DEPARTMENT OF THE AIR FORCE

AIR FORCE CIVIL ENGINEER CENTER

July 3, 2019

MEMORANDUM FOR: U.S. Environmental Protection Agency – Region 2
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New York State Department of Environmental Conservation
Attn: Ms. Heather Bishop
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FROM: AFCEC/CIBE – Plattsburgh
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Plattsburgh NY, 12903

SUBJECT: Final Technical Memorandum, Site SD052-02 ISCO Pilot Study, Griffiss Air Force Base (AFB) Rome, New York

Accompanying this letter, please find the subject document for the former Griffiss AFB for your review and comment. This Technical Memorandum dcouments the permanganate pilot study completed at SD052-02. Should you have any questions or concerns please contact me at 518-563-2871 or david.farnsworth@us.af.mil.

David S. Farnsworth
Program Manager/BRAC Environment Coordinator
BRAC Program Execution Branch

cc: See Attachment 2 - Distribution List

Attachments:

1. Final Technical Memorandum Site SD052-02 ISCO Pilot Study
2. Distribution List

Distribution Requirements
Final Technical Memorandum Site SD052-02 ISCO Pilot Study
Former Griffiss Air Force Base, Rome, New York
July 3, 2019

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FINAL TECHNICAL MEMORANDUM
SITE SD052-02 ISCO PILOT STUDY
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PREPARED FOR:	Mr. David Farnsworth/Former Griffiss Air Force Base, Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and Contracting Officer's Representative (COR)
PREPARED BY:	Bhate Environmental Associates, Inc.
COPIES:	Mr. Robert Morse, United States Environmental Protection Agency Ms. Heather Bishop, New York State Department of Environmental Conservation (NYSDEC)
DATE:	July 3, 2019

INTRODUCTION AND OBJECTIVES

An In-situ Chemical Oxidation (ISCO) Pilot Study was implemented at Site SD052-02, Building 775 at the Former Griffiss Air Force Base (AFB), Rome, New York (**Figure 1**). Injection well installation and permanganate injections were completed in the fourth quarter of 2017 with post-injection monitoring continuing into 2018. The activities and results are documented in this Technical Memorandum. The pilot study was completed in accordance with *Attachment 1 Remedial Optimization Work Plan Pilot Test at SD052-02, Building 775 On-Base Groundwater Areas of Concern, Former Griffiss AFB, New York* (Work Plan) (Bhate, October 2017).

The ISCO Pilot Study was designed to use permanent injection wells to deliver a potassium permanganate solution into the saturated zone. Per the Work Plan, the permanganate solution was intended to mostly travel in the more permeable sand and silty-sand lenses and was initially anticipated to move radially away from the injection points and establish a radius of influence (ROI) of approximately 25 feet (ft). Following injection operations, the permanganate injectate was expected to migrate downgradient in accordance with groundwater flow (Bhate, October 2017). In general, following injection, distribution of injection materials is driven by advection and dispersion (Fetter, 1980). Advection is downgradient flow with groundwater velocity. Dispersion is lateral and vertical distribution due to irregular travel pathways through porous media. Dispersion also reduces the concentration as distance from the injection location increases. Since the permanganate also reacts and degrades due to contact with organics, the concentration also decreases with distance from the injection location. The parameters governing the downgradient distribution are injection location specific but would be consistent for each injection location. Permanganate was selected as the oxidant for the study because of its known longevity in the subsurface, site specific total oxidant demand (TOD) testing, and it had been previously selected and tested at Site SD052-04, immediately southwest of Landfill 6, at Griffiss AFB (Ecology and Environment, June 2004). The original design was mass-based using the TOD analysis to determine the mass of permanganate needed for the expected treatment area.

The treatment area was assumed to be 2,500 square feet with a 20-foot thick saturated column at each injection location. The expected ROI after injection was approximately 25 feet.

The ISCO Pilot Study was implemented in 5 separate phases:

- TOD testing including soil sample collection
- Injection well installation
- Permanganate injection test
- Air sparge dispersion test
- Groundwater and soil sampling and analysis for monitoring

TOTAL OXIDANT DEMAND TESTING

TOD testing is a method of estimating the oxidant dosage required to treat a volume or mass of soil. TOD testing is not a method to evaluate the in-situ remediation effectiveness of permanganate. It is a test method to determine the minimum mass of permanganate needed to oxidize the organics present in site soils. The test does not evaluate operational remediation parameters (e.g., permanganate concentration or volume, treatment duration, or distribution). On May 24, 2017, Bhate advanced a 6.5-inch hollow-stem auger (HSA) at 775SB-100 to 70 ft below ground surface (bgs). Groundwater was encountered at 50 ft bgs. A discrete sampler was pushed from 70 to 74.5 ft and refusal was encountered at 74.5 ft bgs. A soil sample was collected from 72 to 74.5 ft bgs which was described as dark brown, silty-sand, trace gravel, stiff, and wet. The boring log is included in **Attachment 1.** The boring was backfilled to ground surface with bentonite chips and finished with 6 inches of sand. Investigation derived waste (IDW) was drummed and transported to Building B817 and later combined with soil from the injection well installations and transported to the Oneida Harkimer Solid Waste Management Authority in Boonville, New York for disposal. Copies of the non-hazardous waste manifests are included in **Attachment 2.**

The soil sample was shipped to ReSolution Partners of Madison, WI for TOD analysis. The soil sample was received on May 25, 2017, in sealable bags on ice. The sample was lightly homogenized to obtain consistent results for potential replicates and minimize any volatile loss that may contribute to the TOD. Testing conformed with procedures similar to ASTM International (ASTM, formerly American Society for Testing and Materials) 7262-10. Each sample was set up with the following series of permanganate dosages: blank (0), 0.28, 0.83, 2.8, 8.3, and 28 grams per kilogram (g/kg). The liquid used for the testing was deionized water. Each sample was reacted with a range of permanganate concentrations at ambient temperature for 48 hours, during which the sample reaction containers were occasionally agitated to expose solid particle surfaces to the permanganate.

Sample analysis was performed using a colorimeter for absorbance at 526 nanometers (nm). Residual permanganate was determined by comparing the absorbance values to a standard curve generated the same day as the sample analysis. Since this method is a colorimetric determination, any turbidity in the sample will cause a false positive in the result. Therefore, the supernatant from each reaction container was passed through a 0.45 micron filter prior to analysis to minimize turbidity.

Analysis of residual permanganate in samples with large excesses of permanganate can result in a positive bias for the TOD, because permanganate can oxidize manganese (Mn2+) to manganese dioxide (MnO2+) and MnO2+ can catalyze the further decomposition of permanganate. Therefore, the sample with the least amount of residual permanganate (likely to have the least positive bias) was used to make the TOD determination. The results indicated that 0.066 grams of potassium permanganate per kilogram of impacted soil are required to overcome the site's TOD. The report from ReSolution Partners is included as **Attachment 3**.

INJECTION WELL INSTALLATION

As shown on **Figure 2**, 12 permanent injection wells (SD052-02_IW-01 thru SD052-02_IW-09, SD052-02_IW-12, SD052-02_IW-13, and SD052-02_IW-14) were installed between October 31, 2017, and November 8, 2017. HSAs with 8-inch outside diameter were used to drill the borings for each well. Soil was logged from cuttings collected from the augers and screened using soil-headspace methods with a photoionization detector (PID). The injection wells were constructed using 2-inch diameter Schedule 40 polyvinyl chloride (PVC), threaded, 0.020-inch slotted well screen and blank casing. Lithology logs and well construction diagrams are included as **Attachments 4 and 5**. IDW was transported to the Oneida Harkimer Solid Waste Management Authority in Boonville, New York. Copies of the non-hazardous waste manifests are included in **Attachment 2**.

PERMANGANATE INJECTION

Based upon the results of the TOD study, each well was to receive 1,648 gallons of 3-percent (%) potassium permanganate solution, which equates to 412 pounds of potassium permanganate per well. Equipment, including water storage tanks, pumps, hoses, and mixing equipment was mobilized to the site on November 28, 2017. The three existing extraction wells were renamed SD052-02_IW-10 (775EW-1), SD052-02_IW-11 (775EW-1R), and SD052-02_IW-15 (775EW-3). Injections were accomplished into these three wells by gravity feeding through a hose inserted directly into the casing. Injections of the 3% potassium permanganate solution were completed in batches ranging from 148 to 250 gallons. Each batch was made by adding the batch volume of water to the mixing tank, adding the appropriate weight of potassium permanganate and mixing until the solid potassium permanganate was completely dissolved. This batch was then pumped through hoses from the tank, through a trash pump, and into the injection well. These steps were repeated until the total volume of solution was injected into the well. The entire process was repeated for each injection well.

Each well received the design volume except SD052-02_IW-14, which received only 1,005 gallons due to increased pressures during injection. The remainder of the volume from SD052-02_IW-14 was injected into SD052-02_IW-11 (actual volume injected was 660 gallons). Average flow rates ranged from 8.6 gallons per minute (gpm) at SD052-02_IW-14 to 47.1 gpm at SD052-02_IW-05. Injections were completed and equipment removed from the site on December 3, 2017. Daylighting of the solution was not observed during the injection event. A summary of the injection dates, times, flow rates, and volumes is included in **Table 1**. A total of 24,739 gallons of an approximate 3% solution of potassium permanganate (6,180 pounds of potassium permanganate) was injected into 15 wells at the site over a period of 6 days from November 28 through December 3, 2017.

PILOT TEST MONITORING ACTIVITIES

The saturated zone was monitored to assess the performance of the pilot study via groundwater samples from selected wells and soil samples from two new borings. Site monitoring wells used to evaluate the Pilot Study included 775VMW-5, 775MW-6, 775VMW-8, and 775MW-27. These wells were gauged and sampled on multiple occasions including a baseline event in November 2017 (annual Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] sampling event) followed by events in January, April, and October 2018 (annual CERCLA sampling for 2018). Groundwater samples were analyzed using United States Environmental Protection Agency (USEPA) Method 8260B for Volatile Organic Compounds (VOCs). Groundwater gauging data is shown in **Table 2** and analytical data is shown in **Table 3**. A Potentiometric Surface Map for the October 2018 data is presented in **Figure 3**. In addition, two soil borings (775-BH-1 and 775-BH-2) were drilled in September 2018 near SD052-02_IW-03 to inspect soil for the presence of permanganate and collect grab groundwater samples from the borehole. Groundwater samples were analyzed using USEPA Method 8260B for VOCs. Grab groundwater analytical data is shown in **Table4**. Analytical reports, sampling logs, and data validation reports are included in the *2017 Annual Performance Monitoring Report On-Base Groundwater Remediation Former Griffiss Air Force Base Rome, New York* (Bhate, June 2018) for the 2017 sampling and in the *Working Copy 2018 Annual Performance Monitoring Report On-Base Groundwater Remediation Former Griffiss Air Force Base Rome, New York* (Bhate, March 2019) for the 2018 sample events.

PILOT TEST MONITORING RESULTS

Baseline monitoring for the pilot test was collected in November 2017 as part of the annual sampling event for the site. Trichloroethene (TCE) concentrations in the Pilot Study wells at baseline were 32 micrograms per liter (µg/L) in 775VMW-5, 25 µg/L in 775MW-6, 19 µg/L in 775VMW-8, and 28 µg/L in 775MW-27 (**Table 3**). The first sampling event following injections was completed on January 30-31, 2018. The TCE concentrations reported in samples from the wells were similar to the baseline event at 33 µg/L (reported in a duplicate sample) in 775VMW-5, 29 µg/L in 775MW-6, 15 µg/L in 775VMW-8, and 16 µg/L in 775MW-27 (**Table 3**). No color was observed during the sampling event to indicate that permanganate had reached any of the sampled wells.

The second post-injection evaluation sampling was completed on April 19, 2018. TCE concentrations in the Pilot Study wells were similar to the previous events at 36 µg/L in 775VMW-5, 33 µg/L in 775MW-6, 16 estimated (J) µg/L in 775VMW-8, and 22 µg/L in 775MW-27 (**Table 3**). As in the first post-injection sampling event, no color was observed during the April 2018 sampling event to indicate that permanganate had reached any of the sampled wells. A purple color was observed in 775EW-1R (also called injection well SD052-02_IW-11), indicating the presence of permanganate in the injection well. TCE was not detected in the sample from this well in April 2018.

Since permanganate was not observed in downgradient monitoring wells 4 months after injection, additional investigation (an addition to the original scope) with two soil borings was undertaken. On September 6 and 7, 2018, two borings (BH-1 and BH-2) were advanced near 775MW-6 to inspect soils and collect grab groundwater samples. The two borings were drilled 10 feet and 5 feet laterally, respectively, from SD052-02_IW-03 (**Figure 2**). These locations were

placed in a direct line between S052-02_IW-03 and 775MW-6. The locations were cross-gradient from SD052-02_IW-03. Soil did not exhibit a purple color in the samples collected between 40 and 74 ft bgs in BH-1 and between 50 and 77 ft bgs in BH-2. Grab groundwater samples (BH1-10 and BH2-5), were collected from the augers on September 6 and 7, 2018, and submitted to TestAmerica for VOC analysis. Groundwater analytical data is shown in **Table 4.** Groundwater samples did not exhibit a purple tint. Additionally, one groundwater grab sample was collected from 775MW-6 and sent to TestAmerica for analysis of dissolved iron and manganese. Lithology logs of the two borings are included in **Attachment 4**. Analysis of the groundwater samples had reported TCE concentrations of 25 µg/L in BH1-10 and 56 µg/L in sample BH2-5. Manganese (dissolved) was reported in the sample from 775MW-6 at 74 J µg/L (in the duplicate). Iron (dissolved) was not detected in sample 775MW-6. Metals were analyzed to determine if oxidant could be consumed by oxidizing reduced metals. Oxidation of the manganese present at SD052-02 should not be a significant impact on the distribution of the oxidant. Analytical reports and data validation reports are included in **Attachment 6.**

The third post-injection sampling was completed as part of the annual CERCLA sampling at the site on October 23, 2018. TCE concentrations in the Pilot Study wells were: 47 J µg/L (reported in the duplicate sample) in 775VMW-5, 27 µg/L in 775MW-6, and 23 µg/L in 775VMW-8. Monitoring well 775MW-27 was not sampled because a pump was stuck in the well casing. As in the previous post-injection sampling events, no color was observed to indicate that permanganate had reached any of the sampled wells.

POST SOIL BORING CONCLUSIONS

The lack of observed permanganate in site monitoring wells in January and April 2018 and the observations made during the soil boring investigation indicated that the injection distribution or ROI was limited to less than 5 ft, the shortest distance from an injection well to the soil test borings. Although the ROI was only investigated with borings near one injection well, the lack of any permanganate observed 4 months later in any of the wells downgradient of each injection well suggests that the migration footprint of the permanganate was limited. The variable at each injection location that governs downgradient distribution is the starting cross-gradient width of the initial delivery. In other words, an injection ROI of 25 feet, as expected in the Work Plan, would generate roughly a 50-foot width of permanganate to start the downgradient distribution. Whereas, an ROI of 5 feet would generate a starting width of 10 feet. A narrow, cross-gradient initial ROI will deliver permanganate to a much narrower downgradient area than a wider starting width. The observed narrow starting width of less than 10 feet, minimized the likelihood that the path of permanganate flow would intersect downgradient monitoring wells.

Injection distribution appears to have been governed by displacement of groundwater and not injection parameters. Therefore, the injection ROI was dependent on the volume of permanganate injected (volume limited). Under these conditions, a sufficient volume of fluid must be injected to displace the groundwater within the soil matrix around the injection well. Assuming a cylinder of permanganate is created within the soil matrix around the injection well screen to a distance of the ROI, the volume needed to create an ROI can be expressed as:

$$V = \pi r^2 h (Ø)$$

In this equation, V is volume, r is the radius, h is the height, and Ø is matrix porosity.

The volume needed to generate a 5-foot ROI around a 10-foot long injection screen assuming a cylinder is created, would be: π (5 feet)^2 (10 feet) (0.30) (7.48 gallons/cubic feet) = 1,762 gallons. Each injection well received approximately 1,648 gallons of permanganate solution, suggesting an ROI of less than 5 feet could be realistic. This was confirmed by the September 2017 soil borings which did not observe permanganate at a distance of 5 feet from the injection well. The ROI was volume limited to less than 5 feet.

AIR SPARGING DISPERSION TEST

Since the injection wells still contained permanganate, A a plan was formulated to try and increase the ROI by increasing the volume of fluid injected into the well. The fluid chosen was air because it can be injected in large volumes over a short period of time. The test was designed to inject air (sparge) into several injection wells and monitor for permanganate in neighboring monitoring wells. The purpose of this test (an addition to the original scope) was to evaluate if groundwater mixing by sparging would further distribute the permanganate. Air was injected into three injection wells, SD052-02_IW-07, SD052-02_IW-03, and SD052-02_IW-14, on October 21, 2018. Adjacent monitoring wells were observed for color changes as well as the groundwater field parameters temperature, conductivity, dissolved oxygen (DO), pH, and oxidation reduction potential (ORP). Injection flow rates, pressures, and durations were varied over the course of the test in an attempt to move groundwater away from the injection well. A summary log detailing the injection variables is included in **Attachment 7**. After initiating flow, injection flow rates varied from 10 to 40 standard cubic feet per minute (scfm) at 14 to 24 pounds per square inch (psi) pressure.

During air injection, a portable YSI meter was deployed down-hole in the monitoring wells (775MW-6 or 775VMW-8) located closest to the injection well to record groundwater parameters. Monitoring well 775MW-6 is approximately 25 feet from SD052-02_IW-07 and 30 feet from SD052-02_IW-03. Monitoring well 775VMW-8 is approximately 35 feet from SD052-02_IW-14. While air injection was occurring in a particular injection well, the YSI data was recorded periodically from the closest monitoring well. The Groundwater Parameter Monitoring Log is included in **Attachment 7**.

Temperature remained relatively constant in each monitoring well during the test while conductivity, pH, and ORP fluctuated slightly but with no significant or lasting changes during the test period. However, DO at 775MW-6 increased during air injection at both SD052-02_IW-07 and SD052-02_IW-03. Increases from approximately 2 mg/L DO to over 5 mg/L DO were recorded. Conversely, during sparging of SD052-02_IW-14 the DO in monitoring well 775VMW-8 decreased from 7.16 mg/L at the start of injection to 2.40 mg/L approximately 67 minutes into the test. Periodically bailers of groundwater were extracted from the monitoring wells during the test. A purple or pink tint was not observed in the water collected; it remained clear throughout the tests. Bailers of water collected from injection wells prior to air sparging were observed to be a dark opaque purple whereas groundwater collected from the same injection well post-sparging were observed to be light purple or pink indicating that the air sparging was able to move the permanganate out of the injection well. A photo log is included as **Attachment 8**.

CURRENT SITE STATUS

TCE concentrations in the Pilot Study monitoring wells were not reduced by the injection of permanganate. Three of the four Pilot Study monitoring wells were sampled at baseline in November 2017 and again in October 2018. Changes in TCE concentrations in the Pilot Study wells from baseline to October 2018 were: 775VMW-5 (32 µg/L to 47 J µg/L), 775MW-6 (25 µg/L to 27 µg/L), and 775VMW-8 (19 µg/L to 23 µg/L).

CONCLUSIONS

The original work plan was a mass-based design. TOD analysis was used to determine the mass of permanganate needed for the expected treatment area. The treatment area was assumed to be 2,500 square feet with a 20-foot thick saturated column at each injection location. The expected ROI after injection was approximately 25 ft. The actual injection ROI was determined to be volume limited and was less than 5 feet.

The attempt to increase the distribution radius by air sparging appears to have been inadequate as color changes were not observed in neighboring monitoring wells at distances of 25 to 35 ft. The permanganate concentration at the injection wells did appear to decrease significantly after air injection based on observed color changes at the injection wells. This attempt was made 11 months after the original injection, and the concentration of permanganate within the surrounding soil matrix was unknown. It is possible that sparging increased the distribution footprint and depending upon the current permanganate concentration within the new footprint, permanganate may show up over time in monitoring wells 775MW-6 or 775VMW-8.

The volume of injectate originally proposed was 1.47% of the expected treatment area pore volume (Bhate, October 2017). The Pilot Study found that the injection radial distribution is a function of volume and dependent upon groundwater displacement. Therefore the volume injected developed a small lateral ROI that air sparge could not overcome and groundwater flow was unable to distribute the injectate in a significant manner. Full-scale implementation of permanganate injection at SD052-02 would require a complementary design between the number of injection wells and the injection volume per well due to the dependency upon displacement to generate distribution. In other words, to achieve distribution of solution across the site would require pore volume range quantities (in excess of 8 million gallons) of injectate. This is not a lithologic limitation, it is a limitation based on total pore volume. The plume covers over 4 acres and is roughly 20 feet thick. The current Conceptual Site Model is consistent with the Pilot Study results.

RECOMMENDATIONS

The Pilot Study highlighted volumetric obstacles to full-scale remediation; primarily the difficulty contacting the groundwater and saturated soil using injection. Whether the injectate is permanganate or another oxidant or biological amendments, distribution of the injectate will require pore volume range quantities in order to achieve distribution and contact with the contaminants. Logistically, pursuit of injection would require the installation of hundreds of closely spaced wells drilled to depths of 80 to 100 ft bgs in active parking areas, streets, and sidewalks. Other options such as monitored natural attenuation should be considered; particularly since the maximum TCE concentration is 47 µg/L.

REFERENCES

Bhate. October 2017. Attachment 1 Remedial Optimization Work Plan Pilot Test at SD052-02, Building 775 On-Base Groundwater Areas of Concern, Former Griffiss AFB, New York.

Bhate. June 2018. *2017* Annual Performance Monitoring Report, On-Base Groundwater Remediation, Former Griffiss Air Force Base, Rome, New York.

Bhate. March 2019. *Working Copy 2018 Annual Performance Monitoring Report, On-Base Groundwater Remediation, Former Griffiss Air Force Base, Rome, New York.*

Ecology and Environment, Inc. June 2004. *Final Groundwater Treatability Pilot Study Report, Former Griffiss Air Force Base, Rome New York.*

Fetter, C.W. Jr. 1980. *Applied Hydrogeology.* Columbus: Bell and Howell Company.

TABLES

Table 1
SD52-02 Pilot Test Injection Summary
Former Griffiss AFB, Rome, New York

Injection Well	Well Diameter (in)	Screen Interval (ft)	$KMnO_4$ Concentration (%)	Injection date	Start Time	Stop Time	Actual Injection Time (minutes)	Average Injection Flow Rate (gpm)	Volume Injected (gallons)	Comments
SD052-02_IW-01	2	68-78	3	12/1/2017	15:07	15:56	22	40.9	900	
				12/2/2017	7:15	7:48	19	39.5	750	
SD052-02_IW-02	2	68-78	3	12/2/2017	8:20	9:55	55	30.0	1,648	
SD052-02_IW-03	2	68-78	3	11/30/2017	9:13	12:40	45	36.6	1,648	
SD052-02_IW-04	2	64-84	3	11/30/2017	13:40	16:34	73	22.6	1,648	
SD052-02_IW-05	2	64-84	3	12/1/2017	11:00	12:19	35	47.1	1,648	
SD052-02_IW-06	2	64-84	3	12/1/2017	12:57	14:46	41	40.2	1,648	
SD052-02_IW-07	2	68-78	3	11/29/2017	15:38	17:10	52	28.8	1,500	
				11/30/2017	8:20	8:27	7	21.1	148	
SD052-02_IW-08	2	72-92	3	11/29/2017	9:26	11:08	42	39.2	1,648	
SD052-02_IW-09	2	72-92	3	11/29/2017	11:45	15:17	160	10.3	1,648	Elevated pressure throughout
SD052-02_IW-10	4	56-76	3	12/3/2017	7:24	10:58	86	19.2	1,648	Also 775EW-1
SD052-02_IW-11	4	55.2-75.2	3	12/2/2017	14:39	16:23	61	27.0	1,648	Also 775EW-1R
				12/3/2017	11:12	11:47	21	31.4	660	Remaining material from IW-14
SD052-02_IW-12	2	84-104	3	11/28/2017	16:44	17:05	13	38.5	500	
				11/29/2017	7:45	8:52	30	38.3	1,148	
SD052-02_IW-13	2	84-104	3	11/28/2017	13:50	16:03	69	23.9	1,648	
SD052-02_IW-14	2	68-78	3	12/1/2017	7:30	10:30	117	8.6	1,005	Increased pressure after 1,000 gal
SD052-02_IW-15	4	56-76	3	12/2/2017	12:26	14:15	55	30.0	1,648	Also 775EW-3
							Total Permanganate Volume		24,739	

Notes:
in = inches
ft = feet
$KMnO_4$ = Potassium permanganate
% = percent
gpm = gallons per minute

Table 2
Site SD052-02 Building 775
Water Level Measurements

Well Identification	Top of Casing (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
Date		**11/15-17/2017**	**11/15-17/2017**	**1/30-31/2018**	**1/30-31/2018**	**4/19/18**	**4/19/18**	**10/22-23/2018**	**10/22-23/2018**
775VMW-4	518.51	58.68	459.83	--	--	--	--	59.48	459.03
775VMW-5	518.64	58.10	460.54	58.45	460.19	58.20	460.44	58.67	459.97
775MW-6	518.02	58.15	459.87	58.76	459.26	57.96	460.06	59.09	458.93
775VMW-8	518.22	59.72	458.50	61.28	456.94	59.26	458.96	61.01	457.21
775VMW-9	513.63	55.45	458.18	--	--	--	--	58.22	455.41
775VMW-10	517.22	59.04	458.18	--	--	--	--	60.03	457.19
775VMW-19R	517.46	59.97	457.49	--	--	--	--	60.98	456.48
775MW-20	520.35	62.33	458.02	--	--	--	--	64.06	456.29
775VMW-20R	521.11	64.53	456.58	--	--	--	--	65.88	455.23
775MW-27	515.99	58.80	457.19	57.35	458.64	56.66	459.33	--	--
775MW-28	517.68	60.20	457.48	--	--	--	--	61.02	456.66

Notes:
ft = Feet
btoc = Below top of casing
amsl = Above mean sea level
-- = well not gauged

Table 3
SD052-02 Pilot Test Detected Groundwater Sampling Results
Former Griffiss AFB, Rome, New York

Sample Location	**NYS Class GA**	**775VMW-5**			
Sample Identification	**Groundwater**	775VMW-5_1117	775VMW-5_0118	775VMW-5_0418	775VMW-5_1018
Date of Collection	**Standards**	11/17/2017	1/30/2018	4/19/2018	10/23/2018
VOCs (µg/L)					
1,1,1-Trichloroethane	5*	0.27 J	0.16 J ♦	0.17 J	0.17 J
1,1-Dichloroethane	5*	U	U	U	UJ
1,1-Dichloroethene	5*	U	U	U	UJ
1,2,3-Trichlorobenzene	5*	U	U	U	UJ
1,2,4-Trichlorobenzene	5*	U	U	U	UJ
1,2-Dichloroethane	0.6	U	U	U	UJ
Acetone	50	8.0 UB	6.5 UB	U	6.9 J ♦
Chlorobenzene	5*	U	U	U	UJ
Chloroform	7	0.16 J	U	U	UJ
cis-1,2-Dichloroethene (DCE)	5*	0.59 J ♦	U	U	UJ
Methylene chloride	5*	U	U	U	UJ
Tetrachloroethene (PCE)	5*	U	U	U	UJ
Trichloroethene (TCE)	5*	32	33 ♦	36	47 J ♦
Trichlorofluoromethane	5*	UJ	U	U	UJ
Total VOCs	-	33.02	33.16	36.17	54.06
Field Parameters					
ORP (mV)	--	53	143	162	36
Dissolved Oxygen (mg/L)	--	8.36	7.42	12.90	2.58
pH	--	7.50	8.00	7.63	7.91

Notes:

Qualifiers

J - Analyte was positively identified above the Method Detection Limit (MDL), but the concentration is below the Reporting Limit (RL).

UB - considered artifacts of blank contamination and qualified non-detected

U - The analyte was analyzed for, but not detected - numerical value is at or below the MDL

UJ - Estimated non detect flag due to a QC discrepancy

ORP - Oxidation Reduction Potential

mV - milliVolts; µg/L - micrograms per liter; mg/L - milligrams per liter

NS - not sampled

NYS - New York State

- Exceedance of the NYS Groundwater Standards or Guidance Values.

♦ - Denotes higher nominal value of duplicate sample result.

* - The principal organic contaminant standard for groundwater of 5 µg/L applies to this COC.

- - No NYS Groundwater Standard available.

Table 3
SD052-02 Pilot Test Detected Groundwater Sampling Results
Former Griffiss AFB, Rome, New York

Sample Location	**NYS Class GA**	**775MW-6**			
Sample Identification	**Groundwater**	775MW-6_1117	775MW-6_0118	775MW-6_0418	775MW-6_1018
Date of Collection	**Standards**	11/16/2017	1/31/2018	4/19/2018	10/23/2018
VOCs (µg/L)					
1,1,1-Trichloroethane	5*	0.35 J	0.23 J	0.29 J	0.43 J
1,1-Dichloroethane	5*	U	U	U	U
1,1-Dichloroethene	5*	U	U	U	U
1,2,3-Trichlorobenzene	5*	U	U	U	U
1,2,4-Trichlorobenzene	5*	U	U	U	U
1,2-Dichloroethane	0.6	U	U	U	U
Acetone	50	6.6 UB	U	10	U
Chlorobenzene	5*	U	U	U	U
Chloroform	7	1.6	1.1	1.5	1.3 J
cis-1,2-Dichloroethene (DCE)	5*	U	U	U	U
Methylene chloride	5*	U	U	U	U
Tetrachloroethene (PCE)	5*	U	U	U	U
Trichloroethene (TCE)	5*	25	29	33	27
Trichlorofluoromethane	5*	U	U	U	U
Total VOCs	-	26.95	30.33	44.79	28.73
Field Parameters					
ORP (mV)	--	162	155	189	58
Dissolved Oxygen (mg/L)	--	4.92	1.50	8.56	2.80
pH	--	7.60	8.21	7.64	7.76

Notes:

Qualifiers

J - Analyte was positively identified above the Method Det
the Reporting Limit (RL).

UB - considered artifacts of blank contamination and qual

U - The analyte was analyzed for, but not detected - nume

UJ - Estimated non detect flag due to a QC discrepancy

ORP - Oxidation Reduction Potential

mV - milliVolts; µg/L - micrograms per liter; mg/L - milligra

NS - not sampled

NYS - New York State

- Exceedance of the NYS Groundwater Standards or G

♦ - Denotes higher nominal value of duplicate sample resu

* - The principal organic contaminant standard for ground

- - No NYS Groundwater Standard available.

Table 3
SD052-02 Pilot Test Detected Groundwater Sampling Results
Former Griffiss AFB, Rome, New York

Sample Location	**NYS Class GA**	**775VMW-8**			
Sample Identification	**Groundwater**	775VMW-8_1117	775VMW-8_0118	775VMW-8_0418	775VMW-8_1018
Date of Collection	**Standards**	11/16/2017	1/31/2018	4/19/2018	10/23/2018
VOCs (µg/L)					
1,1,1-Trichloroethane	5*	0.37 J	0.23 J	0.29 J	0.47 J
1,1-Dichloroethane	5*	U	U	U	U
1,1-Dichloroethene	5*	U	U	U	U
1,2,3-Trichlorobenzene	5*	U	U	U	U
1,2,4-Trichlorobenzene	5*	U	U	U	U
1,2-Dichloroethane	0.6	U	U	U	U
Acetone	50	3.4 UB	U	U	U
Chlorobenzene	5*	U	U	U	U
Chloroform	7	U	U	U	U
cis-1,2-Dichloroethene (DCE)	5*	U	U	U	U
Methylene chloride	5*	U	U	U	U
Tetrachloroethene (PCE)	5*	U	U	U	U
Trichloroethene (TCE)	5*	19	15	16 J	23
Trichlorofluoromethane	5*	U	U	U	U
Total VOCs	-	19.37	15.23	16.29	23.47
Field Parameters					
ORP (mV)	--	77	127	128	-14
Dissolved Oxygen (mg/L)	--	4.63	8.23	5.04	6.50
pH	--	7.05	8.28	7.53	7.76

Notes:

Qualifiers

J - Analyte was positively identified above the Method Det
the Reporting Limit (RL).

UB - considered artifacts of blank contamination and qual

U - The analyte was analyzed for, but not detected - nume

UJ - Estimated non detect flag due to a QC discrepancy

ORP - Oxidation Reduction Potential

mV - milliVolts; µg/L - micrograms per liter; mg/L - milligra

NS - not sampled

NYS - New York State

- Exceedance of the NYS Groundwater Standards or G

♦ - Denotes higher nominal value of duplicate sample resu

* - The principal organic contaminant standard for ground

- - No NYS Groundwater Standard available.

Table 3
SD052-02 Pilot Test Detected Groundwater Sampling Results
Former Griffiss AFB, Rome, New York

Sample Location	**NYS Class GA**		**775MW-27**		**775EW-1R**
Sample Identification	**Groundwater**	775MW-27_1117	775MW-27_0118	775MW-27_0418	775EW-1R_0418
Date of Collection	**Standards**	11/17/2017	1/31/2018	4/19/2018	4/19/2018
VOCs (µg/L)					
1,1,1-Trichloroethane	5*	0.40 J	0.26 J	0.27 J	U
1,1-Dichloroethane	5*	U	U	U	U
1,1-Dichloroethene	5*	U	U	U	U
1,2,3-Trichlorobenzene	5*	U	U	U	U
1,2,4-Trichlorobenzene	5*	U	U	U	U
1,2-Dichloroethane	0.6	U	U	U	U
Acetone	50	3.2 UB	U	U	18 J
Chlorobenzene	5*	U	U	U	U
Chloroform	7	0.44 J	0.38 J	0.36 J	U
cis-1,2-Dichloroethene (DCE)	5*	U	U	U	U
Methylene chloride	5*	U	U	U	U
Tetrachloroethene (PCE)	5*	U	U	U	U
Trichloroethene (TCE)	5*	28	16	22	U
Trichlorofluoromethane	5*	UJ	U	U	U
Total VOCs	-	28.84	16.64	22.63	18
Field Parameters					
ORP (mV)	--	82	107	103	NS
Dissolved Oxygen (mg/L)	--	8.12	7.94	10.57	NS
pH	--	6.93	8.36	7.56	NS

Notes:

Qualifiers

J - Analyte was positively identified above the Method Det the Reporting Limit (RL).

UB - considered artifacts of blank contamination and qual

U - The analyte was analyzed for, but not detected - nume

UJ - Estimated non detect flag due to a QC discrepancy

ORP - Oxidation Reduction Potential

mV - milliVolts; µg/L - micrograms per liter; mg/L - milligra

NS - not sampled

NYS - New York State

- Exceedance of the NYS Groundwater Standards or G

♦ - Denotes higher nominal value of duplicate sample resu

* - The principal organic contaminant standard for ground

- - No NYS Groundwater Standard available.

Table 4
SD052-02 Pilot Study Detected Grab Groundwater Sampling Results
Former Griffiss AFB, Rome, New York

Sample Location **Sample Identification** **Date of Collection** **Volatile Organic Compounds (µg/L)**	**NYS Class GA Groundwater Standards**	**BH1** **BH1-10** **9/6/2018**	**BH2** **BH2-5** **9/7/2018**	**775MW-6** **775MW-6** **9/7/2018**
1,1,1-Trichloroethane	5*	0.33 J	0.39 J	NS
Acetone	50	21 J ♦	7 J ♦	NS
Chloroform	7	1.4	0.94 J	NS
Toluene	5*	0.19 UB	U	NS
Trichloroethene	5*	25	56	NS
Dissolved Manganese	300	NS	NS	74 J ♦
Dissolved Iron	300	NS	NS	U

Notes:
µg/L - micrograms per liter
Qualifiers:
J - Analyte was positively identified above the method detection limit, but the concentration is below the reporting limit.
U - The analyte was analyzed for, but not detected.
UB - considered artifact of blank contamination and qualified non-detected
NS - Not Sampled
♦ - Denotes higher nominal value of duplicate sample result.
NYS - New York State
- Exceedance of the NYS Groundwater Standards or Guidance Values.

* - The principal organic contaminant standard for groundwater of 5 µg/L applies to this COC.

FIGURES

Former Griffiss Air Force Base
Rome, New York

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Former Griffiss AFB
Boundary

Former Griffiss Air Force Base
Site Location Map

Figure 1

Technical Memorandum
Site SD052-02 ISCO Pilot Study
Former Griffiss Air Force Base, Rome, New York

DRAWN BY: MRM

DATE: 4/18/2019

SCALE: As Shown

PROJECT NO: AFCGSA3, 0012.00AF

Former Griffiss Air Force Base
Rome, New York

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0 1,500 3,000 6,000
Feet

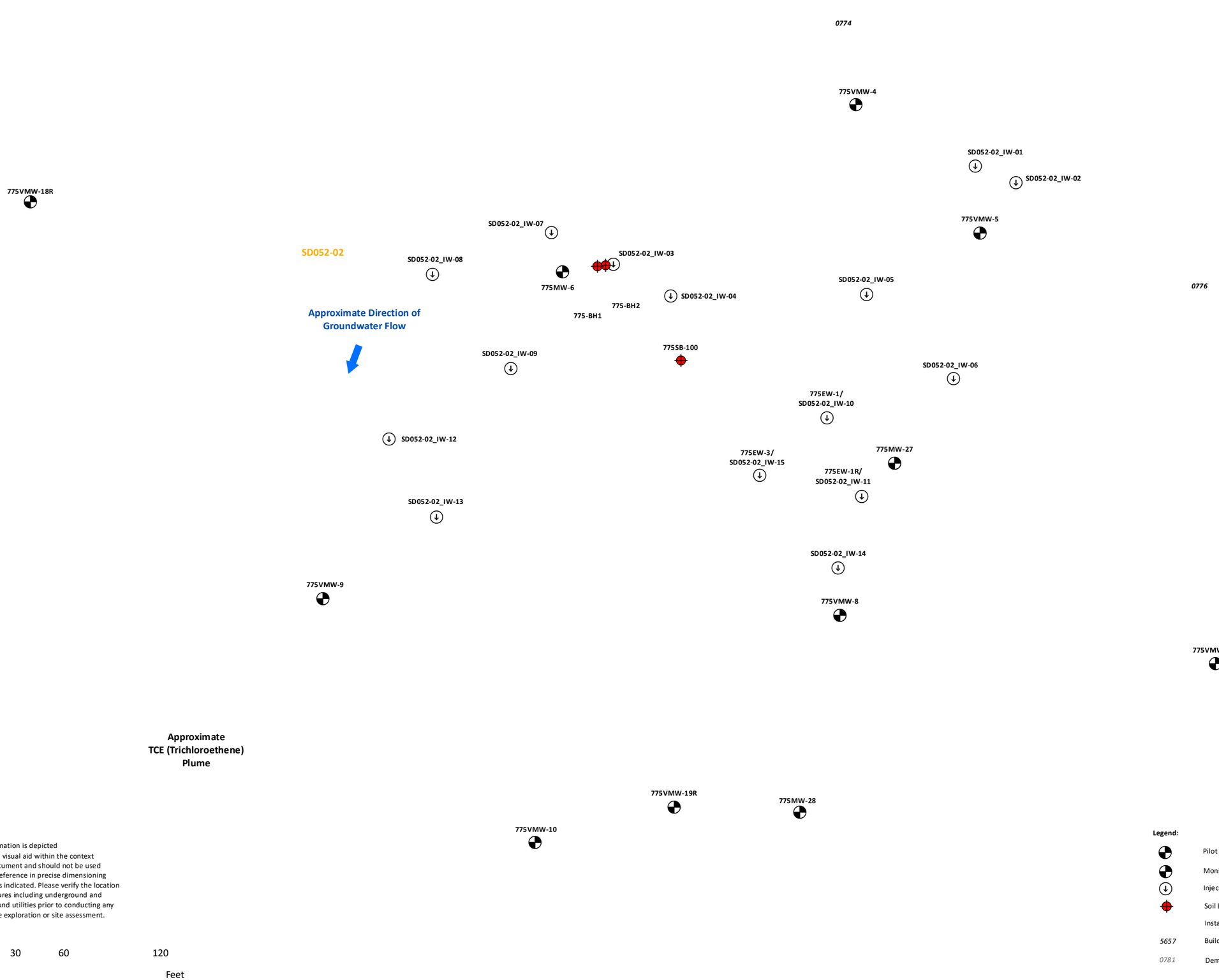
SD052-02

Legend:

Installation Restoration Program (IRP) Area

Base Boundary

Esri, HERE, Garmin, © OpenStreetMap contributors, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



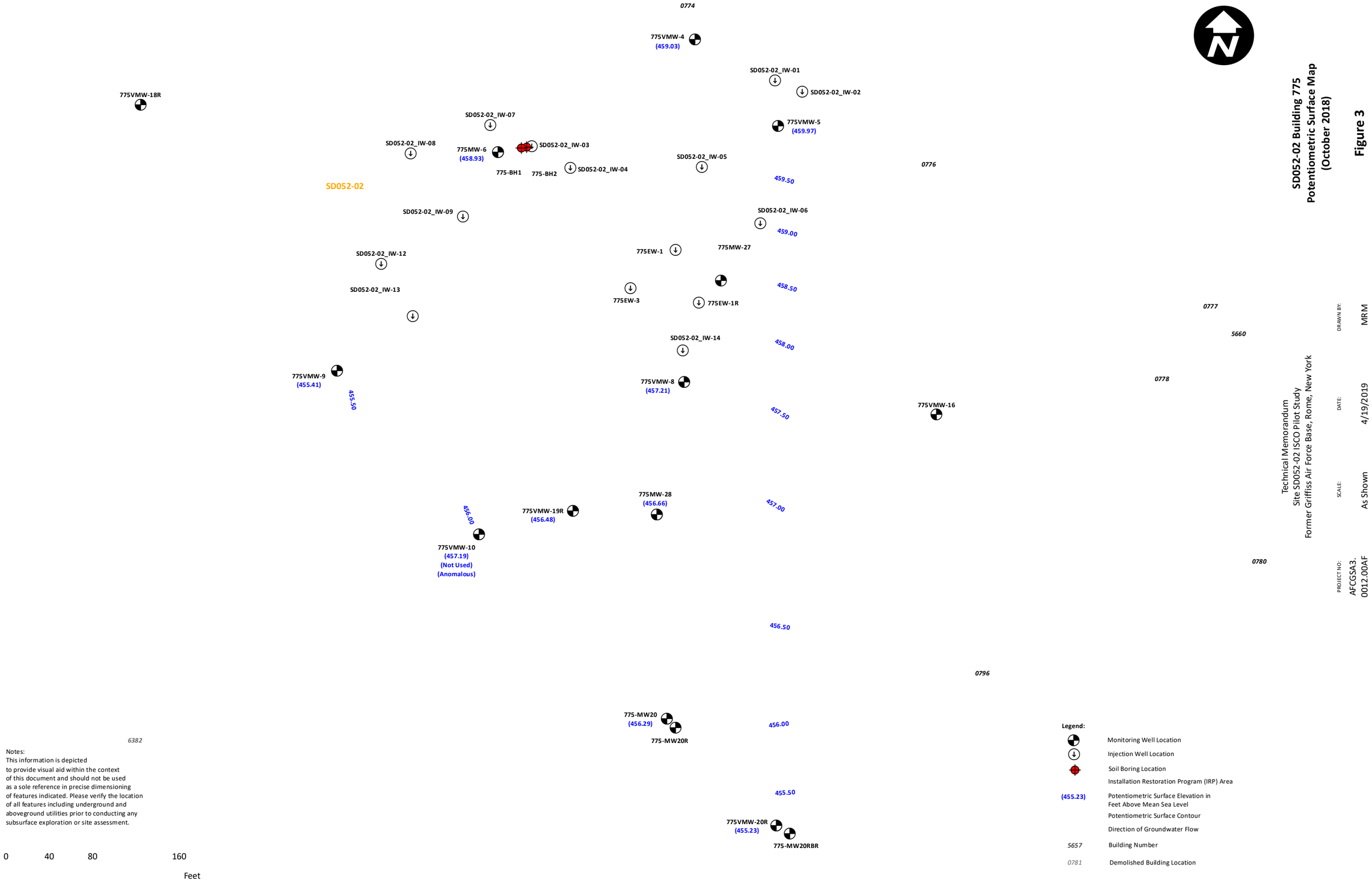
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

SD052-02 Building 775
TCE Plume
(October 2018)

Figure 2

Technical Memorandum
Site SD052-02 ISCO Pilot Study
Former Griffiss Air Force Base, Rome, New York

DRAWN BY: MRM
DATE: 4/19/2019
SCALE: As Shown
PROJECT NO: AFCGSA3.0012.00AF



SD052-02 Building 775
Potentiometric Surface Map
(October 2018)

Figure 3

Technical Memorandum
Site SD052-02 ISCO Pilot Study
Former Griffiss Air Force Base, Rome, New York

DRAWN BY: MRM
DATE: 4/19/2019
SCALE: As Shown
PROJECT NO: AFCGSA3, 0012.00AF

ATTACHMENT 1
BORING LOG FOR 775SB-100

HTW DRILLING LOG

HOLE NO. 775SB-100

1.COMPANY NAME: Parsons
2.DRILLING CONTRACTOR: AZTEK
SHEET 1 OF 2 SHEETS
3.PROJECT: SD052-02 TOD sampling
4.LOCATION: Former Griffiss Air Force Base, Rome, NY
5.NAME OF DRILLER
6.MANUFACTURER'S DESIGNATION OF DRILL
7.SIZES AND TYPE OF DRILLING EQUIPMENT: 6.5" hollow stem auger; 2.5" macrocore w/ liner
8.HOLE LOCATION (NAD 83, NM State Plane) Northing / Easting
9.SURFACE ELEVATION (FT. NAVD88)
10.DATE STARTED: 24-May-17
11.DATE COMPLETED: 24-May-17
12.OVERBURDEN THICKNESS: NA
15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs): 50
13.DEPTH DRILLED INTO ROCK: NA
16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED
14.TOTAL DEPTH OF HOLE (ft bgs): 70
17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)
18.GEOTECHNICAL SAMPLES: None — DISTURBED: N/A — UNDISTURBED: N/A
19.TOTAL NUMBER OF CORE BOXES: N/A
20.SAMPLES FOR CHEMICAL ANALYSIS: VOC; METALS; OTHER (SPECIFY); OTHER (SPECIFY); OTHER (SPECIFY)
21. TOTAL CORE; RECOVERY %
22.DISPOSITION OF HOLE: Backfilled w/ bentonite — BACKFILLED: X; MONITORING WELL; OTHER (SPECIFY)
23. INSPECTOR: Steven Liberatore

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	grass at surface Hollow stem auger to 70 ft bgs.					
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						

HTW DRILLING LOG

HOLE NO. 775SB-100

PROJECT SD052-02 TOD sampling

INSPECTOR Steven Liberatore

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	50						
	55						
	60						
	65						
	70	dark brown silty-sand, trace gravel, stiff, wet.					
	75						
	80						
	85						
	90						
	95						
	100						
	105						
	110						
	115						
	120						
	125						

ATTACHMENT 2
NON-HAZARDOUS WASTE MANIFESTS

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. NA	Manifest Document No. 17-0757	2. Page 1 of

3. Generator's Name and Mailing Address

US Air Force Civil Engineer
474 Phoenix Drive
Rome NY

SAME

5. Transporter 1 Company Name	6. US EPA ID Number	A. State Transporter's ID
Cioffi Enterprise		B. Transporter 1 Phone
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID
		D. Transporter 2 Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	E. State Facility's ID
Oneida Herkimer Solid Waste Mgmt Authority 7044 State Rt. 294 Boonville NY 13309		F. Facility's Phone (315) 942-5290

11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	1	CM	~	T
b.				
c.				
d.				

GENERATOR

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

a. Petroleum Impacted Soil
Profile Number: OHSWA: CS1217-02

A) L

15. Special Handling Instructions and Additional Information

NON-HAZARDOUS WASTE

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
David Farnsworth	David Farnsworth	12	7	17

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name	Signature	Date Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

Ref. Invoice # 2223747

Printed/Typed Name	Signature	Date Month	Day	Year

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PRINTED WITH SOY INK

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N/A

Manifest Document No. 17-0757

2 Page 1 of 1

3. Generator's Name and Mailing Address

US Air Force Civil Engineer
474 Phoenix Drive
Rome NY

SAME

4. Generator's Phone (315) 563-2871

5. Transporter 1 Company Name: Chafee Enterprises

6. US EPA ID Number

A. State Transporter's ID 79480

B. Transporter 1 Phone (315) 687-3221

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address

Oneida Herkimer Solid Waste Mgmt Authority
7044 State Rt. 294
Boonville, NY 13309

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone (315) 942-5890

11. WASTE DESCRIPTION	Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non-RCRA, Non-DOT Regulated Material		CM	EST	T 20
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

A) Petroleum Impacted Soil
Profile Number: OHSWA . CS1217-02

H. Handling Codes for Wastes Listed Above

A) L

15. Special Handling Instructions and Additional Information

Emergency Contact: Paragon Environmental Construction, Inc. @ 315-699-0840

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: David Farnsworth

Signature: David Farnsworth

Date: Month 12 Day 7 Year 17

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19:

Printed/Typed Name

Signature

Date: Month Day Year

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

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ATTACHMENT 3
RESOLUTION PARTNERS REPORT

ReSolution Partners, LLC

June 2, 2017

Mr. Mark Stapleton
Bhate Environment & Infrastructure
445 Union Boulevard, Suite 129
Lakewood, CO 80228

Subject: Permanganate Total Oxidant Demand (TOD) Report for the Site SD052-02 Optimization - Former Griffiss Air Force Base - Rome, NY Project.

Dear Mark:

ReSolution Partners, LLC (ReSolution) is pleased to provide Bhate Environmental this report for Total Oxidant Demand (TOD) testing for the Former Griffiss AFB Project.

OBJECTIVE

The objective of the TOD study is to determine the amount of permanganate (in the form of potassium permanganate) required to oxidize natural and anthropogenic sources of organic compounds in site soil.

BACKGROUND

The constituent of interest for this project is trichloroethene. The soil sample was received on May 25, 2017 in sealable bags. The sample was lightly homogenized to obtain consistent results for potential replicates and minimize any volatile loss that may contribute to the TOD. The sample was received on ice. The sample received, description, and comments are shown in Table 1.

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Table 1.
Sample Received for TOD Testing

Sample Name	Sample Date	Sample Matrix	Sample Comments
SD052-02_SB100(74)_0517	5/24/17	Soil	Poorly graded sand (SP), fine sand, non-plastic, brown 10YR4/3, no odor, moist.

METHODOLOGY

Testing conformed with procedures similar to ASTM 7262-10. Each sample was set up with the following series of permanganate dosages: blank (0), 0.28, 0.83, 2.8, 8.3 and 28 g/kg. The liquid used for the testing was deionized water.

Each sample was reacted with a range of permanganate concentrations at ambient temperature for 48 hours. During which period, the sample reaction containers were occasionally agitated to expose solid particle surfaces to the permanganate. The analysis was performed using a colorimeter for absorbance at 526 nm. Residual permanganate was determined by comparing the absorbance values to a standard curve generated the same day as the sample analysis.

Since this method is a colorimetric determination, any turbidity in the sample will cause a false positive in the result. Therefore, the supernatant from each reaction container was passed through a 0.45µ PTFE filter to eliminate/reduce turbidity.

Analysis of residual permanganate in samples with large excesses of permanganate can result in a positive bias for the TOD, because permanganate can oxidize Mn^{2+} to manganese dioxide and MnO^{2+} can catalyze the further decomposition of permanganate. Therefore, the sample with the least amount of residual permanganate (likely to have the least positive bias) is used to make the TOD determination.

RESULTS

The samples were set up with permanganate dosages on May 30, 2017. The analyses were performed on June 1, 2017. The TOD from the lowest positive result for permanganate is reported in Table 2.

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Table 2.
Permanganate TOD (48 hour) Result

Sample	Dosage g/kg	TOD g/kg
SD052-02_SB100(74)_0517	0.28	0.066

Please contact me with any questions at kbaker@resolutionpartnersllc.net or 608-669-6949.

Sincerely,

Kevin Baker
Laboratory Manager

cc: Kim Nemmers

967 Jonathon Drive · Madison, WI · 53713

bhate ENVIRONMENT & INFRASTRUCTURE

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

ReSolution Partners, LLC
Attention: Kevin Baker
967 Jonathon Drive
Madison, WI 53713
Cell: 608.347.9114
Office: 608-669-6949

Chain of Custody and Analytical Request

Project No: AFCG8A3.0012.00AA.2015.0006

COC Number(1): 05-24-2017-01

LIMS Number:

Facility/Base I.D.: Former Griffiss Air Force Base

Project/Site Name: Site SD052-02 Optimization

Client Name: Air Force Civil Engineer Center (AFCEC)

Collected by: Stephen Liberatore

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Sample Analysis Requested (5): Number of containers	TOD 48hr permanganate								Quality Assurance Samples (6): Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number
SD052-02_SB100(74)_0517	24-May-2017	1240	72 - 74	N	1	SO	1	X										
			-															
			-															
			-															
			-															
			-															
			-															
			-															
			-															

COMMENTS: Email results to knemmers@bhate.com and mstapleton@bhate.com

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.		5.24.17	1700	FEDEX		
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.: _____

Method of Shipment: _____ Airbill Number: _____

Analytical Lab: _____ Delivery Location: _____

Lab Recipient: _____ Delivery Date/Time: _____

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample. FD = Field Duplicate (-a) Samples. FR = Field Replicate (-b) Samples. EB = Equipment Blank (-d) Samples. MS = Matrix Spike, SD = Matrix Spike Duplicate. AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day, (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

ATTACHMENT 4
LITHOLOGY LOGS

BORING NUMBER SD052-02_IW-01

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/8/17 **COMPLETED** 11/8/17

NORTHING: 1173187.19 **EASTING:** 1135885.38

GROUND ELEVATION 517.91 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.2
			SM			0.1
10						0.1
				15.0		502.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.2
20						0.2
			SM			0.3
30						0.4
				35.0		482.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand with trace coarse grains present, subangular.	
			SM			0.3
40				40.0		477.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.3
			SM			0.2
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*		0.1
			SM				0.1
60							0.2
				65.0	Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand with trace coarse grains present, subangular.	452.9	0.2
70							
			SM				0.2
							0.2
				78.0	Bottom of hole at 78.0 feet.	439.9	

BORING NUMBER SD052-02_IW-02

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/8/17 **COMPLETED** 11/8/17

NORTHING: 1173165.66 **EASTING:** 1135910.73

GROUND ELEVATION 517.90 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

24hrs AFTER DRILLING 56.4 ft / Elev 461.5 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.0
			SM			0.0
10						0.0
				15.0		502.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.2
20						0.2
			SM			0.3
30						0.4
				35.0		482.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand with trace coarse grains present, subangular.	
			SM			0.3
40				40.0		477.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.3
			SM			0.2
50						

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BHATE ENVIRONMENTAL ASSOCIATES GAFB - SD052-02.GPJ GINT US LAB.GDT 12/28/17

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*		0.1
			SM				0.1
60							0.2
				65.0	Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand with trace coarse grains present, subangular.	452.9	0.2
70							
			SM				0.2
							0.2
				78.0	Bottom of hole at 78.0 feet.	439.9	

BORING NUMBER SD052-02_IW-03

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/3/17 **COMPLETED** 11/3/17

NORTHING: 1173142.92 **EASTING:** 1135659.69

GROUND ELEVATION 517.61 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

120hrs AFTER DRILLING 57.6 ft / Elev 460.0 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.0
			SM			0.0
10						0.0
					15.0	502.6
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.0
20						0.0
						0.0
30						0.0
			SM			0.0
40						0.0
						0.0
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	0.0
						0.0
60						0.0
			SM			0.0
70						0.6
						0.6
				78.0	Bottom of hole at 78.0 feet.	439.6

BORING NUMBER SD052-02_IW-04

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/6/17 **COMPLETED** 11/6/17

NORTHING: 1173119.48 **EASTING:** 1135698.75

GROUND ELEVATION 517.37 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING 80.0 ft / Elev 437.4 ft

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

24hrs AFTER DRILLING 57.3 ft / Elev 460.0 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.0
						0.0
10			SM			0.0
						0.0
						0.0
20					20.0	497.4
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.0
						0.0
30						0.0
			SM			0.0
40						0.0
						0.0
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	0.0
			SM			0.0
60				60.0		457.4
					Silty Sand, brown (7.5YR 4/3), moist to saturated, loose, fine grained sand, subangular.	0.0
						0.0
70						
			SM			0.0
						0.0
80						
						0.1
				84.0		433.4
					Bottom of hole at 84.0 feet.	

BORING NUMBER SD052-02_IW-05

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/6/17 **COMPLETED** 11/7/17

NORTHING: 1173116.88 **EASTING:** 1135821.15

GROUND ELEVATION 517.56 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.		0.0
			SM				0.1
10				10.0	Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	507.6	
			SM				0.1
				15.0	Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular.	502.6	
							0.0
20							0.0
							0.0
30							
			SM				0.0
							0.0
40							0.0
							0.0
50							

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular. *(continued)*	0.0
						0.0
60						0.0
			SM			0.0
70						0.0
						0.0
						0.0
80						0.0
				84.0	Bottom of hole at 84.0 feet.	433.6

BORING NUMBER SD052-02_IW-06

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/4/17 **COMPLETED** 11/4/17

NORTHING: 1173069.14 **EASTING:** 1135870.63

GROUND ELEVATION 517.48 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, very dark brown (7.5YR 3/2), moist, loose, fine grained sand with trace coarse grains present, subangular.		0.0
			SM				0.0
10				10.0	Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	507.5	
			SM				0.0
				15.0	Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular.	502.5	
							0.0
20							0.0
							0.0
30							0.0
			SM				0.0
							0.0
40							0.0
							0.0
50							

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular. *(continued)*	0.0
						0.0
60						0.0
			SM			0.0
70						0.0
						0.0
80						0.0
				83.0	Bottom of hole at 83.0 feet.	434.5

BORING NUMBER SD052-02_IW-07

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/1/17 **COMPLETED** 11/1/17

NORTHING: 1173160.63 **EASTING:** 1135617.85

GROUND ELEVATION 517.24 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.5
			SM			0.6
10						0.4
					15.0	502.2
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.2
20						0.2
						0.7
30						
			SM			0.3
						0.2
40						0.2
						0.1
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	0.5
						0.1
60						0.4
			SM			0.3
70						0.2
						0.2
				78.0	Bottom of hole at 78.0 feet.	439.2

BORING NUMBER SD052-02_IW-08

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/2/17 **COMPLETED** 11/2/17

NORTHING: 1173121.22 **EASTING:** 1135549.45

GROUND ELEVATION 516.03 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.0
			SM			0.2
10						0.3
					15.0	501.0
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	0.4
20						0.3
						0.4
30						
			SM			0.4
						0.4
40						
						0.4
						0.4
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	0.2
			SM			0.6
60				60.0	Silty Sand, very dark brown (7.5YR 3/2), moist, loose, fine grained sand, subangular.	456.0
						0.2
						0.4
70						
						0.2
			SM			0.4
80						
						0.4
						0.2
90						
				92.0	Bottom of hole at 92.0 feet.	424.0
						0.3

BORING NUMBER SD052-02_IW-09

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/2/17 **COMPLETED** 11/3/17

NORTHING: 1173070 **EASTING:** 1135602.4

GROUND ELEVATION 516.35 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

24hrs AFTER DRILLING 57.3 ft / Elev 459.1 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.1
						0.0
10			SM			0.0
						0.2
20					20.0 Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. 496.4	0.1
						0.4
30						0.3
			SM			0.6
40						0.3
						0.3
50						

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CLIENT AFCEC **PROJECT NAME** SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004 **PROJECT LOCATION** Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*		0.5
			SM				0.0
60				60.0	Silty Sand, dark brown (7.5YR 3/4), moist, loose, fine grained sand, subangular.	456.4	0.1
							0.1
70							0.1
			SM				0.1
80							0.1
				87.0	Clay, dark gray (7.5YR 4/1), plastic, soft, moist.	429.4	0.1
90			CL				
			SM	91.0 92.0	Silty Sand, brown (7.5YR 4/4), saturated, loose, fine grained sand, subangular. Bottom of hole at 92.0 feet.	425.4 424.4	0.1

BORING NUMBER SD052-02_IW-12

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 10/31/17 **COMPLETED** 11/1/17

NORTHING: 1173020.96 **EASTING:** 1135507.13

GROUND ELEVATION 513.92 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING 100.0 ft / Elev 413.9 ft

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

72hrs AFTER DRILLING 57.3 ft / Elev 456.7 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.4
			SM			0.7
10						1.2
					15.0	498.9
					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	1.0
20						0.9
						0.6
30						
			SM			1.3
						1.2
40						0.5
						1.2
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	1.0
			SM			1.6
60						6.0
				65.0	Silty Sand, dark brown (7.5YR 3/4), moist, loose, fine grained sand, subangular.	448.9
						0.2
70						0.4
						0.2
80						
			SM			0.3
						0.4
90						0.3
						0.4
100				100.0	Bottom of hole at 100.0 feet.	413.9

BORING NUMBER SD052-02_IW-13

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 10/31/17 **COMPLETED** 10/31/17

NORTHING: 1172979.63 **EASTING:** 1135546.39

GROUND ELEVATION 514.56 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.		0.1
			SM				0.1
10				10.0	Silty Clay, dark brown (7.5YR 3/4), plastic, soft, moist.	504.6	0.1
			CL				0.1
20				20.0	Silty Sand, reddish yellow (7.5YR 6/6), moist, loose, fine grained sand, subangular.	494.6	0.1
			SM				0.1
30							0.1
				35.0	Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular.	479.6	0.1
40			SM				0.1
							0.9
50							

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/4), moist, loose, fine grained sand, subangular. *(continued)*	0.8
						0.9
60						0.5
						0.3
70			SM			0.4
						0.4
80						0.3
						0.5
90						0.6
				95.0		419.6
			SM		Silty Sand, brown (7.5YR 4/4), saturated, loose, fine grained sand, subangular.	0.4
100				100.0		414.6
					Bottom of hole at 100.0 feet.	

BORING NUMBER SD052-02_IW-14

CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DATE STARTED 11/7/17 **COMPLETED** 11/7/17

NORTHING: 1172944.66 **EASTING:** 1135808.99

GROUND ELEVATION 517.11 ft feet **HOLE SIZE** 8.25

DRILLING CONTRACTOR NYEG Drilling

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY J. Geroux

AT END OF DRILLING ---

NOTES

24hrs AFTER DRILLING 57.5 ft / Elev 459.6 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		Borehole logged from auger cuttings.			Silty Sand, dark brown (7.5YR 3/3), moist, loose, fine grained sand, subangular.	0.0
			SM			0.0
10						0.0
					15.0	502.1
					Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular.	0.0
20						0.0
						0.0
30						0.0
			SM			0.0
40						0.0
						0.0
50						

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CLIENT AFCEC

PROJECT NAME SD052-02

PROJECT NUMBER AFCGSA3.0012.00AC.2016.0004

PROJECT LOCATION Former Griffiss AFB - Rome, NY

DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
50					Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular. *(continued)*	
						0.0
						0.0
60						
			SM			0.0
						0.0
70						
						0.0
				75.0		442.1
					Silty Sand, brown (7.5YR 4/3), moist, loose, fine grained sand, subangular.	
			SM			0.0
				78.0		439.1
					Bottom of hole at 78.0 feet.	

HTW DRILLING LOG

HOLE NO.
52-02 BH1-10'

SHEET 1 OF 2 SHEETS

1.COMPANY NAME
Bhate

2.DRILLING CONTRACTOR
NYEG

3.PROJECT
SD52-02 Pilot Boreholes

4.LOCATION
Griffiss FAFB - SD52-02

5.NAME OF DRILLER
Chris Duffy

6.MANUFACTURER'S DESIGNATION OF DRILL
850 Steel Track Auger Rig

7.SIZES AND TYPE OF DRILLING EQUIPMENT
2' Split Spoon

8.HOLE LOCATION (NAD 83, NY State Plane)
Northing Easting

9.SURFACE ELEVATION (FT. NAVD88)

10.DATE STARTED
5-Sep-18

11.DATE COMPLETED
6-Sep-18

12.OVERBURDEN THICKNESS
NA

15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs)
57

13.DEPTH DRILLED INTO ROCK
NA

16. DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED

14.TOTAL DEPTH OF HOLE (ft bgs)
74'

17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

18.GEOTECHNICAL SAMPLES
DISTURBED N/A
UNDISTURBED N/A

19.TOTAL NUMBER OF CORE BOXES
N/A

20.SAMPLES FOR CHEMICAL ANALYSIS
VOC METALS OTHER (SPECIFY) OTHER (SPECIFY) OTHER (SPECIFY)

21. TOTAL CORE RECOVERY %

22.DISPOSITION OF HOLE
BACKFILLED Grout
MONITORING WELL OTHER (SPECIFY)

23. SIGNATURE OF Geologist
Jonathon Geroux

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0						
5						
10						Auger down to depths then send spoon sampler ahead 2 feet.
15						
20						
25						
30						
35						
40	Silty Sand, 7.5YR 4/5 brown, Loose, Dry				9, 4, 11, 12	Auger to 40 feet.
45						
50						

HTW DRILLING LOG

HOLE NO. 52-02 BH1-10'

PROJECT SD52-02 Pilot Boreholes

Geologist Jonathon Geroux

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	50	Silty Sand, 7.5YR 4/5 brown, loose, moist				12, 16, 15, 14	
	55						56'
						12, 16, 17, 12	
	60	Silty Sand, 7.5YR 4/5 brown, loose, wet					Water Sample taken.
	65	Sand with silts, wet, with coarse grains					
	70					14, 17, 18, 19	
		Sand with silt, wet.					
		Bottom of Hole 74'					
	75						
	80						

HTW DRILLING LOG

HOLE NO. 52-02 BH2-5'

SHEET 1 OF 2 SHEETS

1.COMPANY NAME: Bhate

2.DRILLING CONTRACTOR: NYEG

3.PROJECT: SD52-02 Pilot Boreholes

4.LOCATION: Griffiss FAFB - SD52-02

5.NAME OF DRILLER: Chris Duffy

6.MANUFACTURER'S DESIGNATION OF DRILL: 850 Steel Track Auger Rig

7.SIZES AND TYPE OF DRILLING EQUIPMENT: 2' Split Spoon

8.HOLE LOCATION (NAD 83, NY State Plane) Northing / Easting

9.SURFACE ELEVATION (FT. NAVD88)

10.DATE STARTED: 6-Sep-18

11.DATE COMPLETED: 7-Sep-18

12.OVERBURDEN THICKNESS: NA

13.DEPTH DRILLED INTO ROCK: NA

14.TOTAL DEPTH OF HOLE (ft bgs): 76'

15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs): 57

16. DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED

17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

18.GEOTECHNICAL SAMPLES: DISTURBED N/A; UNDISTURBED N/A

19.TOTAL NUMBER OF CORE BOXES: N/A

20.SAMPLES FOR CHEMICAL ANALYSIS: VOC, METALS, OTHER (SPECIFY), OTHER (SPECIFY), OTHER (SPECIFY)

21. TOTAL CORE RECOVERY %

22.DISPOSITION OF HOLE: BACKFILLED (Grout), MONITORING WELL, OTHER (SPECIFY)

23. SIGNATURE OF Geologist: Jonathon Geroux

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0						
5						
10						Auger down to depths then send spoon sampler ahead 2 feet.
15						
20						
25						
30						
35						
40						
45						
50						

HTW DRILLING LOG

HOLE NO. 52-02 BH2-5'

PROJECT SD52-02 Pilot Boreholes

Geologist Jonathon Geroux

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	50	Silty Sand, 7.5YR 4/5 brown, loose, moist					Auger to 50'
	55						56'
	60	Silty Sand, 7.5YR 4/5 brown, loose, wet				17, 23, 29, 30	
	65	Sand with silts, wet				17, 29, 37, 40	
		Sand with silts, wet					Water Sample taken.
	70	Silty Sand, 7.5YR 4/5 brown, loose, wet				19, 36, 37, 21	
						18, 35, 31, 33	
	75	Sand with silts, wet					
		Bottom of Hole 78'					
	80						

ATTACHMENT 5
WELL CONSTRUCTION DIAGRAMS

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-01
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/8/2017
SURVEYOR:
NORTHING (NAD 83): 1173187.19
EASTING (NAD 83): 1135885.38

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 76' bgs
Date 11/8/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 56'

Top of Filter Pack: 64'3"

Top of Screen: 67'10"

Bottom of Screen: 77'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 78'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 200 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 300
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-02
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/8/2017
SURVEYOR:
NORTHING (NAD 83): 1173165.66
EASTING (NAD 83): 1135910.73

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 76' bgs
Date 11/8/2017
Pre Development: 56.41' bgs
Date 11/9/2017
Post Development:
Date

Top Bentonite Seal: 55'8"

Top of Filter Pack: 64'4"

Top of Screen: 67'10"

Bottom of Screen: 77'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 78'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 200 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 400
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-03
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/3/2017
SURVEYOR:
NORTHING (NAD 83): 1173142.92
EASTING (NAD 83): 1135659.69

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 76' bgs
Date 11/3/2017
Pre Development: 57.58' bgs
Date 11/8/2017
Post Development:
Date

Top Bentonite Seal: 55'8"

Top of Filter Pack: 64'4"

Top of Screen: 67'10"

Bottom of Screen: 77'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 78'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 250 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 150
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 350
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-04
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/6/2017
SURVEYOR:
NORTHING (NAD 83): 1173119.48
EASTING (NAD 83): 1135698.75

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 82' bgs
Date 11/6/2017
Pre Development: 57.34' bgs
Date 11/7/2017
Post Development:
Date

Top Bentonite Seal: 55'8"

Top of Filter Pack: 60'8"

Top of Screen: 63'10"

Bottom of Screen: 83'10"
Bottom of Well: 84'
Bottom of Filter Pack: 84'

Borehole Depth: 84'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 250 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 550
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-05
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/6/2017- 11/7/2017
SURVEYOR:
NORTHING (NAD 83): 1173116.88
EASTING (NAD 83): 1135821.15

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 82' bgs
Date 11/7/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 53'

Top of Filter Pack: 58'

Top of Screen: 63'10"

Bottom of Screen: 83'10"
Bottom of Well: 84'
Bottom of Filter Pack: 84'

Borehole Depth: 84'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 210 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 600
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-06
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/4/2017
SURVEYOR:
NORTHING (NAD 83): 1173069.14
EASTING (NAD 83): 1135870.63

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 79' bgs
Date 11/4/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 57'

Top of Filter Pack: 59'9"

Top of Screen: 62'10"

Bottom of Screen: 82'10"
Bottom of Well: 83'
Bottom of Filter Pack: 83'

Borehole Depth: 83'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 210 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 175
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 450
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-07
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/1/2017
SURVEYOR:
NORTHING (NAD 83): 1173160.63
EASTING (NAD 83): 1135617.85

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 76' bgs
Date 11/1/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 58'

Top of Filter Pack: 64'5"

Top of Screen: 67'10"

Bottom of Screen: 77'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 78'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 250 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 150
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 350
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-08
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/2/2017
SURVEYOR:
NORTHING (NAD 83): 1173121.22
EASTING (NAD 83): 1135549.45

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 89' bgs
Date 11/2/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 60'7"

Top of Filter Pack: 67'3"

Top of Screen: 71'10"

Bottom of Screen: 91'10"
Bottom of Well: 92'
Bottom of Filter Pack: 92'

Borehole Depth: 92'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Lafarge Type I Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 350 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 600
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-09
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/2/2017-11/3/2017
SURVEYOR:
NORTHING (NAD 83): 1173070.00
EASTING (NAD 83): 1135602.40

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 89' bgs
Date 11/3/2017
Pre Development: 57.27' bgs
Date 11/4/2017
Post Development:
Date

Top Bentonite Seal: 60'

Top of Filter Pack: 65'

Top of Screen: 71'10"

Bottom of Screen: 91'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 92'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 250 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 750
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-12
DRILLING METHOD: Hollow Stem Auger
DATE(S): 10/31/2017-11/1/2017
SURVEYOR:
NORTHING (NAD 83): 1173020.96
EASTING (NAD 83): 1135507.13

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 98' bgs
Date 11/1/2017
Pre Development: 57.26' bgs
Date 11/4/2017
Post Development:
Date

Top Bentonite Seal: 65'3"

Top of Filter Pack: 73'5"

Top of Screen: 79'10"

Bottom of Screen: 99'10"
Bottom of Well: 100'
Bottom of Filter Pack: 100'

Borehole Depth: 100'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 400 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 550
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-13
DRILLING METHOD: Hollow Stem Auger
DATE(S): 10/31/2017
SURVEYOR:
NORTHING (NAD 83): 1172979.63
EASTING (NAD 83): 1135546.39

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 98' bgs
Date 10/31/2017
Pre Development:
Date
Post Development:
Date

Top Bentonite Seal: 67'3"

Top of Filter Pack: 74'6"

Top of Screen: 79'10"

Bottom of Screen: 99'10"
Bottom of Well: 100'
Bottom of Filter Pack: 100'

Borehole Depth: 100'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Lafarge Type I Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 500 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 600
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE: SD052-02
PROJECT NAME: Remedial Optimization Pilot Study
PROJECT NO./PHASE: AFCGSA3.0012.00AC.2016.0004
DRILLING CONTRACTOR: NYEG Drilling
DRILLER: Jay Maitland
GEOLOGIST: Jonathon Geroux

WELL/BORING ID: SD052-02_IW-14
DRILLING METHOD: Hollow Stem Auger
DATE(S): 11/7/2017
SURVEYOR:
NORTHING (NAD 83): 1172944.66
EASTING (NAD 83): 1135808.99

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 8.25
Well Casing Diameter (in): 2.0

DEPTH TO WATER
During Drilling: 76' bgs
Date 11/7/2017
Pre Development: 57.51' bgs
Date 11/8/2017
Post Development:
Date

Top Bentonite Seal: 56'3"

Top of Filter Pack: 63'5"

Top of Screen: 67'10"

Bottom of Screen: 77'10"
Bottom of Well: 78'
Bottom of Filter Pack: 78'

Borehole Depth: 78'

Comments:

PROTECTIVE CASING
Type: Bolted Flush Mount
Dimensions: 10" Diameter
Length: 12"

Existing Surface

SURFACE PAD
Dimensions: 18" Circular Ring
Type: Concrete

WELL CASING (RISER)
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Diameter (in): 2.0
Connection: Flush Thread

WELL SCREEN
Manufacturer: Atlantic
Type/Material: Schedule 40 PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: Flush Thread

ANNULAR SEAL
Type: Grout
Manufacturer: Sakrete Type I,II Cement & Powdered Bentonite
Mud Scale: -
Installation: Gravity Tremie Pressure
Volume: 200 gallons
Hydration Time: N/A

BENTONITE SEAL
Manufacturer: Baroid
Product Name: Hole Plug
Size: 3/8 inch
Volume (lbs): 100
Installation: Tremie Gravity

PRIMARY FILTER PACK
Manufacturer: US Silica
Product Name: Fil Pro
Size: #1
Volume (lbs): 350
Installation: Tremie Gravity

SUMP/END CAP
Type: 2" Schedule 40 PVC
Length: 2"

BACKFILL MATERIAL
Type: N/A
Volume: N/A

ATTACHMENT 6

ANALYTICAL REPORTS AND DATA VALIDATION REPORTS

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Griffiss Air Force Base, New York, on January 30th and 31st, 2018. Four aqueous samples, one field duplicate, and associated quality control (QC) blanks were collected from site SD052-02 Building 775 for performance monitoring. All analyses were performed by TestAmerica Laboratories, Inc., Arvada, Colorado. The specific samples included in this validation were:

Sample Identification	Matrix	Collection Date	Lab Package	Analyses (USEPA Method Number)
775VMW-5_0118 775VMW-5_0118-a	Water	1/30/18	280-105986	VOCs (SW8260B)*
775MW-6_0118 775VMW-8_0118 775MW-27_0118		1/31/18		
775-AB_013018		1/30/18		
775-AB_013118 775-TB_013118		1/31/18		

Notes: AB – Ambient Blank; TB – Trip Blank; USEPA – United States Environmental Protection Agency; VOCs – Volatile Organic Compounds; SW – Solid Waste

*TestAmerica Denver holds both Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) and New York National Environmental Laboratory Accreditation Program (NELAP) certifications for method 8260B. The reporting limits for all analytes are much lower by 8260B compared to 8260C.

This data was validated against the laboratory's quality assurance (QA)/QC limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, January 2017) and per requirements of the DoD Quality Systems Manual (QSM), Version 5.0, as specified in the project-specific Quality Assurance Project Plan (QAPP).

Sample Handling and Holding Times

The samples were properly preserved and transferred under chain-of-custody to the laboratory for analysis and analyzed within the required holding times.

Method Blank

No compounds were detected in the method blank.

Blank Spike Sample (Laboratory Control Sample)/Surrogates

The laboratory control sample (LCS)/LCS duplicate (LCSD) relative percent difference (RPD) for 2-hexanone was above control limits. The LCS and LCSD recoveries were within control limits and using professional judgement; no qualification was deemed necessary.

The surrogate recoveries were within control limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

The MS/MSD recoveries and/or RPD, when reported, were within control limits.

Project Specific Quality Assurance/Quality Control

The RPD between the sample and duplicate were within project defined control limits.

Both ambient blanks reported detections of acetone. Only sample 775VMW-5_0118 reported a detection of acetone which was <10x the blank concentration. Acetone was qualified as non-detect, "UB", and considered an artifact of blank contamination.

Calibration Verification Data

The continuing calibration verification (CCV) was within control limits for all target analytes.

Overall Assessment of Data

The internal standard (IS) response of TBA-d9 was below acceptance criteria for sample 775MW-27_0118. This IS was not associated with any target compounds and required no qualification.

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Results

Sample Identification	Compound	Result and Qualifier (µg/L)	Reason Code
775VMW-5_0118	Acetone	6.5 UB	AB

Notes: µg/L – micrograms per liter; AB – Ambient blank contamination

ANALYTICAL REPORT

Job Number: 280-105986-1

Job Description: BRAC Eastern: Griffiss AFB, NY - SD052

For:
Bhate Environmental
445 Union Blvd Ste.129
Lakewood, CO 80226

Attention: Marcia Olive

Approved for release.
Stephanie K Rothmeyer
Project Manager I
2/14/2018 3:47 PM

Stephanie K Rothmeyer, Project Manager I
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0182
stephanie.rothmeyer@testamericainc.com
02/14/2018

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

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

CASE NARRATIVE

Client: Bhate Environmental

Project: BRAC Eastern: Griffiss AFB, NY - SD052

Report Number: 280-105986-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 2/1/2018 at 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples 775VMW-5_0118 (280-105986-1), 775VMW-5_0118-a (280-105986-2), 775MW-6_0118 (280-105986-3), 775MW-27_0118 (280-105986-4), 775VMW-8_0118 (280-105986-5), 775-AB_013018 (280-105986-6), 775-AB_013118 (280-105986-7) and 775TB_013118 (280-105986-8) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 02/12/2018.

2-Hexanone exceeded the RPD limit for LCSD 280-404562/5. Each control sample meet individual %Recovery limits and there is no specific corrective action required for %RPD failures. Associated results are flagged "Q".

The internal standard (ISTD) response of TBA-d9 for the following samples was outside acceptance criteria: 775MW-27_0118 (280-105986-4), (CCVC 280-404562/29). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

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

Detection Summary

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Client Sample ID: 775VMW-5_0118 — Lab Sample ID: 280-105986-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.5	J	10	1.9	ug/L	1		8260B	Total/NA
Trichloroethene	32		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-5_0118-a — Lab Sample ID: 280-105986-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.16	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	33		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-6_0118 — Lab Sample ID: 280-105986-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.23	J	1.0	0.16	ug/L	1		8260B	Total/NA
Chloroform	1.1		1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	29		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-27_0118 — Lab Sample ID: 280-105986-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.26	J	1.0	0.16	ug/L	1		8260B	Total/NA
Chloroform	0.38	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	16		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-8_0118 — Lab Sample ID: 280-105986-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.23	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	15		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775-AB_013018 — Lab Sample ID: 280-105986-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.1	J	10	1.9	ug/L	1		8260B	Total/NA

Client Sample ID: 775-AB_013118 — Lab Sample ID: 280-105986-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14		10	1.9	ug/L	1		8260B	Total/NA

Client Sample ID: 775TB_013118 — Lab Sample ID: 280-105986-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 775VMW-5_0118
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 10:38	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 10:38	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 10:38	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 10:38	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 10:38	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 10:38	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 10:38	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.77	ug/L			02/12/18 10:38	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 10:38	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 10:38	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 10:38	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 10:38	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 10:38	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 10:38	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 10:38	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 10:38	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 10:38	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 10:38	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 10:38	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 10:38	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 10:38	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 10:38	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 10:38	1
Acetone	**6.5**	**J**	10	1.9	ug/L			02/12/18 10:38	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 10:38	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 10:38	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 10:38	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 10:38	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 10:38	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 10:38	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 10:38	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 10:38	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 10:38	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 10:38	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 10:38	1

Client Sample ID: 775VMW-5_0118
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 10:38	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 10:38	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 10:38	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 10:38	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 10:38	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 10:38	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 10:38	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 10:38	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 10:38	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 10:38	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 10:38	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 10:38	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 10:38	1
Trichloroethene	**32**		1.0	0.16	ug/L			02/12/18 10:38	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 10:38	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 10:38	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 10:38	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*02/12/18 10:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*02/12/18 10:38*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*02/12/18 10:38*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*02/12/18 10:38*	*1*

Client Sample ID: 775VMW-5_0118-a
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 11:01	1
1,1,1-Trichloroethane	**0.16**	**J**	1.0	0.16	ug/L			02/12/18 11:01	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 11:01	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 11:01	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 11:01	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 11:01	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 11:01	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 11:01	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			02/12/18 11:01	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 11:01	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 11:01	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 11:01	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 11:01	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 11:01	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 11:01	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 11:01	1

Client Sample ID: 775VMW-5_0118-a
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 11:01	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 11:01	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 11:01	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 11:01	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 11:01	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 11:01	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 11:01	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 11:01	1
Acetone	6.4	U M	10	1.9	ug/L			02/12/18 11:01	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 11:01	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 11:01	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 11:01	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 11:01	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 11:01	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 11:01	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 11:01	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 11:01	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 11:01	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 11:01	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 11:01	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 11:01	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 11:01	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 11:01	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 11:01	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 11:01	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 11:01	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 11:01	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 11:01	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:01	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 11:01	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:01	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 11:01	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 11:01	1

Client Sample ID: 775VMW-5_0118-a
Lab Sample ID: 280-105986-2

Date Collected: 01/30/18 13:40
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**33**		1.0	0.16	ug/L			02/12/18 11:01	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 11:01	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 11:01	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 11:01	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 11:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*02/12/18 11:01*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*02/12/18 11:01*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*02/12/18 11:01*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*02/12/18 11:01*	*1*

Client Sample ID: 775MW-6_0118
Lab Sample ID: 280-105986-3

Date Collected: 01/31/18 11:45
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 11:22	1
1,1,1-Trichloroethane	**0.23**	**J**	1.0	0.16	ug/L			02/12/18 11:22	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 11:22	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 11:22	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 11:22	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 11:22	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 11:22	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 11:22	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.77	ug/L			02/12/18 11:22	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 11:22	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 11:22	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 11:22	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 11:22	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 11:22	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 11:22	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 11:22	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 11:22	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 11:22	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 11:22	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 11:22	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 11:22	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 11:22	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 11:22	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 11:22	1
Acetone	6.4	U	10	1.9	ug/L			02/12/18 11:22	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 11:22	1

Client Sample ID: 775MW-6_0118
Date Collected: 01/31/18 11:45
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 11:22	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 11:22	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 11:22	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 11:22	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 11:22	1
Chloroform	**1.1**		1.0	0.16	ug/L			02/12/18 11:22	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 11:22	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 11:22	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 11:22	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 11:22	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 11:22	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 11:22	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 11:22	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 11:22	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 11:22	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 11:22	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 11:22	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 11:22	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 11:22	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 11:22	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 11:22	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 11:22	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 11:22	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 11:22	1
Trichloroethene	**29**		1.0	0.16	ug/L			02/12/18 11:22	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 11:22	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 11:22	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 11:22	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 11:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*02/12/18 11:22*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*02/12/18 11:22*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*02/12/18 11:22*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*02/12/18 11:22*	*1*

Client Sample ID: 775MW-27_0118
Date Collected: 01/31/18 13:30
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 12:10	1
1,1,1-Trichloroethane	**0.26**	**J**	1.0	0.16	ug/L			02/12/18 12:10	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 12:10	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 12:10	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 12:10	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 12:10	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 12:10	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 12:10	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.77	ug/L			02/12/18 12:10	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:10	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:10	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 12:10	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 12:10	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 12:10	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 12:10	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 12:10	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 12:10	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:10	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 12:10	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 12:10	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 12:10	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 12:10	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 12:10	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 12:10	1
Acetone	6.4	U M	10	1.9	ug/L			02/12/18 12:10	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 12:10	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 12:10	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 12:10	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 12:10	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 12:10	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 12:10	1
Chloroform	**0.38**	**J**	1.0	0.16	ug/L			02/12/18 12:10	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 12:10	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:10	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 12:10	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 12:10	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 12:10	1

Client Sample ID: 775MW-27_0118
Lab Sample ID: 280-105986-4

Date Collected: 01/31/18 13:30
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 12:10	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 12:10	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 12:10	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 12:10	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 12:10	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 12:10	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:10	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 12:10	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:10	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 12:10	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:10	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:10	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 12:10	1
Trichloroethene	**16**		1.0	0.16	ug/L			02/12/18 12:10	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 12:10	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 12:10	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 12:10	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*02/12/18 12:10*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*02/12/18 12:10*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*02/12/18 12:10*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*02/12/18 12:10*	*1*

Client Sample ID: 775VMW-8_0118
Lab Sample ID: 280-105986-5

Date Collected: 01/31/18 15:30
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 12:32	1
1,1,1-Trichloroethane	**0.23**	**J**	1.0	0.16	ug/L			02/12/18 12:32	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 12:32	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 12:32	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 12:32	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 12:32	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 12:32	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 12:32	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			02/12/18 12:32	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:32	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:32	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 12:32	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 12:32	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 12:32	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 12:32	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 12:32	1

Client Sample ID: 775VMW-8_0118
Date Collected: 01/31/18 15:30
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 12:32	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:32	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 12:32	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 12:32	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 12:32	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 12:32	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 12:32	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 12:32	1
Acetone	6.4	U M	10	1.9	ug/L			02/12/18 12:32	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 12:32	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 12:32	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 12:32	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 12:32	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 12:32	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 12:32	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 12:32	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 12:32	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 12:32	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 12:32	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 12:32	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 12:32	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 12:32	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 12:32	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 12:32	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 12:32	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:32	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 12:32	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:32	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 12:32	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:32	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:32	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 12:32	1

Client Sample ID: 775VMW-8_0118
Lab Sample ID: 280-105986-5

Date Collected: 01/31/18 15:30
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**15**		1.0	0.16	ug/L			02/12/18 12:32	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 12:32	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 12:32	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 12:32	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*02/12/18 12:32*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*02/12/18 12:32*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*02/12/18 12:32*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*02/12/18 12:32*	*1*

Client Sample ID: 775-AB_013018
Lab Sample ID: 280-105986-6

Date Collected: 01/30/18 13:45
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 12:54	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 12:54	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 12:54	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 12:54	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 12:54	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 12:54	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 12:54	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			02/12/18 12:54	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:54	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:54	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 12:54	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 12:54	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 12:54	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 12:54	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 12:54	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 12:54	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 12:54	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 12:54	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 12:54	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 12:54	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 12:54	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 12:54	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 12:54	1
Acetone	**5.1**	**J**	10	1.9	ug/L			02/12/18 12:54	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 12:54	1

Client Sample ID: 775-AB_013018
Date Collected: 01/30/18 13:45
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 12:54	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 12:54	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 12:54	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 12:54	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 12:54	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 12:54	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:54	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 12:54	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 12:54	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 12:54	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 12:54	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 12:54	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 12:54	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 12:54	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 12:54	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 12:54	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 12:54	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 12:54	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 12:54	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 12:54	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 12:54	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 12:54	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			02/12/18 12:54	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 12:54	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 12:54	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 12:54	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*02/12/18 12:54*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*02/12/18 12:54*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*02/12/18 12:54*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*02/12/18 12:54*	*1*

Client Sample ID: 775-AB_013118
Date Collected: 01/31/18 11:50
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 13:16	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 13:16	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 13:16	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 13:16	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 13:16	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 13:16	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 13:16	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			02/12/18 13:16	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 13:16	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 13:16	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 13:16	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 13:16	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 13:16	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 13:16	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 13:16	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 13:16	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 13:16	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 13:16	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 13:16	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 13:16	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 13:16	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 13:16	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 13:16	1
Acetone	**14**		10	1.9	ug/L			02/12/18 13:16	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 13:16	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 13:16	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 13:16	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 13:16	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 13:16	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 13:16	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 13:16	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 13:16	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 13:16	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 13:16	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 13:16	1

Client Sample ID: 775-AB_013118
Lab Sample ID: 280-105986-7

Date Collected: 01/31/18 11:50
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 13:16	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 13:16	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 13:16	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 13:16	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 13:16	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 13:16	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 13:16	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 13:16	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 13:16	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:16	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 13:16	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 13:16	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			02/12/18 13:16	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 13:16	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 13:16	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 13:16	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*02/12/18 13:16*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*02/12/18 13:16*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*02/12/18 13:16*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*02/12/18 13:16*	*1*

Client Sample ID: 775TB_013118
Lab Sample ID: 280-105986-8

Date Collected: 01/31/18 00:00
Matrix: Water
Date Received: 02/01/18 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 13:37	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 13:37	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 13:37	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 13:37	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 13:37	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 13:37	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 13:37	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			02/12/18 13:37	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 13:37	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 13:37	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 13:37	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 13:37	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 13:37	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 13:37	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 13:37	1

Client Sample ID: 775TB_013118
Date Collected: 01/31/18 00:00
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 13:37	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 13:37	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 13:37	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 13:37	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 13:37	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			02/12/18 13:37	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 13:37	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 13:37	1
Acetone	6.4	U	10	1.9	ug/L			02/12/18 13:37	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 13:37	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 13:37	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 13:37	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 13:37	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 13:37	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 13:37	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 13:37	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 13:37	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 13:37	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 13:37	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 13:37	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 13:37	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 13:37	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 13:37	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 13:37	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 13:37	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 13:37	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 13:37	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 13:37	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 13:37	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 13:37	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 13:37	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 13:37	1

Client Sample ID: 775TB_013118
Date Collected: 01/31/18 00:00
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.40	U	1.0	0.16	ug/L			02/12/18 13:37	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 13:37	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 13:37	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 13:37	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*02/12/18 13:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*02/12/18 13:37*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*02/12/18 13:37*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*02/12/18 13:37*	*1*

Default Detection Limits

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.17	ug/L	8260B
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.32	ug/L	8260B
1,1-Dichloroethane	1.0	0.16	ug/L	8260B
1,1-Dichloroethene	1.0	0.14	ug/L	8260B
1,1-Dichloropropene	1.0	0.15	ug/L	8260B
1,2,3-Trichlorobenzene	1.0	0.18	ug/L	8260B
1,2,3-Trichloropropane	3.0	0.77	ug/L	8260B
1,2,4-Trichlorobenzene	1.0	0.32	ug/L	8260B
1,2,4-Trimethylbenzene	1.0	0.14	ug/L	8260B
1,2-Dibromo-3-Chloropropane	5.0	0.81	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichlorobenzene	1.0	0.13	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.15	ug/L	8260B
1,2-Dichloropropane	1.0	0.13	ug/L	8260B
1,3,5-Trimethylbenzene	1.0	0.14	ug/L	8260B
1,3-Dichlorobenzene	1.0	0.16	ug/L	8260B
1,3-Dichloropropane	1.0	0.15	ug/L	8260B
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260B
2,2-Dichloropropane	1.0	0.20	ug/L	8260B
2-Butanone (MEK)	6.0	1.8	ug/L	8260B
2-Chlorotoluene	1.0	0.17	ug/L	8260B
2-Hexanone	5.0	1.4	ug/L	8260B
4-Chlorotoluene	1.0	0.17	ug/L	8260B
4-Isopropyltoluene	1.0	0.17	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	1.0	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Dibromomethane	1.0	0.17	ug/L	8260B
Dichlorodifluoromethane	2.0	0.31	ug/L	8260B
Diisopropyl ether	10	0.74	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Hexachlorobutadiene	1.0	0.36	ug/L	8260B
Isopropylbenzene	1.0	0.19	ug/L	8260B
m,p-Xylene	2.0	0.34	ug/L	8260B
Methyl iodide	2.0	0.23	ug/L	8260B

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units	Method
Methyl tert-butyl ether	5.0	0.25	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Naphthalene	1.0	0.22	ug/L	8260B
n-Butylbenzene	1.0	0.32	ug/L	8260B
N-Propylbenzene	1.0	0.16	ug/L	8260B
o-Xylene	1.0	0.19	ug/L	8260B
sec-Butylbenzene	1.0	0.17	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
tert-Butylbenzene	1.0	0.16	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Trichlorofluoromethane	2.0	0.29	ug/L	8260B
Vinyl acetate	3.0	0.94	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	2.0	0.19	ug/L	8260B

Surrogate Summary

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-105986-1	775VMW-5_0118	99	98	105	104
280-105986-2	775VMW-5_0118-a	98	93	102	96
280-105986-3	775MW-6_0118	107	95	106	97
280-105986-4	775MW-27_0118	99	98	106	103
280-105986-5	775VMW-8_0118	103	95	106	104
280-105986-6	775-AB_013018	99	95	103	97
280-105986-7	775-AB_013118	104	94	105	100
280-105986-8	775TB_013118	103	94	106	102
LCS 280-404562/10 - IN2	Lab Control Sample	108	97	107	99
LCS 280-404562/4	Lab Control Sample	105	98	104	108
LCSD 280-404562/11 - IN2	Lab Control Sample Dup	101	91	102	96
LCSD 280-404562/5	Lab Control Sample Dup	109	98	106	110
MB 280-404562/6	Method Blank	104	96	107	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-404562/6
Matrix: Water
Analysis Batch: 404562

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			02/12/18 09:33	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			02/12/18 09:33	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			02/12/18 09:33	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			02/12/18 09:33	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			02/12/18 09:33	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			02/12/18 09:33	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			02/12/18 09:33	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.77	ug/L			02/12/18 09:33	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			02/12/18 09:33	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 09:33	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			02/12/18 09:33	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			02/12/18 09:33	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			02/12/18 09:33	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			02/12/18 09:33	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			02/12/18 09:33	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			02/12/18 09:33	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			02/12/18 09:33	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			02/12/18 09:33	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			02/12/18 09:33	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			02/12/18 09:33	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			02/12/18 09:33	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			02/12/18 09:33	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			02/12/18 09:33	1
Acetone	6.4	U	10	1.9	ug/L			02/12/18 09:33	1
Benzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			02/12/18 09:33	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Bromoform	0.40	U	1.0	0.19	ug/L			02/12/18 09:33	1
Bromomethane	0.80	U	2.0	0.21	ug/L			02/12/18 09:33	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			02/12/18 09:33	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			02/12/18 09:33	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Chloroethane	1.6	U	2.0	0.41	ug/L			02/12/18 09:33	1
Chloroform	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
Chloromethane	0.80	U	2.0	0.30	ug/L			02/12/18 09:33	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 09:33	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			02/12/18 09:33	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			02/12/18 09:33	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-404562/6
Matrix: Water
Analysis Batch: 404562

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			02/12/18 09:33	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			02/12/18 09:33	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			02/12/18 09:33	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			02/12/18 09:33	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			02/12/18 09:33	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			02/12/18 09:33	1
Naphthalene	0.80	U	1.0	0.22	ug/L			02/12/18 09:33	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			02/12/18 09:33	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
o-Xylene	0.40	U	1.0	0.19	ug/L			02/12/18 09:33	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
Styrene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			02/12/18 09:33	1
Toluene	0.40	U	1.0	0.17	ug/L			02/12/18 09:33	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			02/12/18 09:33	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			02/12/18 09:33	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			02/12/18 09:33	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			02/12/18 09:33	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			02/12/18 09:33	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			02/12/18 09:33	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			02/12/18 09:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*02/12/18 09:33*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*02/12/18 09:33*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*02/12/18 09:33*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*02/12/18 09:33*	*1*

Lab Sample ID: LCS 280-404562/4
Matrix: Water
Analysis Batch: 404562

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.11		ug/L		102	78 - 124
1,1,1-Trichloroethane	5.00	4.10		ug/L		82	74 - 131
1,1,2,2-Tetrachloroethane	5.00	5.14		ug/L		103	71 - 121
1,1,2-Trichloroethane	5.00	4.26		ug/L		85	80 - 119
1,1-Dichloroethane	5.00	4.28		ug/L		86	77 - 125
1,1-Dichloroethene	5.00	4.52		ug/L		90	71 - 131
1,1-Dichloropropene	5.00	4.38		ug/L		88	79 - 125
1,2,3-Trichlorobenzene	5.00	4.83		ug/L		97	69 - 129
1,2,3-Trichloropropane	5.00	4.65		ug/L		93	73 - 122
1,2,4-Trichlorobenzene	5.00	4.70		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	5.00	4.46		ug/L		89	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	4.79	J	ug/L		96	62 - 128
1,2-Dibromoethane	5.00	5.28		ug/L		106	77 - 121
1,2-Dichlorobenzene	5.00	4.89		ug/L		98	80 - 119

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-404562/4
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	5.00	4.29		ug/L		86	73 - 128
1,2-Dichloroethene, Total	10.0	9.24		ug/L		92	79 - 121
1,2-Dichloropropane	5.00	4.68		ug/L		94	78 - 122
1,3,5-Trimethylbenzene	5.00	4.46		ug/L		89	75 - 124
1,3-Dichlorobenzene	5.00	5.13		ug/L		103	80 - 119
1,3-Dichloropropane	5.00	5.05		ug/L		101	80 - 119
1,4-Dichlorobenzene	5.00	4.93		ug/L		99	79 - 118
2,2-Dichloropropane	5.00	4.05		ug/L		81	60 - 139
2-Butanone (MEK)	20.0	18.5		ug/L		93	56 - 143
2-Chlorotoluene	5.00	4.18		ug/L		84	79 - 122
2-Hexanone	20.0	15.7		ug/L		78	57 - 139
4-Chlorotoluene	5.00	4.89		ug/L		98	78 - 122
4-Isopropyltoluene	5.00	4.55		ug/L		91	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	17.4		ug/L		87	67 - 130
Acetone	20.0	19.3		ug/L		96	39 - 160
Benzene	5.00	4.66		ug/L		93	79 - 120
Bromobenzene	5.00	5.07		ug/L		101	80 - 120
Bromochloromethane	5.00	4.53		ug/L		91	78 - 123
Bromodichloromethane	5.00	4.41		ug/L		88	79 - 125
Bromoform	5.00	5.08		ug/L		102	66 - 130
Bromomethane	5.00	4.42		ug/L		88	53 - 141
Carbon disulfide	5.00	4.36		ug/L		87	64 - 133
Carbon tetrachloride	5.00	3.94		ug/L		79	72 - 136
Chlorobenzene	5.00	4.99		ug/L		100	82 - 118
Chloroethane	5.00	4.45		ug/L		89	60 - 138
Chloroform	5.00	4.43		ug/L		89	79 - 124
Chloromethane	5.00	3.85		ug/L		77	50 - 139
cis-1,2-Dichloroethene	5.00	4.63		ug/L		93	78 - 123
cis-1,3-Dichloropropene	5.00	5.19		ug/L		104	75 - 124
Dibromochloromethane	5.00	4.63		ug/L		93	74 - 126
Dibromomethane	5.00	4.35		ug/L		87	79 - 123
Dichlorodifluoromethane	5.00	3.47		ug/L		69	32 - 152
Ethylbenzene	5.00	4.90		ug/L		98	79 - 121
Hexachlorobutadiene	5.00	4.60		ug/L		92	66 - 134
Isopropylbenzene	5.00	4.52		ug/L		90	72 - 131
m,p-Xylene	5.00	4.89		ug/L		98	80 - 121
Methyl iodide	5.00	4.54		ug/L		91	69 - 131
Methyl tert-butyl ether	5.00	4.49	J	ug/L		90	71 - 124
Methylene Chloride	5.00	4.91	J	ug/L		98	74 - 124
Naphthalene	5.00	4.25		ug/L		85	61 - 128
n-Butylbenzene	5.00	4.33		ug/L		87	75 - 128
N-Propylbenzene	5.00	4.40		ug/L		88	76 - 126
o-Xylene	5.00	5.16		ug/L		103	78 - 122
sec-Butylbenzene	5.00	4.16		ug/L		83	77 - 126
Styrene	5.00	5.11		ug/L		102	78 - 123
tert-Butylbenzene	5.00	4.43		ug/L		89	78 - 124
Tetrachloroethene	5.00	4.98		ug/L		100	74 - 129
Toluene	5.00	4.58		ug/L		92	80 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-404562/4
Matrix: Water
Analysis Batch: 404562

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	5.00	4.61		ug/L		92	75 - 124
trans-1,3-Dichloropropene	5.00	4.82		ug/L		96	73 - 127
Trichloroethene	5.00	4.53		ug/L		91	79 - 123
Trichlorofluoromethane	5.00	4.06		ug/L		81	65 - 141
Vinyl acetate	10.0	8.42		ug/L		84	54 - 146
Vinyl chloride	5.00	3.91		ug/L		78	58 - 137
Xylenes, Total	10.0	10.1		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*
Toluene-d8 (Surr)	*108*		*89 - 112*

Lab Sample ID: LCSD 280-404562/5
Matrix: Water
Analysis Batch: 404562

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.08		ug/L		102	78 - 124	1	20
1,1,1-Trichloroethane	5.00	4.31		ug/L		86	74 - 131	5	20
1,1,2,2-Tetrachloroethane	5.00	5.11		ug/L		102	71 - 121	1	20
1,1,2-Trichloroethane	5.00	4.69		ug/L		94	80 - 119	10	20
1,1-Dichloroethane	5.00	4.35		ug/L		87	77 - 125	2	20
1,1-Dichloroethene	5.00	4.70		ug/L		94	71 - 131	4	20
1,1-Dichloropropene	5.00	4.57		ug/L		91	79 - 125	4	20
1,2,3-Trichlorobenzene	5.00	4.77		ug/L		95	69 - 129	1	20
1,2,3-Trichloropropane	5.00	5.07		ug/L		101	73 - 122	9	20
1,2,4-Trichlorobenzene	5.00	5.08		ug/L		102	69 - 130	8	20
1,2,4-Trimethylbenzene	5.00	4.59		ug/L		92	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	5.00	5.52		ug/L		110	62 - 128	14	20
1,2-Dibromoethane	5.00	5.20		ug/L		104	77 - 121	1	20
1,2-Dichlorobenzene	5.00	4.82		ug/L		96	80 - 119	1	20
1,2-Dichloroethane	5.00	4.32		ug/L		86	73 - 128	1	20
1,2-Dichloroethene, Total	10.0	9.30		ug/L		93	79 - 121	1	20
1,2-Dichloropropane	5.00	4.74		ug/L		95	78 - 122	1	20
1,3,5-Trimethylbenzene	5.00	4.59		ug/L		92	75 - 124	3	20
1,3-Dichlorobenzene	5.00	5.02		ug/L		100	80 - 119	2	20
1,3-Dichloropropane	5.00	5.14		ug/L		103	80 - 119	2	20
1,4-Dichlorobenzene	5.00	4.99		ug/L		100	79 - 118	1	20
2,2-Dichloropropane	5.00	4.38		ug/L		88	60 - 139	8	20
2-Butanone (MEK)	20.0	19.3		ug/L		96	56 - 143	4	20
2-Chlorotoluene	5.00	4.70		ug/L		94	79 - 122	12	20
2-Hexanone	20.0	19.8	Q	ug/L		99	57 - 139	23	20
4-Chlorotoluene	5.00	4.93		ug/L		99	78 - 122	1	20
4-Isopropyltoluene	5.00	4.57		ug/L		91	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	20.0	19.6		ug/L		98	67 - 130	12	20
Acetone	20.0	20.9		ug/L		105	39 - 160	8	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-404562/5
Matrix: Water
Analysis Batch: 404562

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	5.00	4.65		ug/L		93	79 - 120	0	20
Bromobenzene	5.00	5.01		ug/L		100	80 - 120	1	20
Bromochloromethane	5.00	4.64		ug/L		93	78 - 123	2	20
Bromodichloromethane	5.00	4.53		ug/L		91	79 - 125	3	20
Bromoform	5.00	5.29		ug/L		106	66 - 130	4	20
Bromomethane	5.00	4.49		ug/L		90	53 - 141	2	20
Carbon disulfide	5.00	4.57		ug/L		91	64 - 133	5	20
Carbon tetrachloride	5.00	4.18		ug/L		84	72 - 136	6	20
Chlorobenzene	5.00	4.96		ug/L		99	82 - 118	0	20
Chloroethane	5.00	4.54		ug/L		91	60 - 138	2	20
Chloroform	5.00	4.47		ug/L		89	79 - 124	1	20
Chloromethane	5.00	3.95		ug/L		79	50 - 139	3	20
cis-1,2-Dichloroethene	5.00	4.59		ug/L		92	78 - 123	1	20
cis-1,3-Dichloropropene	5.00	5.19		ug/L		104	75 - 124	0	20
Dibromochloromethane	5.00	4.99		ug/L		100	74 - 126	7	20
Dibromomethane	5.00	4.48		ug/L		90	79 - 123	3	20
Dichlorodifluoromethane	5.00	3.37		ug/L		67	32 - 152	3	20
Ethylbenzene	5.00	5.24		ug/L		105	79 - 121	7	20
Hexachlorobutadiene	5.00	4.97		ug/L		99	66 - 134	8	20
Isopropylbenzene	5.00	4.65		ug/L		93	72 - 131	3	20
m,p-Xylene	5.00	5.09		ug/L		102	80 - 121	4	20
Methyl iodide	5.00	4.57		ug/L		91	69 - 131	1	20
Methyl tert-butyl ether	5.00	4.67	J	ug/L		93	71 - 124	4	20
Methylene Chloride	5.00	4.91	J	ug/L		98	74 - 124	0	20
Naphthalene	5.00	5.13		ug/L		103	61 - 128	19	20
n-Butylbenzene	5.00	4.58		ug/L		92	75 - 128	6	20
N-Propylbenzene	5.00	4.48		ug/L		90	76 - 126	2	20
o-Xylene	5.00	5.10		ug/L		102	78 - 122	1	20
sec-Butylbenzene	5.00	4.54		ug/L		91	77 - 126	9	20
Styrene	5.00	5.14		ug/L		103	78 - 123	1	20
tert-Butylbenzene	5.00	4.49		ug/L		90	78 - 124	1	20
Tetrachloroethene	5.00	5.15		ug/L		103	74 - 129	3	20
Toluene	5.00	4.73		ug/L		95	80 - 121	3	20
trans-1,2-Dichloroethene	5.00	4.71		ug/L		94	75 - 124	2	20
trans-1,3-Dichloropropene	5.00	4.94		ug/L		99	73 - 127	2	20
Trichloroethene	5.00	4.69		ug/L		94	79 - 123	3	20
Trichlorofluoromethane	5.00	4.12		ug/L		82	65 - 141	2	20
Vinyl acetate	10.0	9.85		ug/L		98	54 - 146	16	20
Vinyl chloride	5.00	3.95		ug/L		79	58 - 137	1	20
Xylenes, Total	10.0	10.2		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*
Toluene-d8 (Surr)	*110*		*89 - 112*

Method: 8260B - Volatile Organic Compounds (GC/MS) - IN2

Lab Sample ID: LCS 280-404562/10
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diisopropyl ether - IN2	5.00	4.47	J	ug/L		89	67 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr) - IN2	*108*		*81 - 118*
4-Bromofluorobenzene (Surr) - IN2	*97*		*85 - 114*
Dibromofluoromethane (Surr) - IN2	*107*		*80 - 119*
Toluene-d8 (Surr) - IN2	*99*		*89 - 112*

Lab Sample ID: LCSD 280-404562/11
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404562

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diisopropyl ether - IN2	5.00	4.37	J	ug/L		87	67 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr) - IN2	*101*		*81 - 118*
4-Bromofluorobenzene (Surr) - IN2	*91*		*85 - 114*
Dibromofluoromethane (Surr) - IN2	*102*		*80 - 119*
Toluene-d8 (Surr) - IN2	*96*		*89 - 112*

QC Association Summary

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

GC/MS VOA

Analysis Batch: 404562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105986-1	775VMW-5_0118	Total/NA	Water	8260B	
280-105986-2	775VMW-5_0118-a	Total/NA	Water	8260B	
280-105986-3	775MW-6_0118	Total/NA	Water	8260B	
280-105986-4	775MW-27_0118	Total/NA	Water	8260B	
280-105986-5	775VMW-8_0118	Total/NA	Water	8260B	
280-105986-6	775-AB_013018	Total/NA	Water	8260B	
280-105986-7	775-AB_013118	Total/NA	Water	8260B	
280-105986-8	775TB_013118	Total/NA	Water	8260B	
MB 280-404562/6	Method Blank	Total/NA	Water	8260B	
LCS 280-404562/10 - IN2	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-404562/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-404562/11 - IN2	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 280-404562/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Client Sample ID: 775VMW-5_0118
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 10:38	MRM	TAL DEN

Client Sample ID: 775VMW-5_0118-a
Date Collected: 01/30/18 13:40
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 11:01	MRM	TAL DEN

Client Sample ID: 775MW-6_0118
Date Collected: 01/31/18 11:45
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 11:22	MRM	TAL DEN

Client Sample ID: 775MW-27_0118
Date Collected: 01/31/18 13:30
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 12:10	MRM	TAL DEN

Client Sample ID: 775VMW-8_0118
Date Collected: 01/31/18 15:30
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 12:32	MRM	TAL DEN

Client Sample ID: 775-AB_013018
Date Collected: 01/30/18 13:45
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 12:54	MRM	TAL DEN

Lab Chronicle

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Client Sample ID: 775-AB_013118

Date Collected: 01/31/18 11:50
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 13:16	MRM	TAL DEN

Client Sample ID: 775TB_013118

Date Collected: 01/31/18 00:00
Date Received: 02/01/18 09:00

Lab Sample ID: 280-105986-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	404562	02/12/18 13:37	MRM	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-105986-1
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

Analysis Method	Prep Method	Matrix	Analyte		
New York		NELAP	2	11964	04-01-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,1,1-Trichloroethane
8260B		Water	1,1,2,2-Tetrachloroethane
8260B		Water	1,1,2-Trichloroethane
8260B		Water	1,1-Dichloroethane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,3-Trichloropropane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	1,2-Dibromoethane
8260B		Water	1,2-Dichlorobenzene
8260B		Water	1,2-Dichloroethane
8260B		Water	1,2-Dichloroethene, Total
8260B		Water	1,2-Dichloropropane
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichlorobenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Butanone (MEK)
8260B		Water	2-Chlorotoluene
8260B		Water	2-Hexanone
8260B		Water	4-Chlorotoluene
8260B		Water	4-Isopropyltoluene
8260B		Water	4-Methyl-2-pentanone (MIBK)
8260B		Water	Acetone
8260B		Water	Benzene
8260B		Water	Bromobenzene
8260B		Water	Bromochloromethane
8260B		Water	Bromodichloromethane
8260B		Water	Bromoform
8260B		Water	Bromomethane
8260B		Water	Carbon disulfide
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chloroethane
8260B		Water	Chloroform
8260B		Water	Chloromethane
8260B		Water	cis-1,2-Dichloroethene

Laboratory: TestAmerica Denver (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11964	04-01-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	cis-1,3-Dichloropropene
8260B		Water	Dibromochloromethane
8260B		Water	Dibromomethane
8260B		Water	Dichlorodifluoromethane
8260B		Water	Diisopropyl ether
8260B		Water	Ethylbenzene
8260B		Water	Hexachlorobutadiene
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	Methyl iodide
8260B		Water	Methyl tert-butyl ether
8260B		Water	Methylene Chloride
8260B		Water	Naphthalene
8260B		Water	n-Butylbenzene
8260B		Water	N-Propylbenzene
8260B		Water	o-Xylene
8260B		Water	sec-Butylbenzene
8260B		Water	Styrene
8260B		Water	tert-Butylbenzene
8260B		Water	Tetrachloroethene
8260B		Water	Toluene
8260B		Water	trans-1,2-Dichloroethene
8260B		Water	trans-1,3-Dichloropropene
8260B		Water	Trichloroethene
8260B		Water	Trichlorofluoromethane
8260B		Water	Vinyl acetate
8260B		Water	Vinyl chloride
8260B		Water	Xylenes, Total

Method Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-105986-1
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Bhate Environmental
Project/Site: BRAC Eastern: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-105986-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-105986-1	775VMW-5_0118	Water	01/30/18 13:40	02/01/18 09:00
280-105986-2	775VMW-5_0118-a	Water	01/30/18 13:40	02/01/18 09:00
280-105986-3	775MW-6_0118	Water	01/31/18 11:45	02/01/18 09:00
280-105986-4	775MW-27_0118	Water	01/31/18 13:30	02/01/18 09:00
280-105986-5	775VMW-8_0118	Water	01/31/18 15:30	02/01/18 09:00
280-105986-6	775-AB_013018	Water	01/30/18 13:45	02/01/18 09:00
280-105986-7	775-AB_013118	Water	01/31/18 11:50	02/01/18 09:00
280-105986-8	775TB_013118	Water	01/31/18 00:00	02/01/18 09:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Analysis Batch Number: 403042

Lab Sample ID: IC 280-403042/2 Client Sample ID:

Date Analyzed: 01/29/18 10:19 Lab File ID: H3794.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,2-Dichloroethane	6.41	Assign Peak	wickhamt	01/30/18 08:22
1,1,2-Trichloroethane		Invalid Compound ID	wickhamt	01/30/18 08:23
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	wickhamt	01/30/18 08:22
Acrolein		Invalid Compound ID	wickhamt	01/30/18 08:21
Cyclohexanone		Invalid Compound ID	wickhamt	01/30/18 08:23
Ethyl methacrylate		Invalid Compound ID	wickhamt	01/30/18 08:23
t-Butyl alcohol		Invalid Compound ID	wickhamt	01/30/18 08:21
trans-1,4-Dichloro-2-butene		Invalid Compound ID	wickhamt	01/30/18 08:24
Vinyl acetate		Invalid Compound ID	wickhamt	01/30/18 08:22

Lab Sample ID: IC 280-403042/8 Client Sample ID:

Date Analyzed: 01/29/18 12:30 Lab File ID: H3800.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Chloromethane	2.31	Shouldering	wickhamt	01/30/18 09:00

Lab Sample ID: ICV 280-403042/9 Client Sample ID:

Date Analyzed: 01/29/18 13:14 Lab File ID: H3802.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	wickhamt	01/30/18 09:18
2-Chloroethyl vinyl ether		Invalid Compound ID	wickhamt	01/30/18 09:18

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Analysis Batch Number: 403042

Lab Sample ID: IC 280-403042/10 Client Sample ID:

Date Analyzed: 01/29/18 13:35 Lab File ID: H3803.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
n-Butanol		Invalid Compound ID	wickhamt	01/30/18 09:19

Lab Sample ID: IC 280-403042/11 Client Sample ID:

Date Analyzed: 01/29/18 13:57 Lab File ID: H3804.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Ethanol	3.22	Baseline	wickhamt	01/30/18 09:26

Lab Sample ID: IC 280-403042/12 Client Sample ID:

Date Analyzed: 01/29/18 14:19 Lab File ID: H3805.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Ethanol	3.16	Baseline	wickhamt	01/30/18 09:25

Lab Sample ID: ICIS 280-403042/13 Client Sample ID:

Date Analyzed: 01/29/18 14:41 Lab File ID: H3806.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Isopropyl alcohol		Invalid Compound ID	wickhamt	01/30/18 09:22

Lab Sample ID: IC 280-403042/14 Client Sample ID:

Date Analyzed: 01/29/18 15:03 Lab File ID: H3807.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Isopropyl alcohol		Invalid Compound ID	wickhamt	01/30/18 09:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Analysis Batch Number: 403042

Lab Sample ID: IC 280-403042/15 Client Sample ID:

Date Analyzed: 01/29/18 15:25 Lab File ID: H3808.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Isopropyl alcohol		Invalid Compound ID	wickhamt	01/30/18 09:23

Lab Sample ID: ICV 280-403042/16 Client Sample ID:

Date Analyzed: 01/29/18 15:47 Lab File ID: H3809.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Acetonitrile		Invalid Compound ID	wickhamt	01/30/18 09:34
Isopropyl alcohol		Invalid Compound ID	wickhamt	01/30/18 09:34

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Analysis Batch Number: 404562

Lab Sample ID: MB 280-404562/6 Client Sample ID:

Date Analyzed: 02/12/18 09:33 Lab File ID: H4162.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	moanm	02/12/18 17:31

Lab Sample ID: 280-105986-1 Client Sample ID: 775VMW-5_0118

Date Analyzed: 02/12/18 10:38 Lab File ID: H4165.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	moanm	02/12/18 17:32

Lab Sample ID: 280-105986-2 Client Sample ID: 775VMW-5_0118-a

Date Analyzed: 02/12/18 11:01 Lab File ID: H4166.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Acetone		Invalid Compound ID	moanm	02/12/18 17:32

Lab Sample ID: 280-105986-3 Client Sample ID: 775MW-6_0118

Date Analyzed: 02/12/18 11:22 Lab File ID: H4167.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	moanm	02/12/18 17:33

Lab Sample ID: 280-105986-4 Client Sample ID: 775MW-27_0118

Date Analyzed: 02/12/18 12:10 Lab File ID: H4169.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	moanm	02/12/18 17:33
Acetone		Invalid Compound ID	moanm	02/12/18 17:33

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Analysis Batch Number: 404562

Lab Sample ID: 280-105986-5 Client Sample ID: 775VMW-8_0118

Date Analyzed: 02/12/18 12:32 Lab File ID: H4170.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION REASON	ANALYST	DATE
Acetone		Invalid Compound ID	moanm	02/12/18 17:34

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent ID	Volume Added	Analyte	Concentration
MV-2cleve+AVA_00032	01/31/18	01/01/18	P&T Methanol, Lot 177891	10 mL	MV-568720_00018	202.5 uL	Acrolein	399.938 ug/mL
					MV-569724_00013	160 uL	Vinyl acetate	80 ug/mL
.MV-568720_00018	01/31/18		RESTEK, Lot A0128953		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569724_00013	04/30/18		RESTEK, Lot A0131948		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-2cleve+AVA_00033	03/31/18	02/01/18	P&T Methanol, Lot 177891	10 mL	MV-569724_00013	160 uL	Vinyl acetate	80 ug/mL
.MV-569724_00013	04/30/18		RESTEK, Lot A0131948		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-568718-D_00008	03/31/21		RESTEK, Lot A0118105		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00090	06/21/18	12/21/17	P&T Methanol, Lot 177891	100 mL	MV-567650_00027	10 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00025							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Xylenes, Total	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19		Ultra Scientific, Lot CH-3248Z		(Purchased Reagent)		BFB	2000 ug/mL
MV-Gas/Ket A_00069	07/05/18	01/05/18	P&T Methanol, Lot 177891	10 mL	MV-569721_00004	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722_00006	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Dichlorofluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
					MV-569727_00006	640 uL	Cyclohexanone	1600 ug/mL
.MV-569721_00004	01/31/20		RESTEK, Lot A0123890		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent ID	Volume Added	Analyte	Concentration
.MV-569722_00006	01/31/20		RESTEK, Lot A0124278		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569727_00006	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
MV-Gas/Ket B_00040	07/05/18	01/05/18	P&T Methanol, Lot 177891	10 mL	MV-569721.sec_00005	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722.sec_00004	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00004	01/31/20		RESTEK, Lot A0124116		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Main A_00033	03/31/18	11/19/17	P&T Methanol, Lot 177891	20 mL	MV-569720_00003	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent Reagent ID	Volume Added	Analyte	Concentration
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	400 ug/mL
							3-Chloro-1-propene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Acrylonitrile	400 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Dibromomethane	40 ug/mL
							Ethyl ether	40 ug/mL
							Ethyl methacrylate	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexane	40 ug/mL
							Isobutyl alcohol	1000 ug/mL
							Isopropylbenzene	40 ug/mL
							m,p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl iodide	40 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Tetrahydrofuran	80 ug/mL
							Toluene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent: Reagent ID	Parent Reagent: Volume Added	Analyte	Concentration
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							trans-1,4-Dichloro-2-butene	40 ug/mL
							Trichloroethene	40 ug/mL
					MV-CUS17739_00002	800 uL	1-Chlorohexane	40 ug/mL
							2-Pentanone	160 ug/mL
							sec-Butyl Alcohol	1200 ug/mL
.MV-569720_00003	03/31/18		RESTEK, Lot A0118177		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent Reagent ID	Volume Added	Analyte	Concentration
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00002	07/31/19		Ultra, Lot CR-2819		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-Main A_00033	03/31/18	11/19/17	P&T Methanol, Lot 177891	20 mL	MV-569720_00003	320 uL	1,2-Dichloroethene, Total	80 ug/mL
							Xylenes, Total	80 ug/mL
.MV-569720_00003	03/31/18		RESTEK, Lot A0118177		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Main B_00020	07/25/18	01/25/18	P&T Methanol, Lot 127999	20 mL	MV-569720.sec_00002	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent Reagent ID	Volume Added	Analyte	Concentration
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloroethene, Total	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Dibromomethane	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Isopropylbenzene	40 ug/mL
							m,p-Xylene	40 ug/mL
							Methyl iodide	40 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							Trichloroethene	40 ug/mL
							Xylenes, Total	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent Reagent ID	Volume Added	Analyte	Concentration
.MV-569720.sec_00002	07/31/18		RESTEK, Lot A0120604		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent ID	Volume Added	Analyte	Concentration
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-SS 2-Cleve_00042	04/30/18	01/01/18	P&T Methanol, Lot 177891	10 mL	MV-569724.sec_00016	160 uL	Vinyl acetate	80 ug/mL
.MV-569724.sec_00016	04/30/18		RESTEK, Lot A0131389		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-Supp A_00028	02/25/18	01/17/18	P&T Methanol, Lot 12799	10 mL	mv-570808_00003	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	80 ug/mL
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
							n-Butanol	1000 ug/mL
					mv-570809_00003	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-571993_00001	160 uL	Diisopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-571994_00001	240 uL	Ethanol	2400 ug/mL
					mv-VO-TAOH-5_00003	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
.mv-570808_00003	06/30/18		Restek, Lot A0123685		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00003	06/30/18		Restek, Lot A0123728		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00001	12/31/18		RESTEK, Lot A0123796		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00001	06/30/20		RESTEK, Lot A0128797		(Purchased Reagent)		Ethanol	100000 ug/mL
.mv-VO-TAOH-5_00003	02/25/18		SPEX, Lot BW170829016		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-Supp B_00019	02/25/18	09/09/17	P&T Methanol, Lot 127999	10 mL	mv-571993.sec_00001	160 uL	Diisopropyl ether	40 ug/mL
.mv-571993.sec_00001	12/31/18		RESTEK, Lot A0123771		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL

Reagent

MV-567650_00027

CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

1	Dibromofluoromethane		2,521.2	µg/mL	+/- 14.6582	µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 0012016)			+/- 141.3584	µg/mL	Unstressed
	Purity 99%				+/- 144.6660	µg/mL	Stressed
2	1,2-Dichloroethane-d4		2,513.8	µg/mL	+/- 14.6157	µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot PR-25433)			+/- 140.9489	µg/mL	Unstressed
	Purity 98%				+/- 144.2469	µg/mL	Stressed
3	Toluene-d8		2,519.4	µg/mL	+/- 14.6480	µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot PR-27311)			+/- 141.2603	µg/mL	Unstressed
	Purity 99%				+/- 144.5656	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)		2,520.8	µg/mL	+/- 14.6559	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KOV)			+/- 141.3360	µg/mL	Unstressed
	Purity 99%				+/- 144.6430	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00008

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. 568718 **Lot No.:** A0118105

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	tert-Butyl-d9-alcohol		5,023.8	µg/mL	+/- 29.2073	µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot I201P6)			+/- 107.5597	µg/mL	Unstressed
	Purity 99%				+/- 110.6867	µg/mL	Stressed
2	2-Butanone-d5		1,251.1	µg/mL	+/- 7.2740	µg/mL	Gravimetric
	CAS # 24313-50-6	(Lot M276)			+/- 26.7862	µg/mL	Unstressed
	Purity 99%				+/- 27.5649	µg/mL	Stressed
3	Fluorobenzene		250.2	µg/mL	+/- 1.4578	µg/mL	Gravimetric
	CAS # 462-06-6	(Lot BCBK8171V)			+/- 5.3567	µg/mL	Unstressed
	Purity 99%				+/- 5.5123	µg/mL	Stressed
4	1,4-Dioxane-d8		5,005.7	µg/mL	+/- 29.1020	µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot I-19239)			+/- 107.1722	µg/mL	Unstressed
	Purity 99%				+/- 110.2879	µg/mL	Stressed
5	Chlorobenzene-d5		250.1	µg/mL	+/- 1.4575	µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-23926)			+/- 5.3556	µg/mL	Unstressed
	Purity 99%				+/- 5.5112	µg/mL	Stressed
6	1,4-Dichlorobenzene-d4		250.0	µg/mL	+/- 1.4566	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/- 5.3524	µg/mL	Unstressed
	Purity 99%				+/- 5.5079	µg/mL	Stressed

Reagent

MV-569720.sec_00002

CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0120604

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

1	Diethyl ether (ethyl ether)		2,501.1	µg/mL	+/-	14.5415	µg/mL	Gravimetric
	CAS # 60-29-7.SEC	(Lot F23X068)			+/-	150.9014	µg/mL	Unstressed
	Purity 98%				+/-	151.2597	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 76-13-1.SEC	(Lot 18342)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
3	1,1-Dichloroethene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 75-35-4.SEC	(Lot 2767000)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
4	tert-Butanol (TBA)		25,004.1	µg/mL	+/-	145.3683	µg/mL	Gravimetric
	CAS # 75-65-0.SEC	(Lot XYXDO)			+/-	1,508.6067	µg/mL	Unstressed
	Purity 98%				+/-	1,512.1884	µg/mL	Stressed
5	Iodomethane (methyl iodide)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 74-88-4.SEC	(Lot Y25A027)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
6	Methyl acetate		12,501.6	µg/mL	+/-	72.6817	µg/mL	Gravimetric
	CAS # 79-20-9.SEC	(Lot 6WOXM)			+/-	754.2781	µg/mL	Unstressed
	Purity 99%				+/-	756.0689	µg/mL	Stressed
7	Allyl chloride (3-chloropropene)		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 107-05-1.SEC	(Lot VEBOC)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed

8	Methylene chloride (dichloromethane)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
9	Carbon disulfide		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
10	Acrylonitrile		25,020.0	µg/mL	+/-	145.4608	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot UERIL-DA)			+/-	1,509.5667	µg/mL	Unstressed
	Purity 99%				+/-	1,513.1507	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	150.8866	µg/mL	Unstressed
	Purity 98%				+/-	151.2448	µg/mL	Stressed
12	n-Hexane (C6)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
13	1,1-Dichloroethane		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 5035700)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot GI01)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,501.3	µg/mL	+/-	14.5426	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	150.9125	µg/mL	Unstressed
	Purity 97%				+/-	151.2708	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,503.0	µg/mL	+/-	363.3788	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot 83NHH)			+/-	3,771.0811	µg/mL	Unstressed
	Purity 99%				+/-	3,780.0343	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZAQTA-MS)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
18	Bromochloromethane		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 1775400)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
19	Tetrahydrofuran		5,000.3	µg/mL	+/-	29.0719	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot K3V7J-SJ)			+/-	301.6872	µg/mL	Unstressed
	Purity 99%				+/-	302.4035	µg/mL	Stressed
20	1,1,1-Trichloroethane		2,501.3	µg/mL	+/-	14.5429	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot CS160712)			+/-	150.9162	µg/mL	Unstressed
	Purity 98%				+/-	151.2745	µg/mL	Stressed
21	Cyclohexane		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
22	1,1-Dichloropropene		2,500.4	µg/mL	+/-	14.5378	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 4672600)			+/-	150.8626	µg/mL	Unstressed
	Purity 96%				+/-	151.2208	µg/mL	Stressed
23	Carbon tetrachloride		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed

24	n-Heptane (C7)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot OGM01)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
25	1,2-Dichloroethane		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot FO6PK)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
26	Benzene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
27	Trichloroethene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
28	Methylcyclohexane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	150.9492	µg/mL	Unstressed
	Purity 99%				+/-	151.3076	µg/mL	Stressed
29	1,2-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot OGG01)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
30	Bromodichloromethane		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 10171168)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
31	1,4-Dioxane		50,014.8	µg/mL	+/-	290.7749	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot CHA4A)			+/-	3,017.6100	µg/mL	Unstressed
	Purity 99%				+/-	3,024.7743	µg/mL	Stressed
32	Dibromomethane		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot FGI01-OICH)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
34	Toluene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
35	Ethyl methacrylate		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot MLWYK-LS)			+/-	150.9341	µg/mL	Unstressed
	Purity 99%				+/-	151.2925	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot 2ECIC)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 3440900)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
38	1,3-Dichloropropane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot AGN01-EFPC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
39	Tetrachloroethene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed

40	Dibromochloromethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10181507)			+/-	150.9491	µg/mL	Unstressed
	Purity 97%				+/-	151.3074	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
42	Chlorobenzene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
44	Ethylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
45	m-Xylene		1,250.9	µg/mL	+/-	7.2727	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.4708	µg/mL	Unstressed
	Purity 99%				+/-	75.6500	µg/mL	Stressed
46	p-Xylene		1,250.8	µg/mL	+/-	7.2720	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	75.4633	µg/mL	Unstressed
	Purity 99%				+/-	75.6425	µg/mL	Stressed
47	o-Xylene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
48	Styrene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
50	Bromoform		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5139000)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
52	Chloroform		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.5	µg/mL	+/-	14.5436	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	150.9236	µg/mL	Unstressed
	Purity 98%				+/-	151.2819	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed

56	Bromobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
57	1,2,4-Trimethylbenzene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
58	2-Chlorotoluene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
59	4-Chlorotoluene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
60	tert-Butylbenzene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot OGN01-CAI)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
61	1,3,5-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot FGH02-CMLN)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
62	sec-Butylbenzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot OGN01-IMA)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.5	µg/mL	+/-	14.5441	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 1195000)			+/-	150.9278	µg/mL	Unstressed
	Purity 96%				+/-	151.2861	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.9341	µg/mL	Unstressed
	Purity 99%				+/-	151.2925	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
66	n-Butylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot OGN01-PNP)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,500.3	µg/mL	+/-	14.5369	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	150.8539	µg/mL	Unstressed
	Purity 97%				+/-	151.2121	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
70	Hexachlorobutadiene		2,500.7	µg/mL	+/-	14.5394	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 497470099			+/-	150.8792	µg/mL	Unstressed
	Purity 98%				+/-	151.2374	µg/mL	Stressed
71	Naphthalene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,501.6	µg/mL	+/-	14.5444	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	150.9310	µg/mL	Unstressed
	Purity 98%				+/-	151.2893	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 25-Jul-2016 **Balance:** 1127510105

Date Passed: 28-Jul-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

MV-569720_00003

CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720 **Lot No.:** A0118177

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2018 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

1	Diethyl ether (ethyl ether)		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 60-29-7	(Lot SHBG1462V)			+/-	151.0472	µg/mL	Unstressed
	Purity 99%				+/-	151.4059	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 76-13-1	(Lot 00004562)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed
3	1,1-Dichloroethane		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 00008621)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
4	tert-Butanol (TBA)		25,033.4	µg/mL	+/-	145.5386	µg/mL	Gravimetric
	CAS # 75-65-0	(Lot SHBD0362V)			+/-	1,510.3737	µg/mL	Unstressed
	Purity 99%				+/-	1,513.9596	µg/mL	Stressed
5	Iodomethane (methyl iodide)		2,502.9	µg/mL	+/-	14.5522	µg/mL	Gravimetric
	CAS # 74-88-4	(Lot SHBF2149V)			+/-	151.0123	µg/mL	Unstressed
	Purity 98%				+/-	151.3708	µg/mL	Stressed
6	Methyl acetate		12,508.6	µg/mL	+/-	72.7223	µg/mL	Gravimetric
	CAS # 79-20-9	(Lot SHBD7134V)			+/-	754.6987	µg/mL	Unstressed
	Purity 98%				+/-	756.4905	µg/mL	Stressed
7	Allyl chloride (3-chloropropene)		2,500.0	µg/mL	+/-	19.2743	µg/mL	Gravimetric
	CAS # 107-05-1	(Lot SHBF8133V)			+/-	151.3663	µg/mL	Unstressed
	Purity 99%				+/-	151.7231	µg/mL	Stressed

8	Methylene chloride (dichloromethane)		2,521.4	µg/mL	+/-	14.6595	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBF9870V)			+/-	152.1257	µg/mL	Unstressed
	Purity 99%				+/-	152.4869	µg/mL	Stressed
9	Carbon disulfide		2,516.0	µg/mL	+/-	14.6282	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot S20A856)			+/-	151.8014	µg/mL	Unstressed
	Purity 99%				+/-	152.1618	µg/mL	Stressed
10	Acrylonitrile		25,001.3	µg/mL	+/-	145.3518	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot J08Z057)			+/-	1,508.4355	µg/mL	Unstressed
	Purity 99%				+/-	1,512.0167	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,507.8	µg/mL	+/-	14.5807	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBV2831V)			+/-	151.3079	µg/mL	Unstressed
	Purity 98%				+/-	151.6671	µg/mL	Stressed
12	n-Hexane (C6)		2,512.4	µg/mL	+/-	14.6072	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBF7674V)			+/-	151.5827	µg/mL	Unstressed
	Purity 99%				+/-	151.9426	µg/mL	Stressed
13	1,1-dichloroethene		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot 73896KMV)			+/-	151.3263	µg/mL	Unstressed
	Purity 99%				+/-	151.6856	µg/mL	Stressed
14	2,2-Dichloropropane		2,507.6	µg/mL	+/-	14.5795	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBL9720V)			+/-	151.2961	µg/mL	Unstressed
	Purity 99%				+/-	151.6553	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,509.8	µg/mL	+/-	14.5919	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	151.4243	µg/mL	Unstressed
	Purity 99%				+/-	151.7838	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,815.4	µg/mL	+/-	365.1949	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBD1647V)			+/-	3,789.9281	µg/mL	Unstressed
	Purity 99%				+/-	3,798.9260	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,510.0	µg/mL	+/-	14.5934	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot MKBV2134V)			+/-	151.4394	µg/mL	Unstressed
	Purity 99%				+/-	151.7990	µg/mL	Stressed
18	Bromochloromethane		2,507.0	µg/mL	+/-	14.5759	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/-	151.2584	µg/mL	Unstressed
	Purity 99%				+/-	151.6175	µg/mL	Stressed
19	Tetrahydrofuran		5,025.3	µg/mL	+/-	29.2172	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBG2910V)			+/-	303.1956	µg/mL	Unstressed
	Purity 99%				+/-	303.9154	µg/mL	Stressed
20	1,1,1-trichloroethane		2,508.9	µg/mL	+/-	14.5868	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B15MW0705)			+/-	151.3715	µg/mL	Unstressed
	Purity 99%				+/-	151.7309	µg/mL	Stressed
21	Cyclohexane		2,503.4	µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot MKBV3194V)			+/-	151.0397	µg/mL	Unstressed
	Purity 99%				+/-	151.3983	µg/mL	Stressed
22	1,1-Dichloropropene		2,507.4	µg/mL	+/-	14.5781	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot PR09161302)			+/-	151.2810	µg/mL	Unstressed
	Purity 99%				+/-	151.6402	µg/mL	Stressed
23	carbon tetrachloride		2,505.9	µg/mL	+/-	14.5694	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBG1763V)			+/-	151.1905	µg/mL	Unstressed
	Purity 99%				+/-	151.5495	µg/mL	Stressed

24	n-Heptane (C7)		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot MKBV6176V)			+/-	151.4847	µg/mL	Unstressed
	Purity 99%				+/-	151.8443	µg/mL	Stressed
25	1,2-Dichloroethane		2,511.1	µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKBV4565V)			+/-	151.5073	µg/mL	Unstressed
	Purity 99%				+/-	151.8670	µg/mL	Stressed
26	Benzene		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot SHBG1169V)			+/-	151.0095	µg/mL	Unstressed
	Purity 99%				+/-	151.3681	µg/mL	Stressed
27	Trichloroethene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBF0943V)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
28	Methylcyclohexane		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot 50996APV)			+/-	151.0699	µg/mL	Unstressed
	Purity 99%				+/-	151.4285	µg/mL	Stressed
29	1,2-Dichloropropane		2,523.5	µg/mL	+/-	14.6718	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot 01113D0V)			+/-	152.2539	µg/mL	Unstressed
	Purity 99%				+/-	152.6154	µg/mL	Stressed
30	bromodichloromethane		2,509.0	µg/mL	+/-	14.5878	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKBL1617V)			+/-	151.3818	µg/mL	Unstressed
	Purity 98%				+/-	151.7412	µg/mL	Stressed
31	1,4-Dioxane		50,018.1	µg/mL	+/-	290.7945	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG6312V)			+/-	3,017.8137	µg/mL	Unstressed
	Purity 99%				+/-	3,024.9785	µg/mL	Stressed
32	Dibromomethane		2,511.4	µg/mL	+/-	14.6013	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10183283)			+/-	151.5222	µg/mL	Unstressed
	Purity 98%				+/-	151.8820	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,506.0	µg/mL	+/-	14.5701	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 22622)			+/-	151.1981	µg/mL	Unstressed
	Purity 99%				+/-	151.5571	µg/mL	Stressed
34	Toluene		2,515.5	µg/mL	+/-	14.6253	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot MKBV5601V)			+/-	151.7713	µg/mL	Unstressed
	Purity 99%				+/-	152.1316	µg/mL	Stressed
35	Ethyl methacrylate		2,503.1	µg/mL	+/-	14.5534	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot SHBD9190V)			+/-	151.0246	µg/mL	Unstressed
	Purity 99%				+/-	151.3832	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,508.0	µg/mL	+/-	14.5817	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot C584177)			+/-	151.3188	µg/mL	Unstressed
	Purity 99%				+/-	151.6780	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,508.4	µg/mL	+/-	14.5839	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	151.3414	µg/mL	Unstressed
	Purity 99%				+/-	151.7007	µg/mL	Stressed
38	1,3-Dichloropropane		2,522.8	µg/mL	+/-	14.6675	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBG2162V)			+/-	152.2087	µg/mL	Unstressed
	Purity 99%				+/-	152.5701	µg/mL	Stressed
39	Tetrachloroethene		2,518.9	µg/mL	+/-	14.6450	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBD9374V)			+/-	151.9749	µg/mL	Unstressed
	Purity 99%				+/-	152.3357	µg/mL	Stressed

40	dibromochloromethane		2,505.4	µg/mL	+/-	14.5664	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBQ6577V)			+/-	151.1601	µg/mL	Unstressed
	Purity 98%				+/-	151.5190	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	151.1453	µg/mL	Unstressed
	Purity 99%				+/-	151.5041	µg/mL	Stressed
42	Chlorobenzene		2,505.6	µg/mL	+/-	14.5679	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBF0505V)			+/-	151.1755	µg/mL	Unstressed
	Purity 99%				+/-	151.5344	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	151.1453	µg/mL	Unstressed
	Purity 99%				+/-	151.5041	µg/mL	Stressed
44	Ethylbenzene		2,506.1	µg/mL	+/-	14.5708	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBG5920V)			+/-	151.2056	µg/mL	Unstressed
	Purity 99%				+/-	151.5646	µg/mL	Stressed
45	m-Xylene		1,254.4	µg/mL	+/-	7.2930	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF8095V)			+/-	75.6820	µg/mL	Unstressed
	Purity 99%				+/-	75.8617	µg/mL	Stressed
46	p-Xylene		1,250.0	µg/mL	+/-	7.2676	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	75.4180	µg/mL	Unstressed
	Purity 99%				+/-	75.5971	µg/mL	Stressed
47	o-Xylene		2,506.3	µg/mL	+/-	14.5716	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBF7003V)			+/-	151.2132	µg/mL	Unstressed
	Purity 99%				+/-	151.5722	µg/mL	Stressed
48	Styrene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKBS7097V)			+/-	151.0699	µg/mL	Unstressed
	Purity 99%				+/-	151.4285	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,509.4	µg/mL	+/-	14.5897	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10185056)			+/-	151.4017	µg/mL	Unstressed
	Purity 99%				+/-	151.7612	µg/mL	Stressed
50	bromoform		2,503.3	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	151.0322	µg/mL	Unstressed
	Purity 99%				+/-	151.3907	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	151.1378	µg/mL	Unstressed
	Purity 99%				+/-	151.4966	µg/mL	Stressed
52	chloroform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot MKBV2089V)			+/-	151.3037	µg/mL	Unstressed
	Purity 99%				+/-	151.6629	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,504.8	µg/mL	+/-	14.5628	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot BCBH8722V)			+/-	151.1227	µg/mL	Unstressed
	Purity 99%				+/-	151.4815	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.7	µg/mL	+/-	14.5334	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP6041V)			+/-	150.8172	µg/mL	Unstressed
	Purity 95%				+/-	151.1753	µg/mL	Stressed
55	n-Propylbenzene		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBJ0332V)			+/-	151.2886	µg/mL	Unstressed
	Purity 99%				+/-	151.6478	µg/mL	Stressed

56	Bromobenzene		2,515.1	µg/mL	+/-	14.6232	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/-	151.7486	µg/mL	Unstressed
	Purity 99%				+/-	152.1089	µg/mL	Stressed
57	1,2,4-Trimethylbenzene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot MKBJ6229V)			+/-	151.0566	µg/mL	Unstressed
	Purity 98%				+/-	151.4152	µg/mL	Stressed
58	2-Chlorotoluene		2,502.1	µg/mL	+/-	14.5476	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKBH8892V)			+/-	150.9643	µg/mL	Unstressed
	Purity 99%				+/-	151.3227	µg/mL	Stressed
59	4-Chlorotoluene		2,512.6	µg/mL	+/-	14.6086	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKBL7753V)			+/-	151.5978	µg/mL	Unstressed
	Purity 99%				+/-	151.9577	µg/mL	Stressed
60	tert-Butylbenzene		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot S52237V)			+/-	151.3037	µg/mL	Unstressed
	Purity 99%				+/-	151.6629	µg/mL	Stressed
61	1,3,5-Trimethylbenzene		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCBJ6245V)			+/-	150.9869	µg/mL	Unstressed
	Purity 99%				+/-	151.3454	µg/mL	Stressed
62	sec-Butylbenzene		2,521.8	µg/mL	+/-	14.6617	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKBK3151V)			+/-	152.1484	µg/mL	Unstressed
	Purity 99%				+/-	152.5096	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,502.6	µg/mL	+/-	14.5505	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKBK4439V)			+/-	150.9945	µg/mL	Unstressed
	Purity 99%				+/-	151.3529	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,505.8	µg/mL	+/-	14.5686	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	151.1830	µg/mL	Unstressed
	Purity 99%				+/-	151.5419	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,504.1	µg/mL	+/-	14.5592	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	151.0850	µg/mL	Unstressed
	Purity 99%				+/-	151.4437	µg/mL	Stressed
66	n-Butylbenzene		2,503.3	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJV)			+/-	151.0322	µg/mL	Unstressed
	Purity 99%				+/-	151.3907	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,505.5	µg/mL	+/-	14.5672	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	151.1679	µg/mL	Unstressed
	Purity 99%				+/-	151.5268	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,508.6	µg/mL	+/-	14.5854	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot FBL01-JM)			+/-	151.3565	µg/mL	Unstressed
	Purity 99%				+/-	151.7158	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,518.6	µg/mL	+/-	14.6435	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot 26896BM)			+/-	151.9598	µg/mL	Unstressed
	Purity 99%				+/-	152.3206	µg/mL	Stressed
70	Hexachlorobutadiene		2,499.9	µg/mL	+/-	14.5344	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	150.8275	µg/mL	Unstressed
	Purity 98%				+/-	151.1856	µg/mL	Stressed
71	Naphthalene		2,514.9	µg/mL	+/-	14.6217	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	151.7336	µg/mL	Unstressed
	Purity 99%				+/-	152.0938	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,502.0	µg/mL	+/-	14.5468	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBS4859V)			+/-	150.9567	µg/mL	Unstressed
	Purity 99%				+/-	151.3151	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 21-Mar-2016 **Balance:** 1125113331

Date Passed: 28-Mar-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721.sec_00005

CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

1	Acetone			12,501.6	µg/mL	+/-	73.1996	µg/mL	Gravimetric
	CAS #	67-64-1.SEC	(Lot P14A572)			+/-	754.3267	µg/mL	Unstressed
	Purity	99%				+/-	756.1173	µg/mL	Stressed
2	2-Butanone (MEK)			12,503.6	µg/mL	+/-	73.2113	µg/mL	Gravimetric
	CAS #	78-93-3.SEC	(Lot RA58J)			+/-	754.4473	µg/mL	Unstressed
	Purity	99%				+/-	756.2383	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)			12,506.0	µg/mL	+/-	73.2254	µg/mL	Gravimetric
	CAS #	108-10-1.SEC	(Lot E29T040)			+/-	754.5921	µg/mL	Unstressed
	Purity	99%				+/-	756.3834	µg/mL	Stressed
4	2-Hexanone			12,504.0	µg/mL	+/-	73.2137	µg/mL	Gravimetric
	CAS #	591-78-6.SEC	(Lot V3NRA)			+/-	754.4715	µg/mL	Unstressed
	Purity	99%				+/-	756.2625	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00004

Rec 7/10/17 mg
6 x 1 mL vials

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0123890

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone		12,517.5 µg/mL	+/- 72.7778	µg/mL	Gravimetric
	CAS # 67-64-1	(Lot SHBH0922V)		+/- 755.2362	µg/mL	Unstressed
	Purity 99%			+/- 757.0293	µg/mL	Stressed
2	2-Butanone (MEK)		12,521.8 µg/mL	+/- 72.8025	µg/mL	Gravimetric
	CAS # 78-93-3	(Lot SHBF2461V)		+/- 755.4927	µg/mL	Unstressed
	Purity 99%			+/- 757.2863	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)		12,519.8 µg/mL	+/- 72.7909	µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBG3630V)		+/- 755.3720	µg/mL	Unstressed
	Purity 99%			+/- 757.1654	µg/mL	Stressed
4	2-Hexanone		12,508.5 µg/mL	+/- 72.7255	µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKBW0198V)		+/- 754.6932	µg/mL	Unstressed
	Purity 99%			+/- 756.4850	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

MV-569722.sec_00004

CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0124116

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

1	Dichlorodifluoromethane (CFC-12)		2,503.4	µg/mL	+/-	19.5506	µg/mL	Gravimetric
	CAS # 75-71-8.SEC	(Lot 23586)			+/-	140.9699	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed
2	Chloromethane (methyl chloride)		2,508.1	µg/mL	+/-	21.1963	µg/mL	Gravimetric
	CAS # 74-87-3.SEC	(Lot 18343)			+/-	141.4639	µg/mL	Unstressed
	Purity 99%				+/-	144.7353	µg/mL	Stressed
3	Vinyl chloride		2,518.6	µg/mL	+/-	19.4186	µg/mL	Gravimetric
	CAS # 75-01-4.SEC	(Lot MKBK6872V)			+/-	141.7924	µg/mL	Unstressed
	Purity 99%				+/-	145.0836	µg/mL	Stressed
4	1,3-Butadiene		2,504.0	µg/mL	+/-	20.5722	µg/mL	Gravimetric
	CAS # 106-99-0.SEC	(Lot 22331)			+/-	141.1450	µg/mL	Unstressed
	Purity 99%				+/-	144.4130	µg/mL	Stressed
5	Bromomethane (methyl bromide)		2,498.5	µg/mL	+/-	19.9806	µg/mL	Gravimetric
	CAS # 74-83-9.SEC	(Lot Q119-46)			+/-	140.7602	µg/mL	Unstressed
	Purity 99%				+/-	144.0229	µg/mL	Stressed
6	Chloroethane (ethyl chloride)		2,494.9	µg/mL	+/-	17.8868	µg/mL	Gravimetric
	CAS # 75-00-3.SEC	(Lot 00004202)			+/-	140.2786	µg/mL	Unstressed
	Purity 99%				+/-	143.5429	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)		2,503.4	µg/mL	+/-	20.0421	µg/mL	Gravimetric
	CAS # 75-43-4.SEC	(Lot SHBC0858V)			+/-	141.0350	µg/mL	Unstressed
	Purity 99%				+/-	144.3039	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,503.2	µg/mL	+/-	18.7037	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q12B-59)			+/-	140.8450	µg/mL	Unstressed
	Purity 99%				+/-	144.1179	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 12-Jan-2017 **Balance:** 1127510105

Date Passed: 17-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569722_00006

Rec 7/10/17
6x 1 mL vials

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0124278

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,500.5 µg/mL	+/- 16.7232 µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/- 140.4412 µg/mL	Unstressed
	Purity 99%		+/- 143.7161 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,498.7 µg/mL	+/- 17.4998 µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBG7976V)		+/- 140.4406 µg/mL	Unstressed
	Purity 99%		+/- 143.7111 µg/mL	Stressed
3	Vinyl chloride	2,498.4 µg/mL	+/- 16.6753 µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 1026101231B1)		+/- 140.3203 µg/mL	Unstressed
	Purity 99%		+/- 143.5926 µg/mL	Stressed
4	1,3-Butadiene	2,496.9 µg/mL	+/- 17.0619 µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBF3387V)		+/- 140.2843 µg/mL	Unstressed
	Purity 99%		+/- 143.5535 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,500.5 µg/mL	+/- 17.3456 µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/- 140.5211 µg/mL	Unstressed
	Purity 99%		+/- 143.7944 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.5 µg/mL	+/- 16.8189 µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 23593)		+/- 140.4526 µg/mL	Unstressed
	Purity 99%		+/- 143.7272 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 10.0499 µg/mL	Gravimetric
	CAS # 75-43-4 (Lot 4938100)		+/- 139.7786 µg/mL	Unstressed
	Purity 99%		+/- 143.0675 µg/mL	Stressed

Reagent

MV-569727_00006

CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0118487

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

1	Cyclohexanone			25,000.4	µg/mL	+/-	146.3826	µg/mL	Gravimetric
	CAS #	108-94-1	(Lot MKBN5282V)			+/-	1,508.4819	µg/mL	Unstressed
	Purity	99%				+/-	1,512.0629	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 31-Mar-2016 **Balance:** B442140311

Date Passed: 04-Apr-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-570808_00003

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0123685

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2500-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol)	25,022.0 µg/mL	+/- 145.4725 µg/mL	Gravimetric
	CAS # 67-63-0 (Lot SHBG8138V)		+/- 1,237.7836 µg/mL	Unstressed
	Purity 99%		+/- 1,268.5622 µg/mL	Stressed
2	Chloroprene (2-chloro-1,3-butadiene)	2,515.5 µg/mL	+/- 14.6253 µg/mL	Gravimetric
	CAS # 126-99-8 (Lot 161201JLM)		+/- 124.4364 µg/mL	Unstressed
	Purity 99%		+/- 127.5306 µg/mL	Stressed
3	Methacrylonitrile	25,000.0 µg/mL	+/- 145.3446 µg/mL	Gravimetric
	CAS # 126-98-7 (Lot 1012014)		+/- 1,236.6953 µg/mL	Unstressed
	Purity 99%		+/- 1,267.4469 µg/mL	Stressed
4	2,2,4-Trimethylpentane (isooctane)	2,508.0 µg/mL	+/- 14.5817 µg/mL	Gravimetric
	CAS # 540-84-1 (Lot SHBD2922V)		+/- 124.0654 µg/mL	Unstressed
	Purity 99%		+/- 127.1504 µg/mL	Stressed
5	1-Butanol	62,715.5 µg/mL	+/- 364.6143 µg/mL	Gravimetric
	CAS # 71-36-3 (Lot SHBF9309V)		+/- 3,102.3986 µg/mL	Unstressed
	Purity 99%		+/- 3,179.5425 µg/mL	Stressed
6	2-Nitropropane	5,007.8 µg/mL	+/- 29.1158 µg/mL	Gravimetric
	CAS # 79-46-9 (Lot BCBL0537V)		+/- 247.7251 µg/mL	Unstressed
	Purity 98%		+/- 253.8850 µg/mL	Stressed
7	1-Chlorohexane	2,501.5 µg/mL	+/- 14.5436 µg/mL	Gravimetric
	CAS # 544-10-5 (Lot 05107LK)		+/- 123.7413 µg/mL	Unstressed
	Purity 98%		+/- 126.8183 µg/mL	Stressed

Reagent

mv-570809_00003

RESTEK
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0123728

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2500-5000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Ethyl acetate		5,003.0 µg/mL	+/- 29.2937 µg/mL		Gravimetric
	CAS # 141-78-6	(Lot SHBG6401V)		+/- 301.8731 µg/mL		Unstressed
	Purity 99%			+/- 302.5897 µg/mL		Stressed
2	Ethyl acrylate		2,508.0 µg/mL	+/- 14.7183 µg/mL		Gravimetric
	CAS # 140-88-5	(Lot 10129902)		+/- 151.3320 µg/mL		Unstressed
	Purity 99%			+/- 151.6912 µg/mL		Stressed
3	Methyl methacrylate		5,011.5 µg/mL	+/- 29.3434 µg/mL		Gravimetric
	CAS # 80-62-6	(Lot 160830A-BL1)		+/- 302.3859 µg/mL		Unstressed
	Purity 99%			+/- 303.1038 µg/mL		Stressed
4	Butyl acetate		2,505.5 µg/mL	+/- 14.7037 µg/mL		Gravimetric
	CAS # 123-86-4	(Lot SHBF4442V)		+/- 151.1811 µg/mL		Unstressed
	Purity 99%			+/- 151.5400 µg/mL		Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

mv-571993_00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0123796

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,004.5 µg/mL	+/- 145.3705 µg/mL	Gravimetric
	CAS # 75-05-8 (Lot SHBB3177V)		+/- 1,236.9157 µg/mL	Unstressed
	Purity 98%		+/- 1,267.6727 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,505.0 µg/mL	+/- 14.5643 µg/mL	Gravimetric
	CAS # 108-20-3 (Lot SHBC0391V)		+/- 123.9170 µg/mL	Unstressed
	Purity 99%		+/- 126.9983 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,501.5 µg/mL	+/- 14.5439 µg/mL	Gravimetric
	CAS # 637-92-3 (Lot MKBT8400V)		+/- 123.7438 µg/mL	Unstressed
	Purity 99%		+/- 126.8208 µg/mL	Stressed
4	Propionitrile	25,003.8 µg/mL	+/- 145.3664 µg/mL	Gravimetric
	CAS # 107-12-0 (Lot BCBM6569V)		+/- 1,236.8808 µg/mL	Unstressed
	Purity 99%		+/- 1,267.6370 µg/mL	Stressed
5	tert-Amyl alcohol	25,006.0 µg/mL	+/- 145.3794 µg/mL	Gravimetric
	CAS # 75-85-4 (Lot STBB1898V)		+/- 1,236.9921 µg/mL	Unstressed
	Purity 99%		+/- 1,267.7510 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,505.4 µg/mL	+/- 14.5664 µg/mL	Gravimetric
	CAS # 994-05-8 (Lot HMBD8698V)		+/- 123.9353 µg/mL	Unstressed
	Purity 98%		+/- 127.0170 µg/mL	Stressed

Reagent

mv-571994_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571994 **Lot No.:** A0128797

Description : 8260 Ethanol Standard

8260 Ethanol Standard 100,000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,127.0 µg/mL	+/- 586.2354 µg/mL	Gravimetric
	CAS # 64-17-5 (Lot PG0219)		+/- 2,144.8448 µg/mL	Unstressed
	Purity 99%		+/- 2,207.1354 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

MV-CUS17739_00002

Certificate of Analysis

Custom Standard

Product Number: CUS-17739 **Page:** 1 of 1

Lot Number: CR-2819 **Lot Issue Date:** 19-Jun-2017 **Expiration Date:** 31-Jul-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA Scientific's ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-chlorohexane	000544-10-5	RM04263	998.8 ± 5.0 µg/mL
2-pentanone	000107-87-9	RM03775	4020 ± 20 µg/mL
sec-butanol	000078-92-2	RM01299	30116 ± 151 µg/mL

Matrix: methanol (purge & trap grade)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ISO 9001
Registered
TUV USA, Inc.

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 (75. ID: 0.53(mm)

Client Sample ID	Lab Sample ID	DBFM	#	DCA	#	TOL	#	BFB	#
775VMW-5_0118	280-105986-1	105		99		104		98	
775VMW-5_0118-a	280-105986-2	102		98		96		93	
775MW-6_0118	280-105986-3	106		107		97		95	
775MW-27_0118	280-105986-4	106		99		103		98	
775VMW-8_0118	280-105986-5	106		103		104		95	
775-AB_013018	280-105986-6	103		99		97		95	
775-AB_013118	280-105986-7	105		104		100		94	
775TB_013118	280-105986-8	106		103		102		94	
	MB 280-404562/6	107		104		100		96	
	LCS 280-404562/4	104		105		108		98	
	LCS 280-404562/10 IN2	107		108		99		97	
	LCSD 280-404562/5	106		109		110		98	
	LCSD 280-404562/11 IN2	102		101		96		91	

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4160.D

Lab ID: LCS 280-404562/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)		LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.11		102	78-124	
1,1,1-Trichloroethane	5.00	4.10		82	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.14		103	71-121	
1,1,2-Trichloroethane	5.00	4.26		85	80-119	
1,1-Dichloroethane	5.00	4.28		86	77-125	
1,1-Dichloroethene	5.00	4.52		90	71-131	
1,1-Dichloropropene	5.00	4.38		88	79-125	
1,2,3-Trichlorobenzene	5.00	4.83		97	69-129	
1,2,3-Trichloropropane	5.00	4.65		93	73-122	
1,2,4-Trichlorobenzene	5.00	4.70		94	69-130	
1,2,4-Trimethylbenzene	5.00	4.46		89	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.79	J	96	62-128	
1,2-Dibromoethane	5.00	5.28		106	77-121	
1,2-Dichlorobenzene	5.00	4.89		98	80-119	
1,2-Dichloroethane	5.00	4.29		86	73-128	
1,2-Dichloroethene, Total	10.0	9.24		92	79-121	
1,2-Dichloropropane	5.00	4.68		94	78-122	
1,3,5-Trimethylbenzene	5.00	4.46		89	75-124	
1,3-Dichlorobenzene	5.00	5.13		103	80-119	
1,3-Dichloropropane	5.00	5.05		101	80-119	
1,4-Dichlorobenzene	5.00	4.93		99	79-118	
2,2-Dichloropropane	5.00	4.05		81	60-139	
2-Butanone (MEK)	20.0	18.5		93	56-143	
2-Chlorotoluene	5.00	4.18		84	79-122	
2-Hexanone	20.0	15.7		78	57-139	
4-Chlorotoluene	5.00	4.89		98	78-122	
4-Isopropyltoluene	5.00	4.55		91	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	17.4		87	67-130	
Acetone	20.0	19.3		96	39-160	
Benzene	5.00	4.66		93	79-120	
Bromobenzene	5.00	5.07		101	80-120	
Bromochloromethane	5.00	4.53		91	78-123	
Bromodichloromethane	5.00	4.41		88	79-125	
Bromoform	5.00	5.08		102	66-130	
Bromomethane	5.00	4.42		88	53-141	
Carbon disulfide	5.00	4.36		87	64-133	
Carbon tetrachloride	5.00	3.94		79	72-136	
Chlorobenzene	5.00	4.99		100	82-118	
Chloroethane	5.00	4.45		89	60-138	
Chloroform	5.00	4.43		89	79-124	
Chloromethane	5.00	3.85		77	50-139	
cis-1,2-Dichloroethene	5.00	4.63		93	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4160.D

Lab ID: LCS 280-404562/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)		LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.19		104	75-124	
Dibromochloromethane	5.00	4.63		93	74-126	
Dibromomethane	5.00	4.35		87	79-123	
Dichlorodifluoromethane	5.00	3.47		69	32-152	
Ethylbenzene	5.00	4.90		98	79-121	
Hexachlorobutadiene	5.00	4.60		92	66-134	
Isopropylbenzene	5.00	4.52		90	72-131	
m,p-Xylene	5.00	4.89		98	80-121	
Methyl iodide	5.00	4.54		91	69-131	
Methyl tert-butyl ether	5.00	4.49	J	90	71-124	
Methylene Chloride	5.00	4.91	J	98	74-124	
Naphthalene	5.00	4.25		85	61-128	
n-Butylbenzene	5.00	4.33		87	75-128	
N-Propylbenzene	5.00	4.40		88	76-126	
o-Xylene	5.00	5.16		103	78-122	
sec-Butylbenzene	5.00	4.16		83	77-126	
Styrene	5.00	5.11		102	78-123	
tert-Butylbenzene	5.00	4.43		89	78-124	
Tetrachloroethene	5.00	4.98		100	74-129	
Toluene	5.00	4.58		92	80-121	
trans-1,2-Dichloroethene	5.00	4.61		92	75-124	
trans-1,3-Dichloropropene	5.00	4.82		96	73-127	
Trichloroethene	5.00	4.53		91	79-123	
Trichlorofluoromethane	5.00	4.06		81	65-141	
Vinyl acetate	10.0	8.42		84	54-146	
Vinyl chloride	5.00	3.91		78	58-137	
Xylenes, Total	10.0	10.1		101	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4163.D

Lab ID: LCS 280-404562/10 IN2 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)		LCS % REC	QC LIMITS REC	#
Diisopropyl ether	5.00	4.47	J	89	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4161.D

Lab ID: LCSD 280-404562/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.08	102	1	20	78-124	
1,1,1-Trichloroethane	5.00	4.31	86	5	20	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.11	102	1	20	71-121	
1,1,2-Trichloroethane	5.00	4.69	94	10	20	80-119	
1,1-Dichloroethane	5.00	4.35	87	2	20	77-125	
1,1-Dichloroethene	5.00	4.70	94	4	20	71-131	
1,1-Dichloropropene	5.00	4.57	91	4	20	79-125	
1,2,3-Trichlorobenzene	5.00	4.77	95	1	20	69-129	
1,2,3-Trichloropropane	5.00	5.07	101	9	20	73-122	
1,2,4-Trichlorobenzene	5.00	5.08	102	8	20	69-130	
1,2,4-Trimethylbenzene	5.00	4.59	92	3	20	76-124	
1,2-Dibromo-3-Chloropropane	5.00	5.52	110	14	20	62-128	
1,2-Dibromoethane	5.00	5.20	104	1	20	77-121	
1,2-Dichlorobenzene	5.00	4.82	96	1	20	80-119	
1,2-Dichloroethane	5.00	4.32	86	1	20	73-128	
1,2-Dichloroethene, Total	10.0	9.30	93	1	20	79-121	
1,2-Dichloropropane	5.00	4.74	95	1	20	78-122	
1,3,5-Trimethylbenzene	5.00	4.59	92	3	20	75-124	
1,3-Dichlorobenzene	5.00	5.02	100	2	20	80-119	
1,3-Dichloropropane	5.00	5.14	103	2	20	80-119	
1,4-Dichlorobenzene	5.00	4.99	100	1	20	79-118	
2,2-Dichloropropane	5.00	4.38	88	8	20	60-139	
2-Butanone (MEK)	20.0	19.3	96	4	20	56-143	
2-Chlorotoluene	5.00	4.70	94	12	20	79-122	
2-Hexanone	20.0	19.8	99	23	20	57-139	Q
4-Chlorotoluene	5.00	4.93	99	1	20	78-122	
4-Isopropyltoluene	5.00	4.57	91	0	20	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	19.6	98	12	20	67-130	
Acetone	20.0	20.9	105	8	20	39-160	
Benzene	5.00	4.65	93	0	20	79-120	
Bromobenzene	5.00	5.01	100	1	20	80-120	
Bromochloromethane	5.00	4.64	93	2	20	78-123	
Bromodichloromethane	5.00	4.53	91	3	20	79-125	
Bromoform	5.00	5.29	106	4	20	66-130	
Bromomethane	5.00	4.49	90	2	20	53-141	
Carbon disulfide	5.00	4.57	91	5	20	64-133	
Carbon tetrachloride	5.00	4.18	84	6	20	72-136	
Chlorobenzene	5.00	4.96	99	0	20	82-118	
Chloroethane	5.00	4.54	91	2	20	60-138	
Chloroform	5.00	4.47	89	1	20	79-124	
Chloromethane	5.00	3.95	79	3	20	50-139	
cis-1,2-Dichloroethene	5.00	4.59	92	1	20	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4161.D

Lab ID: LCSD 280-404562/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.19	104	0	20	75-124	
Dibromochloromethane	5.00	4.99	100	7	20	74-126	
Dibromomethane	5.00	4.48	90	3	20	79-123	
Dichlorodifluoromethane	5.00	3.37	67	3	20	32-152	
Ethylbenzene	5.00	5.24	105	7	20	79-121	
Hexachlorobutadiene	5.00	4.97	99	8	20	66-134	
Isopropylbenzene	5.00	4.65	93	3	20	72-131	
m,p-Xylene	5.00	5.09	102	4	20	80-121	
Methyl iodide	5.00	4.57	91	1	20	69-131	
Methyl tert-butyl ether	5.00	4.67 J	93	4	20	71-124	
Methylene Chloride	5.00	4.91 J	98	0	20	74-124	
Naphthalene	5.00	5.13	103	19	20	61-128	
n-Butylbenzene	5.00	4.58	92	6	20	75-128	
N-Propylbenzene	5.00	4.48	90	2	20	76-126	
o-Xylene	5.00	5.10	102	1	20	78-122	
sec-Butylbenzene	5.00	4.54	91	9	20	77-126	
Styrene	5.00	5.14	103	1	20	78-123	
tert-Butylbenzene	5.00	4.49	90	1	20	78-124	
Tetrachloroethene	5.00	5.15	103	3	20	74-129	
Toluene	5.00	4.73	95	3	20	80-121	
trans-1,2-Dichloroethene	5.00	4.71	94	2	20	75-124	
trans-1,3-Dichloropropene	5.00	4.94	99	2	20	73-127	
Trichloroethene	5.00	4.69	94	3	20	79-123	
Trichlorofluoromethane	5.00	4.12	82	2	20	65-141	
Vinyl acetate	10.0	9.85	98	16	20	54-146	
Vinyl chloride	5.00	3.95	79	1	20	58-137	
Xylenes, Total	10.0	10.2	102	1	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Matrix: Water Level: Low Lab File ID: H4164.D

Lab ID: LCSD 280-404562/11 IN2 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)		LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Diisopropyl ether	5.00	4.37	J	87	2	20	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Lab File ID: H4162.D | Lab Sample ID: MB 280-404562/6

Matrix: Water | Heated Purge:(Y/N) N

Instrument ID: VMS_H | Date Analyzed: 02/12/2018 09:33

GC Column: DB-624 (75.53) ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-404562/4	H4160.D	02/12/2018 08:49
	LCSD 280-404562/5	H4161.D	02/12/2018 09:11
	LCS 280-404562/10 IN2	H4163.D	02/12/2018 09:55
	LCSD 280-404562/11 IN2	H4164.D	02/12/2018 10:17
775VMW-5_0118	280-105986-1	H4165.D	02/12/2018 10:38
775VMW-5_0118-a	280-105986-2	H4166.D	02/12/2018 11:01
775MW-6_0118	280-105986-3	H4167.D	02/12/2018 11:22
775MW-27_0118	280-105986-4	H4169.D	02/12/2018 12:10
775VMW-8_0118	280-105986-5	H4170.D	02/12/2018 12:32
775-AB_013018	280-105986-6	H4171.D	02/12/2018 12:54
775-AB_013118	280-105986-7	H4172.D	02/12/2018 13:16
775TB_013118	280-105986-8	H4173.D	02/12/2018 13:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab File ID: H3791.D BFB Injection Date: 01/29/2018

Instrument ID: VMS_H BFB Injection Time: 09:18

Analysis Batch No.: 403042

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.4	
75	30.0 - 60.0 % of mass 95	52.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	64.3	
175	5.0 - 9.0 % of mass 174	5.1	(7.9) 1
176	95.0 - 101.0 % of mass 174	63.5	(98.8) 1
177	5.0 - 9.0 % of mass 176	5.7	(9.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-403042/2	H3794.D	01/29/2018	10:19
	IC 280-403042/3	H3795.D	01/29/2018	10:40
	IC 280-403042/4	H3796.D	01/29/2018	11:02
	IC 280-403042/5	H3797.D	01/29/2018	11:24
	IC 280-403042/6	H3798.D	01/29/2018	11:46
	IC 280-403042/7	H3799.D	01/29/2018	12:08
	IC 280-403042/8	H3800.D	01/29/2018	12:30
	ICV 280-403042/9	H3802.D	01/29/2018	13:14
	IC 280-403042/10	H3803.D	01/29/2018	13:35
	IC 280-403042/11	H3804.D	01/29/2018	13:57
	IC 280-403042/12	H3805.D	01/29/2018	14:19
	ICIS 280-403042/13	H3806.D	01/29/2018	14:41
	IC 280-403042/14	H3807.D	01/29/2018	15:03
	IC 280-403042/15	H3808.D	01/29/2018	15:25
	ICV 280-403042/16	H3809.D	01/29/2018	15:47

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab File ID: H4014.D BFB Injection Date: 02/05/2018

Instrument ID: VMS_H BFB Injection Time: 07:29

Analysis Batch No.: 403825

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	43.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	69.1	
175	5.0 - 9.0 % of mass 174	5.8	(8.4) 1
176	95.0 - 101.0 % of mass 174	68.7	(99.4) 1
177	5.0 - 9.0 % of mass 176	5.6	(8.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-403825/10	H4016.D	02/05/2018	08:05
	IC 280-403825/11	H4017.D	02/05/2018	08:28
	IC 280-403825/12	H4018.D	02/05/2018	08:49
	IC 280-403825/13	H4019.D	02/05/2018	09:11
	IC 280-403825/14	H4020.D	02/05/2018	09:34
	ICV 280-403825/15	H4021.D	02/05/2018	09:56

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab File ID: H4157.D BFB Injection Date: 02/12/2018

Instrument ID: VMS_H BFB Injection Time: 07:56

Analysis Batch No.: 404562

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.2	
75	30.0 - 60.0 % of mass 95	46.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	63.9	(95.1) 1
177	5.0 - 9.0 % of mass 176	4.7	(7.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-404562/2	H4158.D	02/12/2018	08:05
	CCV 280-404562/3	H4159.D	02/12/2018	08:27
	LCS 280-404562/4	H4160.D	02/12/2018	08:49
	LCSD 280-404562/5	H4161.D	02/12/2018	09:11
	MB 280-404562/6	H4162.D	02/12/2018	09:33
	LCS 280-404562/10 IN2	H4163.D	02/12/2018	09:55
	LCSD 280-404562/11 IN2	H4164.D	02/12/2018	10:17
775VMW-5_0118	280-105986-1	H4165.D	02/12/2018	10:38
775VMW-5_0118-a	280-105986-2	H4166.D	02/12/2018	11:01
775MW-6_0118	280-105986-3	H4167.D	02/12/2018	11:22
775MW-27_0118	280-105986-4	H4169.D	02/12/2018	12:10
775VMW-8_0118	280-105986-5	H4170.D	02/12/2018	12:32
775-AB_013018	280-105986-6	H4171.D	02/12/2018	12:54
775-AB_013118	280-105986-7	H4172.D	02/12/2018	13:16
775TB_013118	280-105986-8	H4173.D	02/12/2018	13:37
	CCVC 280-404562/28	H4182.D	02/12/2018	16:55
	CCVC 280-404562/29	H4183.D	02/12/2018	17:17

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Sample No.: ICIS 280-403042/13 | Date Analyzed: 01/29/2018 14:41

Instrument ID: VMS_H | GC Column: DB-624 (75.53) ID: 0.53(mm)

Lab File ID (Standard): H3806.D | Heated Purge: (Y/N) N

Calibration ID: 31507

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		150005	3.98	804351	6.74	236273	11.09
UPPER LIMIT		300010	4.48	1608702	7.24	472546	11.59
LOWER LIMIT		75003	3.48	402176	6.24	118137	10.59
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-403042/16		140755	3.98	873152	6.73	244871	11.08
CCV 280-404562/2		103872	3.98	589813	6.76	145734	11.12
CCV 280-404562/3		97057	4.00	565486	6.75	151899	11.10
LCS 280-404562/4		101826	4.00	580066	6.75	141061	11.11
LCSD 280-404562/5		109831	3.99	574033	6.75	141071	11.10
MB 280-404562/6		91032	4.01	564171	6.75	150166	11.10
LCS 280-404562/10		98675	4.00	574694	6.75	153410	11.11
LCSD 280-404562/11 IN2		101963	4.01	598864	6.75	159376	11.10
280-105986-1 IN2	775VMW-5_0118	86603	3.99	582912	6.75	151731	11.10
280-105986-2	775VMW-5_0118-a	98024	4.00	597608	6.75	159014	11.10
280-105986-3	775MW-6_0118	98162	4.01	592658	6.75	159243	11.10
280-105986-4	775MW-27_0118	68401Q	3.98	574833	6.73	149806	11.11
280-105986-5	775VMW-8_0118	102912	4.00	602387	6.75	158233	11.11
280-105986-6	775-AB_013018	87706	3.99	590676	6.75	156089	11.12
280-105986-7	775-AB_013118	95608	3.99	583216	6.75	155522	11.10
280-105986-8	775TB_013118	93728	3.98	588944	6.75	156136	11.10
CCVC 280-404562/28		79060	3.98	532895	6.75	133894	11.11
CCVC 280-404562/29		69840Q	4.02	540867	6.75	145926	11.11

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Sample No.: ICIS 280-403042/13 Date Analyzed: 01/29/2018 14:41

Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53(mm)

Lab File ID (Standard): H3806.D Heated Purge: (Y/N) N

Calibration ID: 31507

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		369391	14.14				
UPPER LIMIT		738782	14.64				
LOWER LIMIT		184696	13.64				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-403042/16		390855	14.13				
CCV 280-404562/2		267472	14.13				
CCV 280-404562/3		258185	14.15				
LCS 280-404562/4		255531	14.14				
LCSD 280-404562/5		260392	14.15				
MB 280-404562/6		246054	14.14				
LCS 280-404562/10 IN2		251529	14.14				
LCSD 280-404562/11 IN2		261932	14.15				
280-105986-1	775VMW-5_0118	241628	14.15				
280-105986-2	775VMW-5_0118-a	256259	14.13				
280-105986-3	775MW-6_0118	260811	14.15				
280-105986-4	775MW-27_0118	243084	14.14				
280-105986-5	775VMW-8_0118	269156	14.14				
280-105986-6	775-AB_013018	252271	14.15				
280-105986-7	775-AB_013118	266131	14.15				
280-105986-8	775TB_013118	259743	14.15				
CCVC 280-404562/28		244207	14.14				
CCVC 280-404562/29		248084	14.14				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118 | Lab Sample ID: 280-105986-1

Matrix: Water | Lab File ID: H4165.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 10:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.5	J	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118 | Lab Sample ID: 280-105986-1

Matrix: Water | Lab File ID: H4165.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 10:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	32		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118 | Lab Sample ID: 280-105986-1

Matrix: Water | Lab File ID: H4165.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 10:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	105		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4165.D
Lims ID: 280-105986-A-1
Client ID: 775VMW-5_0118
Sample Type: Client
Inject. Date: 12-Feb-2018 10:38:30 ALS Bottle#: 17 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-A-1 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:32:29

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.993	3.975	0.018	0	86603	250.0	
*	2 Fluorobenzene	96	6.746	6.763	-0.017	99	582912	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.102	11.118	-0.016	88	151731	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.150	14.132	0.018	96	241628	12.5	
$	8 Dibromofluoromethane (Surr	111	5.910	5.912	-0.002	93	294856	9.97	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.328	6.330	-0.002	0	118800	9.43	
$	10 Toluene-d8 (Surr)	98	8.872	8.874	-0.002	93	581103	9.87	
$	11 4-Bromofluorobenzene (Surr	95	12.774	12.777	-0.003	85	311591	9.27	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43	3.523	3.522	0.001	79	7567	6.46	
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97		5.961				ND	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95	7.216	7.233	-0.017	99	895283	31.7	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	U
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

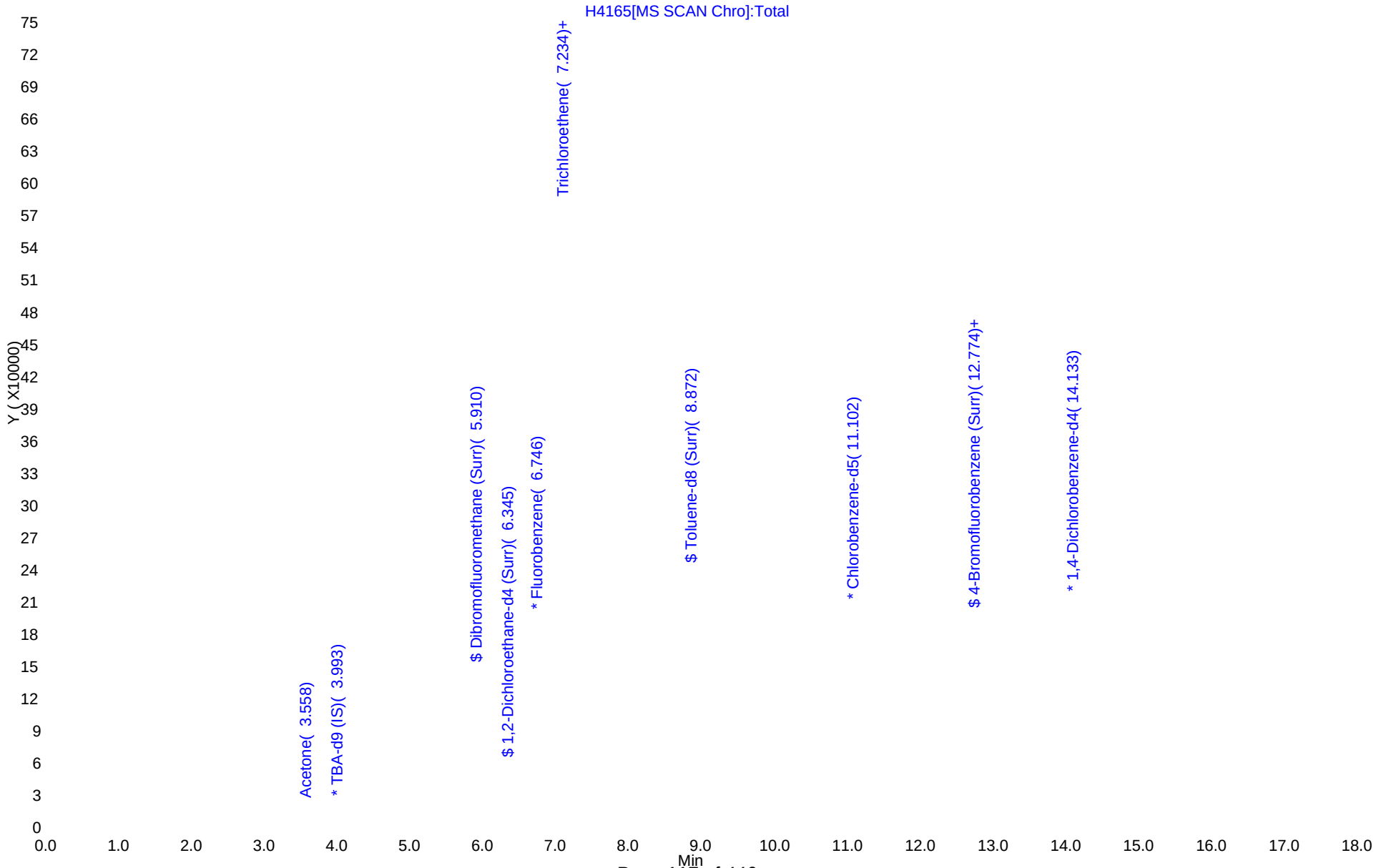
Report Date: 12-Feb-2018 17:39:56 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4165.D

Injection Date:	12-Feb-2018 10:38:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-A-1	Lab Sample ID:	280-105986-1	Worklist Smp#:	12
Client ID:	775VMW-5_0118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4165.D				
Lims ID:	280-105986-A-1				
Client ID:	775VMW-5_0118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 10:38:30	ALS Bottle#:	17	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-A-1 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:32:29		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.97	104.94
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.43	99.25
$ 10 Toluene-d8 (Surr)	9.50	9.87	103.92
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.27	97.58

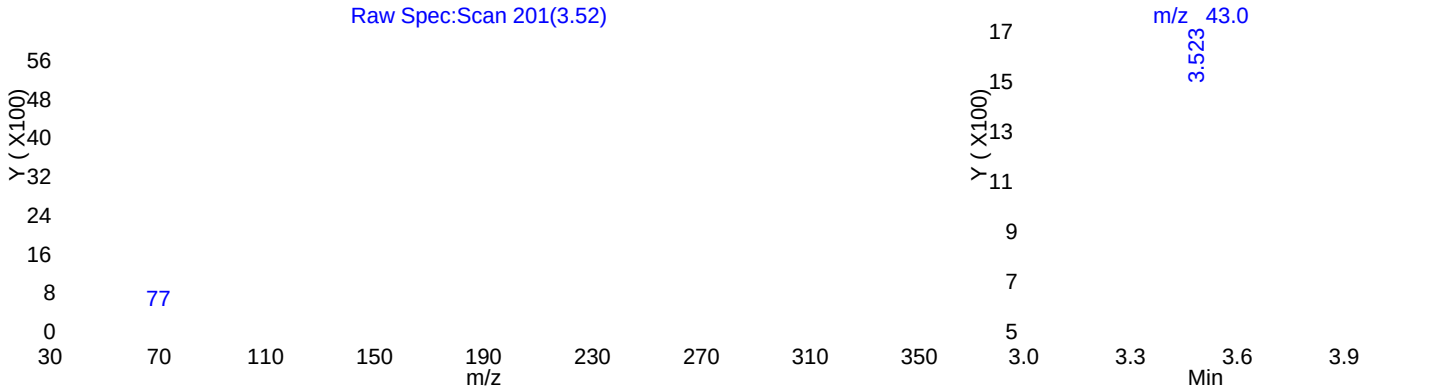
Report Date: 12-Feb-2018 17:39:56 Chrom Revision: 2.2 24-Jan-2018 15:37:30

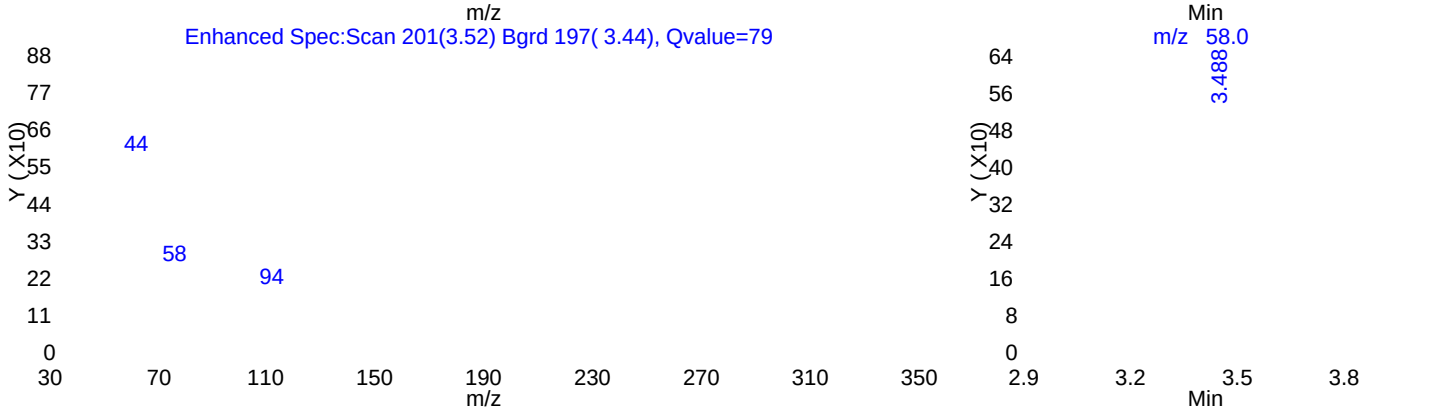
TestAmerica Denver

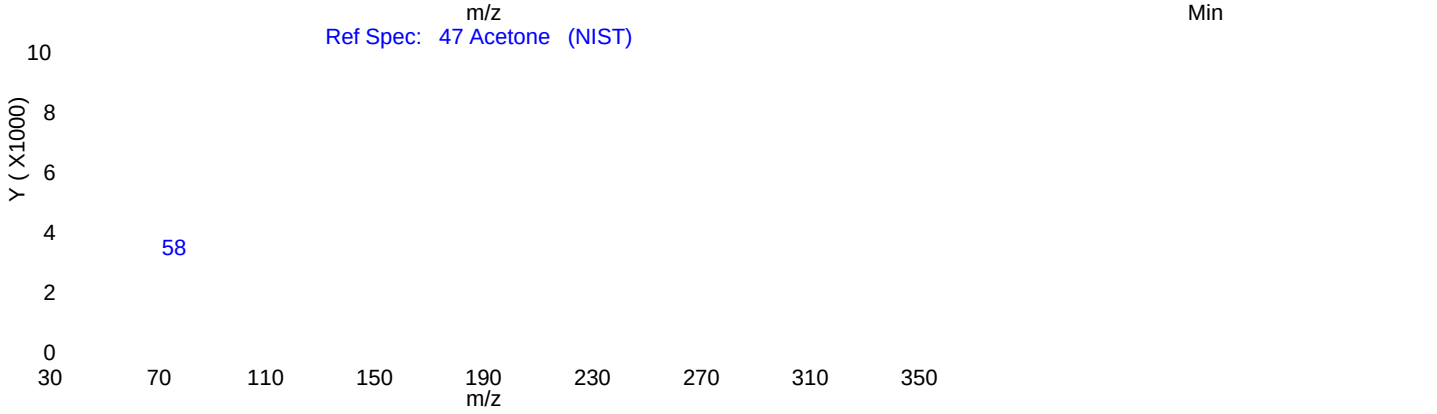
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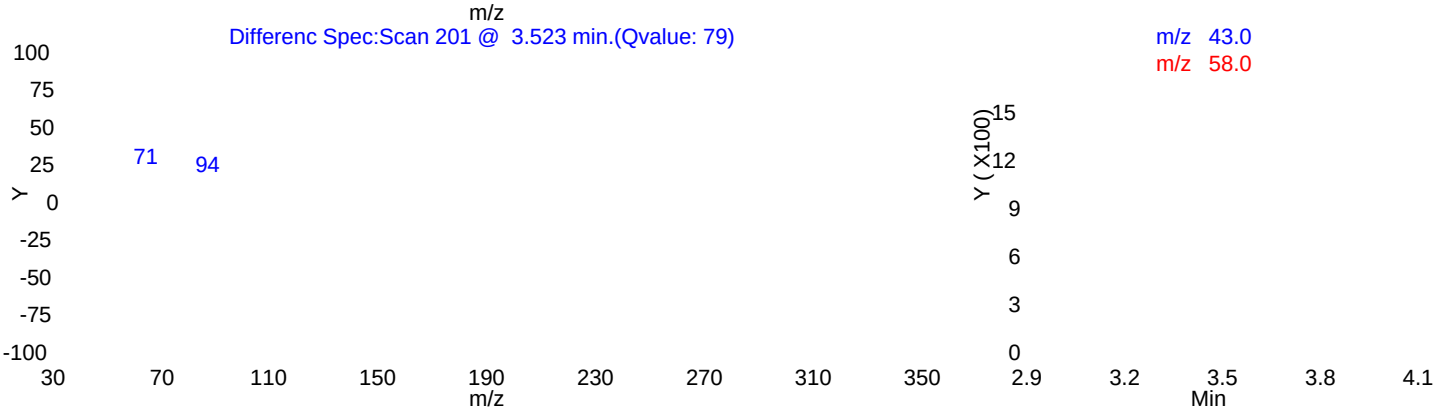
Injection Date:	12-Feb-2018 10:38:30	Instrument ID:	VMS_H
Lims ID:	280-105986-A-1	Lab Sample ID:	280-105986-1
Client ID:	775VMW-5_0118		
Operator ID:	moanm	ALS Bottle#:	17 Worklist Smp#: 12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN

47 Acetone, CAS: 67-64-1









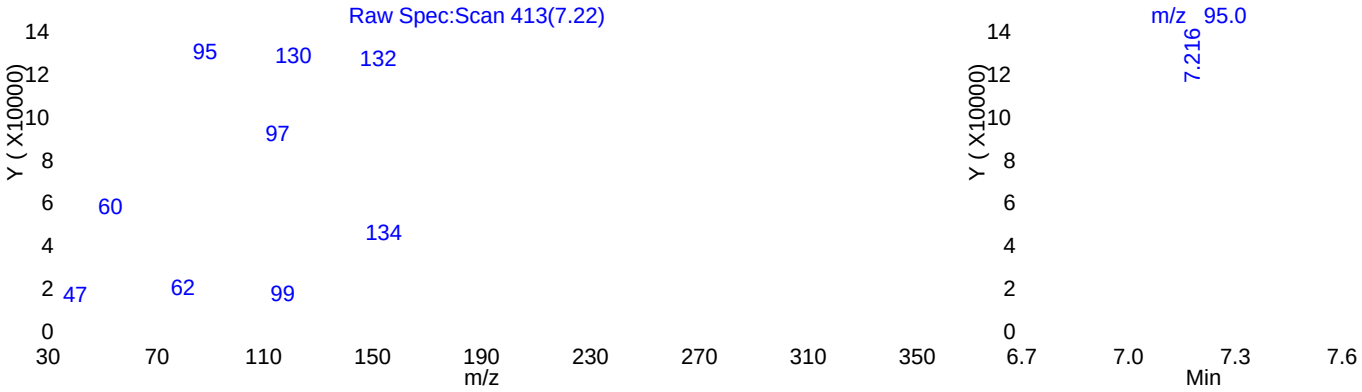
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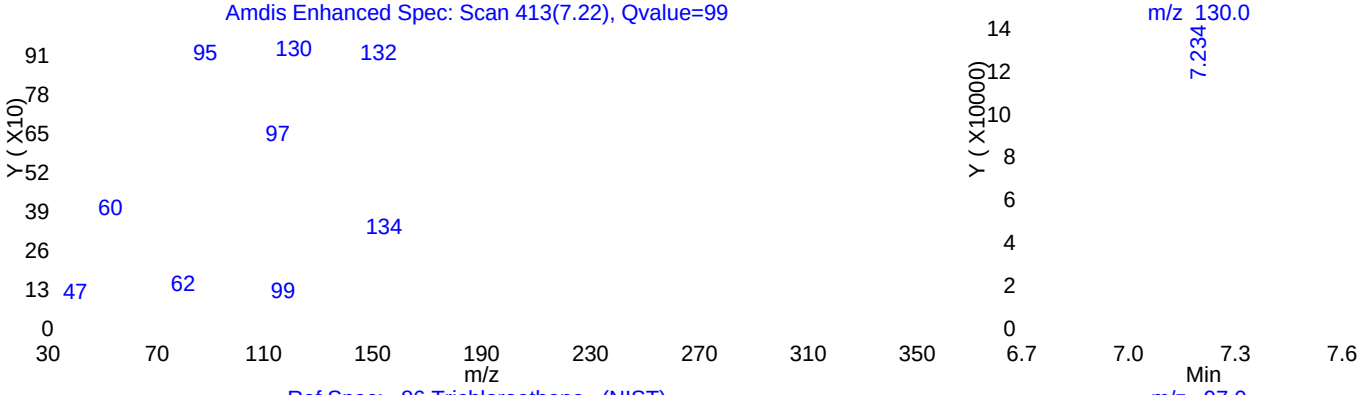
TestAmerica Denver

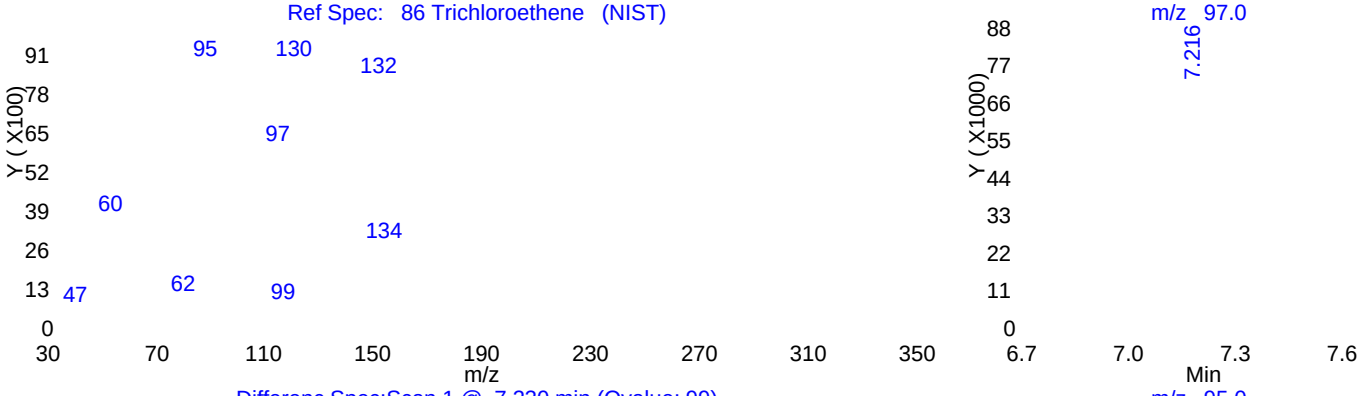
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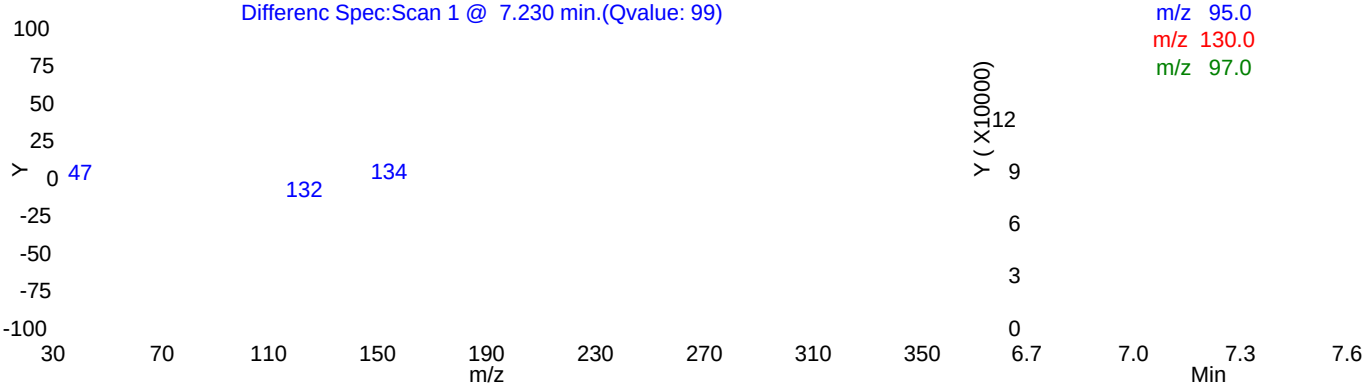
Injection Date:	12-Feb-2018 10:38:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-A-1	Lab Sample ID:	280-105986-1		
Client ID:	775VMW-5_0118				
Operator ID:	moanm	ALS Bottle#:	17	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

86 Trichloroethene, CAS: 79-01-6









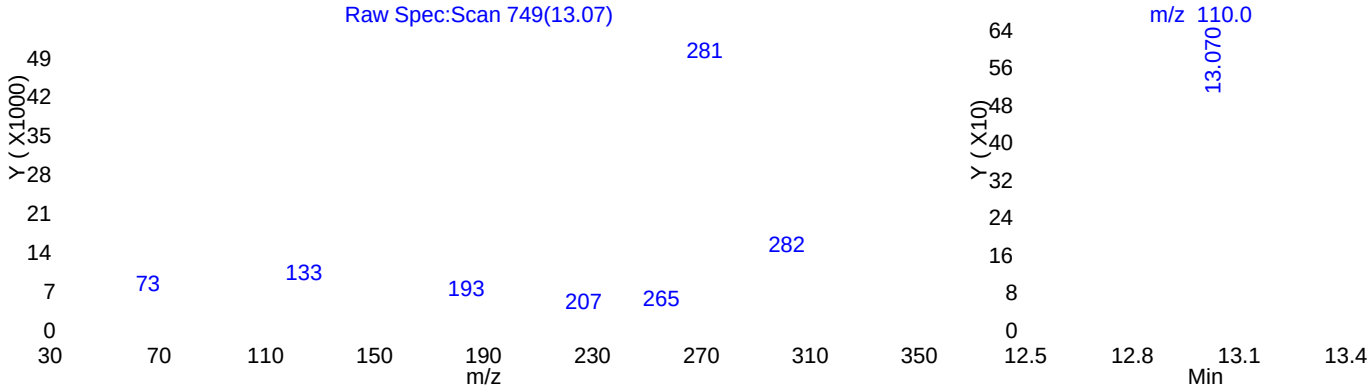
User Disabled Compound Report

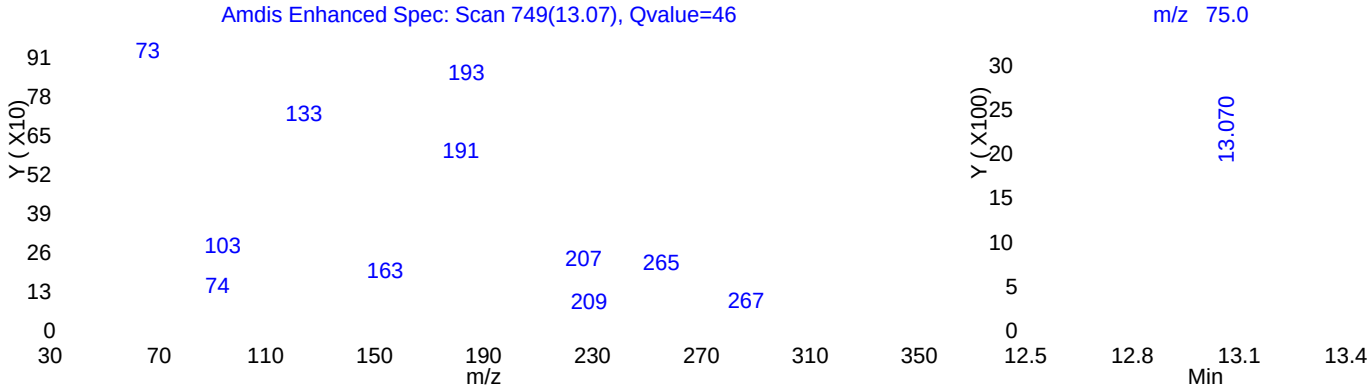
TestAmerica Denver

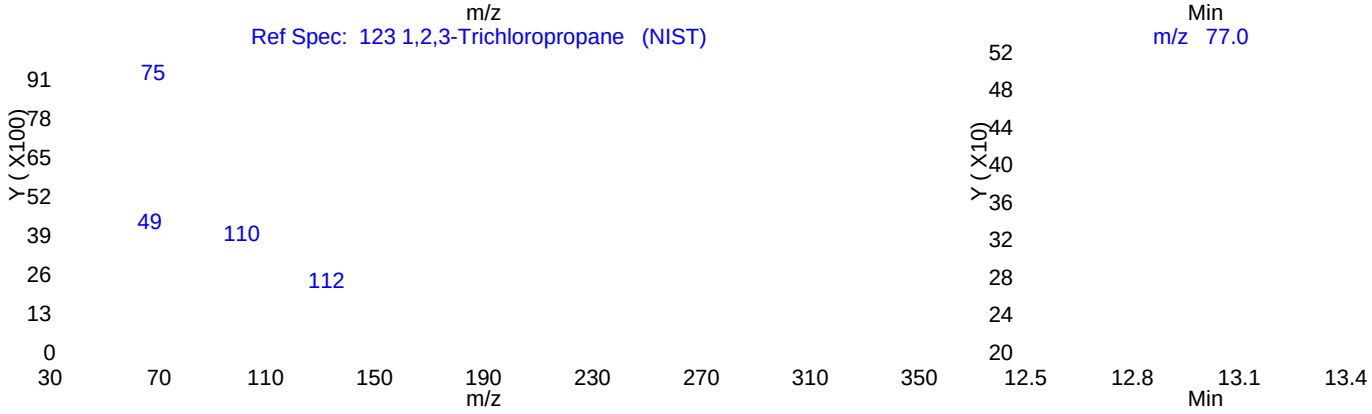
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4165.D				
Injection Date:	12-Feb-2018 10:38:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-A-1	Lab Sample ID:	280-105986-1		
Client ID:	775VMW-5_0118				
Operator ID:	moanm	ALS Bottle#:	17	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

123 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results







RT	Mass	Response	Amount
13.07	110.00	3909	0.655181
13.07	75.00	11710	
13.03	77.00	0	

Reviewer: moanm, 12-Feb-2018 17:32:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118-a | Lab Sample ID: 280-105986-2

Matrix: Water | Lab File ID: H4166.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 11:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q		LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.16	J		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U		1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U		5.0	3.2	1.0
67-64-1	Acetone	6.4	U	M	10	6.4	1.9
71-43-2	Benzene	0.40	U		1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U		1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U		1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U		1.0	0.40	0.17
75-25-2	Bromoform	0.40	U		1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U		2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118-a | Lab Sample ID: 280-105986-2

Matrix: Water | Lab File ID: H4166.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 11:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	33		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-5_0118-a | Lab Sample ID: 280-105986-2

Matrix: Water | Lab File ID: H4166.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:40

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 11:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
460-00-4	4-Bromofluorobenzene (Surr)	93		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D
Lims ID: 280-105986-B-2
Client ID: 775VMW-5_0118-a
Sample Type: Client
Inject. Date: 12-Feb-2018 11:01:30 ALS Bottle#: 18 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-B-2 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 13:06:32

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.995	3.975	0.020	0	98024	250.0	
*	2 Fluorobenzene	96	6.747	6.763	-0.016	98	597608	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.103	11.118	-0.015	87	159014	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.134	14.132	0.002	96	256259	12.5	
$	8 Dibromofluoromethane (Surr	111	5.911	5.912	-0.001	93	293971	9.69	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.329	6.330	-0.001	0	120823	9.35	
$	10 Toluene-d8 (Surr)	98	8.873	8.874	-0.001	93	562676	9.12	
$	11 4-Bromofluorobenzene (Surr	95	12.776	12.777	-0.001	85	315467	8.85	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43		3.522				ND	U
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97	5.963	5.961	0.002	36	7403	0.1633	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95	7.218	7.233	-0.015	99	941661	32.6	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

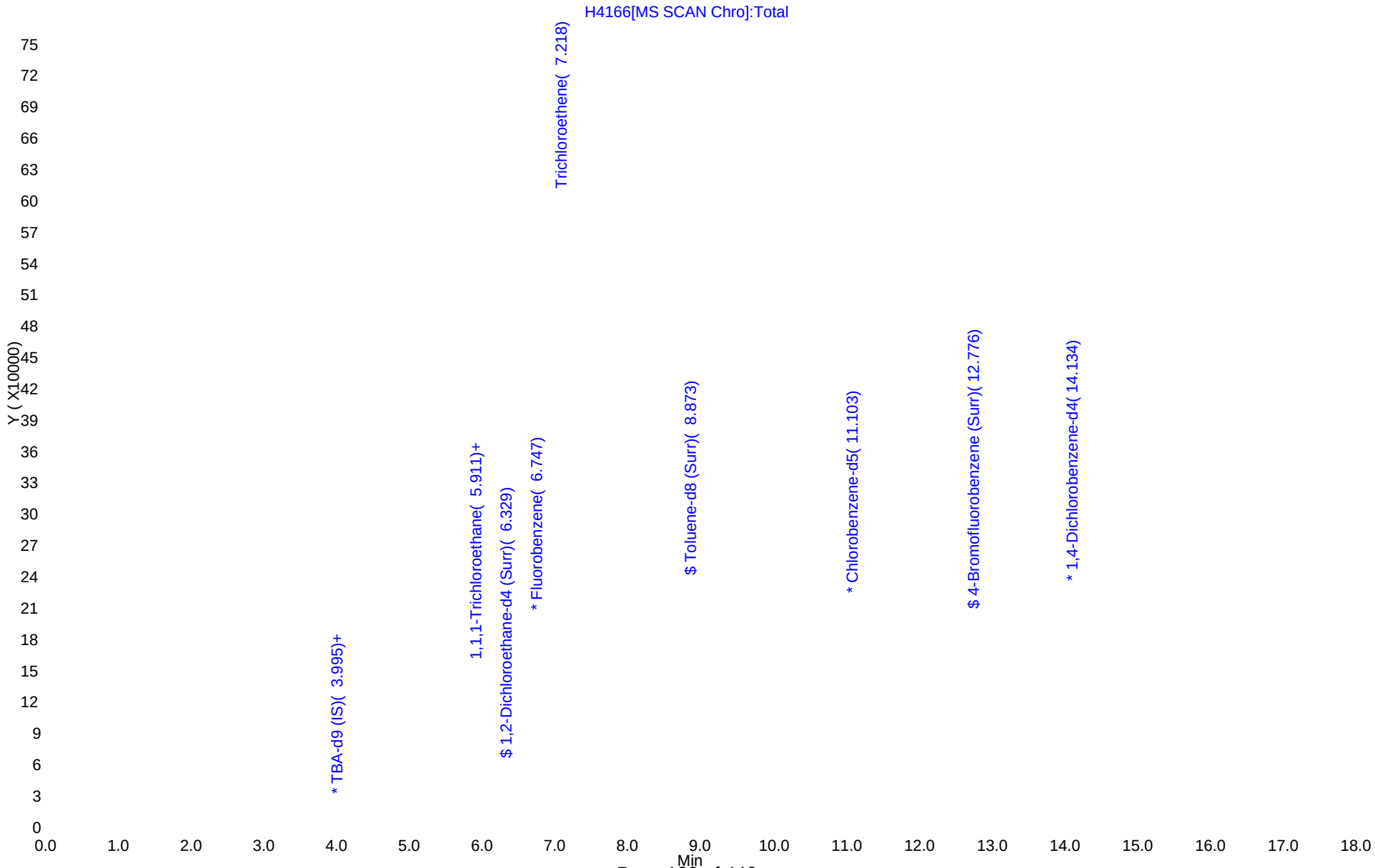
Report Date: 12-Feb-2018 17:39:57 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D

Injection Date:	12-Feb-2018 11:01:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-B-2	Lab Sample ID:	280-105986-2	Worklist Smp#:	13
Client ID:	775VMW-5_0118-a				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D				
Lims ID:	280-105986-B-2				
Client ID:	775VMW-5_0118-a				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 11:01:30	ALS Bottle#:	18	Worklist Smp#:	13
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-B-2 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 13:06:32		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.69	102.05
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.35	98.45
$ 10 Toluene-d8 (Surr)	9.50	9.12	96.02
$ 11 4-Bromofluorobenzene (Surr)	9.50	8.85	93.15

Report Date: 12-Feb-2018 17:39:57 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D

Injection Date: 12-Feb-2018 11:01:30 Instrument ID: VMS_H

Lims ID: 280-105986-B-2 Lab Sample ID: 280-105986-2

Client ID: 775VMW-5_0118-a

Operator ID: moanm ALS Bottle#: 18 Worklist Smp#: 13

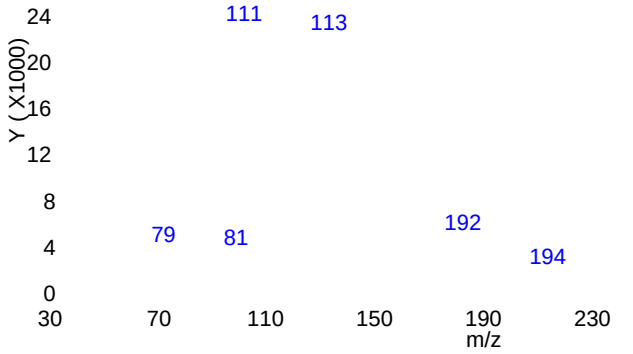
Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid

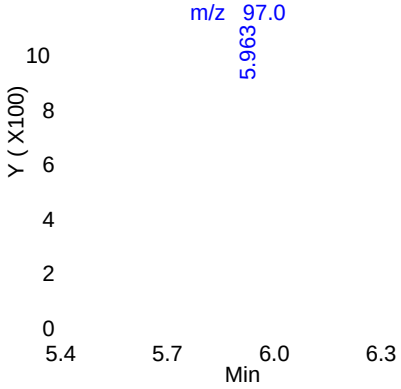
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

76 1,1,1-Trichloroethane, CAS: 71-55-6

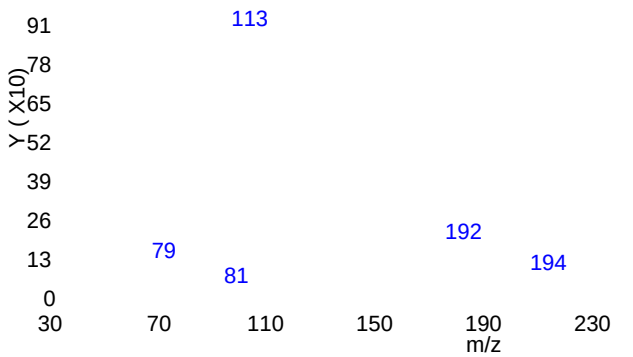
Raw Spec:Scan 341(5.96)



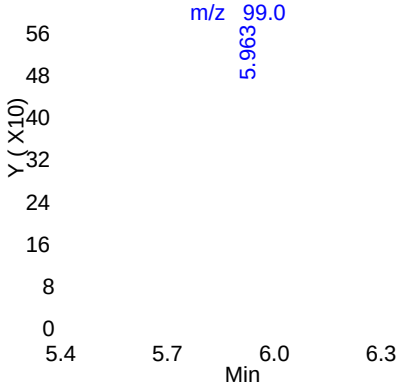
m/z 97.0



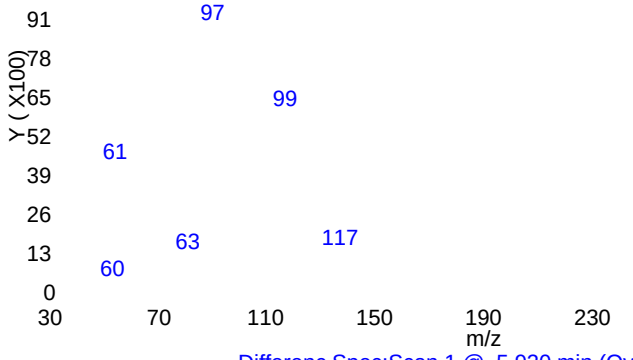
Amdis Enhanced Spec: Scan 341(5.96), Qvalue=36



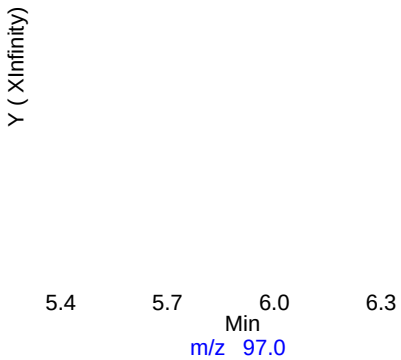
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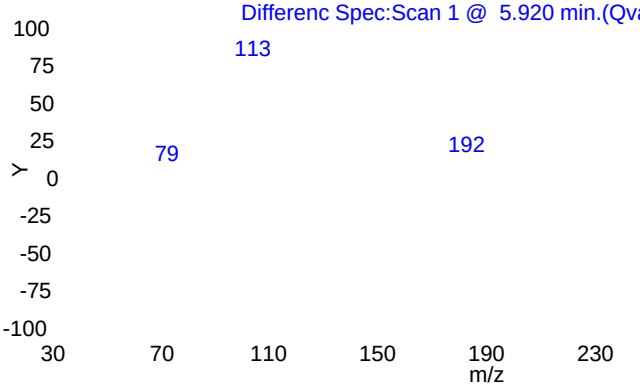
Ref Spec: 76 1,1,1-Trichloroethane (NIST)



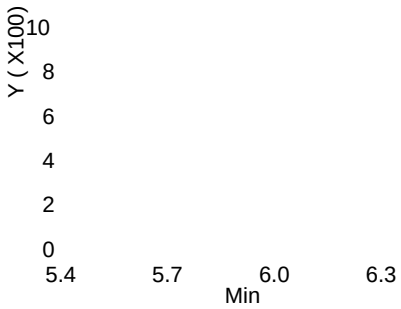
m/z 117.0



Differenc Spec:Scan 1 @ 5.920 min.(Qvalue: 36)



m/z 97.0
m/z 99.0
m/z 117.0



Report Date: 12-Feb-2018 17:39:57 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D

Injection Date: 12-Feb-2018 11:01:30 Instrument ID: VMS_H

Lims ID: 280-105986-B-2 Lab Sample ID: 280-105986-2

Client ID: 775VMW-5_0118-a

Operator ID: moanm ALS Bottle#: 18 Worklist Smp#: 13

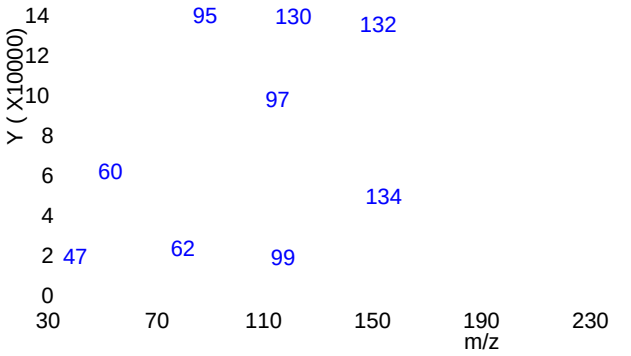
Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid

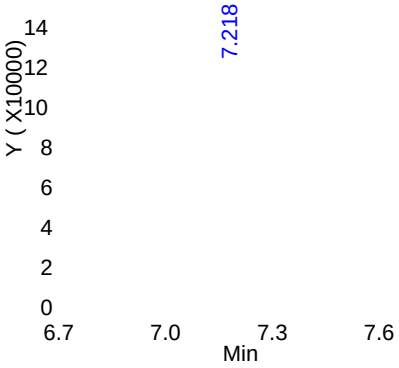
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

86 Trichloroethene, CAS: 79-01-6

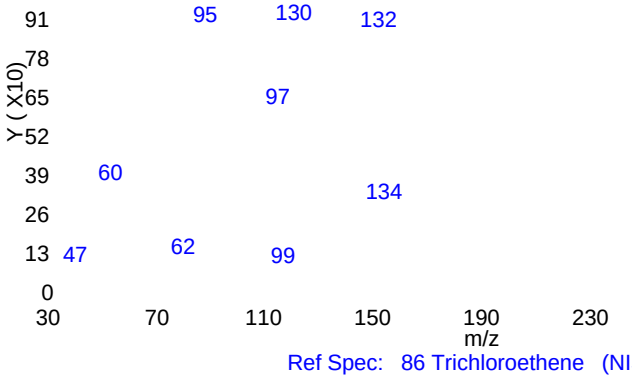
Raw Spec:Scan 413(7.22)



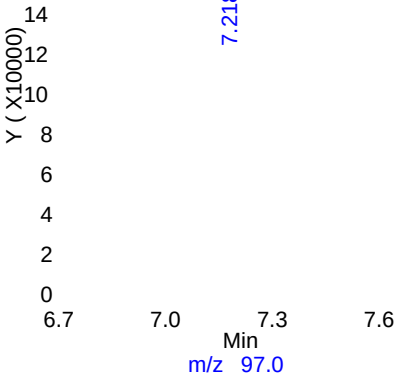
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Amdis Enhanced Spec: Scan 413(7.22), Qvalue=99

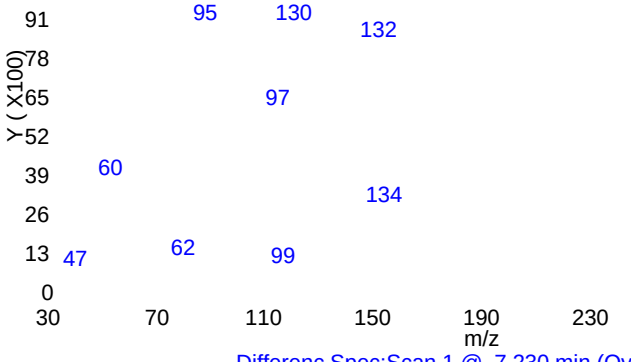


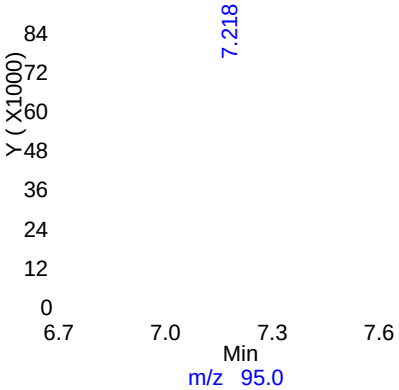
m/z 130.0



Ref Spec: 86 Trichloroethene (NIST)

m/z 97.0



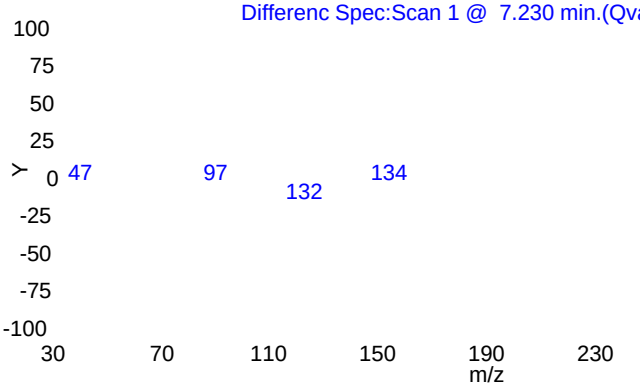


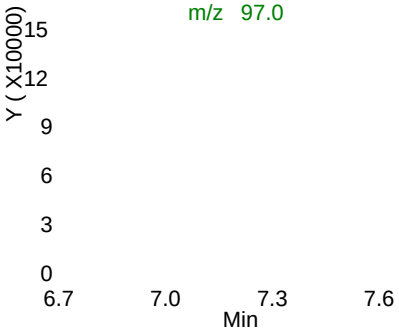
Differenc Spec:Scan 1 @ 7.230 min.(Qvalue: 99)

m/z 95.0

m/z 130.0

m/z 97.0





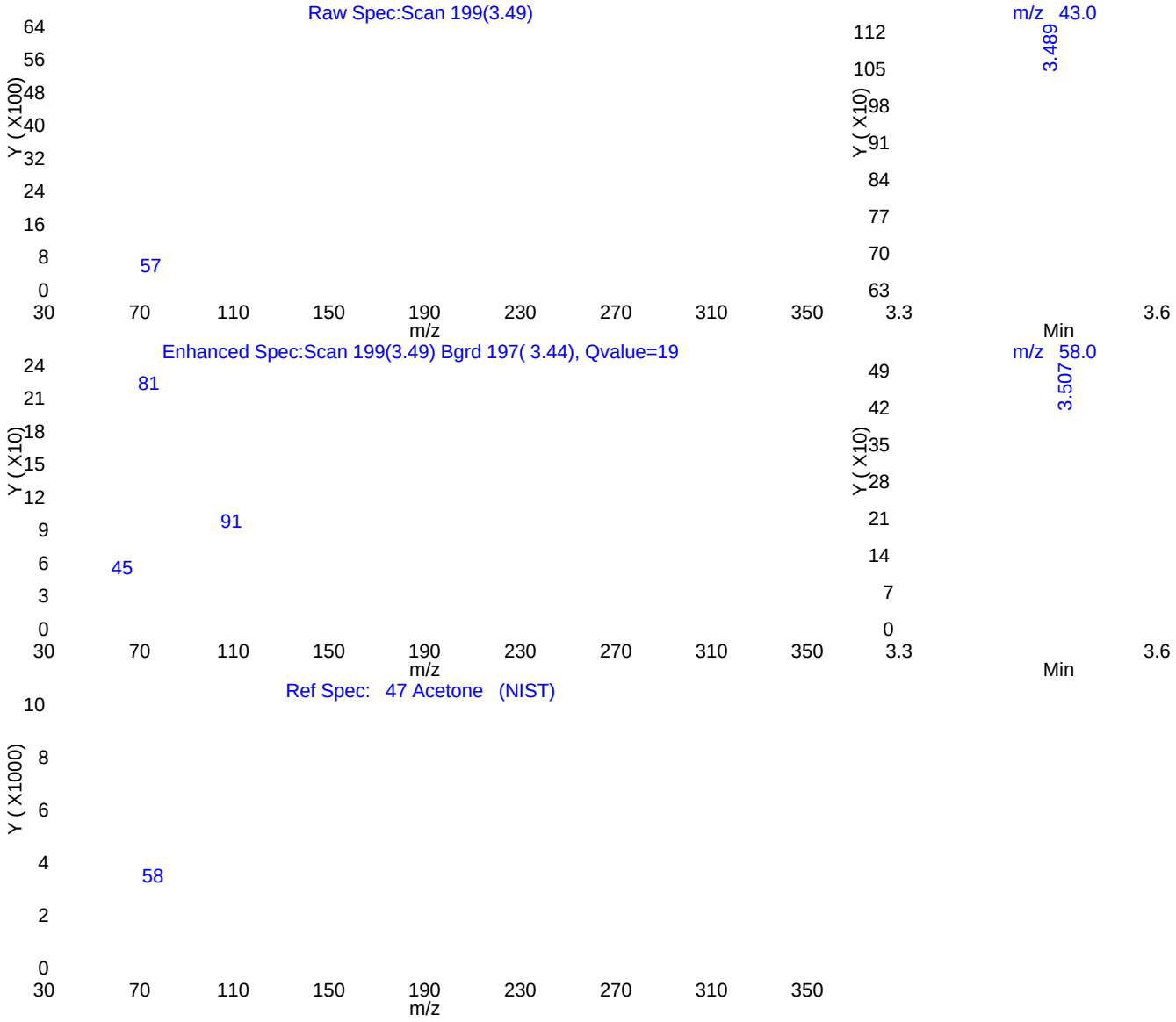
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4166.D				
Injection Date:	12-Feb-2018 11:01:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-2	Lab Sample ID:	280-105986-2		
Client ID:	775VMW-5_0118-a				
Operator ID:	moanm	ALS Bottle#:	18	Worklist Smp#:	13
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

47 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.49	43.00	1154	0.960278
3.51	58.00	2876	

Reviewer: moanm, 12-Feb-2018 17:32:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-6_0118 | Lab Sample ID: 280-105986-3

Matrix: Water | Lab File ID: H4167.D

Analysis Method: 8260B | Date Collected: 01/31/2018 11:45

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 11:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.23	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-6_0118 | Lab Sample ID: 280-105986-3

Matrix: Water | Lab File ID: H4167.D

Analysis Method: 8260B | Date Collected: 01/31/2018 11:45

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 11:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.1		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	29		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-6_0118
Lab Sample ID: 280-105986-3

Matrix: Water
Lab File ID: H4167.D

Analysis Method: 8260B
Date Collected: 01/31/2018 11:45

Sample wt/vol: 20(mL)
Date Analyzed: 02/12/2018 11:22

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture:
Level: (low/med) Low

Analysis Batch No.: 404562
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4167.D
Lims ID: 280-105986-B-3
Client ID: 775MW-6_0118
Sample Type: Client
Inject. Date: 12-Feb-2018 11:22:30 ALS Bottle#: 19 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-B-3 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:33:13

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	4.013	3.975	0.038	0	98162	250.0	
*	2 Fluorobenzene	96	6.748	6.763	-0.015	98	592658	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.104	11.118	-0.014	87	159243	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.153	14.132	0.021	96	260811	12.5	
$	8 Dibromofluoromethane (Surr	111	5.912	5.912	0.000	93	304070	10.1	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.330	6.330	0.000	0	130475	10.2	
$	10 Toluene-d8 (Surr)	98	8.874	8.874	0.000	93	569578	9.22	
$	11 4-Bromofluorobenzene (Surr	95	12.776	12.777	-0.001	85	328279	9.05	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43		3.522				ND	
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83	5.720	5.717	0.003	93	49533	1.12	
	76 1,1,1-Trichloroethane	97	5.964	5.961	0.003	37	10220	0.2273	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95	7.219	7.233	-0.014	99	817802	28.5	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	U
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

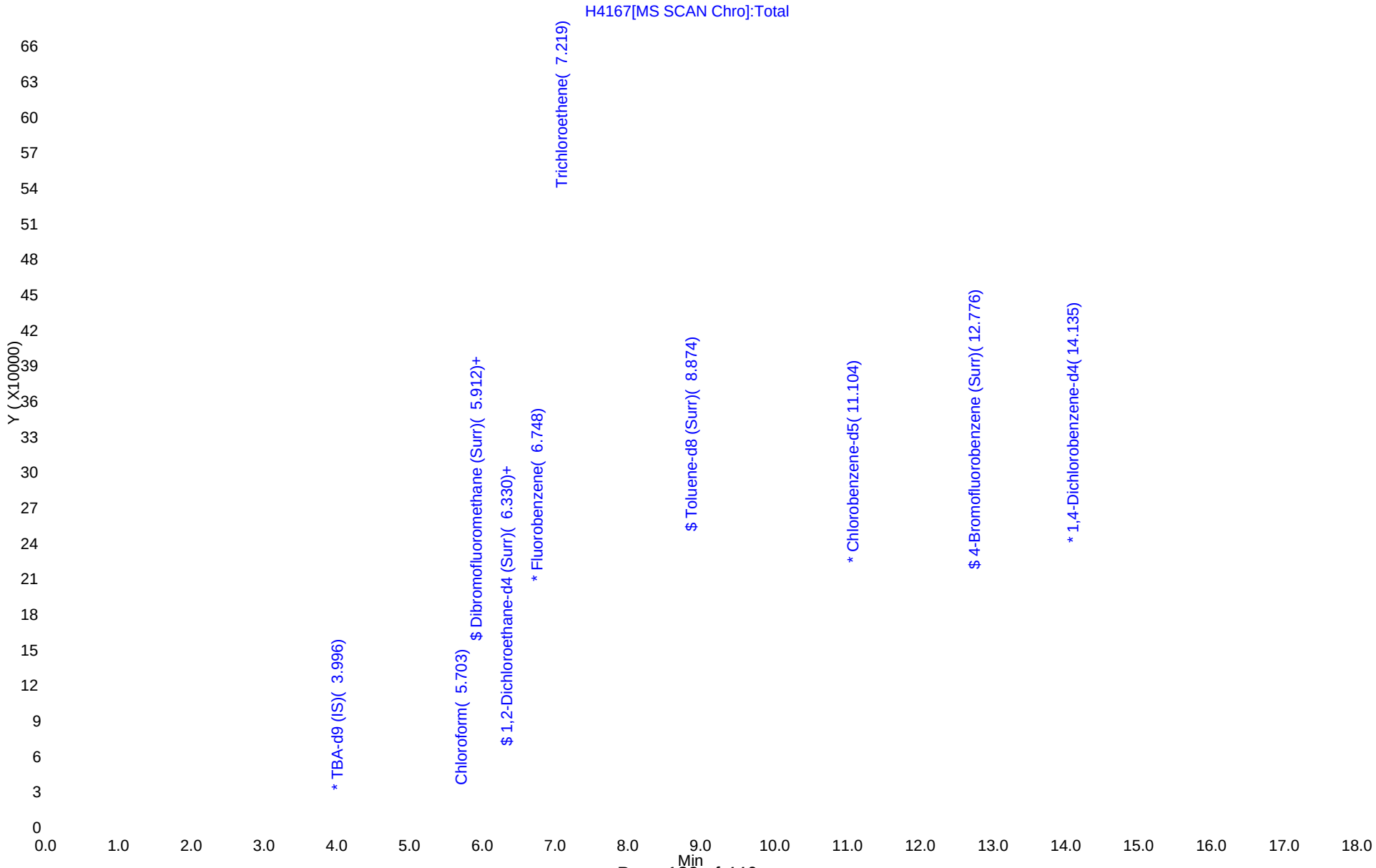
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4167.D

Injection Date:	12-Feb-2018 11:22:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-B-3	Lab Sample ID:	280-105986-3	Worklist Smp#:	14
Client ID:	775MW-6_0118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4167.D				
Lims ID:	280-105986-B-3				
Client ID:	775MW-6_0118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 11:22:30	ALS Bottle#:	19	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-B-3 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:33:13		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.1	106.44
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	10.2	107.21
$ 10 Toluene-d8 (Surr)	9.50	9.22	97.05
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.05	95.24

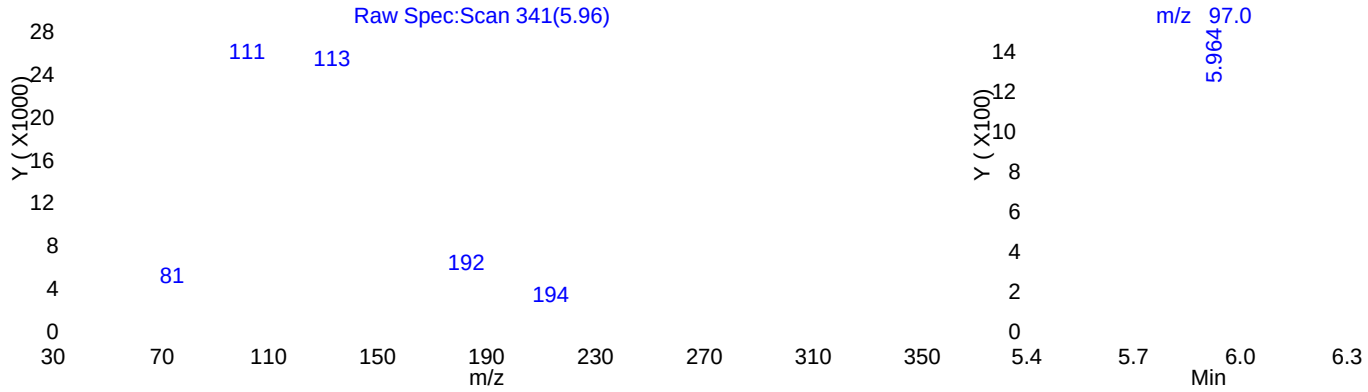
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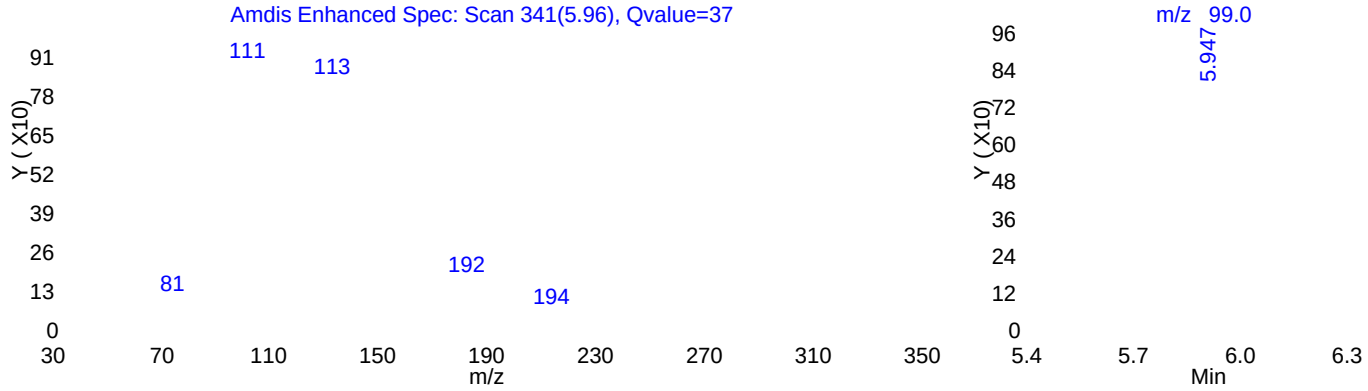
TestAmerica Denver

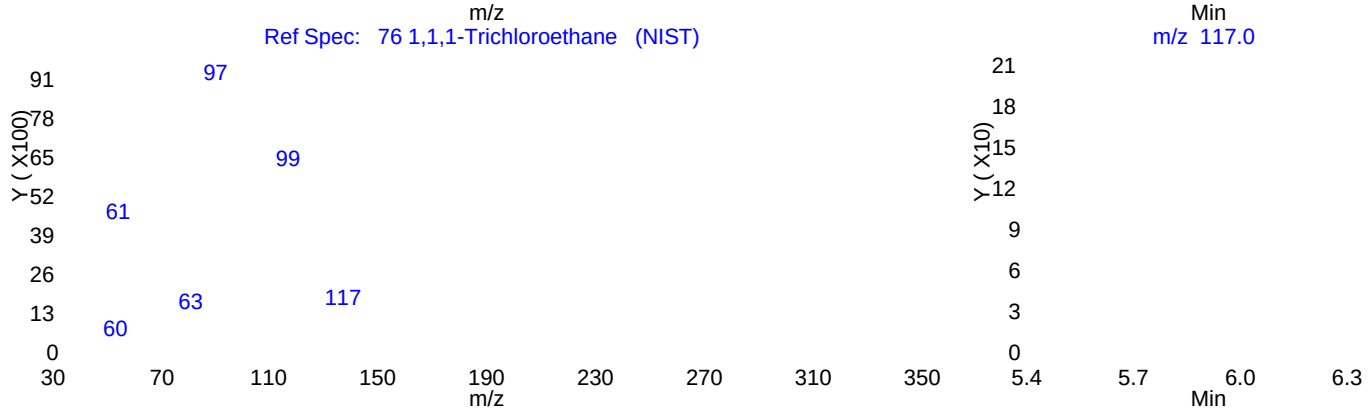
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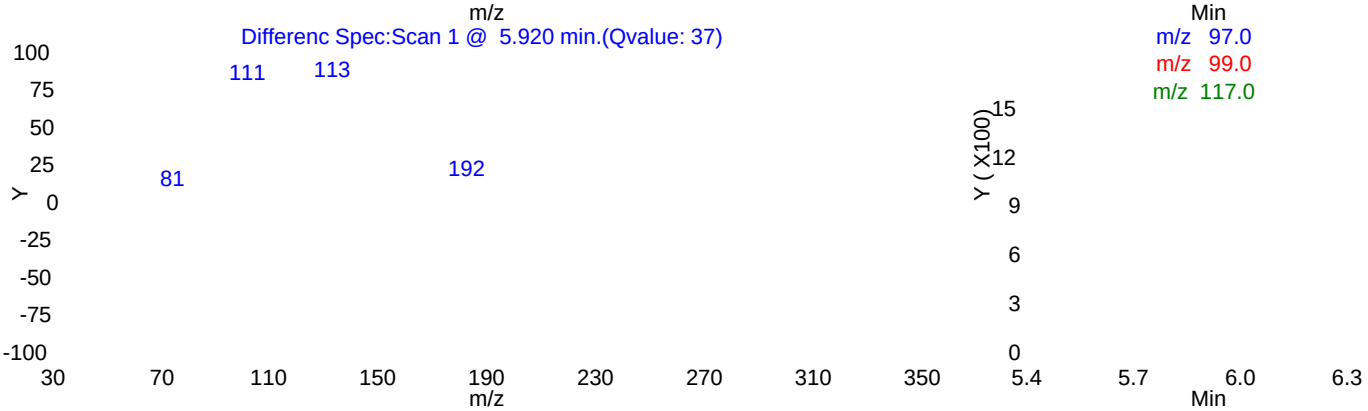
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Lims ID:	280-105986-B-3	Lab Sample ID:	280-105986-3		
Client ID:	775MW-6_0118				
Operator ID:	moanm	ALS Bottle#:	19	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

76 1,1,1-Trichloroethane, CAS: 71-55-6









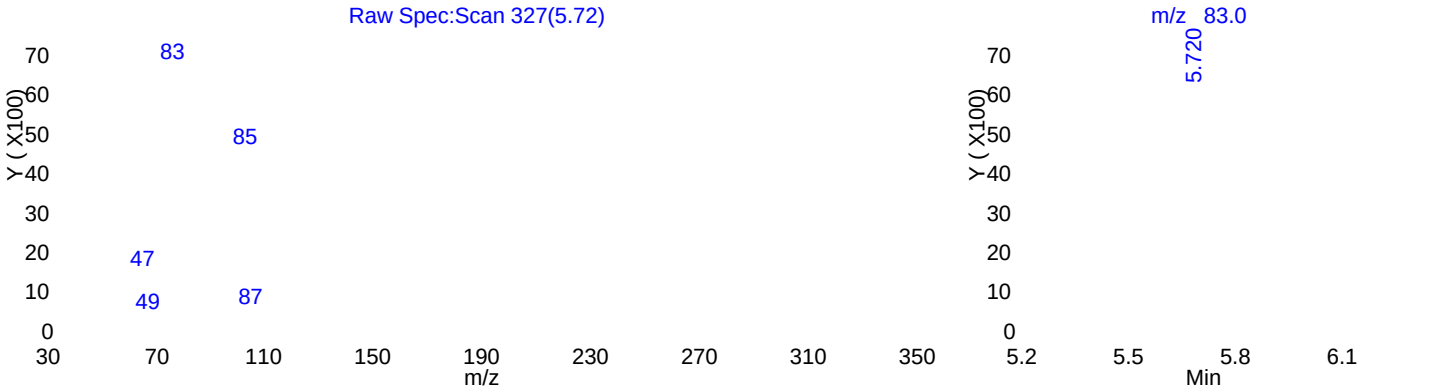
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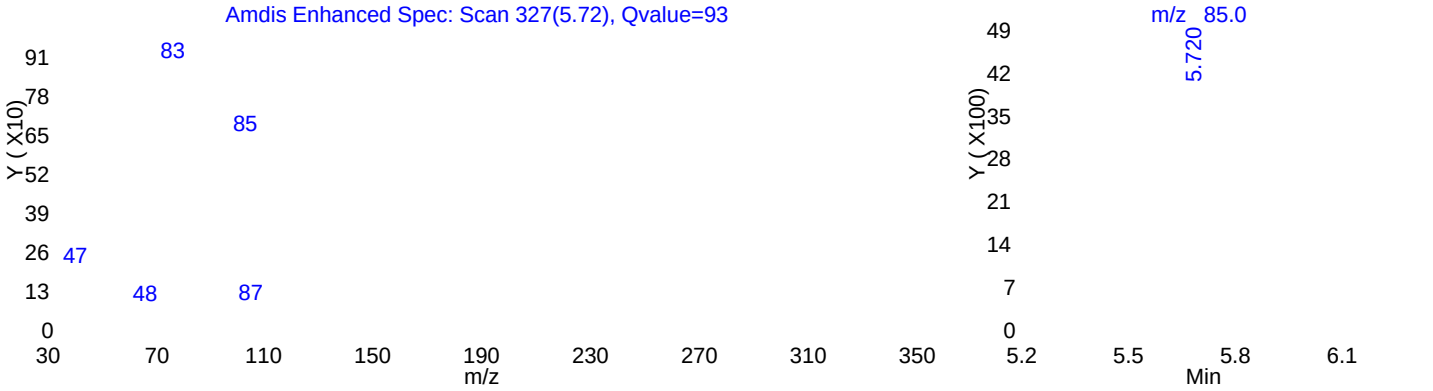
TestAmerica Denver

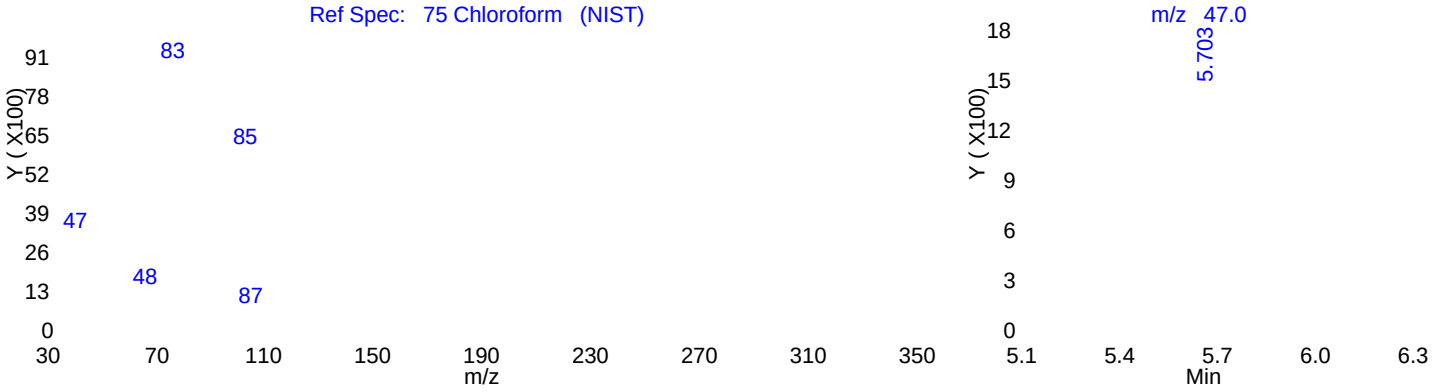
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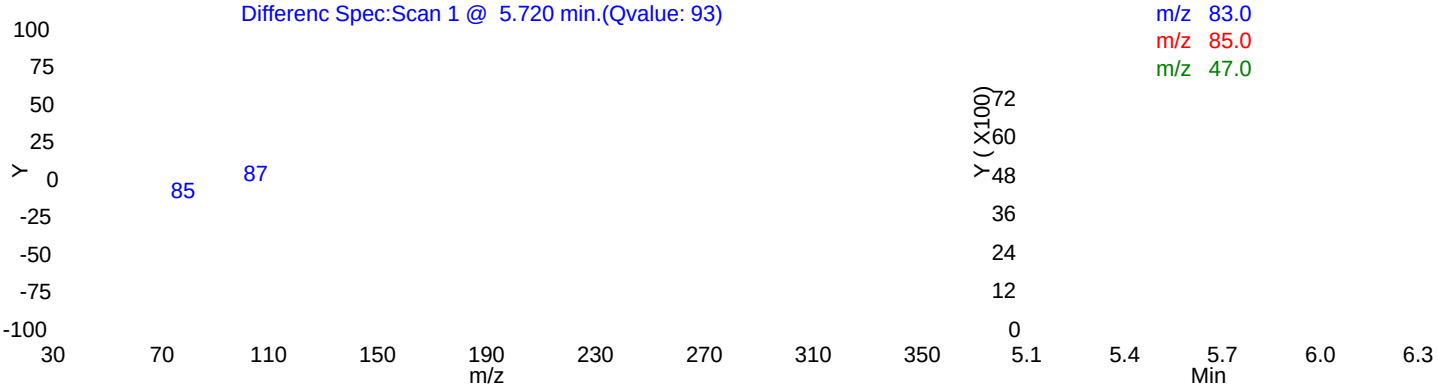
Injection Date:	12-Feb-2018 11:22:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-3	Lab Sample ID:	280-105986-3		
Client ID:	775MW-6_0118				
Operator ID:	moanm	ALS Bottle#:	19	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

75 Chloroform, CAS: 67-66-3









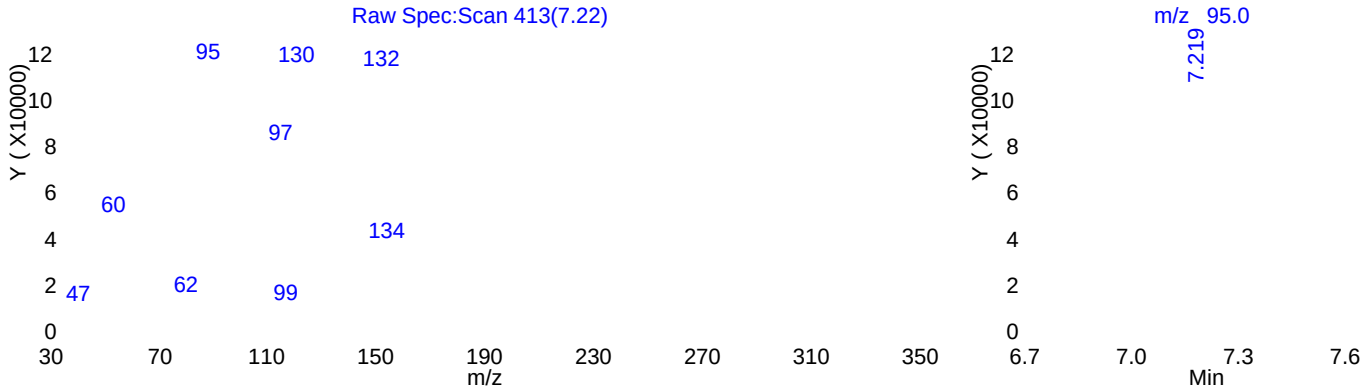
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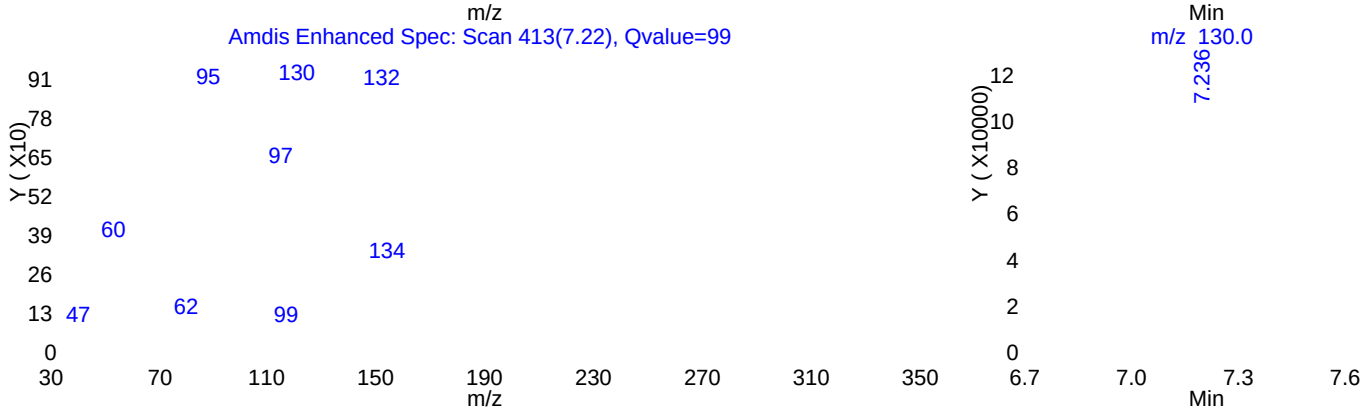
TestAmerica Denver

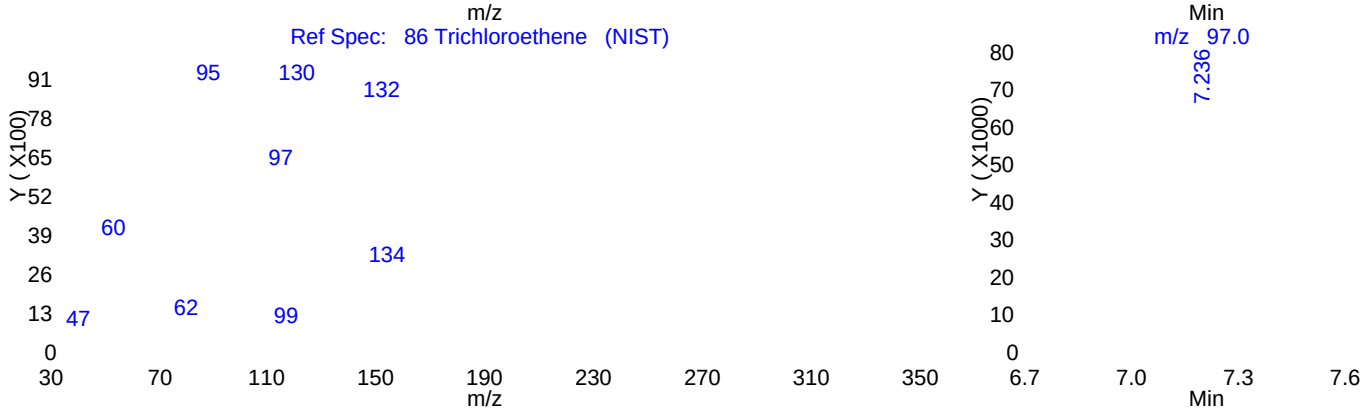
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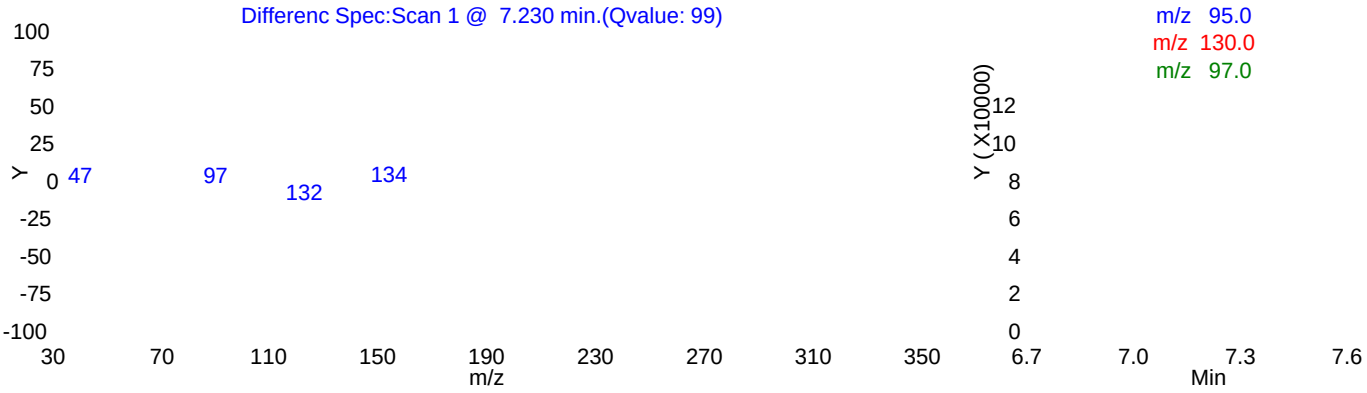
Injection Date:	12-Feb-2018 11:22:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-3	Lab Sample ID:	280-105986-3		
Client ID:	775MW-6_0118				
Operator ID:	moanm	ALS Bottle#:	19	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

86 Trichloroethene, CAS: 79-01-6









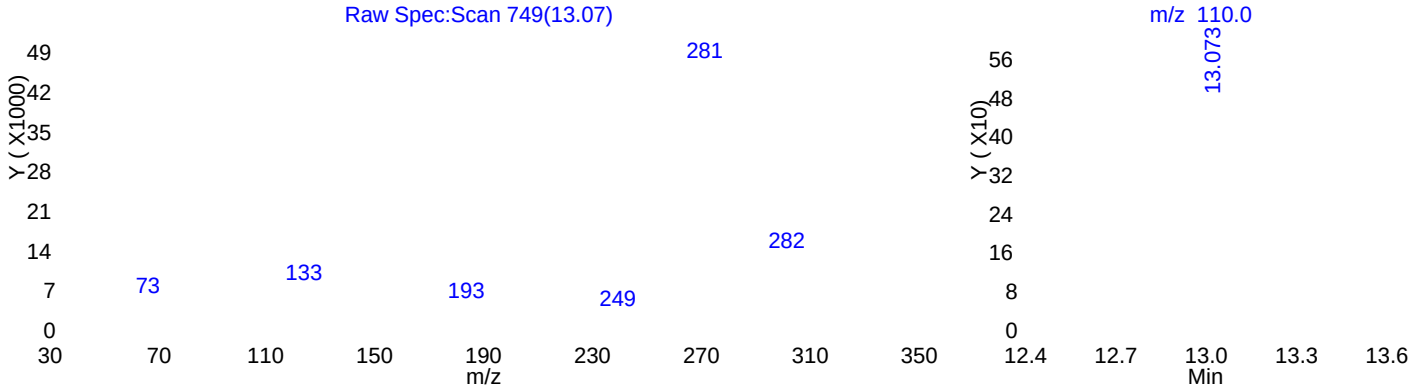
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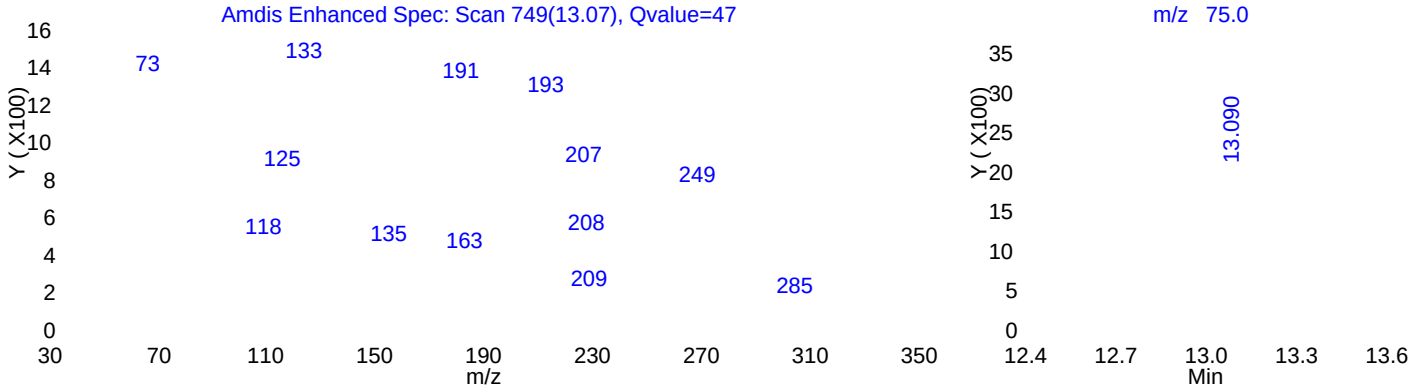
TestAmerica Denver

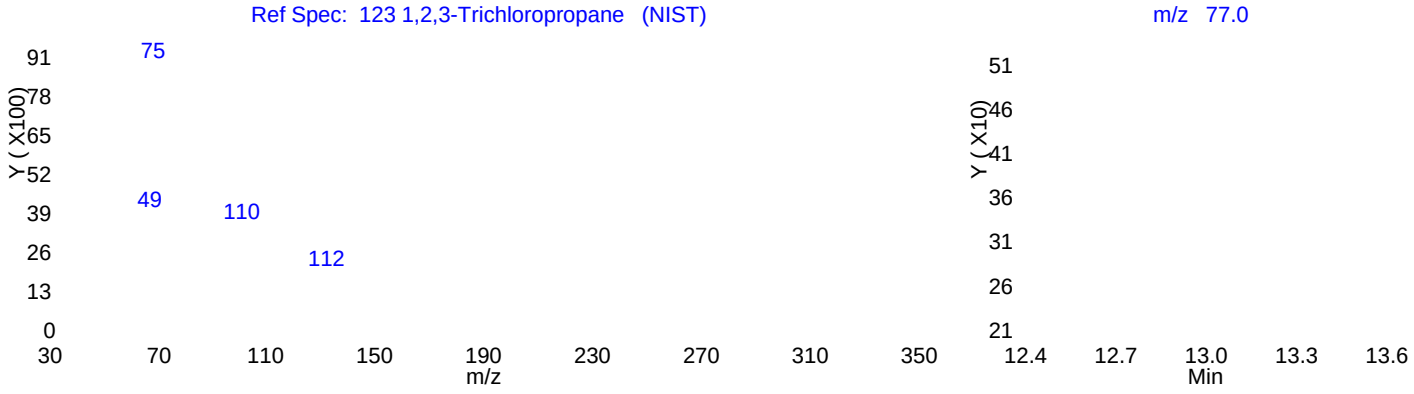
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4167.D				
Injection Date:	12-Feb-2018 11:22:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-3	Lab Sample ID:	280-105986-3		
Client ID:	775MW-6_0118				
Operator ID:	moanm	ALS Bottle#:	19	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

123 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results







RT	Mass	Response	Amount
13.07	110.00	4362	0.687710
13.09	75.00	12432	
13.03	77.00	0	

Reviewer: moanm, 12-Feb-2018 17:33:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-27_0118 | Lab Sample ID: 280-105986-4

Matrix: Water | Lab File ID: H4169.D

Analysis Method: 8260B | Date Collected: 01/31/2018 13:30

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.26	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-27_0118 | Lab Sample ID: 280-105986-4

Matrix: Water | Lab File ID: H4169.D

Analysis Method: 8260B | Date Collected: 01/31/2018 13:30

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.38	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	16		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775MW-27_0118
Lab Sample ID: 280-105986-4

Matrix: Water
Lab File ID: H4169.D

Analysis Method: 8260B
Date Collected: 01/31/2018 13:30

Sample wt/vol: 20(mL)
Date Analyzed: 02/12/2018 12:10

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture:
Level: (low/med) Low

Analysis Batch No.: 404562
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D
Lims ID: 280-105986-B-4
Client ID: 775MW-27_0118
Sample Type: Client
Inject. Date: 12-Feb-2018 12:10:30 ALS Bottle#: 21 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-B-4 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:33:52

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.982	3.975	0.007	0	68401	250.0	s
*	2 Fluorobenzene	96	6.734	6.763	-0.029	98	574833	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.107	11.118	-0.011	87	149806	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.139	14.132	0.007	96	243084	12.5	
$	8 Dibromofluoromethane (Surr	111	5.916	5.912	0.004	93	293571	10.1	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.334	6.330	0.004	0	116339	9.36	
$	10 Toluene-d8 (Surr)	98	8.877	8.874	0.003	93	570042	9.81	
$	11 4-Bromofluorobenzene (Surr	95	12.780	12.777	0.003	85	313649	9.28	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43		3.522				ND	U
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83	5.707	5.717	-0.011	90	16277	0.3810	
	76 1,1,1-Trichloroethane	97	5.933	5.961	-0.028	35	11533	0.2645	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95	7.222	7.233	-0.011	99	442751	15.9	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	U
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

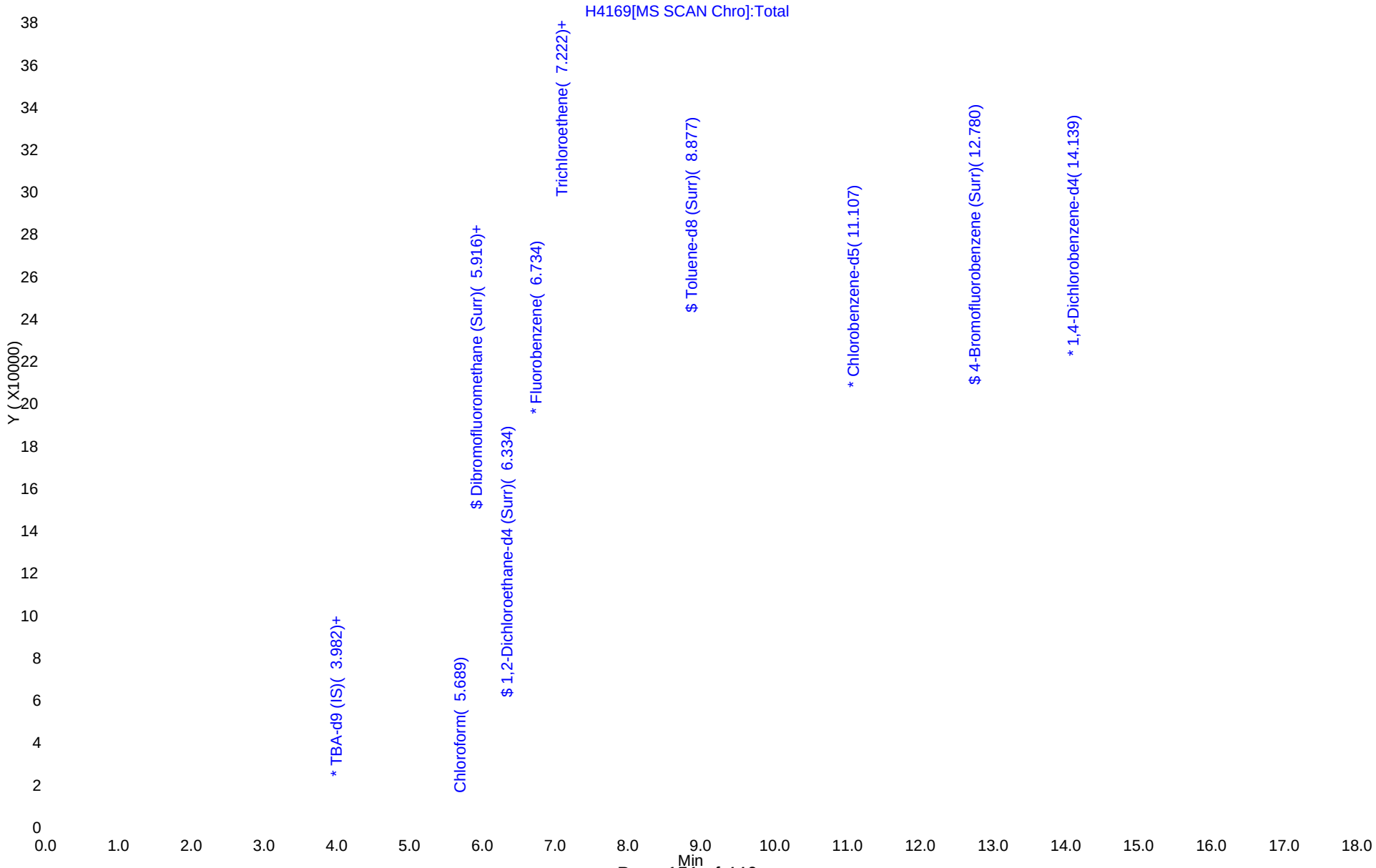
Report Date: 12-Feb-2018 17:40:00 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D

Injection Date:	12-Feb-2018 12:10:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-B-4	Lab Sample ID:	280-105986-4	Worklist Smp#:	16
Client ID:	775MW-27_0118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D				
Lims ID:	280-105986-B-4				
Client ID:	775MW-27_0118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 12:10:30	ALS Bottle#:	21	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-B-4 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:33:52		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.1	105.95
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.36	98.56
$ 10 Toluene-d8 (Surr)	9.50	9.81	103.25
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.28	97.64

Report Date: 12-Feb-2018 17:40:00 Chrom Revision: 2.2 24-Jan-2018 15:37:30

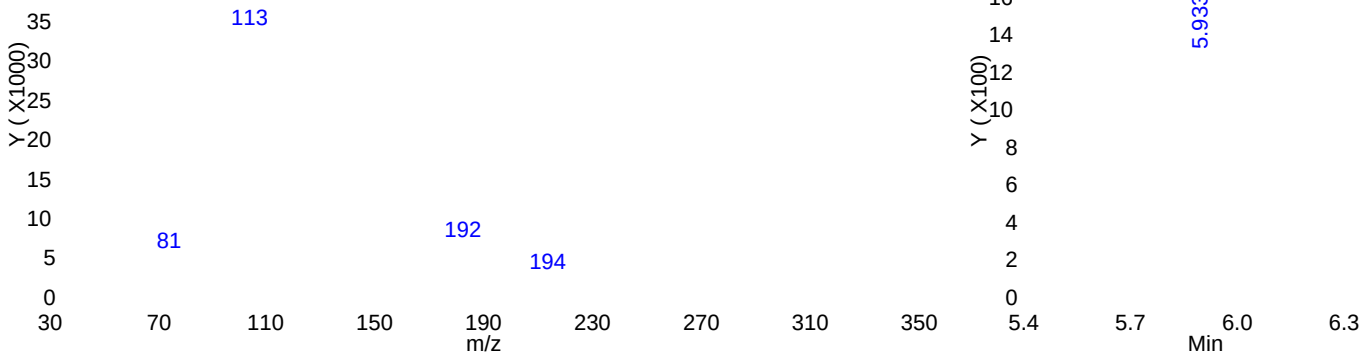
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D

Injection Date:	12-Feb-2018 12:10:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-4	Lab Sample ID:	280-105986-4		
Client ID:	775MW-27_0118				
Operator ID:	moanm	ALS Bottle#:	21	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

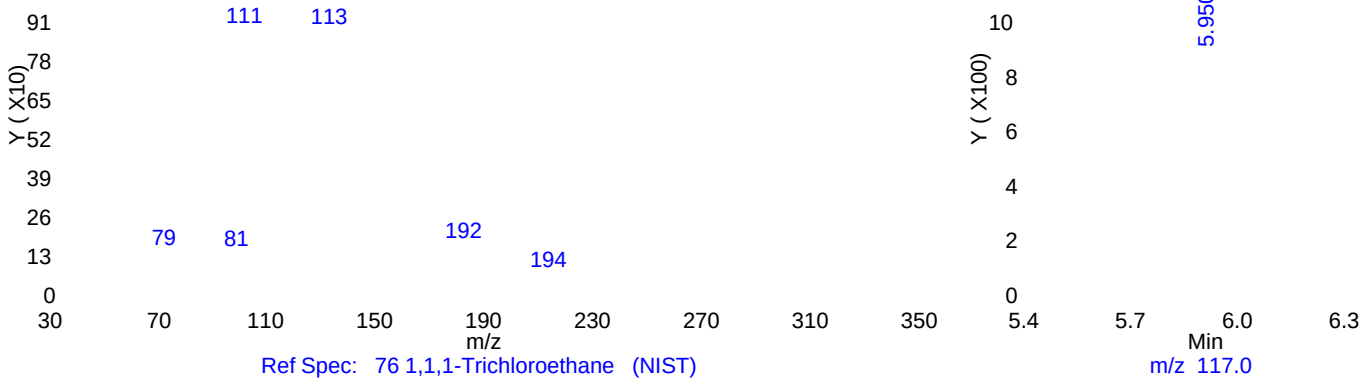
76 1,1,1-Trichloroethane, CAS: 71-55-6

Raw Spec:Scan 339(5.93)



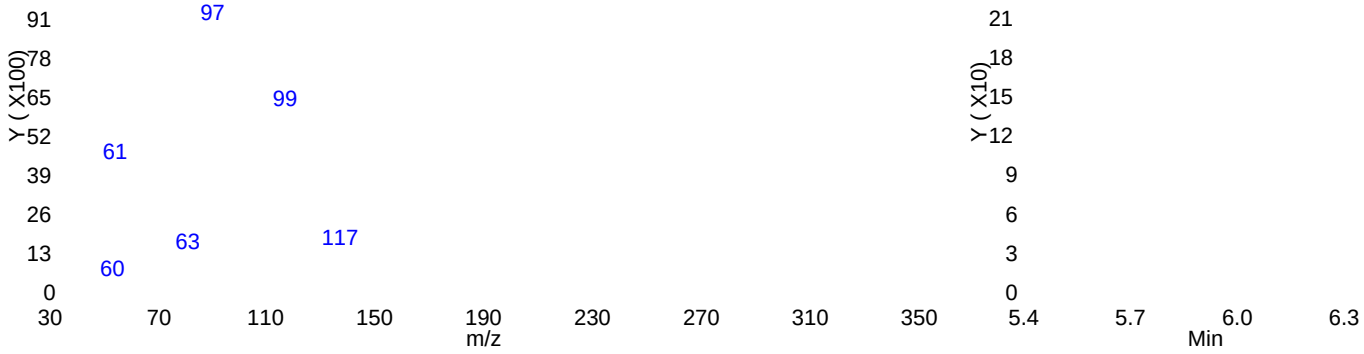
m/z 97.0

Amdis Enhanced Spec: Scan 339(5.93), Qvalue=35



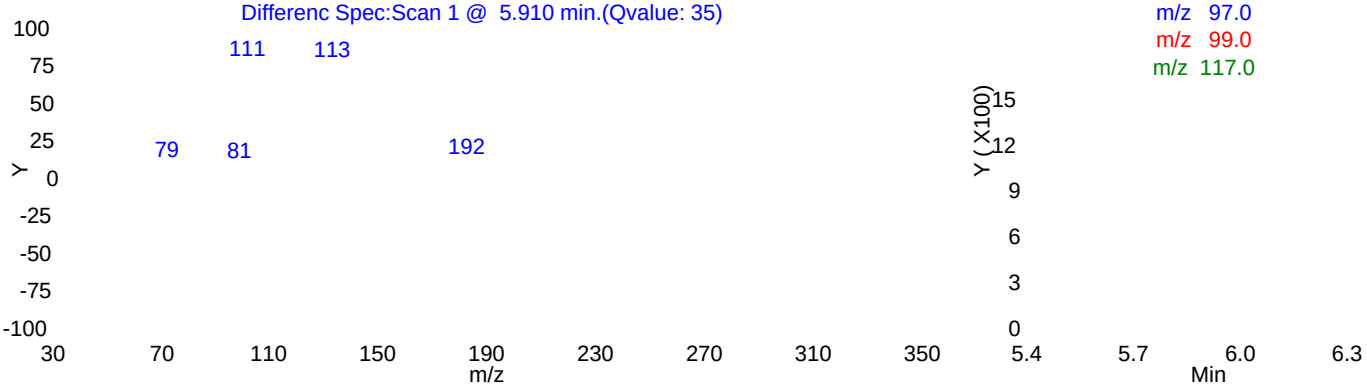
m/z 99.0

Ref Spec: 76 1,1,1-Trichloroethane (NIST)



m/z 117.0

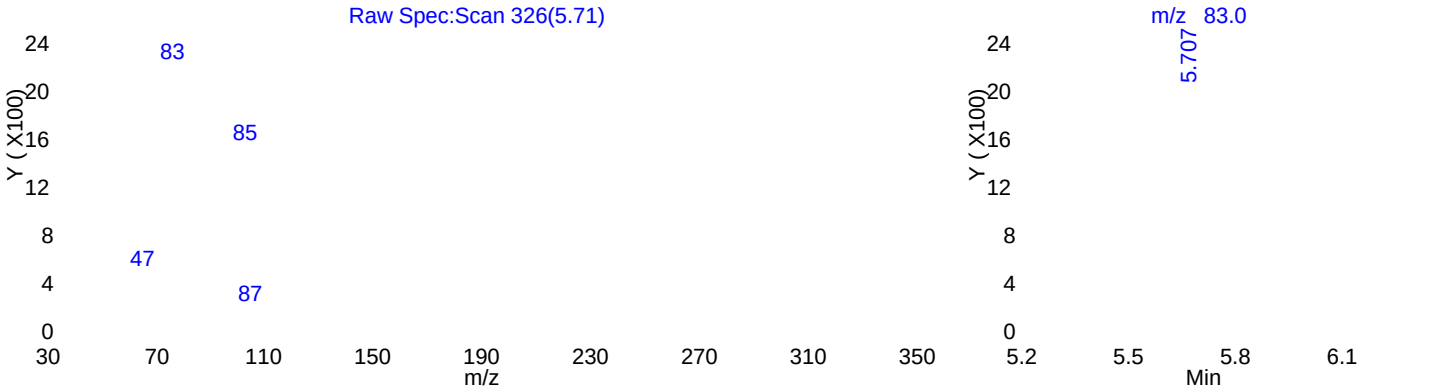
Differenc Spec:Scan 1 @ 5.910 min.(Qvalue: 35)

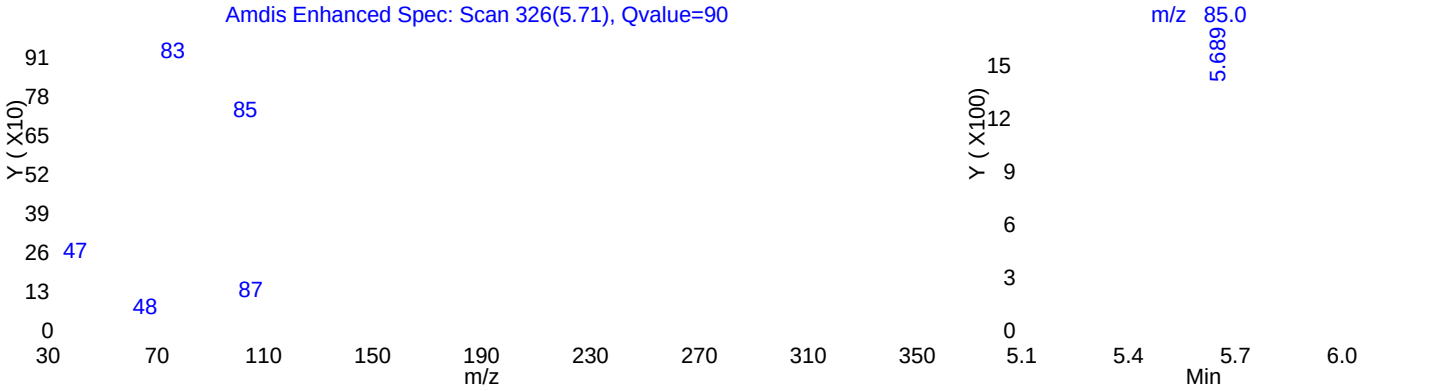


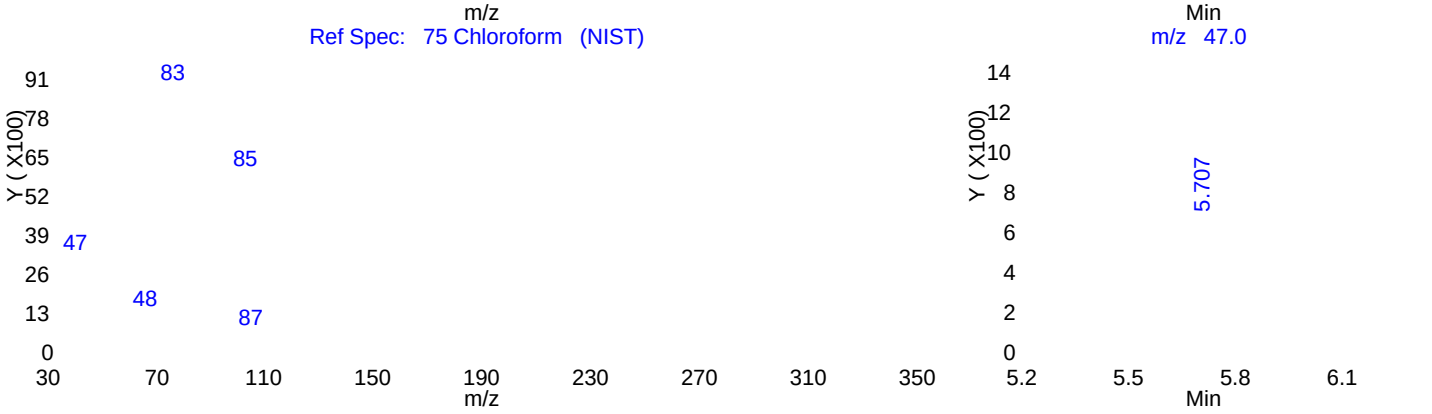
m/z 97.0
m/z 99.0
m/z 117.0

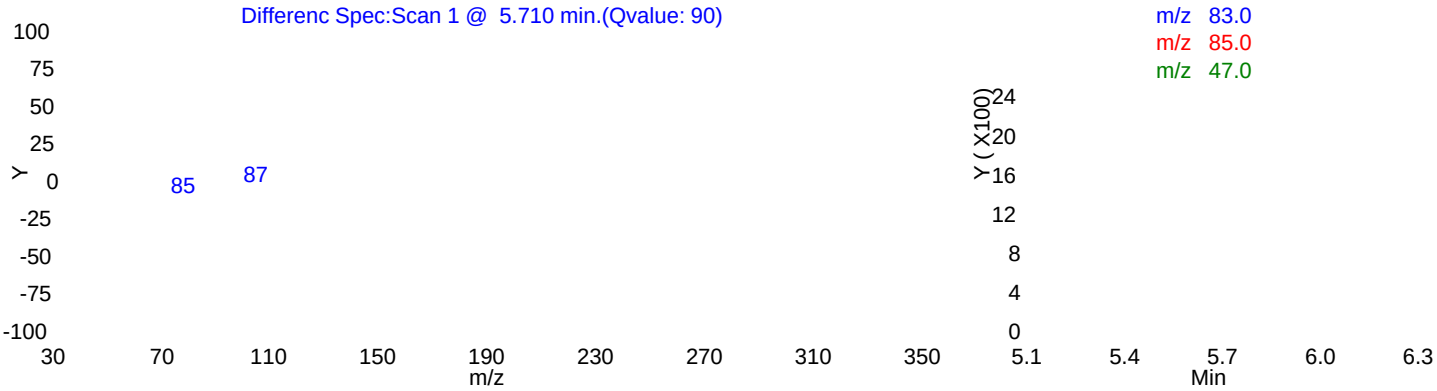
Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D
Injection Date: 12-Feb-2018 12:10:30 Instrument ID: VMS_H
Lims ID: 280-105986-B-4 Lab Sample ID: 280-105986-4
Client ID: 775MW-27_0118
Operator ID: moanm ALS Bottle#: 21 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

75 Chloroform, CAS: 67-66-3









Report Date: 12-Feb-2018 17:40:00 Chrom Revision: 2.2 24-Jan-2018 15:37:30

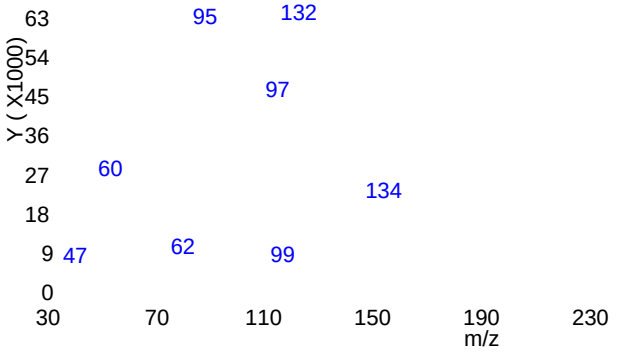
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D

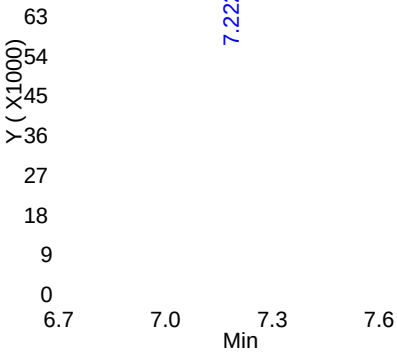
Injection Date:	12-Feb-2018 12:10:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-4	Lab Sample ID:	280-105986-4		
Client ID:	775MW-27_0118				
Operator ID:	moanm	ALS Bottle#:	21	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

86 Trichloroethene, CAS: 79-01-6

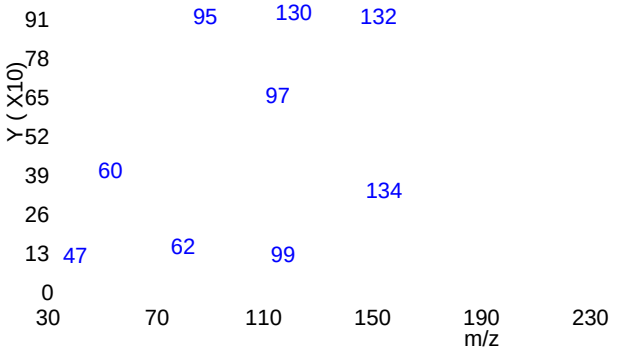
Raw Spec:Scan 413(7.22)



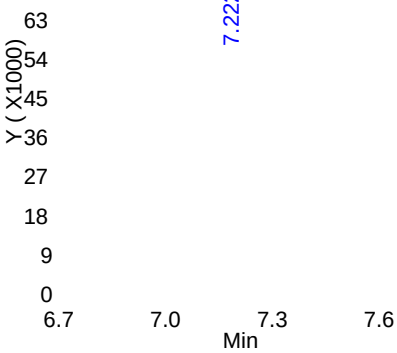
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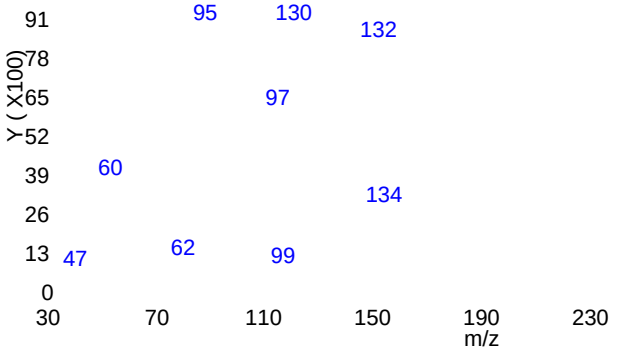
Amdis Enhanced Spec: Scan 413(7.22), Qvalue=99



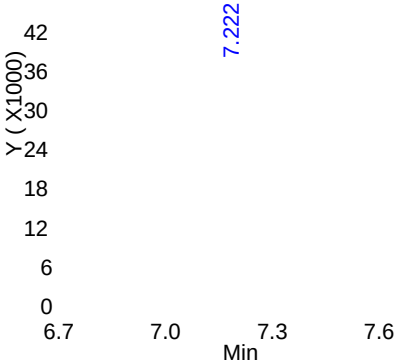
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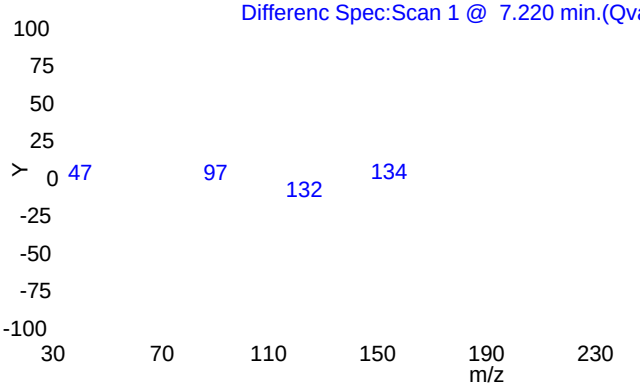
Ref Spec: 86 Trichloroethene (NIST)



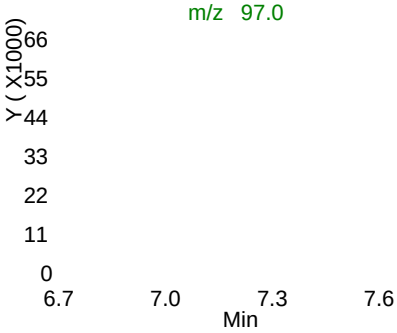
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Differenc Spec:Scan 1 @ 7.220 min.(Qvalue: 99)



m/z 95.0
m/z 130.0
m/z 97.0



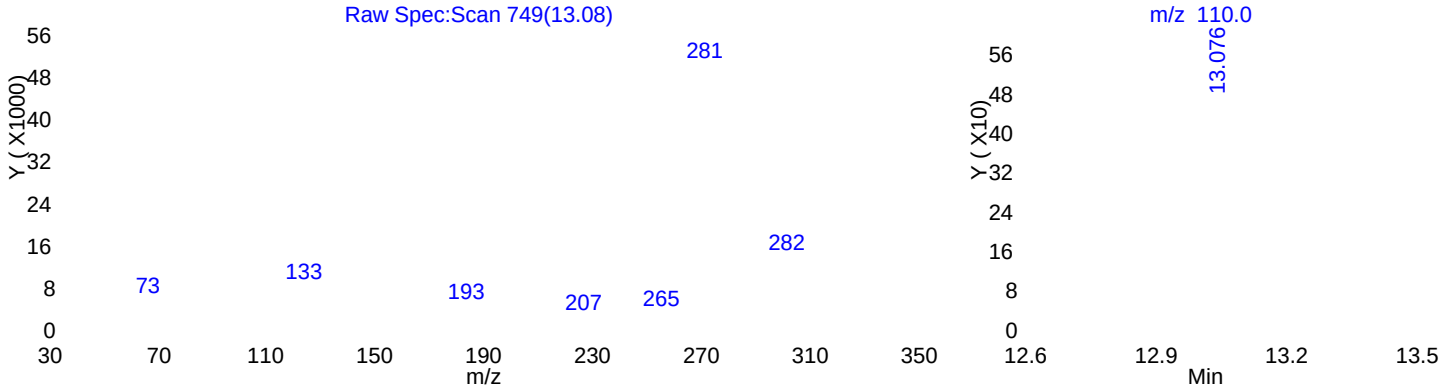
User Disabled Compound Report

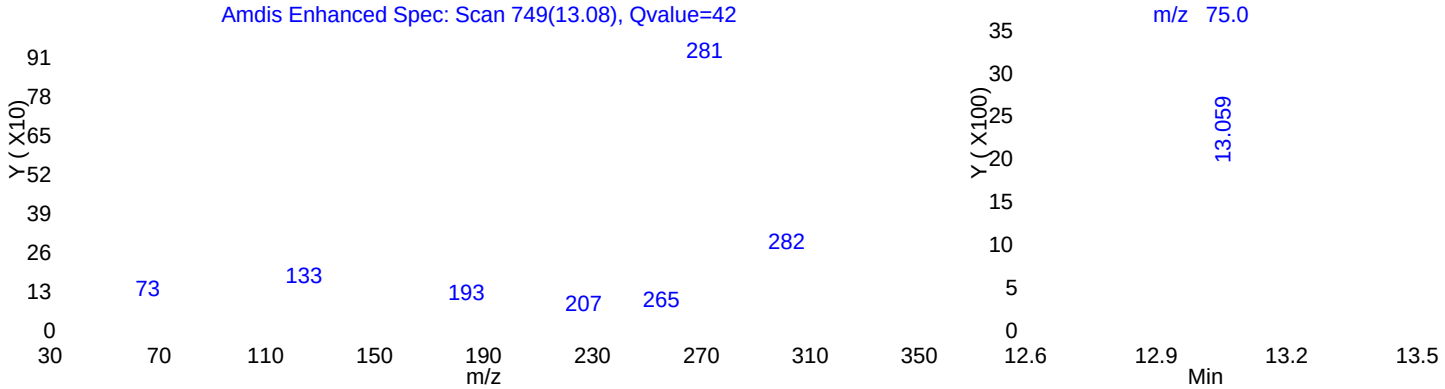
TestAmerica Denver

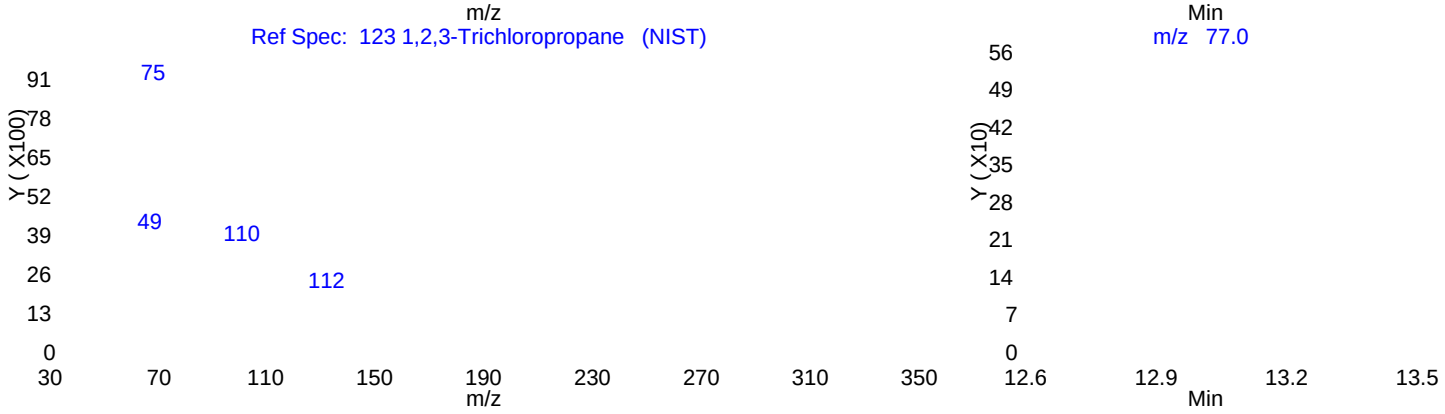
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D				
Injection Date:	12-Feb-2018 12:10:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-4	Lab Sample ID:	280-105986-4		
Client ID:	775MW-27_0118				
Operator ID:	moanm	ALS Bottle#:	21	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

123 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results







RT	Mass	Response	Amount
13.08	110.00	3802	0.623242
13.06	75.00	13571	
13.03	77.00	0	

Reviewer: moanm, 12-Feb-2018 17:33:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

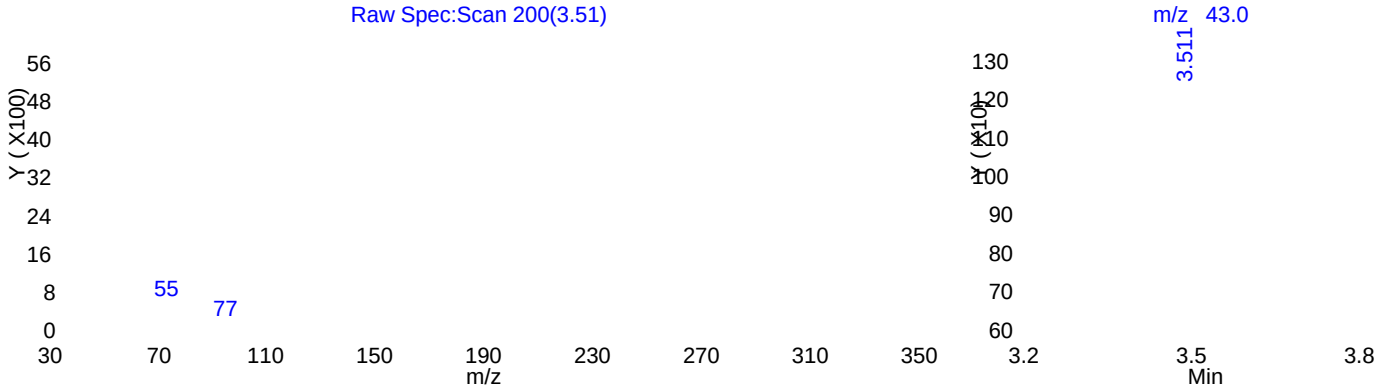
User Disabled Compound Report

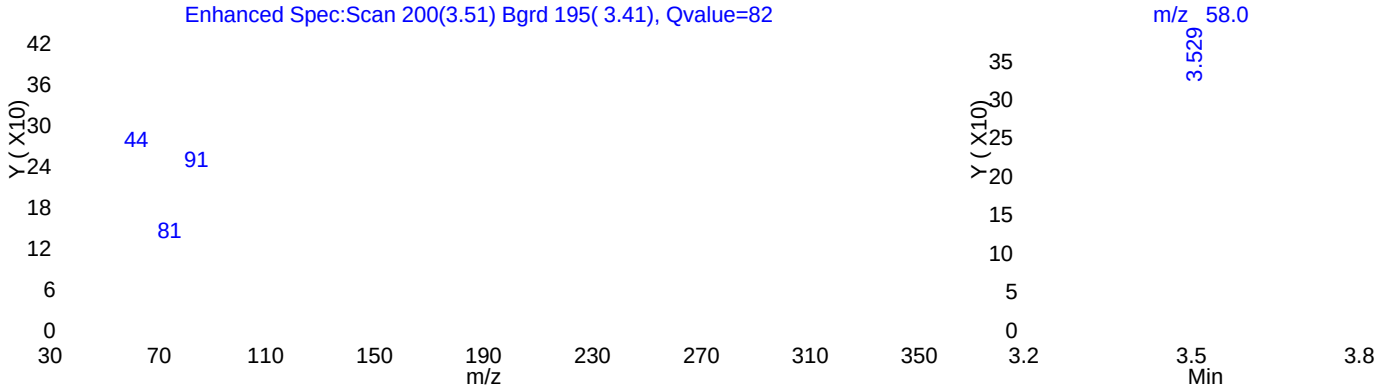
TestAmerica Denver

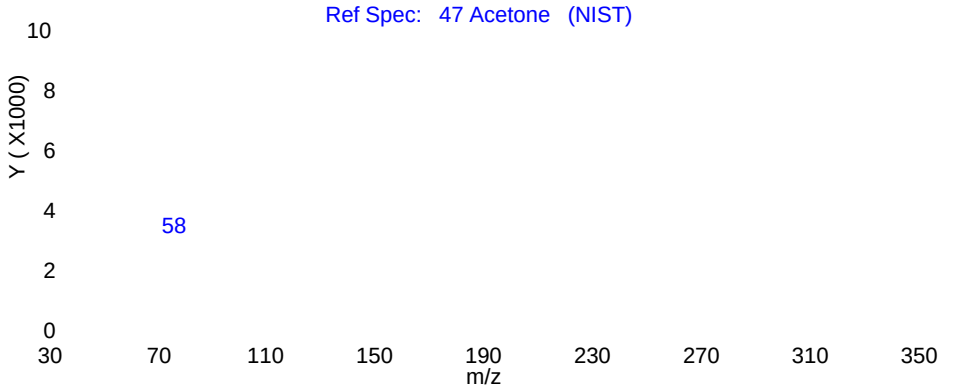
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4169.D				
Injection Date:	12-Feb-2018 12:10:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-4	Lab Sample ID:	280-105986-4		
Client ID:	775MW-27_0118				
Operator ID:	moanm	ALS Bottle#:	21	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

47 Acetone, CAS: 67-64-1

Processing Results







RT	Mass	Response	Amount
3.51	43.00	2174	1.880725
3.53	58.00	1613	

Reviewer: moanm, 12-Feb-2018 17:33:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-8_0118 | Lab Sample ID: 280-105986-5

Matrix: Water | Lab File ID: H4170.D

Analysis Method: 8260B | Date Collected: 01/31/2018 15:30

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q		LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.23	J		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U		1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U		5.0	3.2	1.0
67-64-1	Acetone	6.4	U	M	10	6.4	1.9
71-43-2	Benzene	0.40	U		1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U		1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U		1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U		1.0	0.40	0.17
75-25-2	Bromoform	0.40	U		1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U		2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-8_0118 | Lab Sample ID: 280-105986-5

Matrix: Water | Lab File ID: H4170.D

Analysis Method: 8260B | Date Collected: 01/31/2018 15:30

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	15		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775VMW-8_0118
Lab Sample ID: 280-105986-5

Matrix: Water
Lab File ID: H4170.D

Analysis Method: 8260B
Date Collected: 01/31/2018 15:30

Sample wt/vol: 20(mL)
Date Analyzed: 02/12/2018 12:32

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture:
Level: (low/med) Low

Analysis Batch No.: 404562
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4170.D
Lims ID: 280-105986-B-5
Client ID: 775VMW-8_0118
Sample Type: Client
Inject. Date: 12-Feb-2018 12:32:30 ALS Bottle#: 22 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-B-5 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:34:09

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.999	3.975	0.024	0	102912	250.0	
*	2 Fluorobenzene	96	6.751	6.763	-0.012	98	602387	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.107	11.118	-0.011	87	158233	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	96	269156	12.5	
$	8 Dibromofluoromethane (Surr	111	5.915	5.912	0.003	93	308705	10.1	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.333	6.330	0.003	0	127487	9.79	
$	10 Toluene-d8 (Surr)	98	8.877	8.874	0.003	93	604046	9.84	
$	11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	336689	8.99	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43		3.522				ND	U
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97	5.950	5.961	-0.011	95	10495	0.2296	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95	7.222	7.233	-0.011	98	424637	14.6	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

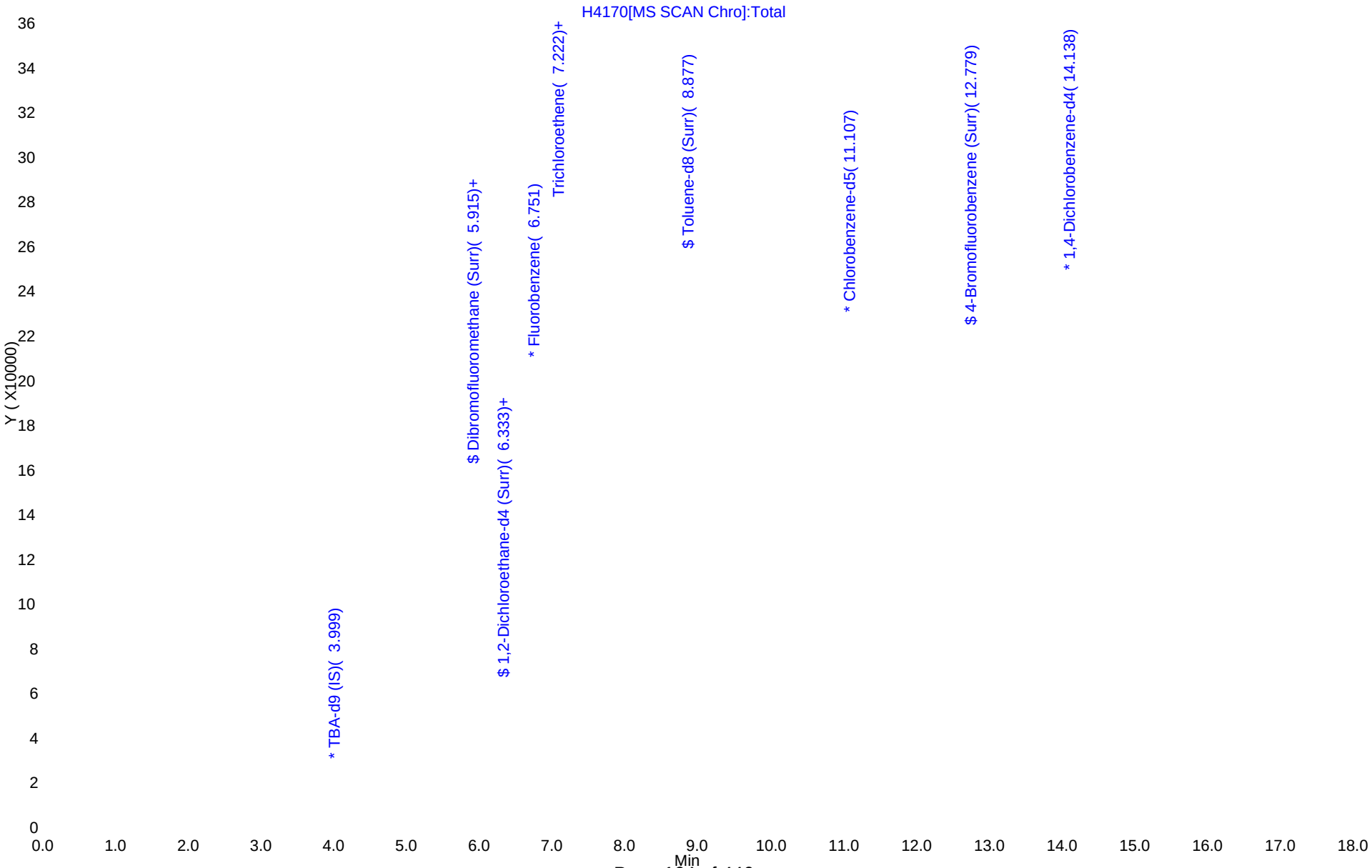
Report Date: 12-Feb-2018 17:40:02 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4170.D

Injection Date:	12-Feb-2018 12:32:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-B-5	Lab Sample ID:	280-105986-5	Worklist Smp#:	17
Client ID:	775VMW-8_0118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4170.D				
Lims ID:	280-105986-B-5				
Client ID:	775VMW-8_0118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 12:32:30	ALS Bottle#:	22	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-B-5 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:34:09		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.1	106.31
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.79	103.06
$ 10 Toluene-d8 (Surr)	9.50	9.84	103.58
$ 11 4-Bromofluorobenzene (Surr)	9.50	8.99	94.66

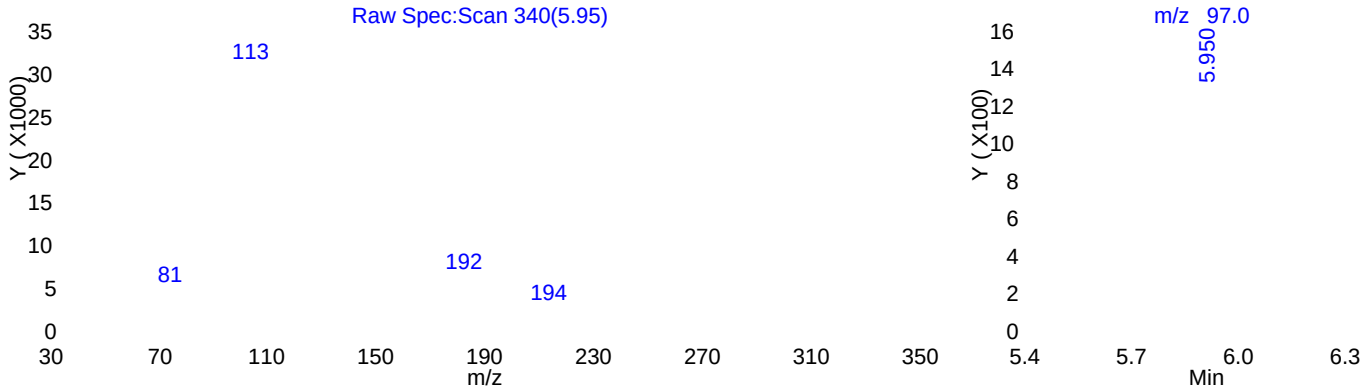
Report Date: 12-Feb-2018 17:40:02 Chrom Revision: 2.2 24-Jan-2018 15:37:30

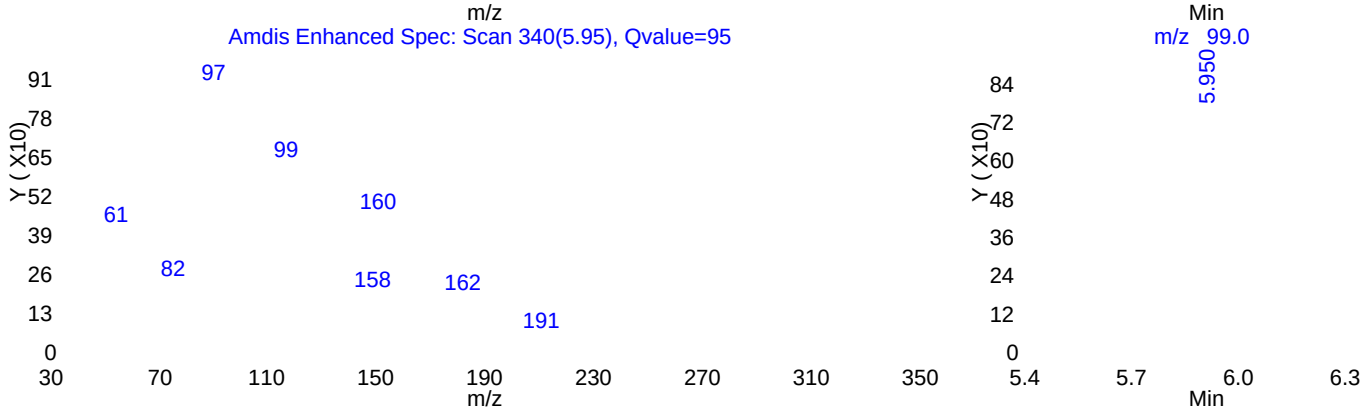
TestAmerica Denver

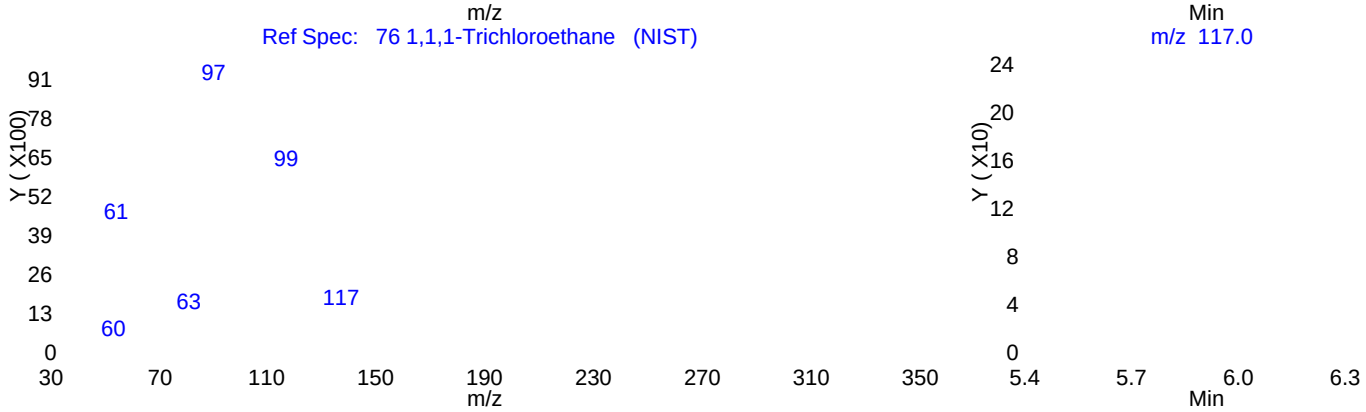
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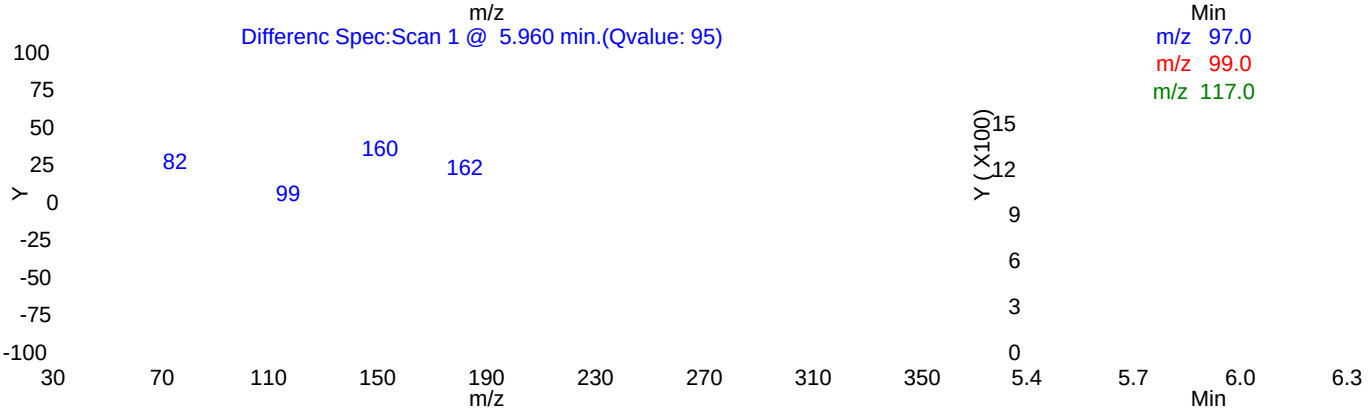
Injection Date:	12-Feb-2018 12:32:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-5	Lab Sample ID:	280-105986-5		
Client ID:	775VMW-8_0118				
Operator ID:	moanm	ALS Bottle#:	22	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

76 1,1,1-Trichloroethane, CAS: 71-55-6









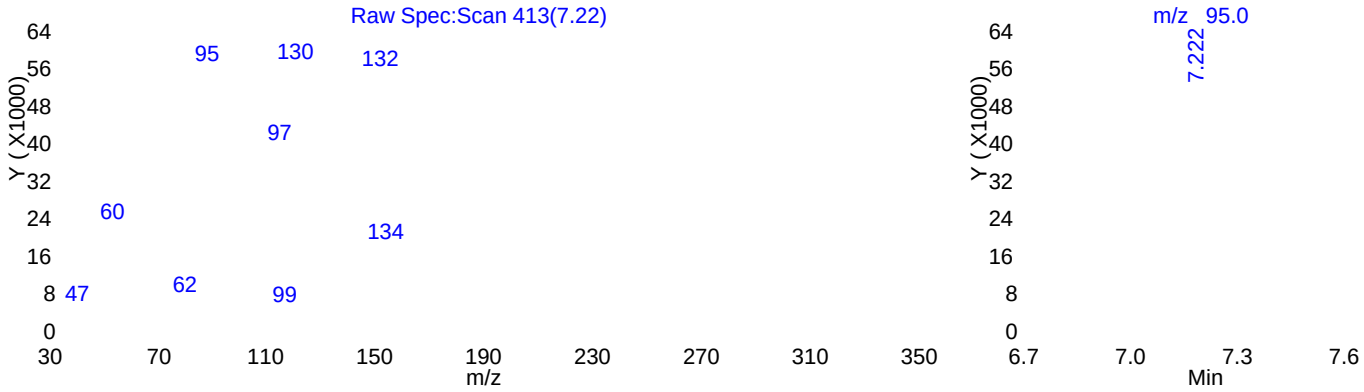
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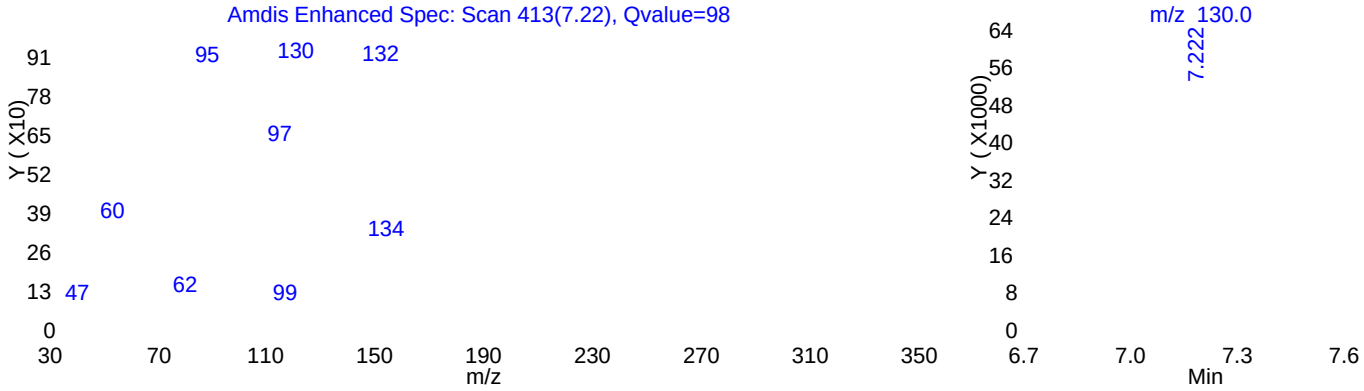
TestAmerica Denver

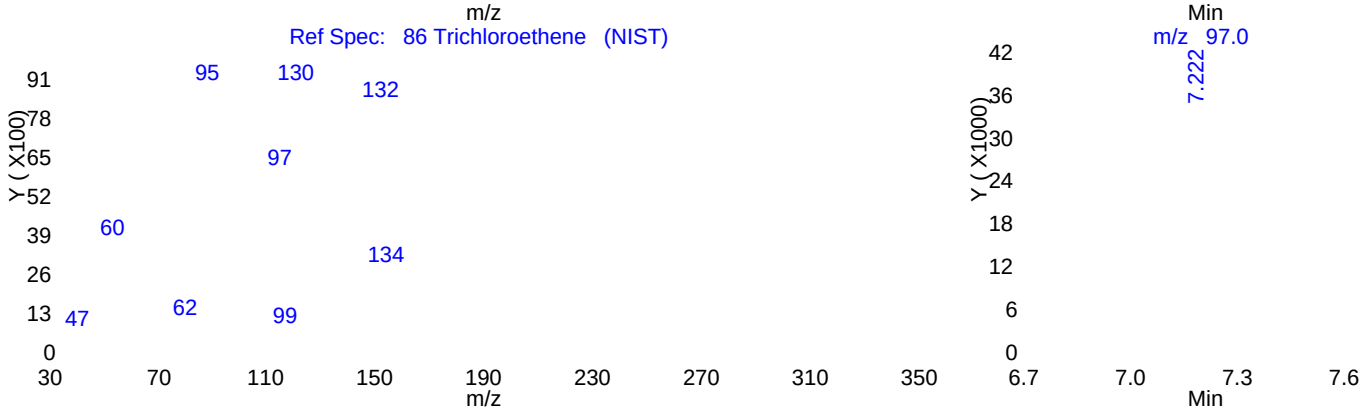
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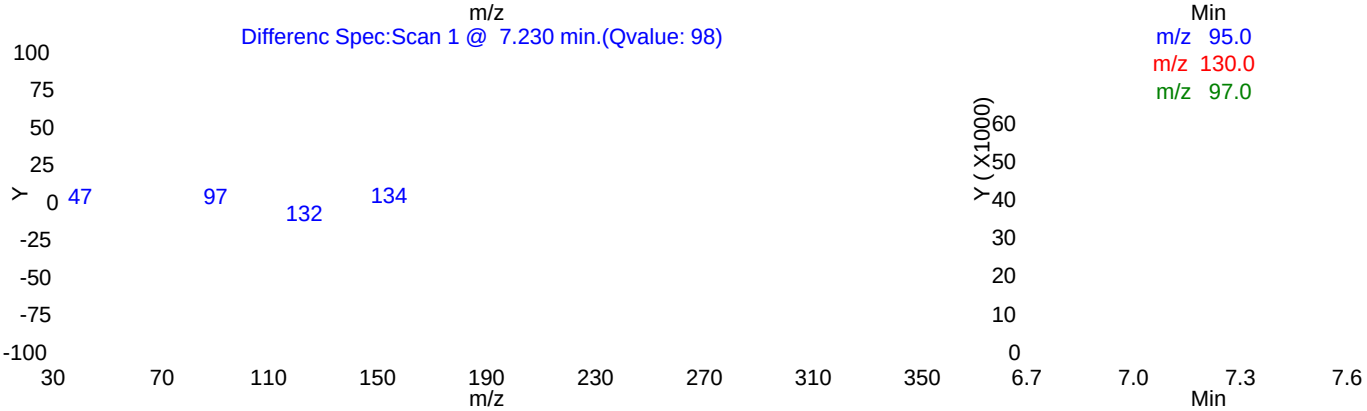
Injection Date:	12-Feb-2018 12:32:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-5	Lab Sample ID:	280-105986-5		
Client ID:	775VMW-8_0118				
Operator ID:	moanm	ALS Bottle#:	22	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

86 Trichloroethene, CAS: 79-01-6









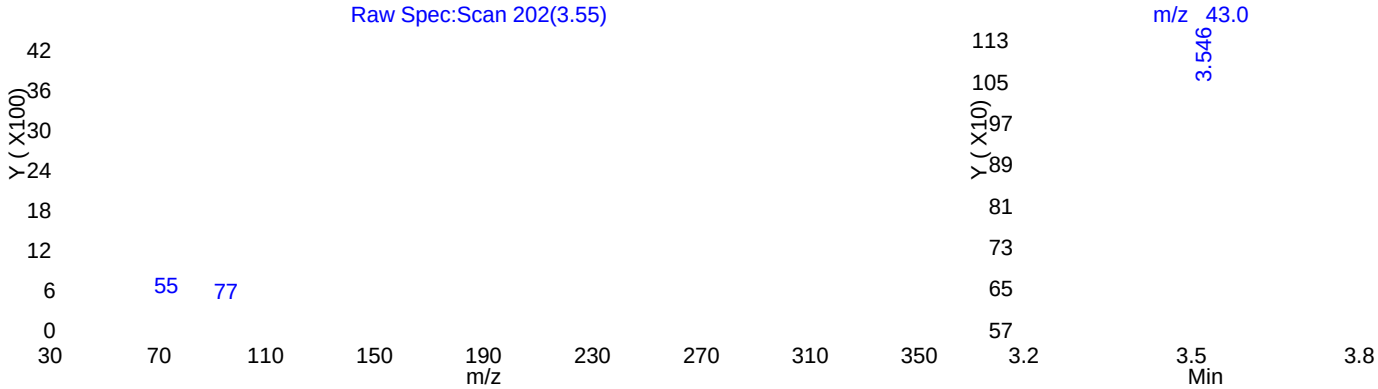
User Disabled Compound Report

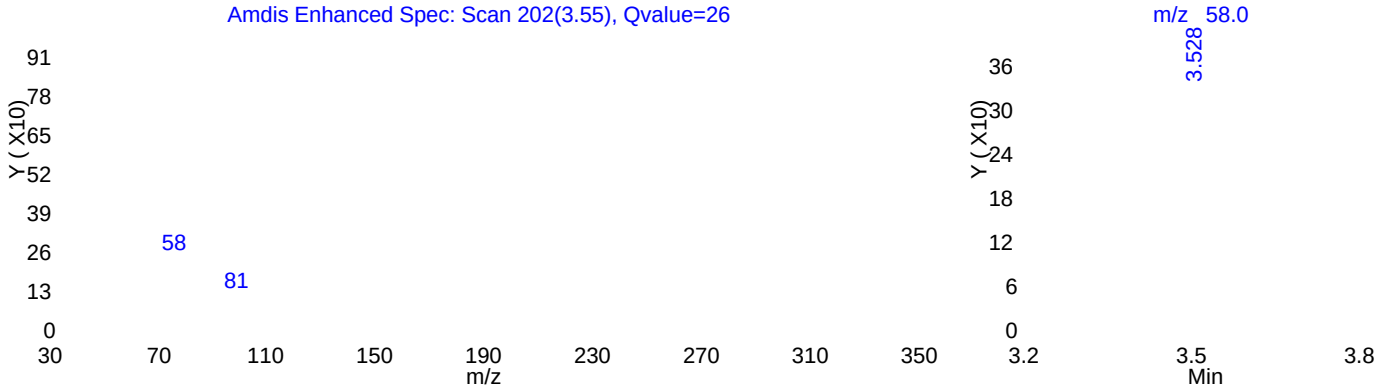
TestAmerica Denver

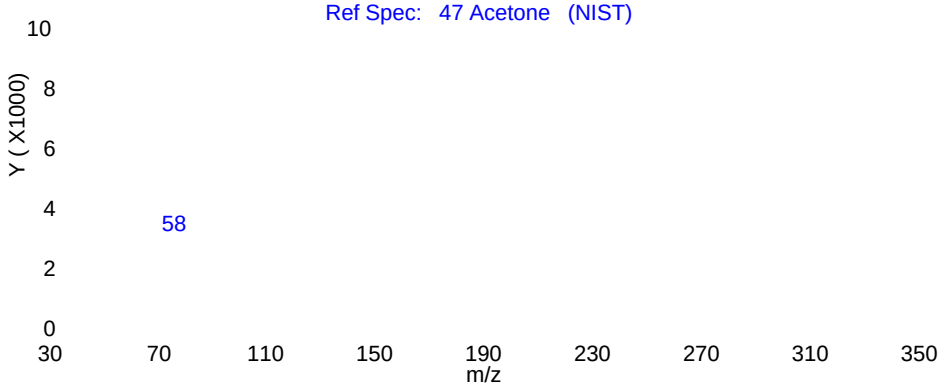
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4170.D				
Injection Date:	12-Feb-2018 12:32:30	Instrument ID:	VMS_H		
Lims ID:	280-105986-B-5	Lab Sample ID:	280-105986-5		
Client ID:	775VMW-8_0118				
Operator ID:	moanm	ALS Bottle#:	22	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

47 Acetone, CAS: 67-64-1

Processing Results







RT	Mass	Response	Amount
3.55	43.00	1240	1.023655
3.53	58.00	1485	

Reviewer: moanm, 12-Feb-2018 17:34:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013018 | Lab Sample ID: 280-105986-6

Matrix: Water | Lab File ID: H4171.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:45

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q		LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U		1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U		5.0	3.2	1.0
67-64-1	Acetone	5.1	J		10	6.4	1.9
71-43-2	Benzene	0.40	U		1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U		1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U		1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U		1.0	0.40	0.17
75-25-2	Bromoform	0.40	U		1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U		2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013018 | Lab Sample ID: 280-105986-6

Matrix: Water | Lab File ID: H4171.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:45

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013018 | Lab Sample ID: 280-105986-6

Matrix: Water | Lab File ID: H4171.D

Analysis Method: 8260B | Date Collected: 01/30/2018 13:45

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4171.D
Lims ID: 280-105986-A-6
Client ID: 775-AB_013018
Sample Type: Client
Inject. Date: 12-Feb-2018 12:54:30 ALS Bottle#: 23 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-A-6 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:34:21

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.993	3.975	0.018	0	87706	250.0	
*	2 Fluorobenzene	96	6.746	6.763	-0.017	99	590676	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.119	11.118	0.001	87	156089	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.150	14.132	0.018	96	252271	12.5	
$	8 Dibromofluoromethane (Surr	111	5.910	5.912	-0.002	93	293125	9.78	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.328	6.330	-0.002	0	120019	9.40	
$	10 Toluene-d8 (Surr)	98	8.871	8.874	-0.003	93	559910	9.25	
$	11 4-Bromofluorobenzene (Surr	95	12.774	12.777	-0.003	95	315868	9.00	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43	3.523	3.522	0.001	98	6052	5.10	
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97		5.961				ND	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95		7.233				ND	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

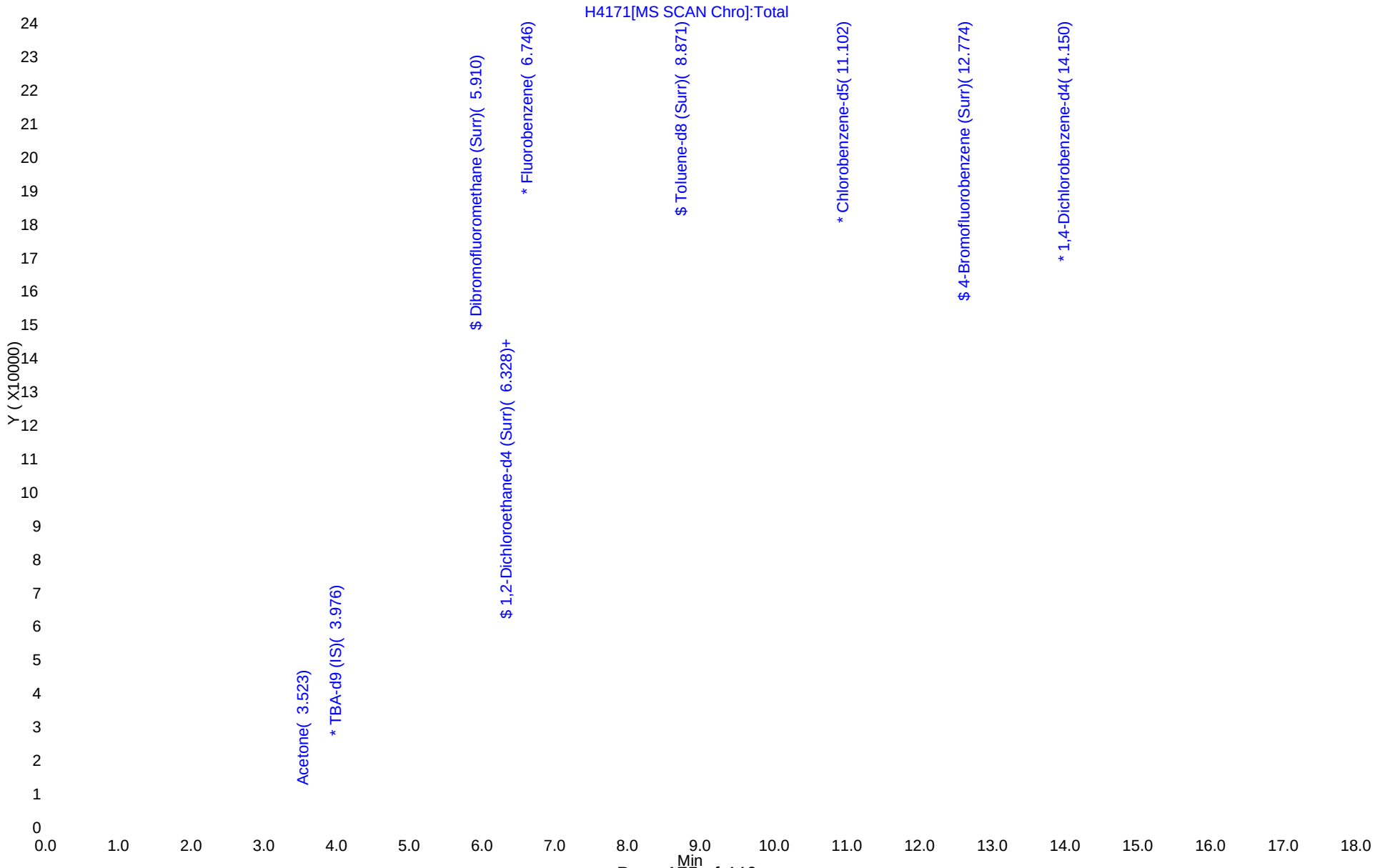
Report Date: 12-Feb-2018 17:40:03 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4171.D

Injection Date:	12-Feb-2018 12:54:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-A-6	Lab Sample ID:	280-105986-6	Worklist Smp#:	18
Client ID:	775-AB_013018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4171.D				
Lims ID:	280-105986-A-6				
Client ID:	775-AB_013018				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 12:54:30	ALS Bottle#:	23	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-A-6 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:34:21		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.78	102.95
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.40	98.95
$ 10 Toluene-d8 (Surr)	9.50	9.25	97.33
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.00	94.75

Report Date: 12-Feb-2018 17:40:03 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4171.D

Injection Date: 12-Feb-2018 12:54:30 Instrument ID: VMS_H

Lims ID: 280-105986-A-6 Lab Sample ID: 280-105986-6

Client ID: 775-AB_013018

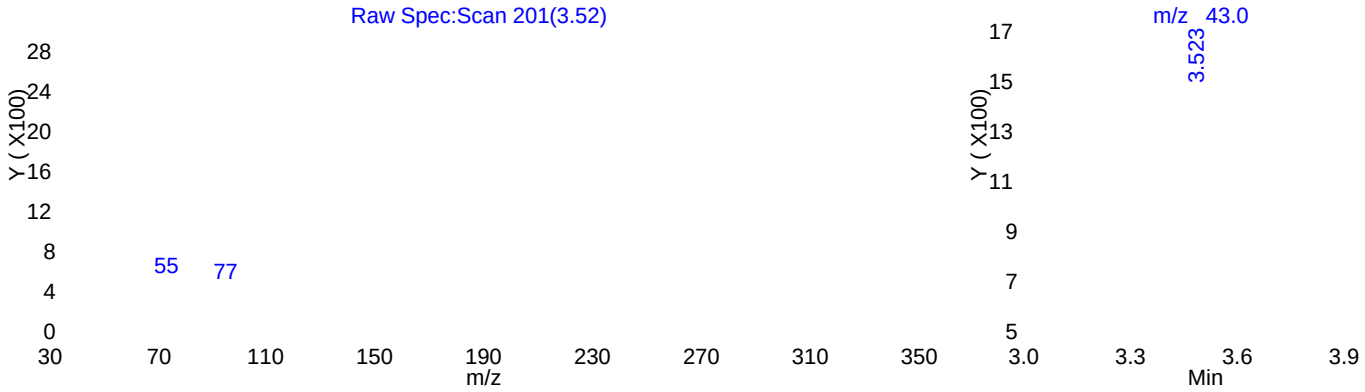
Operator ID: moanm ALS Bottle#: 23 Worklist Smp#: 18

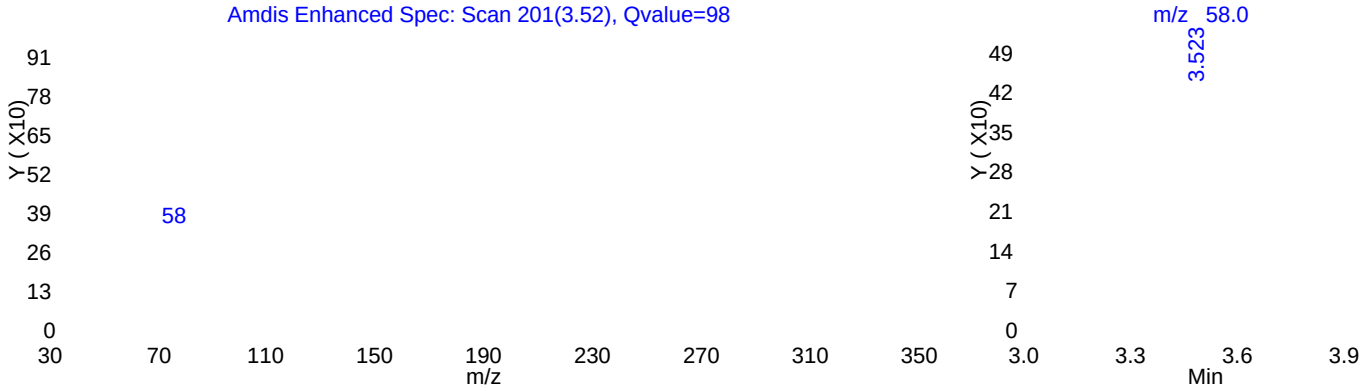
Purge Vol: 20.000 mL Dil. Factor: 1.0000

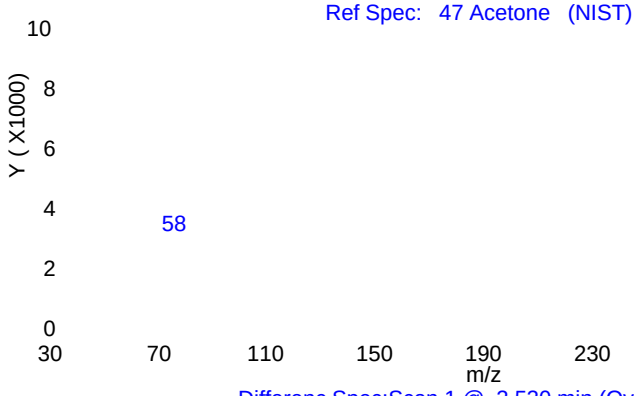
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid

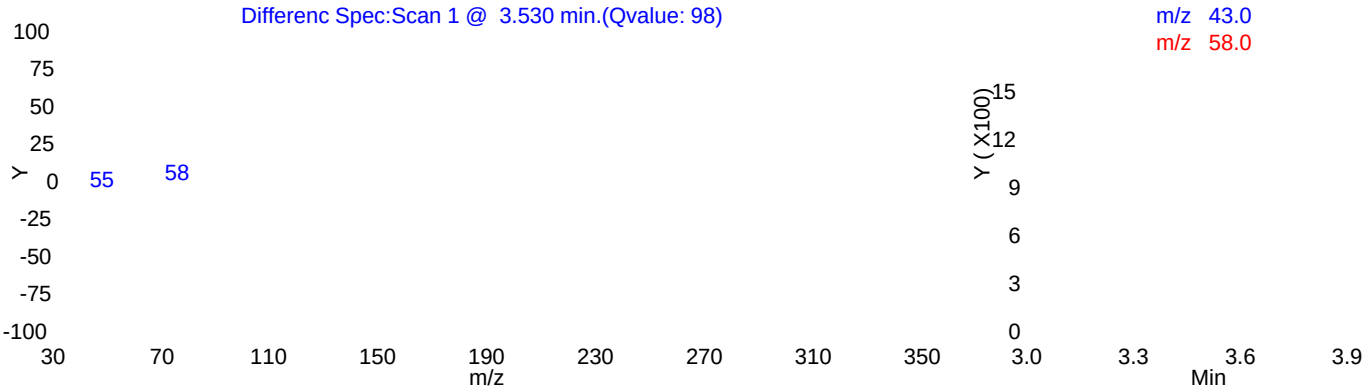
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

47 Acetone, CAS: 67-64-1









FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013118 | Lab Sample ID: 280-105986-7

Matrix: Water | Lab File ID: H4172.D

Analysis Method: 8260B | Date Collected: 01/31/2018 11:50

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 13:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	14		10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013118 | Lab Sample ID: 280-105986-7

Matrix: Water | Lab File ID: H4172.D

Analysis Method: 8260B | Date Collected: 01/31/2018 11:50

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 13:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775-AB_013118 | Lab Sample ID: 280-105986-7

Matrix: Water | Lab File ID: H4172.D

Analysis Method: 8260B | Date Collected: 01/31/2018 11:50

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 13:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		81-118
460-00-4	4-Bromofluorobenzene (Surr)	94		85-114
1868-53-7	Dibromofluoromethane (Surr)	105		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4172.D
Lims ID: 280-105986-A-7
Client ID: 775-AB_013118
Sample Type: Client
Inject. Date: 12-Feb-2018 13:16:30 ALS Bottle#: 24 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-A-7 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:34:34

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.994	3.975	0.019	0	95608	250.0	
*	2 Fluorobenzene	96	6.747	6.763	-0.016	98	583216	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.102	11.118	-0.016	87	155522	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.151	14.132	0.019	96	266131	12.5	
$	8 Dibromofluoromethane (Surr	111	5.928	5.912	0.016	93	295625	9.99	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.329	6.330	-0.001	0	125144	9.93	
$	10 Toluene-d8 (Surr)	98	8.872	8.874	-0.002	93	571543	9.47	
$	11 4-Bromofluorobenzene (Surr	95	12.775	12.777	-0.002	85	329672	8.90	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43	3.506	3.522	-0.016	98	16314	13.9	
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97		5.961				ND	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95		7.233				ND	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

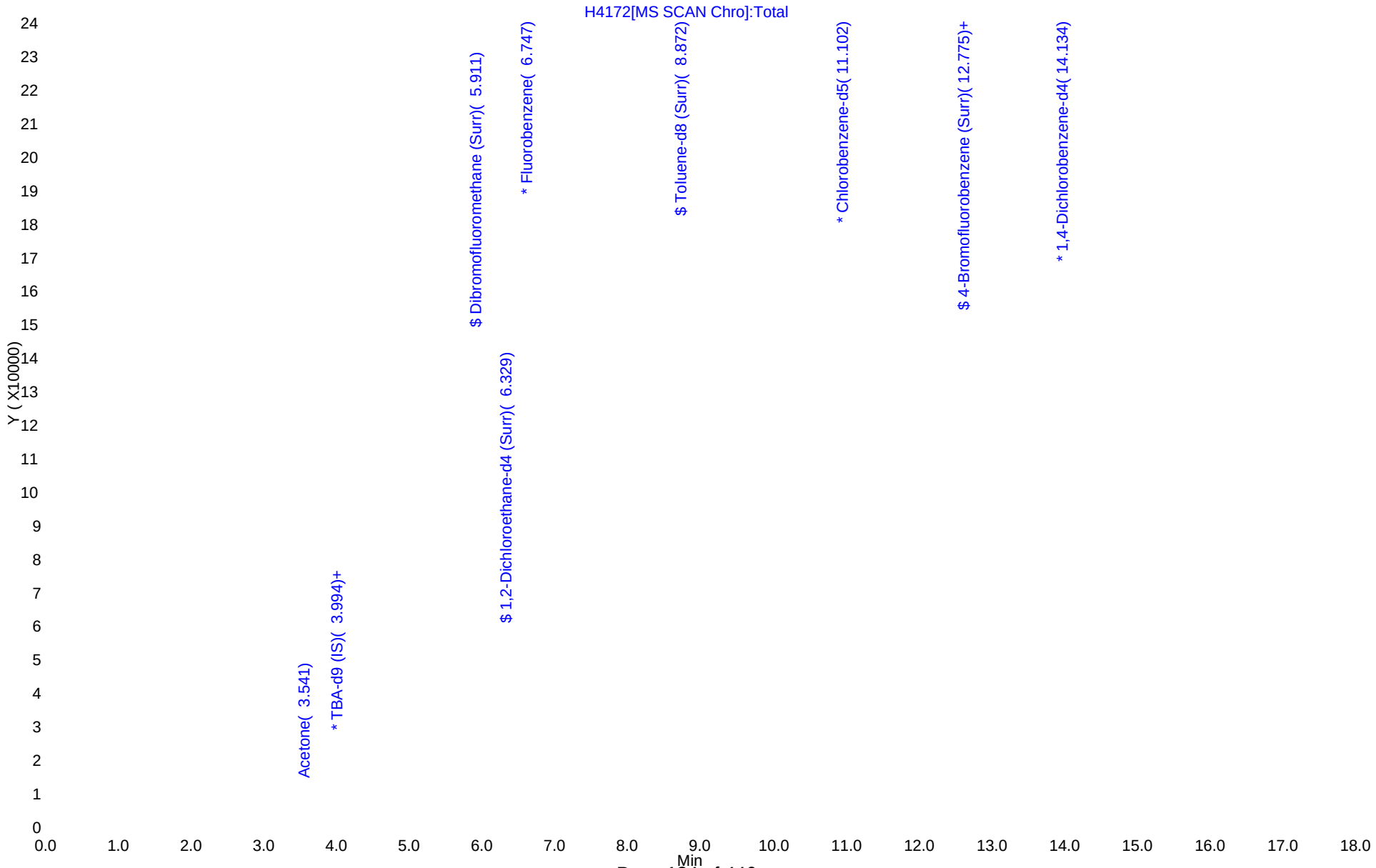
Report Date: 12-Feb-2018 17:40:04 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4172.D

Injection Date:	12-Feb-2018 13:16:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-A-7	Lab Sample ID:	280-105986-7	Worklist Smp#:	19
Client ID:	775-AB_013118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

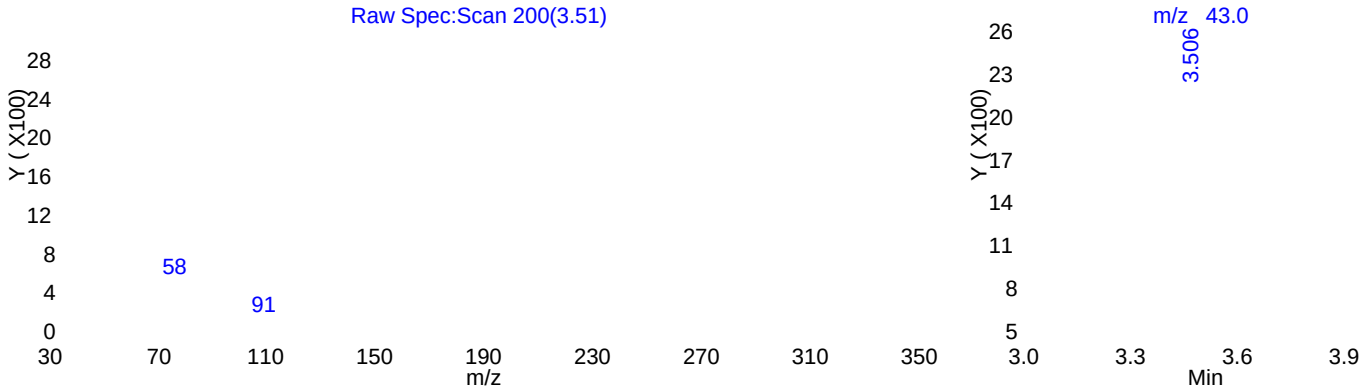
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Lims ID:	280-105986-A-7				
Client ID:	775-AB_013118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 13:16:30	ALS Bottle#:	24	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-A-7 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:34:34		

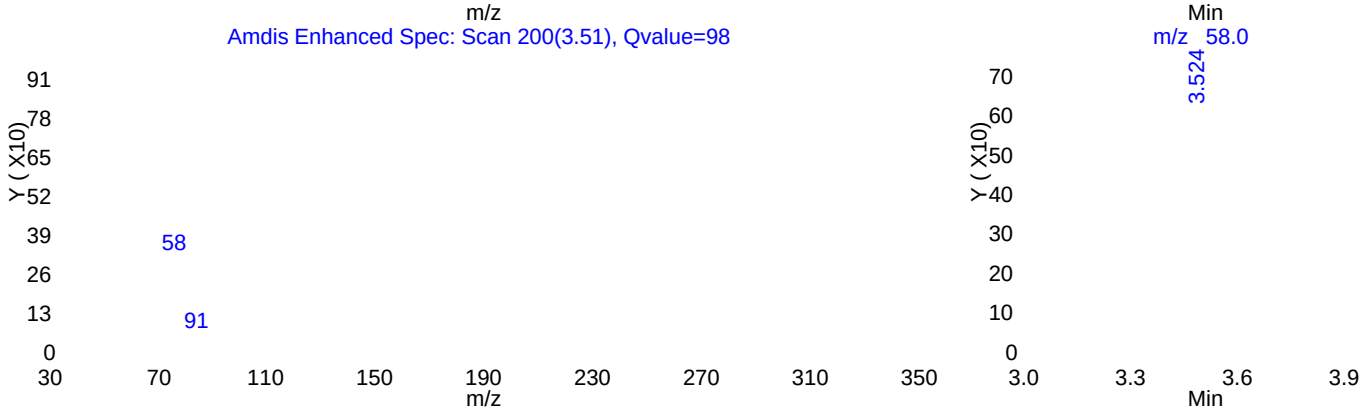
Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.99	105.16
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.93	104.49
$ 10 Toluene-d8 (Surr)	9.50	9.47	99.72
$ 11 4-Bromofluorobenzene (Surr)	9.50	8.90	93.74

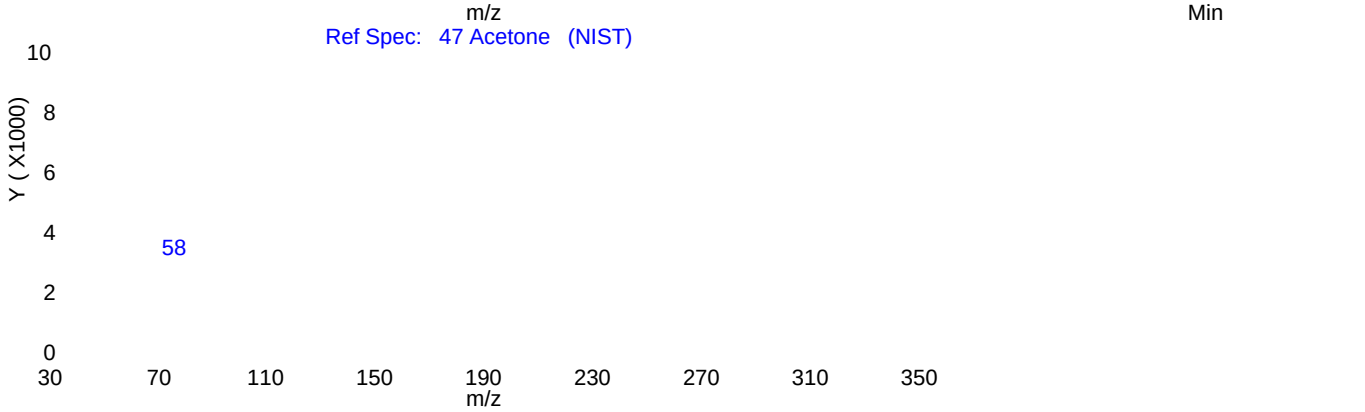
TestAmerica Denver

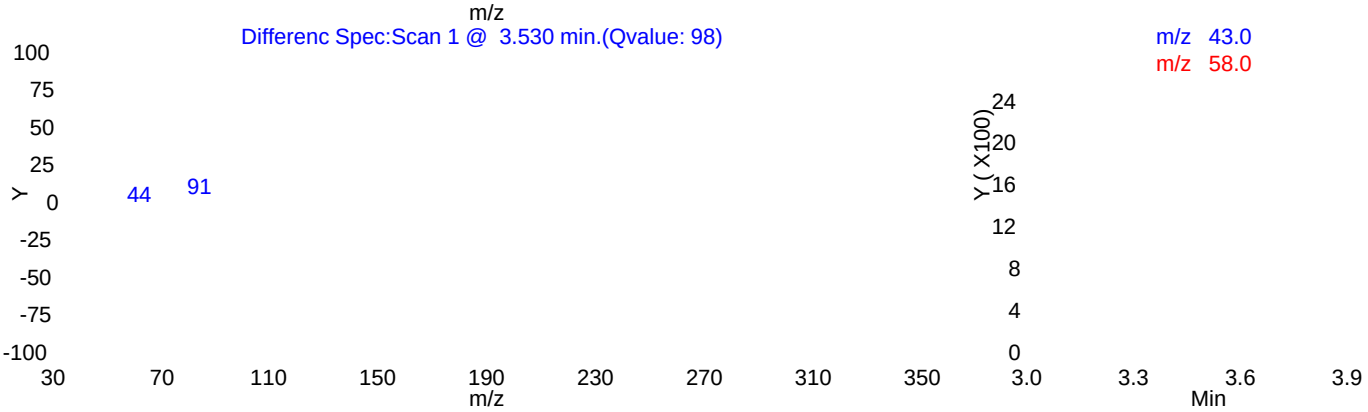
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4172.D		
Injection Date:	12-Feb-2018 13:16:30	Instrument ID:	VMS_H
Lims ID:	280-105986-A-7	Lab Sample ID:	280-105986-7
Client ID:	775-AB_013118		
Operator ID:	moanm	ALS Bottle#:	24 Worklist Smp#: 19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN

47 Acetone, CAS: 67-64-1









FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775TB_013118 | Lab Sample ID: 280-105986-8

Matrix: Water | Lab File ID: H4173.D

Analysis Method: 8260B | Date Collected: 01/31/2018 00:00

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 13:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q		LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U		1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U		5.0	3.2	1.0
67-64-1	Acetone	6.4	U		10	6.4	1.9
71-43-2	Benzene	0.40	U		1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U		1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U		1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U		1.0	0.40	0.17
75-25-2	Bromoform	0.40	U		1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U		2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775TB_013118 | Lab Sample ID: 280-105986-8

Matrix: Water | Lab File ID: H4173.D

Analysis Method: 8260B | Date Collected: 01/31/2018 00:00

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 13:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-105986-1

SDG No.:

Client Sample ID: 775TB_013118
Lab Sample ID: 280-105986-8

Matrix: Water
Lab File ID: H4173.D

Analysis Method: 8260B
Date Collected: 01/31/2018 00:00

Sample wt/vol: 20(mL)
Date Analyzed: 02/12/2018 13:37

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture:
Level: (low/med) Low

Analysis Batch No.: 404562
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	94		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4173.D
Lims ID: 280-105986-A-8
Client ID: 775TB_013118
Sample Type: Client
Inject. Date: 12-Feb-2018 13:37:30 ALS Bottle#: 25 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-105986-A-8 ph<2
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:34:46

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.978	3.975	0.003	0	93728	250.0	
*	2 Fluorobenzene	96	6.748	6.763	-0.015	98	588944	12.5	
*	3 1,4-Dioxane-d8	96		8.670				ND	
*	4 Chlorobenzene-d5	119	11.104	11.118	-0.014	87	156136	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.152	14.132	0.020	96	259743	12.5	
$	8 Dibromofluoromethane (Surr	111	5.912	5.912	0.000	93	301708	10.1	
$	9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.330	0.017	0	124607	9.79	
$	10 Toluene-d8 (Surr)	98	8.874	8.874	0.000	93	584382	9.65	
$	11 4-Bromofluorobenzene (Surr	95	12.776	12.777	-0.001	85	322295	8.92	
	28 Dichlorodifluoromethane	85		2.181				ND	
	30 Chloromethane	50		2.303				ND	
	32 Vinyl chloride	62		2.425				ND	
	35 Bromomethane	94		2.703				ND	
	36 Chloroethane	64		2.773				ND	
	38 Trichlorofluoromethane	101		3.000				ND	
	45 1,1-Dichloroethene	96		3.487				ND	
	47 Acetone	43		3.522				ND	
	48 Iodomethane	142		3.662				ND	
	50 Carbon disulfide	76		3.731				ND	
	54 Methylene Chloride	84		3.958				ND	
	58 trans-1,2-Dichloroethene	96		4.237				ND	
	56 Methyl tert-butyl ether	73		4.237				ND	
	60 1,1-Dichloroethane	63		4.690				ND	
	61 Vinyl acetate	43		4.724				ND	
	62 Isopropyl ether	87		4.745				ND	
	66 2,2-Dichloropropane	77		5.352				ND	
	65 cis-1,2-Dichloroethene	96		5.352				ND	
	67 2-Butanone (MEK)	43		5.369				ND	
	73 Chlorobromomethane	128		5.648				ND	
	75 Chloroform	83		5.717				ND	
	76 1,1,1-Trichloroethane	97		5.961				ND	
	78 1,1-Dichloropropene	75		6.153				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
79 Carbon tetrachloride	117		6.170				ND	
81 Benzene	78		6.414				ND	
82 1,2-Dichloroethane	62		6.432				ND	
86 Trichloroethene	95		7.233				ND	
90 1,2-Dichloropropane	63		7.529				ND	
92 Dibromomethane	93		7.704				ND	
94 Dichlorobromomethane	83		7.895				ND	
97 cis-1,3-Dichloropropene	75		8.505				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732				ND	
99 Toluene	91		8.975				ND	
100 trans-1,3-Dichloropropene	75		9.289				ND	
102 1,1,2-Trichloroethane	97		9.550				ND	
103 Tetrachloroethene	164		9.759				ND	
104 1,3-Dichloropropane	76		9.794				ND	
105 2-Hexanone	43		9.934				ND	
108 Chlorodibromomethane	129		10.160				ND	
109 Ethylene Dibromide	107		10.334				ND	
111 Chlorobenzene	112		11.153				ND	
112 1,1,1,2-Tetrachloroethane	131		11.293				ND	
113 Ethylbenzene	106		11.327				ND	
114 m-Xylene & p-Xylene	106		11.519				ND	
115 o-Xylene	106		12.077				ND	
116 Styrene	104		12.111				ND	
117 Bromoform	173		12.355				ND	
118 Isopropylbenzene	105		12.582				ND	
122 Bromobenzene	156		12.965				ND	
121 1,1,2,2-Tetrachloroethane	83		12.983				ND	
123 1,2,3-Trichloropropane	110		13.035				ND	
125 N-Propylbenzene	120		13.105				ND	
126 2-Chlorotoluene	126		13.209				ND	
127 1,3,5-Trimethylbenzene	105		13.314				ND	
128 4-Chlorotoluene	126		13.331				ND	
129 tert-Butylbenzene	119		13.697				ND	
130 1,2,4-Trimethylbenzene	105		13.749				ND	
131 sec-Butylbenzene	134		13.941				ND	
132 1,3-Dichlorobenzene	146		14.063				ND	
133 4-Isopropyltoluene	119		14.115				ND	
134 1,4-Dichlorobenzene	146		14.167				ND	
137 n-Butylbenzene	91		14.551				ND	
138 1,2-Dichlorobenzene	146		14.568				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369				ND	
141 1,2,4-Trichlorobenzene	180		16.119				ND	
142 Hexachlorobutadiene	225		16.275				ND	
143 Naphthalene	128		16.345				ND	
144 1,2,3-Trichlorobenzene	180		16.572				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

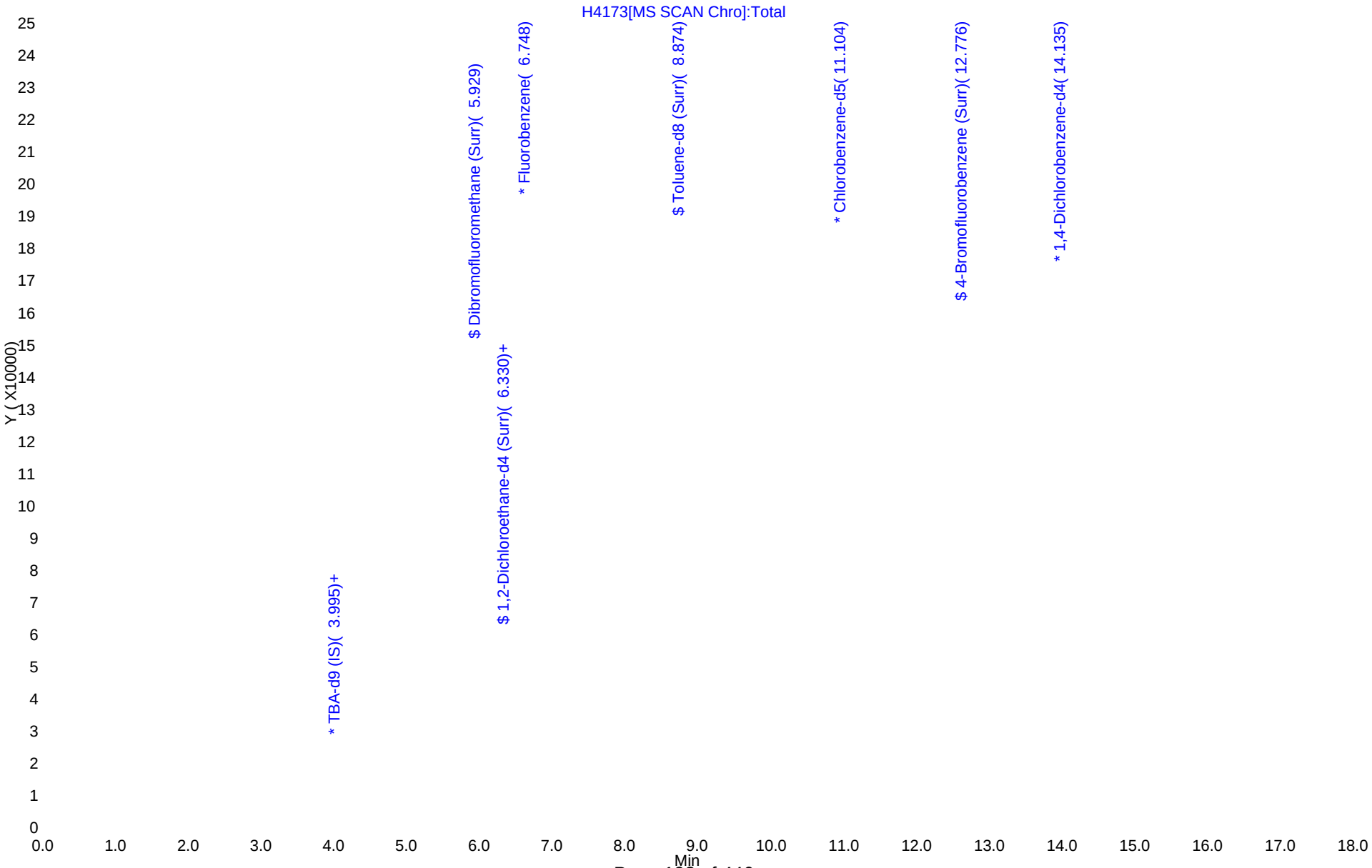
Report Date: 12-Feb-2018 17:40:05 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4173.D

Injection Date:	12-Feb-2018 13:37:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	280-105986-A-8	Lab Sample ID:	280-105986-8	Worklist Smp#:	20
Client ID:	775TB_013118				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4173.D				
Lims ID:	280-105986-A-8				
Client ID:	775TB_013118				
Sample Type:	Client				
Inject. Date:	12-Feb-2018 13:37:30	ALS Bottle#:	25	Worklist Smp#:	20
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-105986-A-8 ph<2				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:38:56	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 17:34:46		

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.1	106.28
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.79	103.03
$ 10 Toluene-d8 (Surr)	9.50	9.65	101.56
$ 11 4-Bromofluorobenzene (Surr)	9.50	8.92	93.89

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver | Job No.: 280-105986-1 | Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H | GC Column: DB-624 (75. ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 | Calibration End Date: 01/29/2018 12:30 | Calibration ID: 31506

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403042/2	H3794.D
Level 2	IC 280-403042/3	H3795.D
Level 3	IC 280-403042/4	H3796.D
Level 4	IC 280-403042/5	H3797.D
Level 5	IC 280-403042/6	H3798.D
Level 6	IC 280-403042/7	H3799.D
Level 7	IC 280-403042/8	H3800.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			# MIN RRF	%RSD	# MAX %RSD	R^2 OR COD	# MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2					
	LVL 6	LVL 7												
Dichlorodifluoromethane	0.9478	0.6290	0.7748	0.6588	0.6759	Ave		0.7337			14.5	15.0		
	0.7312	0.7183												
Chloromethane	0.3384	0.3103	0.3370	0.3291	0.3339	Ave		0.3292		0.1000	2.9	15.0		
	0.3270	0.3285												
Vinyl chloride	0.3963	0.3752	0.3716	0.3412	0.3565	Ave		0.3659			4.7	30.0		
	0.3608	0.3594												
Bromomethane	0.6019	0.4371	0.4205	0.3937	0.3780	Lin2	0.0672	0.3772					1.0000	0.9900
	0.3835	0.3739												
Chloroethane	0.3675	0.2545	0.2532	0.2128	0.2122	Lin2	0.0467	0.2125					0.9980	0.9900
	0.2225	0.2066												
Dichlorofluoromethane	1.2000	0.8544	0.8778	0.8387	0.8370	Ave		0.8970			15.0	15.0		
	0.8444	0.8265												
Trichlorofluoromethane	1.1114	0.9925	1.0190	0.9511	0.9469	Ave		0.9891			6.2	15.0		
	0.9638	0.9390												
Ethyl ether	0.1723	0.1736	0.1697	0.1670	0.1645	Ave		0.1695			1.8	15.0		
	0.1700	0.1696												
Acrolein	+++++	0.0083	0.0099	0.0103	0.0102	Ave		0.0105			13.7	15.0		
	0.0118	0.0124												
1,1-Dichloroethene	0.5074	0.4199	0.4381	0.3808	0.4114	Ave		0.4254			9.4	30.0		
	0.4067	0.4136												
1,1,2-Trichloro-1,2,2-trifluoroethane	0.6441	0.6138	0.6372	0.6046	0.6135	Ave		0.6224			2.2	15.0		
	0.6200	0.6239												
Acetone	+++++	0.0260	0.0270	0.0239	0.0240	Ave		0.0251			4.9	15.0		
	0.0253	0.0246												
Methyl iodide	1.2355	1.0670	1.0714	1.0225	1.0539	Ave		1.0895			6.3	15.0		
	1.0760	1.0999												
Carbon disulfide	1.8147	1.4402	1.4271	1.3379	1.3873	Ave		1.4624			10.9	15.0		
	1.3986	1.4309												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			# MIN RRF	%RSD	# MAX %RSD	R^2 OR COD	# MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2					
	LVL 6	LVL 7												
3-Chloro-1-propene	0.6068	0.4927	0.5586	0.5343	0.5352	Ave		0.5497			6.4	15.0		
	0.5496	0.5704												
Methyl acetate	+++++	0.0730	0.0780	0.0779	0.0830	Ave		0.0811			7.2	15.0		
	0.0863	0.0885												
Methylene Chloride	0.5690	0.3945	0.3472	0.3360	0.3431	Lin2	0.0703	0.3300					0.9990	0.9900
	0.3378	0.3470												
t-Butyl alcohol	+++++	1.7457	1.2176	1.0226	1.0465	Lin1	5.6080	1.0115					0.9970	0.9900
	1.0533	+++++												
Acrylonitrile	0.0207	0.0220	0.0236	0.0206	0.0230	Ave		0.0229			8.6	15.0		
	0.0246	0.0259												
trans-1,2-Dichloroethene	0.5562	0.4458	0.4585	0.4402	0.4617	Ave		0.4677			8.5	15.0		
	0.4557	0.4556												
Methyl tert-butyl ether	0.8152	0.6030	0.6092	0.5889	0.6082	Ave		0.6427			12.2	15.0		
	0.6398	0.6345												
Hexane	2.2520	2.0130	2.2811	2.2328	2.3336	Ave		2.2832			6.6	15.0		
	2.3554	2.5143												
1,1-Dichloroethane	0.9141	0.7650	0.7708	0.7249	0.7520	Ave		0.7816		0.1000	7.8	15.0		
	0.7674	0.7771												
Vinyl acetate	+++++	0.3199	0.3445	0.3302	0.3553	Ave		0.3529			7.9	15.0		
	0.3724	0.3953												
cis-1,2-Dichloroethene	0.5254	0.4677	0.4842	0.4534	0.4668	Ave		0.4780			4.8	15.0		
	0.4731	0.4756												
2,2-Dichloropropane	2.5439	1.3356	1.0146	0.8372	0.7815	Qua	0.5440	0.7363	-0.000243				1.0000	0.9900
	0.7486	0.7307												
2-Butanone (MEK)	+++++	0.0488	0.0531	0.0453	0.0463	Ave		0.0493			6.2	15.0		
	0.0510	0.0512												
sec-Butyl Alcohol	+++++	1.0453	0.9911	0.9918	1.0841	Ave		1.0919			9.8	15.0		
	1.1870	1.2525												
Bromochloromethane	0.2372	0.2320	0.2300	0.2224	0.2329	Ave		0.2326			2.3	15.0		
	0.2375	0.2364												
Tetrahydrofuran	+++++	0.0466	0.0312	0.0311	0.0323	Lin1	0.0006	0.0354					0.9970	0.9900
	0.0359	0.0361												
Chloroform	1.1359	0.8911	0.8898	0.8837	0.8881	Ave		0.9291			9.9	30.0		
	0.9109	0.9039												
1,1,1-Trichloroethane	1.1080	0.9480	0.9528	0.8990	0.8984	Ave		0.9483			7.8	15.0		
	0.9163	0.9158												
Cyclohexane	1.0836	0.6809	0.7705	0.6611	0.6731	Lin2	0.1215	0.6566					0.9930	0.9900
	0.6762	0.6807												
1,1-Dichloropropene	0.8654	0.7680	0.7464	0.6955	0.7151	Ave		0.7438			8.0	15.0		
	0.7073	0.7092												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			# MIN RRF	%RSD	# MAX %RSD	R^2 OR COD	# MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2					
	LVL 6	LVL 7												
Carbon tetrachloride	1.0168	0.9429	0.9454	0.8854	0.8977	Ave		0.9266			5.0	15.0		
	0.8992	0.8990												
Isobutyl alcohol	+++++	0.3967	0.4045	0.3826	0.4438	Ave		0.4268			8.8	15.0		
	0.4563	0.4772												
Benzene	1.3860	1.2464	1.2412	1.1991	1.2476	Ave		1.2653			4.6	15.0		
	1.2680	1.2685												
1,2-Dichloroethane	0.3766	0.3575	0.3686	0.3470	0.3618	Ave		0.3661			3.1	15.0		
	0.3712	0.3799												
Trichloroethene	0.6333	0.6453	0.5842	0.5797	0.5903	Ave		0.6050			4.1	15.0		
	0.6048	0.5972												
2-Pentanone	0.2006	0.2444	0.2004	0.2380	0.2519	Ave		0.2236			14.6	15.0		
	0.2582	0.1717												
Methylcyclohexane	0.7538	0.6717	0.6493	0.6333	0.6506	Ave		0.6649			6.1	15.0		
	0.6484	0.6474												
1,2-Dichloropropane	0.4535	0.4584	0.4421	0.4255	0.4273	Ave		0.4374			3.2	30.0		
	0.4293	0.4259												
Dibromomethane	0.3357	0.3030	0.2955	0.2805	0.2868	Ave		0.2986			6.0	15.0		
	0.2947	0.2937												
Bromodichloromethane	0.9375	0.7772	0.7659	0.7551	0.7834	Ave		0.8040			7.7	15.0		
	0.8077	0.8008												
cis-1,3-Dichloropropene	2.0666	2.1347	2.3216	2.3400	2.4687	Ave		2.3418			8.1	15.0		
	2.4648	2.5965												
4-Methyl-2-pentanone (MIBK)	+++++	0.1663	0.1797	0.1797	0.1883	Ave		0.1839			5.9	15.0		
	0.1942	0.1951												
Toluene	1.7347	1.5077	1.4582	1.4633	1.4742	Ave		1.5132			6.5	30.0		
	1.4824	1.4723												
trans-1,3-Dichloropropene	0.4682	0.4586	0.4349	0.4402	0.4489	Ave		0.4603			4.5	15.0		
	0.4877	0.4836												
Ethyl methacrylate	+++++	1.2033	1.0741	1.2089	1.2665	Ave		1.2511			9.5	15.0		
	1.3362	1.4176												
1,1,2-Trichloroethane	+++++	0.5340	0.4163	0.2868	0.3055	Lin2	0.2541	0.2780					0.9910	0.9900
	0.2988	0.2965												
Tetrachloroethene	1.9277	1.8733	2.0803	2.0428	2.1755	Ave		2.0554			5.7	15.0		
	2.1031	2.1849												
1,3-Dichloropropane	1.6668	1.7581	1.8148	1.6720	1.8048	Ave		1.7759			4.8	15.0		
	1.8098	1.9048												
2-Hexanone	0.2861	0.4219	0.3562	0.4060	0.4817	Lin1	-0.429	0.5020					0.9980	0.9900
	0.4950	0.5116												
Dibromochloromethane	2.0726	2.2052	2.3056	2.2830	2.3605	Ave		2.3007			5.7	15.0		
	2.4110	2.4668												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
1,2-Dibromoethane	1.0946	1.2845	1.3494	1.4014	1.4727	Ave		1.3864				11.8		15.0			
	1.5167	1.5853															
1-Chlorohexane	3.2366	2.8233	2.9478	2.8721	2.9509	Ave		2.9524				4.6		15.0			
	2.8655	2.9707															
Chlorobenzene	3.6392	3.6294	3.9081	3.8928	4.0576	Ave		3.8941			0.3000	5.0		15.0			
	4.0046	4.1271															
1,1,1,2-Tetrachloroethane	2.3609	1.9266	2.1154	2.0955	2.1607	Ave		2.1432				6.1		15.0			
	2.1301	2.2131															
Ethylbenzene	1.7756	1.7287	1.8365	1.8525	1.9493	Ave		1.8465				4.1		30.0			
	1.8756	1.9076															
m,p-Xylene	2.6684	2.5359	2.7718	2.7205	2.8235	Ave		2.7300				3.7		15.0			
	2.7635	2.8266															
o-Xylene	2.1002	2.2027	2.3270	2.2994	2.3654	Ave		2.2904				4.5		15.0			
	2.3408	2.3975															
Styrene	2.8476	3.0191	3.3817	3.5065	3.6894	Ave		3.4175				10.6		15.0			
	3.6744	3.8036															
Bromoform	0.9671	1.0893	1.1469	1.1997	1.2699	Ave		1.1867			0.1000	11.0		15.0			
	1.2892	1.3445															
Isopropylbenzene	5.0069	4.3485	4.4387	4.2450	4.3911	Ave		4.4672				5.5		15.0			
	4.4101	4.4303															
Cyclohexanone	+++++	0.0179	0.0143	0.0156	0.0173	Ave		0.0170				9.8		15.0			
	0.0180	0.0187															
Bromobenzene	1.0530	1.0188	1.0758	1.0618	1.1041	Ave		1.0838				4.1		15.0			
	1.1307	1.1421															
1,1,2,2-Tetrachloroethane	0.7340	0.8056	0.8454	0.7713	0.8048	Ave		0.8107			0.3000	5.8		15.0			
	0.8474	0.8665															
1,2,3-Trichloropropane	0.3340	0.3658	0.2552	0.2184	0.2072	Lin1	0.0645	0.2102							0.9970		0.9900
	0.2142	0.2108															
trans-1,4-Dichloro-2-butene	+++++	0.1750	0.1811	0.1218	0.1378	Ave		0.1544				14.4		15.0			
	0.1531	0.1576															
N-Propylbenzene	1.3255	1.0476	1.0978	1.0123	1.0173	Ave		1.0763				10.6		15.0			
	1.0294	1.0045															
2-Chlorotoluene	1.0437	0.8208	0.9273	0.8650	0.7913	Ave		0.8765				9.8		15.0			
	0.8184	0.8687															
1,3,5-Trimethylbenzene	4.1684	3.1326	3.4176	3.2730	3.3298	Ave		3.4245				9.9		15.0			
	3.3454	3.3046															
4-Chlorotoluene	0.9027	1.0119	1.0258	1.0455	1.1045	Ave		1.0430				7.4		15.0			
	1.1426	1.0683															
tert-Butylbenzene	4.3217	3.7584	3.8416	3.5615	3.6488	Ave		3.7620				7.1		15.0			
	3.6436	3.5582															

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	RRF					CURVE TYPE	COEFFICIENT		# MIN RRF	%RSD	# MAX %RSD	R^2 OR COD	# MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1 M2					
	LVL 6	LVL 7											
1,2,4-Trimethylbenzene	3.6301	2.8796	3.1074	3.0233	3.0182	Ave		3.0986		7.9	15.0		
	3.0135	3.0178											
sec-Butylbenzene	1.1062	0.9601	0.9970	0.9209	0.9762	Ave		0.9779		6.4	15.0		
	0.9607	0.9244											
1,3-Dichlorobenzene	1.3809	1.1727	1.5428	1.4411	1.5220	Ave		1.4520		9.6	15.0		
	1.5712	1.5331											
4-Isopropyltoluene	4.4238	4.1324	4.2237	4.0276	4.1473	Ave		4.1248		4.2	15.0		
	4.0453	3.8737											
1,4-Dichlorobenzene	2.3010	2.6360	2.4874	2.4563	2.4771	Ave		2.4585		4.1	15.0		
	2.4510	2.4004											
n-Butylbenzene	4.6736	3.8397	4.0456	3.9814	4.1185	Ave		4.0864		6.7	15.0		
	4.0470	3.8992											
1,2-Dichlorobenzene	1.5603	1.4830	1.7768	1.6175	1.6513	Ave		1.6337		5.8	15.0		
	1.6929	1.6539											
1,2-Dibromo-3-Chloropropane	+++++	0.1374	0.1286	0.1468	0.1572	Ave		0.1503		10.2	15.0		
	0.1656	0.1659											
1,2,4-Trichlorobenzene	0.7160	0.9436	1.0600	1.0779	1.1432	Ave		1.0226		14.8	15.0		
	1.1493	1.0686											
Hexachlorobutadiene	1.1497	1.1541	1.2204	1.1835	1.2160	Ave		1.1605		5.3	15.0		
	1.1637	1.0359											
Naphthalene	+++++	0.8113	0.9219	0.9969	1.0976	Ave		1.0201		13.4	15.0		
	1.1757	1.1170											
1,2,3-Trichlorobenzene	0.5640	0.9023	0.7149	0.7836	0.8540	Ave		0.7818		14.5	15.0		
	0.8489	0.8047											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver | Job No.: 280-105986-1 | Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H | GC Column: DB-624 (75. ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 | Calibration End Date: 01/29/2018 12:30 | Calibration ID: 31506

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403042/2	H3794.D
Level 2	IC 280-403042/3	H3795.D
Level 3	IC 280-403042/4	H3796.D
Level 4	IC 280-403042/5	H3797.D
Level 5	IC 280-403042/6	H3798.D
Level 6	IC 280-403042/7	H3799.D
Level 7	IC 280-403042/8	H3800.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7				LVL 6	LVL 7			
Dichlorodifluoromethane	FB	Ave	15922	37986	92644	204955	406112	0.300	1.00	2.00	5.00	10.0
			1322681	2551647				30.0	60.0			
Chloromethane	FB	Ave	5685	18737	40301	102380	200609	0.300	1.00	2.00	5.00	10.0
			591486	1166876				30.0	60.0			
Vinyl chloride	FB	Ave	6658	22661	44441	106151	214209	0.300	1.00	2.00	5.00	10.0
			652713	1276720				30.0	60.0			
Bromomethane	FB	Lin2	10111	26395	50285	122466	227110	0.300	1.00	2.00	5.00	10.0
			693792	1328288				30.0	60.0			
Chloroethane	FB	Lin2	6173	15372	30277	66207	127516	0.300	1.00	2.00	5.00	10.0
			402546	734084				30.0	60.0			
Dichlorofluoromethane	FB	Ave	20159	51600	104967	260919	502963	0.300	1.00	2.00	5.00	10.0
			1527478	2936126				30.0	60.0			
Trichlorofluoromethane	FB	Ave	18671	59937	121848	295867	569003	0.300	1.00	2.00	5.00	10.0
			1743384	3336025				30.0	60.0			
Ethyl ether	FB	Ave	2894	10481	20291	51937	98867	0.300	1.00	2.00	5.00	10.0
			307589	602602				30.0	60.0			
Acrolein	FB	Ave	+++++	5028	11891	32147	61243	+++++	10.00	20.0	50.0	100.0
			214152	439187				300	600			
1,1-Dichloroethene	FB	Ave	8524	25359	52390	118461	247176	0.300	1.00	2.00	5.00	10.0
			735605	1469294				30.0	60.0			
1,1,2-Trichloro-1,2,2-trifluoroetha	FB	Ave	10820	37070	76198	188082	368632	0.300	1.00	2.00	5.00	10.0
ne			1121504	2216424				30.0	60.0			
Acetone	FB	Ave	+++++	6278	12927	29734	57698	+++++	4.00	8.00	20.0	40.0
			183365	349023				120	240			
Methyl iodide	FB	Ave	20756	64436	128113	318103	633298	0.300	1.00	2.00	5.00	10.0
			1946457	3907573				30.0	60.0			
Carbon disulfide	FB	Ave	30486	86978	170655	416218	833580	0.300	1.00	2.00	5.00	10.0
			2529991	5083209				30.0	60.0			
3-Chloro-1-propene	FB	Ave	10193	29756	66794	166230	321601	0.300	1.00	2.00	5.00	10.0
			994274	2026480				30.0	60.0			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	+++++ 780721	22043 1571736	46651	121239	249366	+++++ 150	5.00 300	10.0	25.0	50.0
Methylene Chloride	FB	Lin2	9559 611116	23824 1232845	41516	104528	206162	0.300 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Lin1	+++++ 176855	9664 +++++	12105	27146	56313	+++++ 300	10.0 +++++	20.0	50.0	100
Acrylonitrile	FB	Ave	3478 445839	13258 919051	28273	64197	138045	3.00 300	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	9343 824250	26925 1618726	54822	136958	277456	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	13695 1157310	36417 2253997	72843	183190	365448	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	11359 1120296	35070 2198099	73739	182503	360419	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	15357 1388113	46198 2760594	92172	225525	451844	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	+++++ 1347323	38634 2808504	82380	205452	427013	+++++ 60.0	2.00 120	4.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	8827 855742	28244 1689617	57894	141063	280511	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Qua	42735 1354163	80661 2595762	121326	260453	469584	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 369030	11791 727467	25402	56350	111330	+++++ 120	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd9	Ave	+++++ 597917	17360 1213613	29558	78979	175001	+++++ 900	30.0 1800	60.0	150	300
Bromochloromethane	FB	Ave	3985 429534	14013 839726	27499	69174	139974	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Lin1	+++++ 129936	5631 256222	7458	19329	38764	+++++ 60.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	19082 1647818	53813 3211191	106403	274918	533621	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	18614 1657450	57251 3253388	113939	279680	539857	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Lin2	18203 1223204	41118 2418370	92140	205660	404482	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	14538 1279512	46380 2519504	89250	216350	429681	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	17081 1626676	56946 3193587	113046	275437	539426	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Ave	+++++ 191545	5490 385314	10054	25390	59700	+++++ 750	25.0 1500	50.0	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	23284 2293780	75272 4506538	148415	373017	749680	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	6327 671520	21592 1349511	44073	107938	217373	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	10639 1094036	38968 2121611	69862	180333	354695	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	13478 1867967	59046 2439995	95868	296173	605502	1.20 120	4.00 240	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	12663 1172880	40564 2299859	77648	197025	390938	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	7619 776654	27684 1513196	52860	132372	256773	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	5640 533056	18297 1043430	35340	87270	172320	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	15750 1460995	46937 2845068	91591	234906	470707	0.300 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	10424 1172320	37189 2269963	75046	191265	381283	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1405011	40181 2772161	85955	223557	452617	+++++ 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	29142 2681465	91051 5230578	174364	455205	885811	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	7866 882132	27698 1717902	52001	136941	269728	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	+++++ 635518	20963 1239287	34721	98815	195614	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Lin2	+++++ 540487	32249 1053397	49778	89219	183589	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	9723 1000278	32636 1910098	67245	166974	336000	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	8407 860778	30628 1665251	58664	136666	278745	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin1	5773 941760	29403 1789134	46053	132737	297587	1.20 120	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	10454 1146741	38418 2156590	74531	186605	364581	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	5521 721396	22378 1385917	43620	114550	227450	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	16325 1362927	49186 2597113	95290	234756	455759	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	18356 1904713	63229 3608110	126331	318188	626685	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ	Ave	11908	33565	68381	171282	333711	0.300	1.00	2.00	5.00	10.0
	d5		1013119	1934799				30.0	60.0			
Ethylbenzene	CBNZ	Ave	8956	30116	59366	151418	301061	0.300	1.00	2.00	5.00	10.0
	d5		892096	1667728				30.0	60.0			
m,p-Xylene	CBNZ	Ave	13459	44179	89600	222368	436092	0.300	1.00	2.00	5.00	10.0
	d5		1314397	2471125				30.0	60.0			
o-Xylene	CBNZ	Ave	10593	38374	75220	187947	365340	0.300	1.00	2.00	5.00	10.0
	d5		1113344	2096001				30.0	60.0			
Styrene	CBNZ	Ave	14363	52597	109314	286609	569829	0.300	1.00	2.00	5.00	10.0
	d5		1747647	3325274				30.0	60.0			
Bromoform	CBNZ	Ave	4878	18978	37074	98057	196131	0.300	1.00	2.00	5.00	10.0
	d5		613199	1175443				30.0	60.0			
Isopropylbenzene	DCBd	Ave	37070	124723	241636	613789	1215058	0.300	1.00	2.00	5.00	10.0
	4		3577129	6732458				30.0	60.0			
Cyclohexanone	CBNZ	Ave	+++++	12445	18476	51135	106718	+++++	40.0	80.0	200	400
	d5		342469	652456				1200	2400			
Bromobenzene	DCBd	Ave	7796	29221	58567	153522	305524	0.300	1.00	2.00	5.00	10.0
	4		917164	1735652				30.0	60.0			
1,1,2,2-Tetrachloroethane	DCBd	Ave	5434	23106	46023	111526	222700	0.300	1.00	2.00	5.00	10.0
	4		687357	1316837				30.0	60.0			
1,2,3-Trichloropropane	DCBd	Lin1	2473	10492	13894	31583	57347	0.300	1.00	2.00	5.00	10.0
	4		173723	320373				30.0	60.0			
trans-1,4-Dichloro-2-butene	DCBd	Ave	+++++	5018	9861	17610	38138	+++++	1.00	2.00	5.00	10.0
	4		124168	239439				30.0	60.0			
N-Propylbenzene	DCBd	Ave	9814	30046	59762	146369	281499	0.300	1.00	2.00	5.00	10.0
	4		834964	1526442				30.0	60.0			
2-Chlorotoluene	DCBd	Ave	7727	23543	50479	125073	218956	0.300	1.00	2.00	5.00	10.0
	4		663861	1320178				30.0	60.0			
1,3,5-Trimethylbenzene	DCBd	Ave	30862	89849	186050	473240	921386	0.300	1.00	2.00	5.00	10.0
	4		2713545	5021806				30.0	60.0			
4-Chlorotoluene	DCBd	Ave	6683	29022	55841	151169	305636	0.300	1.00	2.00	5.00	10.0
	4		926777	1623469				30.0	60.0			
tert-Butylbenzene	DCBd	Ave	31997	107798	209133	514966	1009652	0.300	1.00	2.00	5.00	10.0
	4		2955408	5407192				30.0	60.0			
1,2,4-Trimethylbenzene	DCBd	Ave	26876	82593	169165	437138	835151	0.300	1.00	2.00	5.00	10.0
	4		2444347	4586081				30.0	60.0			
sec-Butylbenzene	DCBd	Ave	8190	27537	54277	133147	270133	0.300	1.00	2.00	5.00	10.0
	4		779276	1404771				30.0	60.0			
1,3-Dichlorobenzene	DCBd	Ave	10224	33636	83986	208374	421164	0.300	1.00	2.00	5.00	10.0
	4		1274448	2329722				30.0	60.0			
4-Isopropyltoluene	DCBd	Ave	32753	118526	229935	582356	1147601	0.300	1.00	2.00	5.00	10.0
	4		3281195	5886638				30.0	60.0			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 10:19 Calibration End Date: 01/29/2018 12:30 Calibration ID: 31506

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	17036 1988029	75605 3647813	135414	355166	685426	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	34602 3282638	110132 5925426	220236	575677	1139613	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	11552 1373171	42536 2513421	96728	233882	456923	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 134353	3940 252181	7000	21220	43503	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	5301 932184	27065 1623850	57703	155853	316340	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	8512 943881	33102 1574177	66437	171123	336477	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	+++++ 953625	23270 1697509	50189	144144	303713	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	4176 688597	25879 1222837	38918	113306	236321	0.300 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:
Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2018 10:19:30 ALS Bottle#: 12 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:57:56 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 08:24:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	4.009	3.982	0.027	0	112507	250.0	250.0	
*	2 Fluorobenzene	96	6.745	6.735	0.010	98	699968	12.5	12.5	
*	4 Chlorobenzene-d5	119	11.100	11.090	0.010	89	210163	12.5	12.5	
*	5 1,4-Dichlorobenzene-d4	152	14.149	14.139	0.010	98	308489	12.5	12.5	
	28 Dichlorodifluoromethane	85	2.163	2.165	-0.002	94	15922	0.3000	0.3876	
	30 Chloromethane	50	2.285	2.287	-0.002	94	5685	0.3000	0.3084	
	32 Vinyl chloride	62	2.407	2.409	-0.002	94	6658	0.3000	0.3250	
	35 Bromomethane	94	2.685	2.688	-0.003	89	10111	0.3000	0.3006	
	36 Chloroethane	64	2.772	2.757	0.015	93	6173	0.3000	0.2992	
	37 Dichlorofluoromethane	67	2.929	2.949	-0.020	95	20159	0.3000	0.4013	
	38 Trichlorofluoromethane	101	2.982	3.001	-0.019	97	18671	0.3000	0.3371	
	40 Ethyl ether	59	3.225	3.210	0.015	88	2894	0.3000	0.3049	
	44 Acrolein	56		3.367				ND	ND	U
	45 1,1-Dichloroethene	96	3.469	3.472	-0.003	95	8524	0.3000	0.3578	
	46 1,1,2-Trichloro-1,2,2-trif	151	3.487	3.489	-0.002	95	10820	0.3000	0.3104	
	47 Acetone	43	3.522	3.524	-0.002	30	7554	1.20	5.37	
	48 Iodomethane	142	3.626	3.646	-0.020	96	20756	0.3000	0.3402	
	50 Carbon disulfide	76	3.713	3.716	-0.003	99	30486	0.3000	0.3723	
	52 3-Chloro-1-propene	41	3.818	3.803	0.015	36	10193	0.3000	0.3312	
	53 Methyl acetate	43		3.820				ND	ND	
	54 Methylene Chloride	84	3.922	3.942	-0.020	95	9559	0.3000	0.3042	
	55 2-Methyl-2-propanol	59		4.082				ND	ND	U
	57 Acrylonitrile	53	4.236	4.204	0.032	36	3478	3.00	2.71	
	58 trans-1,2-Dichloroethene	96	4.219	4.221	-0.002	96	9343	0.3000	0.3568	
	56 Methyl tert-butyl ether	73	4.219	4.221	-0.002	88	13695	0.3000	0.3805	
	59 Hexane	57	4.480	4.482	-0.002	93	11359	0.3000	0.2959	
	60 1,1-Dichloroethane	63	4.672	4.674	-0.002	93	15357	0.3000	0.3509	
	61 Vinyl acetate	43		4.709				ND	ND	U
	65 cis-1,2-Dichloroethene	96	5.334	5.336	-0.002	80	8827	0.3000	0.3298	
	66 2,2-Dichloropropane	77	5.316	5.353	-0.037	77	42735	0.3000	0.2977	
	67 2-Butanone (MEK)	43		5.353				ND	ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45		5.580				ND	ND	
73 Chlorobromomethane	128	5.630	5.632	-0.002	92	3985	0.3000	0.3059	
74 Tetrahydrofuran	42		5.684				ND	ND	
75 Chloroform	83	5.717	5.702	0.015	91	19082	0.3000	0.3668	
76 1,1,1-Trichloroethane	97	5.961	5.946	0.015	98	18614	0.3000	0.3505	
77 Cyclohexane	56	6.013	6.015	-0.002	77	18203	0.3000	0.3101	
78 1,1-Dichloropropene	75	6.135	6.137	-0.002	86	14538	0.3000	0.3490	
79 Carbon tetrachloride	117	6.152	6.155	-0.003	92	17081	0.3000	0.3292	
80 Isobutyl alcohol	41		6.294				ND	ND	
81 Benzene	78	6.414	6.399	0.015	97	23284	0.3000	0.3286	
82 1,2-Dichloroethane	62	6.414	6.434	-0.020	15	6327	0.3000	0.3086	M
84 n-Heptane	43	6.710	6.695	0.015	36	14800	0.3000	0.3215	
86 Trichloroethene	95	7.233	7.218	0.015	96	10639	0.3000	0.3141	
88 2-Pentanone	43	7.494	7.461	0.033	76	13478	1.20	1.08	
89 Methylcyclohexane	55	7.459	7.461	-0.002	89	12663	0.3000	0.3401	
90 1,2-Dichloropropane	63	7.511	7.514	-0.003	72	7619	0.3000	0.3110	
92 Dibromomethane	93	7.703	7.688	0.015	91	5640	0.3000	0.3373	
93 1,4-Dioxane	88		7.705				ND	ND	
94 Dichlorobromomethane	83	7.877	7.897	-0.020	96	15750	0.3000	0.3499	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	
97 cis-1,3-Dichloropropene	75	8.504	8.507	-0.003	94	10424	0.3000	0.2647	
98 4-Methyl-2-pentanone (MIBK	43		8.716				ND	ND	U
99 Toluene	91	8.975	8.960	0.015	98	29142	0.3000	0.3439	
100 trans-1,3-Dichloropropene	75	9.288	9.291	-0.003	82	7866	0.3000	0.3052	
101 Ethyl methacrylate	69		9.413				ND	ND	U
102 1,1,2-Trichloroethane	97		9.552				ND	ND	U
103 Tetrachloroethene	164	9.759	9.761	-0.002	90	9723	0.3000	0.2814	
104 1,3-Dichloropropane	76	9.794	9.796	-0.002	86	8407	0.3000	0.2816	
105 2-Hexanone	43	9.985	9.935	0.050	51	5773	1.20	1.54	
108 Chlorodibromomethane	129	10.142	10.145	-0.002	91	10454	0.3000	0.2703	
109 Ethylene Dibromide	107	10.316	10.336	-0.020	94	5521	0.3000	0.2369	
110 1-Chlorohexane	91	11.118	11.103	0.015	35	16325	0.3000	0.3289	
111 Chlorobenzene	112	11.153	11.155	-0.002	38	18356	0.3000	0.2804	
112 1,1,1,2-Tetrachloroethane	131	11.292	11.277	0.015	45	11908	0.3000	0.3305	
113 Ethylbenzene	106	11.327	11.329	-0.002	98	8956	0.3000	0.2885	
114 m-Xylene & p-Xylene	106	11.501	11.503	-0.002	0	13459	0.3000	0.2932	
115 o-Xylene	106	12.093	12.078	0.015	96	10593	0.3000	0.2751	
116 Styrene	104	12.111	12.113	-0.002	90	14363	0.3000	0.2500	
117 Bromoform	173	12.372	12.357	0.015	83	4878	0.3000	0.2445	
118 Isopropylbenzene	105	12.581	12.584	-0.003	96	37070	0.3000	0.3362	
120 Cyclohexanone	55		12.706				ND	ND	U
122 Bromobenzene	156	12.965	12.967	-0.002	87	7796	0.3000	0.2915	
121 1,1,2,2-Tetrachloroethane	83	12.999	12.967	0.032	63	5434	0.3000	0.2716	
123 1,2,3-Trichloropropane	110	13.052	13.019	0.033	38	2473	0.3000	0.1698	
124 trans-1,4-Dichloro-2-buten	53		13.054				ND	ND	U
125 N-Propylbenzene	120	13.104	13.106	-0.002	97	9814	0.3000	0.3695	
126 2-Chlorotoluene	126	13.208	13.193	0.015	76	7727	0.3000	0.3572	
127 1,3,5-Trimethylbenzene	105	13.330	13.315	0.015	90	30862	0.3000	0.3652	
128 4-Chlorotoluene	126	13.330	13.333	-0.003	97	6683	0.3000	0.2596	
129 tert-Butylbenzene	119	13.696	13.699	-0.003	92	31997	0.3000	0.3446	
130 1,2,4-Trimethylbenzene	105	13.749	13.751	-0.002	95	26876	0.3000	0.3515	
131 sec-Butylbenzene	134	13.940	13.943	-0.003	95	8190	0.3000	0.3393	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.080	14.065	0.015	87	10224	0.3000	0.2853	
133 4-Isopropyltoluene	119	14.114	14.099	0.015	95	32753	0.3000	0.3217	
134 1,4-Dichlorobenzene	146	14.167	14.169	-0.002	37	17036	0.3000	0.2808	
137 n-Butylbenzene	91	14.550	14.552	-0.002	98	34602	0.3000	0.3431	
138 1,2-Dichlorobenzene	146	14.567	14.570	-0.003	89	11552	0.3000	0.2865	
139 1,2-Dibromo-3-Chloropropan	157		15.354				ND	ND	
141 1,2,4-Trichlorobenzene	180	16.135	16.120	0.015	86	5301	0.3000	0.2100	
142 Hexachlorobutadiene	225	16.275	16.277	-0.002	91	8512	0.3000	0.2972	
143 Naphthalene	128		16.347				ND	ND	
144 1,2,3-Trichlorobenzene	180	16.588	16.573	0.015	90	4176	0.3000	0.2164	
S 151 1,2-Dichloroethene, Total	96				0		0.6000	0.6865	
S 148 1,3-Dichloropropene, Total	1				0		0.6000	0.5699	
S 145 Trihalomethanes, Total	1				0		1.20	1.23	
S 146 Xylenes, Total (URS)	1				0		0.6000	0.5683	
S 149 1,2-Dichloroethene, Total	1				0		0.6000	0.6865	
S 150 Xylenes, Total	106				0		0.6000	0.5683	
S 147 Total BTEX	1				0			1.53	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	0.15	Units: uL
MV-Gas/Ket A_00069	Amount Added:	0.15	Units: uL
MV-2cleve+AVA_00032	Amount Added:	0.15	Units: uL

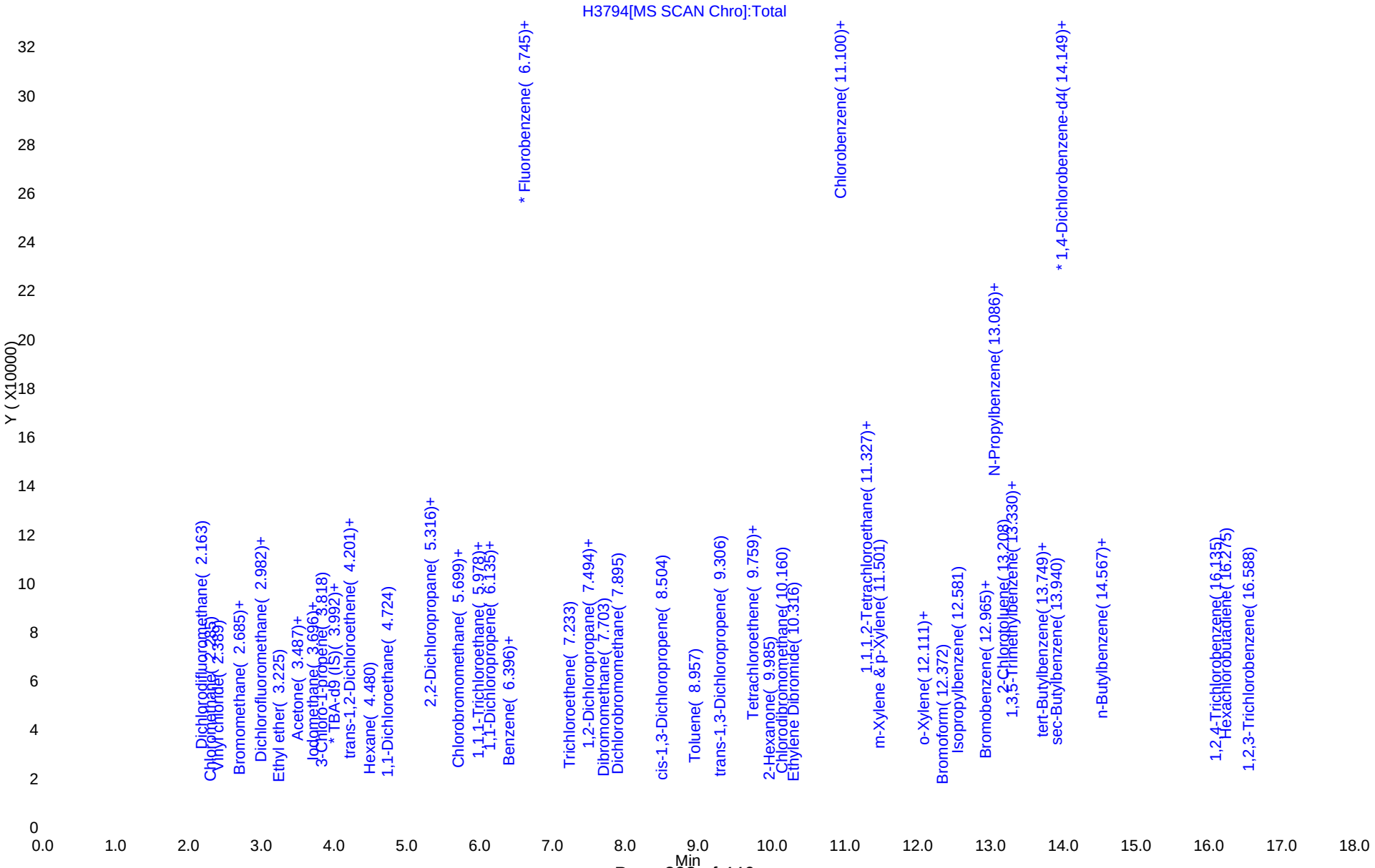
Report Date: 30-Jan-2018 10:57:57 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D

Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D				
Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

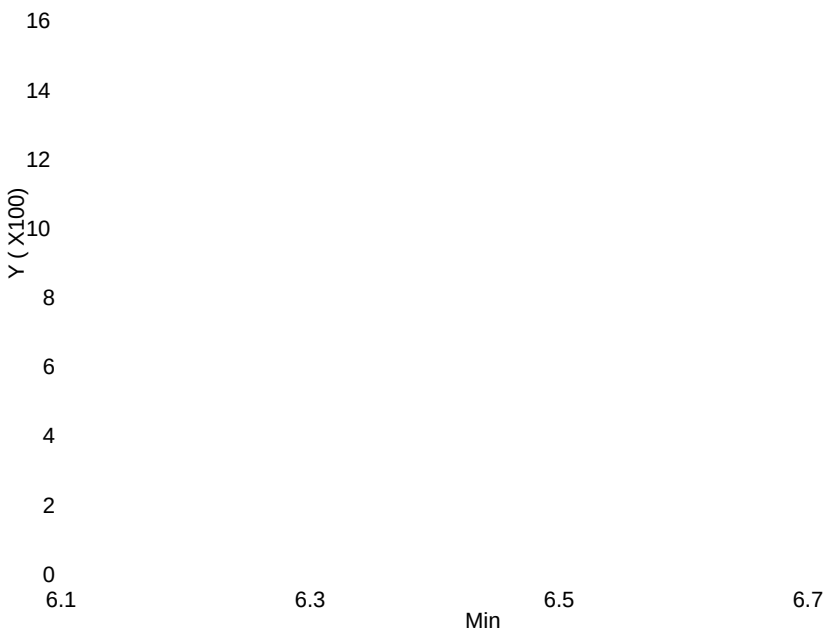
82 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

Processing Integration Results

Not Detected

Expected RT: 6.43



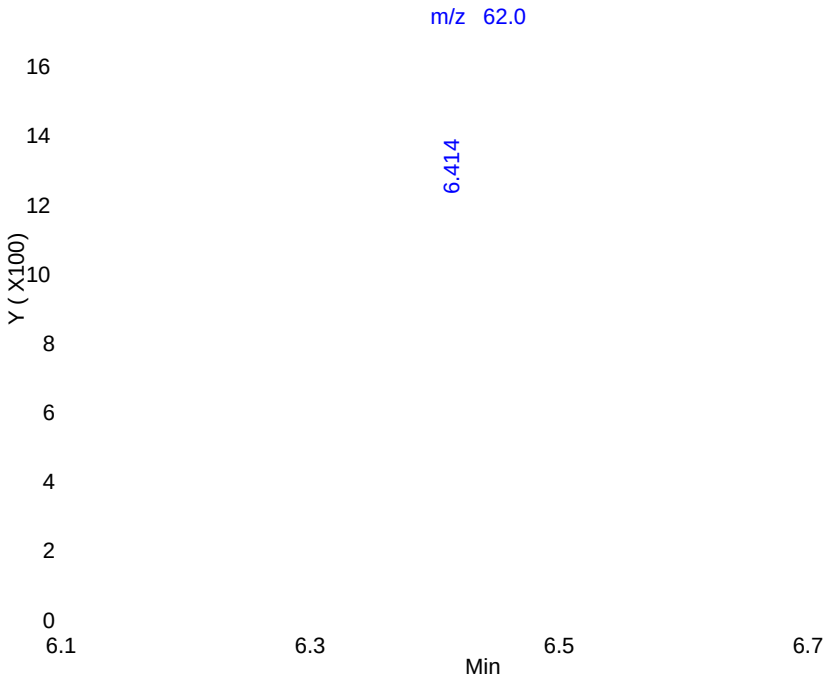
Manual Integration Results

RT: 6.41

Area: 6327

Amount: 0.308643

Amount Units: ug/l



Reviewer: wickhamt, 30-Jan-2018 08:22:30

Audit Action: Manually Integrated Audit Reason: Assign Peak

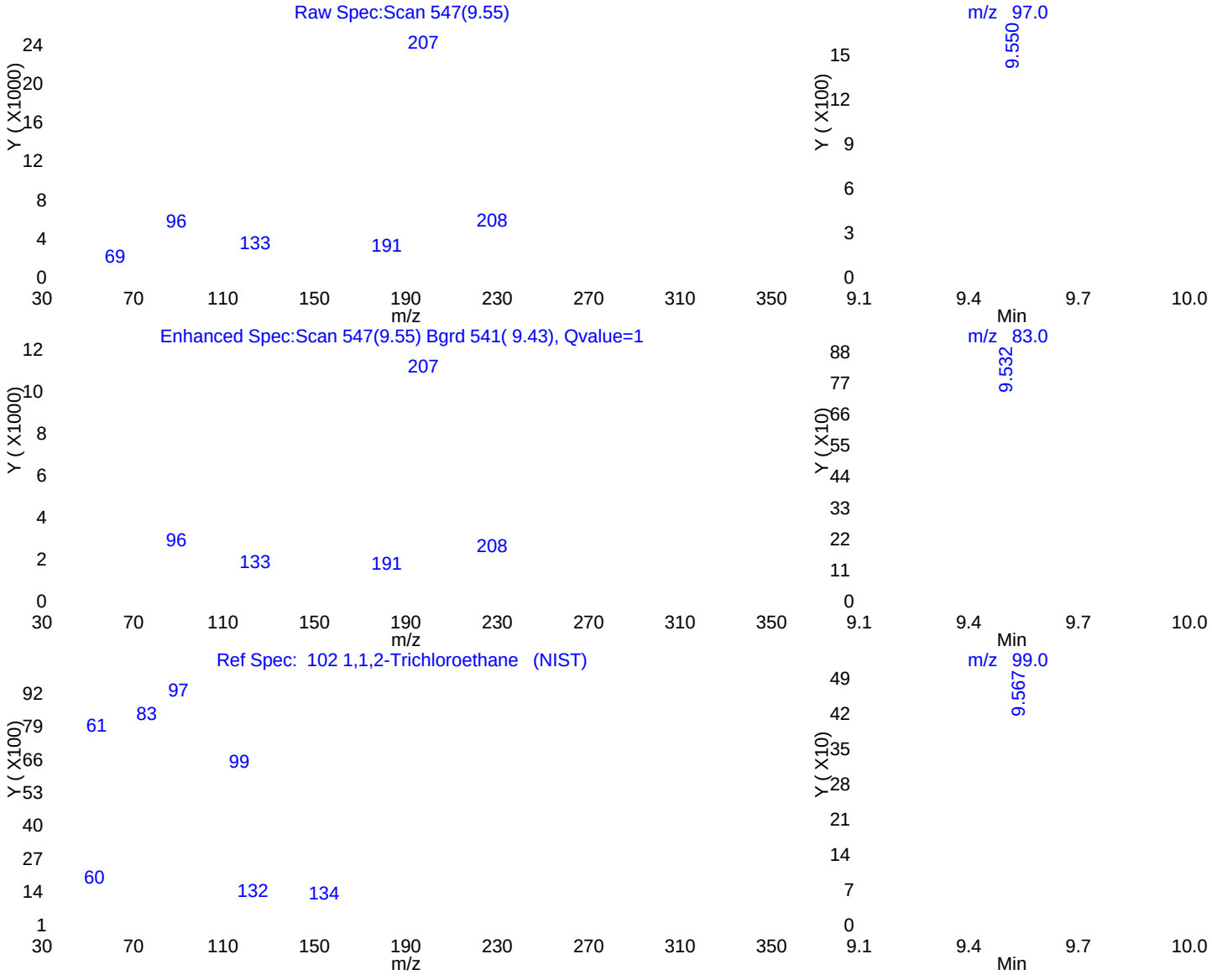
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D				
Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

102 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.55	97.00	5993	0.089965
9.53	83.00	4111	
9.57	99.00	3166	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

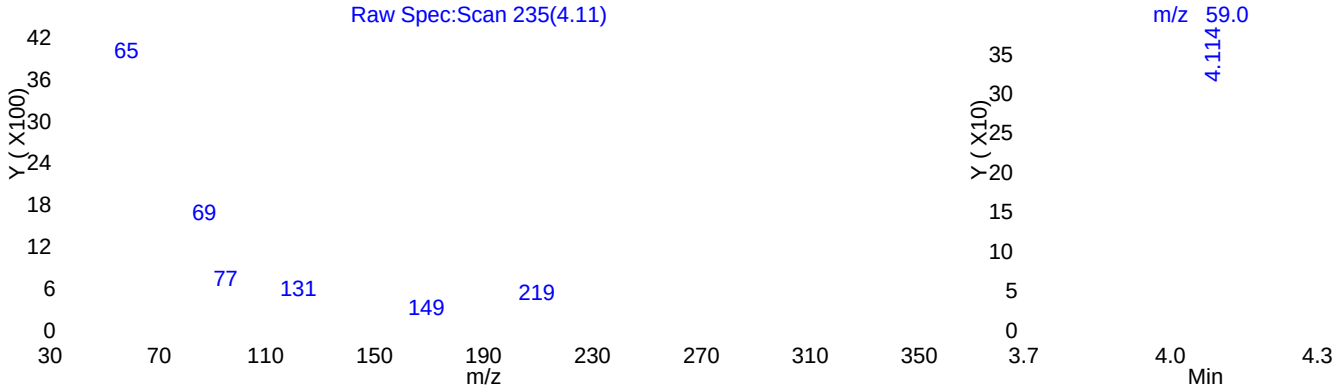
User Disabled Compound Report

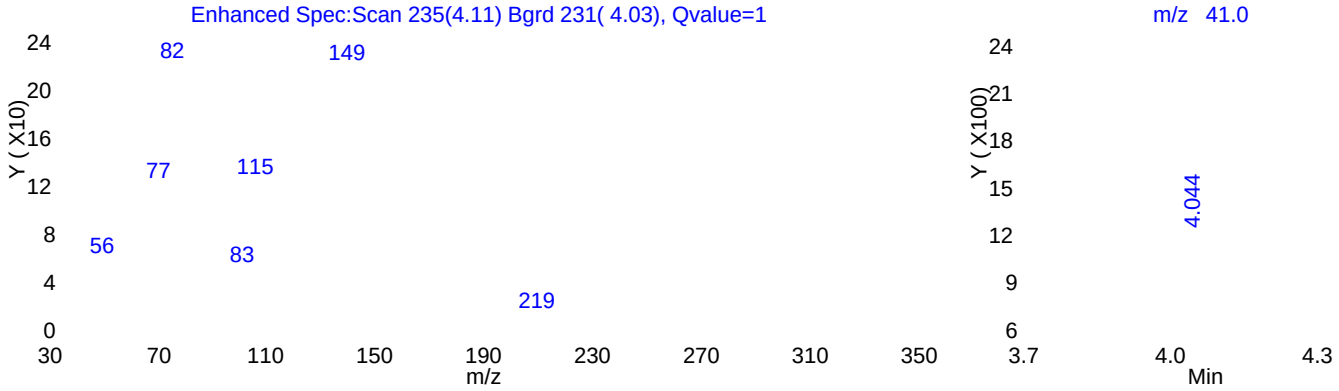
TestAmerica Denver

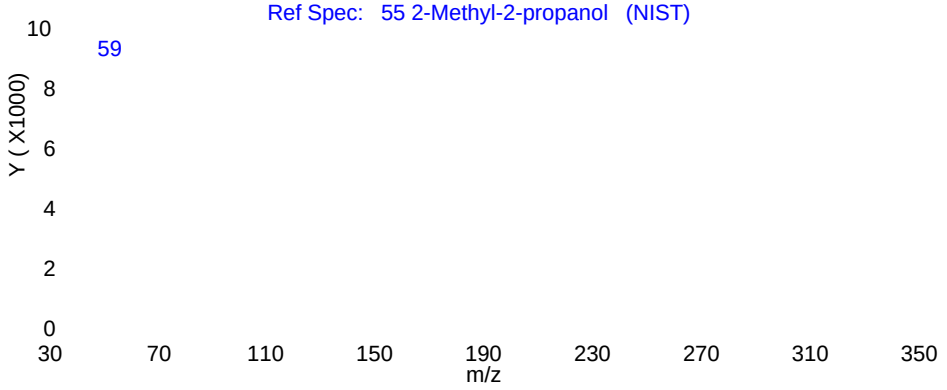
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Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

55 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results







RT	Mass	Response	Amount
4.11	59.00	1962	3.353923
4.04	41.00	1348	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

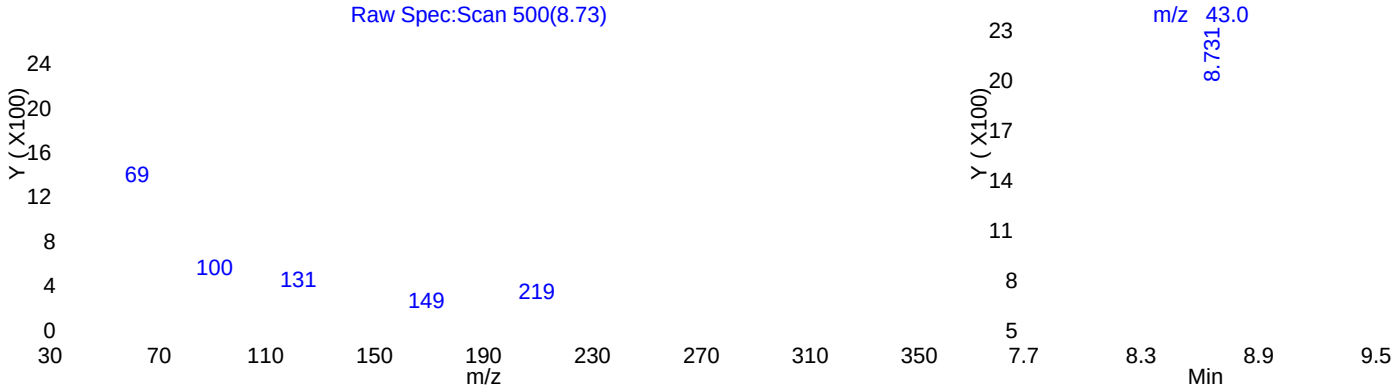
User Disabled Compound Report

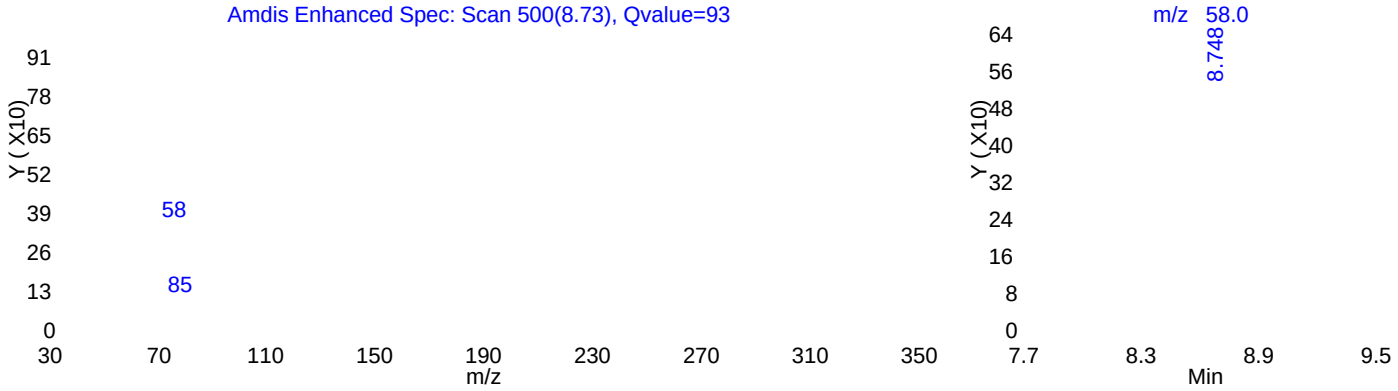
TestAmerica Denver

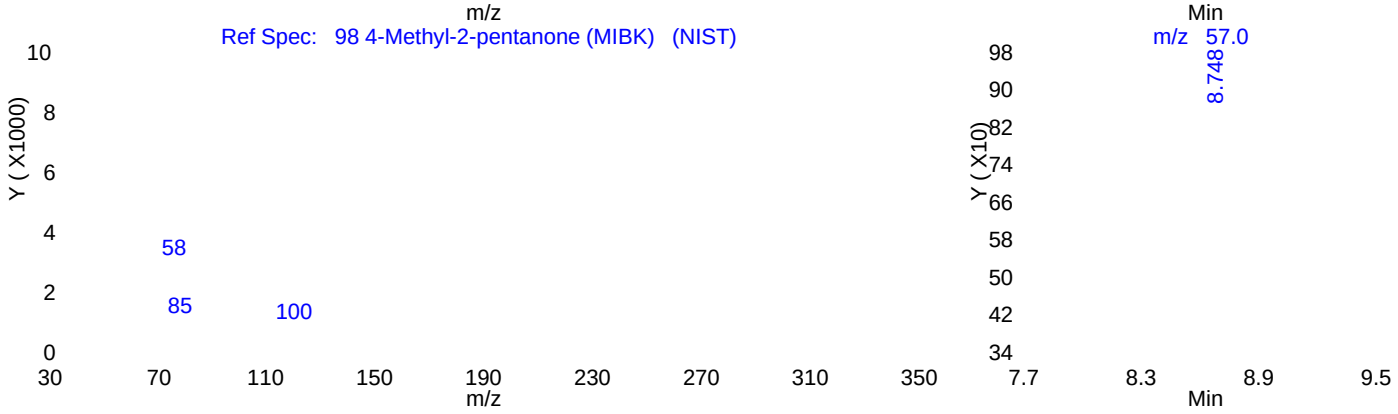
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Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

98 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results







RT	Mass	Response	Amount
8.73	43.00	11808	1.154090
8.75	58.00	4953	
8.75	57.00	3025	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

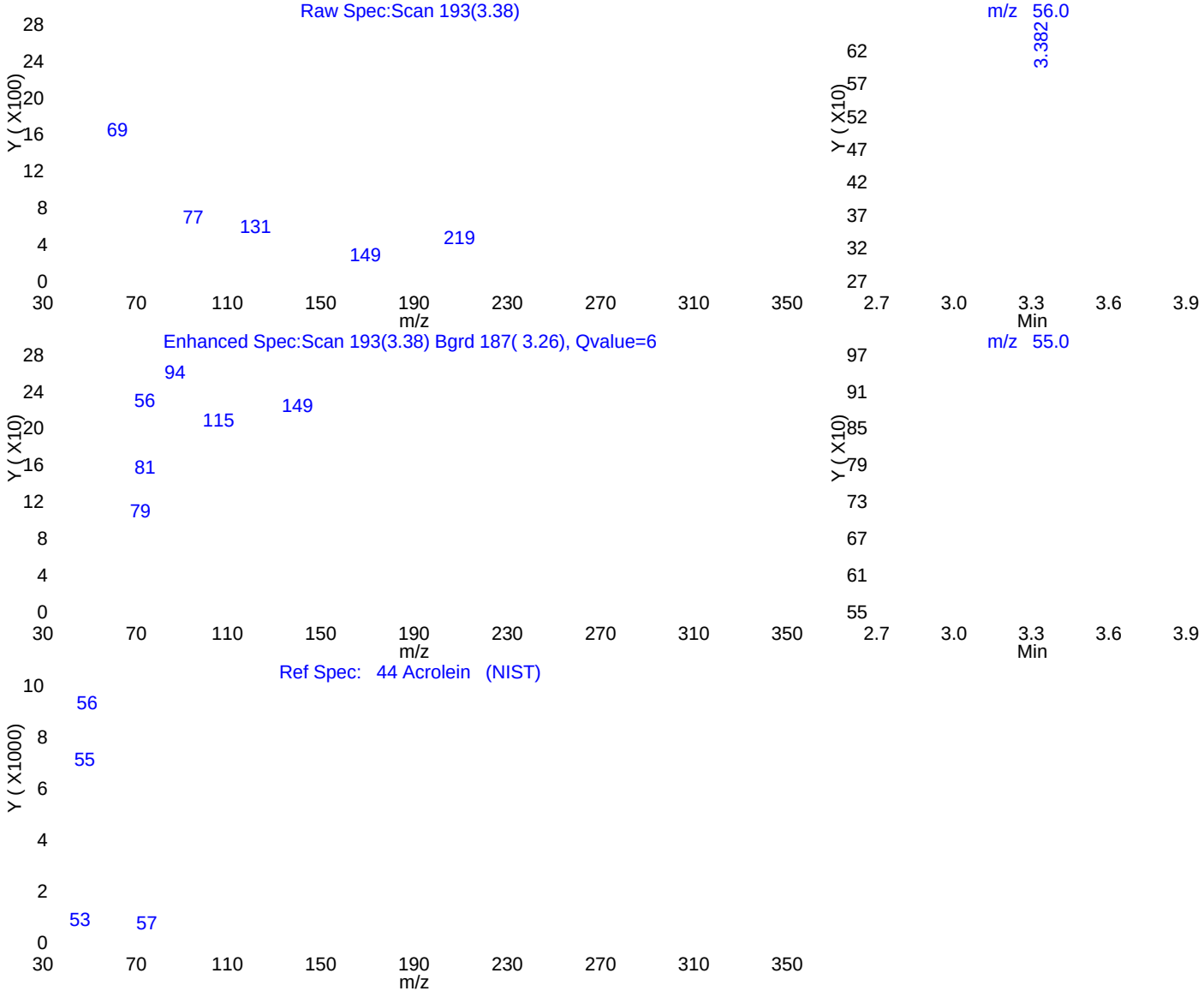
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D				
Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

44 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
3.38	56.00	2027	3.375140
3.37	55.00	0	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

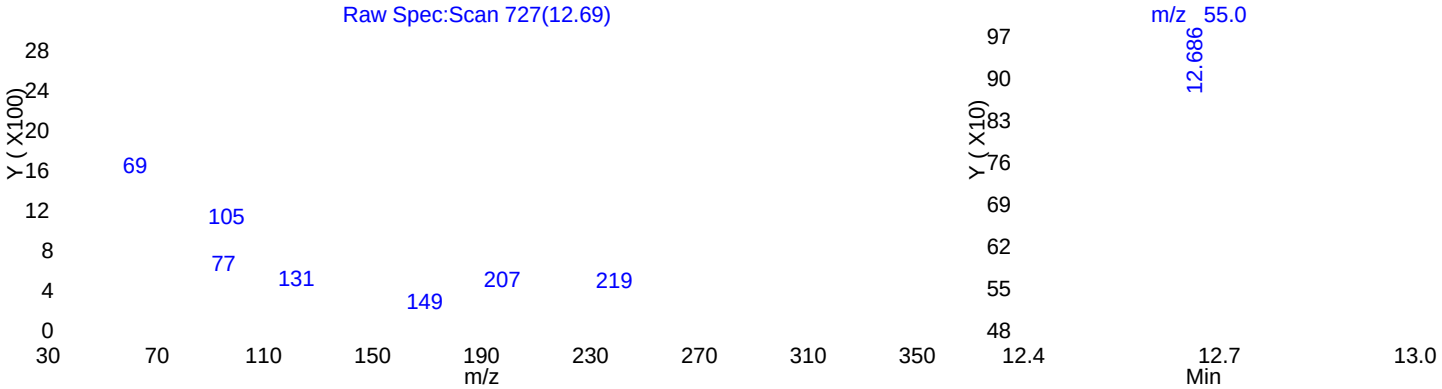
User Disabled Compound Report

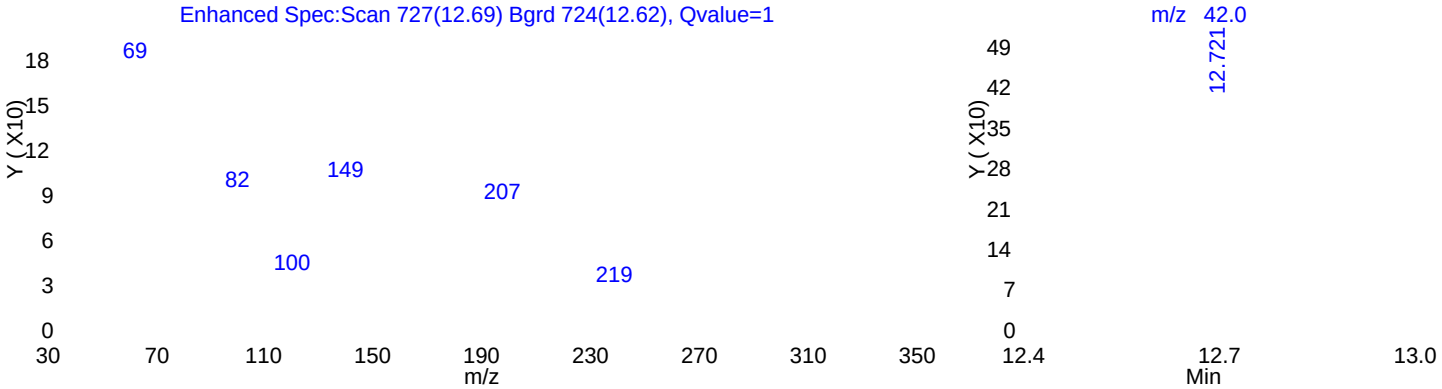
TestAmerica Denver

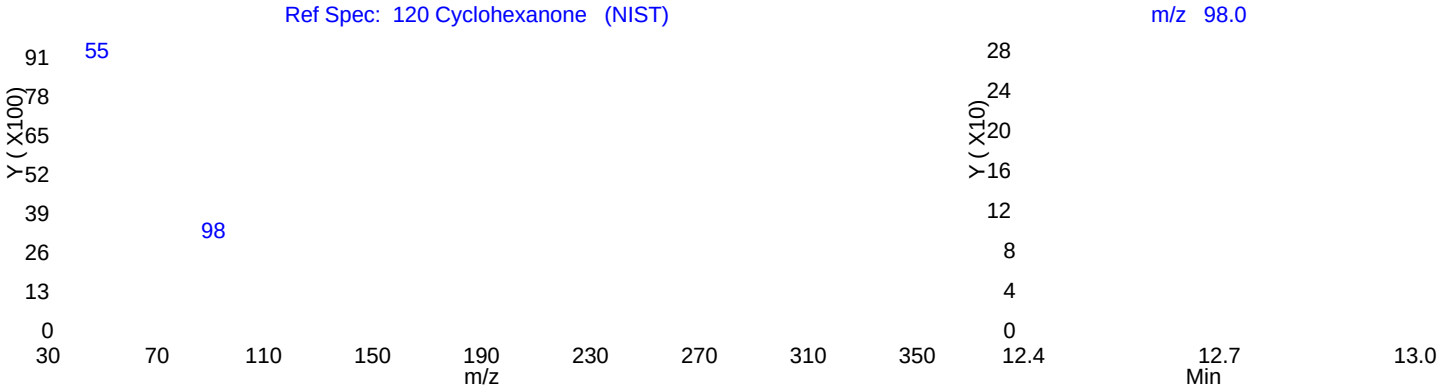
Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D
Injection Date: 29-Jan-2018 10:19:30 Instrument ID: VMS_H
Lims ID: ic
Client ID:
Operator ID: moanm ALS Bottle#: 12 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

120 Cyclohexanone, CAS: 108-94-1

Processing Results







RT	Mass	Response	Amount
12.69	55.00	1081	12.492427
12.72	42.00	1585	
12.72	98.00	0	

Reviewer: wickhamt, 30-Jan-2018 08:24:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

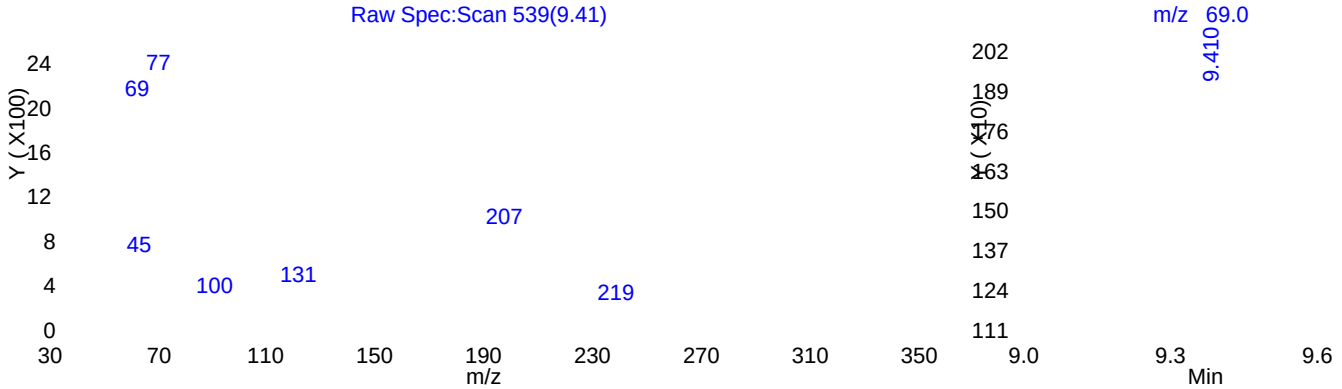
User Disabled Compound Report

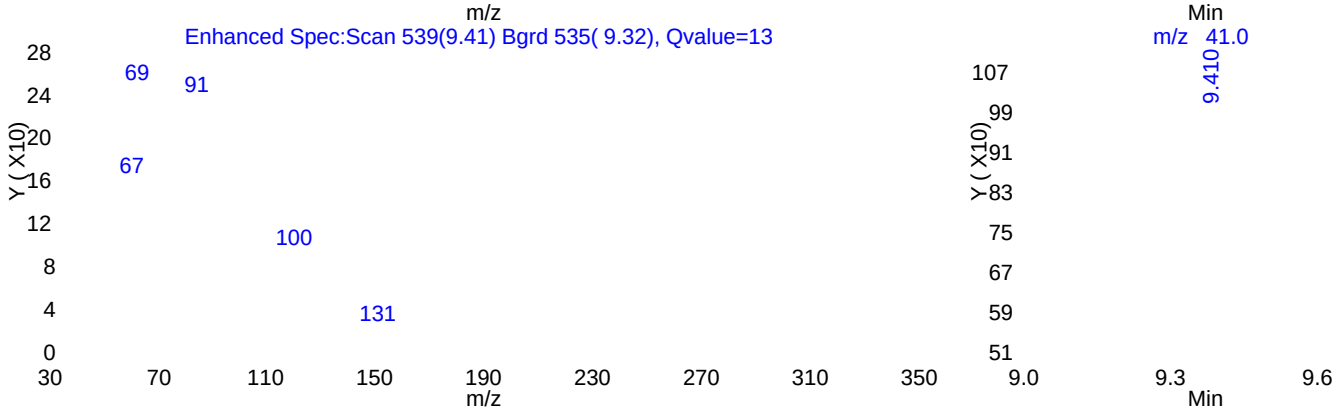
TestAmerica Denver

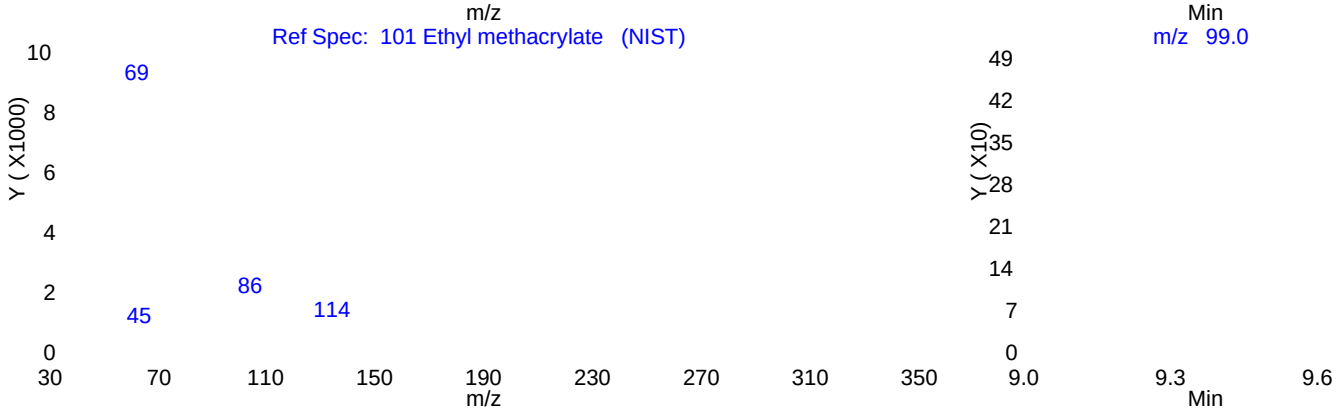
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Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

101 Ethyl methacrylate, CAS: 97-63-2

Processing Results







RT	Mass	Response	Amount
9.41	69.00	3795	0.301189
9.41	41.00	4898	
9.43	99.00	0	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

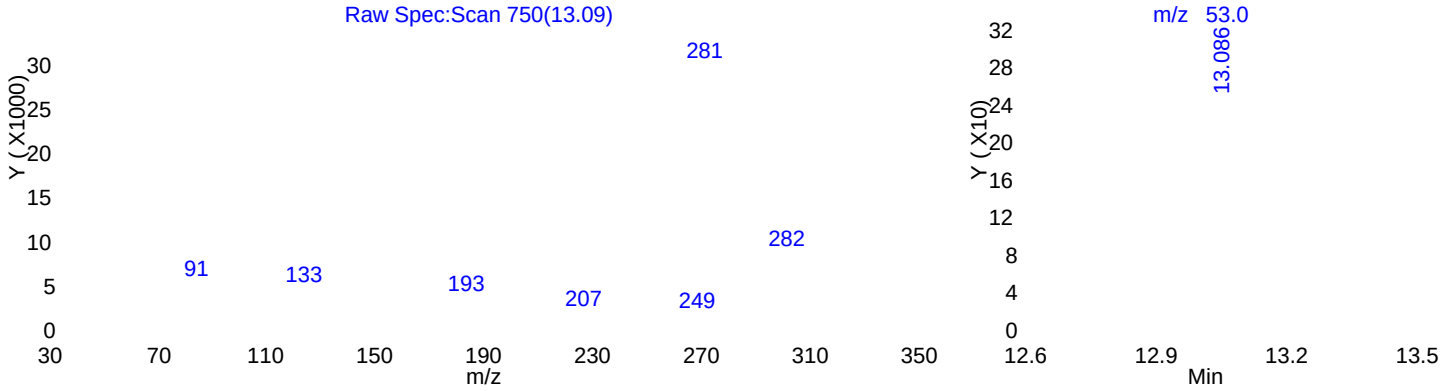
User Disabled Compound Report

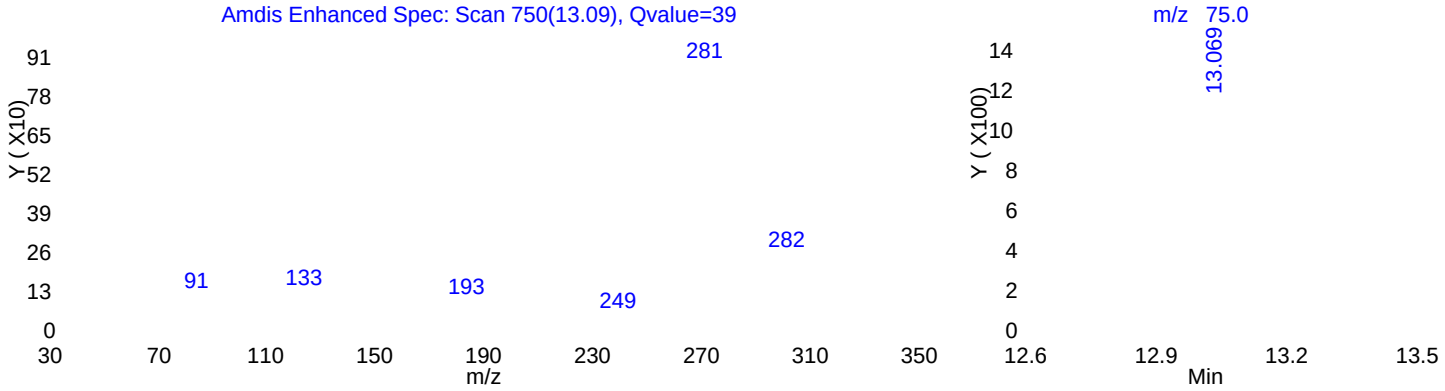
TestAmerica Denver

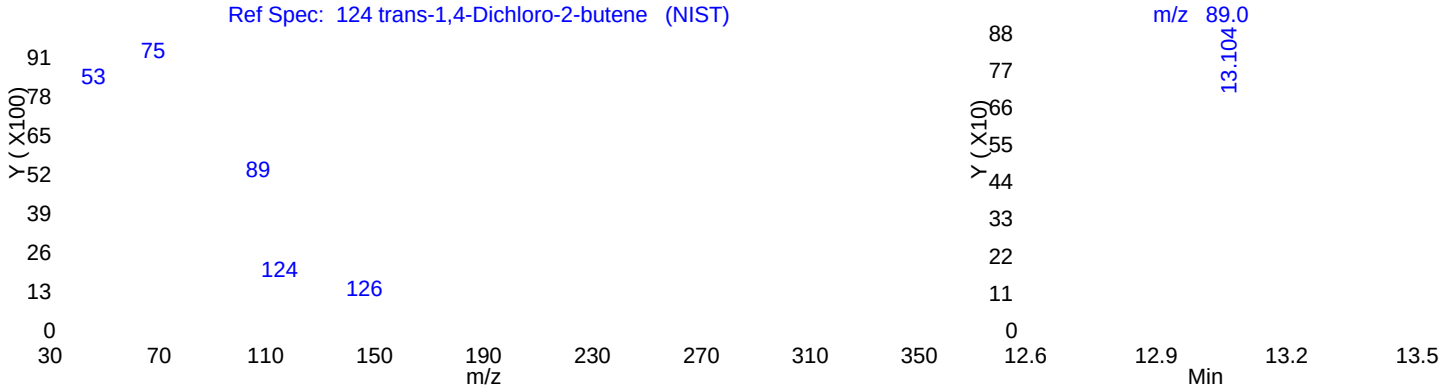
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Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

124 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Processing Results







RT	Mass	Response	Amount
13.09	53.00	1472	0.320660
13.07	75.00	12075	
13.10	89.00	3853	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

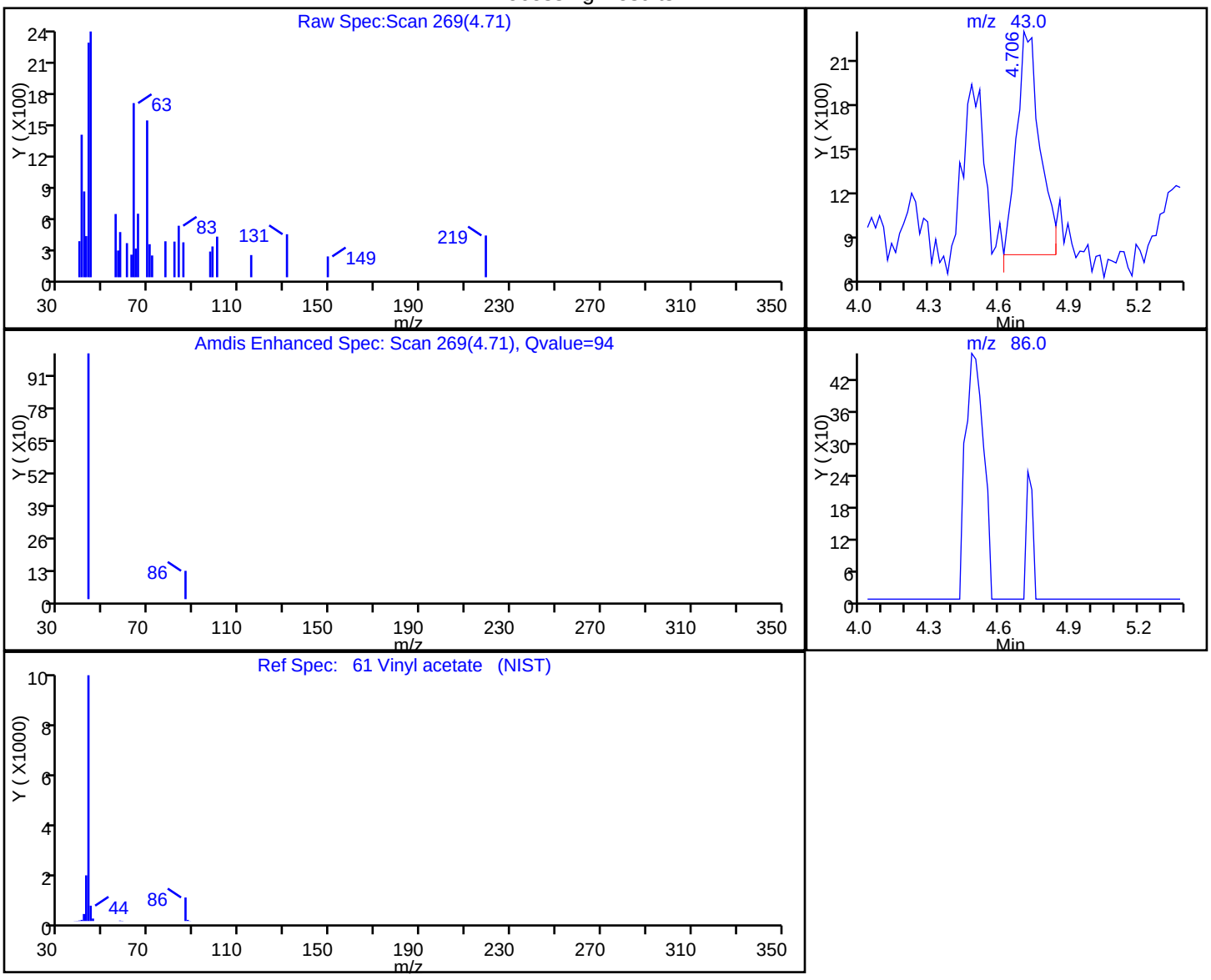
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3794.D				
Injection Date:	29-Jan-2018 10:19:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	12	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

61 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
4.71	43.00	9937	0.514724
4.71	86.00	0	

Reviewer: wickhamt, 30-Jan-2018 08:24:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3795.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2018 10:40:30 ALS Bottle#: 13 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:57:58 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 08:30:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.997	3.982	0.015	0	138399	250.0	250.0	
* 2 Fluorobenzene	96	6.749	6.735	0.014	98	754896	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.105	11.090	0.015	89	217768	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.136	14.139	-0.003	98	358526	12.5	12.5	
28 Dichlorodifluoromethane	85	2.185	2.165	0.020	96	37986	1.00	0.8573	
30 Chloromethane	50	2.272	2.287	-0.015	96	18737	1.00	0.9426	
32 Vinyl chloride	62	2.411	2.409	0.002	96	22661	1.00	1.03	
35 Bromomethane	94	2.690	2.688	0.002	91	26395	1.00	0.9806	
36 Chloroethane	64	2.760	2.757	0.003	98	15372	1.00	0.9782	
37 Dichlorofluoromethane	67	2.934	2.949	-0.015	97	51600	1.00	0.9526	
38 Trichlorofluoromethane	101	2.986	3.001	-0.015	99	59937	1.00	1.00	
40 Ethyl ether	59	3.213	3.210	0.003	87	10481	1.00	1.02	
44 Acrolein	56	3.369	3.367	0.002	94	5028	10.0	7.93	
45 1,1-Dichloroethene	96	3.474	3.472	0.002	98	25359	1.00	0.9871	
46 1,1,2-Trichloro-1,2,2-trif	151	3.491	3.489	0.002	97	37070	1.00	0.9862	
47 Acetone	43	3.526	3.524	0.002	28	6278	4.00	4.14	
48 Iodomethane	142	3.648	3.646	0.002	98	64436	1.00	0.9793	
50 Carbon disulfide	76	3.718	3.716	0.002	99	86978	1.00	0.9848	
52 3-Chloro-1-propene	41	3.822	3.803	0.019	84	29756	1.00	0.8964	
53 Methyl acetate	43	3.840	3.820	0.020	72	22043	5.00	4.50	
54 Methylene Chloride	84	3.944	3.942	0.002	91	23824	1.00	0.9823	
55 2-Methyl-2-propanol	59	4.084	4.082	0.002	93	9664	10.0	11.7	
57 Acrylonitrile	53	4.223	4.204	0.019	36	13258	10.0	9.58	
56 Methyl tert-butyl ether	73	4.240	4.221	0.019	82	36417	1.00	0.9383	
58 trans-1,2-Dichloroethene	96	4.223	4.221	0.002	97	26925	1.00	0.9533	
59 Hexane	57	4.484	4.482	0.002	92	35070	1.00	0.8817	
60 1,1-Dichloroethane	63	4.676	4.674	0.002	95	46198	1.00	0.9787	
61 Vinyl acetate	43	4.711	4.709	0.002	97	38634	2.00	1.81	
65 cis-1,2-Dichloroethene	96	5.355	5.336	0.019	82	28244	1.00	0.9783	
67 2-Butanone (MEK)	43	5.355	5.353	0.002	36	11791	4.00	3.96	
66 2,2-Dichloropropane	77	5.338	5.353	-0.015	80	80661	1.00	1.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.617	5.580	0.037	47	17360	30.0	28.7	
73 Chlorobromomethane	128	5.634	5.632	0.002	94	14013	1.00	1.00	
74 Tetrahydrofuran	42	5.704	5.684	0.020	37	5631	2.00	2.62	
75 Chloroform	83	5.704	5.702	0.002	94	53813	1.00	0.9591	
76 1,1,1-Trichloroethane	97	5.948	5.946	0.002	98	57251	1.00	1.00	
77 Cyclohexane	56	6.018	6.015	0.003	89	41118	1.00	0.8519	
78 1,1-Dichloropropene	75	6.139	6.137	0.002	92	46380	1.00	1.03	
79 Carbon tetrachloride	117	6.157	6.155	0.002	96	56946	1.00	1.02	
80 Isobutyl alcohol	41	6.331	6.294	0.037	36	5490	25.0	23.2	
81 Benzene	78	6.401	6.399	0.002	97	75272	1.00	0.9851	
82 1,2-Dichloroethane	62	6.436	6.434	0.002	93	21592	1.00	0.9767	
84 n-Heptane	43	6.714	6.695	0.019	94	49925	1.00	1.01	
86 Trichloroethene	95	7.220	7.218	0.002	97	38968	1.00	1.07	
89 Methylcyclohexane	55	7.481	7.461	0.020	91	40564	1.00	1.01	
88 2-Pentanone	43	7.481	7.461	0.020	86	59046	4.00	4.37	
90 1,2-Dichloropropane	63	7.516	7.514	0.002	93	27684	1.00	1.05	
92 Dibromomethane	93	7.690	7.688	0.002	90	18297	1.00	1.01	
93 1,4-Dioxane	88		7.705				ND	ND	
94 Dichlorobromomethane	83	7.882	7.897	-0.015	99	46937	1.00	0.9667	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	
97 cis-1,3-Dichloropropene	75	8.509	8.507	0.002	94	37189	1.00	0.9115	
98 4-Methyl-2-pentanone (MIBK	43	8.735	8.716	0.019	98	40181	4.00	3.62	
99 Toluene	91	8.979	8.960	0.019	98	91051	1.00	1.00	
100 trans-1,3-Dichloropropene	75	9.293	9.291	0.002	94	27698	1.00	1.00	
101 Ethyl methacrylate	69	9.415	9.413	0.002	84	20963	1.00	0.9618	
102 1,1,2-Trichloroethane	97	9.554	9.552	0.002	90	32249	1.00	1.01	
103 Tetrachloroethene	164	9.763	9.761	0.002	93	32636	1.00	0.9114	
104 1,3-Dichloropropane	76	9.798	9.796	0.002	88	30628	1.00	0.9900	
105 2-Hexanone	43	9.955	9.935	0.020	93	29403	4.00	4.22	
108 Chlorodibromomethane	129	10.147	10.145	0.003	90	38418	1.00	0.9585	
109 Ethylene Dibromide	107	10.338	10.336	0.002	98	22378	1.00	0.9265	
110 1-Chlorohexane	91	11.105	11.103	0.002	88	49186	1.00	0.9563	
111 Chlorobenzene	112	11.157	11.155	0.002	95	63229	1.00	0.9320	
112 1,1,1,2-Tetrachloroethane	131	11.279	11.277	0.002	75	33565	1.00	0.8990	
113 Ethylbenzene	106	11.331	11.329	0.002	99	30116	1.00	0.9362	
114 m-Xylene & p-Xylene	106	11.506	11.503	0.003	0	44179	1.00	0.9289	
115 o-Xylene	106	12.080	12.078	0.002	95	38374	1.00	0.9617	
116 Styrene	104	12.115	12.113	0.002	87	52597	1.00	0.8834	
117 Bromoform	173	12.359	12.357	0.002	93	18978	1.00	0.9180	
118 Isopropylbenzene	105	12.586	12.584	0.002	96	124723	1.00	0.9734	
120 Cyclohexanone	55	12.725	12.706	0.019	77	12445	40.0	42.1	
121 1,1,2,2-Tetrachloroethane	83	12.969	12.967	0.002	79	23106	1.00	0.99	
122 Bromobenzene	156	12.969	12.967	0.002	93	29221	1.00	0.9400	
123 1,2,3-Trichloropropane	110	13.021	13.019	0.002	80	10492	1.00	1.43	
124 trans-1,4-Dichloro-2-buten	53	13.039	13.054	-0.015	60	5018	1.00	1.13	
125 N-Propylbenzene	120	13.091	13.106	-0.015	99	30046	1.00	0.9733	
126 2-Chlorotoluene	126	13.213	13.193	0.020	94	23543	1.00	0.9365	
127 1,3,5-Trimethylbenzene	105	13.317	13.315	0.002	94	89849	1.00	0.9148	
128 4-Chlorotoluene	126	13.335	13.333	0.002	98	29022	1.00	0.9701	
129 tert-Butylbenzene	119	13.701	13.699	0.002	93	107798	1.00	1.00	
130 1,2,4-Trimethylbenzene	105	13.753	13.751	0.002	96	82593	1.00	0.9293	
131 sec-Butylbenzene	134	13.945	13.943	0.002	94	27537	1.00	0.9817	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.067	14.065	0.002	16	33636	1.00	0.8077	
133 4-Isopropyltoluene	119	14.119	14.099	0.020	97	118526	1.00	1.00	
134 1,4-Dichlorobenzene	146	14.171	14.169	0.002	92	75605	1.00	1.07	
137 n-Butylbenzene	91	14.554	14.552	0.002	98	110132	1.00	0.9396	
138 1,2-Dichlorobenzene	146	14.572	14.570	0.002	97	42536	1.00	0.9078	
139 1,2-Dibromo-3-Chloropropan	157	15.356	15.354	0.002	86	3940	1.00	0.9143	
141 1,2,4-Trichlorobenzene	180	16.140	16.120	0.020	93	27065	1.00	0.9227	
142 Hexachlorobutadiene	225	16.279	16.277	0.002	96	33102	1.00	0.99	
143 Naphthalene	128	16.366	16.347	0.019	96	23270	1.00	0.7953	
144 1,2,3-Trichlorobenzene	180	16.575	16.573	0.002	91	25879	1.00	1.15	
S 151 1,2-Dichloroethene, Total	96				0		2.00	1.93	
S 149 1,2-Dichloroethene, Total	1				0		2.00	1.93	
S 150 Xylenes, Total	106				0		2.00	1.89	
S 147 Total BTEX	1				0			4.81	
S 146 Xylenes, Total (URS)	1				0		2.00	1.89	
S 148 1,3-Dichloropropene, Total	1				0		2.00	1.91	
S 145 Trihalomethanes, Total	1				0		4.00	3.80	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	0.50	Units: uL
MV-Gas/Ket A_00069	Amount Added:	0.50	Units: uL
MV-2cleve+AVA_00032	Amount Added:	0.50	Units: uL

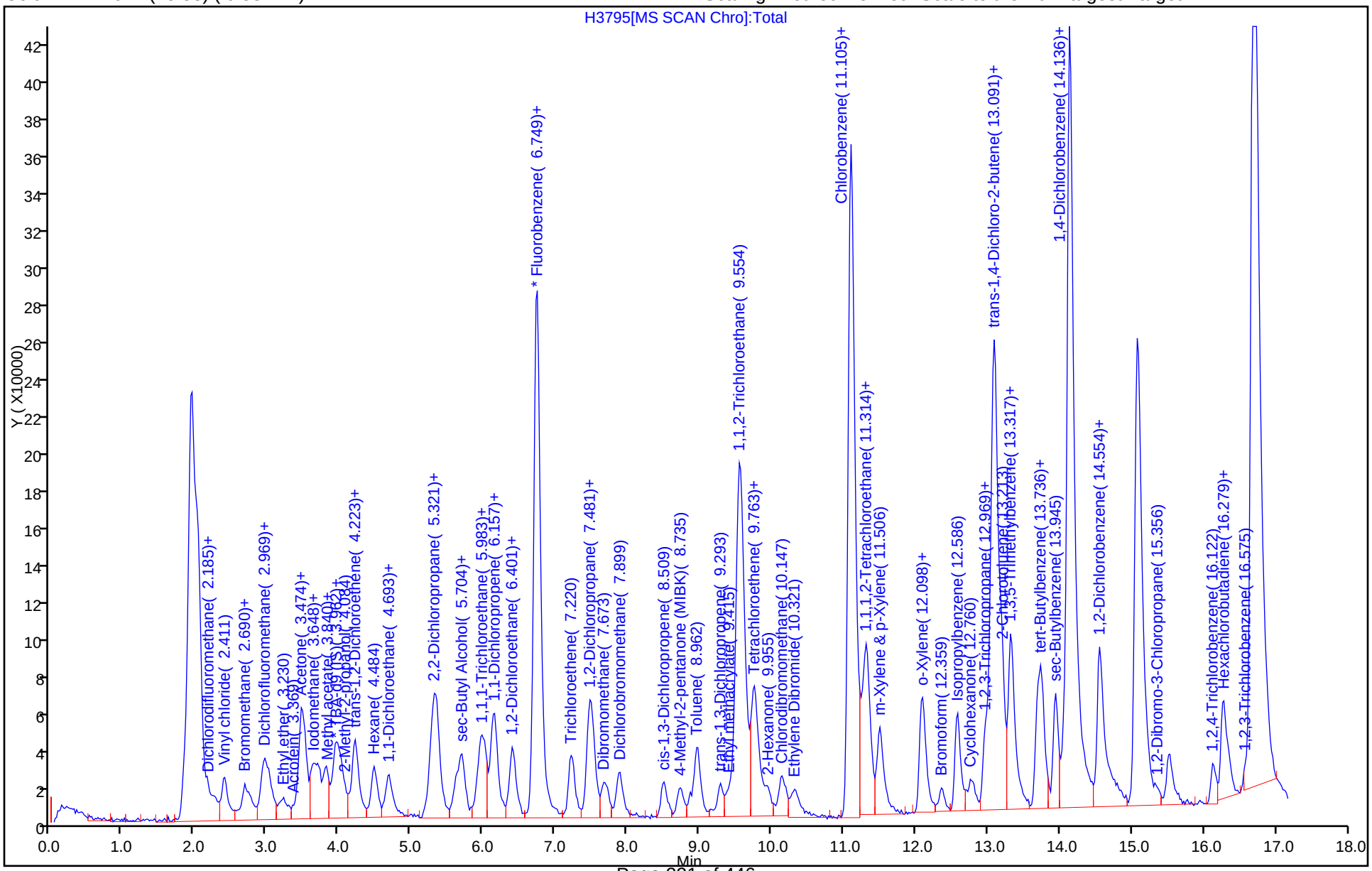
Report Date: 30-Jan-2018 10:57:58 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3795.D

Injection Date:	29-Jan-2018 10:40:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3796.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2018 11:02:30 ALS Bottle#: 14 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: PRIMER
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:57:59 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:11:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.016	3.982	0.034	0	124268	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.735	0.016	97	747365	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.107	11.090	0.017	89	202034	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.139	-0.001	97	340244	12.5	12.5	
28 Dichlorodifluoromethane	85	2.169	2.165	0.004	98	92644	2.00	2.11	
30 Chloromethane	50	2.291	2.287	0.004	98	40301	2.00	2.05	
32 Vinyl chloride	62	2.413	2.409	0.004	98	44441	2.00	2.03	
35 Bromomethane	94	2.692	2.688	0.004	92	50285	2.00	2.05	
36 Chloroethane	64	2.762	2.757	0.005	98	30277	2.00	2.16	
37 Dichlorofluoromethane	67	2.953	2.949	0.004	97	104967	2.00	1.96	
38 Trichlorofluoromethane	101	3.006	3.001	0.005	99	121848	2.00	2.06	
40 Ethyl ether	59	3.232	3.210	0.022	93	20291	2.00	2.00	
44 Acrolein	56	3.371	3.367	0.004	96	11891	20.0	18.9	
45 1,1-Dichloroethene	96	3.476	3.472	0.004	98	52390	2.00	2.06	
46 1,1,2-Trichloro-1,2,2-trif	151	3.493	3.489	0.004	96	76198	2.00	2.05	
47 Acetone	43	3.511	3.524	-0.013	32	12927	8.00	8.60	
48 Iodomethane	142	3.650	3.646	0.004	98	128113	2.00	1.97	
50 Carbon disulfide	76	3.720	3.716	0.004	100	170655	2.00	1.95	
52 3-Chloro-1-propene	41	3.824	3.803	0.021	83	66794	2.00	2.03	
53 Methyl acetate	43	3.824	3.820	0.004	69	46651	10.0	9.62	
54 Methylene Chloride	84	3.946	3.942	0.004	92	41516	2.00	1.89	
55 2-Methyl-2-propanol	59	4.086	4.082	0.004	91	12105	20.0	18.5	
57 Acrylonitrile	53	4.208	4.204	0.004	40	28273	20.0	20.6	
58 trans-1,2-Dichloroethene	96	4.225	4.221	0.004	99	54822	2.00	1.96	
56 Methyl tert-butyl ether	73	4.243	4.221	0.021	82	72843	2.00	1.90	
59 Hexane	57	4.486	4.482	0.004	93	73739	2.00	2.00	
60 1,1-Dichloroethane	63	4.678	4.674	0.004	95	92172	2.00	1.97	
61 Vinyl acetate	43	4.713	4.709	0.004	97	82380	4.00	3.90	
65 cis-1,2-Dichloroethene	96	5.340	5.336	0.004	83	57894	2.00	2.03	
66 2,2-Dichloropropane	77	5.340	5.353	-0.013	79	121326	2.00	2.02	
67 2-Butanone (MEK)	43	5.375	5.353	0.022	36	25402	8.00	8.62	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.584	5.580	0.004	48	29558	60.0	54.5	
73 Chlorobromomethane	128	5.619	5.632	-0.013	94	27499	2.00	1.98	
74 Tetrahydrofuran	42	5.706	5.684	0.022	37	7458	4.00	3.50	
75 Chloroform	83	5.706	5.702	0.004	92	106403	2.00	1.92	
76 1,1,1-Trichloroethane	97	5.950	5.946	0.004	98	113939	2.00	2.01	
77 Cyclohexane	56	6.020	6.015	0.005	91	92140	2.00	2.16	
78 1,1-Dichloropropene	75	6.142	6.137	0.005	97	89250	2.00	2.01	
79 Carbon tetrachloride	117	6.159	6.155	0.004	98	113046	2.00	2.04	
80 Isobutyl alcohol	41	6.333	6.294	0.039	94	10054	50.0	47.4	
81 Benzene	78	6.403	6.399	0.004	97	148415	2.00	1.96	
82 1,2-Dichloroethane	62	6.420	6.434	-0.014	96	44073	2.00	2.01	
84 n-Heptane	43	6.699	6.695	0.004	95	98976	2.00	2.01	
86 Trichloroethene	95	7.222	7.218	0.004	97	69862	2.00	1.93	
88 2-Pentanone	43	7.466	7.461	0.005	80	95868	8.00	7.17	
89 Methylcyclohexane	55	7.466	7.461	0.005	91	77648	2.00	1.95	
90 1,2-Dichloropropane	63	7.518	7.514	0.004	91	52860	2.00	2.02	
92 Dibromomethane	93	7.692	7.688	0.004	94	35340	2.00	1.98	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.884	7.897	-0.013	99	91591	2.00	1.91	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	
97 cis-1,3-Dichloropropene	75	8.511	8.507	0.004	94	75046	2.00	1.98	
98 4-Methyl-2-pentanone (MIBK	43	8.720	8.716	0.004	98	85955	8.00	7.82	
99 Toluene	91	8.964	8.960	0.004	98	174364	2.00	1.93	
100 trans-1,3-Dichloropropene	75	9.295	9.291	0.004	95	52001	2.00	1.89	
101 Ethyl methacrylate	69	9.434	9.413	0.021	88	34721	2.00	1.72	
102 1,1,2-Trichloroethane	97	9.556	9.552	0.004	91	49778	2.00	2.08	
103 Tetrachloroethene	164	9.765	9.761	0.004	95	67245	2.00	2.02	
104 1,3-Dichloropropane	76	9.783	9.796	-0.013	89	58664	2.00	2.04	
105 2-Hexanone	43	9.957	9.935	0.022	97	46053	8.00	6.53	
108 Chlorodibromomethane	129	10.149	10.145	0.005	89	74531	2.00	2.00	
109 Ethylene Dibromide	107	10.340	10.336	0.004	98	43620	2.00	1.95	
110 1-Chlorohexane	91	11.124	11.103	0.021	91	95290	2.00	2.00	
111 Chlorobenzene	112	11.142	11.155	-0.013	94	126331	2.00	2.01	
112 1,1,1,2-Tetrachloroethane	131	11.281	11.277	0.004	82	68381	2.00	1.97	
113 Ethylbenzene	106	11.316	11.329	-0.013	98	59366	2.00	1.99	
114 m-Xylene & p-Xylene	106	11.508	11.503	0.005	0	89600	2.00	2.03	
115 o-Xylene	106	12.083	12.078	0.005	98	75220	2.00	2.03	
116 Styrene	104	12.100	12.113	-0.013	94	109314	2.00	1.98	
117 Bromoform	173	12.361	12.357	0.004	93	37074	2.00	1.93	
118 Isopropylbenzene	105	12.570	12.584	-0.014	96	241636	2.00	1.99	
120 Cyclohexanone	55	12.710	12.706	0.004	92	18476	80.0	67.4	
122 Bromobenzene	156	12.971	12.967	0.004	92	58567	2.00	1.99	
121 1,1,2,2-Tetrachloroethane	83	12.971	12.967	0.004	75	46023	2.00	2.09	
123 1,2,3-Trichloropropane	110	13.041	13.019	0.022	77	13894	2.00	2.12	
124 trans-1,4-Dichloro-2-buten	53	13.058	13.054	0.004	63	9861	2.00	2.35	
125 N-Propylbenzene	120	13.093	13.106	-0.013	98	59762	2.00	2.04	
126 2-Chlorotoluene	126	13.198	13.193	0.005	95	50479	2.00	2.12	
127 1,3,5-Trimethylbenzene	105	13.320	13.315	0.005	95	186050	2.00	2.00	
128 4-Chlorotoluene	126	13.337	13.333	0.004	99	55841	2.00	1.97	
129 tert-Butylbenzene	119	13.703	13.699	0.004	93	209133	2.00	2.04	
130 1,2,4-Trimethylbenzene	105	13.755	13.751	0.004	96	169165	2.00	2.01	
131 sec-Butylbenzene	134	13.947	13.943	0.004	94	54277	2.00	2.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.069	14.065	0.004	96	83986	2.00	2.13	
133 4-Isopropyltoluene	119	14.104	14.099	0.005	98	229935	2.00	2.05	
134 1,4-Dichlorobenzene	146	14.173	14.169	0.004	94	135414	2.00	2.02	
137 n-Butylbenzene	91	14.557	14.552	0.004	98	220236	2.00	1.98	
138 1,2-Dichlorobenzene	146	14.574	14.570	0.004	97	96728	2.00	2.18	
139 1,2-Dibromo-3-Chloropropan	157	15.341	15.354	-0.014	84	7000	2.00	1.71	
141 1,2,4-Trichlorobenzene	180	16.125	16.120	0.005	94	57703	2.00	2.07	
142 Hexachlorobutadiene	225	16.281	16.277	0.004	96	66437	2.00	2.10	
143 Naphthalene	128	16.368	16.347	0.021	96	50189	2.00	1.81	
144 1,2,3-Trichlorobenzene	180	16.577	16.573	0.004	94	38918	2.00	1.83	
S 151 1,2-Dichloroethene, Total	96				0		4.00	3.99	
S 148 1,3-Dichloropropene, Total	1				0		4.00	3.87	
S 145 Trihalomethanes, Total	1				0		8.00	7.76	
S 146 Xylenes, Total (URS)	1				0		4.00	4.06	
S 149 1,2-Dichloroethene, Total	1				0		4.00	3.99	
S 150 Xylenes, Total	106				0		4.00	4.06	
S 147 Total BTEX	1				0			9.94	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	1.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	1.00	Units: uL
MV-2cleve+AVA_00032	Amount Added:	1.00	Units: uL

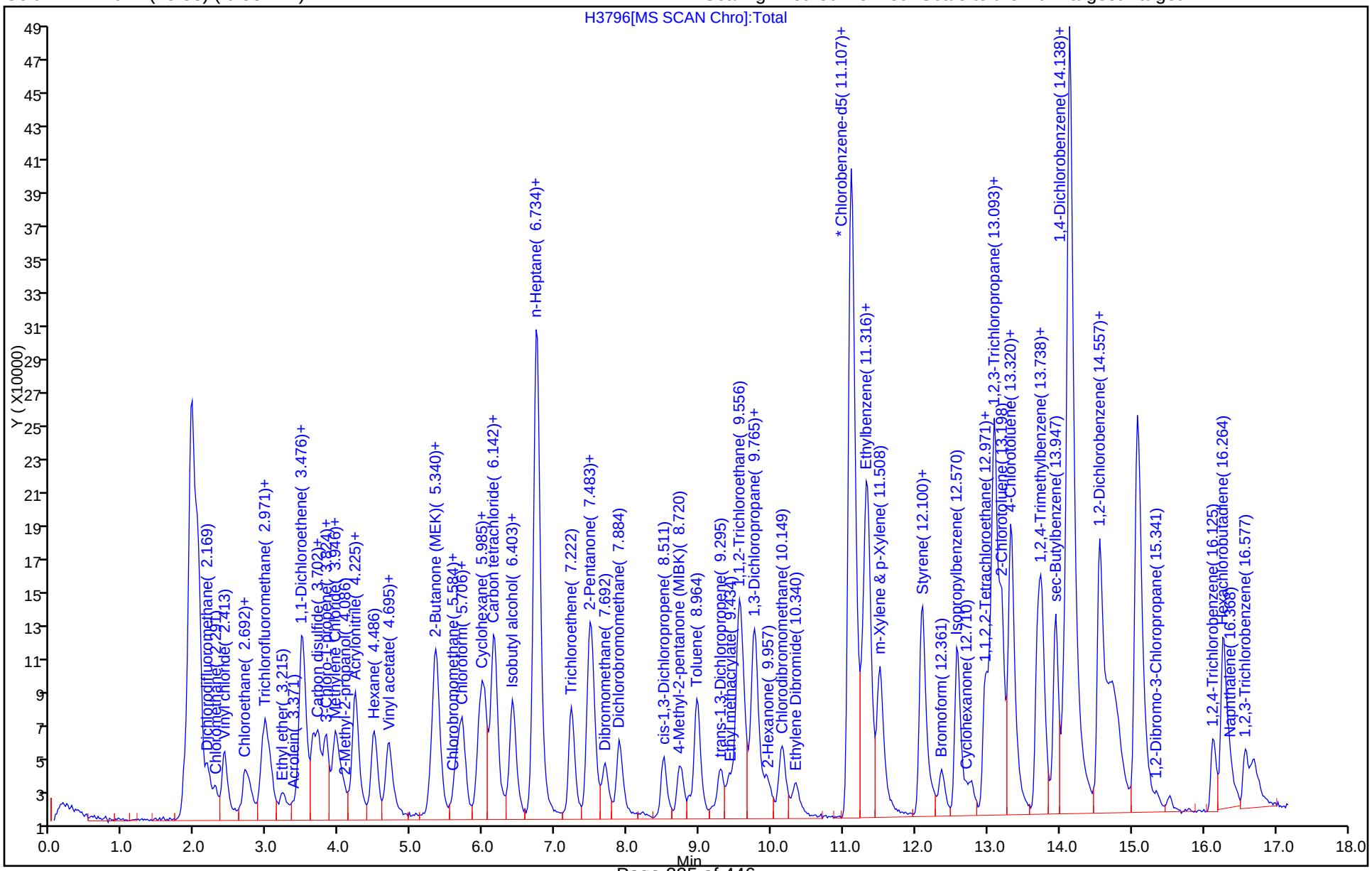
Report Date: 30-Jan-2018 10:58:00 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3796.D

Injection Date:	29-Jan-2018 11:02:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3797.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2018 11:24:30 ALS Bottle#: 15 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:00 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:11:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.993	3.982	0.011	0	132724	250.0	250.0	
* 2 Fluorobenzene	96	6.746	6.735	0.011	97	777729	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.102	11.090	0.012	89	204343	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.150	14.139	0.011	98	361478	12.5	12.5	
28 Dichlorodifluoromethane	85	2.181	2.165	0.016	97	204955	5.00	4.49	
30 Chloromethane	50	2.286	2.287	-0.001	98	102380	5.00	5.00	
32 Vinyl chloride	62	2.408	2.409	-0.001	97	106151	5.00	4.66	
35 Bromomethane	94	2.704	2.688	0.016	92	122466	5.00	5.04	
36 Chloroethane	64	2.756	2.757	-0.001	100	66207	5.00	4.79	
37 Dichlorofluoromethane	67	2.948	2.949	-0.001	98	260919	5.00	4.68	
38 Trichlorofluoromethane	101	3.000	3.001	-0.001	99	295867	5.00	4.81	
40 Ethyl ether	59	3.227	3.210	0.017	92	51937	5.00	4.92	
44 Acrolein	56	3.366	3.367	-0.001	99	32147	50.0	49.2	
45 1,1-Dichloroethene	96	3.471	3.472	-0.001	97	118461	5.00	4.48	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.489	0.016	97	188082	5.00	4.86	
47 Acetone	43	3.505	3.524	-0.019	32	29734	20.0	19.0	
48 Iodomethane	142	3.645	3.646	-0.001	98	318103	5.00	4.69	
50 Carbon disulfide	76	3.714	3.716	-0.002	99	416218	5.00	4.57	
52 3-Chloro-1-propene	41	3.802	3.803	-0.001	82	166230	5.00	4.86	
53 Methyl acetate	43	3.819	3.820	-0.001	74	121239	25.0	24.0	
54 Methylene Chloride	84	3.941	3.942	-0.001	91	104528	5.00	4.88	
55 2-Methyl-2-propanol	59	4.098	4.082	0.016	91	27146	50.0	45.0	
57 Acrylonitrile	53	4.202	4.204	-0.002	43	64197	50.0	45.0	
56 Methyl tert-butyl ether	73	4.220	4.221	-0.001	84	183190	5.00	4.58	
58 trans-1,2-Dichloroethene	96	4.220	4.221	-0.001	99	136958	5.00	4.71	
59 Hexane	57	4.481	4.482	-0.001	94	182503	5.00	4.89	
60 1,1-Dichloroethane	63	4.673	4.674	-0.001	96	225525	5.00	4.64	
61 Vinyl acetate	43	4.708	4.709	-0.001	96	205452	10.0	9.36	
65 cis-1,2-Dichloroethene	96	5.335	5.336	-0.001	84	141063	5.00	4.74	
67 2-Butanone (MEK)	43	5.352	5.353	-0.001	42	56350	20.0	18.4	
66 2,2-Dichloropropane	77	5.352	5.353	-0.001	87	260453	5.00	4.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.579	5.580	-0.001	89	78979	150.0	136.2	
73 Chlorobromomethane	128	5.631	5.632	-0.001	94	69174	5.00	4.78	
74 Tetrahydrofuran	42	5.701	5.684	0.017	37	19329	10.0	8.75	
75 Chloroform	83	5.701	5.702	-0.001	93	274918	5.00	4.76	
76 1,1,1-Trichloroethane	97	5.945	5.946	-0.001	99	279680	5.00	4.74	
77 Cyclohexane	56	6.014	6.015	-0.001	91	205660	5.00	4.85	
78 1,1-Dichloropropene	75	6.136	6.137	-0.001	96	216350	5.00	4.67	
79 Carbon tetrachloride	117	6.154	6.155	-0.001	96	275437	5.00	4.78	
80 Isobutyl alcohol	41	6.293	6.294	-0.001	93	25390	125.0	112.0	
81 Benzene	78	6.398	6.399	-0.001	97	373017	5.00	4.74	
82 1,2-Dichloroethane	62	6.432	6.434	-0.002	96	107938	5.00	4.74	
84 n-Heptane	43	6.694	6.695	-0.001	94	246922	5.00	4.83	
86 Trichloroethene	95	7.216	7.218	-0.002	98	180333	5.00	4.79	
89 Methylcyclohexane	55	7.478	7.461	0.017	87	197025	5.00	4.76	
88 2-Pentanone	43	7.460	7.461	-0.001	89	296173	20.0	21.3	
90 1,2-Dichloropropane	63	7.513	7.514	-0.001	88	132372	5.00	4.86	
92 Dibromomethane	93	7.687	7.688	-0.001	94	87270	5.00	4.70	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.878	7.897	-0.019	99	234906	5.00	4.70	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.506	8.507	-0.001	95	191265	5.00	5.00	
98 4-Methyl-2-pentanone (MIBK	43	8.715	8.716	-0.001	97	223557	20.0	19.5	
99 Toluene	91	8.959	8.960	-0.001	99	455205	5.00	4.83	
100 trans-1,3-Dichloropropene	75	9.290	9.291	-0.001	93	136941	5.00	4.78	
101 Ethyl methacrylate	69	9.429	9.413	0.016	91	98815	5.00	4.83	
102 1,1,2-Trichloroethane	97	9.551	9.552	-0.001	90	89219	5.00	4.24	
103 Tetrachloroethene	164	9.760	9.761	-0.001	95	166974	5.00	4.97	
104 1,3-Dichloropropane	76	9.795	9.796	-0.001	88	136666	5.00	4.71	
105 2-Hexanone	43	9.934	9.935	-0.001	98	132737	20.0	17.0	
108 Chlorodibromomethane	129	10.143	10.145	-0.001	89	186605	5.00	4.96	
109 Ethylene Dibromide	107	10.335	10.336	-0.001	98	114550	5.00	5.05	
110 1-Chlorohexane	91	11.119	11.103	0.016	88	234756	5.00	4.86	
111 Chlorobenzene	112	11.154	11.155	-0.001	95	318188	5.00	5.00	
112 1,1,1,2-Tetrachloroethane	131	11.276	11.277	-0.001	91	171282	5.00	4.89	
113 Ethylbenzene	106	11.328	11.329	-0.001	98	151418	5.00	5.02	
114 m-Xylene & p-Xylene	106	11.502	11.503	-0.001	0	222368	5.00	4.98	
115 o-Xylene	106	12.077	12.078	-0.001	98	187947	5.00	5.02	
116 Styrene	104	12.112	12.113	-0.001	94	286609	5.00	5.13	
117 Bromoform	173	12.373	12.357	0.016	94	98057	5.00	5.05	
118 Isopropylbenzene	105	12.582	12.584	-0.002	96	613789	5.00	4.75	
120 Cyclohexanone	55	12.722	12.706	0.016	91	51135	200.0	184.5	
121 1,1,2,2-Tetrachloroethane	83	12.966	12.967	-0.001	93	111526	5.00	4.76	
122 Bromobenzene	156	12.966	12.967	-0.001	95	153522	5.00	4.90	
123 1,2,3-Trichloropropane	110	13.018	13.019	-0.001	80	31583	5.00	4.89	
124 trans-1,4-Dichloro-2-buten	53	13.053	13.054	-0.001	62	17610	5.00	3.94	
125 N-Propylbenzene	120	13.105	13.106	-0.001	99	146369	5.00	4.70	
126 2-Chlorotoluene	126	13.192	13.193	-0.001	96	125073	5.00	4.93	
127 1,3,5-Trimethylbenzene	105	13.314	13.315	-0.001	95	473240	5.00	4.78	
128 4-Chlorotoluene	126	13.332	13.333	-0.001	99	151169	5.00	5.01	
129 tert-Butylbenzene	119	13.697	13.699	-0.002	93	514966	5.00	4.73	
130 1,2,4-Trimethylbenzene	105	13.750	13.751	-0.001	96	437138	5.00	4.88	
131 sec-Butylbenzene	134	13.941	13.943	-0.002	94	133147	5.00	4.71	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.063	14.065	-0.002	97	208374	5.00	4.96	
133 4-Isopropyltoluene	119	14.116	14.099	0.017	98	582356	5.00	4.88	
134 1,4-Dichlorobenzene	146	14.168	14.169	-0.001	94	355166	5.00	5.00	
137 n-Butylbenzene	91	14.551	14.552	-0.001	98	575677	5.00	4.87	
138 1,2-Dichlorobenzene	146	14.569	14.570	-0.001	97	233882	5.00	4.95	
139 1,2-Dibromo-3-Chloropropan	157	15.353	15.354	-0.001	85	21220	5.00	4.88	
141 1,2,4-Trichlorobenzene	180	16.119	16.120	-0.001	94	155853	5.00	5.27	
142 Hexachlorobutadiene	225	16.276	16.277	-0.001	97	171123	5.00	5.10	
143 Naphthalene	128	16.363	16.347	0.016	97	144144	5.00	4.89	
144 1,2,3-Trichlorobenzene	180	16.572	16.573	-0.001	95	113306	5.00	5.01	
S 151 1,2-Dichloroethene, Total	96				0		10.0	9.45	
S 149 1,2-Dichloroethene, Total	1				0		10.0	9.45	
S 150 Xylenes, Total	106				0		10.0	10.0	
S 147 Total BTEX	1				0			24.6	
S 146 Xylenes, Total (URS)	1				0		10.0	10.0	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.78	
S 145 Trihalomethanes, Total	1				0		20.0	19.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	2.50	Units: uL
MV-Gas/Ket A_00069	Amount Added:	2.50	Units: uL
MV-2cleve+AVA_00032	Amount Added:	2.50	Units: uL

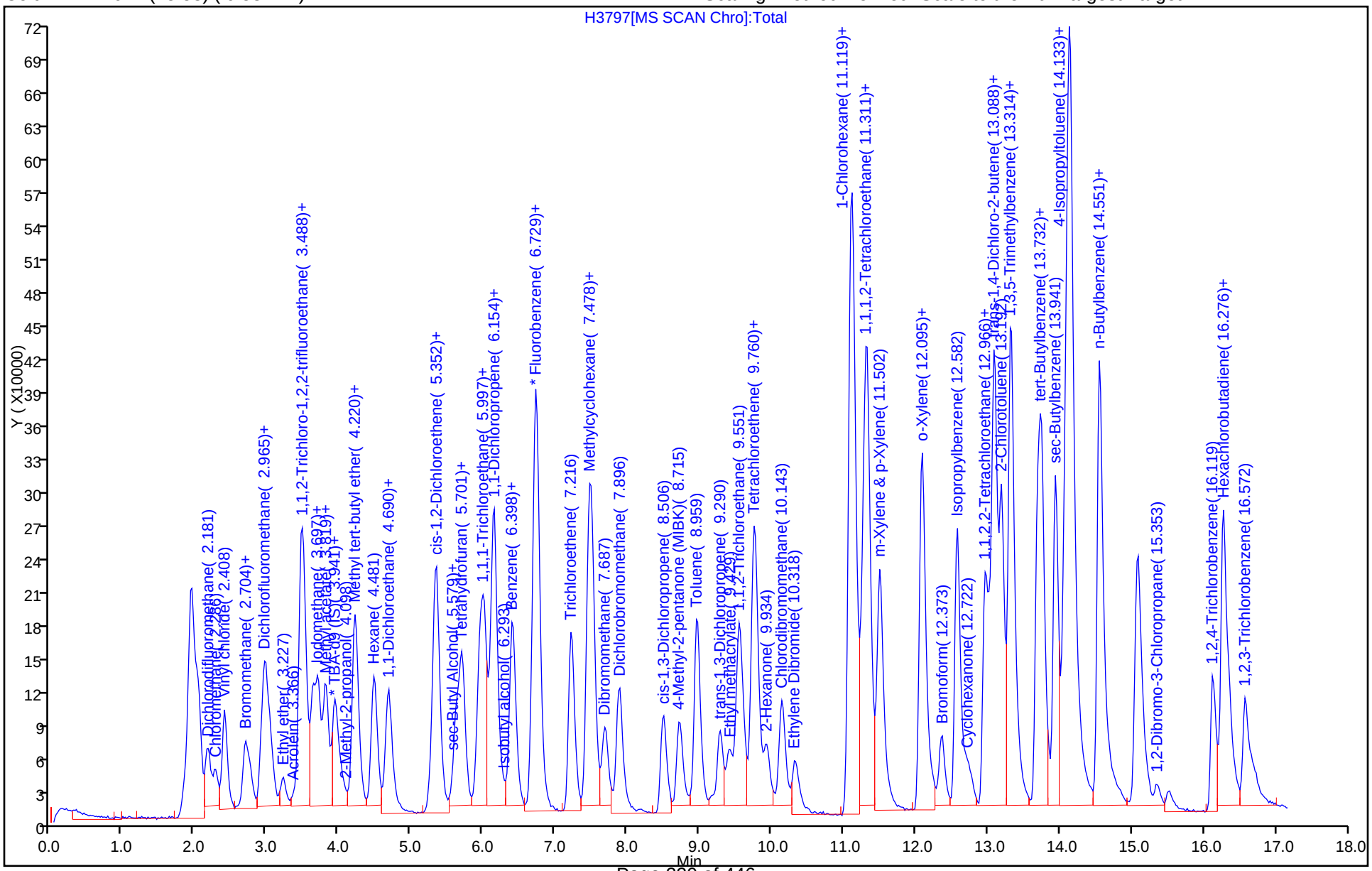
Report Date: 30-Jan-2018 10:58:01 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3797.D

Injection Date:	29-Jan-2018 11:24:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3798.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Jan-2018 11:46:30 ALS Bottle#: 16 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:02 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:09:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.977	3.977	0.000	0	134524	250.0	250.0	
* 2 Fluorobenzene	96	6.747	6.747	0.000	98	751105	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.103	11.103	0.000	88	193061	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.134	0.000	97	345886	12.5	12.5	
28 Dichlorodifluoromethane	85	2.165	2.165	0.000	98	406112	10.0	9.21	
30 Chloromethane	50	2.287	2.287	0.000	98	200609	10.0	10.1	
32 Vinyl chloride	62	2.409	2.409	0.000	97	214209	10.0	9.74	
35 Bromomethane	94	2.688	2.688	0.000	92	227110	10.0	9.84	
36 Chloroethane	64	2.757	2.757	0.000	99	127516	10.0	9.77	
37 Dichlorofluoromethane	67	2.949	2.949	0.000	99	502963	10.0	9.33	
38 Trichlorofluoromethane	101	3.001	3.001	0.000	99	569003	10.0	9.57	
40 Ethyl ether	59	3.210	3.210	0.000	93	98867	10.0	9.71	
44 Acrolein	56	3.367	3.367	0.000	99	61243	100.0	97.1	
45 1,1-Dichloroethene	96	3.472	3.472	0.000	98	247176	10.0	9.67	
46 1,1,2-Trichloro-1,2,2-trif	151	3.489	3.489	0.000	98	368632	10.0	9.86	
47 Acetone	43	3.524	3.524	0.000	31	57698	40.0	38.2	
48 Iodomethane	142	3.646	3.646	0.000	99	633298	10.0	9.67	
50 Carbon disulfide	76	3.716	3.716	0.000	99	833580	10.0	9.49	
52 3-Chloro-1-propene	41	3.803	3.803	0.000	83	321601	10.0	9.74	
53 Methyl acetate	43	3.820	3.820	0.000	97	249366	50.0	51.2	
54 Methylene Chloride	84	3.942	3.942	0.000	93	206162	10.0	10.2	
55 2-Methyl-2-propanol	59	4.082	4.082	0.000	91	56313	100.0	97.9	
57 Acrylonitrile	53	4.204	4.204	0.000	99	138045	100.0	100.2	
58 trans-1,2-Dichloroethene	96	4.221	4.221	0.000	99	277456	10.0	9.87	
56 Methyl tert-butyl ether	73	4.221	4.221	0.000	98	365448	10.0	9.46	
59 Hexane	57	4.482	4.482	0.000	94	360419	10.0	10.2	
60 1,1-Dichloroethane	63	4.674	4.674	0.000	96	451844	10.0	9.62	
61 Vinyl acetate	43	4.709	4.709	0.000	97	427013	20.0	20.1	
65 cis-1,2-Dichloroethene	96	5.336	5.336	0.000	84	280511	10.0	9.77	
66 2,2-Dichloropropane	77	5.353	5.353	0.000	90	469584	10.0	9.91	
67 2-Butanone (MEK)	43	5.353	5.353	0.000	45	111330	40.0	37.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.580	5.580	0.000	97	175001	300.0	297.8	
73 Chlorobromomethane	128	5.632	5.632	0.000	95	139974	10.0	10.0	
74 Tetrahydrofuran	42	5.684	5.684	0.000	41	38764	20.0	18.2	
75 Chloroform	83	5.702	5.702	0.000	93	533621	10.0	9.56	
76 1,1,1-Trichloroethane	97	5.946	5.946	0.000	98	539857	10.0	9.47	
77 Cyclohexane	56	6.015	6.015	0.000	91	404482	10.0	10.1	
78 1,1-Dichloropropene	75	6.137	6.137	0.000	94	429681	10.0	9.61	
79 Carbon tetrachloride	117	6.155	6.155	0.000	97	539426	10.0	9.69	
80 Isobutyl alcohol	41	6.294	6.294	0.000	92	59700	250.0	259.9	
81 Benzene	78	6.399	6.399	0.000	97	749680	10.0	9.86	
82 1,2-Dichloroethane	62	6.434	6.434	0.000	97	217373	10.0	9.88	
84 n-Heptane	43	6.695	6.695	0.000	93	481262	10.0	9.74	
86 Trichloroethene	95	7.218	7.218	0.000	98	354695	10.0	9.76	
88 2-Pentanone	43	7.461	7.461	0.000	99	605502	40.0	45.1	
89 Methylcyclohexane	55	7.461	7.461	0.000	90	390938	10.0	9.78	
90 1,2-Dichloropropane	63	7.514	7.514	0.000	93	256773	10.0	9.77	
92 Dibromomethane	93	7.688	7.688	0.000	95	172320	10.0	9.61	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.897	7.897	0.000	99	470707	10.0	9.74	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.507	8.507	0.000	95	381283	10.0	10.5	
98 4-Methyl-2-pentanone (MIBK	43	8.716	8.716	0.000	97	452617	40.0	41.0	
99 Toluene	91	8.960	8.960	0.000	99	885811	10.0	9.74	
100 trans-1,3-Dichloropropene	75	9.291	9.291	0.000	94	269728	10.0	9.75	
101 Ethyl methacrylate	69	9.413	9.413	0.000	89	195614	10.0	10.1	
102 1,1,2-Trichloroethane	97	9.552	9.552	0.000	93	183589	10.0	10.1	
103 Tetrachloroethene	164	9.761	9.761	0.000	95	336000	10.0	10.6	
104 1,3-Dichloropropane	76	9.796	9.796	0.000	91	278745	10.0	10.2	
105 2-Hexanone	43	9.935	9.935	0.000	99	297587	40.0	39.2	
108 Chlorodibromomethane	129	10.145	10.145	0.000	89	364581	10.0	10.3	
109 Ethylene Dibromide	107	10.336	10.336	0.000	98	227450	10.0	10.6	
110 1-Chlorohexane	91	11.103	11.103	0.000	93	455759	10.0	10.0	
111 Chlorobenzene	112	11.155	11.155	0.000	94	626685	10.0	10.4	
112 1,1,1,2-Tetrachloroethane	131	11.277	11.277	0.000	93	333711	10.0	10.1	
113 Ethylbenzene	106	11.329	11.329	0.000	99	301061	10.0	10.6	
114 m-Xylene & p-Xylene	106	11.503	11.503	0.000	0	436092	10.0	10.3	
115 o-Xylene	106	12.078	12.078	0.000	98	365340	10.0	10.3	
116 Styrene	104	12.113	12.113	0.000	94	569829	10.0	10.8	
117 Bromoform	173	12.357	12.357	0.000	94	196131	10.0	10.7	
118 Isopropylbenzene	105	12.584	12.584	0.000	96	1215058	10.0	9.83	
120 Cyclohexanone	55	12.706	12.706	0.000	90	106718	400.0	407.6	
122 Bromobenzene	156	12.967	12.967	0.000	95	305524	10.0	10.2	
121 1,1,2,2-Tetrachloroethane	83	12.967	12.967	0.000	94	222700	10.0	9.93	
123 1,2,3-Trichloropropane	110	13.019	13.019	0.000	82	57347	10.0	9.55	
124 trans-1,4-Dichloro-2-buten	53	13.054	13.054	0.000	65	38138	10.0	8.93	
125 N-Propylbenzene	120	13.106	13.106	0.000	99	281499	10.0	9.45	
126 2-Chlorotoluene	126	13.193	13.193	0.000	97	218956	10.0	9.03	
127 1,3,5-Trimethylbenzene	105	13.315	13.315	0.000	95	921386	10.0	9.72	
128 4-Chlorotoluene	126	13.333	13.333	0.000	98	305636	10.0	10.6	
129 tert-Butylbenzene	119	13.699	13.699	0.000	93	1009652	10.0	9.70	
130 1,2,4-Trimethylbenzene	105	13.751	13.751	0.000	96	835151	10.0	9.74	
131 sec-Butylbenzene	134	13.943	13.943	0.000	95	270133	10.0	9.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.065	14.065	0.000	97	421164	10.0	10.5	
133 4-Isopropyltoluene	119	14.099	14.099	0.000	97	1147601	10.0	10.1	
134 1,4-Dichlorobenzene	146	14.169	14.169	0.000	95	685426	10.0	10.1	
137 n-Butylbenzene	91	14.552	14.552	0.000	98	1139613	10.0	10.1	
138 1,2-Dichlorobenzene	146	14.570	14.570	0.000	97	456923	10.0	10.1	
139 1,2-Dibromo-3-Chloropropan	157	15.354	15.354	0.000	86	43503	10.0	10.5	
141 1,2,4-Trichlorobenzene	180	16.120	16.120	0.000	94	316340	10.0	11.2	
142 Hexachlorobutadiene	225	16.277	16.277	0.000	98	336477	10.0	10.5	
143 Naphthalene	128	16.347	16.347	0.000	97	303713	10.0	10.8	
144 1,2,3-Trichlorobenzene	180	16.573	16.573	0.000	95	236321	10.0	10.9	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.6	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.3	
S 145 Trihalomethanes, Total	1				0		40.0	40.3	
S 146 Xylenes, Total (URS)	1				0		20.0	20.7	
S 149 1,2-Dichloroethene, Total	1				0		20.0	19.6	
S 150 Xylenes, Total	106				0		20.0	20.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	5.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00032	Amount Added:	5.00	Units: uL

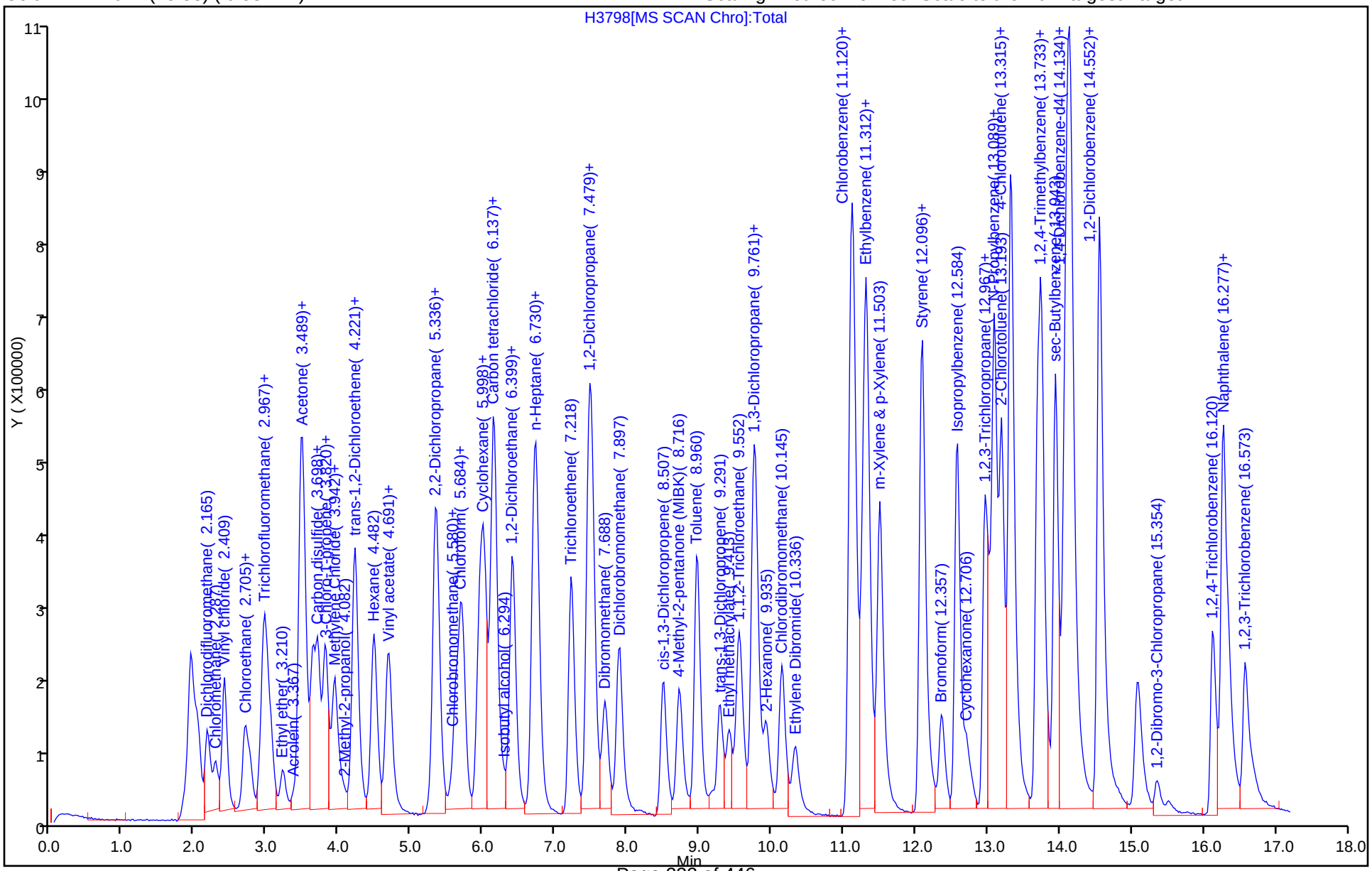
Report Date: 30-Jan-2018 10:58:03 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3798.D

Injection Date:	29-Jan-2018 11:46:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3799.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2018 12:08:30 ALS Bottle#: 17 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:03 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:11:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.981	3.977	0.004	0	139928	250.0	250.0	
* 2 Fluorobenzene	96	6.752	6.747	0.005	95	753720	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.107	11.103	0.004	89	198178	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.139	14.134	0.005	95	337967	12.5	12.5	
28 Dichlorodifluoromethane	85	2.169	2.165	0.004	99	1322681	30.0	29.9	
30 Chloromethane	50	2.309	2.287	0.022	98	591486	30.0	29.8	
32 Vinyl chloride	62	2.413	2.409	0.004	98	652713	30.0	29.6	
35 Bromomethane	94	2.710	2.688	0.022	92	693792	30.0	30.3	
36 Chloroethane	64	2.762	2.757	0.005	100	402546	30.0	31.2	
37 Dichlorofluoromethane	67	2.953	2.949	0.004	99	1527478	30.0	28.2	
38 Trichlorofluoromethane	101	3.006	3.001	0.005	100	1743384	30.0	29.2	
40 Ethyl ether	59	3.215	3.210	0.005	93	307589	30.0	30.1	
44 Acrolein	56	3.372	3.367	0.005	98	214152	300.0	338.2	
45 1,1-Dichloroethene	96	3.476	3.472	0.004	98	735605	30.0	28.7	
46 1,1,2-Trichloro-1,2,2-trif	151	3.494	3.489	0.005	98	1121504	30.0	29.9	
47 Acetone	43	3.511	3.524	-0.013	98	183365	120.0	121.0	
48 Iodomethane	142	3.650	3.646	0.004	98	1946457	30.0	29.6	
50 Carbon disulfide	76	3.720	3.716	0.004	99	2529991	30.0	28.7	
52 3-Chloro-1-propene	41	3.807	3.803	0.004	90	994274	30.0	30.0	
53 Methyl acetate	43	3.825	3.820	0.005	97	780721	150.0	159.6	
54 Methylene Chloride	84	3.947	3.942	0.005	92	611116	30.0	30.5	
55 2-Methyl-2-propanol	59	4.068	4.082	-0.014	93	176855	300.0	306.8	
57 Acrylonitrile	53	4.208	4.204	0.004	98	445839	300.0	322.6	
56 Methyl tert-butyl ether	73	4.225	4.221	0.004	96	1157310	30.0	29.9	
58 trans-1,2-Dichloroethene	96	4.225	4.221	0.004	99	824250	30.0	29.2	
59 Hexane	57	4.487	4.482	0.005	94	1120296	30.0	30.9	
60 1,1-Dichloroethane	63	4.678	4.674	0.004	96	1388113	30.0	29.5	
61 Vinyl acetate	43	4.713	4.709	0.004	97	1347323	60.0	63.3	
65 cis-1,2-Dichloroethene	96	5.340	5.336	0.004	88	855742	30.0	29.7	
67 2-Butanone (MEK)	43	5.358	5.353	0.005	43	369030	120.0	124.2	
66 2,2-Dichloropropane	77	5.358	5.353	0.005	86	1354163	30.0	30.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.567	5.580	-0.013	98	597917	900.0	978.3	
73 Chlorobromomethane	128	5.636	5.632	0.004	94	429534	30.0	30.6	
74 Tetrahydrofuran	42	5.689	5.684	0.005	71	129936	60.0	60.8	
75 Chloroform	83	5.706	5.702	0.004	96	1647818	30.0	29.4	
76 1,1,1-Trichloroethane	97	5.950	5.946	0.004	98	1657450	30.0	29.0	
77 Cyclohexane	56	6.020	6.015	0.005	91	1223204	30.0	30.7	
78 1,1-Dichloropropene	75	6.142	6.137	0.005	97	1279512	30.0	28.5	
79 Carbon tetrachloride	117	6.159	6.155	0.004	98	1626676	30.0	29.1	
80 Isobutyl alcohol	41	6.299	6.294	0.005	91	191545	750.0	801.7	
81 Benzene	78	6.403	6.399	0.004	97	2293780	30.0	30.1	
82 1,2-Dichloroethane	62	6.420	6.434	-0.014	97	671520	30.0	30.4	
84 n-Heptane	43	6.699	6.695	0.004	93	1465342	30.0	29.6	
86 Trichloroethene	95	7.222	7.218	0.004	98	1094036	30.0	30.0	
89 Methylcyclohexane	55	7.483	7.461	0.022	88	1172880	30.0	29.3	
88 2-Pentanone	43	7.466	7.461	0.005	97	1867967	120.0	138.5	
90 1,2-Dichloropropane	63	7.518	7.514	0.004	95	776654	30.0	29.4	
92 Dibromomethane	93	7.692	7.688	0.004	95	533056	30.0	29.6	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.884	7.897	-0.013	99	1460995	30.0	30.1	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.494	8.507	-0.013	95	1172320	30.0	31.6	
98 4-Methyl-2-pentanone (MIBK	43	8.720	8.716	0.004	97	1405011	120.0	126.7	
99 Toluene	91	8.964	8.960	0.004	99	2681465	30.0	29.4	
100 trans-1,3-Dichloropropene	75	9.295	9.291	0.004	93	882132	30.0	31.8	
101 Ethyl methacrylate	69	9.417	9.413	0.004	91	635518	30.0	32.0	
102 1,1,2-Trichloroethane	97	9.557	9.552	0.004	91	540487	30.0	31.3	
103 Tetrachloroethene	164	9.766	9.761	0.005	95	1000278	30.0	30.7	
104 1,3-Dichloropropane	76	9.800	9.796	0.004	88	860778	30.0	30.6	
105 2-Hexanone	43	9.922	9.935	-0.013	98	941760	120.0	119.2	
108 Chlorodibromomethane	129	10.149	10.145	0.005	90	1146741	30.0	31.4	
109 Ethylene Dibromide	107	10.341	10.336	0.004	99	721396	30.0	32.8	
110 1-Chlorohexane	91	11.125	11.103	0.022	97	1362927	30.0	29.1	
111 Chlorobenzene	112	11.159	11.155	0.004	92	1904713	30.0	30.9	
112 1,1,1,2-Tetrachloroethane	131	11.281	11.277	0.004	95	1013119	30.0	29.8	
113 Ethylbenzene	106	11.334	11.329	0.005	99	892096	30.0	30.5	
114 m-Xylene & p-Xylene	106	11.508	11.503	0.005	0	1314397	30.0	30.4	
115 o-Xylene	106	12.083	12.078	0.005	98	1113344	30.0	30.7	
116 Styrene	104	12.100	12.113	-0.013	94	1747647	30.0	32.3	
117 Bromoform	173	12.362	12.357	0.005	94	613199	30.0	32.6	
118 Isopropylbenzene	105	12.588	12.584	0.004	97	3577129	30.0	29.6	
120 Cyclohexanone	55	12.710	12.706	0.004	93	342469	1200.0	1274.1	
121 1,1,2,2-Tetrachloroethane	83	12.971	12.967	0.004	93	687357	30.0	31.4	
122 Bromobenzene	156	12.971	12.967	0.004	96	917164	30.0	31.3	
123 1,2,3-Trichloropropane	110	13.024	13.019	0.005	82	173723	30.0	30.3	
124 trans-1,4-Dichloro-2-buten	53	13.058	13.054	0.004	75	124168	30.0	29.7	
125 N-Propylbenzene	120	13.111	13.106	0.005	99	834964	30.0	28.7	
126 2-Chlorotoluene	126	13.198	13.193	0.005	97	663861	30.0	28.0	
127 1,3,5-Trimethylbenzene	105	13.320	13.315	0.005	94	2713545	30.0	29.3	
128 4-Chlorotoluene	126	13.337	13.333	0.004	99	926777	30.0	32.9	
129 tert-Butylbenzene	119	13.703	13.699	0.004	93	2955408	30.0	29.1	
130 1,2,4-Trimethylbenzene	105	13.755	13.751	0.004	96	2444347	30.0	29.2	
131 sec-Butylbenzene	134	13.947	13.943	0.004	94	779276	30.0	29.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.069	14.065	0.004	97	1274448	30.0	32.5	
133 4-Isopropyltoluene	119	14.104	14.099	0.005	98	3281195	30.0	29.4	
134 1,4-Dichlorobenzene	146	14.173	14.169	0.004	93	1988029	30.0	29.9	
137 n-Butylbenzene	91	14.539	14.552	-0.013	98	3282638	30.0	29.7	
138 1,2-Dichlorobenzene	146	14.574	14.570	0.004	97	1373171	30.0	31.1	
139 1,2-Dibromo-3-Chloropropan	157	15.358	15.354	0.004	87	134353	30.0	33.1	
141 1,2,4-Trichlorobenzene	180	16.125	16.120	0.005	95	932184	30.0	33.7	
142 Hexachlorobutadiene	225	16.282	16.277	0.005	98	943881	30.0	30.1	
143 Naphthalene	128	16.351	16.347	0.004	97	953625	30.0	34.6	
144 1,2,3-Trichlorobenzene	180	16.578	16.573	0.005	95	688597	30.0	32.6	
S 151 1,2-Dichloroethene, Total	96				0		60.0	58.9	
S 149 1,2-Dichloroethene, Total	1				0		60.0	58.9	
S 150 Xylenes, Total	106				0		60.0	61.0	
S 147 Total BTEX	1				0			151.0	
S 146 Xylenes, Total (URS)	1				0		60.0	61.0	
S 148 1,3-Dichloropropene, Total	1				0		60.0	63.4	
S 145 Trihalomethanes, Total	1				0		120.0	123.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	15.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	15.00	Units: uL
MV-2cleve+AVA_00032	Amount Added:	15.00	Units: uL

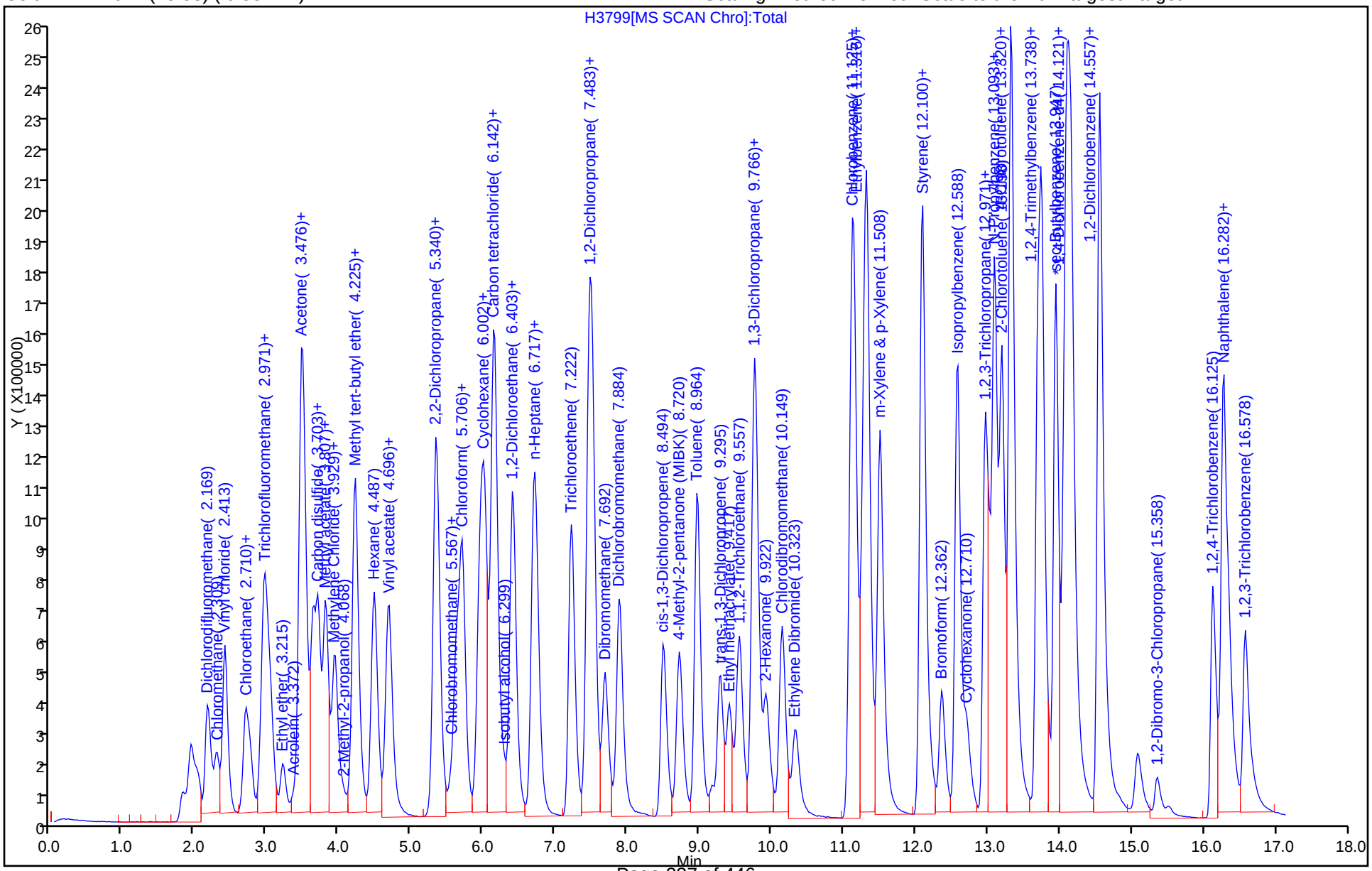
Report Date: 30-Jan-2018 10:58:04 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3799.D

Injection Date:	29-Jan-2018 12:08:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3800.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2018 12:30:30 ALS Bottle#: 18 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:05 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:12:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.999	3.977	0.022	0	134578	250.0	250.0	
* 2 Fluorobenzene	96	6.752	6.747	0.005	98	740119	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.107	11.103	0.004	92	182133	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.139	14.134	0.005	95	316595	12.5	12.5	
28 Dichlorodifluoromethane	85	2.169	2.165	0.004	98	2551647	60.0	58.7	
30 Chloromethane	50	2.309	2.287	0.022	98	1166876	60.0	59.9	M
32 Vinyl chloride	62	2.431	2.409	0.022	98	1276720	60.0	58.9	
35 Bromomethane	94	2.692	2.688	0.004	91	1328288	60.0	59.3	
36 Chloroethane	64	2.762	2.757	0.005	99	734084	60.0	58.1	
37 Dichlorofluoromethane	67	2.953	2.949	0.004	99	2936126	60.0	55.3	
38 Trichlorofluoromethane	101	3.006	3.001	0.005	100	3336025	60.0	57.0	
40 Ethyl ether	59	3.215	3.210	0.005	93	602602	60.0	60.0	
44 Acrolein	56	3.372	3.367	0.005	99	439187	599.9	706.4	
45 1,1-Dichloroethene	96	3.476	3.472	0.004	98	1469294	60.0	58.3	
46 1,1,2-Trichloro-1,2,2-trif	151	3.494	3.489	0.005	98	2216424	60.0	60.1	
47 Acetone	43	3.528	3.524	0.004	98	349023	240.0	234.5	
48 Iodomethane	142	3.633	3.646	-0.013	98	3907573	60.0	60.6	
50 Carbon disulfide	76	3.703	3.716	-0.013	99	5083209	60.0	58.7	
52 3-Chloro-1-propene	41	3.807	3.803	0.004	89	2026480	60.0	62.3	
53 Methyl acetate	43	3.825	3.820	0.005	97	1571736	300.0	327.2	
54 Methylene Chloride	84	3.947	3.942	0.005	92	1232845	60.0	62.9	
55 2-Methyl-2-propanol	59	4.086	4.082	0.004	97	503942	600.0	919.9	
57 Acrylonitrile	53	4.190	4.204	-0.014	98	919051	600.0	677.3	
58 trans-1,2-Dichloroethene	96	4.225	4.221	0.004	99	1618726	60.0	58.5	
56 Methyl tert-butyl ether	73	4.225	4.221	0.004	94	2253997	60.0	59.2	
59 Hexane	57	4.487	4.482	0.005	95	2198099	60.0	66.1	
60 1,1-Dichloroethane	63	4.678	4.674	0.004	96	2760594	60.0	59.7	
61 Vinyl acetate	43	4.713	4.709	0.004	97	2808504	120.0	134.4	
65 cis-1,2-Dichloroethene	96	5.340	5.336	0.004	89	1689617	60.0	59.7	
66 2,2-Dichloropropane	77	5.358	5.353	0.005	87	2595762	60.0	60.0	
67 2-Butanone (MEK)	43	5.358	5.353	0.005	52	727467	240.0	249.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.567	5.580	-0.013	96	1213613	1800.0	2064.7	
73 Chlorobromomethane	128	5.636	5.632	0.004	94	839726	60.0	61.0	
74 Tetrahydrofuran	42	5.706	5.684	0.022	90	256222	120.0	122.1	
75 Chloroform	83	5.706	5.702	0.004	95	3211191	60.0	58.4	
76 1,1,1-Trichloroethane	97	5.950	5.946	0.004	98	3253388	60.0	57.9	
77 Cyclohexane	56	6.020	6.015	0.005	91	2418370	60.0	62.0	
78 1,1-Dichloropropene	75	6.142	6.137	0.005	96	2519504	60.0	57.2	
79 Carbon tetrachloride	117	6.159	6.155	0.004	98	3193587	60.0	58.2	
80 Isobutyl alcohol	41	6.281	6.294	-0.013	92	385314	1500.0	1676.9	
81 Benzene	78	6.403	6.399	0.004	96	4506538	60.0	60.2	
82 1,2-Dichloroethane	62	6.420	6.434	-0.014	97	1349511	60.0	62.3	
84 n-Heptane	43	6.699	6.695	0.004	93	2895806	60.0	59.5	
86 Trichloroethene	95	7.222	7.218	0.004	98	2121611	60.0	59.2	
88 2-Pentanone	43	7.466	7.461	0.005	97	2439995	240.0	184.3	
89 Methylcyclohexane	55	7.483	7.461	0.022	90	2299859	60.0	58.4	
90 1,2-Dichloropropane	63	7.518	7.514	0.004	95	1513196	60.0	58.4	
92 Dibromomethane	93	7.692	7.688	0.004	94	1043430	60.0	59.0	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.884	7.897	-0.013	99	2845068	60.0	59.8	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.494	8.507	-0.013	95	2269963	60.0	66.5	
98 4-Methyl-2-pentanone (MIBK	43	8.720	8.716	0.004	97	2772161	240.0	254.6	
99 Toluene	91	8.964	8.960	0.004	99	5230578	60.0	58.4	
100 trans-1,3-Dichloropropene	75	9.295	9.291	0.004	93	1717902	60.0	63.0	
101 Ethyl methacrylate	69	9.417	9.413	0.004	90	1239287	60.0	68.0	
102 1,1,2-Trichloroethane	97	9.557	9.552	0.004	92	1053397	60.0	63.1	
103 Tetrachloroethene	164	9.766	9.761	0.005	97	1910098	60.0	63.8	
104 1,3-Dichloropropane	76	9.800	9.796	0.004	90	1665251	60.0	64.4	
105 2-Hexanone	43	9.922	9.935	-0.013	98	1789134	240.0	245.5	
108 Chlorodibromomethane	129	10.149	10.145	0.005	90	2156590	60.0	64.3	
109 Ethylene Dibromide	107	10.341	10.336	0.004	98	1385917	60.0	68.6	
110 1-Chlorohexane	91	11.125	11.103	0.021	98	2597113	60.0	60.4	
111 Chlorobenzene	112	11.159	11.155	0.004	92	3608110	60.0	63.6	
112 1,1,1,2-Tetrachloroethane	131	11.281	11.277	0.004	96	1934799	60.0	62.0	
113 Ethylbenzene	106	11.334	11.329	0.005	99	1667728	60.0	62.0	
114 m-Xylene & p-Xylene	106	11.508	11.503	0.005	0	2471125	60.0	62.1	
115 o-Xylene	106	12.083	12.078	0.005	98	2096001	60.0	62.8	
116 Styrene	104	12.100	12.113	-0.013	94	3325274	60.0	66.8	
117 Bromoform	173	12.361	12.357	0.004	94	1175443	60.0	68.0	
118 Isopropylbenzene	105	12.588	12.584	0.004	96	6732458	60.0	59.5	
120 Cyclohexanone	55	12.710	12.706	0.004	91	652456	2400.0	2641.3	
122 Bromobenzene	156	12.971	12.967	0.004	96	1735652	60.0	63.2	
121 1,1,2,2-Tetrachloroethane	83	12.971	12.967	0.004	93	1316837	60.0	64.1	
123 1,2,3-Trichloropropane	110	13.024	13.019	0.005	81	320373	60.0	59.9	
124 trans-1,4-Dichloro-2-buten	53	13.058	13.054	0.004	73	239439	60.0	61.2	
125 N-Propylbenzene	120	13.111	13.106	0.005	99	1526442	60.0	56.0	
126 2-Chlorotoluene	126	13.215	13.193	0.022	96	1320178	60.0	59.5	
127 1,3,5-Trimethylbenzene	105	13.320	13.315	0.005	94	5021806	60.0	57.9	
128 4-Chlorotoluene	126	13.337	13.333	0.004	98	1623469	60.0	61.5	
129 tert-Butylbenzene	119	13.703	13.699	0.004	93	5407192	60.0	56.7	
130 1,2,4-Trimethylbenzene	105	13.755	13.751	0.004	96	4586081	60.0	58.4	
131 sec-Butylbenzene	134	13.947	13.943	0.004	94	1404771	60.0	56.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.069	14.065	0.004	97	2329722	60.0	63.4	
133 4-Isopropyltoluene	119	14.121	14.099	0.022	98	5886638	60.0	56.3	
134 1,4-Dichlorobenzene	146	14.173	14.169	0.004	95	3647813	60.0	58.6	
137 n-Butylbenzene	91	14.557	14.552	0.005	98	5925426	60.0	57.3	
138 1,2-Dichlorobenzene	146	14.574	14.570	0.004	98	2513421	60.0	60.7	
139 1,2-Dibromo-3-Chloropropan	157	15.358	15.354	0.004	87	252181	60.0	66.3	
141 1,2,4-Trichlorobenzene	180	16.125	16.120	0.005	95	1623850	60.0	62.7	
142 Hexachlorobutadiene	225	16.282	16.277	0.005	98	1574177	60.0	53.6	
143 Naphthalene	128	16.351	16.347	0.004	97	1697509	60.0	65.7	
144 1,2,3-Trichlorobenzene	180	16.578	16.573	0.005	95	1222837	60.0	61.8	
S 151 1,2-Dichloroethene, Total	96				0		120.0	118.2	
S 148 1,3-Dichloropropene, Total	1				0		120.0	129.6	
S 145 Trihalomethanes, Total	1				0		240.0	250.5	
S 146 Xylenes, Total (URS)	1				0		120.0	124.9	
S 149 1,2-Dichloroethene, Total	1				0		120.0	118.2	
S 150 Xylenes, Total	106				0		120.0	124.9	
S 147 Total BTEX	1				0			305.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main A_00033	Amount Added:	30.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	30.00	Units: uL
MV-2cleve+AVA_00032	Amount Added:	30.00	Units: uL

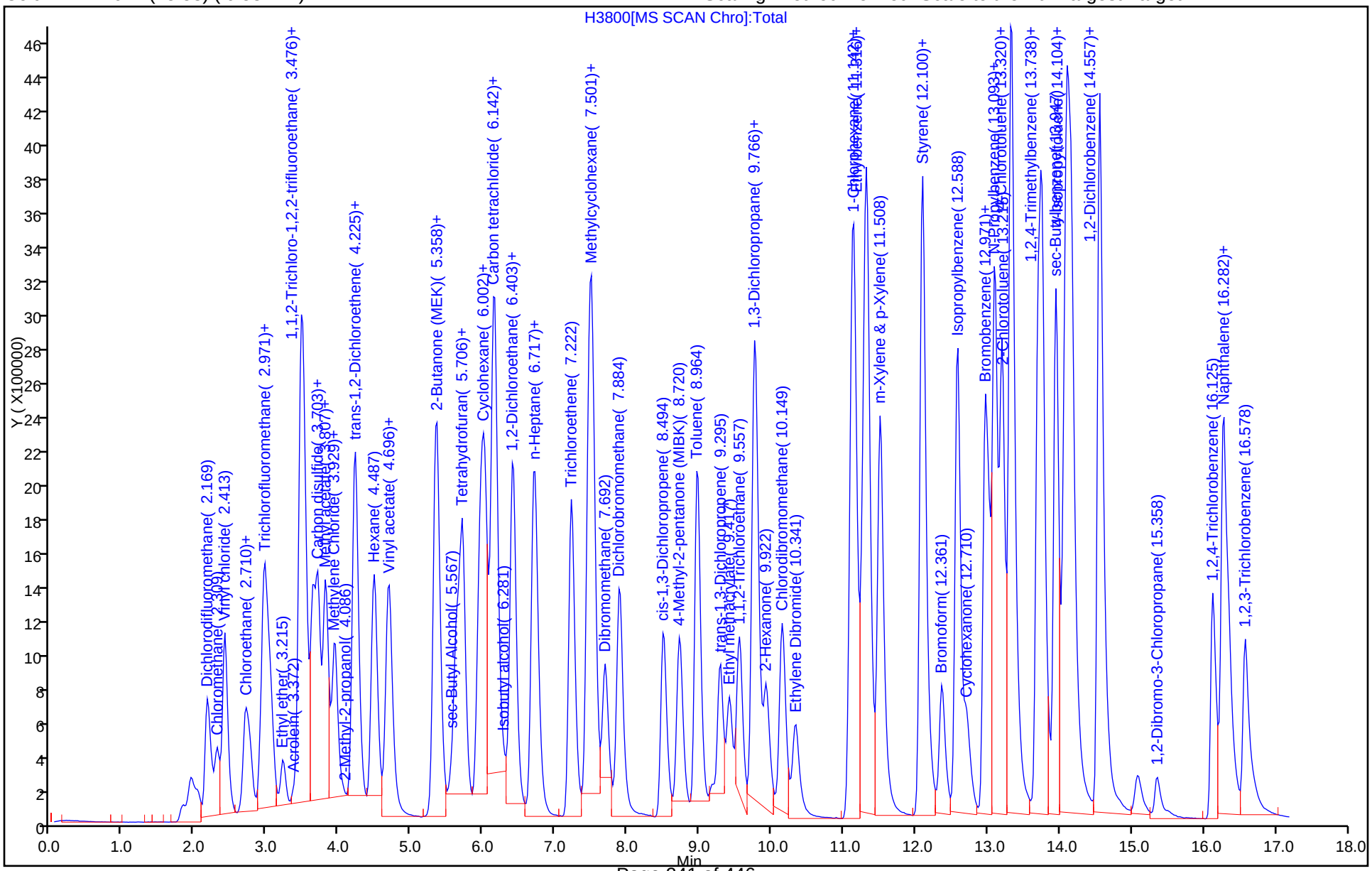
Report Date: 30-Jan-2018 10:58:05 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3800.D

Injection Date:	29-Jan-2018 12:30:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

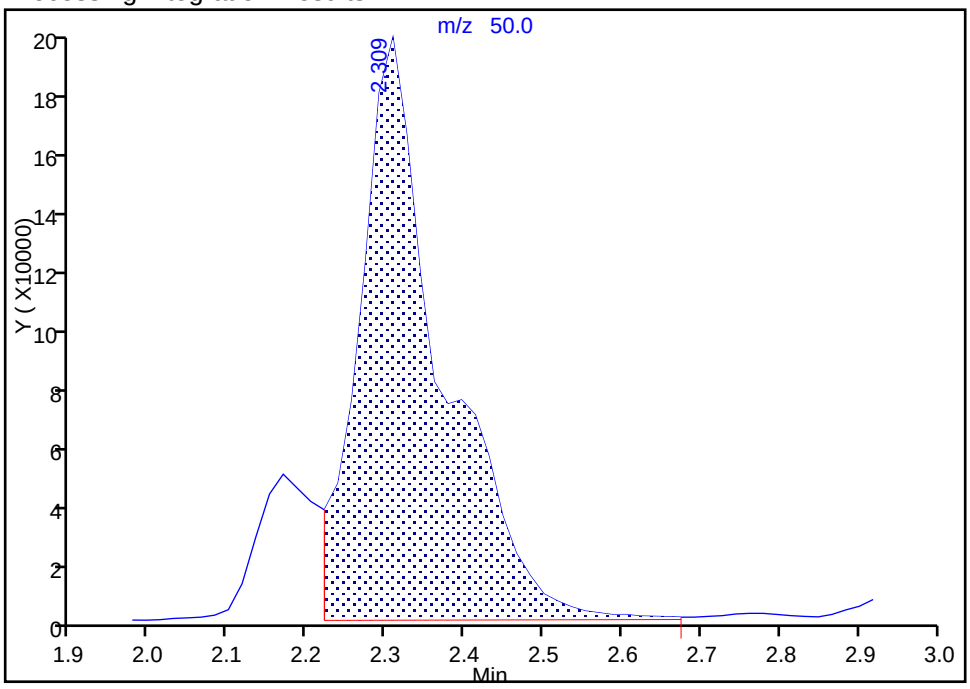
Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3800.D				
Injection Date:	29-Jan-2018 12:30:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	18	Worklist Smp#:	8
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

30 Chloromethane, CAS: 74-87-3

Signal: 1

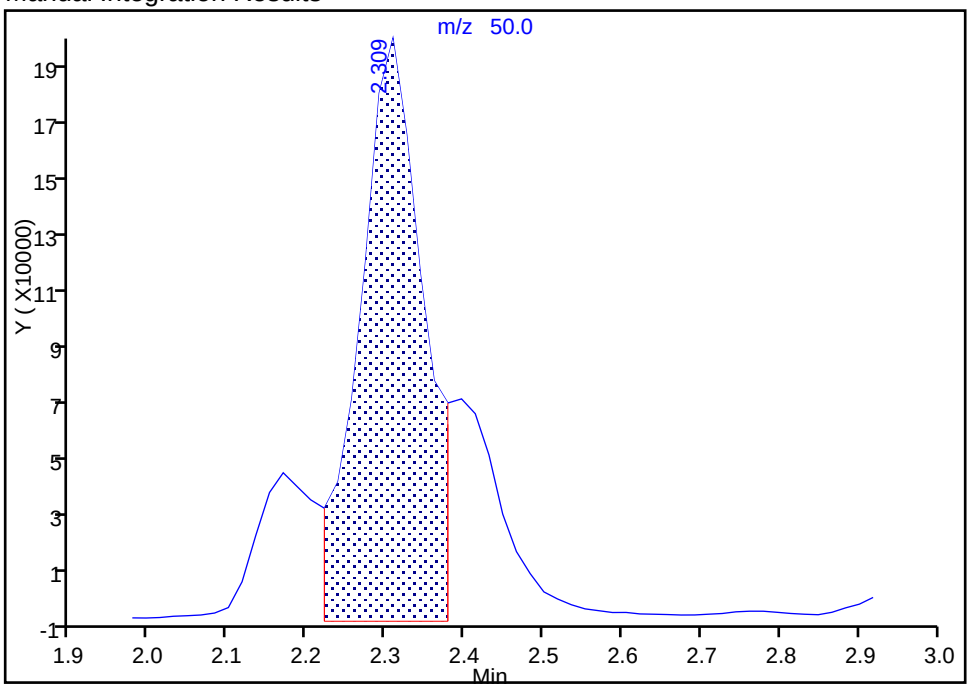
Processing Integration Results

RT: 2.31
Area: 1477776
Amount: 73.050980
Amount Units: ug/l



Manual Integration Results

RT: 2.31
Area: 1166876
Amount: 59.873135
Amount Units: ug/l



Reviewer: wickhamt, 30-Jan-2018 09:00:56

Audit Action: Assigned New Baseline Audit Reason: Shouldering

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 13:35 Calibration End Date: 01/29/2018 15:25 Calibration ID: 31507

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403042/10	H3803.D
Level 2	IC 280-403042/11	H3804.D
Level 3	IC 280-403042/12	H3805.D
Level 4	ICIS 280-403042/13	H3806.D
Level 5	IC 280-403042/14	H3807.D
Level 6	IC 280-403042/15	H3808.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	+++++ 0.0006	0.0004	0.0006	0.0008	0.0007	Lin	0.0266	0.0006							0.9960		0.9900
Isopropyl alcohol	0.0051 +++++	+++++	+++++	+++++	+++++	Ave		0.0051						15.0			
Diisopropyl ether	0.3662 0.3098	0.3600	0.3226	0.3379	0.3234	Ave		0.3367				6.7		15.0			
2-Chloro-1,3-butadiene	0.7008 0.5797	0.6901	0.5966	0.6219	0.6170	Ave		0.6344				7.8		15.0			
Tert-butyl ethyl ether	1.1918 0.9833	1.1458	1.0446	1.0837	1.0144	Ave		1.0773				7.4		15.0			
Ethyl acetate	0.1533 0.1384	0.1253	0.1345	0.1417	0.1354	Ave		0.1381				6.7		15.0			
Propionitrile	0.0042 0.0093	0.0054	0.0092	0.0096	0.0091	Lin2	-0.058	0.0096							0.9900		0.9900
Methacrylonitrile	0.0685 0.0728	0.0773	0.0730	0.0766	0.0721	Ave		0.0734				4.4		15.0			
Tert-amyl methyl ether	0.8808 0.8808	0.9511	0.8825	0.9629	0.8940	Ave		0.9087				4.2		15.0			
n-Butanol	+++++ 0.0026	0.0017	0.0018	0.0024	0.0023	Lin2	-0.044	0.0025							0.9920		0.9900
Methyl methacrylate	0.0643 0.0595	0.0668	0.0629	0.0672	0.0620	Ave		0.0638				4.6		15.0			
2-Nitropropane	0.0431 0.0319	0.0372	0.0329	0.0350	0.0321	Ave		0.0354				12.2		15.0			
cis-1,4-Dichloro-2-butene	0.1516 0.1272	0.1288	0.1311	0.1375	0.1270	Ave		0.1339				7.1		15.0			
1,2,3-Trimethylbenzene	3.1982 2.9254	3.1472	2.8867	3.0389	3.0114	Ave		3.0346				4.0		15.0			
Dibromofluoromethane (Surr)	0.8839 0.7227	0.7961	0.7311	0.7726	0.7494	Ave		0.7760				7.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 13:35 Calibration End Date: 01/29/2018 15:25 Calibration ID: 31507

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloroethane-d4 (Surr)	0.4011 0.3249	0.3828	0.3318	0.3635	0.3360	Ave		0.3567				8.6		15.0			
Toluene-d8 (Surr)	6.3078 4.7321	5.1971	4.8620	4.8568	4.9301	Ave		5.1477				11.4		15.0			
4-Bromofluorobenzene (Surr)	2.3831 1.7217	2.0358	1.7869	1.8306	1.7318	Ave		1.9150				13.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 13:35 Calibration End Date: 01/29/2018 15:25 Calibration ID: 31507

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403042/10	H3803.D
Level 2	IC 280-403042/11	H3804.D
Level 3	IC 280-403042/12	H3805.D
Level 4	ICIS 280-403042/13	H3806.D
Level 5	IC 280-403042/14	H3807.D
Level 6	IC 280-403042/15	H3808.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol	FB	Lin	+++++ 152858	2630	12190	31741	77640	+++++ 3600	120	300	600	1800
Isopropyl alcohol	FB	Ave	3264 +++++	+++++	+++++	+++++	+++++	10.0 +++++	+++++	+++++	+++++	+++++
Diisopropyl ether	FB	Ave	23584 1242012	44997	108491	217432	619860	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	45128 2323835	86252	200631	400207	1182378	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	76744 3941828	143203	351278	697334	1944004	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	19738 1109324	31316	90452	182313	519042	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Lin2	2727 374061	6695	31009	61715	174421	10.0 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	44131 2918117	96620	245421	492623	1381138	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	56722 3530965	118866	296746	619619	1713267	1.00 60.0	2.00	5.00	10.0	30.0
n-Butanol	FB	Lin2	+++++ 260098	5203	15271	38045	111208	+++++ 1500	50.0	125	250	750
Methyl methacrylate	FB	Ave	8286 477346	16702	42335	86524	237696	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	5552 255592	9304	22149	45076	122949	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Ave	8629 453769	14839	40211	81241	224347	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	91035 5218149	181359	442607	898034	2659200	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	56920 2897331	99498	245838	497148	1436113	1.00 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	25827 1302609	47847	111568	233935	643835	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403042

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2018 13:35 Calibration End Date: 01/29/2018 15:25 Calibration ID: 31507

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toluene-d8 (Surr)	CBNZ d5	Ave	114049 5291999	190667	465506	918024	2670736	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	67833 3071008	117311	273986	540970	1529257	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3803.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2018 13:35:30 ALS Bottle#: 21 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:07 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:19:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.012	3.977	0.035	0	130365	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.747	0.001	98	804934	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.103	11.103	0.000	90	226007	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.135	14.134	0.001	97	355809	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.911	5.898	0.013	90	56920	1.00	1.14	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.317	0.030	0	25827	1.00	1.12	
$ 10 Toluene-d8 (Surr)	98	8.873	8.860	0.013	93	114049	1.00	1.23	
$ 11 4-Bromofluorobenzene (Surr	95	12.776	12.763	0.013	84	67833	1.00	1.24	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45		3.163				ND	ND	
43 Propene oxide	58	3.298	3.285	0.013	94	90972	100.0	88.7	M
49 Isopropyl alcohol	45	3.664	3.647	0.017	46	3264	10.0	10.0	
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.744	4.714	0.030	96	23584	1.00	1.09	
63 2-Chloro-1,3-butadiene	53	4.761	4.766	-0.005	90	45128	1.00	1.10	
64 Tert-butyl ethyl ether	59	5.145	5.132	0.013	97	76744	1.00	1.11	
69 Ethyl acetate	43	5.406	5.393	0.013	93	19738	2.00	2.22	
70 Propionitrile	54	5.458	5.428	0.030	39	2727	10.0	10.5	
72 Methacrylonitrile	41	5.615	5.585	0.030	94	44131	10.0	9.34	
83 Tert-amyl methyl ether	73	6.538	6.526	0.012	98	56722	1.00	0.9694	
85 n-Butanol	56		7.153				ND	ND	U
91 Methyl methacrylate	100	7.653	7.658	-0.005	88	8286	2.00	2.02	
95 2-Nitropropane	41	8.228	8.198	0.030	85	5552	2.00	2.44	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.671	12.658	0.013	0	8629	2.00	2.26	
135 1,2,3-Trimethylbenzene	105	14.222	14.209	0.013	97	91035	1.00	1.05	
140 1,3,5-Trichlorobenzene	180	15.563	15.550	0.013	94	46291	1.00	1.03	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.08	Units: uL
MV-Supp A_00028	Amount Added:	0.50	Units: uL

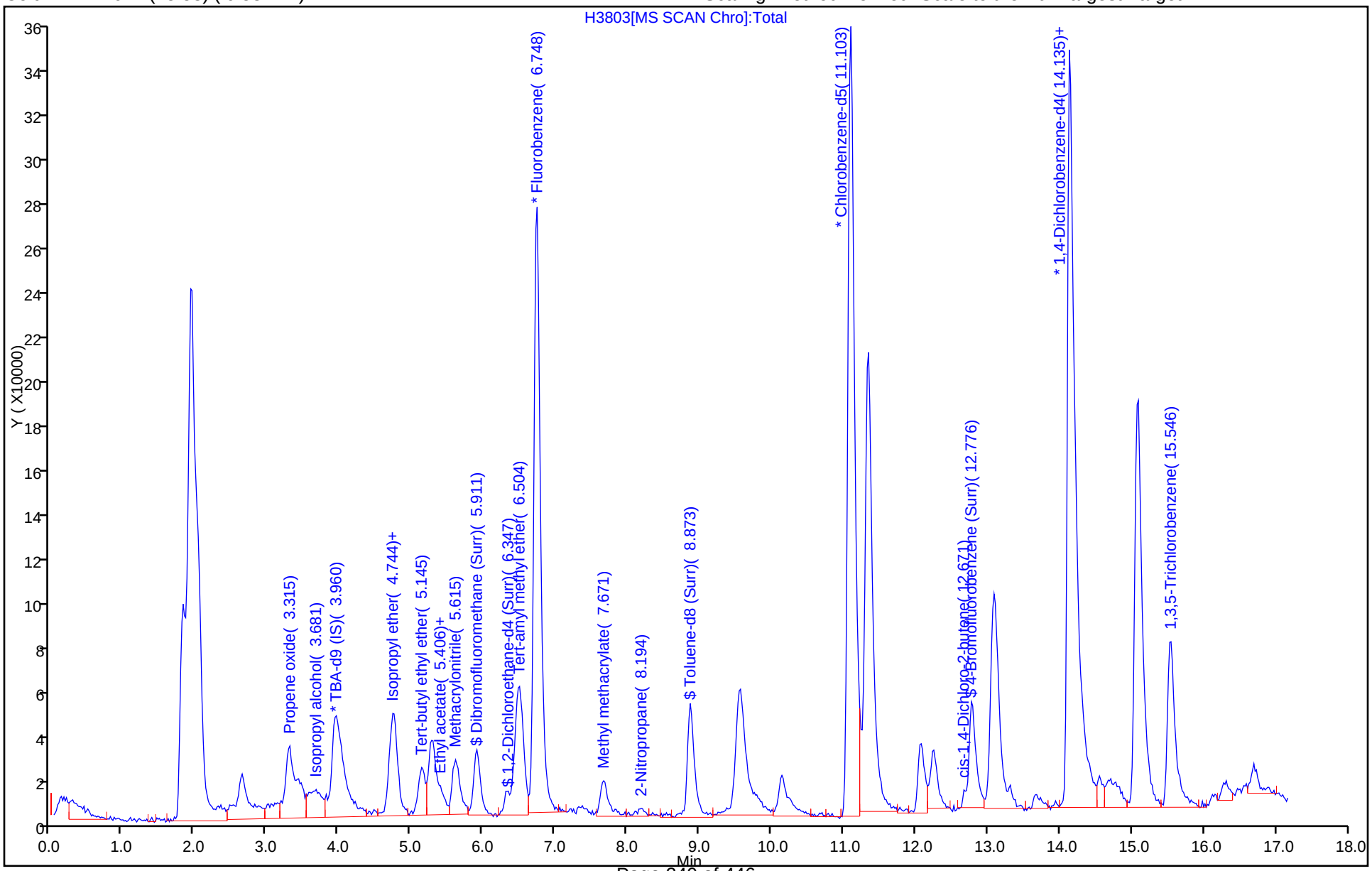
Report Date: 30-Jan-2018 10:58:08 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3803.D

Injection Date:	29-Jan-2018 13:35:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



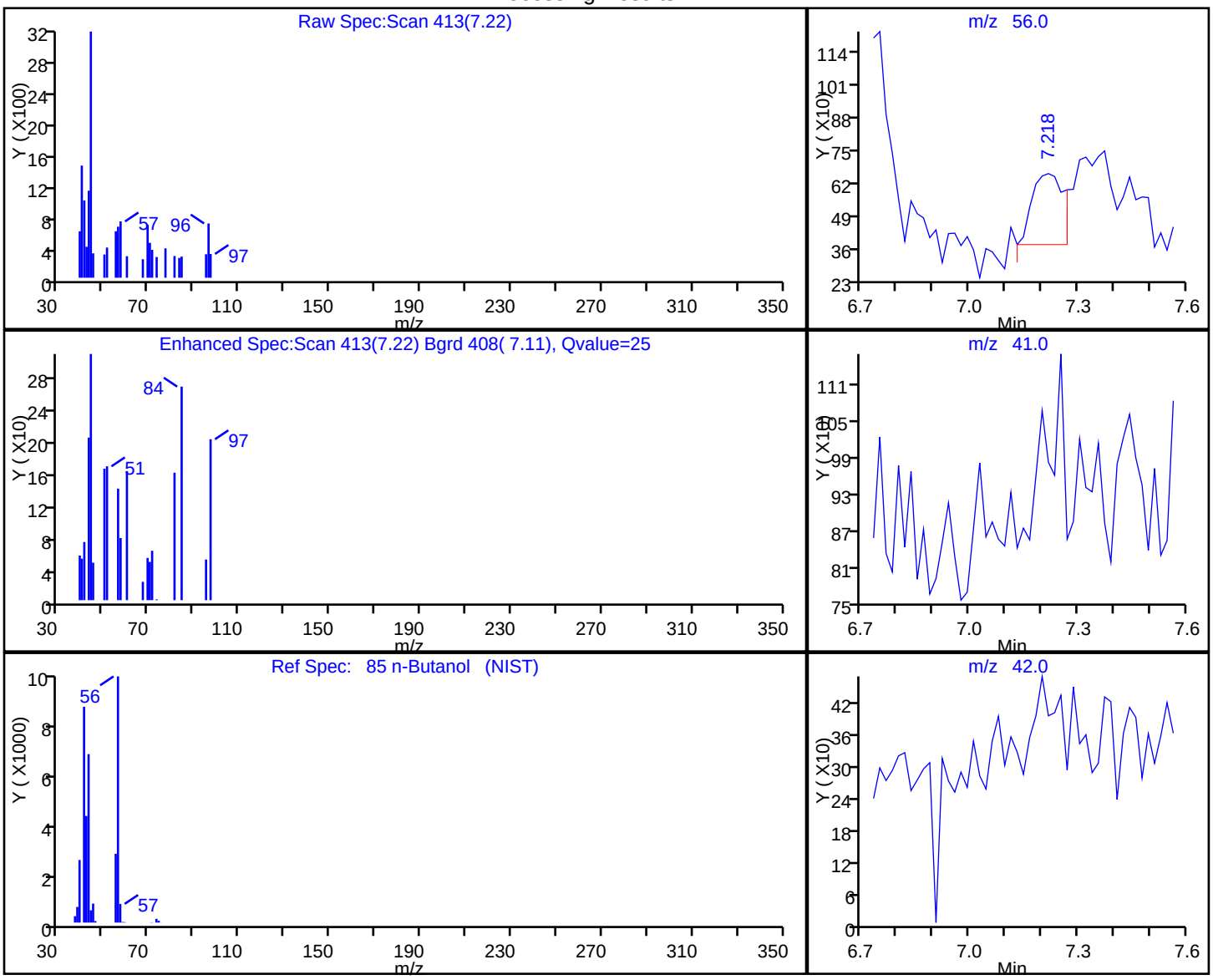
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3803.D				
Injection Date:	29-Jan-2018 13:35:30	Instrument ID:	VMS_H		
Lims ID:	ic				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	21	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

85 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
7.22	56.00	1764	25.757684
7.18	41.00	0	
7.18	42.00	0	

Reviewer: wickhamt, 30-Jan-2018 09:19:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3804.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2018 13:57:30 ALS Bottle#: 22 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:08 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:27:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.000	3.977	0.023	0	130761	250.0	250.0	
* 2 Fluorobenzene	96	6.735	6.747	-0.012	98	781141	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.091	11.103	-0.012	89	229293	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.140	14.134	0.006	97	360157	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.899	5.898	0.001	92	99498	2.00	2.05	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.317	6.317	0.000	0	47847	2.00	2.15	
$ 10 Toluene-d8 (Surr)	98	8.878	8.860	0.018	93	190667	2.00	2.02	
$ 11 4-Bromofluorobenzene (Surr	95	12.781	12.763	0.018	83	117311	2.00	2.13	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.216	3.163	0.053	43	2630	120.0	24.4	M
43 Propene oxide	58	3.303	3.285	0.018	94	187410	200.0	188.3	M
49 Isopropyl alcohol	45		3.647				ND	ND	
51 Acetonitrile	41		3.790				ND	ND	
62 Isopropyl ether	87	4.714	4.714	0.000	97	44997	2.00	2.14	
63 2-Chloro-1,3-butadiene	53	4.766	4.766	0.000	90	86252	2.00	2.18	
64 Tert-butyl ethyl ether	59	5.150	5.132	0.018	97	143203	2.00	2.13	
69 Ethyl acetate	43	5.394	5.393	0.001	99	31316	4.00	3.63	
70 Propionitrile	54	5.446	5.428	0.018	41	6695	20.0	17.2	
72 Methacrylonitrile	41	5.603	5.585	0.018	94	96620	20.0	21.1	
83 Tert-amyl methyl ether	73	6.526	6.526	0.000	97	118866	2.00	2.09	
85 n-Butanol	56	7.240	7.153	0.087	28	5203	50.0	51.9	
91 Methyl methacrylate	100	7.676	7.658	0.018	93	16702	4.00	4.19	
95 2-Nitropropane	41	8.199	8.198	0.001	94	9304	4.00	4.21	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.676	12.658	0.018	0	14839	4.00	3.85	
135 1,2,3-Trimethylbenzene	105	14.209	14.209	0.000	97	181359	2.00	2.07	
140 1,3,5-Trichlorobenzene	180	15.551	15.550	0.001	95	94626	2.00	2.08	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.16	Units: uL
MV-Supp A_00028	Amount Added:	1.00	Units: uL

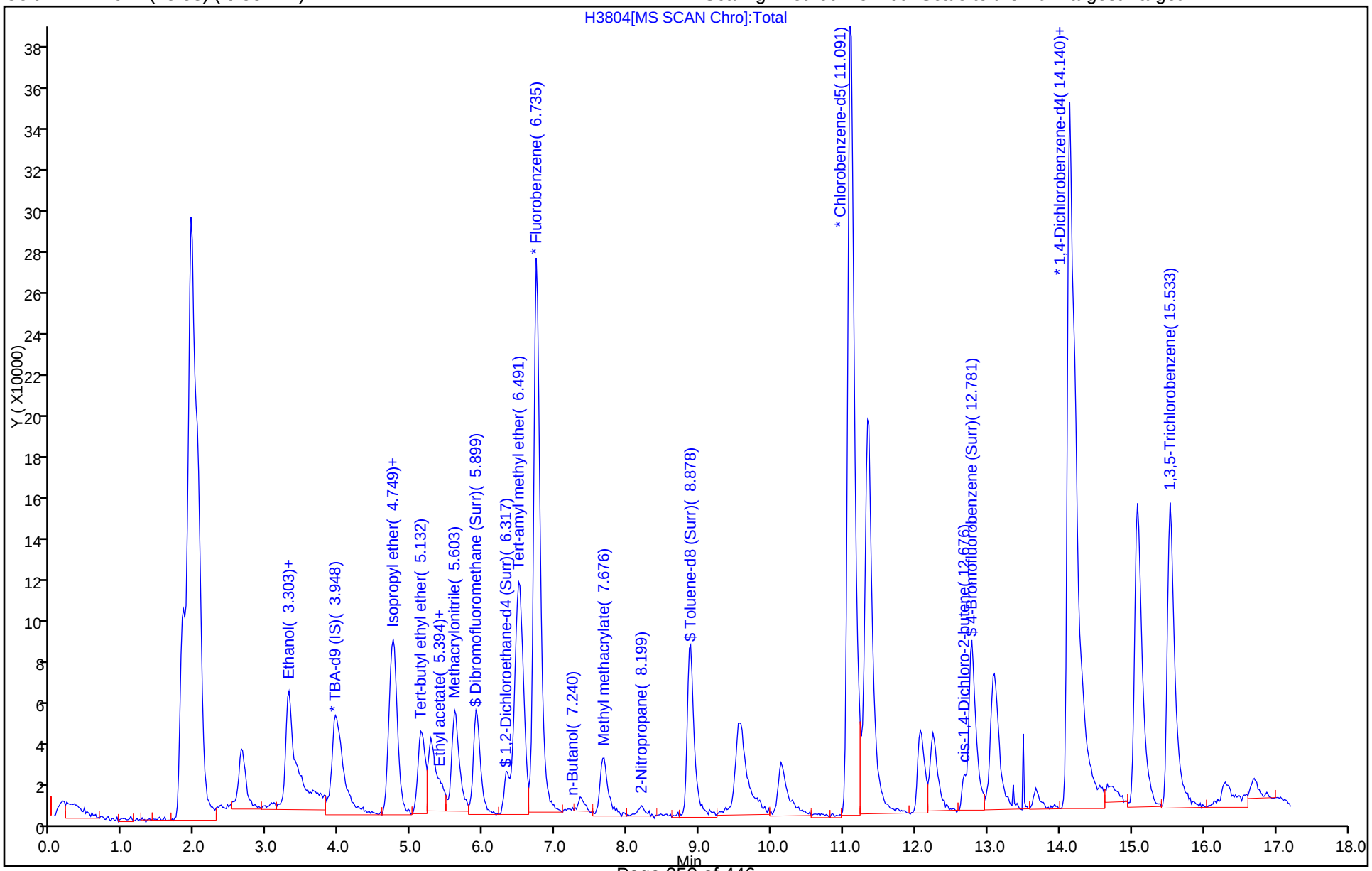
Report Date: 30-Jan-2018 10:58:09 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3804.D

Injection Date:	29-Jan-2018 13:57:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

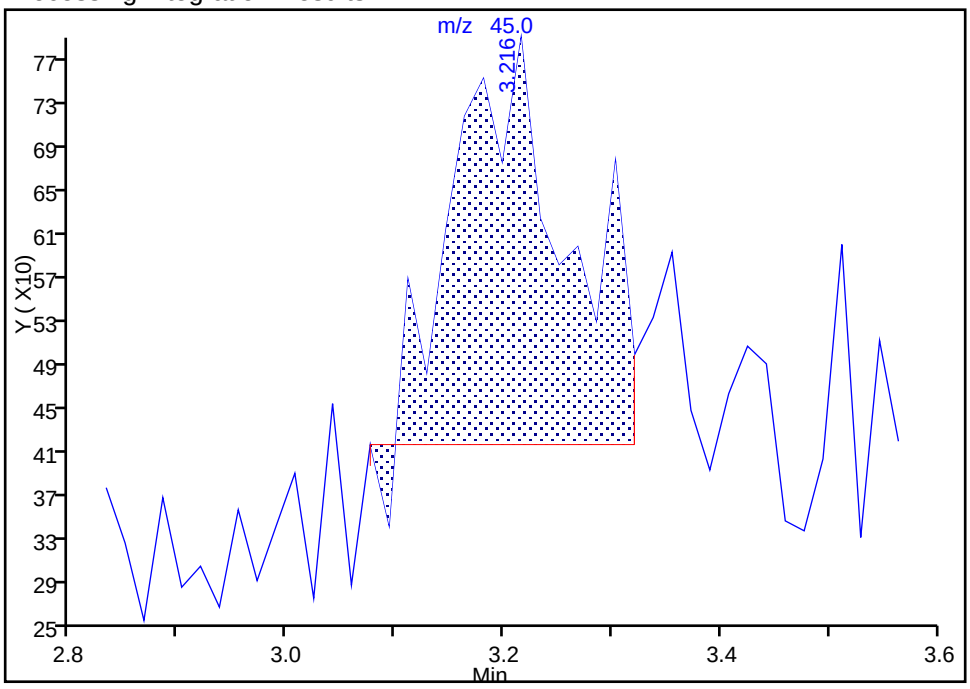
Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3804.D
Injection Date: 29-Jan-2018 13:57:30 Instrument ID: VMS_H
Lims ID: ic
Client ID:
Operator ID: moanm ALS Bottle#: 22 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

39 Ethanol, CAS: 64-17-5

Signal: 1

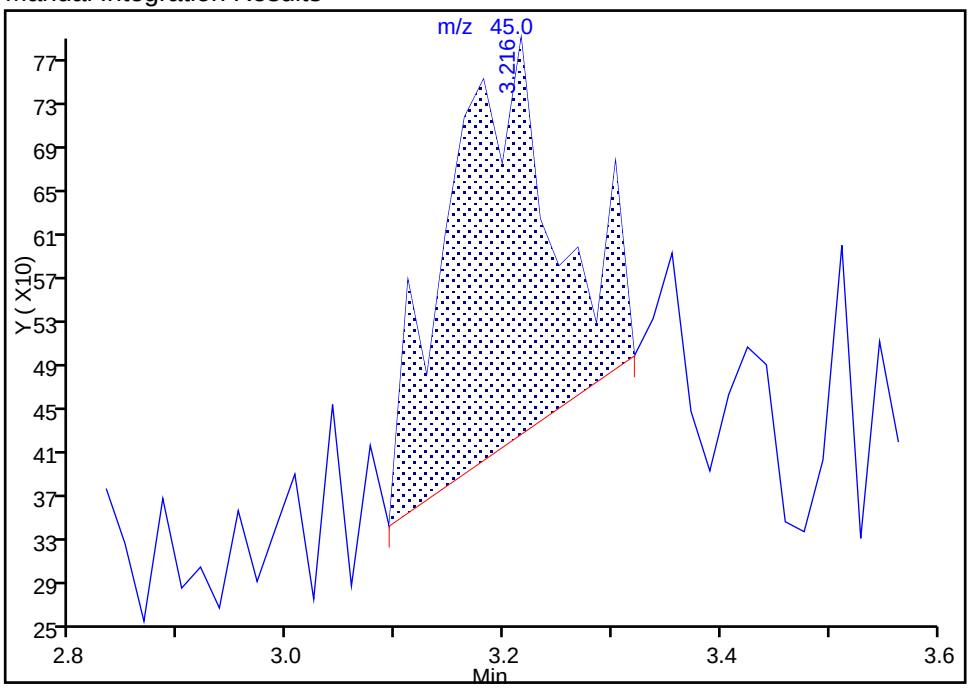
Processing Integration Results

RT: 3.22
Area: 2689
Amount: 25.318565
Amount Units: ug/l



Manual Integration Results

RT: 3.22
Area: 2630
Amount: 24.390124
Amount Units: ug/l



Reviewer: wickhamt, 30-Jan-2018 09:26:15
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3805.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2018 14:19:30 ALS Bottle#: 23 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:10 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:21:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.992	3.977	0.015	0	147301	250.0	250.0	
* 2 Fluorobenzene	96	6.728	6.747	-0.019	98	840667	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.083	11.103	-0.020	91	239358	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.132	14.134	-0.002	97	383320	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.909	5.898	0.011	93	245838	5.00	4.71	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.310	6.317	-0.007	0	111568	5.00	4.65	
$ 10 Toluene-d8 (Surr)	98	8.871	8.860	0.011	93	465506	5.00	4.72	
$ 11 4-Bromofluorobenzene (Surr	95	12.773	12.763	0.010	84	273986	5.00	4.67	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.156	3.163	-0.007	47	12190	300.0	243.0	M
43 Propene oxide	58	3.295	3.285	0.010	95	549342	500.0	513.0	
49 Isopropyl alcohol	45		3.647				ND	ND	
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.724	4.714	0.010	96	108491	5.00	4.79	
63 2-Chloro-1,3-butadiene	53	4.759	4.766	-0.007	91	200631	5.00	4.70	
64 Tert-butyl ethyl ether	59	5.142	5.132	0.010	98	351278	5.00	4.85	
69 Ethyl acetate	43	5.404	5.393	0.011	99	90452	10.0	9.74	
70 Propionitrile	54	5.438	5.428	0.010	90	31009	50.0	54.1	
72 Methacrylonitrile	41	5.595	5.585	0.010	94	245421	50.0	49.7	
83 Tert-amyl methyl ether	73	6.519	6.526	-0.007	98	296746	5.00	4.86	
85 n-Butanol	56	7.215	7.153	0.062	90	15271	125.0	110.6	
91 Methyl methacrylate	100	7.651	7.658	-0.007	94	42335	10.0	9.86	
95 2-Nitropropane	41	8.191	8.198	-0.007	95	22149	10.0	9.31	
107 Tetrahydrothiophene	60		10.097				ND	ND	U
119 cis-1,4-Dichloro-2-butene	53	12.669	12.658	0.011	0	40211	10.0	9.80	
135 1,2,3-Trimethylbenzene	105	14.219	14.209	0.010	98	442607	5.00	4.76	
140 1,3,5-Trichlorobenzene	180	15.543	15.550	-0.007	96	229373	5.00	4.73	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.40	Units: uL
MV-Supp A_00028	Amount Added:	2.50	Units: uL

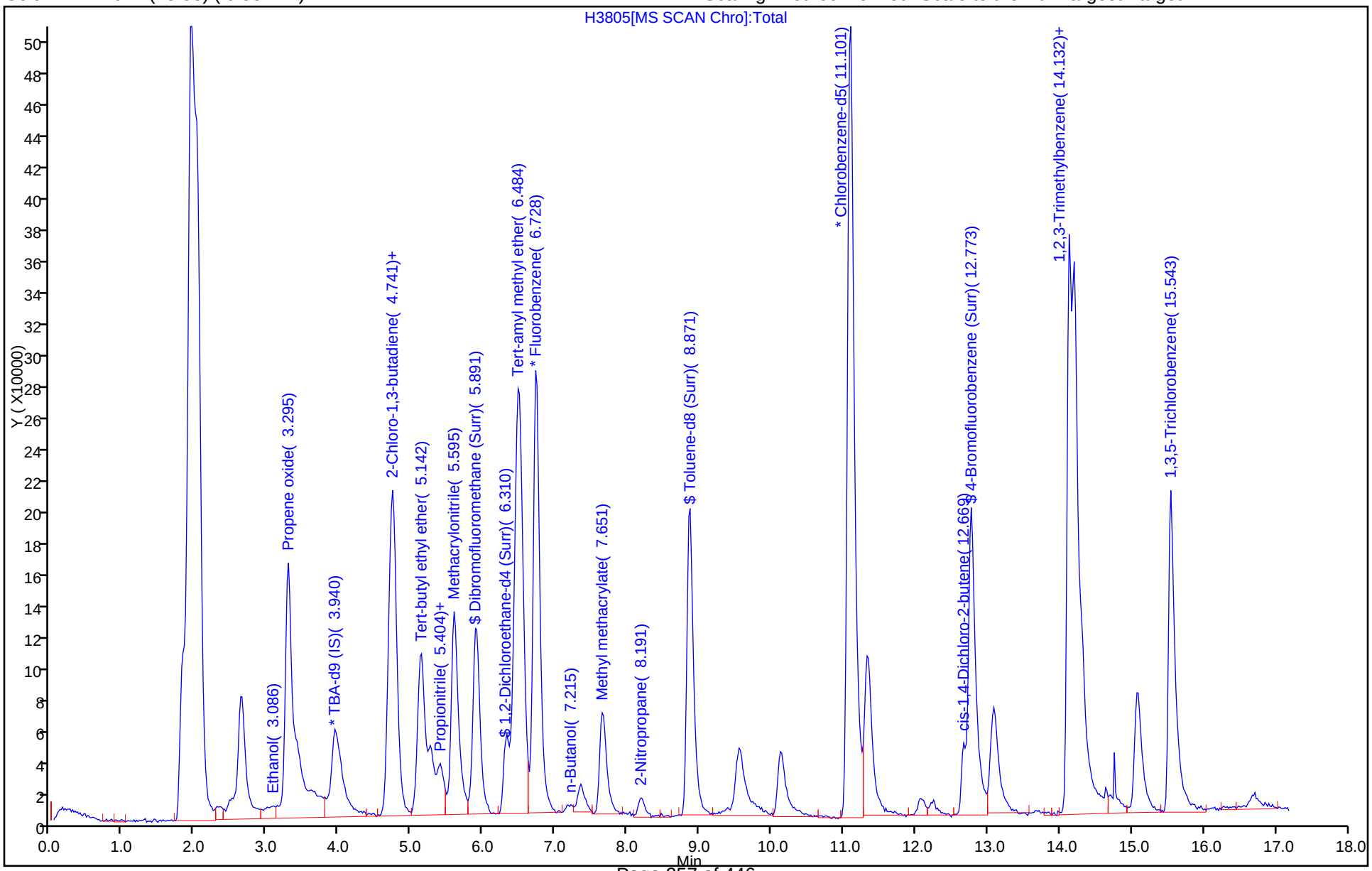
Report Date: 30-Jan-2018 10:58:10 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3805.D

Injection Date:	29-Jan-2018 14:19:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

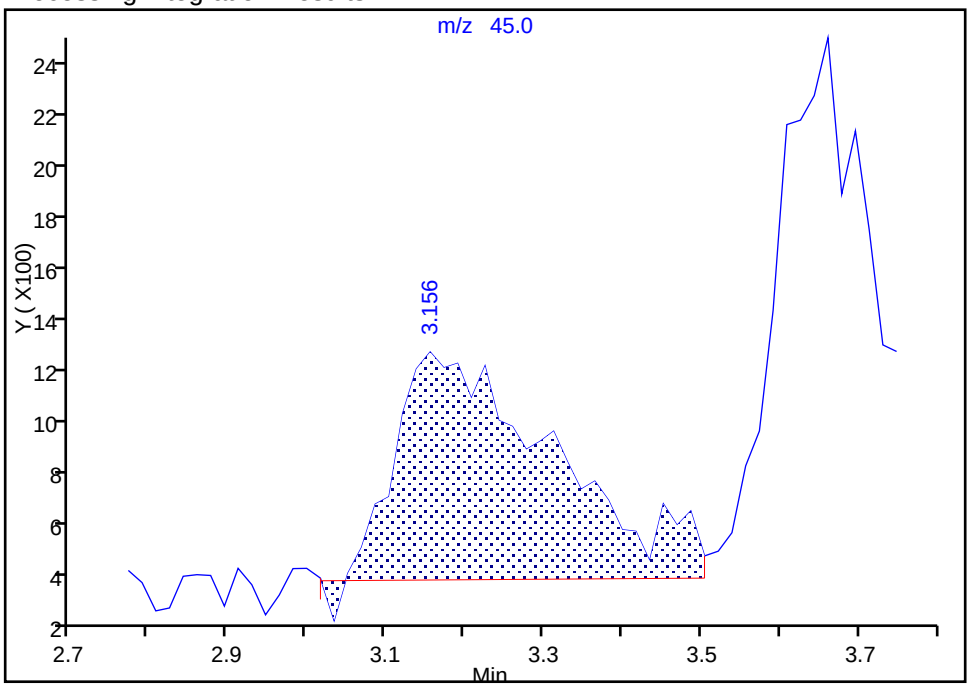
Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3805.D
Injection Date: 29-Jan-2018 14:19:30 Instrument ID: VMS_H
Lims ID: ic
Client ID:
Operator ID: moanm ALS Bottle#: 23 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

39 Ethanol, CAS: 64-17-5

Signal: 1

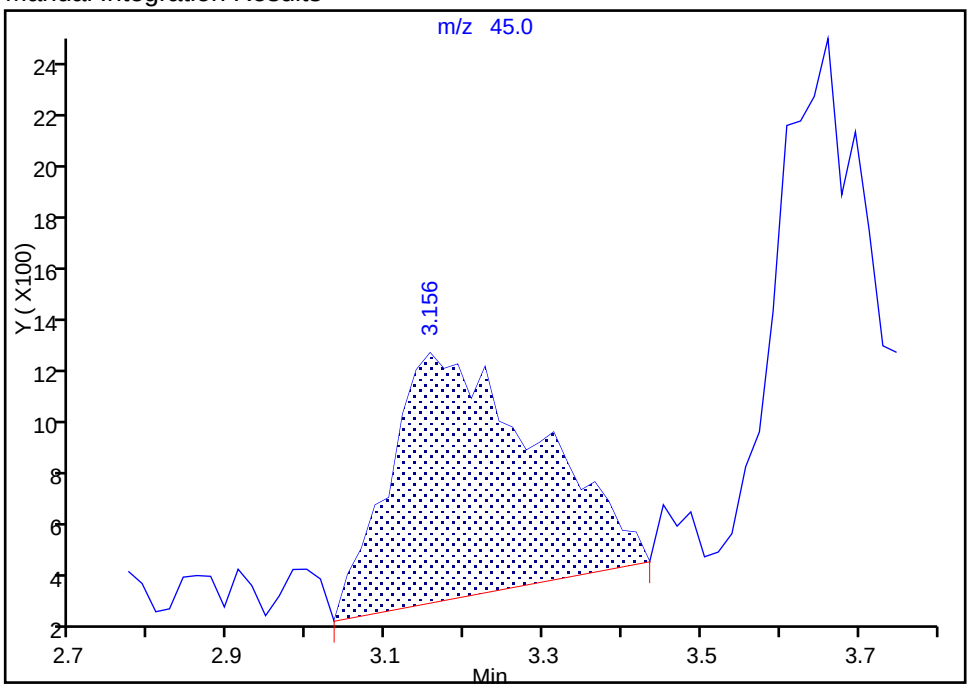
Processing Integration Results

RT: 3.16
Area: 12006
Amount: 239.5787
Amount Units: ug/l



Manual Integration Results

RT: 3.16
Area: 12190
Amount: 243.0031
Amount Units: ug/l



Reviewer: wickhamt, 30-Jan-2018 09:25:45
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3806.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 29-Jan-2018 14:41:30 ALS Bottle#: 24 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:11 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 15:02:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.982	3.982	0.000	0	150005	250.0	250.0	
* 2 Fluorobenzene	96	6.735	6.735	0.000	98	804351	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.090	11.090	0.000	89	236273	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.139	14.139	0.000	97	369391	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.898	5.898	0.000	93	497148	10.0	9.96	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.317	6.317	0.000	0	233935	10.0	10.2	
$ 10 Toluene-d8 (Surr)	98	8.860	8.860	0.000	93	918024	10.0	9.43	
$ 11 4-Bromofluorobenzene (Surr	95	12.763	12.763	0.000	84	540970	10.0	9.56	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.163	3.163	0.000	91	31741	600.0	733.1	
43 Propene oxide	58	3.285	3.285	0.000	95	1139527	1000.0	1112.1	
49 Isopropyl alcohol	45		3.647				ND	ND	U
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.714	4.714	0.000	97	217432	10.0	10.0	
63 2-Chloro-1,3-butadiene	53	4.766	4.766	0.000	91	400207	10.0	9.80	
64 Tert-butyl ethyl ether	59	5.132	5.132	0.000	98	697334	10.0	10.1	
69 Ethyl acetate	43	5.393	5.393	0.000	99	182313	20.0	20.5	
70 Propionitrile	54	5.428	5.428	0.000	94	61715	100.0	105.9	
72 Methacrylonitrile	41	5.585	5.585	0.000	95	492623	100.0	104.3	
83 Tert-amyl methyl ether	73	6.526	6.526	0.000	98	619619	10.0	10.6	
85 n-Butanol	56	7.153	7.153	0.000	87	38045	250.0	259.1	
91 Methyl methacrylate	100	7.658	7.658	0.000	93	86524	20.0	21.1	
95 2-Nitropropane	41	8.198	8.198	0.000	96	45076	20.0	19.8	
107 Tetrahydrothiophene	60		10.097				ND	ND	U
119 cis-1,4-Dichloro-2-butene	53	12.658	12.658	0.000	0	81241	20.0	20.5	
135 1,2,3-Trimethylbenzene	105	14.209	14.209	0.000	99	898034	10.0	10.0	
140 1,3,5-Trichlorobenzene	180	15.550	15.550	0.000	96	474551	10.0	10.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.80	Units: uL
MV-Supp A_00028	Amount Added:	5.00	Units: uL

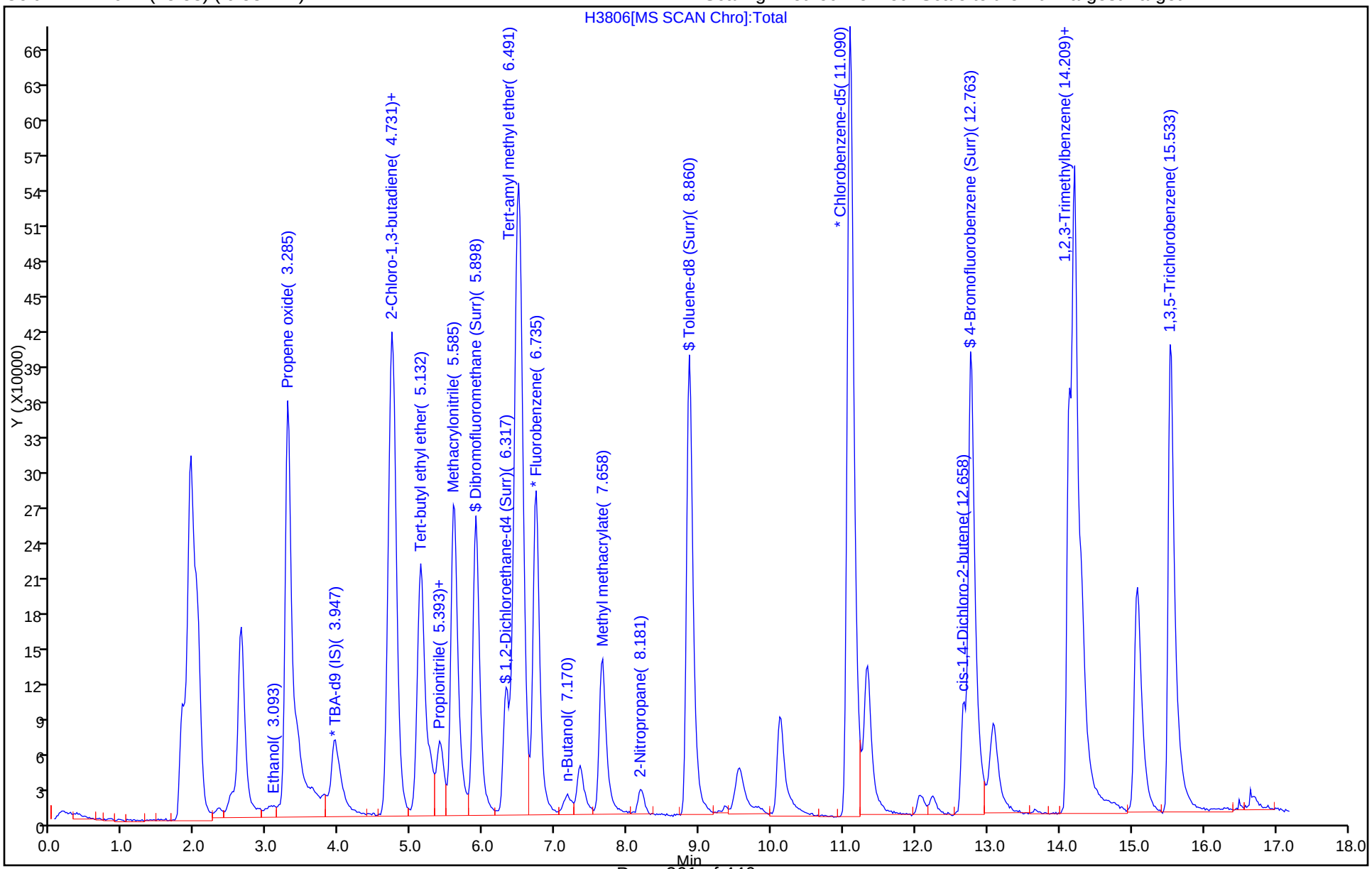
Report Date: 30-Jan-2018 10:58:11 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3806.D

Injection Date:	29-Jan-2018 14:41:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icis			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3807.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2018 15:03:30 ALS Bottle#: 25 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:12 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:22:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.964	3.982	-0.018	0	132914	250.0	250.0	
* 2 Fluorobenzene	96	6.734	6.735	-0.001	98	798515	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.090	11.090	0.000	89	225715	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.139	14.139	0.000	98	367934	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.898	5.898	0.000	93	1436113	30.0	29.0	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.316	6.317	-0.001	0	643835	30.0	28.3	
$ 10 Toluene-d8 (Surr)	98	8.860	8.860	0.000	93	2670736	30.0	28.7	
$ 11 4-Bromofluorobenzene (Surr	95	12.762	12.763	-0.001	84	1529257	30.0	27.1	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.162	3.163	-0.001	93	77640	1800.0	1867.5	
43 Propene oxide	58	3.284	3.285	-0.001	96	3145505	3000.0	3092.2	
49 Isopropyl alcohol	45		3.647				ND	ND	U
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.713	4.714	-0.001	97	619860	30.0	28.8	
63 2-Chloro-1,3-butadiene	53	4.765	4.766	-0.001	91	1182378	30.0	29.2	
64 Tert-butyl ethyl ether	59	5.131	5.132	-0.001	98	1944004	30.0	28.2	
69 Ethyl acetate	43	5.393	5.393	0.000	100	519042	60.0	58.8	
70 Propionitrile	54	5.427	5.428	-0.001	95	174421	300.0	290.3	
72 Methacrylonitrile	41	5.584	5.585	-0.001	95	1381138	300.0	294.7	
83 Tert-amyl methyl ether	73	6.525	6.526	-0.001	98	1713267	30.0	29.5	
85 n-Butanol	56	7.152	7.153	-0.001	88	111208	750.0	727.8	
91 Methyl methacrylate	100	7.657	7.658	-0.001	92	237696	60.0	58.3	
95 2-Nitropropane	41	8.180	8.198	-0.018	98	122949	60.0	54.4	
107 Tetrahydrothiophene	60		10.097				ND	ND	U
119 cis-1,4-Dichloro-2-butene	53	12.658	12.658	0.000	0	224347	60.0	56.9	
135 1,2,3-Trimethylbenzene	105	14.208	14.209	-0.001	99	2659200	30.0	29.8	
140 1,3,5-Trichlorobenzene	180	15.532	15.550	-0.018	96	1412150	30.0	30.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	2.40	Units: uL
MV-Supp A_00028	Amount Added:	15.00	Units: uL

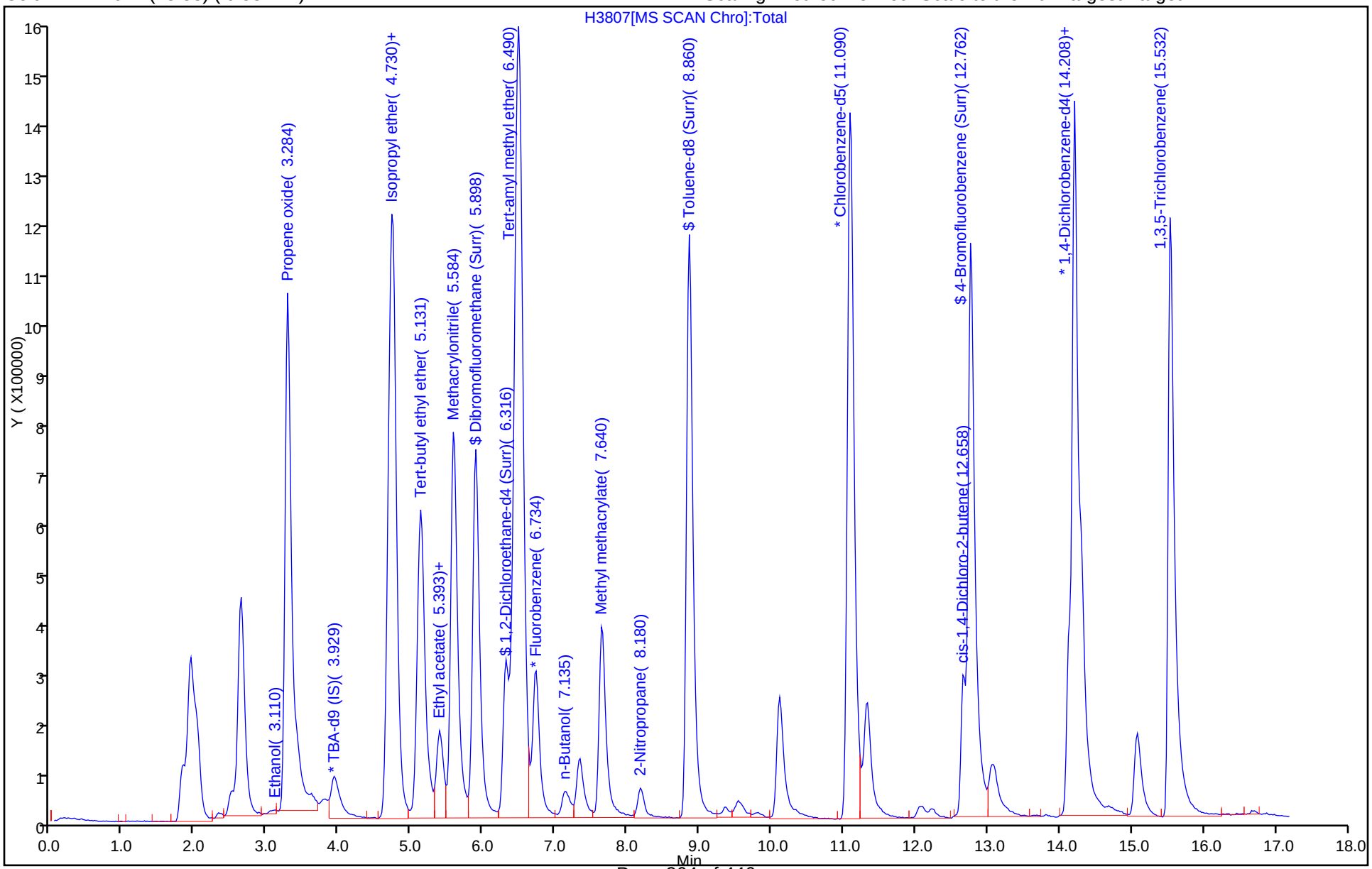
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3807.D

Injection Date:	29-Jan-2018 15:03:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2018 15:25:30 ALS Bottle#: 26 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:13 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:23:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.979	3.982	-0.003	0	147990	250.0	250.0	
* 2 Fluorobenzene	96	6.732	6.735	-0.003	98	835189	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.088	11.090	-0.002	90	232983	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.137	14.139	-0.002	96	371611	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.896	5.898	-0.002	93	2897331	60.0	55.9	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.314	6.317	-0.003	0	1302609	60.0	54.7	
$ 10 Toluene-d8 (Surr)	98	8.858	8.860	-0.002	93	5291999	60.0	55.2	
$ 11 4-Bromofluorobenzene (Surr	95	12.760	12.763	-0.003	84	3071008	60.0	53.9	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.195	3.163	0.032	93	152858	3600.0	3552.0	
43 Propene oxide	58	3.282	3.285	-0.003	96	6399626	6000.0	6014.9	
49 Isopropyl alcohol	45		3.647				ND	ND	U
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.711	4.714	-0.003	97	1242012	60.0	55.2	
63 2-Chloro-1,3-butadiene	53	4.763	4.766	-0.003	91	2323835	60.0	54.8	
64 Tert-butyl ethyl ether	59	5.129	5.132	-0.003	98	3941828	60.0	54.8	
69 Ethyl acetate	43	5.391	5.393	-0.002	99	1109324	120.0	120.2	
70 Propionitrile	54	5.425	5.428	-0.003	96	374061	600.0	588.9	
72 Methacrylonitrile	41	5.582	5.585	-0.003	95	2918117	600.0	595.2	
83 Tert-amyl methyl ether	73	6.523	6.526	-0.003	98	3530965	60.0	58.2	
85 n-Butanol	56	7.133	7.153	-0.020	88	260098	1500.0	1605.3	
91 Methyl methacrylate	100	7.655	7.658	-0.003	93	477346	120.0	112.0	
95 2-Nitropropane	41	8.178	8.198	-0.020	96	255592	120.0	108.1	
107 Tetrahydrothiophene	60	10.095	10.097	-0.002	45	61721	120.0	0	
119 cis-1,4-Dichloro-2-butene	53	12.656	12.658	-0.002	0	453769	120.0	114.0	
135 1,2,3-Trimethylbenzene	105	14.206	14.209	-0.003	99	5218149	60.0	57.8	
140 1,3,5-Trichlorobenzene	180	15.548	15.550	-0.002	96	2695507	60.0	57.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	4.80	Units: uL
MV-Supp A_00028	Amount Added:	30.00	Units: uL

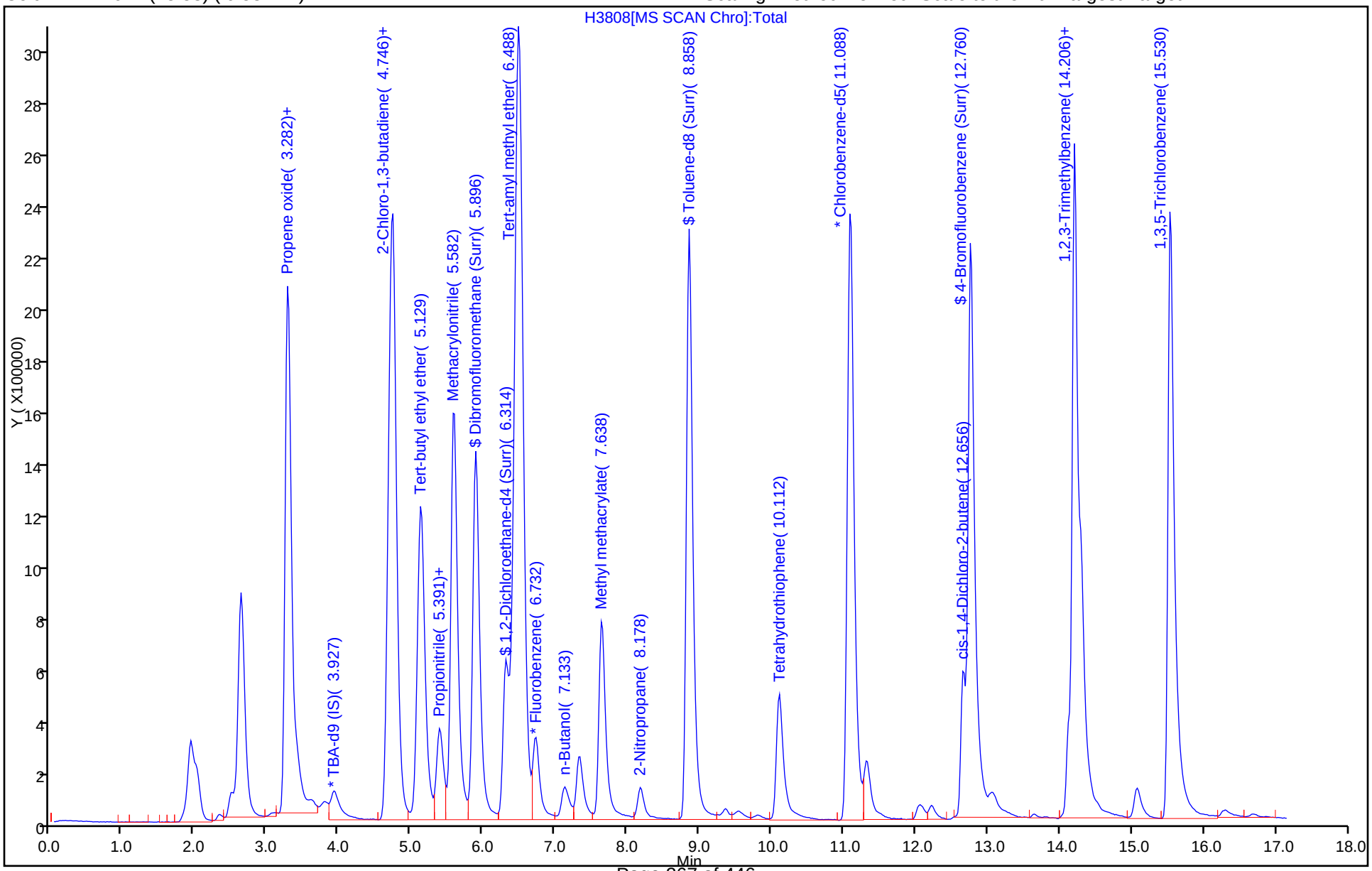
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Injection Date:	29-Jan-2018 15:25:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403825

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/05/2018 08:05 Calibration End Date: 02/05/2018 09:34 Calibration ID: 31567

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403825/10	H4016.D
Level 2	IC 280-403825/11	H4017.D
Level 3	IC 280-403825/12	H4018.D
Level 4	IC 280-403825/13	H4019.D
Level 5	IC 280-403825/14	H4020.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.6700	0.6467	0.6437	0.5939	0.6170	Ave		0.6343				4.6		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2833	0.2822	0.2759	0.2501	0.2595	Ave		0.2702				5.4		15.0			
Toluene-d8 (Surr)	5.1482	4.9856	4.8711	4.5534	4.6877	Ave		4.8492				4.9		15.0			
4-Bromofluorobenzene (Surr)	1.9321	1.8045	1.7627	1.5653	1.6298	Ave		1.7389				8.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-105986-1 Analy Batch No.: 403825

SDG No.:

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/05/2018 08:05 Calibration End Date: 02/05/2018 09:34 Calibration ID: 31567

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-403825/10	H4016.D
Level 2	IC 280-403825/11	H4017.D
Level 3	IC 280-403825/12	H4018.D
Level 4	IC 280-403825/13	H4019.D
Level 5	IC 280-403825/14	H4020.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Dibromofluoromethane (Surr)	FB	Ave	97021	230286	461946	1336170	2662606	2.00	5.00	10.0	30.0	60.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	41021	100497	198006	562739	1119699	2.00	5.00	10.0	30.0	60.0
Toluene-d8 (Surr)	CBNZd	Ave	188974	447274	896395	2592884	5148646	2.00	5.00	10.0	30.0	60.0
4-Bromofluorobenzene (Surr)	DCBd4	Ave	113858	256637	495936	1430248	2890683	2.00	5.00	10.0	30.0	60.0

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4016.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 05-Feb-2018 08:05:30 ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub64

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:42 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 09:43:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.032	4.028	0.004	0	162613	250.0	250.0	
* 2 Fluorobenzene	96	6.767	6.763	0.004	98	905031	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.123	11.119	0.004	87	229417	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.154	14.150	0.004	97	368316	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.931	5.927	0.004	93	97021	2.00	2.11	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.349	6.345	0.004	0	41021	2.00	2.10	
$ 10 Toluene-d8 (Surr)	98	8.893	8.889	0.004	92	188974	2.00	2.12	
$ 11 4-Bromofluorobenzene (Surr	95	12.795	12.791	0.004	85	113858	2.00	2.22	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 0.16 Units: uL

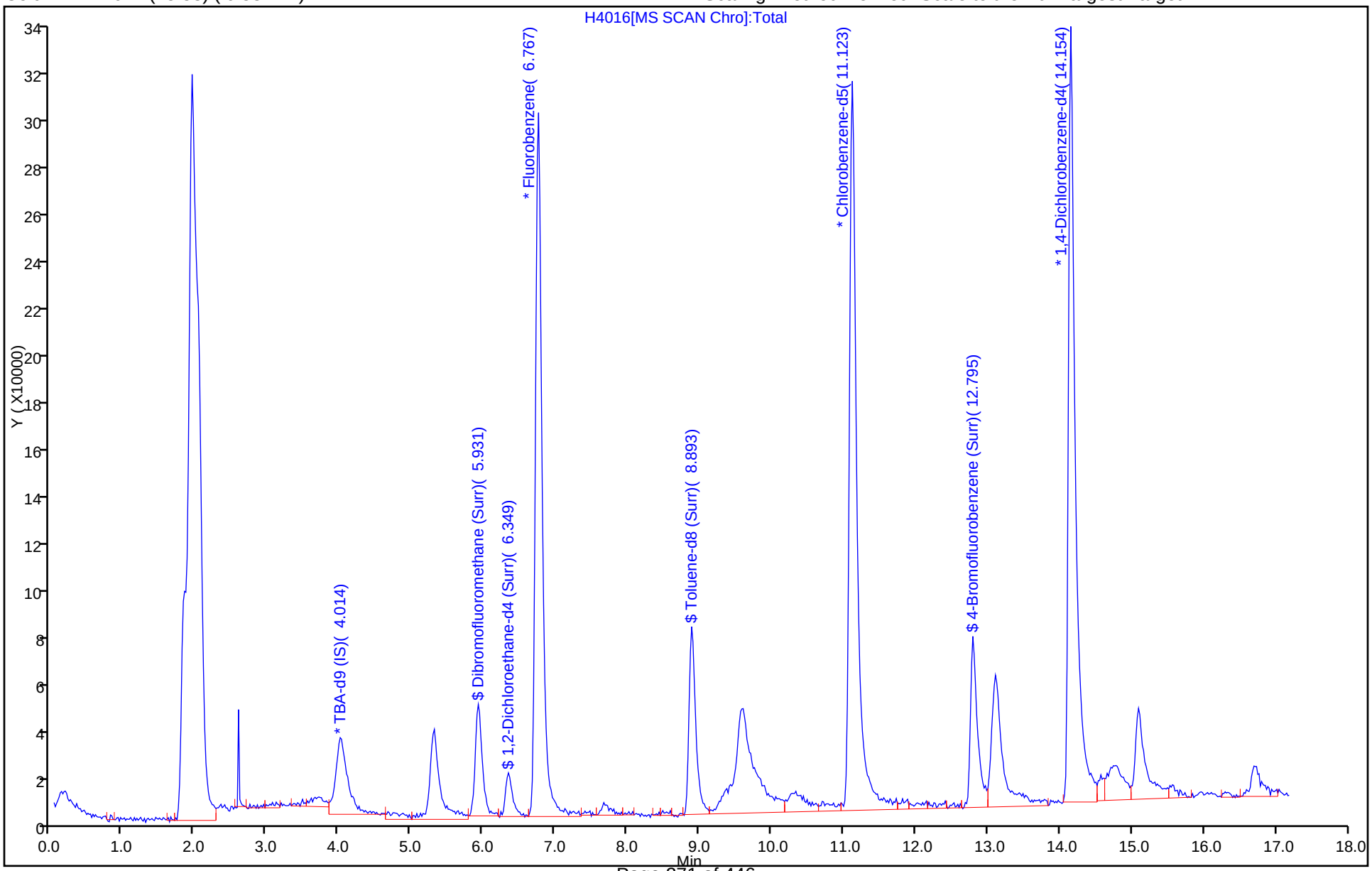
Report Date: 05-Feb-2018 10:18:42 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4016.D

Injection Date:	05-Feb-2018 08:05:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4017.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 05-Feb-2018 08:28:30 ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub64

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:43 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 08:58:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.014	4.028	-0.014	0	151884	250.0	250.0	
* 2 Fluorobenzene	96	6.767	6.763	0.004	98	890277	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.123	11.119	0.004	88	224285	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.154	14.150	0.004	96	355557	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.931	5.927	0.004	92	230286	5.00	5.10	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.349	6.345	0.004	0	100497	5.00	5.22	
$ 10 Toluene-d8 (Surr)	98	8.893	8.889	0.003	93	447274	5.00	5.14	
$ 11 4-Bromofluorobenzene (Surr	95	12.795	12.791	0.004	85	256637	5.00	5.19	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 0.40 Units: uL

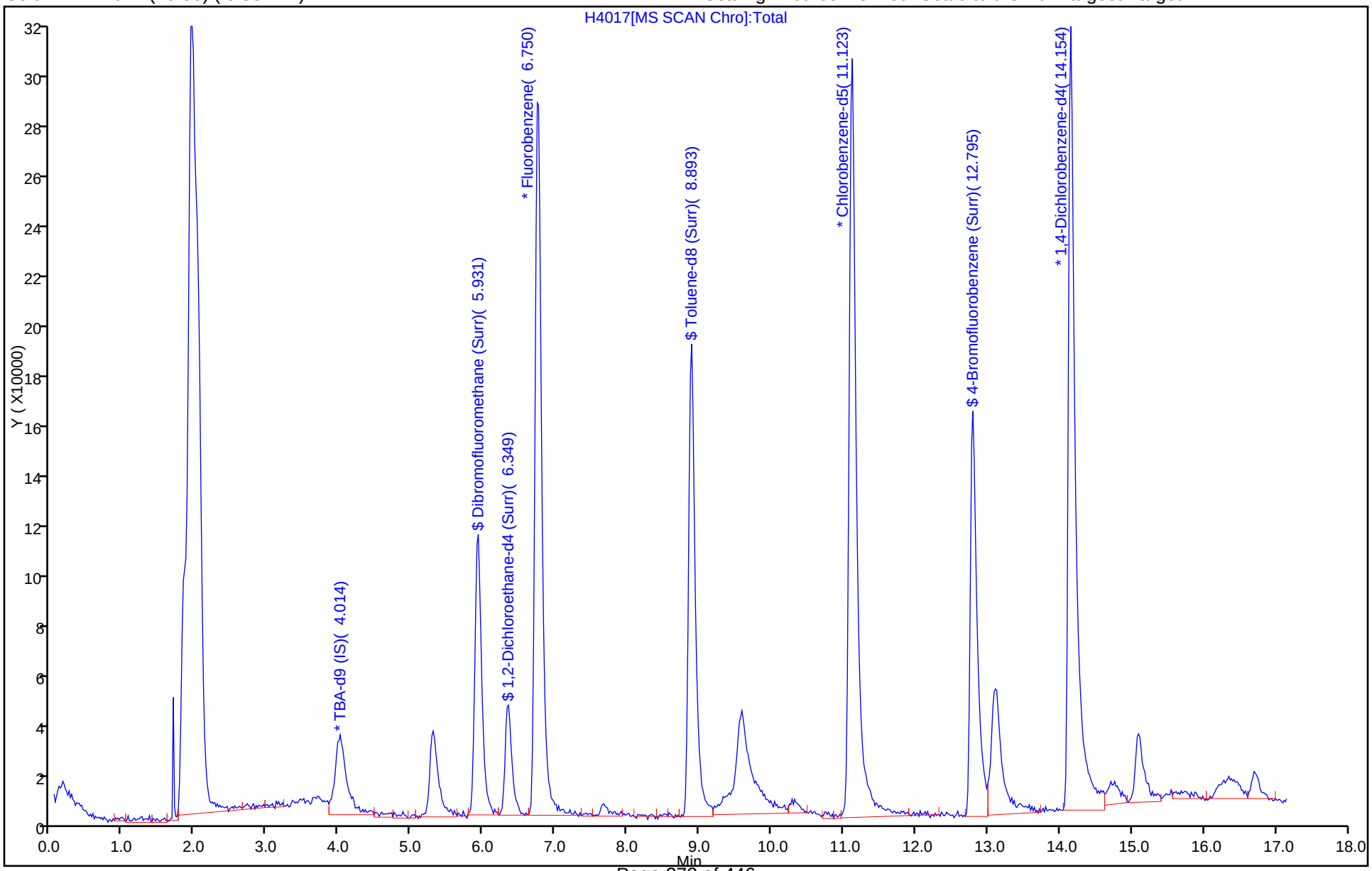
Report Date: 05-Feb-2018 10:18:45 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4017.D

Injection Date:	05-Feb-2018 08:28:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4018.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 05-Feb-2018 08:49:30 ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub64

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:46 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 09:44:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.028	4.028	0.000	0	141131	250.0	250.0	
* 2 Fluorobenzene	96	6.763	6.763	0.000	98	897058	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.119	11.119	0.000	87	230029	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.150	14.150	0.000	96	351694	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.927	5.927	0.000	93	461946	10.0	10.1	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.345	6.345	0.000	0	198006	10.0	10.2	
$ 10 Toluene-d8 (Surr)	98	8.889	8.889	0.000	93	896395	10.0	10.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.791	12.791	0.000	86	495936	10.0	10.1	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 0.80 Units: uL

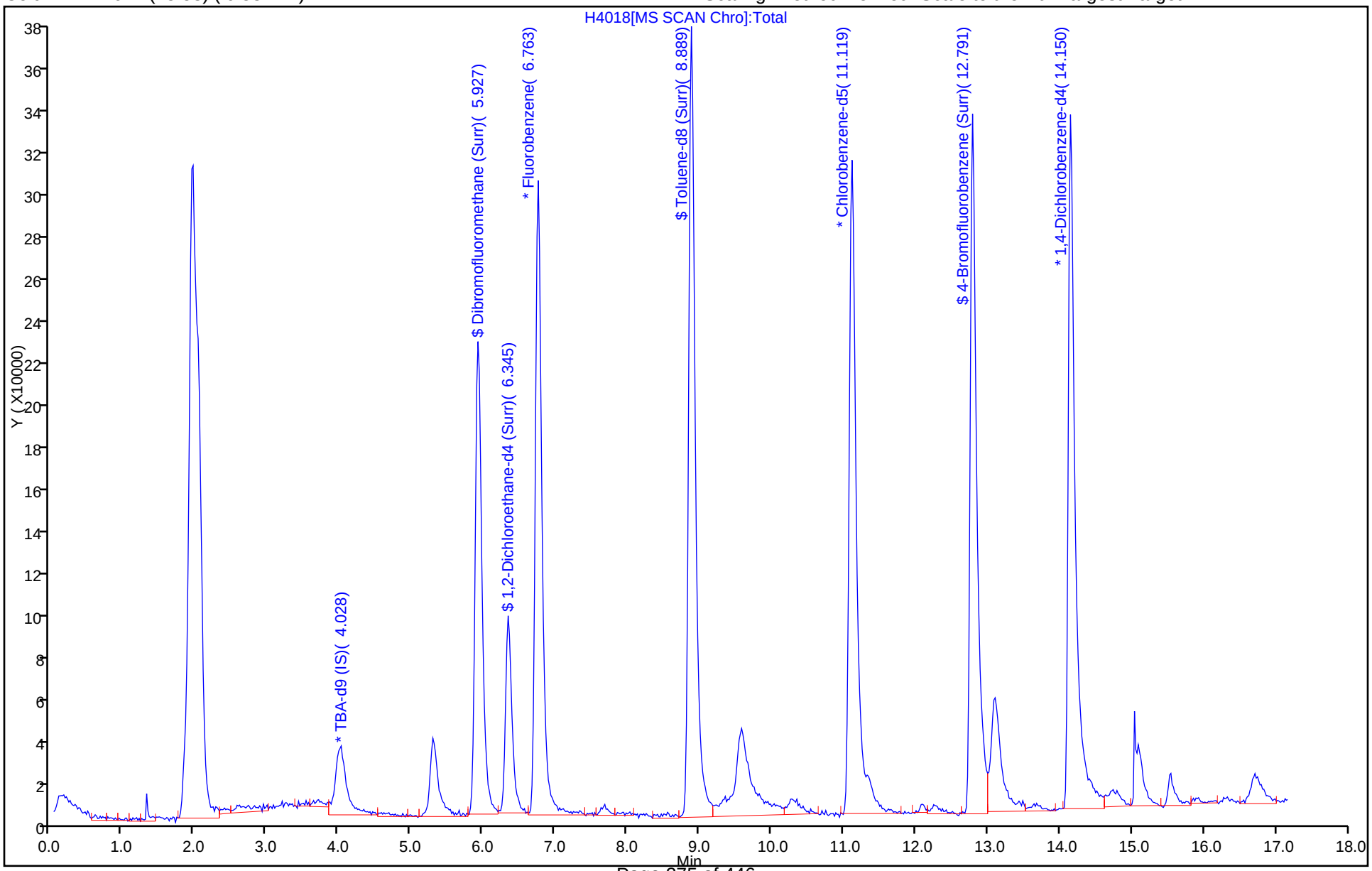
Report Date: 05-Feb-2018 10:18:47 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4018.D

Injection Date:	05-Feb-2018 08:49:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4019.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Feb-2018 09:11:30 ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub64

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:48 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 10:00:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.995	4.028	-0.033	0	161647	250.0	250.0	
* 2 Fluorobenzene	96	6.765	6.763	0.002	98	937395	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.120	11.119	0.001	87	237267	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.152	14.150	0.002	96	380712	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.928	5.927	0.001	93	1336170	30.0	28.1	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.345	0.002	0	562739	30.0	27.8	
$ 10 Toluene-d8 (Surr)	98	8.890	8.889	0.001	93	2592884	30.0	28.2	
$ 11 4-Bromofluorobenzene (Surr	95	12.793	12.791	0.002	86	1430248	30.0	27.0	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 2.40 Units: uL

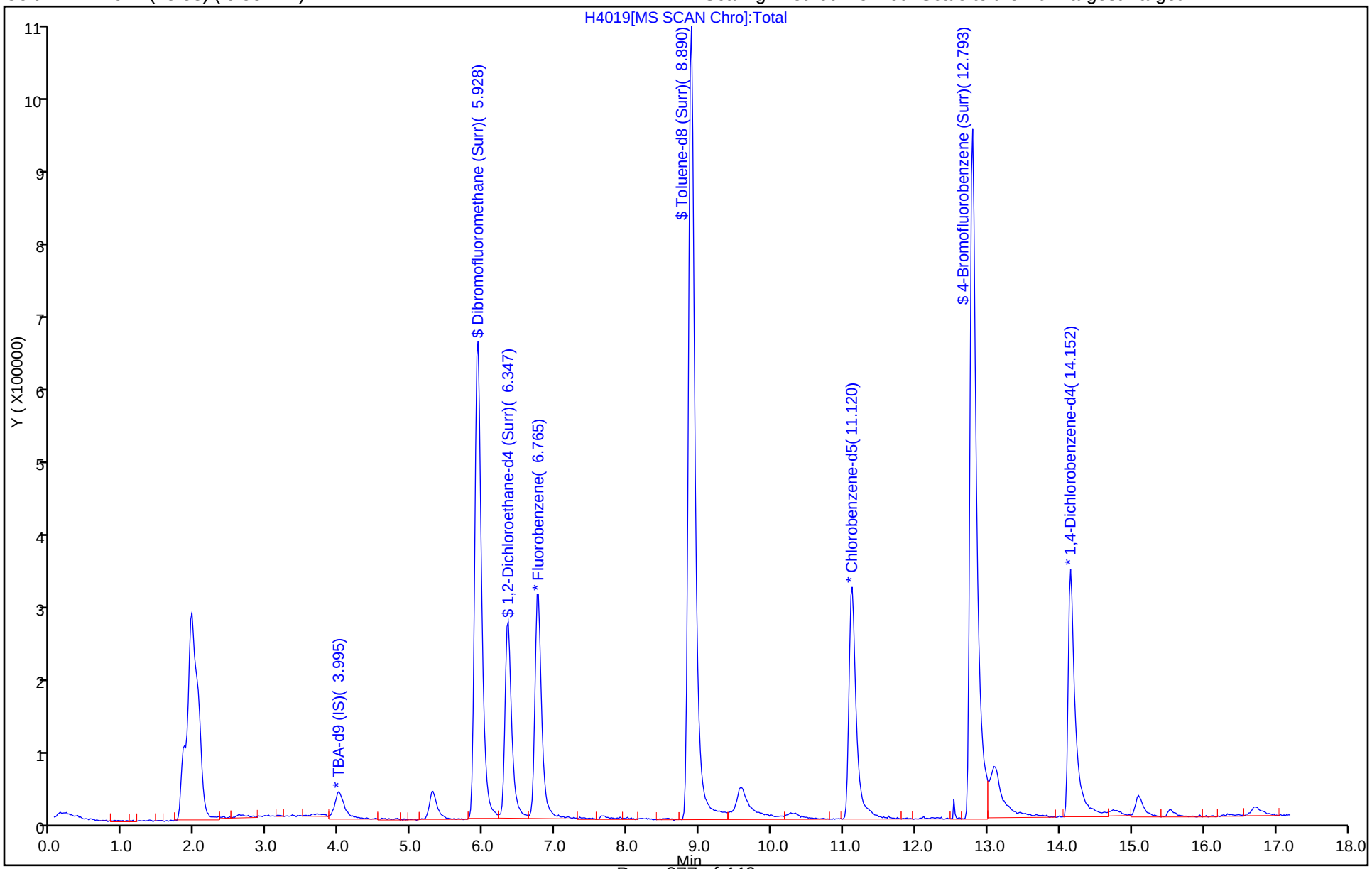
Report Date: 05-Feb-2018 10:18:48 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4019.D

Injection Date:	05-Feb-2018 09:11:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 05-Feb-2018 09:34:30 ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub64

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:50 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 10:01:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.998	4.028	-0.030	0	156859	250.0	250.0	
* 2 Fluorobenzene	96	6.750	6.763	-0.013	98	899034	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.123	11.119	0.004	87	228821	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.155	14.150	0.005	96	369517	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.927	-0.013	93	2662606	60.0	58.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.345	-0.013	0	1119699	60.0	57.6	
$ 10 Toluene-d8 (Surr)	98	8.893	8.889	0.004	93	5148646	60.0	58.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.796	12.791	0.005	86	2890683	60.0	56.2	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 4.80 Units: uL

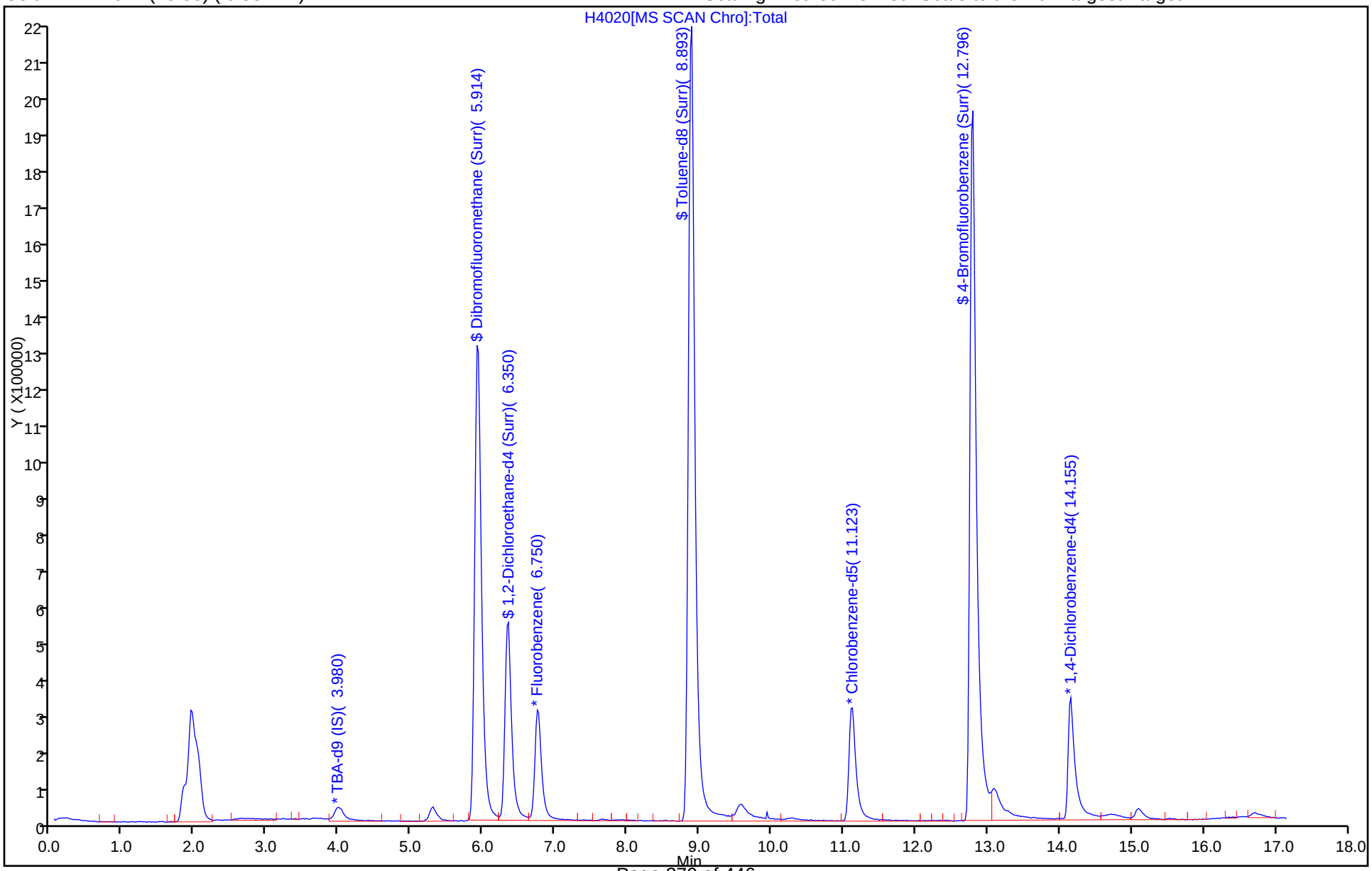
Report Date: 05-Feb-2018 10:18:50 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Injection Date:	05-Feb-2018 09:34:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/9 Calibration Date: 01/29/2018 13:14

Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 04/04/2017 12:48

Lab File ID: H3802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2				1.60	10.0	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2018 13:14:30 ALS Bottle#: 20 Worklist Smp#: 9
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 11:05:58 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:14:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.994	3.982	0.012	0	126244	250.0	250.0	
* 2 Fluorobenzene	96	6.747	6.735	0.012	98	692744	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.102	11.090	0.012	90	190137	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.139	-0.005	97	341465	12.5	12.5	
28 Dichlorodifluoromethane	85	2.182	2.165	0.017	98	355953	10.0	8.75	
30 Chloromethane	50	2.286	2.287	-0.001	99	160271	10.0	8.79	
32 Vinyl chloride	62	2.426	2.409	0.017	99	183999	10.0	9.07	
35 Bromomethane	94	2.705	2.688	0.017	91	215599	10.0	10.1	
36 Chloroethane	64	2.774	2.757	0.017	99	125060	10.0	10.4	
37 Dichlorofluoromethane	67	2.949	2.949	0.000	98	529068	10.0	10.6	
38 Trichlorofluoromethane	101	3.001	3.001	0.000	100	548009	10.0	10.0	
40 Ethyl ether	59	3.227	3.210	0.017	92	105149	10.0	11.2	
44 Acrolein	56	3.384	3.367	0.017	99	69715	100.0	119.8	
45 1,1-Dichloroethene	96	3.471	3.472	-0.001	98	255535	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.506	3.489	0.017	97	386672	10.0	11.2	
47 Acetone	43	3.506	3.524	-0.018	30	55753	40.0	40.0	
48 Iodomethane	142	3.645	3.646	-0.001	98	662285	10.0	11.0	
50 Carbon disulfide	76	3.715	3.716	-0.001	99	889544	10.0	11.0	
52 3-Chloro-1-propene	41	3.820	3.803	0.017	82	336400	10.0	11.0	
53 Methyl acetate	43	3.820	3.820	0.000	71	249699	50.0	55.5	
54 Methylene Chloride	84	3.942	3.942	0.000	93	203981	10.0	10.9	
55 2-Methyl-2-propanol	59	4.081	4.082	-0.001	91	55245	100.0	102.6	
57 Acrylonitrile	53	4.203	4.204	-0.001	98	144791	100.0	114.0	
56 Methyl tert-butyl ether	73	4.220	4.221	-0.001	96	377226	10.0	10.6	
58 trans-1,2-Dichloroethene	96	4.220	4.221	-0.001	99	289713	10.0	11.2	
59 Hexane	57	4.482	4.482	0.000	94	388247	10.0	11.2	
60 1,1-Dichloroethane	63	4.673	4.674	-0.001	96	462627	10.0	10.7	
61 Vinyl acetate	43	4.708	4.709	-0.001	97	437895	20.0	22.4	
65 cis-1,2-Dichloroethene	96	5.335	5.336	-0.001	84	289495	10.0	10.9	
67 2-Butanone (MEK)	43	5.353	5.353	0.000	45	124867	40.0	45.7	
66 2,2-Dichloropropane	77	5.353	5.353	0.000	90	499976	10.0	11.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.597	5.580	0.017	97	180268	300.0	326.9	
73 Chlorobromomethane	128	5.632	5.632	0.000	95	141693	10.0	11.0	
74 Tetrahydrofuran	42	5.701	5.684	0.017	39	43543	20.0	22.2	
75 Chloroform	83	5.701	5.702	-0.001	94	549352	10.0	10.7	
76 1,1,1-Trichloroethane	97	5.963	5.946	0.017	98	561508	10.0	10.7	
77 Cyclohexane	56	6.015	6.015	0.000	91	428857	10.0	11.6	
78 1,1-Dichloropropene	75	6.137	6.137	0.000	96	460683	10.0	11.2	
79 Carbon tetrachloride	117	6.154	6.155	-0.001	96	549474	10.0	10.7	
80 Isobutyl alcohol	41	6.294	6.294	0.000	95	59518	250.0	276.1	
81 Benzene	78	6.398	6.399	-0.001	96	767844	10.0	11.0	
82 1,2-Dichloroethane	62	6.416	6.434	-0.018	97	218979	10.0	10.8	
84 n-Heptane	43	6.712	6.695	0.017	96	513316	10.0	11.3	
86 Trichloroethene	95	7.217	7.218	-0.001	98	368938	10.0	11.0	
89 Methylcyclohexane	55	7.478	7.461	0.017	91	409553	10.0	11.1	
88 2-Pentanone	43	7.461	7.461	0.000	97	300100	40.0	24.2	
90 1,2-Dichloropropane	63	7.513	7.514	-0.001	96	262576	10.0	10.8	
92 Dibromomethane	93	7.687	7.688	-0.001	95	171168	10.0	10.3	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.896	7.897	-0.001	98	481024	10.0	10.8	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.506	8.507	-0.001	95	394219	10.0	11.1	
98 4-Methyl-2-pentanone (MIBK	43	8.733	8.716	0.017	97	433651	40.0	42.6	
99 Toluene	91	8.959	8.960	-0.001	99	904565	10.0	10.8	
100 trans-1,3-Dichloropropene	75	9.290	9.291	-0.001	91	286442	10.0	11.2	
101 Ethyl methacrylate	69	9.412	9.413	-0.001	90	200296	10.0	10.5	
102 1,1,2-Trichloroethane	97	9.552	9.552	0.000	93	184279	10.0	11.0	
103 Tetrachloroethene	164	9.761	9.761	0.000	95	340618	10.0	10.9	
104 1,3-Dichloropropane	76	9.796	9.796	0.000	88	286009	10.0	10.6	
105 2-Hexanone	43	9.935	9.935	0.000	99	268838	40.0	36.1	
108 Chlorodibromomethane	129	10.144	10.145	0.000	90	359668	10.0	10.3	
109 Ethylene Dibromide	107	10.336	10.336	0.000	99	231993	10.0	11.0	
110 1-Chlorohexane	91	11.120	11.103	0.017	92	458676	10.0	10.2	
111 Chlorobenzene	112	11.154	11.155	-0.001	94	617618	10.0	10.4	
112 1,1,1,2-Tetrachloroethane	131	11.276	11.277	-0.001	93	341316	10.0	10.5	
113 Ethylbenzene	106	11.311	11.329	-0.018	99	299264	10.0	10.7	
114 m-Xylene & p-Xylene	106	11.503	11.503	0.000	0	437711	10.0	10.5	
115 o-Xylene	106	12.078	12.078	0.000	97	372841	10.0	10.7	
116 Styrene	104	12.095	12.113	-0.018	95	574818	10.0	11.1	
117 Bromoform	173	12.357	12.357	0.000	94	201570	10.0	11.2	
118 Isopropylbenzene	105	12.583	12.584	-0.001	96	1217337	10.0	9.98	
120 Cyclohexanone	55	12.722	12.706	0.016	90	109722	400.0	425.5	
121 1,1,2,2-Tetrachloroethane	83	12.966	12.967	-0.001	93	229720	10.0	10.4	
122 Bromobenzene	156	12.966	12.967	-0.001	96	303953	10.0	10.3	
123 1,2,3-Trichloropropane	110	13.019	13.019	0.000	80	58582	10.0	9.90	
124 trans-1,4-Dichloro-2-buten	53	13.053	13.054	-0.001	70	41991	10.0	9.96	
125 N-Propylbenzene	120	13.106	13.106	0.000	99	283667	10.0	9.65	
126 2-Chlorotoluene	126	13.193	13.193	0.000	97	232591	10.0	9.71	
127 1,3,5-Trimethylbenzene	105	13.315	13.315	0.000	94	925433	10.0	9.89	
128 4-Chlorotoluene	126	13.332	13.333	-0.001	98	294273	10.0	10.3	
129 tert-Butylbenzene	119	13.698	13.699	-0.001	93	1004790	10.0	9.78	
130 1,2,4-Trimethylbenzene	105	13.750	13.751	-0.001	96	822387	10.0	9.72	
131 sec-Butylbenzene	134	13.942	13.943	-0.001	94	254417	10.0	9.52	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.064	14.065	-0.001	96	413588	10.0	10.4	
133 4-Isopropyltoluene	119	14.099	14.099	0.000	98	1137690	10.0	10.1	
134 1,4-Dichlorobenzene	146	14.168	14.169	-0.001	94	689368	10.0	10.3	
137 n-Butylbenzene	91	14.552	14.552	0.000	98	1113392	10.0	9.97	
138 1,2-Dichlorobenzene	146	14.569	14.570	-0.001	98	470166	10.0	10.5	
139 1,2-Dibromo-3-Chloropropan	157	15.353	15.354	-0.001	87	45202	10.0	11.0	
141 1,2,4-Trichlorobenzene	180	16.120	16.120	0.000	94	314073	10.0	11.2	
142 Hexachlorobutadiene	225	16.277	16.277	0.000	98	335617	10.0	10.6	
143 Naphthalene	128	16.346	16.347	-0.001	97	306290	10.0	11.0	
144 1,2,3-Trichlorobenzene	180	16.573	16.573	0.000	95	240814	10.0	11.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	22.1	
S 149 1,2-Dichloroethene, Total	1				0		10.0	22.1	
S 150 Xylenes, Total	106				0		20.0	21.2	
S 146 Xylenes, Total (URS)	1				0		20.0	21.2	
S 148 1,3-Dichloropropene, Total	1				0		20.0	22.3	
S 145 Trihalomethanes, Total	1				0		40.0	42.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main B_00020	Amount Added:	5.00	Units: uL
MV-Gas/Ket B_00040	Amount Added:	5.00	Units: uL
MV-SS 2-Cleve_00042	Amount Added:	5.00	Units: uL

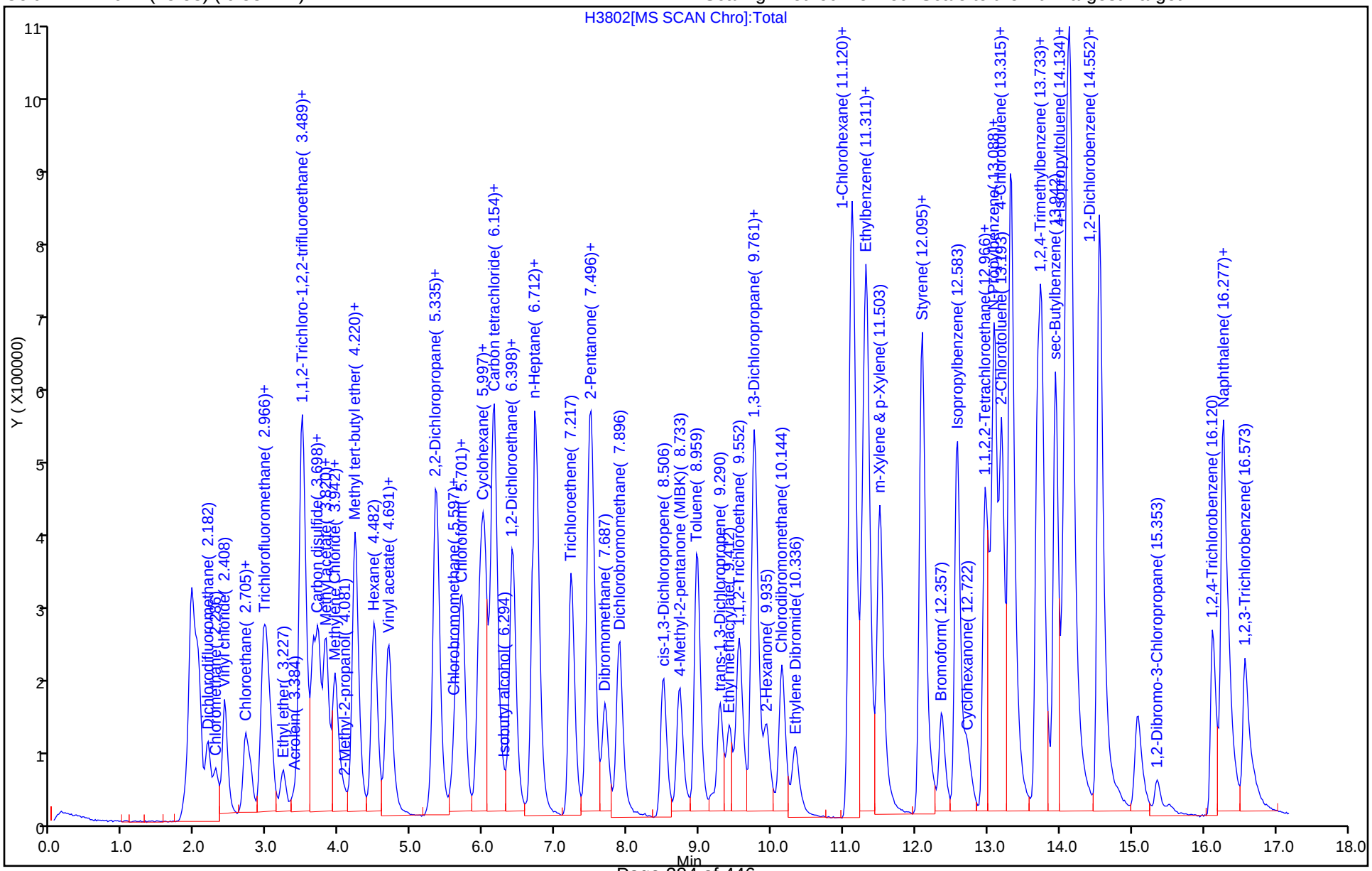
Report Date: 30-Jan-2018 11:06:02 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D

Injection Date:	29-Jan-2018 13:14:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	9
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



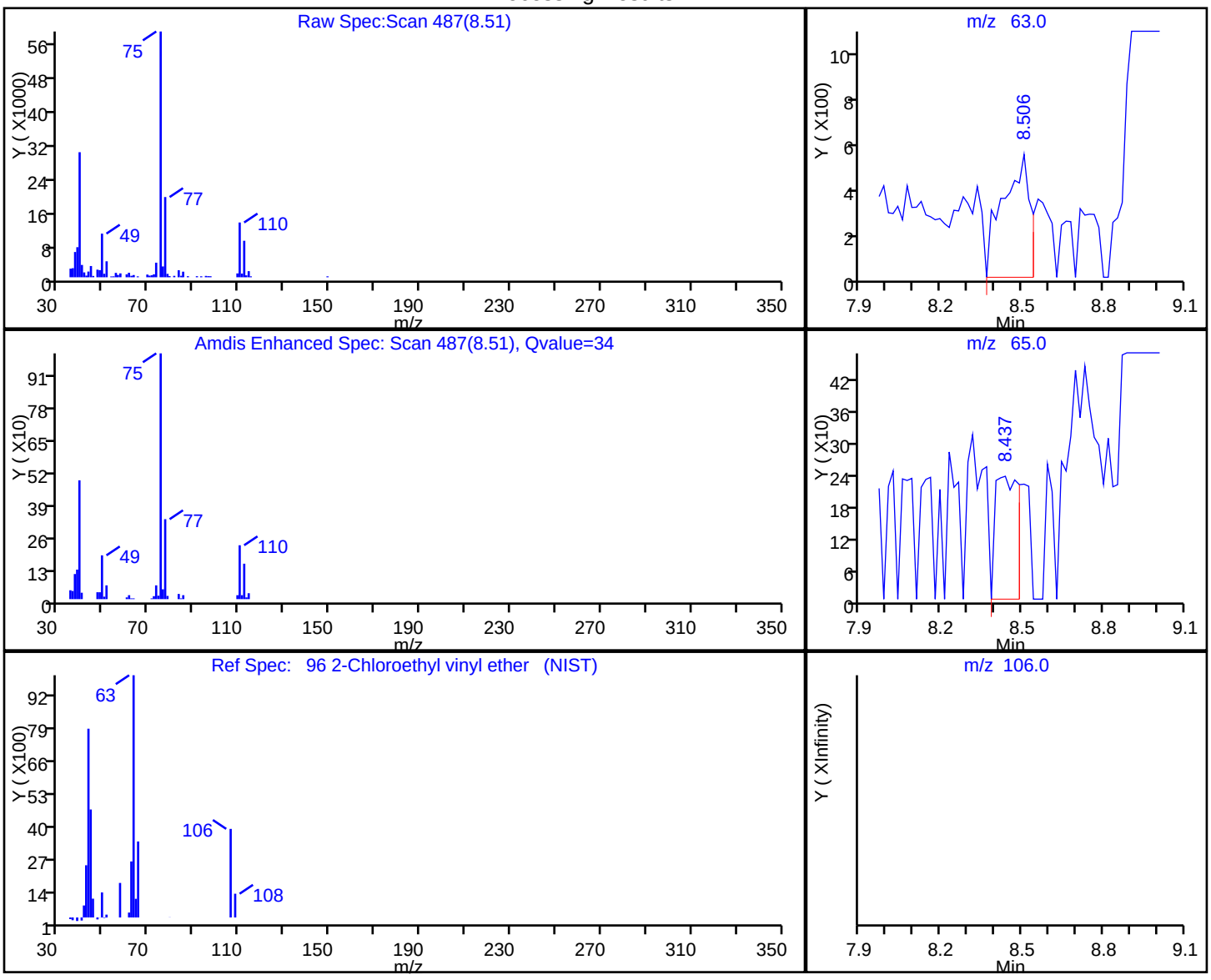
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D				
Injection Date:	29-Jan-2018 13:14:30	Instrument ID:	VMS_H		
Lims ID:	icv				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	20	Worklist Smp#:	9
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

96 2-Chloroethyl vinyl ether, CAS: 110-75-8

Processing Results



RT	Mass	Response	Amount
8.51	63.00	3693	22.990511
8.44	65.00	1399	
8.49	106.00	0	

Reviewer: wickhamt, 30-Jan-2018 09:18:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/9 Calibration Date: 01/29/2018 13:14

Instrument ID: VMS_H Calib Start Date: 11/12/2017 14:49

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 11/12/2017 17:01

Lab File ID: H3802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2				160	200	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2018 13:14:30 ALS Bottle#: 20 Worklist Smp#: 9
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 11:05:58 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:14:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.994	3.982	0.012	0	126244	250.0	250.0	
* 2 Fluorobenzene	96	6.747	6.735	0.012	98	692744	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.102	11.090	0.012	90	190137	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.139	-0.005	97	341465	12.5	12.5	
28 Dichlorodifluoromethane	85	2.182	2.165	0.017	98	355953	10.0	8.75	
30 Chloromethane	50	2.286	2.287	-0.001	99	160271	10.0	8.79	
32 Vinyl chloride	62	2.426	2.409	0.017	99	183999	10.0	9.07	
35 Bromomethane	94	2.705	2.688	0.017	91	215599	10.0	10.1	
36 Chloroethane	64	2.774	2.757	0.017	99	125060	10.0	10.4	
37 Dichlorofluoromethane	67	2.949	2.949	0.000	98	529068	10.0	10.6	
38 Trichlorofluoromethane	101	3.001	3.001	0.000	100	548009	10.0	10.0	
40 Ethyl ether	59	3.227	3.210	0.017	92	105149	10.0	11.2	
44 Acrolein	56	3.384	3.367	0.017	99	69715	100.0	119.8	
45 1,1-Dichloroethene	96	3.471	3.472	-0.001	98	255535	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.506	3.489	0.017	97	386672	10.0	11.2	
47 Acetone	43	3.506	3.524	-0.018	30	55753	40.0	40.0	
48 Iodomethane	142	3.645	3.646	-0.001	98	662285	10.0	11.0	
50 Carbon disulfide	76	3.715	3.716	-0.001	99	889544	10.0	11.0	
52 3-Chloro-1-propene	41	3.820	3.803	0.017	82	336400	10.0	11.0	
53 Methyl acetate	43	3.820	3.820	0.000	71	249699	50.0	55.5	
54 Methylene Chloride	84	3.942	3.942	0.000	93	203981	10.0	10.9	
55 2-Methyl-2-propanol	59	4.081	4.082	-0.001	91	55245	100.0	102.6	
57 Acrylonitrile	53	4.203	4.204	-0.001	98	144791	100.0	114.0	
56 Methyl tert-butyl ether	73	4.220	4.221	-0.001	96	377226	10.0	10.6	
58 trans-1,2-Dichloroethene	96	4.220	4.221	-0.001	99	289713	10.0	11.2	
59 Hexane	57	4.482	4.482	0.000	94	388247	10.0	11.2	
60 1,1-Dichloroethane	63	4.673	4.674	-0.001	96	462627	10.0	10.7	
61 Vinyl acetate	43	4.708	4.709	-0.001	97	437895	20.0	22.4	
65 cis-1,2-Dichloroethene	96	5.335	5.336	-0.001	84	289495	10.0	10.9	
67 2-Butanone (MEK)	43	5.353	5.353	0.000	45	124867	40.0	45.7	
66 2,2-Dichloropropane	77	5.353	5.353	0.000	90	499976	10.0	11.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.597	5.580	0.017	97	180268	300.0	326.9	
73 Chlorobromomethane	128	5.632	5.632	0.000	95	141693	10.0	11.0	
74 Tetrahydrofuran	42	5.701	5.684	0.017	39	43543	20.0	22.2	
75 Chloroform	83	5.701	5.702	-0.001	94	549352	10.0	10.7	
76 1,1,1-Trichloroethane	97	5.963	5.946	0.017	98	561508	10.0	10.7	
77 Cyclohexane	56	6.015	6.015	0.000	91	428857	10.0	11.6	
78 1,1-Dichloropropene	75	6.137	6.137	0.000	96	460683	10.0	11.2	
79 Carbon tetrachloride	117	6.154	6.155	-0.001	96	549474	10.0	10.7	
80 Isobutyl alcohol	41	6.294	6.294	0.000	95	59518	250.0	276.1	
81 Benzene	78	6.398	6.399	-0.001	96	767844	10.0	11.0	
82 1,2-Dichloroethane	62	6.416	6.434	-0.018	97	218979	10.0	10.8	
84 n-Heptane	43	6.712	6.695	0.017	96	513316	10.0	11.3	
86 Trichloroethene	95	7.217	7.218	-0.001	98	368938	10.0	11.0	
89 Methylcyclohexane	55	7.478	7.461	0.017	91	409553	10.0	11.1	
88 2-Pentanone	43	7.461	7.461	0.000	97	300100	40.0	24.2	
90 1,2-Dichloropropane	63	7.513	7.514	-0.001	96	262576	10.0	10.8	
92 Dibromomethane	93	7.687	7.688	-0.001	95	171168	10.0	10.3	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.896	7.897	-0.001	98	481024	10.0	10.8	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.506	8.507	-0.001	95	394219	10.0	11.1	
98 4-Methyl-2-pentanone (MIBK	43	8.733	8.716	0.017	97	433651	40.0	42.6	
99 Toluene	91	8.959	8.960	-0.001	99	904565	10.0	10.8	
100 trans-1,3-Dichloropropene	75	9.290	9.291	-0.001	91	286442	10.0	11.2	
101 Ethyl methacrylate	69	9.412	9.413	-0.001	90	200296	10.0	10.5	
102 1,1,2-Trichloroethane	97	9.552	9.552	0.000	93	184279	10.0	11.0	
103 Tetrachloroethene	164	9.761	9.761	0.000	95	340618	10.0	10.9	
104 1,3-Dichloropropane	76	9.796	9.796	0.000	88	286009	10.0	10.6	
105 2-Hexanone	43	9.935	9.935	0.000	99	268838	40.0	36.1	
108 Chlorodibromomethane	129	10.144	10.145	0.000	90	359668	10.0	10.3	
109 Ethylene Dibromide	107	10.336	10.336	0.000	99	231993	10.0	11.0	
110 1-Chlorohexane	91	11.120	11.103	0.017	92	458676	10.0	10.2	
111 Chlorobenzene	112	11.154	11.155	-0.001	94	617618	10.0	10.4	
112 1,1,1,2-Tetrachloroethane	131	11.276	11.277	-0.001	93	341316	10.0	10.5	
113 Ethylbenzene	106	11.311	11.329	-0.018	99	299264	10.0	10.7	
114 m-Xylene & p-Xylene	106	11.503	11.503	0.000	0	437711	10.0	10.5	
115 o-Xylene	106	12.078	12.078	0.000	97	372841	10.0	10.7	
116 Styrene	104	12.095	12.113	-0.018	95	574818	10.0	11.1	
117 Bromoform	173	12.357	12.357	0.000	94	201570	10.0	11.2	
118 Isopropylbenzene	105	12.583	12.584	-0.001	96	1217337	10.0	9.98	
120 Cyclohexanone	55	12.722	12.706	0.016	90	109722	400.0	425.5	
121 1,1,2,2-Tetrachloroethane	83	12.966	12.967	-0.001	93	229720	10.0	10.4	
122 Bromobenzene	156	12.966	12.967	-0.001	96	303953	10.0	10.3	
123 1,2,3-Trichloropropane	110	13.019	13.019	0.000	80	58582	10.0	9.90	
124 trans-1,4-Dichloro-2-buten	53	13.053	13.054	-0.001	70	41991	10.0	9.96	
125 N-Propylbenzene	120	13.106	13.106	0.000	99	283667	10.0	9.65	
126 2-Chlorotoluene	126	13.193	13.193	0.000	97	232591	10.0	9.71	
127 1,3,5-Trimethylbenzene	105	13.315	13.315	0.000	94	925433	10.0	9.89	
128 4-Chlorotoluene	126	13.332	13.333	-0.001	98	294273	10.0	10.3	
129 tert-Butylbenzene	119	13.698	13.699	-0.001	93	1004790	10.0	9.78	
130 1,2,4-Trimethylbenzene	105	13.750	13.751	-0.001	96	822387	10.0	9.72	
131 sec-Butylbenzene	134	13.942	13.943	-0.001	94	254417	10.0	9.52	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.064	14.065	-0.001	96	413588	10.0	10.4	
133 4-Isopropyltoluene	119	14.099	14.099	0.000	98	1137690	10.0	10.1	
134 1,4-Dichlorobenzene	146	14.168	14.169	-0.001	94	689368	10.0	10.3	
137 n-Butylbenzene	91	14.552	14.552	0.000	98	1113392	10.0	9.97	
138 1,2-Dichlorobenzene	146	14.569	14.570	-0.001	98	470166	10.0	10.5	
139 1,2-Dibromo-3-Chloropropan	157	15.353	15.354	-0.001	87	45202	10.0	11.0	
141 1,2,4-Trichlorobenzene	180	16.120	16.120	0.000	94	314073	10.0	11.2	
142 Hexachlorobutadiene	225	16.277	16.277	0.000	98	335617	10.0	10.6	
143 Naphthalene	128	16.346	16.347	-0.001	97	306290	10.0	11.0	
144 1,2,3-Trichlorobenzene	180	16.573	16.573	0.000	95	240814	10.0	11.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	22.1	
S 149 1,2-Dichloroethene, Total	1				0		10.0	22.1	
S 150 Xylenes, Total	106				0		20.0	21.2	
S 146 Xylenes, Total (URS)	1				0		20.0	21.2	
S 148 1,3-Dichloropropene, Total	1				0		20.0	22.3	
S 145 Trihalomethanes, Total	1				0		40.0	42.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main B_00020	Amount Added:	5.00	Units: uL
MV-Gas/Ket B_00040	Amount Added:	5.00	Units: uL
MV-SS 2-Cleve_00042	Amount Added:	5.00	Units: uL

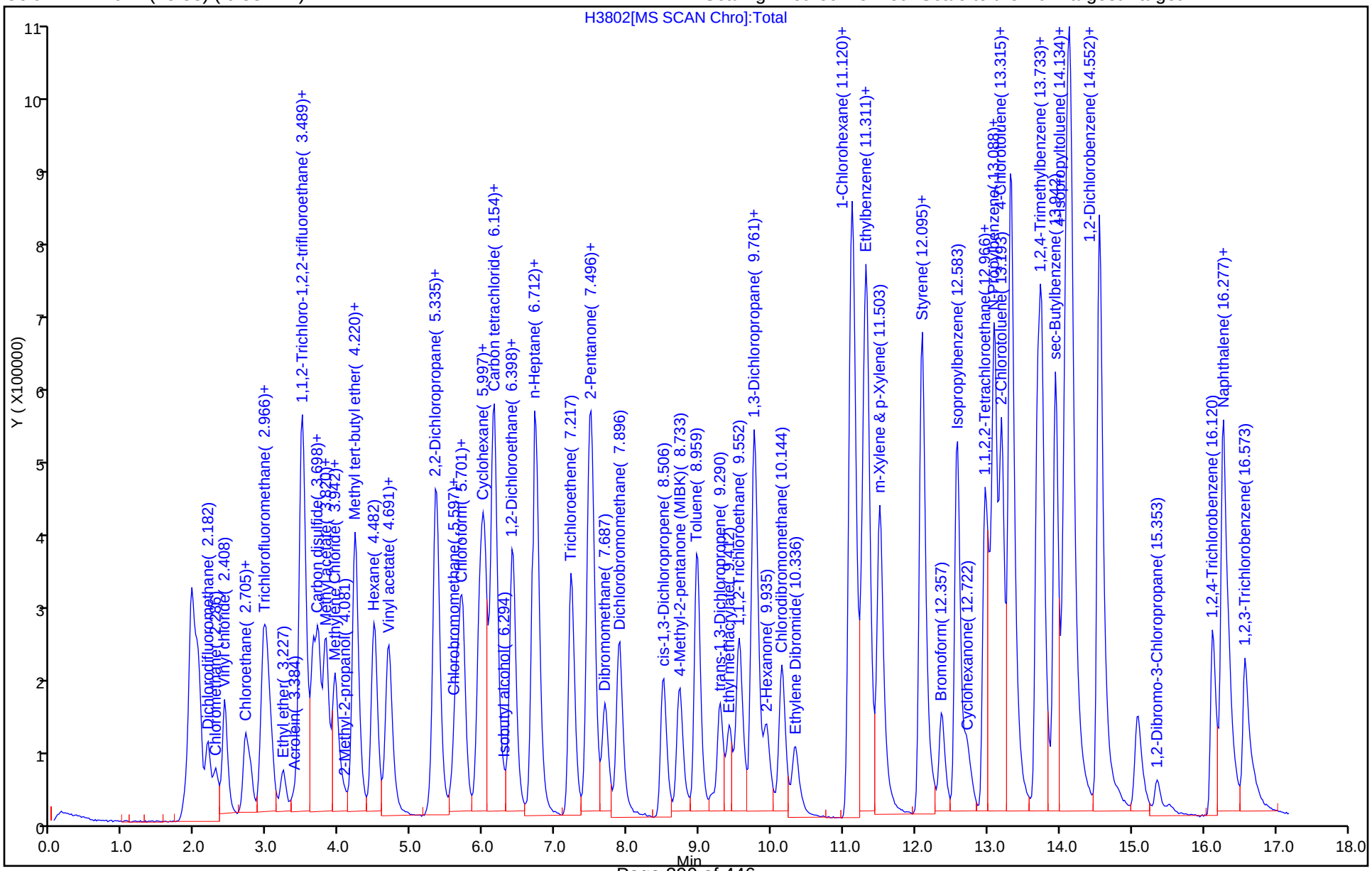
Report Date: 30-Jan-2018 11:06:02 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D

Injection Date:	29-Jan-2018 13:14:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	9
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



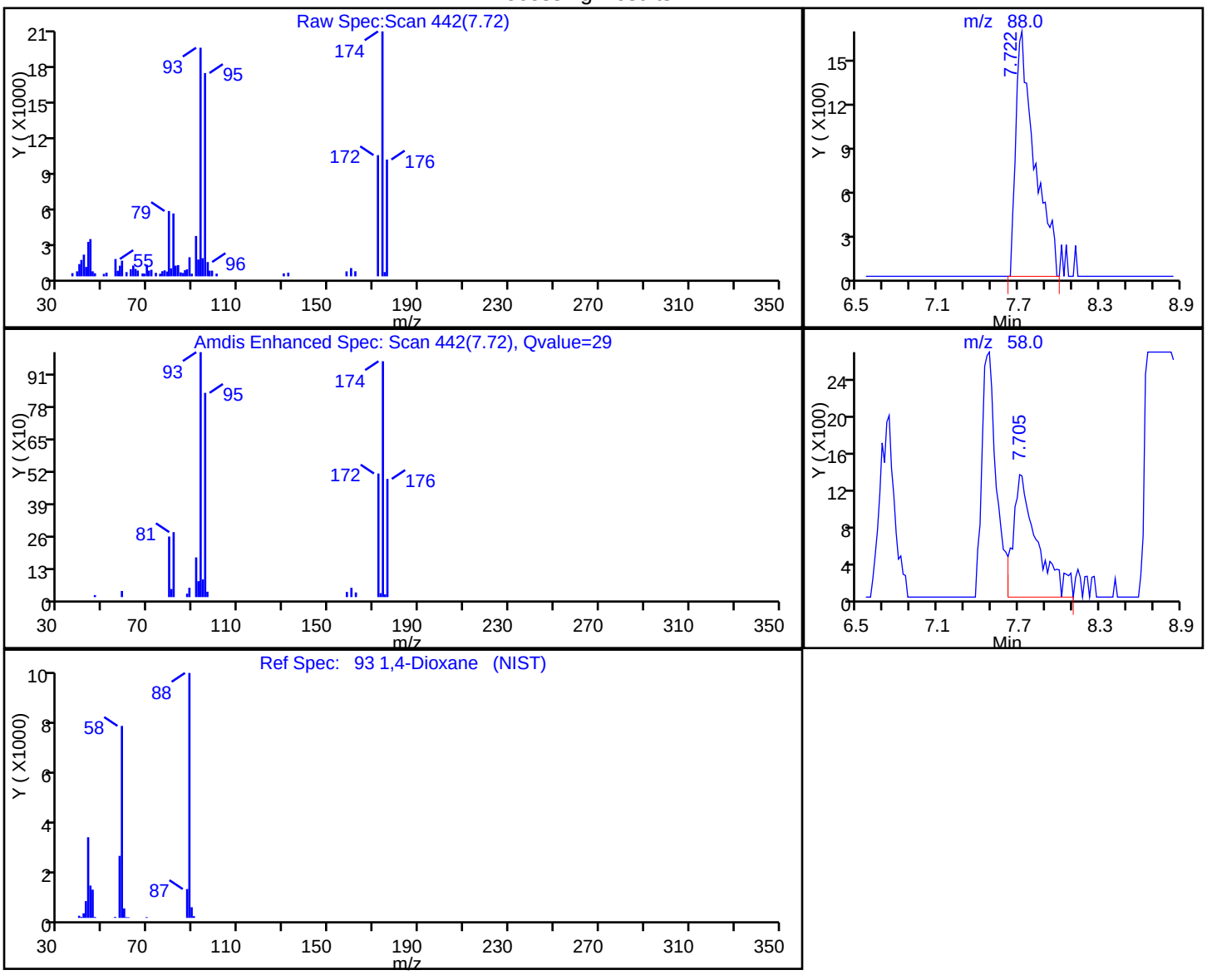
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D				
Injection Date:	29-Jan-2018 13:14:30	Instrument ID:	VMS_H		
Lims ID:	icv				
Client ID:					
Operator ID:	moanm	ALS Bottle#:	20	Worklist Smp#:	9
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

93 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
7.72	88.00	15740	172.2405
7.70	58.00	16766	

Reviewer: wickhamt, 30-Jan-2018 09:18:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/9 Calibration Date: 01/29/2018 13:14

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H3802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.7337	0.6423		8.75	10.0	-12.5	20.0
Chloromethane	Ave	0.3292	0.2892	0.1000	8.79	10.0	-12.1	20.0
Vinyl chloride	Ave	0.3659	0.3320		9.07	10.0	-9.3	20.0
Bromomethane	Lin2		0.3890		10.1	10.0	1.4	20.0
Chloroethane	Lin2		0.2257		10.4	10.0	4.0	20.0
Dichlorofluoromethane	Ave	0.8970	0.9547		10.6	10.0	6.4	20.0
Trichlorofluoromethane	Ave	0.9891	0.9888		10.0	10.0	-0.0	20.0
Ethyl ether	Ave	0.1695	0.1897		11.2	10.0	11.9	20.0
Acrolein	Ave	0.0105	0.0126		120	100	19.8	20.0
1,1-Dichloroethene	Ave	0.4254	0.4611		10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.6224	0.6977		11.2	10.0	12.1	20.0
Acetone	Ave	0.0251	0.0252		40.0	40.0	0.0	20.0
Methyl iodide	Ave	1.089	1.195		11.0	10.0	9.7	20.0
Carbon disulfide	Ave	1.462	1.605		11.0	10.0	9.8	20.0
3-Chloro-1-propene	Ave	0.5497	0.6070		11.0	10.0	10.4	20.0
Methyl acetate	Ave	0.0811	0.0901		55.5	50.0	11.1	20.0
Methylene Chloride	Lin2		0.3681		10.9	10.0	9.4	20.0
t-Butyl alcohol	Lin1		1.094		103	100	2.6	20.0
Acrylonitrile	Ave	0.0229	0.0261		114	100	14.0	20.0
Methyl tert-butyl ether	Ave	0.6427	0.6807		10.6	10.0	5.9	20.0
trans-1,2-Dichloroethene	Ave	0.4677	0.5228		11.2	10.0	11.8	20.0
Hexane	Ave	2.283	2.552		11.2	10.0	11.8	20.0
1,1-Dichloroethane	Ave	0.7816	0.8348	0.1000	10.7	10.0	6.8	20.0
Vinyl acetate	Ave	0.3529	0.3951		22.4	20.0	11.9	20.0
cis-1,2-Dichloroethene	Ave	0.4780	0.5224		10.9	10.0	9.3	20.0
2,2-Dichloropropane	Qua		0.9022		11.6	10.0	15.6	20.0
2-Butanone (MEK)	Ave	0.0493	0.0563		45.7	40.0	14.3	20.0
sec-Butyl Alcohol	Ave	1.092	1.190		327	300	9.0	20.0
Bromochloromethane	Ave	0.2326	0.2557		11.0	10.0	9.9	20.0
Chloroform	Ave	0.9291	0.9913		10.7	10.0	6.7	20.0
Tetrahydrofuran	Lin1		0.0393		22.2	20.0	10.8	20.0
1,1,1-Trichloroethane	Ave	0.9483	1.013		10.7	10.0	6.8	20.0
Cyclohexane	Lin2		0.7738		11.6	10.0	16.0	20.0
1,1-Dichloropropene	Ave	0.7438	0.8313		11.2	10.0	11.8	20.0
Carbon tetrachloride	Ave	0.9266	0.9915		10.7	10.0	7.0	20.0
Isobutyl alcohol	Ave	0.4268	0.4715		276	250	10.5	20.0
Benzene	Ave	1.265	1.386		11.0	10.0	9.5	20.0
1,2-Dichloroethane	Ave	0.3661	0.3951		10.8	10.0	7.9	20.0
Trichloroethene	Ave	0.6050	0.6657		11.0	10.0	10.0	20.0
2-Pentanone	Ave	0.2236	0.1354		24.2	40.0	-39.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/9 Calibration Date: 01/29/2018 13:14

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H3802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6649	0.7390		11.1	10.0	11.1	20.0
1,2-Dichloropropane	Ave	0.4374	0.4738		10.8	10.0	8.3	20.0
Dibromomethane	Ave	0.2986	0.3089		10.3	10.0	3.4	20.0
Bromodichloromethane	Ave	0.8040	0.8680		10.8	10.0	8.0	20.0
cis-1,3-Dichloropropene	Ave	2.342	2.592		11.1	10.0	10.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1839	0.1956		42.6	40.0	6.4	20.0
Toluene	Ave	1.513	1.632		10.8	10.0	7.9	20.0
trans-1,3-Dichloropropene	Ave	0.4603	0.5169		11.2	10.0	12.3	20.0
Ethyl methacrylate	Ave	1.251	1.317		10.5	10.0	5.3	20.0
1,1,2-Trichloroethane	Lin2		0.3325		11.0	10.0	10.5	20.0
Tetrachloroethene	Ave	2.055	2.239		10.9	10.0	8.9	20.0
1,3-Dichloropropane	Ave	1.776	1.880		10.6	10.0	5.9	20.0
2-Hexanone	Lin1		0.4419		36.1	40.0	-9.8	20.0
Dibromochloromethane	Ave	2.301	2.365		10.3	10.0	2.8	20.0
1,2-Dibromoethane	Ave	1.386	1.525		11.0	10.0	10.0	20.0
1-Chlorohexane	Ave	2.952	3.015		10.2	10.0	2.1	20.0
Chlorobenzene	Ave	3.894	4.060	0.3000	10.4	10.0	4.3	20.0
1,1,1,2-Tetrachloroethane	Ave	2.143	2.244		10.5	10.0	4.7	20.0
Ethylbenzene	Ave	1.847	1.967		10.7	10.0	6.5	20.0
m,p-Xylene	Ave	2.730	2.878		10.5	10.0	5.4	20.0
o-Xylene	Ave	2.290	2.451		10.7	10.0	7.0	20.0
Styrene	Ave	3.417	3.779		11.1	10.0	10.6	20.0
Bromoform	Ave	1.187	1.325	0.1000	11.2	10.0	11.7	20.0
Isopropylbenzene	Ave	4.467	4.456		9.98	10.0	-0.2	20.0
Cyclohexanone	Ave	0.0170	0.0180		425	400	6.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8107	0.8409	0.3000	10.4	10.0	3.7	20.0
Bromobenzene	Ave	1.084	1.113		10.3	10.0	2.7	20.0
1,2,3-Trichloropropane	Lin1		0.2145		9.90	10.0	-1.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1544	0.1537		9.96	10.0	-0.4	20.0
N-Propylbenzene	Ave	1.076	1.038		9.65	10.0	-3.5	20.0
2-Chlorotoluene	Ave	0.8765	0.8515		9.71	10.0	-2.9	20.0
1,3,5-Trimethylbenzene	Ave	3.424	3.388		9.89	10.0	-1.1	20.0
4-Chlorotoluene	Ave	1.043	1.077		10.3	10.0	3.3	20.0
tert-Butylbenzene	Ave	3.762	3.678		9.78	10.0	-2.2	20.0
1,2,4-Trimethylbenzene	Ave	3.099	3.011		9.72	10.0	-2.8	20.0
sec-Butylbenzene	Ave	0.9779	0.9313		9.52	10.0	-4.8	20.0
1,3-Dichlorobenzene	Ave	1.452	1.514		10.4	10.0	4.3	20.0
4-Isopropyltoluene	Ave	4.125	4.165		10.1	10.0	1.0	20.0
1,4-Dichlorobenzene	Ave	2.458	2.524		10.3	10.0	2.6	20.0
n-Butylbenzene	Ave	4.086	4.076		9.97	10.0	-0.3	20.0
1,2-Dichlorobenzene	Ave	1.634	1.721		10.5	10.0	5.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/9 Calibration Date: 01/29/2018 13:14

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H3802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1503	0.1655		11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	1.023	1.150		11.2	10.0	12.4	20.0
Hexachlorobutadiene	Ave	1.160	1.229		10.6	10.0	5.9	20.0
Naphthalene	Ave	1.020	1.121		11.0	10.0	9.9	20.0
1,2,3-Trichlorobenzene	Ave	0.7818	0.8816		11.3	10.0	12.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2018 13:14:30 ALS Bottle#: 20 Worklist Smp#: 9
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 11:05:58 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: moanm Date: 29-Jan-2018 14:14:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.994	3.982	0.012	0	126244	250.0	250.0	
* 2 Fluorobenzene	96	6.747	6.735	0.012	98	692744	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.102	11.090	0.012	90	190137	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.139	-0.005	97	341465	12.5	12.5	
28 Dichlorodifluoromethane	85	2.182	2.165	0.017	98	355953	10.0	8.75	
30 Chloromethane	50	2.286	2.287	-0.001	99	160271	10.0	8.79	
32 Vinyl chloride	62	2.426	2.409	0.017	99	183999	10.0	9.07	
35 Bromomethane	94	2.705	2.688	0.017	91	215599	10.0	10.1	
36 Chloroethane	64	2.774	2.757	0.017	99	125060	10.0	10.4	
37 Dichlorofluoromethane	67	2.949	2.949	0.000	98	529068	10.0	10.6	
38 Trichlorofluoromethane	101	3.001	3.001	0.000	100	548009	10.0	10.0	
40 Ethyl ether	59	3.227	3.210	0.017	92	105149	10.0	11.2	
44 Acrolein	56	3.384	3.367	0.017	99	69715	100.0	119.8	
45 1,1-Dichloroethene	96	3.471	3.472	-0.001	98	255535	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.506	3.489	0.017	97	386672	10.0	11.2	
47 Acetone	43	3.506	3.524	-0.018	30	55753	40.0	40.0	
48 Iodomethane	142	3.645	3.646	-0.001	98	662285	10.0	11.0	
50 Carbon disulfide	76	3.715	3.716	-0.001	99	889544	10.0	11.0	
52 3-Chloro-1-propene	41	3.820	3.803	0.017	82	336400	10.0	11.0	
53 Methyl acetate	43	3.820	3.820	0.000	71	249699	50.0	55.5	
54 Methylene Chloride	84	3.942	3.942	0.000	93	203981	10.0	10.9	
55 2-Methyl-2-propanol	59	4.081	4.082	-0.001	91	55245	100.0	102.6	
57 Acrylonitrile	53	4.203	4.204	-0.001	98	144791	100.0	114.0	
56 Methyl tert-butyl ether	73	4.220	4.221	-0.001	96	377226	10.0	10.6	
58 trans-1,2-Dichloroethene	96	4.220	4.221	-0.001	99	289713	10.0	11.2	
59 Hexane	57	4.482	4.482	0.000	94	388247	10.0	11.2	
60 1,1-Dichloroethane	63	4.673	4.674	-0.001	96	462627	10.0	10.7	
61 Vinyl acetate	43	4.708	4.709	-0.001	97	437895	20.0	22.4	
65 cis-1,2-Dichloroethene	96	5.335	5.336	-0.001	84	289495	10.0	10.9	
67 2-Butanone (MEK)	43	5.353	5.353	0.000	45	124867	40.0	45.7	
66 2,2-Dichloropropane	77	5.353	5.353	0.000	90	499976	10.0	11.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.597	5.580	0.017	97	180268	300.0	326.9	
73 Chlorobromomethane	128	5.632	5.632	0.000	95	141693	10.0	11.0	
74 Tetrahydrofuran	42	5.701	5.684	0.017	39	43543	20.0	22.2	
75 Chloroform	83	5.701	5.702	-0.001	94	549352	10.0	10.7	
76 1,1,1-Trichloroethane	97	5.963	5.946	0.017	98	561508	10.0	10.7	
77 Cyclohexane	56	6.015	6.015	0.000	91	428857	10.0	11.6	
78 1,1-Dichloropropene	75	6.137	6.137	0.000	96	460683	10.0	11.2	
79 Carbon tetrachloride	117	6.154	6.155	-0.001	96	549474	10.0	10.7	
80 Isobutyl alcohol	41	6.294	6.294	0.000	95	59518	250.0	276.1	
81 Benzene	78	6.398	6.399	-0.001	96	767844	10.0	11.0	
82 1,2-Dichloroethane	62	6.416	6.434	-0.018	97	218979	10.0	10.8	
84 n-Heptane	43	6.712	6.695	0.017	96	513316	10.0	11.3	
86 Trichloroethene	95	7.217	7.218	-0.001	98	368938	10.0	11.0	
89 Methylcyclohexane	55	7.478	7.461	0.017	91	409553	10.0	11.1	
88 2-Pentanone	43	7.461	7.461	0.000	97	300100	40.0	24.2	
90 1,2-Dichloropropane	63	7.513	7.514	-0.001	96	262576	10.0	10.8	
92 Dibromomethane	93	7.687	7.688	-0.001	95	171168	10.0	10.3	
93 1,4-Dioxane	88		7.705				ND	ND	U
94 Dichlorobromomethane	83	7.896	7.897	-0.001	98	481024	10.0	10.8	
96 2-Chloroethyl vinyl ether	63		8.489				ND	ND	U
97 cis-1,3-Dichloropropene	75	8.506	8.507	-0.001	95	394219	10.0	11.1	
98 4-Methyl-2-pentanone (MIBK	43	8.733	8.716	0.017	97	433651	40.0	42.6	
99 Toluene	91	8.959	8.960	-0.001	99	904565	10.0	10.8	
100 trans-1,3-Dichloropropene	75	9.290	9.291	-0.001	91	286442	10.0	11.2	
101 Ethyl methacrylate	69	9.412	9.413	-0.001	90	200296	10.0	10.5	
102 1,1,2-Trichloroethane	97	9.552	9.552	0.000	93	184279	10.0	11.0	
103 Tetrachloroethene	164	9.761	9.761	0.000	95	340618	10.0	10.9	
104 1,3-Dichloropropane	76	9.796	9.796	0.000	88	286009	10.0	10.6	
105 2-Hexanone	43	9.935	9.935	0.000	99	268838	40.0	36.1	
108 Chlorodibromomethane	129	10.144	10.145	0.000	90	359668	10.0	10.3	
109 Ethylene Dibromide	107	10.336	10.336	0.000	99	231993	10.0	11.0	
110 1-Chlorohexane	91	11.120	11.103	0.017	92	458676	10.0	10.2	
111 Chlorobenzene	112	11.154	11.155	-0.001	94	617618	10.0	10.4	
112 1,1,1,2-Tetrachloroethane	131	11.276	11.277	-0.001	93	341316	10.0	10.5	
113 Ethylbenzene	106	11.311	11.329	-0.018	99	299264	10.0	10.7	
114 m-Xylene & p-Xylene	106	11.503	11.503	0.000	0	437711	10.0	10.5	
115 o-Xylene	106	12.078	12.078	0.000	97	372841	10.0	10.7	
116 Styrene	104	12.095	12.113	-0.018	95	574818	10.0	11.1	
117 Bromoform	173	12.357	12.357	0.000	94	201570	10.0	11.2	
118 Isopropylbenzene	105	12.583	12.584	-0.001	96	1217337	10.0	9.98	
120 Cyclohexanone	55	12.722	12.706	0.016	90	109722	400.0	425.5	
121 1,1,2,2-Tetrachloroethane	83	12.966	12.967	-0.001	93	229720	10.0	10.4	
122 Bromobenzene	156	12.966	12.967	-0.001	96	303953	10.0	10.3	
123 1,2,3-Trichloropropane	110	13.019	13.019	0.000	80	58582	10.0	9.90	
124 trans-1,4-Dichloro-2-buten	53	13.053	13.054	-0.001	70	41991	10.0	9.96	
125 N-Propylbenzene	120	13.106	13.106	0.000	99	283667	10.0	9.65	
126 2-Chlorotoluene	126	13.193	13.193	0.000	97	232591	10.0	9.71	
127 1,3,5-Trimethylbenzene	105	13.315	13.315	0.000	94	925433	10.0	9.89	
128 4-Chlorotoluene	126	13.332	13.333	-0.001	98	294273	10.0	10.3	
129 tert-Butylbenzene	119	13.698	13.699	-0.001	93	1004790	10.0	9.78	
130 1,2,4-Trimethylbenzene	105	13.750	13.751	-0.001	96	822387	10.0	9.72	
131 sec-Butylbenzene	134	13.942	13.943	-0.001	94	254417	10.0	9.52	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.064	14.065	-0.001	96	413588	10.0	10.4	
133 4-Isopropyltoluene	119	14.099	14.099	0.000	98	1137690	10.0	10.1	
134 1,4-Dichlorobenzene	146	14.168	14.169	-0.001	94	689368	10.0	10.3	
137 n-Butylbenzene	91	14.552	14.552	0.000	98	1113392	10.0	9.97	
138 1,2-Dichlorobenzene	146	14.569	14.570	-0.001	98	470166	10.0	10.5	
139 1,2-Dibromo-3-Chloropropan	157	15.353	15.354	-0.001	87	45202	10.0	11.0	
141 1,2,4-Trichlorobenzene	180	16.120	16.120	0.000	94	314073	10.0	11.2	
142 Hexachlorobutadiene	225	16.277	16.277	0.000	98	335617	10.0	10.6	
143 Naphthalene	128	16.346	16.347	-0.001	97	306290	10.0	11.0	
144 1,2,3-Trichlorobenzene	180	16.573	16.573	0.000	95	240814	10.0	11.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	22.1	
S 149 1,2-Dichloroethene, Total	1				0		10.0	22.1	
S 150 Xylenes, Total	106				0		20.0	21.2	
S 146 Xylenes, Total (URS)	1				0		20.0	21.2	
S 148 1,3-Dichloropropene, Total	1				0		20.0	22.3	
S 145 Trihalomethanes, Total	1				0		40.0	42.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Main B_00020	Amount Added:	5.00	Units: uL
MV-Gas/Ket B_00040	Amount Added:	5.00	Units: uL
MV-SS 2-Cleve_00042	Amount Added:	5.00	Units: uL

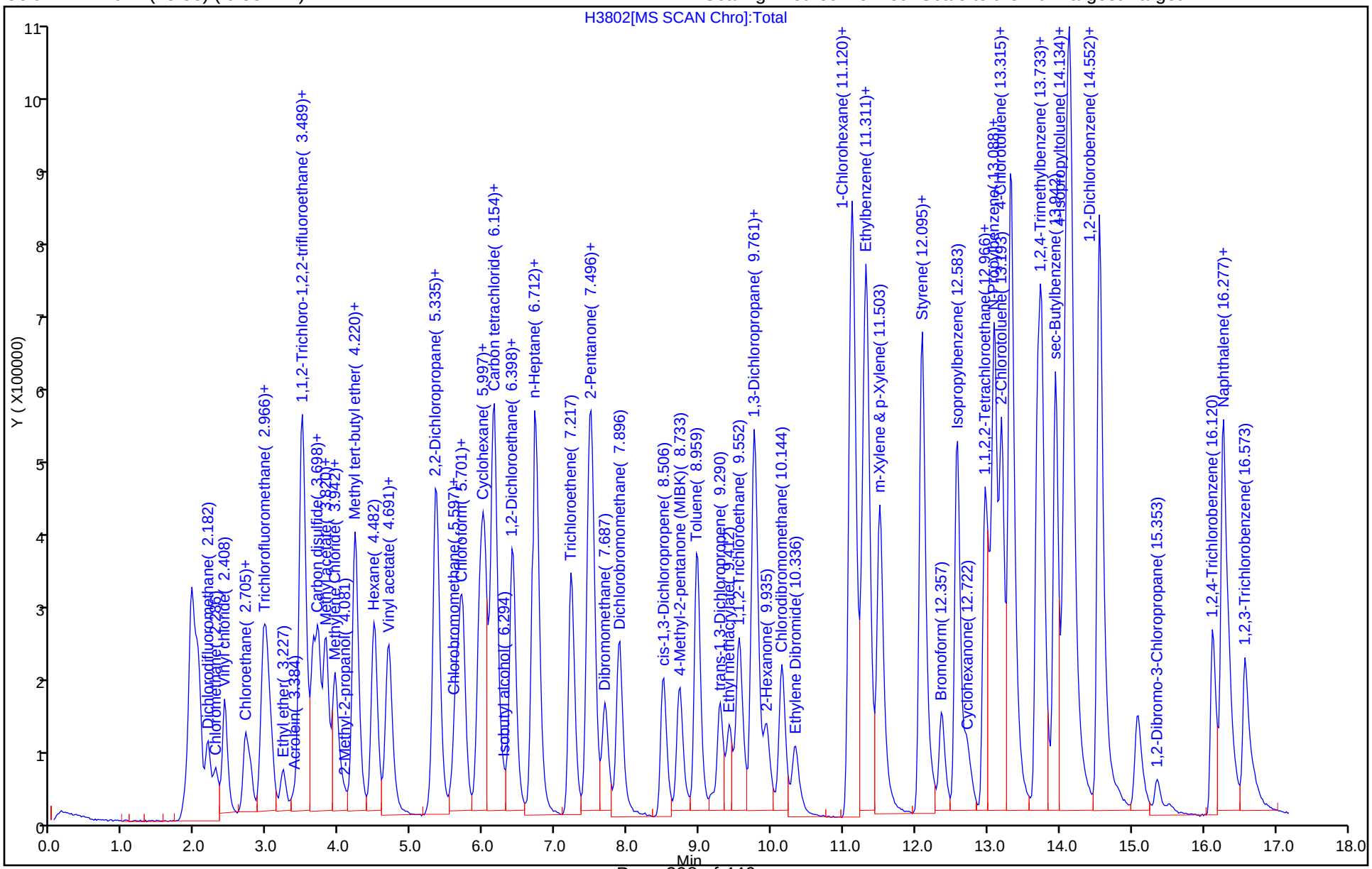
Report Date: 30-Jan-2018 11:06:02 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3802.D

Injection Date:	29-Jan-2018 13:14:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	9
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/16 Calibration Date: 01/29/2018 15:47

Instrument ID: VMS_H Calib Start Date: 10/22/2017 14:54

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/22/2017 19:57

Lab File ID: H3809.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0058			20.0	100		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3809.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2018 15:47:30 ALS Bottle#: 27 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:13 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:36:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.976	3.982	-0.006	0	140755	250.0	250.0	
* 2 Fluorobenzene	96	6.728	6.735	-0.007	98	873152	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.084	11.090	-0.006	89	244871	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.133	14.139	-0.006	97	390855	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.892	5.898	-0.006	93	499511	10.0	9.22	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.310	6.317	-0.007	0	227496	10.0	9.13	
$ 10 Toluene-d8 (Surr)	98	8.854	8.860	-0.006	93	918490	10.0	9.11	
$ 11 4-Bromofluorobenzene (Surr	95	12.774	12.763	0.011	85	543620	10.0	9.08	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.174	3.163	0.011	89	28407	600.0	597.1	
43 Propene oxide	58	3.296	3.285	0.011	95	590075	1000.0	530.5	M
49 Isopropyl alcohol	45		3.647				ND	ND	U
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.725	4.714	0.011	97	199287	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.760	4.766	-0.006	90	294125	10.0	6.64	
64 Tert-butyl ethyl ether	59	5.126	5.132	-0.006	98	626067	10.0	8.32	
69 Ethyl acetate	43	5.387	5.393	-0.006	99	184742	20.0	19.2	
70 Propionitrile	54	5.422	5.428	-0.006	94	61147	100.0	97.2	
72 Methacrylonitrile	41	5.596	5.585	0.011	95	471514	100.0	92.0	
83 Tert-amyl methyl ether	73	6.519	6.526	-0.007	98	591359	10.0	9.32	
85 n-Butanol	56	7.146	7.153	-0.007	84	39055	250.0	246.0	
91 Methyl methacrylate	100	7.652	7.658	-0.006	92	87044	20.0	19.5	
95 2-Nitropropane	41	8.192	8.198	-0.006	95	46383	20.0	18.8	
107 Tetrahydrothiophene	60		10.097				20.0	ND	
119 cis-1,4-Dichloro-2-butene	53	12.669	12.658	0.011	0	78512	20.0	18.8	
135 1,2,3-Trimethylbenzene	105	14.203	14.209	-0.006	98	968603	10.0	10.2	
140 1,3,5-Trichlorobenzene	180	15.544	15.550	-0.006	96	511444	10.0	10.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.80	Units: uL
MV-Supp B_00019	Amount Added:	5.00	Units: uL

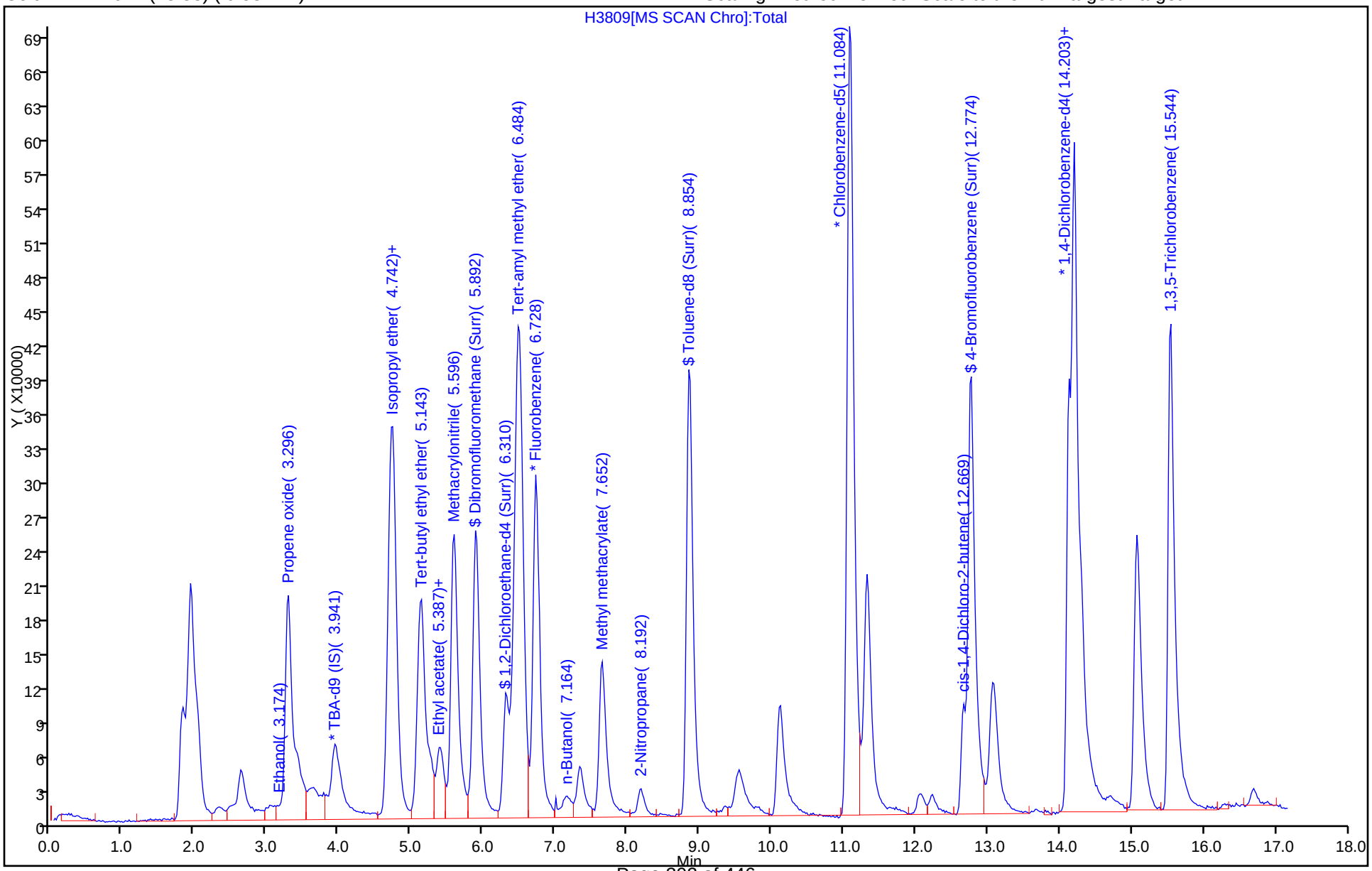
Report Date: 30-Jan-2018 10:58:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3809.D

Injection Date:	29-Jan-2018 15:47:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



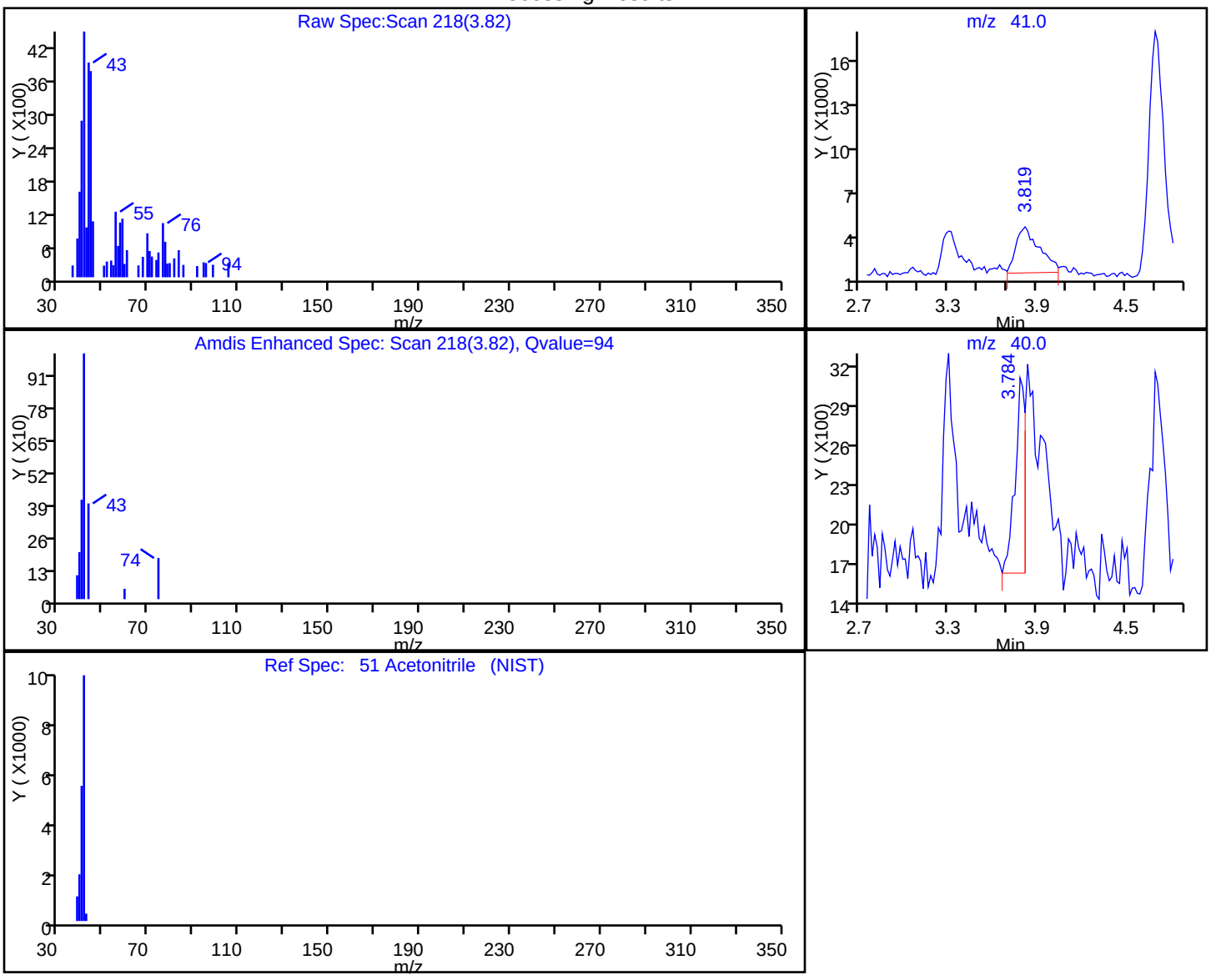
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3809.D
Injection Date: 29-Jan-2018 15:47:30 Instrument ID: VMS_H
Lims ID: icv
Client ID:
Operator ID: moanm ALS Bottle#: 27 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

51 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.82	41.00	34305	106.5923
3.78	40.00	6664	

Reviewer: wickhamt, 30-Jan-2018 09:36:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403042/16 Calibration Date: 01/29/2018 15:47

Instrument ID: VMS_H Calib Start Date: 01/29/2018 13:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 15:25

Lab File ID: H3809.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin		0.0007		597	600	-0.5	20.0
Diisopropyl ether	Ave	0.3367	0.2853		8.47	10.0	-15.3	20.0
2-Chloro-1,3-butadiene	Ave	0.6344	0.4211		6.64	10.0	-33.6*	20.0
Tert-butyl ethyl ether	Ave	1.077	0.8963		8.32	10.0	-16.8	20.0
Ethyl acetate	Ave	0.1381	0.1322		19.2	20.0	-4.2	20.0
Propionitrile	Lin2		0.0088		97.2	100	-2.8	20.0
Methacrylonitrile	Ave	0.0734	0.0675		92.0	100	-8.0	20.0
Tert-amyl methyl ether	Ave	0.9087	0.8466		9.32	10.0	-6.8	20.0
n-Butanol	Lin2		0.0022		246	250	-1.6	20.0
Methyl methacrylate	Ave	0.0638	0.0623		19.5	20.0	-2.4	20.0
2-Nitropropane	Ave	0.0354	0.0332		18.8	20.0	-6.1	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1339	0.1256		18.8	20.0	-6.2	20.0
1,2,3-Trimethylbenzene	Ave	3.035	3.098		10.2	10.0	2.1	20.0
Isopropyl alcohol	Ave	0.0051			32.0	100		
Dibromofluoromethane (Surr)	Ave	0.7760	0.7151		9.22	10.0	-7.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3567	0.3257		9.13	10.0	-8.7	20.0
Toluene-d8 (Surr)	Ave	5.148	4.689		9.11	10.0	-8.9	20.0
4-Bromofluorobenzene (Surr)	Ave	1.915	1.739		9.08	10.0	-9.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3809.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2018 15:47:30 ALS Bottle#: 27 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Jan-2018 10:58:13 Calib Date: 29-Jan-2018 15:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: wickhamt Date: 30-Jan-2018 09:36:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.976	3.982	-0.006	0	140755	250.0	250.0	
* 2 Fluorobenzene	96	6.728	6.735	-0.007	98	873152	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.084	11.090	-0.006	89	244871	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.133	14.139	-0.006	97	390855	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.892	5.898	-0.006	93	499511	10.0	9.22	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.310	6.317	-0.007	0	227496	10.0	9.13	
$ 10 Toluene-d8 (Surr)	98	8.854	8.860	-0.006	93	918490	10.0	9.11	
$ 11 4-Bromofluorobenzene (Surr	95	12.774	12.763	0.011	85	543620	10.0	9.08	
34 Ethylene oxide	43		2.640				ND	ND	U
39 Ethanol	45	3.174	3.163	0.011	89	28407	600.0	597.1	
43 Propene oxide	58	3.296	3.285	0.011	95	590075	1000.0	530.5	M
49 Isopropyl alcohol	45		3.647				ND	ND	U
51 Acetonitrile	41		3.790				ND	ND	U
62 Isopropyl ether	87	4.725	4.714	0.011	97	199287	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.760	4.766	-0.006	90	294125	10.0	6.64	
64 Tert-butyl ethyl ether	59	5.126	5.132	-0.006	98	626067	10.0	8.32	
69 Ethyl acetate	43	5.387	5.393	-0.006	99	184742	20.0	19.2	
70 Propionitrile	54	5.422	5.428	-0.006	94	61147	100.0	97.2	
72 Methacrylonitrile	41	5.596	5.585	0.011	95	471514	100.0	92.0	
83 Tert-amyl methyl ether	73	6.519	6.526	-0.007	98	591359	10.0	9.32	
85 n-Butanol	56	7.146	7.153	-0.007	84	39055	250.0	246.0	
91 Methyl methacrylate	100	7.652	7.658	-0.006	92	87044	20.0	19.5	
95 2-Nitropropane	41	8.192	8.198	-0.006	95	46383	20.0	18.8	
107 Tetrahydrothiophene	60		10.097				20.0	ND	
119 cis-1,4-Dichloro-2-butene	53	12.669	12.658	0.011	0	78512	20.0	18.8	
135 1,2,3-Trimethylbenzene	105	14.203	14.209	-0.006	98	968603	10.0	10.2	
140 1,3,5-Trichlorobenzene	180	15.544	15.550	-0.006	96	511444	10.0	10.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00090	Amount Added:	0.80	Units: uL
MV-Supp B_00019	Amount Added:	5.00	Units: uL

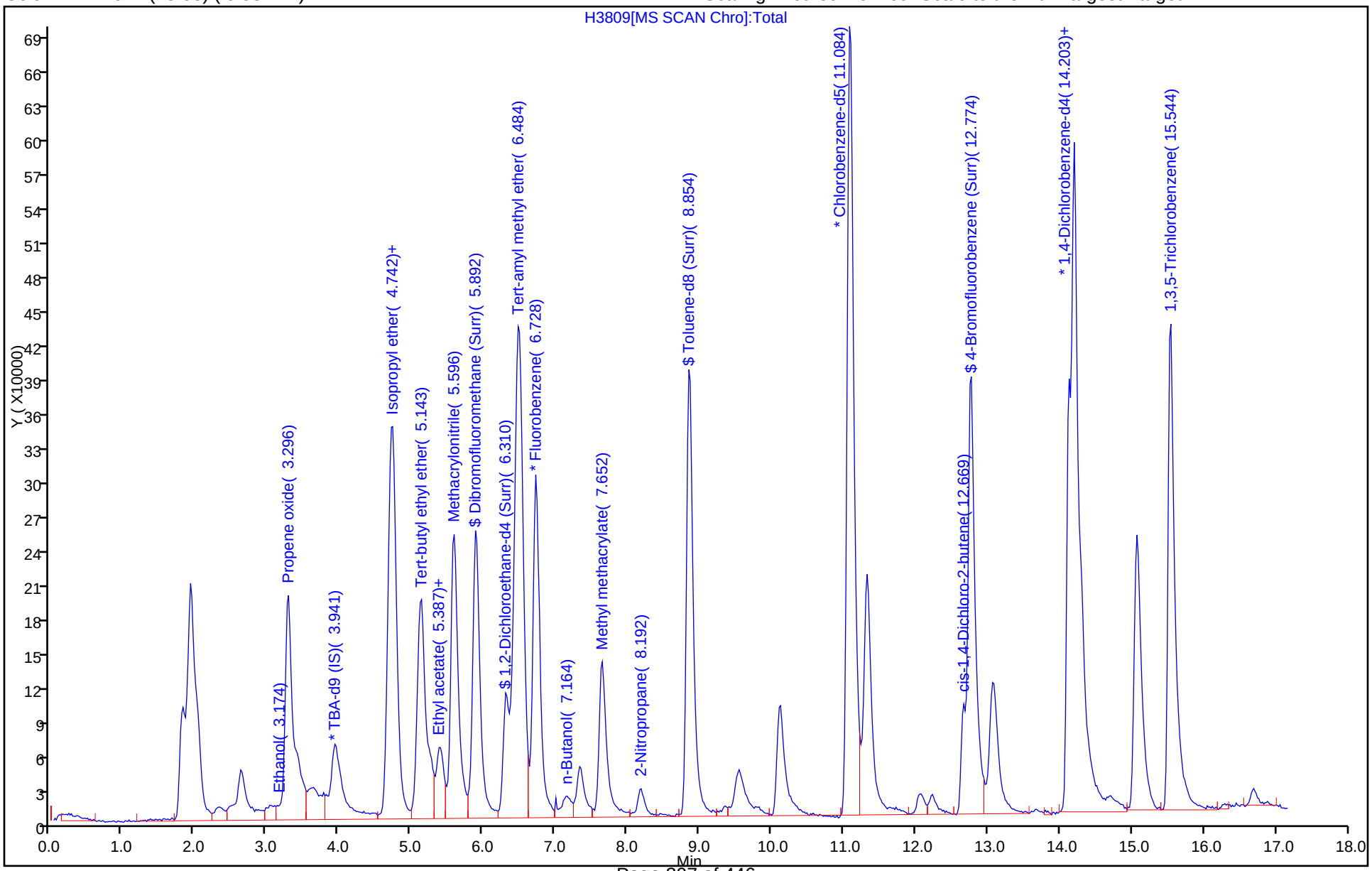
Report Date: 30-Jan-2018 10:58:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3809.D

Injection Date:	29-Jan-2018 15:47:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: ICV 280-403825/15 Calibration Date: 02/05/2018 09:56

Instrument ID: VMS_H Calib Start Date: 02/05/2018 08:05

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 02/05/2018 09:34

Lab File ID: H4021.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.6343	0.6184		9.75	10.0	-2.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2702	0.2574		9.52	10.0	-4.8	20.0
Toluene-d8 (Surr)	Ave	4.849	4.799		9.90	10.0	-1.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.739	1.605		9.23	10.0	-7.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4021.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 05-Feb-2018 09:56:30 ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: moanm Instrument ID: VMS_H
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 05-Feb-2018 10:18:50 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: moanm Date: 05-Feb-2018 10:17:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.998	4.028	-0.030	0	163220	250.0	250.0	
* 2 Fluorobenzene	96	6.769	6.763	0.006	98	923548	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.124	11.119	0.005	87	233341	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.156	14.150	0.006	96	379852	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.932	5.927	0.005	93	456918	10.0	9.75	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.350	6.345	0.005	0	190147	10.0	9.52	
$ 10 Toluene-d8 (Surr)	98	8.894	8.889	0.005	93	895779	10.0	9.90	
$ 11 4-Bromofluorobenzene (Surr	95	12.797	12.791	0.006	85	487788	10.0	9.23	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00090 Amount Added: 0.80 Units: uL

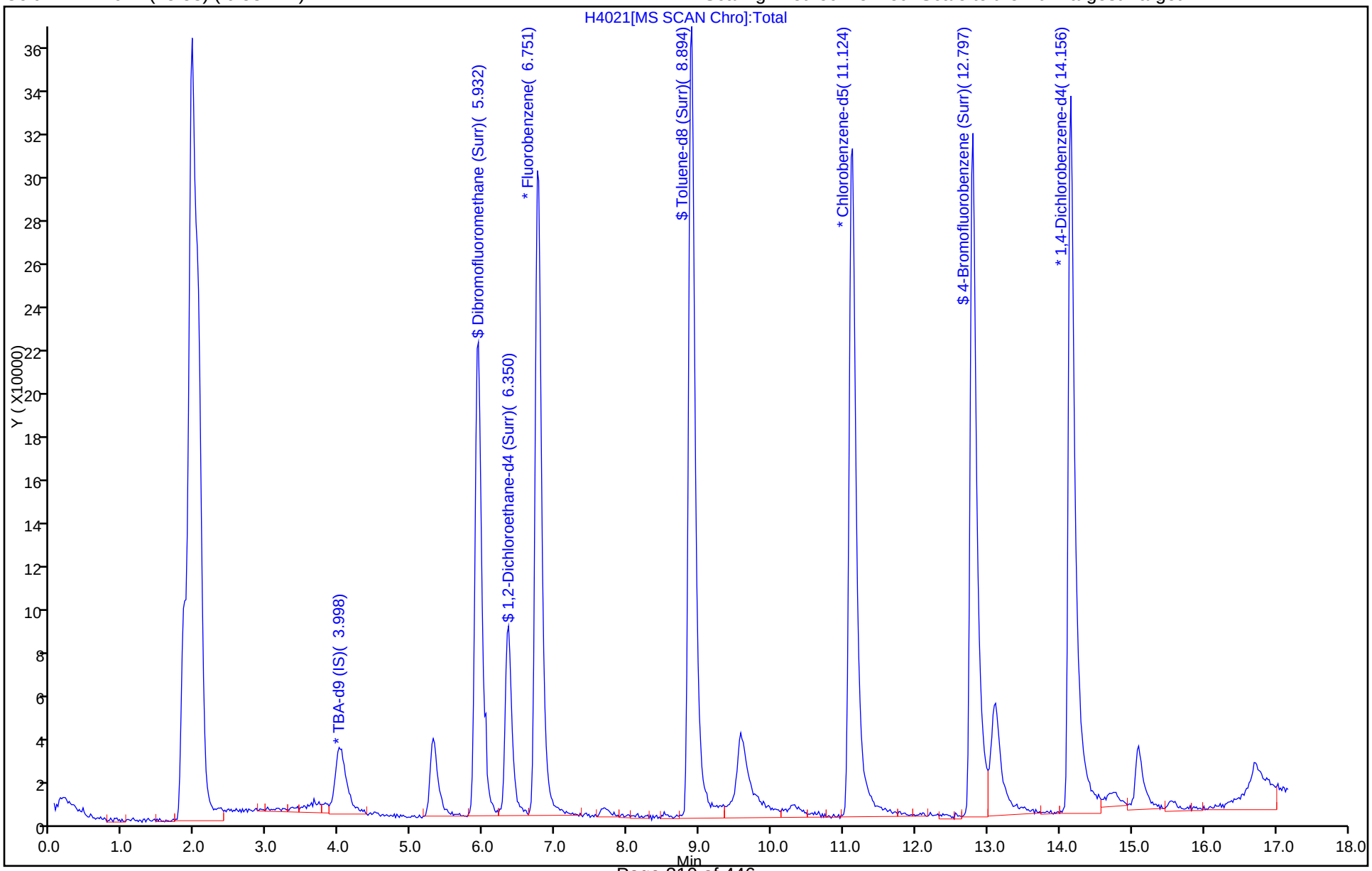
Report Date: 05-Feb-2018 10:18:51 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4021.D

Injection Date:	05-Feb-2018 09:56:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	icv			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/2 Calibration Date: 02/12/2018 08:05

Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 04/04/2017 12:48

Lab File ID: H4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0048		16.7	10.0	67.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:05:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:16 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:22:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.975	0.000	0	103872	250.0	250.0	
* 2 Fluorobenzene	96	6.763	6.763	0.000	99	589813	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.118	11.118	0.000	87	145734	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.132	14.132	0.000	95	267472	12.5	12.5	
28 Dichlorodifluoromethane	85	2.181	2.181	0.000	97	339423	10.0	9.80	
30 Chloromethane	50	2.303	2.303	0.000	98	148520	10.0	9.56	
32 Vinyl chloride	62	2.425	2.425	0.000	98	165860	10.0	9.61	
35 Bromomethane	94	2.703	2.703	0.000	91	185808	10.0	10.3	
36 Chloroethane	64	2.773	2.773	0.000	99	105423	10.0	10.3	
37 Dichlorofluoromethane	67	2.947	2.947	0.000	97	390744	10.0	9.23	
38 Trichlorofluoromethane	101	3.000	3.000	0.000	99	432606	10.0	9.27	
40 Ethyl ether	59	3.226	3.226	0.000	91	78700	10.0	9.84	
44 Acrolein	56	3.383	3.383	0.000	97	60618	100.0	122.3	
45 1,1-Dichloroethene	96	3.487	3.487	0.000	98	193575	10.0	9.64	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.505	0.000	96	280566	10.0	9.55	
47 Acetone	43	3.522	3.522	0.000	32	44345	40.0	37.4	
48 Iodomethane	142	3.662	3.662	0.000	100	481990	10.0	9.38	
50 Carbon disulfide	76	3.731	3.731	0.000	99	647194	10.0	9.38	
52 3-Chloro-1-propene	41	3.818	3.818	0.000	93	248278	10.0	9.57	
53 Methyl acetate	43	3.836	3.836	0.000	97	193874	50.0	50.6	
54 Methylene Chloride	84	3.958	3.958	0.000	90	164260	10.0	10.3	
55 2-Methyl-2-propanol	59	4.080	4.080	0.000	93	62484	100.0	143.1	
57 Acrylonitrile	53	4.202	4.202	0.000	97	106639	100.0	98.6	
58 trans-1,2-Dichloroethene	96	4.237	4.237	0.000	99	205653	10.0	9.32	
56 Methyl tert-butyl ether	73	4.237	4.237	0.000	92	272592	10.0	8.99	
59 Hexane	57	4.498	4.498	0.000	94	255190	10.0	9.59	
60 1,1-Dichloroethane	63	4.690	4.690	0.000	95	324696	10.0	8.80	
61 Vinyl acetate	43	4.724	4.724	0.000	96	344991	20.0	20.7	
66 2,2-Dichloropropane	77	5.352	5.352	0.000	87	342533	10.0	9.15	
65 cis-1,2-Dichloroethene	96	5.352	5.352	0.000	81	210924	10.0	9.35	
67 2-Butanone (MEK)	43	5.369	5.369	0.000	44	83894	40.0	36.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.596	5.596	0.000	96	136179	300.0	300.2	
73 Chlorobromomethane	128	5.648	5.648	0.000	94	103643	10.0	9.44	
75 Chloroform	83	5.717	5.717	0.000	92	400080	10.0	9.13	
74 Tetrahydrofuran	42	5.717	5.717	0.000	38	28858	20.0	17.2	
76 1,1,1-Trichloroethane	97	5.961	5.961	0.000	98	389669	10.0	8.71	
77 Cyclohexane	56	6.031	6.031	0.000	90	289613	10.0	9.16	
78 1,1-Dichloropropene	75	6.153	6.153	0.000	97	307706	10.0	8.77	
79 Carbon tetrachloride	117	6.170	6.170	0.000	96	366323	10.0	8.38	
80 Isobutyl alcohol	41	6.310	6.310	0.000	89	43993	250.0	248.1	
81 Benzene	78	6.414	6.414	0.000	96	559079	10.0	9.36	
82 1,2-Dichloroethane	62	6.432	6.432	0.000	96	150297	10.0	8.70	
84 n-Heptane	43	6.711	6.711	0.000	93	336161	10.0	8.67	
86 Trichloroethene	95	7.233	7.233	0.000	99	263139	10.0	9.22	
88 2-Pentanone	43	7.477	7.477	0.000	98	301374	40.0	28.6	
89 Methylcyclohexane	55	7.477	7.477	0.000	90	275403	10.0	8.78	
90 1,2-Dichloropropane	63	7.529	7.529	0.000	96	191674	10.0	9.29	
92 Dibromomethane	93	7.704	7.704	0.000	96	130291	10.0	9.25	
93 1,4-Dioxane	88	7.721	7.721	0.000	30	13794	200.0	177.3	
94 Dichlorobromomethane	83	7.895	7.895	0.000	99	327179	10.0	8.62	
96 2-Chloroethyl vinyl ether	63	8.505	8.505	0.000	34	2284	10.0	16.7	
97 cis-1,3-Dichloropropene	75	8.505	8.505	0.000	96	284768	10.0	10.4	
98 4-Methyl-2-pentanone (MIBK	43	8.732	8.732	0.000	96	323438	40.0	37.3	
99 Toluene	91	8.975	8.975	0.000	99	673611	10.0	9.43	
100 trans-1,3-Dichloropropene	75	9.289	9.289	0.000	92	203105	10.0	9.35	
101 Ethyl methacrylate	69	9.428	9.428	0.000	87	148740	10.0	10.2	
102 1,1,2-Trichloroethane	97	9.550	9.550	0.000	91	143912	10.0	10.1	
103 Tetrachloroethene	164	9.759	9.759	0.000	97	251465	10.0	10.5	
104 1,3-Dichloropropane	76	9.794	9.794	0.000	86	217839	10.0	10.5	
105 2-Hexanone	43	9.934	9.934	0.000	96	196217	40.0	34.4	
108 Chlorodibromomethane	129	10.160	10.160	0.000	90	267619	10.0	9.98	
109 Ethylene Dibromide	107	10.334	10.334	0.000	98	173512	10.0	10.7	
110 1-Chlorohexane	91	11.118	11.118	0.000	92	335524	10.0	9.75	
111 Chlorobenzene	112	11.153	11.153	0.000	95	462828	10.0	10.2	
112 1,1,1,2-Tetrachloroethane	131	11.293	11.293	0.000	94	248704	10.0	9.95	
113 Ethylbenzene	106	11.327	11.327	0.000	98	226070	10.0	10.5	
114 m-Xylene & p-Xylene	106	11.519	11.519	0.000	0	317018	10.0	9.96	
115 o-Xylene	106	12.077	12.077	0.000	96	269691	10.0	10.1	
116 Styrene	104	12.111	12.111	0.000	93	419310	10.0	10.5	
117 Bromoform	173	12.355	12.355	0.000	95	151270	10.0	10.9	
118 Isopropylbenzene	105	12.582	12.582	0.000	96	884140	10.0	9.25	
120 Cyclohexanone	55	12.721	12.721	0.000	89	75582	400.0	382.4	
122 Bromobenzene	156	12.965	12.965	0.000	94	234018	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.983	12.983	0.000	95	185865	10.0	10.7	
123 1,2,3-Trichloropropane	110	13.035	13.035	0.000	81	42137	10.0	9.06	
124 trans-1,4-Dichloro-2-buten	53	13.052	13.052	0.000	69	29985	10.0	9.08	
125 N-Propylbenzene	120	13.105	13.105	0.000	99	203069	10.0	8.82	
126 2-Chlorotoluene	126	13.209	13.209	0.000	97	171735	10.0	9.16	
127 1,3,5-Trimethylbenzene	105	13.314	13.314	0.000	93	679199	10.0	9.27	
128 4-Chlorotoluene	126	13.331	13.331	0.000	98	216775	10.0	9.71	
129 tert-Butylbenzene	119	13.697	13.697	0.000	92	747816	10.0	9.29	
130 1,2,4-Trimethylbenzene	105	13.749	13.749	0.000	96	627533	10.0	9.46	
131 sec-Butylbenzene	134	13.941	13.941	0.000	94	190862	10.0	9.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.063	14.063	0.000	98	316554	10.0	10.2	
133 4-Isopropyltoluene	119	14.115	14.115	0.000	97	822150	10.0	9.31	
134 1,4-Dichlorobenzene	146	14.167	14.167	0.000	94	531229	10.0	10.1	
137 n-Butylbenzene	91	14.551	14.551	0.000	98	807701	10.0	9.24	
138 1,2-Dichlorobenzene	146	14.568	14.568	0.000	98	353924	10.0	10.1	
139 1,2-Dibromo-3-Chloropropan	157	15.369	15.369	0.000	89	33109	10.0	10.3	
141 1,2,4-Trichlorobenzene	180	16.119	16.119	0.000	94	214480	10.0	9.80	
142 Hexachlorobutadiene	225	16.275	16.275	0.000	98	225715	10.0	9.09	
143 Naphthalene	128	16.345	16.345	0.000	97	200278	10.0	9.18	
144 1,2,3-Trichlorobenzene	180	16.572	16.572	0.000	96	150795	10.0	9.01	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	38.7	
S 146 Xylenes, Total (URS)	1				0		20.0	20.1	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 150 Xylenes, Total	106				0		20.0	20.1	
S 147 Total BTEX	1				0			49.4	

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL
MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL

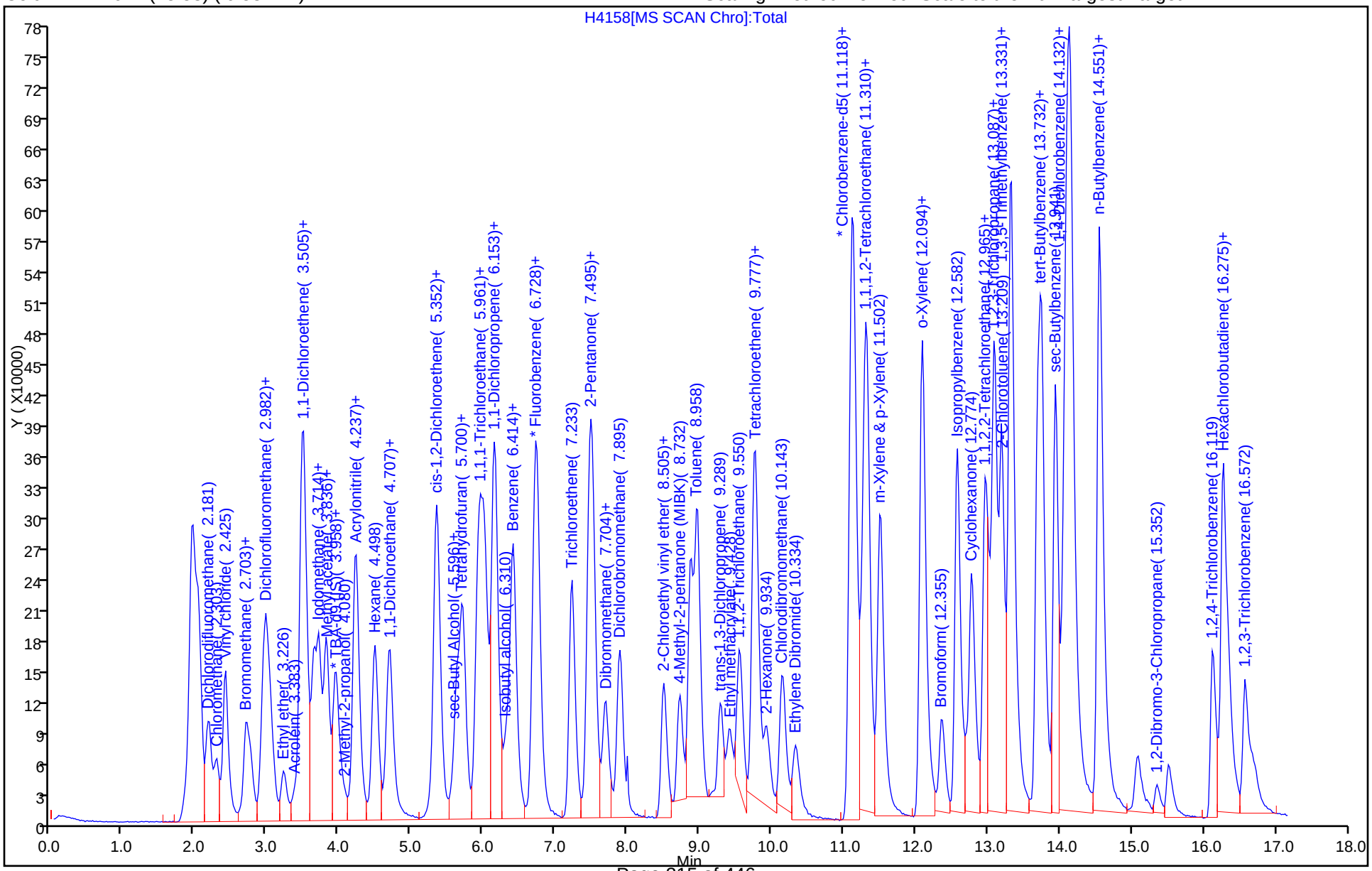
Report Date: 12-Feb-2018 17:40:17 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D

Injection Date:	12-Feb-2018 08:05:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/2 Calibration Date: 02/12/2018 08:05

Instrument ID: VMS_H Calib Start Date: 11/12/2017 14:49

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 11/12/2017 17:01

Lab File ID: H4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0015		177	200	-11.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:05:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:16 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:22:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.975	0.000	0	103872	250.0	250.0	
* 2 Fluorobenzene	96	6.763	6.763	0.000	99	589813	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.118	11.118	0.000	87	145734	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.132	14.132	0.000	95	267472	12.5	12.5	
28 Dichlorodifluoromethane	85	2.181	2.181	0.000	97	339423	10.0	9.80	
30 Chloromethane	50	2.303	2.303	0.000	98	148520	10.0	9.56	
32 Vinyl chloride	62	2.425	2.425	0.000	98	165860	10.0	9.61	
35 Bromomethane	94	2.703	2.703	0.000	91	185808	10.0	10.3	
36 Chloroethane	64	2.773	2.773	0.000	99	105423	10.0	10.3	
37 Dichlorofluoromethane	67	2.947	2.947	0.000	97	390744	10.0	9.23	
38 Trichlorofluoromethane	101	3.000	3.000	0.000	99	432606	10.0	9.27	
40 Ethyl ether	59	3.226	3.226	0.000	91	78700	10.0	9.84	
44 Acrolein	56	3.383	3.383	0.000	97	60618	100.0	122.3	
45 1,1-Dichloroethene	96	3.487	3.487	0.000	98	193575	10.0	9.64	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.505	0.000	96	280566	10.0	9.55	
47 Acetone	43	3.522	3.522	0.000	32	44345	40.0	37.4	
48 Iodomethane	142	3.662	3.662	0.000	100	481990	10.0	9.38	
50 Carbon disulfide	76	3.731	3.731	0.000	99	647194	10.0	9.38	
52 3-Chloro-1-propene	41	3.818	3.818	0.000	93	248278	10.0	9.57	
53 Methyl acetate	43	3.836	3.836	0.000	97	193874	50.0	50.6	
54 Methylene Chloride	84	3.958	3.958	0.000	90	164260	10.0	10.3	
55 2-Methyl-2-propanol	59	4.080	4.080	0.000	93	62484	100.0	143.1	
57 Acrylonitrile	53	4.202	4.202	0.000	97	106639	100.0	98.6	
58 trans-1,2-Dichloroethene	96	4.237	4.237	0.000	99	205653	10.0	9.32	
56 Methyl tert-butyl ether	73	4.237	4.237	0.000	92	272592	10.0	8.99	
59 Hexane	57	4.498	4.498	0.000	94	255190	10.0	9.59	
60 1,1-Dichloroethane	63	4.690	4.690	0.000	95	324696	10.0	8.80	
61 Vinyl acetate	43	4.724	4.724	0.000	96	344991	20.0	20.7	
66 2,2-Dichloropropane	77	5.352	5.352	0.000	87	342533	10.0	9.15	
65 cis-1,2-Dichloroethene	96	5.352	5.352	0.000	81	210924	10.0	9.35	
67 2-Butanone (MEK)	43	5.369	5.369	0.000	44	83894	40.0	36.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.596	5.596	0.000	96	136179	300.0	300.2	
73 Chlorobromomethane	128	5.648	5.648	0.000	94	103643	10.0	9.44	
75 Chloroform	83	5.717	5.717	0.000	92	400080	10.0	9.13	
74 Tetrahydrofuran	42	5.717	5.717	0.000	38	28858	20.0	17.2	
76 1,1,1-Trichloroethane	97	5.961	5.961	0.000	98	389669	10.0	8.71	
77 Cyclohexane	56	6.031	6.031	0.000	90	289613	10.0	9.16	
78 1,1-Dichloropropene	75	6.153	6.153	0.000	97	307706	10.0	8.77	
79 Carbon tetrachloride	117	6.170	6.170	0.000	96	366323	10.0	8.38	
80 Isobutyl alcohol	41	6.310	6.310	0.000	89	43993	250.0	248.1	
81 Benzene	78	6.414	6.414	0.000	96	559079	10.0	9.36	
82 1,2-Dichloroethane	62	6.432	6.432	0.000	96	150297	10.0	8.70	
84 n-Heptane	43	6.711	6.711	0.000	93	336161	10.0	8.67	
86 Trichloroethene	95	7.233	7.233	0.000	99	263139	10.0	9.22	
88 2-Pentanone	43	7.477	7.477	0.000	98	301374	40.0	28.6	
89 Methylcyclohexane	55	7.477	7.477	0.000	90	275403	10.0	8.78	
90 1,2-Dichloropropane	63	7.529	7.529	0.000	96	191674	10.0	9.29	
92 Dibromomethane	93	7.704	7.704	0.000	96	130291	10.0	9.25	
93 1,4-Dioxane	88	7.721	7.721	0.000	30	13794	200.0	177.3	
94 Dichlorobromomethane	83	7.895	7.895	0.000	99	327179	10.0	8.62	
96 2-Chloroethyl vinyl ether	63	8.505	8.505	0.000	34	2284	10.0	16.7	
97 cis-1,3-Dichloropropene	75	8.505	8.505	0.000	96	284768	10.0	10.4	
98 4-Methyl-2-pentanone (MIBK	43	8.732	8.732	0.000	96	323438	40.0	37.3	
99 Toluene	91	8.975	8.975	0.000	99	673611	10.0	9.43	
100 trans-1,3-Dichloropropene	75	9.289	9.289	0.000	92	203105	10.0	9.35	
101 Ethyl methacrylate	69	9.428	9.428	0.000	87	148740	10.0	10.2	
102 1,1,2-Trichloroethane	97	9.550	9.550	0.000	91	143912	10.0	10.1	
103 Tetrachloroethene	164	9.759	9.759	0.000	97	251465	10.0	10.5	
104 1,3-Dichloropropane	76	9.794	9.794	0.000	86	217839	10.0	10.5	
105 2-Hexanone	43	9.934	9.934	0.000	96	196217	40.0	34.4	
108 Chlorodibromomethane	129	10.160	10.160	0.000	90	267619	10.0	9.98	
109 Ethylene Dibromide	107	10.334	10.334	0.000	98	173512	10.0	10.7	
110 1-Chlorohexane	91	11.118	11.118	0.000	92	335524	10.0	9.75	
111 Chlorobenzene	112	11.153	11.153	0.000	95	462828	10.0	10.2	
112 1,1,1,2-Tetrachloroethane	131	11.293	11.293	0.000	94	248704	10.0	9.95	
113 Ethylbenzene	106	11.327	11.327	0.000	98	226070	10.0	10.5	
114 m-Xylene & p-Xylene	106	11.519	11.519	0.000	0	317018	10.0	9.96	
115 o-Xylene	106	12.077	12.077	0.000	96	269691	10.0	10.1	
116 Styrene	104	12.111	12.111	0.000	93	419310	10.0	10.5	
117 Bromoform	173	12.355	12.355	0.000	95	151270	10.0	10.9	
118 Isopropylbenzene	105	12.582	12.582	0.000	96	884140	10.0	9.25	
120 Cyclohexanone	55	12.721	12.721	0.000	89	75582	400.0	382.4	
122 Bromobenzene	156	12.965	12.965	0.000	94	234018	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.983	12.983	0.000	95	185865	10.0	10.7	
123 1,2,3-Trichloropropane	110	13.035	13.035	0.000	81	42137	10.0	9.06	
124 trans-1,4-Dichloro-2-buten	53	13.052	13.052	0.000	69	29985	10.0	9.08	
125 N-Propylbenzene	120	13.105	13.105	0.000	99	203069	10.0	8.82	
126 2-Chlorotoluene	126	13.209	13.209	0.000	97	171735	10.0	9.16	
127 1,3,5-Trimethylbenzene	105	13.314	13.314	0.000	93	679199	10.0	9.27	
128 4-Chlorotoluene	126	13.331	13.331	0.000	98	216775	10.0	9.71	
129 tert-Butylbenzene	119	13.697	13.697	0.000	92	747816	10.0	9.29	
130 1,2,4-Trimethylbenzene	105	13.749	13.749	0.000	96	627533	10.0	9.46	
131 sec-Butylbenzene	134	13.941	13.941	0.000	94	190862	10.0	9.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.063	14.063	0.000	98	316554	10.0	10.2	
133 4-Isopropyltoluene	119	14.115	14.115	0.000	97	822150	10.0	9.31	
134 1,4-Dichlorobenzene	146	14.167	14.167	0.000	94	531229	10.0	10.1	
137 n-Butylbenzene	91	14.551	14.551	0.000	98	807701	10.0	9.24	
138 1,2-Dichlorobenzene	146	14.568	14.568	0.000	98	353924	10.0	10.1	
139 1,2-Dibromo-3-Chloropropan	157	15.369	15.369	0.000	89	33109	10.0	10.3	
141 1,2,4-Trichlorobenzene	180	16.119	16.119	0.000	94	214480	10.0	9.80	
142 Hexachlorobutadiene	225	16.275	16.275	0.000	98	225715	10.0	9.09	
143 Naphthalene	128	16.345	16.345	0.000	97	200278	10.0	9.18	
144 1,2,3-Trichlorobenzene	180	16.572	16.572	0.000	96	150795	10.0	9.01	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	38.7	
S 146 Xylenes, Total (URS)	1				0		20.0	20.1	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 150 Xylenes, Total	106				0		20.0	20.1	
S 147 Total BTEX	1				0			49.4	

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL
MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL

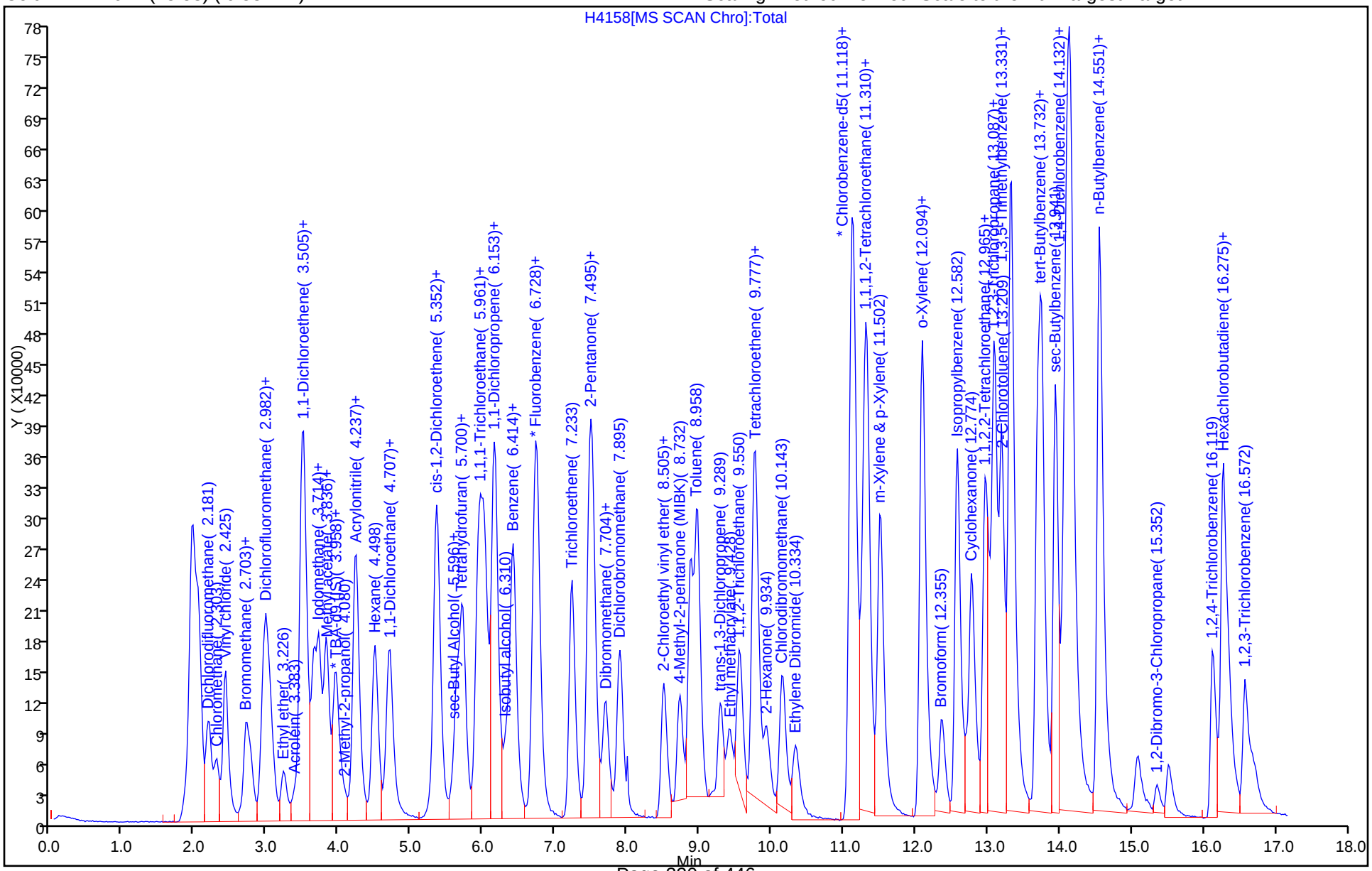
Report Date: 12-Feb-2018 17:40:17 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D

Injection Date:	12-Feb-2018 08:05:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/2 Calibration Date: 02/12/2018 08:05

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.7337	0.7193		9.80	10.0	-2.0	20.0
Chloromethane	Ave	0.3292	0.3148	0.1000	9.56	10.0	-4.4	20.0
Vinyl chloride	Ave	0.3659	0.3515		9.61	10.0	-3.9	20.0
Bromomethane	Lin2		0.3938		10.3	10.0	2.6	20.0
Chloroethane	Lin2		0.2234		10.3	10.0	2.9	20.0
Dichlorofluoromethane	Ave	0.8970	0.8281		9.23	10.0	-7.7	20.0
Trichlorofluoromethane	Ave	0.9891	0.9168		9.27	10.0	-7.3	20.0
Ethyl ether	Ave	0.1695	0.1668		9.84	10.0	-1.6	20.0
Acrolein	Ave	0.0105	0.0129		122	100	22.4*	20.0
1,1-Dichloroethene	Ave	0.4254	0.4103		9.64	10.0	-3.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.6224	0.5946		9.55	10.0	-4.5	20.0
Acetone	Ave	0.0251	0.0235		37.4	40.0	-6.5	20.0
Methyl iodide	Ave	1.089	1.021		9.38	10.0	-6.2	20.0
Carbon disulfide	Ave	1.462	1.372		9.38	10.0	-6.2	20.0
3-Chloro-1-propene	Ave	0.5497	0.5262		9.57	10.0	-4.3	20.0
Methyl acetate	Ave	0.0811	0.0822		50.6	50.0	1.3	20.0
Methylene Chloride	Lin2		0.3481		10.3	10.0	3.3	20.0
t-Butyl alcohol	Lin1		1.504		143	100	43.1*	20.0
Acrylonitrile	Ave	0.0229	0.0226		98.6	100	-1.4	20.0
Methyl tert-butyl ether	Ave	0.6427	0.5777		8.99	10.0	-10.1	20.0
trans-1,2-Dichloroethene	Ave	0.4677	0.4358		9.32	10.0	-6.8	20.0
Hexane	Ave	2.283	2.189		9.59	10.0	-4.1	20.0
1,1-Dichloroethane	Ave	0.7816	0.6881	0.1000	8.80	10.0	-12.0	20.0
Vinyl acetate	Ave	0.3529	0.3656		20.7	20.0	3.6	20.0
2,2-Dichloropropane	Qua		0.7259		9.15	10.0	-8.5	20.0
cis-1,2-Dichloroethene	Ave	0.4780	0.4470		9.35	10.0	-6.5	20.0
2-Butanone (MEK)	Ave	0.0493	0.0445		36.1	40.0	-9.8	20.0
sec-Butyl Alcohol	Ave	1.092	1.093		300	300	0.0	20.0
Bromochloromethane	Ave	0.2326	0.2197		9.44	10.0	-5.6	20.0
Chloroform	Ave	0.9291	0.8479		9.13	10.0	-8.7	20.0
Tetrahydrofuran	Lin1		0.0306		17.2	20.0	-13.8	20.0
1,1,1-Trichloroethane	Ave	0.9483	0.8258		8.71	10.0	-12.9	20.0
Cyclohexane	Lin2		0.6138		9.16	10.0	-8.4	20.0
1,1-Dichloropropene	Ave	0.7438	0.6521		8.77	10.0	-12.3	20.0
Carbon tetrachloride	Ave	0.9266	0.7764		8.38	10.0	-16.2	20.0
Isobutyl alcohol	Ave	0.4268	0.4235		248	250	-0.8	20.0
Benzene	Ave	1.265	1.185		9.36	10.0	-6.4	20.0
1,2-Dichloroethane	Ave	0.3661	0.3185		8.70	10.0	-13.0	20.0
Trichloroethene	Ave	0.6050	0.5577		9.22	10.0	-7.8	20.0
2-Pentanone	Ave	0.2236	0.1597		28.6	40.0	-28.6*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/2 Calibration Date: 02/12/2018 08:05

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6649	0.5837		8.78	10.0	-12.2	20.0
1,2-Dichloropropane	Ave	0.4374	0.4062		9.29	10.0	-7.1	20.0
Dibromomethane	Ave	0.2986	0.2761		9.25	10.0	-7.5	20.0
Bromodichloromethane	Ave	0.8040	0.6934		8.62	10.0	-13.8	20.0
cis-1,3-Dichloropropene	Ave	2.342	2.443		10.4	10.0	4.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1839	0.1714		37.3	40.0	-6.8	20.0
Toluene	Ave	1.513	1.428		9.43	10.0	-5.7	20.0
trans-1,3-Dichloropropene	Ave	0.4603	0.4304		9.35	10.0	-6.5	20.0
Ethyl methacrylate	Ave	1.251	1.276		10.2	10.0	2.0	20.0
1,1,2-Trichloroethane	Lin2		0.3050		10.1	10.0	0.6	20.0
Tetrachloroethene	Ave	2.055	2.157		10.5	10.0	4.9	20.0
1,3-Dichloropropane	Ave	1.776	1.868		10.5	10.0	5.2	20.0
2-Hexanone	Lin1		0.4208		34.4	40.0	-14.0	20.0
Dibromochloromethane	Ave	2.301	2.295		9.98	10.0	-0.2	20.0
1,2-Dibromoethane	Ave	1.386	1.488		10.7	10.0	7.3	20.0
1-Chlorohexane	Ave	2.952	2.878		9.75	10.0	-2.5	20.0
Chlorobenzene	Ave	3.894	3.970	0.3000	10.2	10.0	1.9	20.0
1,1,1,2-Tetrachloroethane	Ave	2.143	2.133		9.95	10.0	-0.5	20.0
Ethylbenzene	Ave	1.847	1.939		10.5	10.0	5.0	20.0
m,p-Xylene	Ave	2.730	2.719		9.96	10.0	-0.4	20.0
o-Xylene	Ave	2.290	2.313		10.1	10.0	1.0	20.0
Styrene	Ave	3.417	3.597		10.5	10.0	5.2	20.0
Bromoform	Ave	1.187	1.297	0.1000	10.9	10.0	9.3	20.0
Isopropylbenzene	Ave	4.467	4.132		9.25	10.0	-7.5	20.0
Cyclohexanone	Ave	0.0170	0.0162		382	400	-4.4	20.0
Bromobenzene	Ave	1.084	1.094		10.1	10.0	0.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8107	0.8686	0.3000	10.7	10.0	7.1	20.0
1,2,3-Trichloropropane	Lin1		0.1969		9.06	10.0	-9.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1544	0.1401		9.08	10.0	-9.2	20.0
N-Propylbenzene	Ave	1.076	0.9490		8.82	10.0	-11.8	20.0
2-Chlorotoluene	Ave	0.8765	0.8026		9.16	10.0	-8.4	20.0
1,3,5-Trimethylbenzene	Ave	3.424	3.174		9.27	10.0	-7.3	20.0
4-Chlorotoluene	Ave	1.043	1.013		9.71	10.0	-2.9	20.0
tert-Butylbenzene	Ave	3.762	3.495		9.29	10.0	-7.1	20.0
1,2,4-Trimethylbenzene	Ave	3.099	2.933		9.46	10.0	-5.4	20.0
sec-Butylbenzene	Ave	0.9779	0.8920		9.12	10.0	-8.8	20.0
1,3-Dichlorobenzene	Ave	1.452	1.479		10.2	10.0	1.9	20.0
4-Isopropyltoluene	Ave	4.125	3.842		9.31	10.0	-6.9	20.0
1,4-Dichlorobenzene	Ave	2.458	2.483		10.1	10.0	1.0	20.0
n-Butylbenzene	Ave	4.086	3.775		9.24	10.0	-7.6	20.0
1,2-Dichlorobenzene	Ave	1.634	1.654		10.1	10.0	1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/2 Calibration Date: 02/12/2018 08:05

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4158.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1503	0.1547		10.3	10.0	3.0	20.0
1,2,4-Trichlorobenzene	Ave	1.023	1.002		9.80	10.0	-2.0	20.0
Hexachlorobutadiene	Ave	1.160	1.055		9.09	10.0	-9.1	20.0
Naphthalene	Ave	1.020	0.9360		9.18	10.0	-8.2	20.0
1,2,3-Trichlorobenzene	Ave	0.7818	0.7047		9.01	10.0	-9.9	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:05:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub52

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:16 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:22:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.975	0.000	0	103872	250.0	250.0	
* 2 Fluorobenzene	96	6.763	6.763	0.000	99	589813	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.118	11.118	0.000	87	145734	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.132	14.132	0.000	95	267472	12.5	12.5	
28 Dichlorodifluoromethane	85	2.181	2.181	0.000	97	339423	10.0	9.80	
30 Chloromethane	50	2.303	2.303	0.000	98	148520	10.0	9.56	
32 Vinyl chloride	62	2.425	2.425	0.000	98	165860	10.0	9.61	
35 Bromomethane	94	2.703	2.703	0.000	91	185808	10.0	10.3	
36 Chloroethane	64	2.773	2.773	0.000	99	105423	10.0	10.3	
37 Dichlorofluoromethane	67	2.947	2.947	0.000	97	390744	10.0	9.23	
38 Trichlorofluoromethane	101	3.000	3.000	0.000	99	432606	10.0	9.27	
40 Ethyl ether	59	3.226	3.226	0.000	91	78700	10.0	9.84	
44 Acrolein	56	3.383	3.383	0.000	97	60618	100.0	122.3	
45 1,1-Dichloroethene	96	3.487	3.487	0.000	98	193575	10.0	9.64	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.505	0.000	96	280566	10.0	9.55	
47 Acetone	43	3.522	3.522	0.000	32	44345	40.0	37.4	
48 Iodomethane	142	3.662	3.662	0.000	100	481990	10.0	9.38	
50 Carbon disulfide	76	3.731	3.731	0.000	99	647194	10.0	9.38	
52 3-Chloro-1-propene	41	3.818	3.818	0.000	93	248278	10.0	9.57	
53 Methyl acetate	43	3.836	3.836	0.000	97	193874	50.0	50.6	
54 Methylene Chloride	84	3.958	3.958	0.000	90	164260	10.0	10.3	
55 2-Methyl-2-propanol	59	4.080	4.080	0.000	93	62484	100.0	143.1	
57 Acrylonitrile	53	4.202	4.202	0.000	97	106639	100.0	98.6	
58 trans-1,2-Dichloroethene	96	4.237	4.237	0.000	99	205653	10.0	9.32	
56 Methyl tert-butyl ether	73	4.237	4.237	0.000	92	272592	10.0	8.99	
59 Hexane	57	4.498	4.498	0.000	94	255190	10.0	9.59	
60 1,1-Dichloroethane	63	4.690	4.690	0.000	95	324696	10.0	8.80	
61 Vinyl acetate	43	4.724	4.724	0.000	96	344991	20.0	20.7	
66 2,2-Dichloropropane	77	5.352	5.352	0.000	87	342533	10.0	9.15	
65 cis-1,2-Dichloroethene	96	5.352	5.352	0.000	81	210924	10.0	9.35	
67 2-Butanone (MEK)	43	5.369	5.369	0.000	44	83894	40.0	36.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.596	5.596	0.000	96	136179	300.0	300.2	
73 Chlorobromomethane	128	5.648	5.648	0.000	94	103643	10.0	9.44	
75 Chloroform	83	5.717	5.717	0.000	92	400080	10.0	9.13	
74 Tetrahydrofuran	42	5.717	5.717	0.000	38	28858	20.0	17.2	
76 1,1,1-Trichloroethane	97	5.961	5.961	0.000	98	389669	10.0	8.71	
77 Cyclohexane	56	6.031	6.031	0.000	90	289613	10.0	9.16	
78 1,1-Dichloropropene	75	6.153	6.153	0.000	97	307706	10.0	8.77	
79 Carbon tetrachloride	117	6.170	6.170	0.000	96	366323	10.0	8.38	
80 Isobutyl alcohol	41	6.310	6.310	0.000	89	43993	250.0	248.1	
81 Benzene	78	6.414	6.414	0.000	96	559079	10.0	9.36	
82 1,2-Dichloroethane	62	6.432	6.432	0.000	96	150297	10.0	8.70	
84 n-Heptane	43	6.711	6.711	0.000	93	336161	10.0	8.67	
86 Trichloroethene	95	7.233	7.233	0.000	99	263139	10.0	9.22	
88 2-Pentanone	43	7.477	7.477	0.000	98	301374	40.0	28.6	
89 Methylcyclohexane	55	7.477	7.477	0.000	90	275403	10.0	8.78	
90 1,2-Dichloropropane	63	7.529	7.529	0.000	96	191674	10.0	9.29	
92 Dibromomethane	93	7.704	7.704	0.000	96	130291	10.0	9.25	
93 1,4-Dioxane	88	7.721	7.721	0.000	30	13794	200.0	177.3	
94 Dichlorobromomethane	83	7.895	7.895	0.000	99	327179	10.0	8.62	
96 2-Chloroethyl vinyl ether	63	8.505	8.505	0.000	34	2284	10.0	16.7	
97 cis-1,3-Dichloropropene	75	8.505	8.505	0.000	96	284768	10.0	10.4	
98 4-Methyl-2-pentanone (MIBK	43	8.732	8.732	0.000	96	323438	40.0	37.3	
99 Toluene	91	8.975	8.975	0.000	99	673611	10.0	9.43	
100 trans-1,3-Dichloropropene	75	9.289	9.289	0.000	92	203105	10.0	9.35	
101 Ethyl methacrylate	69	9.428	9.428	0.000	87	148740	10.0	10.2	
102 1,1,2-Trichloroethane	97	9.550	9.550	0.000	91	143912	10.0	10.1	
103 Tetrachloroethene	164	9.759	9.759	0.000	97	251465	10.0	10.5	
104 1,3-Dichloropropane	76	9.794	9.794	0.000	86	217839	10.0	10.5	
105 2-Hexanone	43	9.934	9.934	0.000	96	196217	40.0	34.4	
108 Chlorodibromomethane	129	10.160	10.160	0.000	90	267619	10.0	9.98	
109 Ethylene Dibromide	107	10.334	10.334	0.000	98	173512	10.0	10.7	
110 1-Chlorohexane	91	11.118	11.118	0.000	92	335524	10.0	9.75	
111 Chlorobenzene	112	11.153	11.153	0.000	95	462828	10.0	10.2	
112 1,1,1,2-Tetrachloroethane	131	11.293	11.293	0.000	94	248704	10.0	9.95	
113 Ethylbenzene	106	11.327	11.327	0.000	98	226070	10.0	10.5	
114 m-Xylene & p-Xylene	106	11.519	11.519	0.000	0	317018	10.0	9.96	
115 o-Xylene	106	12.077	12.077	0.000	96	269691	10.0	10.1	
116 Styrene	104	12.111	12.111	0.000	93	419310	10.0	10.5	
117 Bromoform	173	12.355	12.355	0.000	95	151270	10.0	10.9	
118 Isopropylbenzene	105	12.582	12.582	0.000	96	884140	10.0	9.25	
120 Cyclohexanone	55	12.721	12.721	0.000	89	75582	400.0	382.4	
122 Bromobenzene	156	12.965	12.965	0.000	94	234018	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.983	12.983	0.000	95	185865	10.0	10.7	
123 1,2,3-Trichloropropane	110	13.035	13.035	0.000	81	42137	10.0	9.06	
124 trans-1,4-Dichloro-2-buten	53	13.052	13.052	0.000	69	29985	10.0	9.08	
125 N-Propylbenzene	120	13.105	13.105	0.000	99	203069	10.0	8.82	
126 2-Chlorotoluene	126	13.209	13.209	0.000	97	171735	10.0	9.16	
127 1,3,5-Trimethylbenzene	105	13.314	13.314	0.000	93	679199	10.0	9.27	
128 4-Chlorotoluene	126	13.331	13.331	0.000	98	216775	10.0	9.71	
129 tert-Butylbenzene	119	13.697	13.697	0.000	92	747816	10.0	9.29	
130 1,2,4-Trimethylbenzene	105	13.749	13.749	0.000	96	627533	10.0	9.46	
131 sec-Butylbenzene	134	13.941	13.941	0.000	94	190862	10.0	9.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.063	14.063	0.000	98	316554	10.0	10.2	
133 4-Isopropyltoluene	119	14.115	14.115	0.000	97	822150	10.0	9.31	
134 1,4-Dichlorobenzene	146	14.167	14.167	0.000	94	531229	10.0	10.1	
137 n-Butylbenzene	91	14.551	14.551	0.000	98	807701	10.0	9.24	
138 1,2-Dichlorobenzene	146	14.568	14.568	0.000	98	353924	10.0	10.1	
139 1,2-Dibromo-3-Chloropropan	157	15.369	15.369	0.000	89	33109	10.0	10.3	
141 1,2,4-Trichlorobenzene	180	16.119	16.119	0.000	94	214480	10.0	9.80	
142 Hexachlorobutadiene	225	16.275	16.275	0.000	98	225715	10.0	9.09	
143 Naphthalene	128	16.345	16.345	0.000	97	200278	10.0	9.18	
144 1,2,3-Trichlorobenzene	180	16.572	16.572	0.000	96	150795	10.0	9.01	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	38.7	
S 146 Xylenes, Total (URS)	1				0		20.0	20.1	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 150 Xylenes, Total	106				0		20.0	20.1	
S 147 Total BTEX	1				0			49.4	

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL
MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL

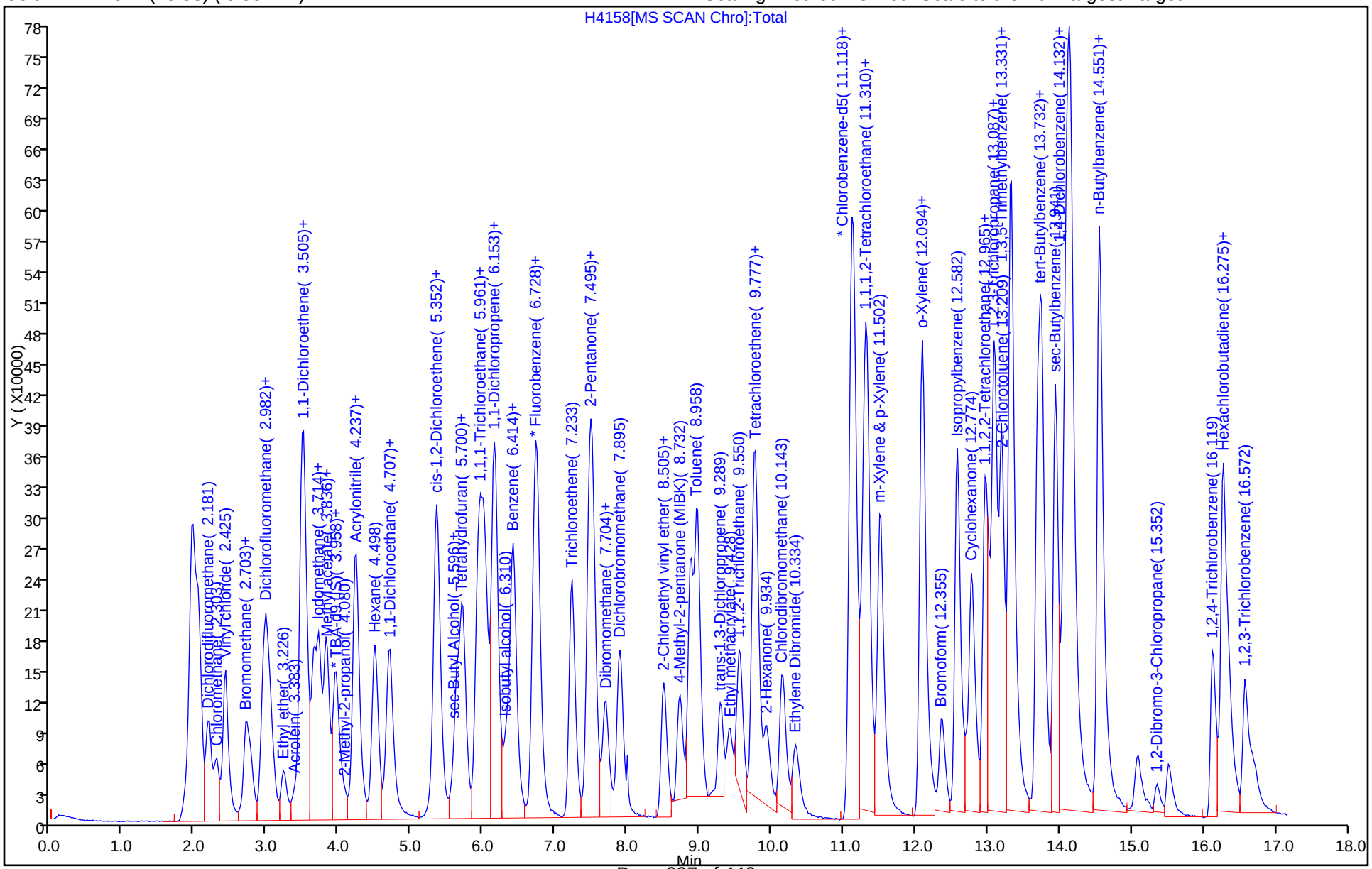
Report Date: 12-Feb-2018 17:40:17 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4158.D

Injection Date:	12-Feb-2018 08:05:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/3 Calibration Date: 02/12/2018 08:27

Instrument ID: VMS_H Calib Start Date: 10/22/2017 14:54

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/22/2017 19:57

Lab File ID: H4159.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0058	0.0039		76.3	100	-31.7*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:27:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 08:53:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.996	3.996	0.000	0	97057	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	565486	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.104	11.104	0.000	90	151899	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.153	14.153	0.000	96	258185	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.912	5.912	0.000	93	293003	9.50	10.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.330	6.330	0.000	0	130625	9.50	10.7	
$ 10 Toluene-d8 (Surr)	98	8.874	8.874	0.000	93	559332	9.50	9.49	
$ 11 4-Bromofluorobenzene (Surr	95	12.777	12.777	0.000	86	317459	9.50	8.84	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.177	3.177	0.000	92	26350	600.0	873.2	
43 Propene oxide	58	3.316	3.316	0.000	96	710371	1000.0	986.1	
49 Isopropyl alcohol	45	3.647	3.647	0.000	95	20961	100.0	91.4	
51 Acetonitrile	41	3.821	3.821	0.000	94	17829	100.0	76.3	
62 Isopropyl ether	87	4.745	4.745	0.000	97	135544	10.0	8.90	
63 2-Chloro-1,3-butadiene	53	4.780	4.780	0.000	89	246261	10.0	8.58	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	416758	10.0	8.55	
69 Ethyl acetate	43	5.424	5.424	0.000	99	104360	20.0	16.7	
70 Propionitrile	54	5.442	5.442	0.000	46	37506	100.0	92.4	
72 Methacrylonitrile	41	5.616	5.616	0.000	93	285965	100.0	86.2	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	383774	10.0	9.34	
85 n-Butanol	56	7.219	7.219	0.000	89	22017	250.0	216.4	
91 Methyl methacrylate	100	7.672	7.672	0.000	91	49381	20.0	17.1	
95 2-Nitropropane	41	8.194	8.194	0.000	97	21514	20.0	13.4	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.689	12.689	0.000	0	43054	20.0	15.6	
135 1,2,3-Trimethylbenzene	105	14.223	14.223	0.000	99	559015	10.0	8.92	
140 1,3,5-Trichlorobenzene	180	15.547	15.547	0.000	97	303085	10.0	9.29	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

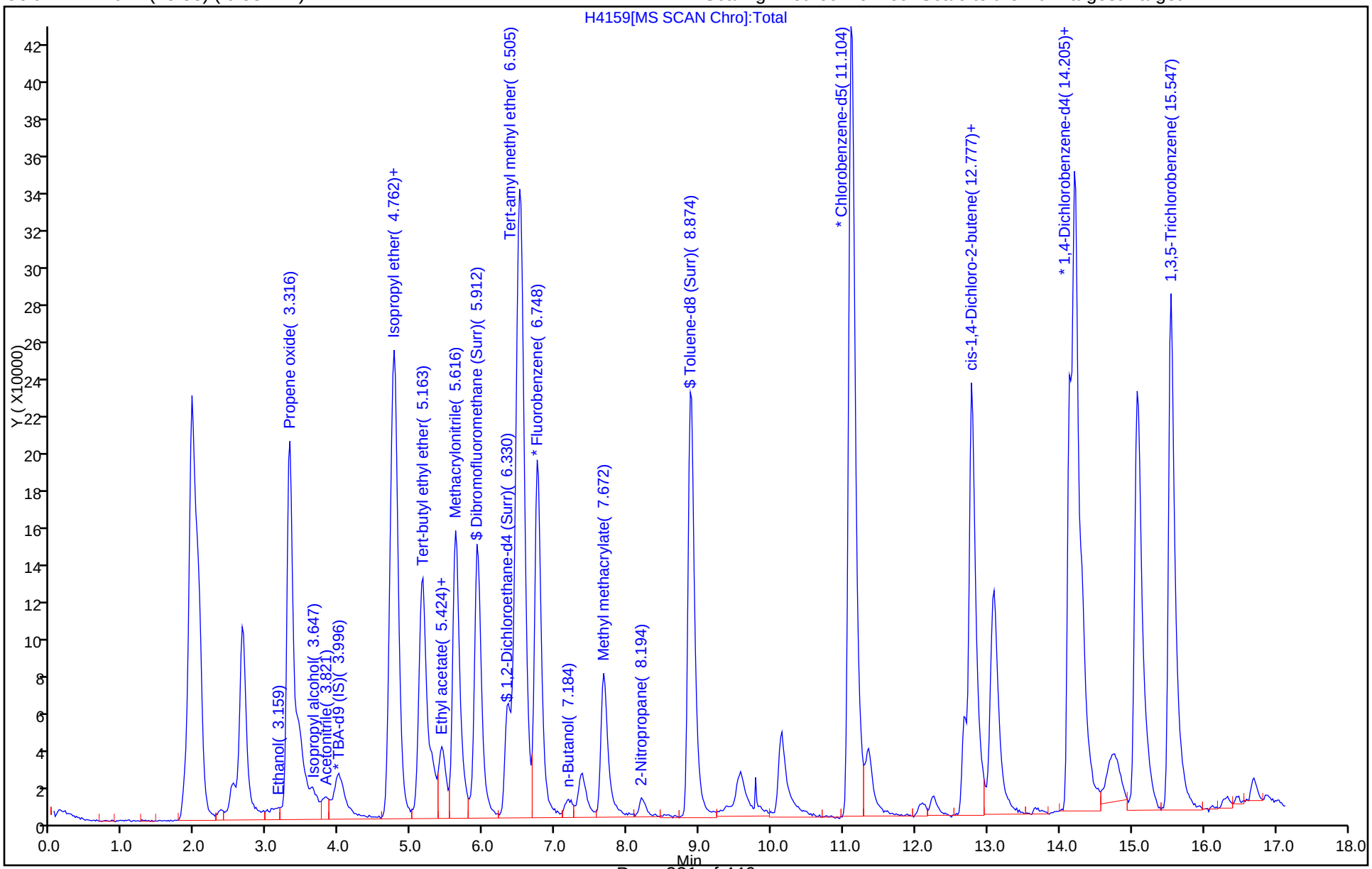
Report Date: 12-Feb-2018 17:40:18 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D

Injection Date:	12-Feb-2018 08:27:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/3 Calibration Date: 02/12/2018 08:27

Instrument ID: VMS_H Calib Start Date: 01/29/2018 13:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 15:25

Lab File ID: H4159.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin		0.0010		873	600	45.5*	20.0
Isopropyl alcohol	Ave	0.0051	0.0046		91.4	100	-8.6	20.0
Diisopropyl ether	Ave	0.3367	0.2996		8.90	10.0	-11.0	20.0
2-Chloro-1,3-butadiene	Ave	0.6344	0.5444		8.58	10.0	-14.2	20.0
Tert-butyl ethyl ether	Ave	1.077	0.9212		8.55	10.0	-14.5	20.0
Ethyl acetate	Ave	0.1381	0.1153		16.7	20.0	-16.5	20.0
Propionitrile	Lin2		0.0083		92.4	100	-7.6	20.0
Methacrylonitrile	Ave	0.0734	0.0632		86.2	100	-13.8	20.0
Tert-amyl methyl ether	Ave	0.9087	0.8483		9.34	10.0	-6.6	20.0
n-Butanol	Lin2		0.0020		216	250	-13.4	20.0
Methyl methacrylate	Ave	0.0638	0.0546		17.1	20.0	-14.5	20.0
2-Nitropropane	Ave	0.0354	0.0238		13.4	20.0	-32.8*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1339	0.1042		15.6	20.0	-22.1*	20.0
1,2,3-Trimethylbenzene	Ave	3.035	2.706		8.92	10.0	-10.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:27:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 08:53:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.996	3.996	0.000	0	97057	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	565486	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.104	11.104	0.000	90	151899	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.153	14.153	0.000	96	258185	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.912	5.912	0.000	93	293003	9.50	10.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.330	6.330	0.000	0	130625	9.50	10.7	
$ 10 Toluene-d8 (Surr)	98	8.874	8.874	0.000	93	559332	9.50	9.49	
$ 11 4-Bromofluorobenzene (Surr	95	12.777	12.777	0.000	86	317459	9.50	8.84	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.177	3.177	0.000	92	26350	600.0	873.2	
43 Propene oxide	58	3.316	3.316	0.000	96	710371	1000.0	986.1	
49 Isopropyl alcohol	45	3.647	3.647	0.000	95	20961	100.0	91.4	
51 Acetonitrile	41	3.821	3.821	0.000	94	17829	100.0	76.3	
62 Isopropyl ether	87	4.745	4.745	0.000	97	135544	10.0	8.90	
63 2-Chloro-1,3-butadiene	53	4.780	4.780	0.000	89	246261	10.0	8.58	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	416758	10.0	8.55	
69 Ethyl acetate	43	5.424	5.424	0.000	99	104360	20.0	16.7	
70 Propionitrile	54	5.442	5.442	0.000	46	37506	100.0	92.4	
72 Methacrylonitrile	41	5.616	5.616	0.000	93	285965	100.0	86.2	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	383774	10.0	9.34	
85 n-Butanol	56	7.219	7.219	0.000	89	22017	250.0	216.4	
91 Methyl methacrylate	100	7.672	7.672	0.000	91	49381	20.0	17.1	
95 2-Nitropropane	41	8.194	8.194	0.000	97	21514	20.0	13.4	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.689	12.689	0.000	0	43054	20.0	15.6	
135 1,2,3-Trimethylbenzene	105	14.223	14.223	0.000	99	559015	10.0	8.92	
140 1,3,5-Trichlorobenzene	180	15.547	15.547	0.000	97	303085	10.0	9.29	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

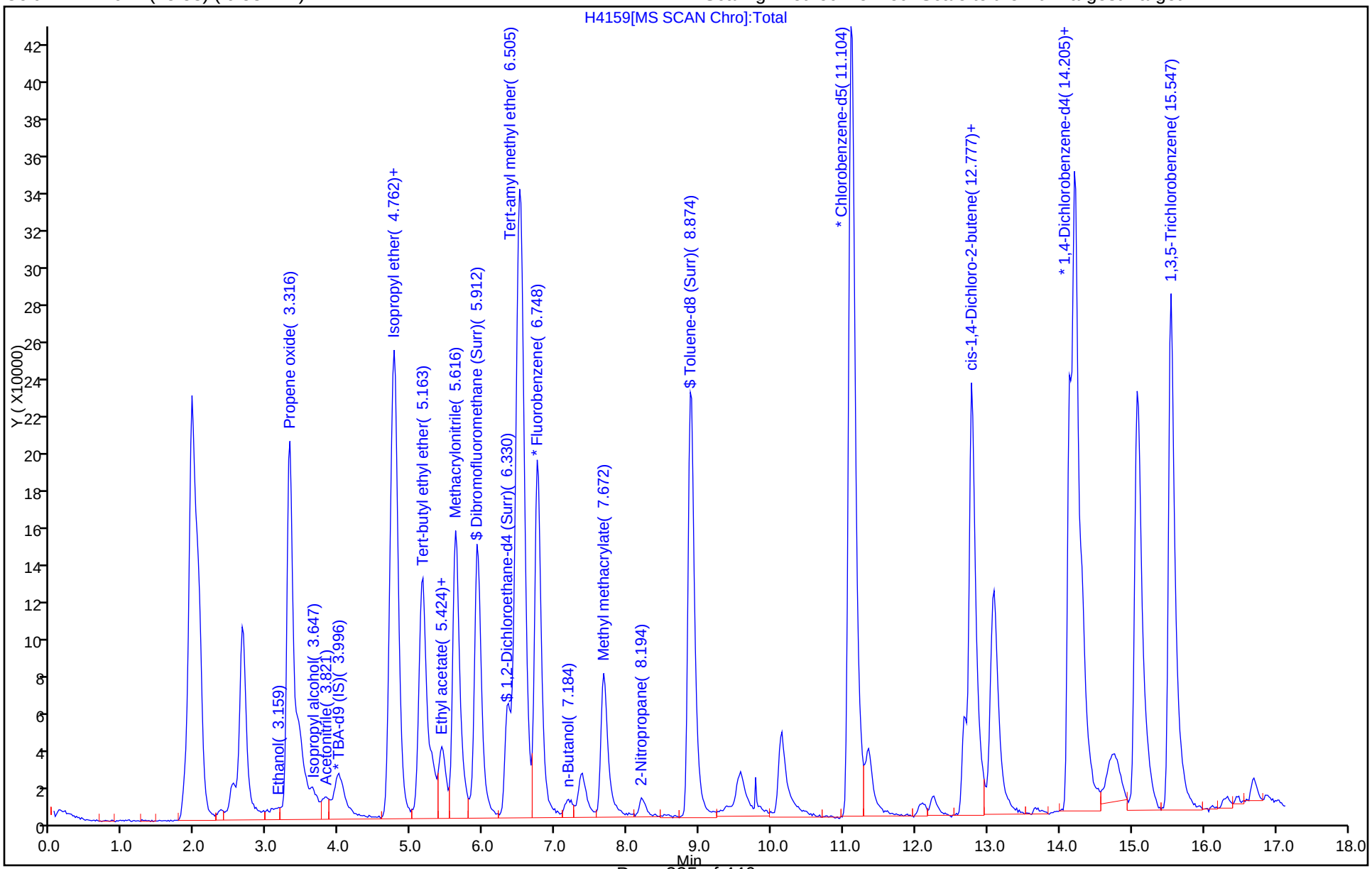
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D

Injection Date:	12-Feb-2018 08:27:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCV 280-404562/3 Calibration Date: 02/12/2018 08:27

Instrument ID: VMS_H Calib Start Date: 02/05/2018 08:05

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 02/05/2018 09:34

Lab File ID: H4159.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.6343	0.6818		10.2	9.50	7.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2702	0.3039		10.7	9.50	12.5	20.0
Toluene-d8 (Surr)	Ave	4.849	4.845		9.49	9.50	-0.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.739	1.618		8.84	9.50	-7.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 12-Feb-2018 08:27:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 08:53:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.996	3.996	0.000	0	97057	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	565486	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.104	11.104	0.000	90	151899	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.153	14.153	0.000	96	258185	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.912	5.912	0.000	93	293003	9.50	10.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.330	6.330	0.000	0	130625	9.50	10.7	
$ 10 Toluene-d8 (Surr)	98	8.874	8.874	0.000	93	559332	9.50	9.49	
$ 11 4-Bromofluorobenzene (Surr	95	12.777	12.777	0.000	86	317459	9.50	8.84	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.177	3.177	0.000	92	26350	600.0	873.2	
43 Propene oxide	58	3.316	3.316	0.000	96	710371	1000.0	986.1	
49 Isopropyl alcohol	45	3.647	3.647	0.000	95	20961	100.0	91.4	
51 Acetonitrile	41	3.821	3.821	0.000	94	17829	100.0	76.3	
62 Isopropyl ether	87	4.745	4.745	0.000	97	135544	10.0	8.90	
63 2-Chloro-1,3-butadiene	53	4.780	4.780	0.000	89	246261	10.0	8.58	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	416758	10.0	8.55	
69 Ethyl acetate	43	5.424	5.424	0.000	99	104360	20.0	16.7	
70 Propionitrile	54	5.442	5.442	0.000	46	37506	100.0	92.4	
72 Methacrylonitrile	41	5.616	5.616	0.000	93	285965	100.0	86.2	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	383774	10.0	9.34	
85 n-Butanol	56	7.219	7.219	0.000	89	22017	250.0	216.4	
91 Methyl methacrylate	100	7.672	7.672	0.000	91	49381	20.0	17.1	
95 2-Nitropropane	41	8.194	8.194	0.000	97	21514	20.0	13.4	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.689	12.689	0.000	0	43054	20.0	15.6	
135 1,2,3-Trimethylbenzene	105	14.223	14.223	0.000	99	559015	10.0	8.92	
140 1,3,5-Trichlorobenzene	180	15.547	15.547	0.000	97	303085	10.0	9.29	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

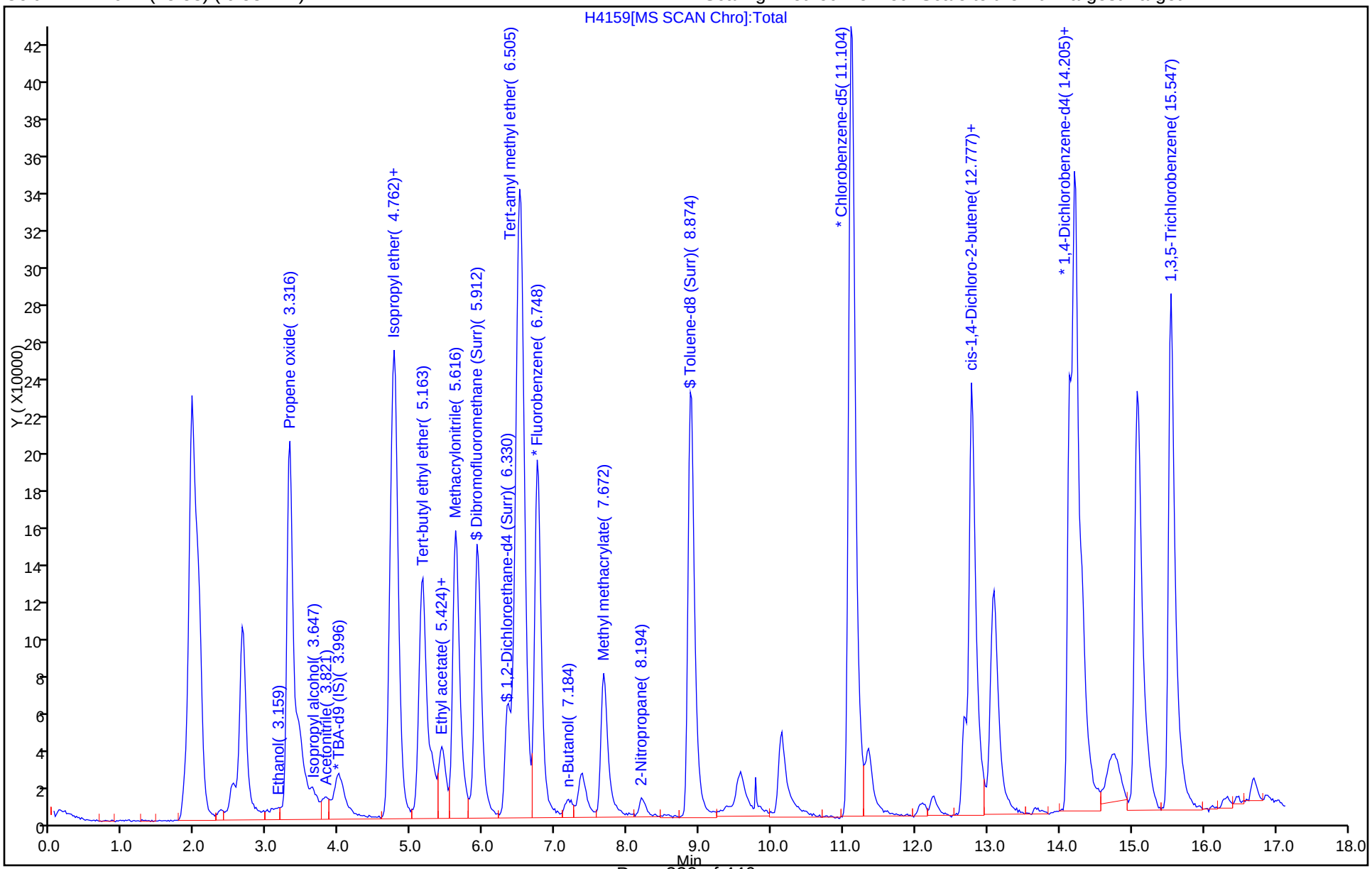
Report Date: 12-Feb-2018 17:40:18 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4159.D

Injection Date:	12-Feb-2018 08:27:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 04/04/2017 12:48

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2				1.60	10.0	-100.0*	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 16:55:30 ALS Bottle#: 34 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub70

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:13 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.980	3.975	0.005	0	79060	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.763	-0.012	98	532895	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	89	133894	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	96	244207	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.912	0.002	93	266008	9.50	9.84	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	118970	9.50	10.3	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	513925	9.50	9.89	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	310977	9.50	9.15	
28 Dichlorodifluoromethane	85	2.186	2.181	0.005	97	256737	10.0	8.21	
30 Chloromethane	50	2.290	2.303	-0.013	99	114280	10.0	8.14	
32 Vinyl chloride	62	2.412	2.425	-0.013	98	127274	10.0	8.16	
35 Bromomethane	94	2.709	2.703	0.006	90	150540	10.0	9.18	
36 Chloroethane	64	2.778	2.773	0.005	99	85646	10.0	9.23	
37 Dichlorofluoromethane	67	2.953	2.947	0.005	98	314445	10.0	8.22	
38 Trichlorofluoromethane	101	3.005	3.000	0.005	99	340610	10.0	8.08	
40 Ethyl ether	59	3.231	3.226	0.005	92	69382	10.0	9.60	
44 Acrolein	56	3.371	3.383	-0.012	97	51879	100.0	115.9	
45 1,1-Dichloroethene	96	3.475	3.487	-0.012	98	167197	10.0	9.22	
46 1,1,2-Trichloro-1,2,2-trif	151	3.510	3.505	0.005	97	243473	10.0	9.18	
47 Acetone	43	3.527	3.522	0.005	50	36832	40.0	34.4	
48 Iodomethane	142	3.649	3.662	-0.013	100	426461	10.0	9.18	
50 Carbon disulfide	76	3.719	3.731	-0.012	98	531389	10.0	8.52	
52 3-Chloro-1-propene	41	3.824	3.818	0.006	88	203330	10.0	8.68	
53 Methyl acetate	43	3.824	3.836	-0.012	97	162695	50.0	47.0	
54 Methylene Chloride	84	3.946	3.958	-0.012	90	144079	10.0	10.0	
55 2-Methyl-2-propanol	59	4.068	4.080	-0.012	91	27792	100.0	81.3	
57 Acrylonitrile	53	4.207	4.202	0.005	97	89753	100.0	91.9	
58 trans-1,2-Dichloroethene	96	4.224	4.237	-0.013	98	178936	10.0	8.97	
56 Methyl tert-butyl ether	73	4.224	4.237	-0.013	98	234829	10.0	8.57	
59 Hexane	57	4.486	4.498	-0.012	94	208570	10.0	8.53	
60 1,1-Dichloroethane	63	4.677	4.690	-0.013	95	282741	10.0	8.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Vinyl acetate	43	4.712	4.724	-0.012	96	272553	20.0	18.1	
66 2,2-Dichloropropane	77	5.357	5.352	0.005	86	273409	10.0	7.99	
65 cis-1,2-Dichloroethene	96	5.357	5.352	0.005	83	185416	10.0	9.10	
67 2-Butanone (MEK)	43	5.357	5.369	-0.012	44	68607	40.0	32.7	
71 sec-Butyl Alcohol	45	5.583	5.596	-0.013	97	98200	300.0	284.4	
73 Chlorobromomethane	128	5.636	5.648	-0.012	93	89491	10.0	9.02	
75 Chloroform	83	5.723	5.717	0.006	92	347362	10.0	8.77	
74 Tetrahydrofuran	42	5.705	5.717	-0.012	38	25396	20.0	16.8	
76 1,1,1-Trichloroethane	97	5.967	5.961	0.006	98	329736	10.0	8.16	
77 Cyclohexane	56	6.036	6.031	0.005	88	247872	10.0	8.67	
78 1,1-Dichloropropene	75	6.141	6.153	-0.012	97	262694	10.0	8.28	
79 Carbon tetrachloride	117	6.176	6.170	0.006	97	307788	10.0	7.79	
80 Isobutyl alcohol	41	6.298	6.310	-0.012	41	30018	250.0	222.4	
81 Benzene	78	6.420	6.414	0.006	96	481770	10.0	8.93	
82 1,2-Dichloroethane	62	6.437	6.432	0.005	96	132103	10.0	8.46	
84 n-Heptane	43	6.698	6.711	-0.013	93	274228	10.0	7.82	
86 Trichloroethene	95	7.221	7.233	-0.012	98	235326	10.0	9.12	
88 2-Pentanone	43	7.465	7.477	-0.012	98	322982	40.0	33.9	
89 Methylcyclohexane	55	7.482	7.477	0.005	89	227468	10.0	8.02	
90 1,2-Dichloropropane	63	7.517	7.529	-0.012	96	167268	10.0	8.97	
92 Dibromomethane	93	7.691	7.704	-0.013	96	111550	10.0	8.76	
93 1,4-Dioxane	88	7.744	7.721	0.023	36	9290	200.0	132.2	
94 Dichlorobromomethane	83	7.883	7.895	-0.012	99	301924	10.0	8.81	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.510	8.505	0.005	96	245708	10.0	9.80	
98 4-Methyl-2-pentanone (MIBK	43	8.737	8.732	0.005	96	267110	40.0	34.1	
99 Toluene	91	8.981	8.975	0.006	99	576318	10.0	8.93	
100 trans-1,3-Dichloropropene	75	9.294	9.289	0.005	90	188029	10.0	9.58	
101 Ethyl methacrylate	69	9.434	9.428	0.006	89	121559	10.0	9.07	
102 1,1,2-Trichloroethane	97	9.556	9.550	0.006	92	119219	10.0	9.15	
103 Tetrachloroethene	164	9.765	9.759	0.006	97	214969	10.0	9.76	
104 1,3-Dichloropropane	76	9.799	9.794	0.005	87	184617	10.0	9.71	
105 2-Hexanone	43	9.939	9.934	0.005	97	166219	40.0	31.8	
108 Chlorodibromomethane	129	10.148	10.160	-0.012	89	234446	10.0	9.51	
109 Ethylene Dibromide	107	10.340	10.334	0.006	98	150022	10.0	10.1	
110 1-Chlorohexane	91	11.124	11.118	0.006	88	274381	10.0	8.68	
111 Chlorobenzene	112	11.158	11.153	0.005	95	398441	10.0	9.55	
112 1,1,1,2-Tetrachloroethane	131	11.298	11.293	0.005	93	214786	10.0	9.36	
113 Ethylbenzene	106	11.333	11.327	0.006	98	193346	10.0	9.78	
114 m-Xylene & p-Xylene	106	11.507	11.519	-0.012	0	271832	10.0	9.30	
115 o-Xylene	106	12.082	12.077	0.005	97	235676	10.0	9.61	
116 Styrene	104	12.117	12.111	0.006	93	361437	10.0	9.87	
117 Bromoform	173	12.378	12.355	0.023	96	135417	10.0	10.7	
118 Isopropylbenzene	105	12.587	12.582	0.005	96	741785	10.0	8.50	
120 Cyclohexanone	55	12.726	12.721	0.005	91	62073	400.0	341.8	
122 Bromobenzene	156	12.970	12.965	0.005	95	207202	10.0	9.79	
121 1,1,2,2-Tetrachloroethane	83	12.970	12.983	-0.013	93	149495	10.0	9.44	
123 1,2,3-Trichloropropane	110	13.023	13.035	-0.012	80	37456	10.0	8.81	
124 trans-1,4-Dichloro-2-buten	53	13.057	13.052	0.005	71	23383	10.0	7.75	
125 N-Propylbenzene	120	13.110	13.105	0.005	99	174525	10.0	8.30	
126 2-Chlorotoluene	126	13.197	13.209	-0.012	97	148427	10.0	8.67	
127 1,3,5-Trimethylbenzene	105	13.319	13.314	0.005	94	578461	10.0	8.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
128 4-Chlorotoluene	126	13.336	13.331	0.005	98	180957	10.0	8.88	
129 tert-Butylbenzene	119	13.702	13.697	0.005	93	633091	10.0	8.61	
130 1,2,4-Trimethylbenzene	105	13.754	13.749	0.005	96	522874	10.0	8.64	
131 sec-Butylbenzene	134	13.946	13.941	0.005	94	156562	10.0	8.19	
132 1,3-Dichlorobenzene	146	14.068	14.063	0.005	96	281449	10.0	9.92	
133 4-Isopropyltoluene	119	14.103	14.115	-0.012	97	691463	10.0	8.58	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	456459	10.0	9.50	
137 n-Butylbenzene	91	14.538	14.551	-0.013	98	673257	10.0	8.43	
138 1,2-Dichlorobenzene	146	14.573	14.568	0.005	97	312889	10.0	9.80	
139 1,2-Dibromo-3-Chloropropan	157	15.357	15.369	-0.012	89	29283	10.0	9.98	
141 1,2,4-Trichlorobenzene	180	16.124	16.119	0.005	94	195246	10.0	9.77	
142 Hexachlorobutadiene	225	16.281	16.275	0.006	98	200606	10.0	8.85	
143 Naphthalene	128	16.350	16.345	0.005	97	194665	10.0	9.77	
144 1,2,3-Trichlorobenzene	180	16.577	16.572	0.005	96	149227	10.0	9.77	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.1	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 145 Trihalomethanes, Total	1				0		40.0	37.7	
S 146 Xylenes, Total (URS)	1				0		20.0	18.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.1	
S 150 Xylenes, Total	106				0		20.0	18.9	
S 147 Total BTEX	1				0			46.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

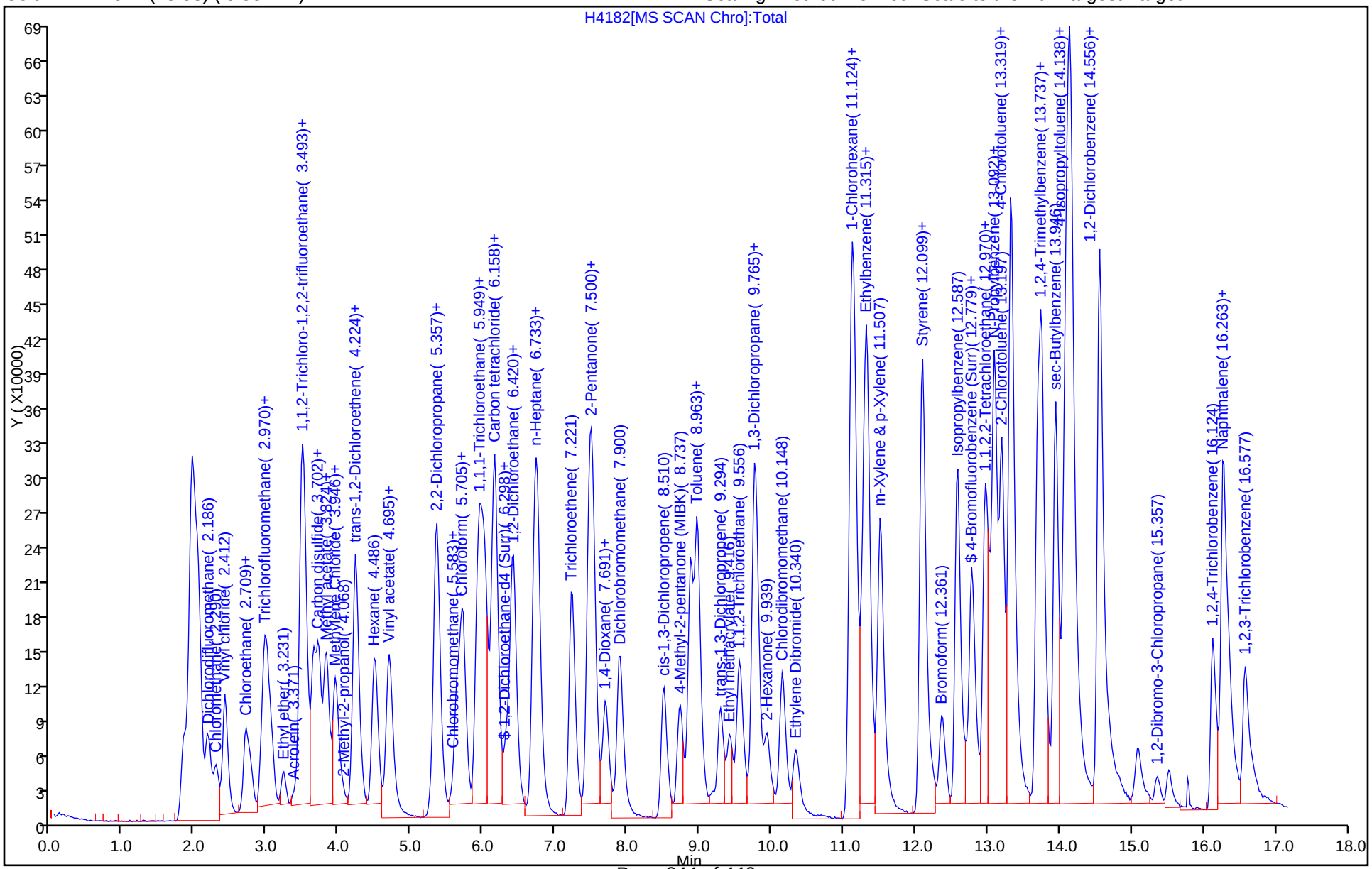
Report Date: 12-Feb-2018 17:40:14 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D

Injection Date:	12-Feb-2018 16:55:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	28
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 11/12/2017 14:49

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 11/12/2017 17:01

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0011		132	200	-33.9	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 16:55:30 ALS Bottle#: 34 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub70

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:13 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.980	3.975	0.005	0	79060	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.763	-0.012	98	532895	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	89	133894	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	96	244207	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.912	0.002	93	266008	9.50	9.84	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	118970	9.50	10.3	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	513925	9.50	9.89	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	310977	9.50	9.15	
28 Dichlorodifluoromethane	85	2.186	2.181	0.005	97	256737	10.0	8.21	
30 Chloromethane	50	2.290	2.303	-0.013	99	114280	10.0	8.14	
32 Vinyl chloride	62	2.412	2.425	-0.013	98	127274	10.0	8.16	
35 Bromomethane	94	2.709	2.703	0.006	90	150540	10.0	9.18	
36 Chloroethane	64	2.778	2.773	0.005	99	85646	10.0	9.23	
37 Dichlorofluoromethane	67	2.953	2.947	0.005	98	314445	10.0	8.22	
38 Trichlorofluoromethane	101	3.005	3.000	0.005	99	340610	10.0	8.08	
40 Ethyl ether	59	3.231	3.226	0.005	92	69382	10.0	9.60	
44 Acrolein	56	3.371	3.383	-0.012	97	51879	100.0	115.9	
45 1,1-Dichloroethene	96	3.475	3.487	-0.012	98	167197	10.0	9.22	
46 1,1,2-Trichloro-1,2,2-trif	151	3.510	3.505	0.005	97	243473	10.0	9.18	
47 Acetone	43	3.527	3.522	0.005	50	36832	40.0	34.4	
48 Iodomethane	142	3.649	3.662	-0.013	100	426461	10.0	9.18	
50 Carbon disulfide	76	3.719	3.731	-0.012	98	531389	10.0	8.52	
52 3-Chloro-1-propene	41	3.824	3.818	0.006	88	203330	10.0	8.68	
53 Methyl acetate	43	3.824	3.836	-0.012	97	162695	50.0	47.0	
54 Methylene Chloride	84	3.946	3.958	-0.012	90	144079	10.0	10.0	
55 2-Methyl-2-propanol	59	4.068	4.080	-0.012	91	27792	100.0	81.3	
57 Acrylonitrile	53	4.207	4.202	0.005	97	89753	100.0	91.9	
58 trans-1,2-Dichloroethene	96	4.224	4.237	-0.013	98	178936	10.0	8.97	
56 Methyl tert-butyl ether	73	4.224	4.237	-0.013	98	234829	10.0	8.57	
59 Hexane	57	4.486	4.498	-0.012	94	208570	10.0	8.53	
60 1,1-Dichloroethane	63	4.677	4.690	-0.013	95	282741	10.0	8.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Vinyl acetate	43	4.712	4.724	-0.012	96	272553	20.0	18.1	
66 2,2-Dichloropropane	77	5.357	5.352	0.005	86	273409	10.0	7.99	
65 cis-1,2-Dichloroethene	96	5.357	5.352	0.005	83	185416	10.0	9.10	
67 2-Butanone (MEK)	43	5.357	5.369	-0.012	44	68607	40.0	32.7	
71 sec-Butyl Alcohol	45	5.583	5.596	-0.013	97	98200	300.0	284.4	
73 Chlorobromomethane	128	5.636	5.648	-0.012	93	89491	10.0	9.02	
75 Chloroform	83	5.723	5.717	0.006	92	347362	10.0	8.77	
74 Tetrahydrofuran	42	5.705	5.717	-0.012	38	25396	20.0	16.8	
76 1,1,1-Trichloroethane	97	5.967	5.961	0.006	98	329736	10.0	8.16	
77 Cyclohexane	56	6.036	6.031	0.005	88	247872	10.0	8.67	
78 1,1-Dichloropropene	75	6.141	6.153	-0.012	97	262694	10.0	8.28	
79 Carbon tetrachloride	117	6.176	6.170	0.006	97	307788	10.0	7.79	
80 Isobutyl alcohol	41	6.298	6.310	-0.012	41	30018	250.0	222.4	
81 Benzene	78	6.420	6.414	0.006	96	481770	10.0	8.93	
82 1,2-Dichloroethane	62	6.437	6.432	0.005	96	132103	10.0	8.46	
84 n-Heptane	43	6.698	6.711	-0.013	93	274228	10.0	7.82	
86 Trichloroethene	95	7.221	7.233	-0.012	98	235326	10.0	9.12	
88 2-Pentanone	43	7.465	7.477	-0.012	98	322982	40.0	33.9	
89 Methylcyclohexane	55	7.482	7.477	0.005	89	227468	10.0	8.02	
90 1,2-Dichloropropane	63	7.517	7.529	-0.012	96	167268	10.0	8.97	
92 Dibromomethane	93	7.691	7.704	-0.013	96	111550	10.0	8.76	
93 1,4-Dioxane	88	7.744	7.721	0.023	36	9290	200.0	132.2	
94 Dichlorobromomethane	83	7.883	7.895	-0.012	99	301924	10.0	8.81	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.510	8.505	0.005	96	245708	10.0	9.80	
98 4-Methyl-2-pentanone (MIBK	43	8.737	8.732	0.005	96	267110	40.0	34.1	
99 Toluene	91	8.981	8.975	0.006	99	576318	10.0	8.93	
100 trans-1,3-Dichloropropene	75	9.294	9.289	0.005	90	188029	10.0	9.58	
101 Ethyl methacrylate	69	9.434	9.428	0.006	89	121559	10.0	9.07	
102 1,1,2-Trichloroethane	97	9.556	9.550	0.006	92	119219	10.0	9.15	
103 Tetrachloroethene	164	9.765	9.759	0.006	97	214969	10.0	9.76	
104 1,3-Dichloropropane	76	9.799	9.794	0.005	87	184617	10.0	9.71	
105 2-Hexanone	43	9.939	9.934	0.005	97	166219	40.0	31.8	
108 Chlorodibromomethane	129	10.148	10.160	-0.012	89	234446	10.0	9.51	
109 Ethylene Dibromide	107	10.340	10.334	0.006	98	150022	10.0	10.1	
110 1-Chlorohexane	91	11.124	11.118	0.006	88	274381	10.0	8.68	
111 Chlorobenzene	112	11.158	11.153	0.005	95	398441	10.0	9.55	
112 1,1,1,2-Tetrachloroethane	131	11.298	11.293	0.005	93	214786	10.0	9.36	
113 Ethylbenzene	106	11.333	11.327	0.006	98	193346	10.0	9.78	
114 m-Xylene & p-Xylene	106	11.507	11.519	-0.012	0	271832	10.0	9.30	
115 o-Xylene	106	12.082	12.077	0.005	97	235676	10.0	9.61	
116 Styrene	104	12.117	12.111	0.006	93	361437	10.0	9.87	
117 Bromoform	173	12.378	12.355	0.023	96	135417	10.0	10.7	
118 Isopropylbenzene	105	12.587	12.582	0.005	96	741785	10.0	8.50	
120 Cyclohexanone	55	12.726	12.721	0.005	91	62073	400.0	341.8	
122 Bromobenzene	156	12.970	12.965	0.005	95	207202	10.0	9.79	
121 1,1,2,2-Tetrachloroethane	83	12.970	12.983	-0.013	93	149495	10.0	9.44	
123 1,2,3-Trichloropropane	110	13.023	13.035	-0.012	80	37456	10.0	8.81	
124 trans-1,4-Dichloro-2-buten	53	13.057	13.052	0.005	71	23383	10.0	7.75	
125 N-Propylbenzene	120	13.110	13.105	0.005	99	174525	10.0	8.30	
126 2-Chlorotoluene	126	13.197	13.209	-0.012	97	148427	10.0	8.67	
127 1,3,5-Trimethylbenzene	105	13.319	13.314	0.005	94	578461	10.0	8.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
128 4-Chlorotoluene	126	13.336	13.331	0.005	98	180957	10.0	8.88	
129 tert-Butylbenzene	119	13.702	13.697	0.005	93	633091	10.0	8.61	
130 1,2,4-Trimethylbenzene	105	13.754	13.749	0.005	96	522874	10.0	8.64	
131 sec-Butylbenzene	134	13.946	13.941	0.005	94	156562	10.0	8.19	
132 1,3-Dichlorobenzene	146	14.068	14.063	0.005	96	281449	10.0	9.92	
133 4-Isopropyltoluene	119	14.103	14.115	-0.012	97	691463	10.0	8.58	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	456459	10.0	9.50	
137 n-Butylbenzene	91	14.538	14.551	-0.013	98	673257	10.0	8.43	
138 1,2-Dichlorobenzene	146	14.573	14.568	0.005	97	312889	10.0	9.80	
139 1,2-Dibromo-3-Chloropropan	157	15.357	15.369	-0.012	89	29283	10.0	9.98	
141 1,2,4-Trichlorobenzene	180	16.124	16.119	0.005	94	195246	10.0	9.77	
142 Hexachlorobutadiene	225	16.281	16.275	0.006	98	200606	10.0	8.85	
143 Naphthalene	128	16.350	16.345	0.005	97	194665	10.0	9.77	
144 1,2,3-Trichlorobenzene	180	16.577	16.572	0.005	96	149227	10.0	9.77	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.1	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 145 Trihalomethanes, Total	1				0		40.0	37.7	
S 146 Xylenes, Total (URS)	1				0		20.0	18.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.1	
S 150 Xylenes, Total	106				0		20.0	18.9	
S 147 Total BTEX	1				0			46.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL		
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL		
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL		
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent	
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent	

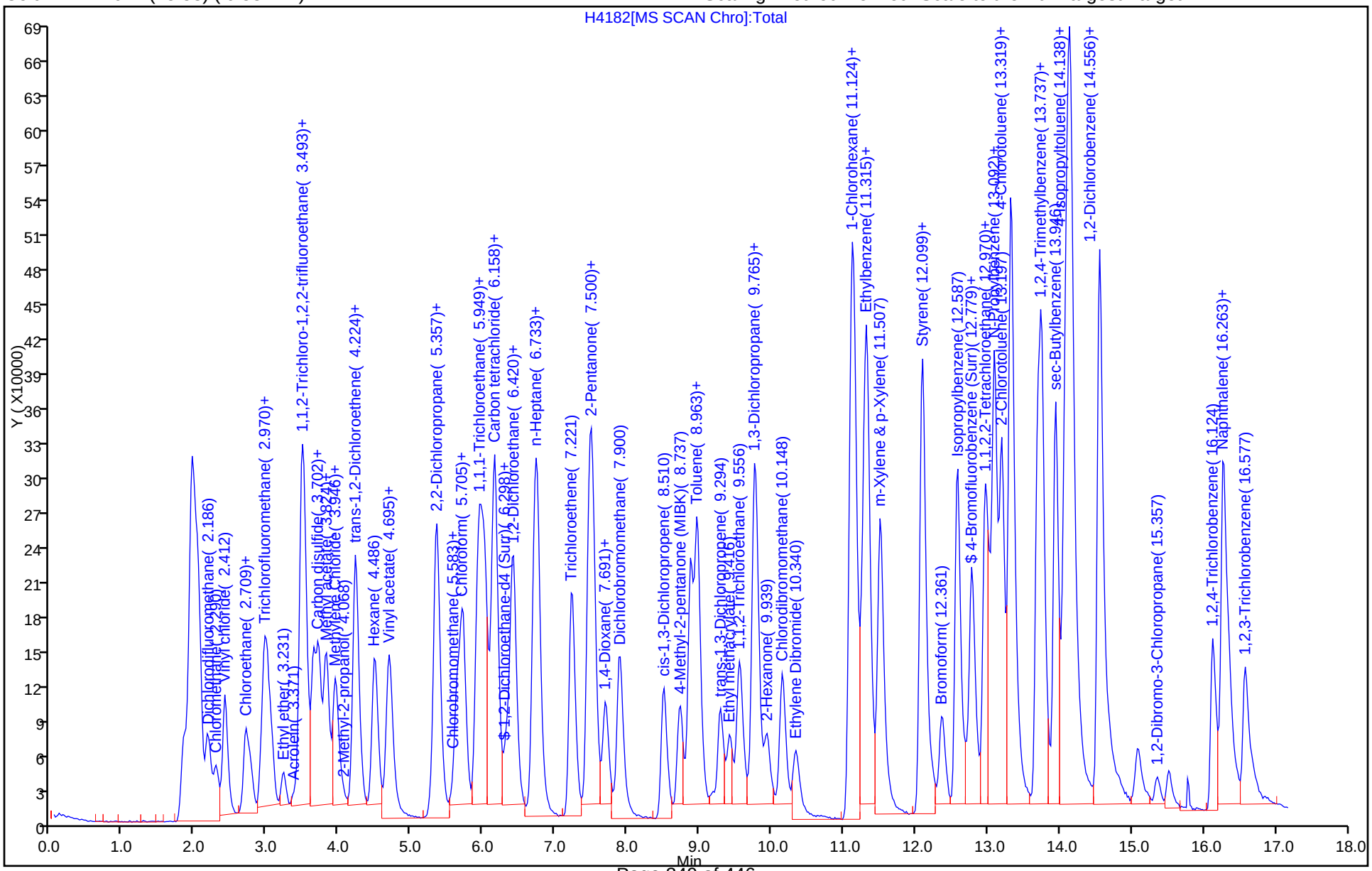
Report Date: 12-Feb-2018 17:40:14 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D

Injection Date:	12-Feb-2018 16:55:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	28
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.7337	0.6022		8.21	10.0	-17.9	50.0
Chloromethane	Ave	0.3292	0.2681	0.1000	8.14	10.0	-18.6	50.0
Vinyl chloride	Ave	0.3659	0.2985		8.16	10.0	-18.4	50.0
Bromomethane	Lin2		0.3531		9.18	10.0	-8.2	50.0
Chloroethane	Lin2		0.2009		9.23	10.0	-7.7	50.0
Dichlorofluoromethane	Ave	0.8970	0.7376		8.22	10.0	-17.8	50.0
Trichlorofluoromethane	Ave	0.9891	0.7990		8.08	10.0	-19.2	50.0
Ethyl ether	Ave	0.1695	0.1628		9.60	10.0	-4.0	50.0
Acrolein	Ave	0.0105	0.0122		116	100	15.9	50.0
1,1-Dichloroethene	Ave	0.4254	0.3922		9.22	10.0	-7.8	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.6224	0.5711		9.18	10.0	-8.2	50.0
Acetone	Ave	0.0251	0.0216		34.4	40.0	-14.1	50.0
Methyl iodide	Ave	1.089	1.000		9.18	10.0	-8.2	50.0
Carbon disulfide	Ave	1.462	1.246		8.52	10.0	-14.8	50.0
3-Chloro-1-propene	Ave	0.5497	0.4770		8.68	10.0	-13.2	50.0
Methyl acetate	Ave	0.0811	0.0763		47.0	50.0	-5.9	50.0
Methylene Chloride	Lin2		0.3380		10.0	10.0	0.3	50.0
t-Butyl alcohol	Lin1		0.8788		81.3	100	-18.7	50.0
Acrylonitrile	Ave	0.0229	0.0211		91.9	100	-8.1	50.0
Methyl tert-butyl ether	Ave	0.6427	0.5508		8.57	10.0	-14.3	50.0
trans-1,2-Dichloroethene	Ave	0.4677	0.4197		8.97	10.0	-10.3	50.0
Hexane	Ave	2.283	1.947		8.53	10.0	-14.7	50.0
1,1-Dichloroethane	Ave	0.7816	0.6632	0.1000	8.49	10.0	-15.1	50.0
Vinyl acetate	Ave	0.3529	0.3197		18.1	20.0	-9.4	50.0
2,2-Dichloropropane	Qua		0.6413		7.99	10.0	-20.1	50.0
2-Butanone (MEK)	Ave	0.0493	0.0402		32.7	40.0	-18.4	50.0
cis-1,2-Dichloroethene	Ave	0.4780	0.4349		9.10	10.0	-9.0	50.0
sec-Butyl Alcohol	Ave	1.092	1.035		284	300	-5.2	50.0
Bromochloromethane	Ave	0.2326	0.2099		9.02	10.0	-9.8	50.0
Tetrahydrofuran	Lin1		0.0298		16.8	20.0	-16.0	50.0
Chloroform	Ave	0.9291	0.8148		8.77	10.0	-12.3	50.0
1,1,1-Trichloroethane	Ave	0.9483	0.7735		8.16	10.0	-18.4	50.0
Cyclohexane	Lin2		0.5814		8.67	10.0	-13.3	50.0
1,1-Dichloropropene	Ave	0.7438	0.6162		8.28	10.0	-17.2	50.0
Carbon tetrachloride	Ave	0.9266	0.7220		7.79	10.0	-22.1	50.0
Isobutyl alcohol	Ave	0.4268	0.3797		222	250	-11.0	50.0
Benzene	Ave	1.265	1.130		8.93	10.0	-10.7	50.0
1,2-Dichloroethane	Ave	0.3661	0.3099		8.46	10.0	-15.4	50.0
Trichloroethene	Ave	0.6050	0.5520		9.12	10.0	-8.8	50.0
2-Pentanone	Ave	0.2236	0.1894		33.9	40.0	-15.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6649	0.5336		8.02	10.0	-19.8	50.0
1,2-Dichloropropane	Ave	0.4374	0.3924		8.97	10.0	-10.3	50.0
Dibromomethane	Ave	0.2986	0.2617		8.76	10.0	-12.4	50.0
Bromodichloromethane	Ave	0.8040	0.7082		8.81	10.0	-11.9	50.0
cis-1,3-Dichloropropene	Ave	2.342	2.294		9.80	10.0	-2.0	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1839	0.1566		34.1	40.0	-14.8	50.0
Toluene	Ave	1.513	1.352		8.93	10.0	-10.7	50.0
trans-1,3-Dichloropropene	Ave	0.4603	0.4411		9.58	10.0	-4.2	50.0
Ethyl methacrylate	Ave	1.251	1.135		9.07	10.0	-9.3	50.0
1,1,2-Trichloroethane	Lin2		0.2797		9.15	10.0	-8.5	50.0
Tetrachloroethene	Ave	2.055	2.007		9.76	10.0	-2.4	50.0
1,3-Dichloropropane	Ave	1.776	1.724		9.71	10.0	-2.9	50.0
2-Hexanone	Lin1		0.3879		31.8	40.0	-20.6	50.0
Dibromochloromethane	Ave	2.301	2.189		9.51	10.0	-4.9	50.0
1,2-Dibromoethane	Ave	1.386	1.401		10.1	10.0	1.0	50.0
1-Chlorohexane	Ave	2.952	2.562		8.68	10.0	-13.2	50.0
Chlorobenzene	Ave	3.894	3.720	0.3000	9.55	10.0	-4.5	50.0
1,1,1,2-Tetrachloroethane	Ave	2.143	2.005		9.36	10.0	-6.4	50.0
Ethylbenzene	Ave	1.847	1.805		9.78	10.0	-2.2	50.0
m,p-Xylene	Ave	2.730	2.538		9.30	10.0	-7.0	50.0
o-Xylene	Ave	2.290	2.200		9.61	10.0	-3.9	50.0
Styrene	Ave	3.417	3.374		9.87	10.0	-1.3	50.0
Bromoform	Ave	1.187	1.264	0.1000	10.7	10.0	6.5	50.0
Isopropylbenzene	Ave	4.467	3.797		8.50	10.0	-15.0	50.0
Cyclohexanone	Ave	0.0170	0.0145		342	400	-14.5	50.0
1,1,2,2-Tetrachloroethane	Ave	0.8107	0.7652	0.3000	9.44	10.0	-5.6	50.0
Bromobenzene	Ave	1.084	1.061		9.79	10.0	-2.1	50.0
1,2,3-Trichloropropane	Lin1		0.1917		8.81	10.0	-11.9	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1544	0.1197		7.75	10.0	-22.5	50.0
N-Propylbenzene	Ave	1.076	0.8933		8.30	10.0	-17.0	50.0
2-Chlorotoluene	Ave	0.8765	0.7597		8.67	10.0	-13.3	50.0
1,3,5-Trimethylbenzene	Ave	3.424	2.961		8.65	10.0	-13.5	50.0
4-Chlorotoluene	Ave	1.043	0.9263		8.88	10.0	-11.2	50.0
tert-Butylbenzene	Ave	3.762	3.241		8.61	10.0	-13.9	50.0
1,2,4-Trimethylbenzene	Ave	3.099	2.676		8.64	10.0	-13.6	50.0
sec-Butylbenzene	Ave	0.9779	0.8014		8.19	10.0	-18.1	50.0
1,3-Dichlorobenzene	Ave	1.452	1.441		9.92	10.0	-0.8	50.0
4-Isopropyltoluene	Ave	4.125	3.539		8.58	10.0	-14.2	50.0
1,4-Dichlorobenzene	Ave	2.458	2.336		9.50	10.0	-5.0	50.0
n-Butylbenzene	Ave	4.086	3.446		8.43	10.0	-15.7	50.0
1,2-Dichlorobenzene	Ave	1.634	1.602		9.80	10.0	-2.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 01/29/2018 10:19

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 12:30

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1503	0.1499		9.98	10.0	-0.2	50.0
1,2,4-Trichlorobenzene	Ave	1.023	0.999		9.77	10.0	-2.3	50.0
Hexachlorobutadiene	Ave	1.160	1.027		8.85	10.0	-11.5	50.0
Naphthalene	Ave	1.020	0.996		9.77	10.0	-2.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7818	0.7638		9.77	10.0	-2.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 16:55:30 ALS Bottle#: 34 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub70

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:13 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.980	3.975	0.005	0	79060	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.763	-0.012	98	532895	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	89	133894	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	96	244207	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.912	0.002	93	266008	9.50	9.84	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	118970	9.50	10.3	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	513925	9.50	9.89	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	310977	9.50	9.15	
28 Dichlorodifluoromethane	85	2.186	2.181	0.005	97	256737	10.0	8.21	
30 Chloromethane	50	2.290	2.303	-0.013	99	114280	10.0	8.14	
32 Vinyl chloride	62	2.412	2.425	-0.013	98	127274	10.0	8.16	
35 Bromomethane	94	2.709	2.703	0.006	90	150540	10.0	9.18	
36 Chloroethane	64	2.778	2.773	0.005	99	85646	10.0	9.23	
37 Dichlorofluoromethane	67	2.953	2.947	0.005	98	314445	10.0	8.22	
38 Trichlorofluoromethane	101	3.005	3.000	0.005	99	340610	10.0	8.08	
40 Ethyl ether	59	3.231	3.226	0.005	92	69382	10.0	9.60	
44 Acrolein	56	3.371	3.383	-0.012	97	51879	100.0	115.9	
45 1,1-Dichloroethene	96	3.475	3.487	-0.012	98	167197	10.0	9.22	
46 1,1,2-Trichloro-1,2,2-trif	151	3.510	3.505	0.005	97	243473	10.0	9.18	
47 Acetone	43	3.527	3.522	0.005	50	36832	40.0	34.4	
48 Iodomethane	142	3.649	3.662	-0.013	100	426461	10.0	9.18	
50 Carbon disulfide	76	3.719	3.731	-0.012	98	531389	10.0	8.52	
52 3-Chloro-1-propene	41	3.824	3.818	0.006	88	203330	10.0	8.68	
53 Methyl acetate	43	3.824	3.836	-0.012	97	162695	50.0	47.0	
54 Methylene Chloride	84	3.946	3.958	-0.012	90	144079	10.0	10.0	
55 2-Methyl-2-propanol	59	4.068	4.080	-0.012	91	27792	100.0	81.3	
57 Acrylonitrile	53	4.207	4.202	0.005	97	89753	100.0	91.9	
58 trans-1,2-Dichloroethene	96	4.224	4.237	-0.013	98	178936	10.0	8.97	
56 Methyl tert-butyl ether	73	4.224	4.237	-0.013	98	234829	10.0	8.57	
59 Hexane	57	4.486	4.498	-0.012	94	208570	10.0	8.53	
60 1,1-Dichloroethane	63	4.677	4.690	-0.013	95	282741	10.0	8.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Vinyl acetate	43	4.712	4.724	-0.012	96	272553	20.0	18.1	
66 2,2-Dichloropropane	77	5.357	5.352	0.005	86	273409	10.0	7.99	
65 cis-1,2-Dichloroethene	96	5.357	5.352	0.005	83	185416	10.0	9.10	
67 2-Butanone (MEK)	43	5.357	5.369	-0.012	44	68607	40.0	32.7	
71 sec-Butyl Alcohol	45	5.583	5.596	-0.013	97	98200	300.0	284.4	
73 Chlorobromomethane	128	5.636	5.648	-0.012	93	89491	10.0	9.02	
75 Chloroform	83	5.723	5.717	0.006	92	347362	10.0	8.77	
74 Tetrahydrofuran	42	5.705	5.717	-0.012	38	25396	20.0	16.8	
76 1,1,1-Trichloroethane	97	5.967	5.961	0.006	98	329736	10.0	8.16	
77 Cyclohexane	56	6.036	6.031	0.005	88	247872	10.0	8.67	
78 1,1-Dichloropropene	75	6.141	6.153	-0.012	97	262694	10.0	8.28	
79 Carbon tetrachloride	117	6.176	6.170	0.006	97	307788	10.0	7.79	
80 Isobutyl alcohol	41	6.298	6.310	-0.012	41	30018	250.0	222.4	
81 Benzene	78	6.420	6.414	0.006	96	481770	10.0	8.93	
82 1,2-Dichloroethane	62	6.437	6.432	0.005	96	132103	10.0	8.46	
84 n-Heptane	43	6.698	6.711	-0.013	93	274228	10.0	7.82	
86 Trichloroethene	95	7.221	7.233	-0.012	98	235326	10.0	9.12	
88 2-Pentanone	43	7.465	7.477	-0.012	98	322982	40.0	33.9	
89 Methylcyclohexane	55	7.482	7.477	0.005	89	227468	10.0	8.02	
90 1,2-Dichloropropane	63	7.517	7.529	-0.012	96	167268	10.0	8.97	
92 Dibromomethane	93	7.691	7.704	-0.013	96	111550	10.0	8.76	
93 1,4-Dioxane	88	7.744	7.721	0.023	36	9290	200.0	132.2	
94 Dichlorobromomethane	83	7.883	7.895	-0.012	99	301924	10.0	8.81	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.510	8.505	0.005	96	245708	10.0	9.80	
98 4-Methyl-2-pentanone (MIBK	43	8.737	8.732	0.005	96	267110	40.0	34.1	
99 Toluene	91	8.981	8.975	0.006	99	576318	10.0	8.93	
100 trans-1,3-Dichloropropene	75	9.294	9.289	0.005	90	188029	10.0	9.58	
101 Ethyl methacrylate	69	9.434	9.428	0.006	89	121559	10.0	9.07	
102 1,1,2-Trichloroethane	97	9.556	9.550	0.006	92	119219	10.0	9.15	
103 Tetrachloroethene	164	9.765	9.759	0.006	97	214969	10.0	9.76	
104 1,3-Dichloropropane	76	9.799	9.794	0.005	87	184617	10.0	9.71	
105 2-Hexanone	43	9.939	9.934	0.005	97	166219	40.0	31.8	
108 Chlorodibromomethane	129	10.148	10.160	-0.012	89	234446	10.0	9.51	
109 Ethylene Dibromide	107	10.340	10.334	0.006	98	150022	10.0	10.1	
110 1-Chlorohexane	91	11.124	11.118	0.006	88	274381	10.0	8.68	
111 Chlorobenzene	112	11.158	11.153	0.005	95	398441	10.0	9.55	
112 1,1,1,2-Tetrachloroethane	131	11.298	11.293	0.005	93	214786	10.0	9.36	
113 Ethylbenzene	106	11.333	11.327	0.006	98	193346	10.0	9.78	
114 m-Xylene & p-Xylene	106	11.507	11.519	-0.012	0	271832	10.0	9.30	
115 o-Xylene	106	12.082	12.077	0.005	97	235676	10.0	9.61	
116 Styrene	104	12.117	12.111	0.006	93	361437	10.0	9.87	
117 Bromoform	173	12.378	12.355	0.023	96	135417	10.0	10.7	
118 Isopropylbenzene	105	12.587	12.582	0.005	96	741785	10.0	8.50	
120 Cyclohexanone	55	12.726	12.721	0.005	91	62073	400.0	341.8	
122 Bromobenzene	156	12.970	12.965	0.005	95	207202	10.0	9.79	
121 1,1,2,2-Tetrachloroethane	83	12.970	12.983	-0.013	93	149495	10.0	9.44	
123 1,2,3-Trichloropropane	110	13.023	13.035	-0.012	80	37456	10.0	8.81	
124 trans-1,4-Dichloro-2-buten	53	13.057	13.052	0.005	71	23383	10.0	7.75	
125 N-Propylbenzene	120	13.110	13.105	0.005	99	174525	10.0	8.30	
126 2-Chlorotoluene	126	13.197	13.209	-0.012	97	148427	10.0	8.67	
127 1,3,5-Trimethylbenzene	105	13.319	13.314	0.005	94	578461	10.0	8.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
128 4-Chlorotoluene	126	13.336	13.331	0.005	98	180957	10.0	8.88	
129 tert-Butylbenzene	119	13.702	13.697	0.005	93	633091	10.0	8.61	
130 1,2,4-Trimethylbenzene	105	13.754	13.749	0.005	96	522874	10.0	8.64	
131 sec-Butylbenzene	134	13.946	13.941	0.005	94	156562	10.0	8.19	
132 1,3-Dichlorobenzene	146	14.068	14.063	0.005	96	281449	10.0	9.92	
133 4-Isopropyltoluene	119	14.103	14.115	-0.012	97	691463	10.0	8.58	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	456459	10.0	9.50	
137 n-Butylbenzene	91	14.538	14.551	-0.013	98	673257	10.0	8.43	
138 1,2-Dichlorobenzene	146	14.573	14.568	0.005	97	312889	10.0	9.80	
139 1,2-Dibromo-3-Chloropropan	157	15.357	15.369	-0.012	89	29283	10.0	9.98	
141 1,2,4-Trichlorobenzene	180	16.124	16.119	0.005	94	195246	10.0	9.77	
142 Hexachlorobutadiene	225	16.281	16.275	0.006	98	200606	10.0	8.85	
143 Naphthalene	128	16.350	16.345	0.005	97	194665	10.0	9.77	
144 1,2,3-Trichlorobenzene	180	16.577	16.572	0.005	96	149227	10.0	9.77	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.1	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 145 Trihalomethanes, Total	1				0		40.0	37.7	
S 146 Xylenes, Total (URS)	1				0		20.0	18.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.1	
S 150 Xylenes, Total	106				0		20.0	18.9	
S 147 Total BTEX	1				0			46.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL		
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL		
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL		
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent	
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent	

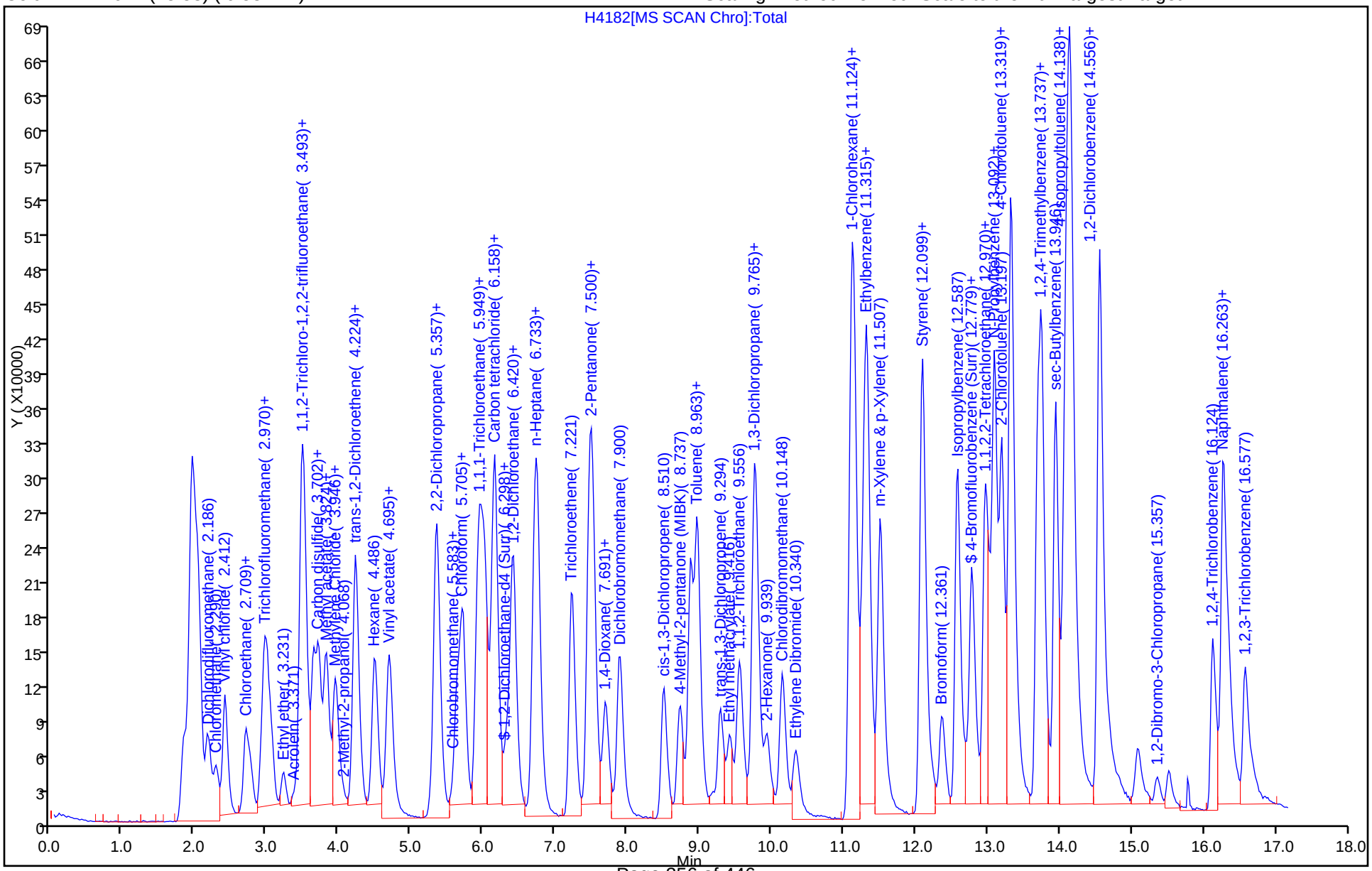
Report Date: 12-Feb-2018 17:40:14 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D

Injection Date:	12-Feb-2018 16:55:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	28
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/28 Calibration Date: 02/12/2018 16:55

Instrument ID: VMS_H Calib Start Date: 02/05/2018 08:05

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 02/05/2018 09:34

Lab File ID: H4182.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.6343	0.6568		9.84	9.50	3.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2702	0.2938		10.3	9.50	8.7	50.0
Toluene-d8 (Surr)	Ave	4.849	5.050		9.89	9.50	4.1	50.0
4-Bromofluorobenzene (Surr)	Ave	1.739	1.676		9.15	9.50	-3.6	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 16:55:30 ALS Bottle#: 34 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub70

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:13 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.980	3.975	0.005	0	79060	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.763	-0.012	98	532895	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	89	133894	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	96	244207	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.912	0.002	93	266008	9.50	9.84	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	118970	9.50	10.3	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	513925	9.50	9.89	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	310977	9.50	9.15	
28 Dichlorodifluoromethane	85	2.186	2.181	0.005	97	256737	10.0	8.21	
30 Chloromethane	50	2.290	2.303	-0.013	99	114280	10.0	8.14	
32 Vinyl chloride	62	2.412	2.425	-0.013	98	127274	10.0	8.16	
35 Bromomethane	94	2.709	2.703	0.006	90	150540	10.0	9.18	
36 Chloroethane	64	2.778	2.773	0.005	99	85646	10.0	9.23	
37 Dichlorofluoromethane	67	2.953	2.947	0.005	98	314445	10.0	8.22	
38 Trichlorofluoromethane	101	3.005	3.000	0.005	99	340610	10.0	8.08	
40 Ethyl ether	59	3.231	3.226	0.005	92	69382	10.0	9.60	
44 Acrolein	56	3.371	3.383	-0.012	97	51879	100.0	115.9	
45 1,1-Dichloroethene	96	3.475	3.487	-0.012	98	167197	10.0	9.22	
46 1,1,2-Trichloro-1,2,2-trif	151	3.510	3.505	0.005	97	243473	10.0	9.18	
47 Acetone	43	3.527	3.522	0.005	50	36832	40.0	34.4	
48 Iodomethane	142	3.649	3.662	-0.013	100	426461	10.0	9.18	
50 Carbon disulfide	76	3.719	3.731	-0.012	98	531389	10.0	8.52	
52 3-Chloro-1-propene	41	3.824	3.818	0.006	88	203330	10.0	8.68	
53 Methyl acetate	43	3.824	3.836	-0.012	97	162695	50.0	47.0	
54 Methylene Chloride	84	3.946	3.958	-0.012	90	144079	10.0	10.0	
55 2-Methyl-2-propanol	59	4.068	4.080	-0.012	91	27792	100.0	81.3	
57 Acrylonitrile	53	4.207	4.202	0.005	97	89753	100.0	91.9	
58 trans-1,2-Dichloroethene	96	4.224	4.237	-0.013	98	178936	10.0	8.97	
56 Methyl tert-butyl ether	73	4.224	4.237	-0.013	98	234829	10.0	8.57	
59 Hexane	57	4.486	4.498	-0.012	94	208570	10.0	8.53	
60 1,1-Dichloroethane	63	4.677	4.690	-0.013	95	282741	10.0	8.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Vinyl acetate	43	4.712	4.724	-0.012	96	272553	20.0	18.1	
66 2,2-Dichloropropane	77	5.357	5.352	0.005	86	273409	10.0	7.99	
65 cis-1,2-Dichloroethene	96	5.357	5.352	0.005	83	185416	10.0	9.10	
67 2-Butanone (MEK)	43	5.357	5.369	-0.012	44	68607	40.0	32.7	
71 sec-Butyl Alcohol	45	5.583	5.596	-0.013	97	98200	300.0	284.4	
73 Chlorobromomethane	128	5.636	5.648	-0.012	93	89491	10.0	9.02	
75 Chloroform	83	5.723	5.717	0.006	92	347362	10.0	8.77	
74 Tetrahydrofuran	42	5.705	5.717	-0.012	38	25396	20.0	16.8	
76 1,1,1-Trichloroethane	97	5.967	5.961	0.006	98	329736	10.0	8.16	
77 Cyclohexane	56	6.036	6.031	0.005	88	247872	10.0	8.67	
78 1,1-Dichloropropene	75	6.141	6.153	-0.012	97	262694	10.0	8.28	
79 Carbon tetrachloride	117	6.176	6.170	0.006	97	307788	10.0	7.79	
80 Isobutyl alcohol	41	6.298	6.310	-0.012	41	30018	250.0	222.4	
81 Benzene	78	6.420	6.414	0.006	96	481770	10.0	8.93	
82 1,2-Dichloroethane	62	6.437	6.432	0.005	96	132103	10.0	8.46	
84 n-Heptane	43	6.698	6.711	-0.013	93	274228	10.0	7.82	
86 Trichloroethene	95	7.221	7.233	-0.012	98	235326	10.0	9.12	
88 2-Pentanone	43	7.465	7.477	-0.012	98	322982	40.0	33.9	
89 Methylcyclohexane	55	7.482	7.477	0.005	89	227468	10.0	8.02	
90 1,2-Dichloropropane	63	7.517	7.529	-0.012	96	167268	10.0	8.97	
92 Dibromomethane	93	7.691	7.704	-0.013	96	111550	10.0	8.76	
93 1,4-Dioxane	88	7.744	7.721	0.023	36	9290	200.0	132.2	
94 Dichlorobromomethane	83	7.883	7.895	-0.012	99	301924	10.0	8.81	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.510	8.505	0.005	96	245708	10.0	9.80	
98 4-Methyl-2-pentanone (MIBK	43	8.737	8.732	0.005	96	267110	40.0	34.1	
99 Toluene	91	8.981	8.975	0.006	99	576318	10.0	8.93	
100 trans-1,3-Dichloropropene	75	9.294	9.289	0.005	90	188029	10.0	9.58	
101 Ethyl methacrylate	69	9.434	9.428	0.006	89	121559	10.0	9.07	
102 1,1,2-Trichloroethane	97	9.556	9.550	0.006	92	119219	10.0	9.15	
103 Tetrachloroethene	164	9.765	9.759	0.006	97	214969	10.0	9.76	
104 1,3-Dichloropropane	76	9.799	9.794	0.005	87	184617	10.0	9.71	
105 2-Hexanone	43	9.939	9.934	0.005	97	166219	40.0	31.8	
108 Chlorodibromomethane	129	10.148	10.160	-0.012	89	234446	10.0	9.51	
109 Ethylene Dibromide	107	10.340	10.334	0.006	98	150022	10.0	10.1	
110 1-Chlorohexane	91	11.124	11.118	0.006	88	274381	10.0	8.68	
111 Chlorobenzene	112	11.158	11.153	0.005	95	398441	10.0	9.55	
112 1,1,1,2-Tetrachloroethane	131	11.298	11.293	0.005	93	214786	10.0	9.36	
113 Ethylbenzene	106	11.333	11.327	0.006	98	193346	10.0	9.78	
114 m-Xylene & p-Xylene	106	11.507	11.519	-0.012	0	271832	10.0	9.30	
115 o-Xylene	106	12.082	12.077	0.005	97	235676	10.0	9.61	
116 Styrene	104	12.117	12.111	0.006	93	361437	10.0	9.87	
117 Bromoform	173	12.378	12.355	0.023	96	135417	10.0	10.7	
118 Isopropylbenzene	105	12.587	12.582	0.005	96	741785	10.0	8.50	
120 Cyclohexanone	55	12.726	12.721	0.005	91	62073	400.0	341.8	
122 Bromobenzene	156	12.970	12.965	0.005	95	207202	10.0	9.79	
121 1,1,2,2-Tetrachloroethane	83	12.970	12.983	-0.013	93	149495	10.0	9.44	
123 1,2,3-Trichloropropane	110	13.023	13.035	-0.012	80	37456	10.0	8.81	
124 trans-1,4-Dichloro-2-buten	53	13.057	13.052	0.005	71	23383	10.0	7.75	
125 N-Propylbenzene	120	13.110	13.105	0.005	99	174525	10.0	8.30	
126 2-Chlorotoluene	126	13.197	13.209	-0.012	97	148427	10.0	8.67	
127 1,3,5-Trimethylbenzene	105	13.319	13.314	0.005	94	578461	10.0	8.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
128 4-Chlorotoluene	126	13.336	13.331	0.005	98	180957	10.0	8.88	
129 tert-Butylbenzene	119	13.702	13.697	0.005	93	633091	10.0	8.61	
130 1,2,4-Trimethylbenzene	105	13.754	13.749	0.005	96	522874	10.0	8.64	
131 sec-Butylbenzene	134	13.946	13.941	0.005	94	156562	10.0	8.19	
132 1,3-Dichlorobenzene	146	14.068	14.063	0.005	96	281449	10.0	9.92	
133 4-Isopropyltoluene	119	14.103	14.115	-0.012	97	691463	10.0	8.58	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	456459	10.0	9.50	
137 n-Butylbenzene	91	14.538	14.551	-0.013	98	673257	10.0	8.43	
138 1,2-Dichlorobenzene	146	14.573	14.568	0.005	97	312889	10.0	9.80	
139 1,2-Dibromo-3-Chloropropan	157	15.357	15.369	-0.012	89	29283	10.0	9.98	
141 1,2,4-Trichlorobenzene	180	16.124	16.119	0.005	94	195246	10.0	9.77	
142 Hexachlorobutadiene	225	16.281	16.275	0.006	98	200606	10.0	8.85	
143 Naphthalene	128	16.350	16.345	0.005	97	194665	10.0	9.77	
144 1,2,3-Trichlorobenzene	180	16.577	16.572	0.005	96	149227	10.0	9.77	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.1	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 145 Trihalomethanes, Total	1				0		40.0	37.7	
S 146 Xylenes, Total (URS)	1				0		20.0	18.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	18.1	
S 150 Xylenes, Total	106				0		20.0	18.9	
S 147 Total BTEX	1				0			46.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main A_00033	Amount Added:	5.00	Units: uL		
MV-Gas/Ket A_00069	Amount Added:	5.00	Units: uL		
MV-2cleve+AVA_00033	Amount Added:	5.00	Units: uL		
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent	
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent	

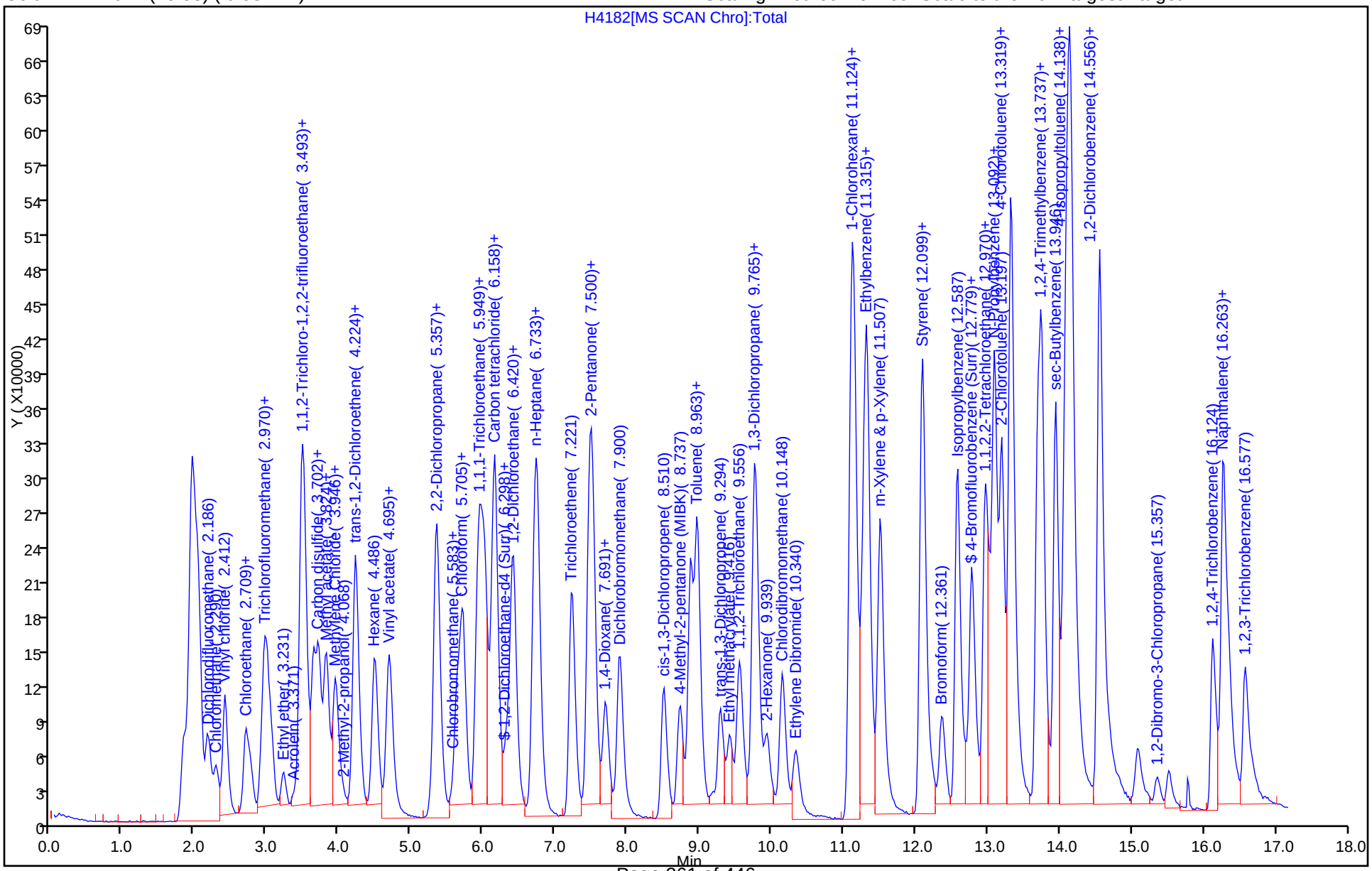
Report Date: 12-Feb-2018 17:40:14 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4182.D

Injection Date:	12-Feb-2018 16:55:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	28
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/29 Calibration Date: 02/12/2018 17:17

Instrument ID: VMS_H Calib Start Date: 10/22/2017 14:54

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/22/2017 19:57

Lab File ID: H4183.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0058	0.0026		49.8	100	-55.4*	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 17:17:30 ALS Bottle#: 35 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc s
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:14 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.015	3.975	0.040	0	69840	250.0	250.0	s
* 2 Fluorobenzene	96	6.750	6.763	-0.013	98	540867	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	88	145926	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	95	248084	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.932	5.912	0.020	93	284762	9.50	10.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	119187	9.50	10.2	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	540940	9.50	9.56	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	87	307559	9.50	8.91	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.179	3.177	0.002	56	18147	600.0	617.1	
43 Propene oxide	58	3.318	3.316	0.002	96	644752	1000.0	935.7	
49 Isopropyl alcohol	45	3.649	3.647	0.002	95	11008	100.0	50.2	
51 Acetonitrile	41	3.841	3.821	0.020	96	11133	100.0	49.8	
62 Isopropyl ether	87	4.747	4.745	0.002	97	128432	10.0	8.82	
63 2-Chloro-1,3-butadiene	53	4.782	4.780	0.002	89	218090	10.0	7.95	
64 Tert-butyl ethyl ether	59	5.165	5.163	0.002	97	382681	10.0	8.21	
69 Ethyl acetate	43	5.426	5.424	0.002	99	89791	20.0	15.0	
70 Propionitrile	54	5.461	5.442	0.019	90	31605	100.0	82.1	
72 Methacrylonitrile	41	5.618	5.616	0.002	93	248997	100.0	78.4	
83 Tert-amyl methyl ether	73	6.541	6.539	0.002	92	348050	10.0	8.85	
85 n-Butanol	56	7.203	7.219	-0.016	86	13633	250.0	146.5	
91 Methyl methacrylate	100	7.674	7.672	0.002	91	45087	20.0	16.3	
95 2-Nitropropane	41	8.197	8.194	0.003	97	21305	20.0	13.9	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.691	12.689	0.002	0	38902	20.0	14.6	
135 1,2,3-Trimethylbenzene	105	14.225	14.223	0.002	99	521597	10.0	8.66	
140 1,3,5-Trichlorobenzene	180	15.549	15.547	0.002	97	283959	10.0	9.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

s - Failed ISTD Recovery Test

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

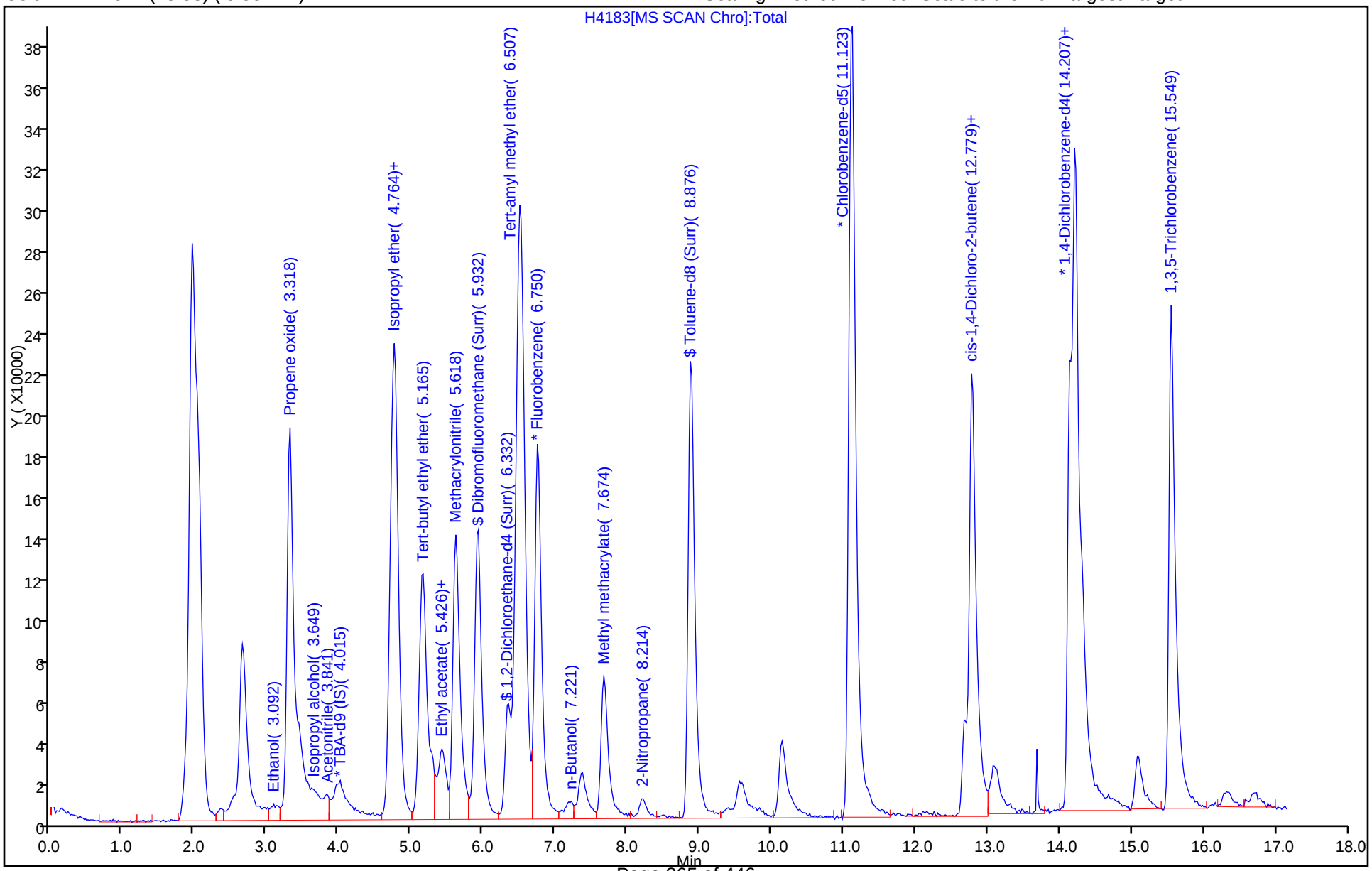
Report Date: 12-Feb-2018 17:40:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D

Injection Date:	12-Feb-2018 17:17:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	29
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/29 Calibration Date: 02/12/2018 17:17

Instrument ID: VMS_H Calib Start Date: 01/29/2018 13:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 01/29/2018 15:25

Lab File ID: H4183.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin		0.0007		617	600	2.8	50.0
Isopropyl alcohol	Ave	0.0051	0.0025		50.2	100	-49.8	50.0
Diisopropyl ether	Ave	0.3367	0.2968		8.82	10.0	-11.8	50.0
2-Chloro-1,3-butadiene	Ave	0.6344	0.5040		7.95	10.0	-20.5	50.0
Tert-butyl ethyl ether	Ave	1.077	0.8844		8.21	10.0	-17.9	50.0
Ethyl acetate	Ave	0.1381	0.1038		15.0	20.0	-24.9	50.0
Propionitrile	Lin2		0.0073		82.1	100	-17.9	50.0
Methacrylonitrile	Ave	0.0734	0.0576		78.4	100	-21.6	50.0
Tert-amyl methyl ether	Ave	0.9087	0.8044		8.85	10.0	-11.5	50.0
n-Butanol	Lin2		0.0013		146	250	-41.4	50.0
Methyl methacrylate	Ave	0.0638	0.0521		16.3	20.0	-18.4	50.0
2-Nitropropane	Ave	0.0354	0.0246		13.9	20.0	-30.4	50.0
cis-1,4-Dichloro-2-butene	Ave	0.1339	0.0980		14.6	20.0	-26.8	50.0
1,2,3-Trimethylbenzene	Ave	3.035	2.628		8.66	10.0	-13.4	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 17:17:30 ALS Bottle#: 35 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc s
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:14 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.015	3.975	0.040	0	69840	250.0	250.0	s
* 2 Fluorobenzene	96	6.750	6.763	-0.013	98	540867	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	88	145926	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	95	248084	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.932	5.912	0.020	93	284762	9.50	10.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	119187	9.50	10.2	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	540940	9.50	9.56	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	87	307559	9.50	8.91	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.179	3.177	0.002	56	18147	600.0	617.1	
43 Propene oxide	58	3.318	3.316	0.002	96	644752	1000.0	935.7	
49 Isopropyl alcohol	45	3.649	3.647	0.002	95	11008	100.0	50.2	
51 Acetonitrile	41	3.841	3.821	0.020	96	11133	100.0	49.8	
62 Isopropyl ether	87	4.747	4.745	0.002	97	128432	10.0	8.82	
63 2-Chloro-1,3-butadiene	53	4.782	4.780	0.002	89	218090	10.0	7.95	
64 Tert-butyl ethyl ether	59	5.165	5.163	0.002	97	382681	10.0	8.21	
69 Ethyl acetate	43	5.426	5.424	0.002	99	89791	20.0	15.0	
70 Propionitrile	54	5.461	5.442	0.019	90	31605	100.0	82.1	
72 Methacrylonitrile	41	5.618	5.616	0.002	93	248997	100.0	78.4	
83 Tert-amyl methyl ether	73	6.541	6.539	0.002	92	348050	10.0	8.85	
85 n-Butanol	56	7.203	7.219	-0.016	86	13633	250.0	146.5	
91 Methyl methacrylate	100	7.674	7.672	0.002	91	45087	20.0	16.3	
95 2-Nitropropane	41	8.197	8.194	0.003	97	21305	20.0	13.9	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.691	12.689	0.002	0	38902	20.0	14.6	
135 1,2,3-Trimethylbenzene	105	14.225	14.223	0.002	99	521597	10.0	8.66	
140 1,3,5-Trichlorobenzene	180	15.549	15.547	0.002	97	283959	10.0	9.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

s - Failed ISTD Recovery Test

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

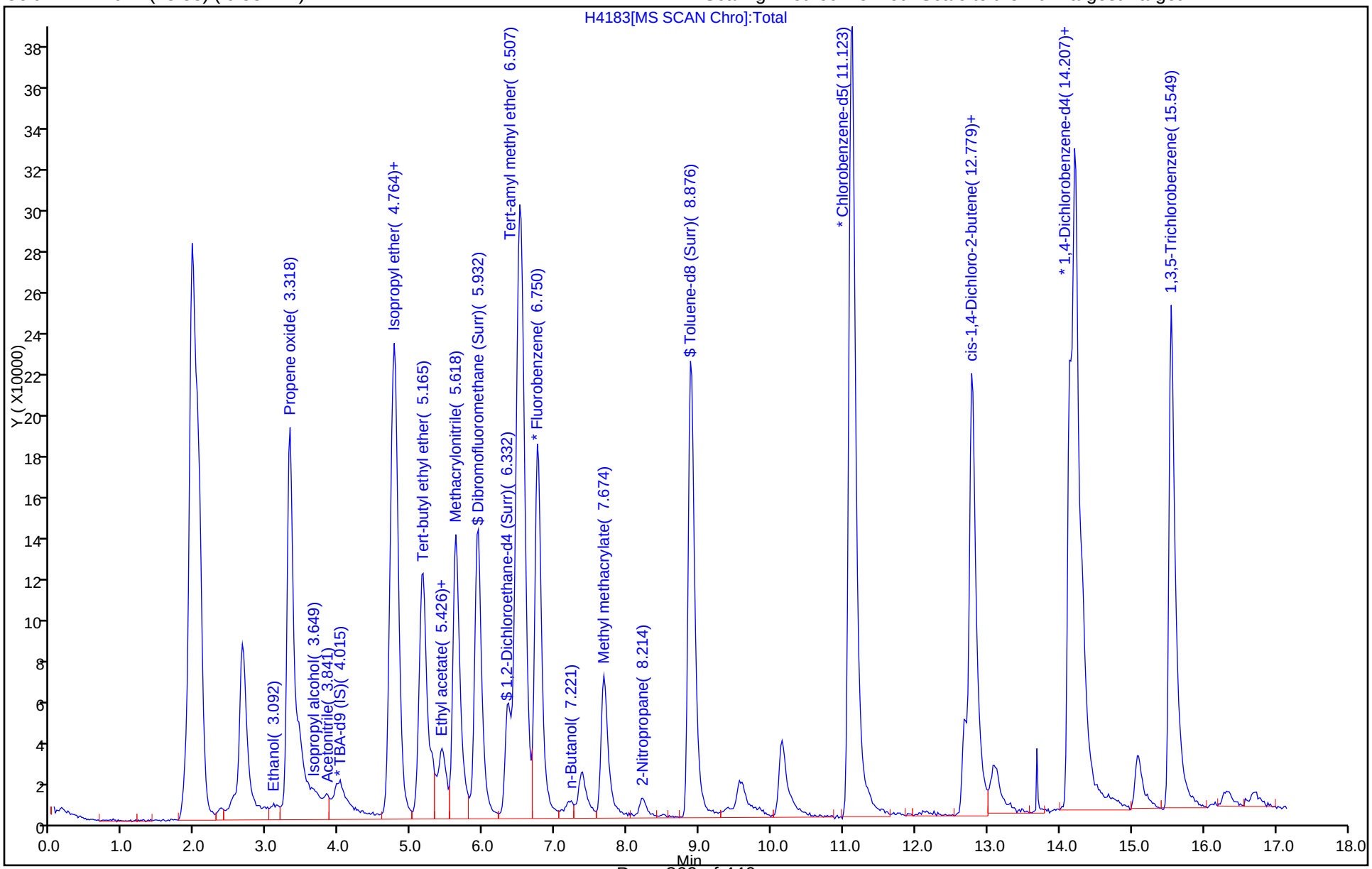
Report Date: 12-Feb-2018 17:40:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D

Injection Date:	12-Feb-2018 17:17:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	29
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Lab Sample ID: CCVC 280-404562/29 Calibration Date: 02/12/2018 17:17

Instrument ID: VMS_H Calib Start Date: 02/05/2018 08:05

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 02/05/2018 09:34

Lab File ID: H4183.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.6343	0.6928		10.4	9.50	9.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2702	0.2900		10.2	9.50	7.3	50.0
Toluene-d8 (Surr)	Ave	4.849	4.878		9.56	9.50	0.6	50.0
4-Bromofluorobenzene (Surr)	Ave	1.739	1.631		8.91	9.50	-6.2	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 12-Feb-2018 17:17:30 ALS Bottle#: 35 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc s
Operator ID: moanm Instrument ID: VMS_H
Sublist: chrom-AQ_VMSH_8260*sub86

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:14 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:38:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.015	3.975	0.040	0	69840	250.0	250.0	s
* 2 Fluorobenzene	96	6.750	6.763	-0.013	98	540867	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.106	11.118	-0.012	88	145926	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	95	248084	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.932	5.912	0.020	93	284762	9.50	10.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	119187	9.50	10.2	
$ 10 Toluene-d8 (Surr)	98	8.876	8.874	0.002	93	540940	9.50	9.56	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	87	307559	9.50	8.91	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.179	3.177	0.002	56	18147	600.0	617.1	
43 Propene oxide	58	3.318	3.316	0.002	96	644752	1000.0	935.7	
49 Isopropyl alcohol	45	3.649	3.647	0.002	95	11008	100.0	50.2	
51 Acetonitrile	41	3.841	3.821	0.020	96	11133	100.0	49.8	
62 Isopropyl ether	87	4.747	4.745	0.002	97	128432	10.0	8.82	
63 2-Chloro-1,3-butadiene	53	4.782	4.780	0.002	89	218090	10.0	7.95	
64 Tert-butyl ethyl ether	59	5.165	5.163	0.002	97	382681	10.0	8.21	
69 Ethyl acetate	43	5.426	5.424	0.002	99	89791	20.0	15.0	
70 Propionitrile	54	5.461	5.442	0.019	90	31605	100.0	82.1	
72 Methacrylonitrile	41	5.618	5.616	0.002	93	248997	100.0	78.4	
83 Tert-amyl methyl ether	73	6.541	6.539	0.002	92	348050	10.0	8.85	
85 n-Butanol	56	7.203	7.219	-0.016	86	13633	250.0	146.5	
91 Methyl methacrylate	100	7.674	7.672	0.002	91	45087	20.0	16.3	
95 2-Nitropropane	41	8.197	8.194	0.003	97	21305	20.0	13.9	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.691	12.689	0.002	0	38902	20.0	14.6	
135 1,2,3-Trimethylbenzene	105	14.225	14.223	0.002	99	521597	10.0	8.66	
140 1,3,5-Trichlorobenzene	180	15.549	15.547	0.002	97	283959	10.0	9.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

s - Failed ISTD Recovery Test

Reagents:

MV-Supp A_00028	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

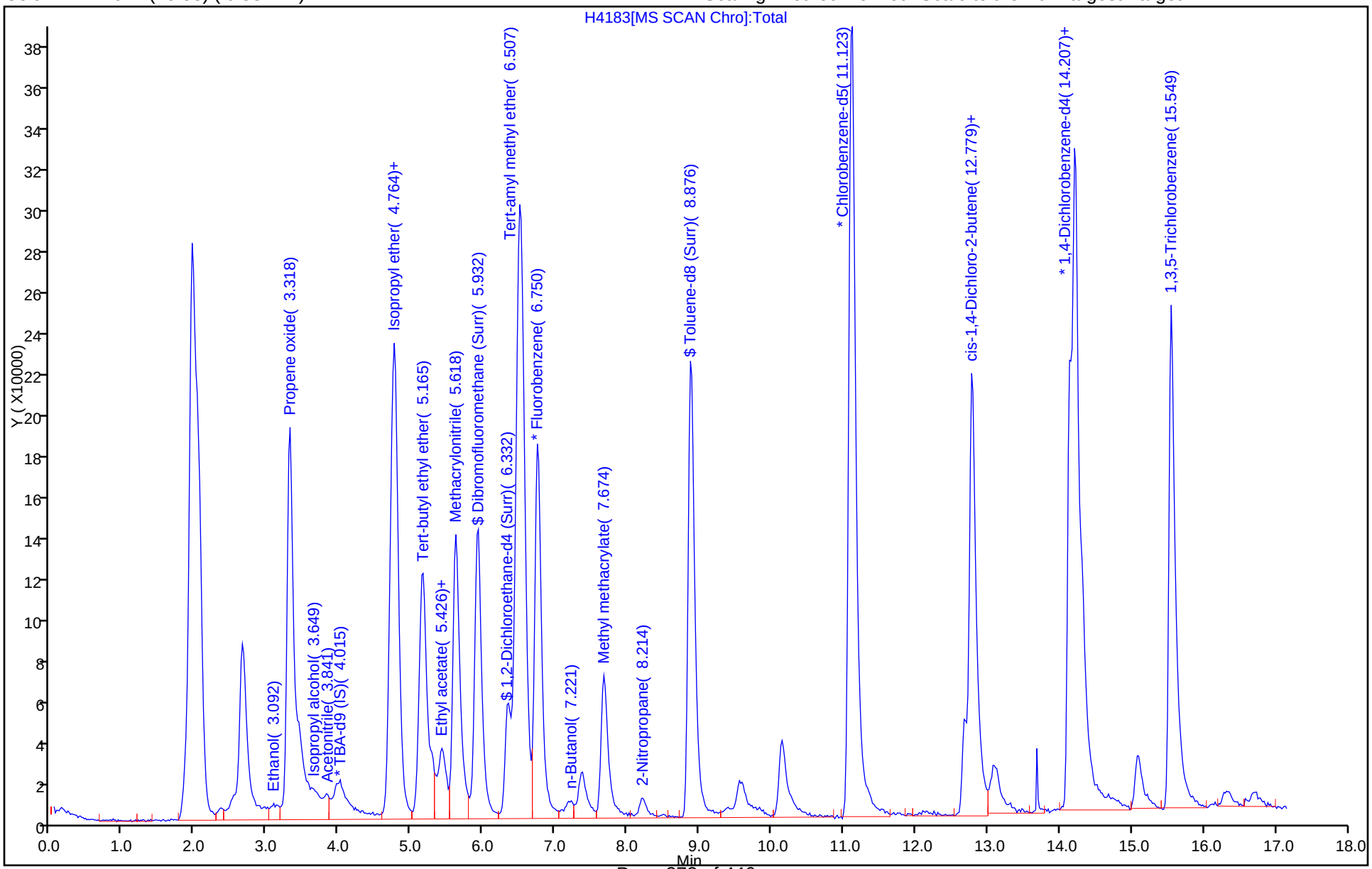
Report Date: 12-Feb-2018 17:40:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4183.D

Injection Date:	12-Feb-2018 17:17:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	ccvc			Worklist Smp#:	29
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3791.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	29-Jan-2018 09:18:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	30-Jan-2018 10:04:09	Calib Date:	29-Jan-2018 15:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3808.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: moanm		Date:	29-Jan-2018 09:26:39		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.497	2.497	0.000	78	101717	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

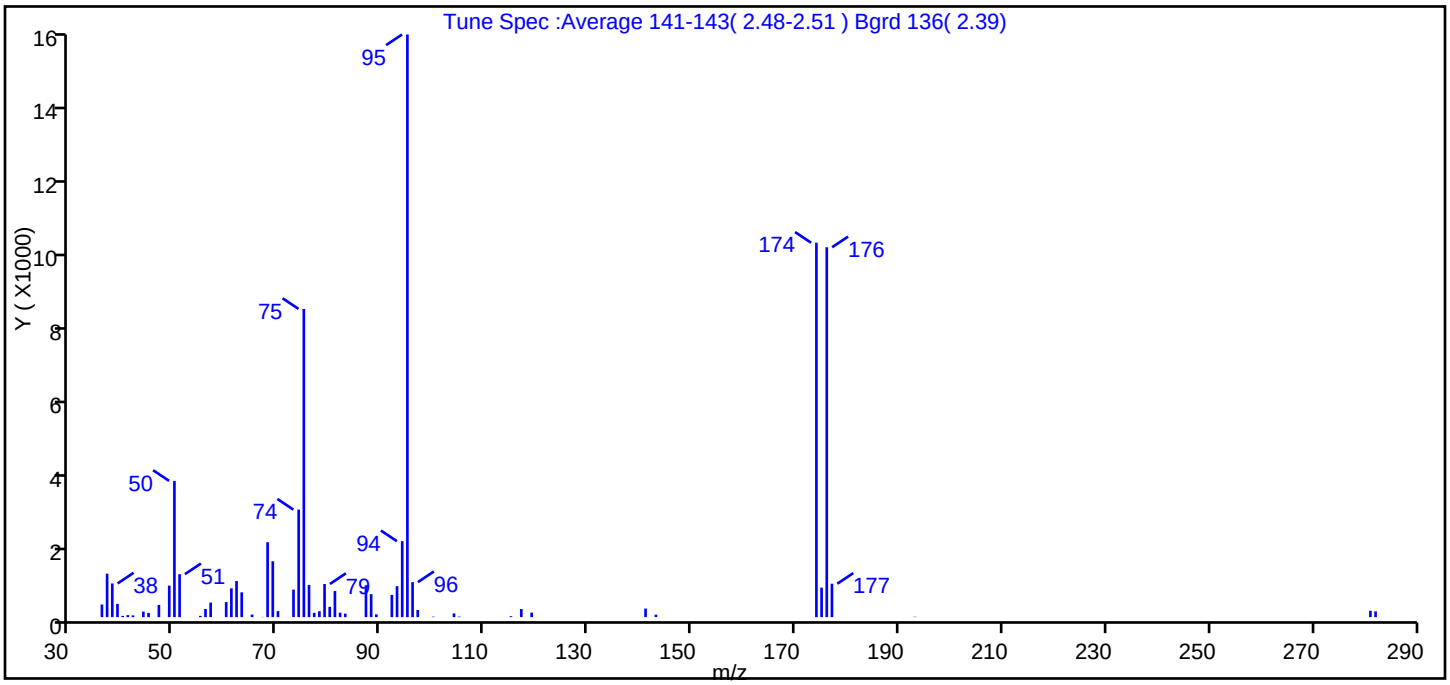
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3791.D
Injection Date: 29-Jan-2018 09:18:30 Instrument ID: VMS_H
Lims ID: BFB
Client ID:
Operator ID: moanm ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.4
75	30 to 60% of m/z 95	52.9
96	5 to 9% of m/z 95	6.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	64.3
175	5 to 9% of m/z 174	5.1 (7.9)
176	Greater than 95% but less than 101% of m/z 174	63.5 (98.8)
177	5 to 9% of m/z 176	5.7 (9.0)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3791.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 29-Jan-2018 09:18:30
Spectrum: Tune Spec :Average 141-143(2.48-2.51) Bgrd 136(2.39)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	344	57.00	395	78.00	161	100.00	13
37.00	1182	60.00	410	79.00	901	104.00	102
38.00	916	61.00	783	80.00	280	105.00	15
39.00	360	62.00	982	81.00	710	115.00	26
40.00	35	63.00	674	82.00	122	117.00	221
41.00	55	65.00	71	83.00	96	119.00	122
42.00	47	67.00	6	87.00	865	141.00	233
44.00	151	68.00	2037	88.00	625	143.00	68
45.00	115	69.00	1520	89.00	75	174.00	10178
47.00	332	70.00	164	92.00	605	175.00	802
49.00	857	73.00	747	93.00	842	176.00	10055
50.00	3704	74.00	2923	94.00	2065	177.00	908
51.00	1168	75.00	8379	95.00	15839	193.00	11
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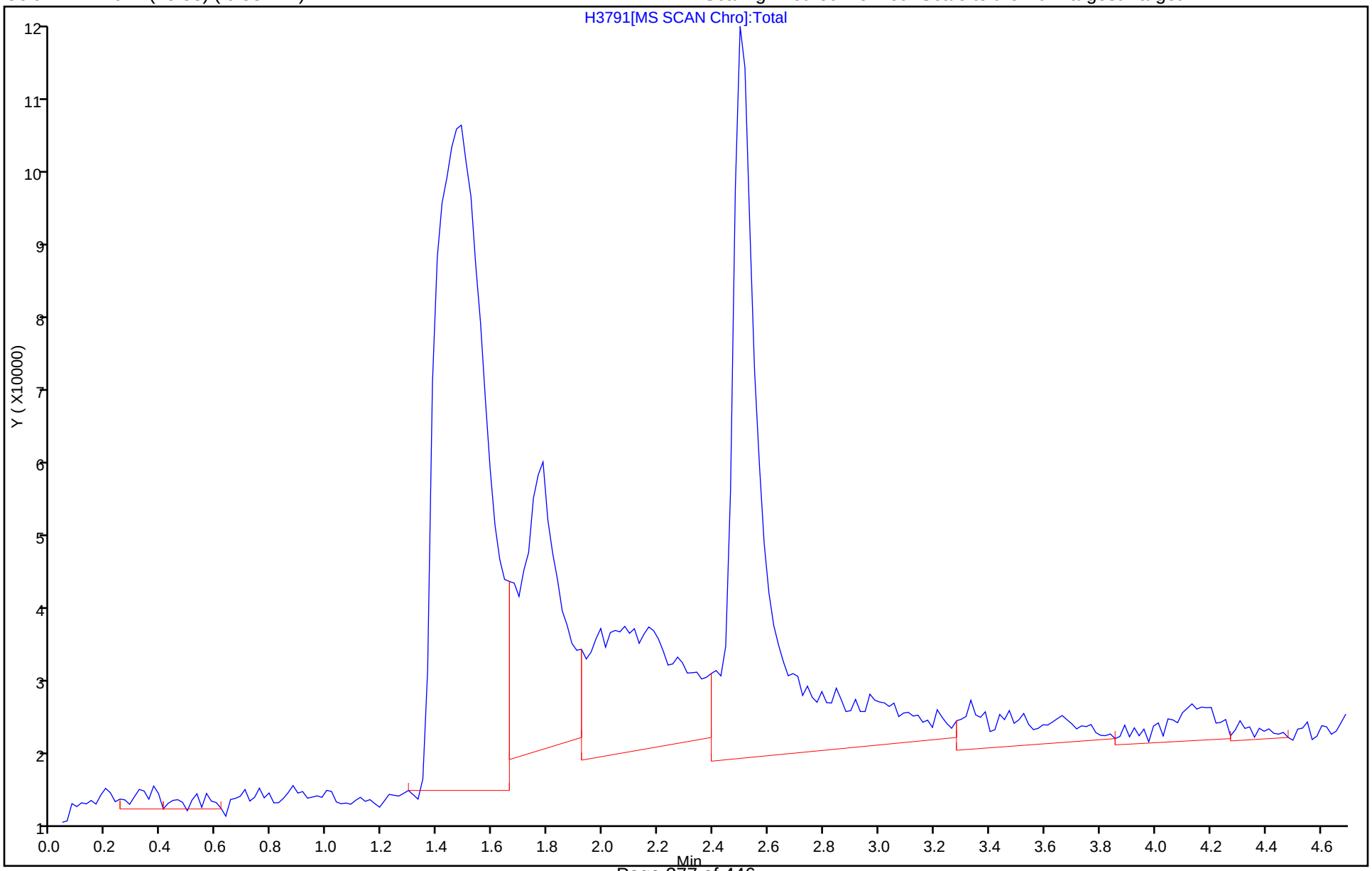
Report Date: 30-Jan-2018 10:04:09 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b\H3791.D

Injection Date:	29-Jan-2018 09:18:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4014.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	05-Feb-2018 07:29:30	ALS Bottle#:	99	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	05-Feb-2018 10:18:53	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK016				
First Level Reviewer: moanm		Date:	05-Feb-2018 07:35:20		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.497	2.497	0.000	81	90693	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

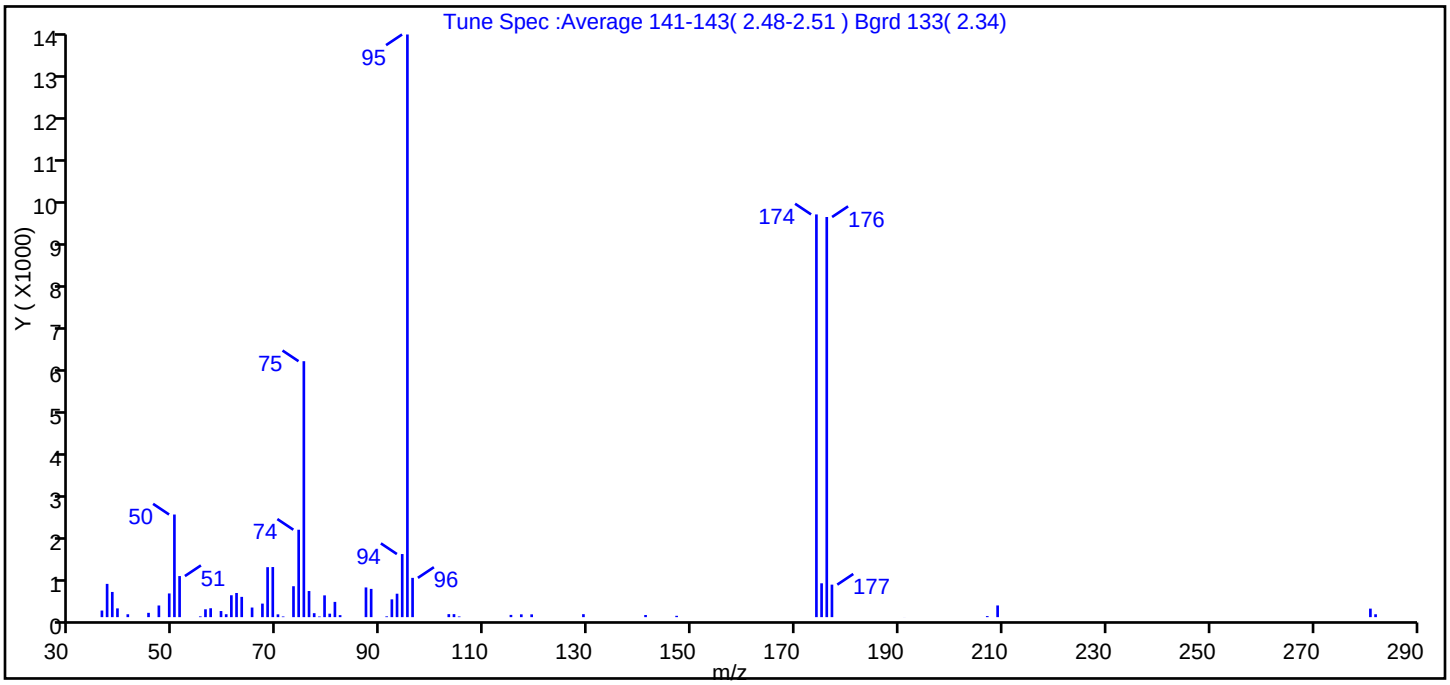
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4014.D
Injection Date: 05-Feb-2018 07:29:30 Instrument ID: VMS_H
Lims ID: BFB
Client ID:
Operator ID: moanm ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.6
75	30 to 60% of m/z 95	43.9
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.1
175	5 to 9% of m/z 174	5.8 (8.4)
176	Greater than 95% but less than 101% of m/z 174	68.7 (99.4)
177	5 to 9% of m/z 176	5.6 (8.1)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4014.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 05-Feb-2018 07:29:30
Spectrum: Tune Spec :Average 141-143(2.48-2.51) Bgrd 133(2.34)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	158	61.00	524	79.00	521	115.00	54
37.00	796	62.00	578	80.00	83	117.00	67
38.00	603	63.00	485	81.00	365	119.00	67
39.00	210	65.00	230	82.00	48	129.00	71
41.00	69	67.00	324	87.00	711	141.00	51
45.00	103	68.00	1196	88.00	676	147.00	32
47.00	279	69.00	1199	91.00	19	174.00	9638
49.00	567	70.00	67	92.00	426	175.00	810
50.00	2456	71.00	16	93.00	561	176.00	9576
51.00	983	73.00	740	94.00	1510	177.00	778
55.00	18	74.00	2092	95.00	13944	191.00	1
56.00	188	75.00	6125	96.00	940	207.00	25
57.00	213	76.00	625	103.00	72	209.00	280
59.00	146	77.00	95	104.00	72	281.00	204
60.00	70	78.00	15	105.00	16	282.00	69

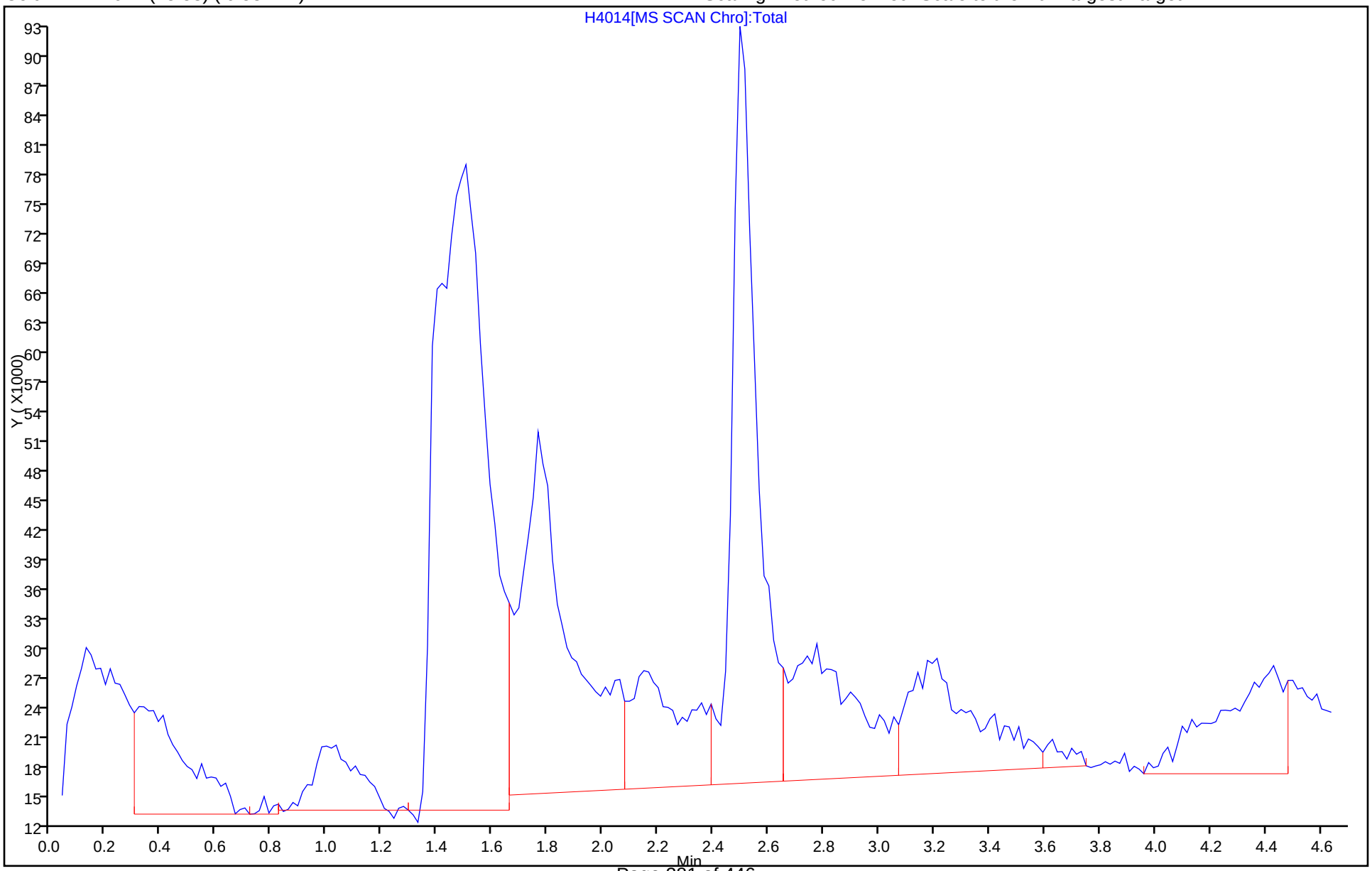
Report Date: 05-Feb-2018 10:18:53 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4014.D

Injection Date:	05-Feb-2018 07:29:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	99
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4157.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	12-Feb-2018 07:56:30	ALS Bottle#:	99	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:40:15	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				
First Level Reviewer: moanm		Date:	12-Feb-2018 08:05:49		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.494	2.494	0.000	81	166192	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

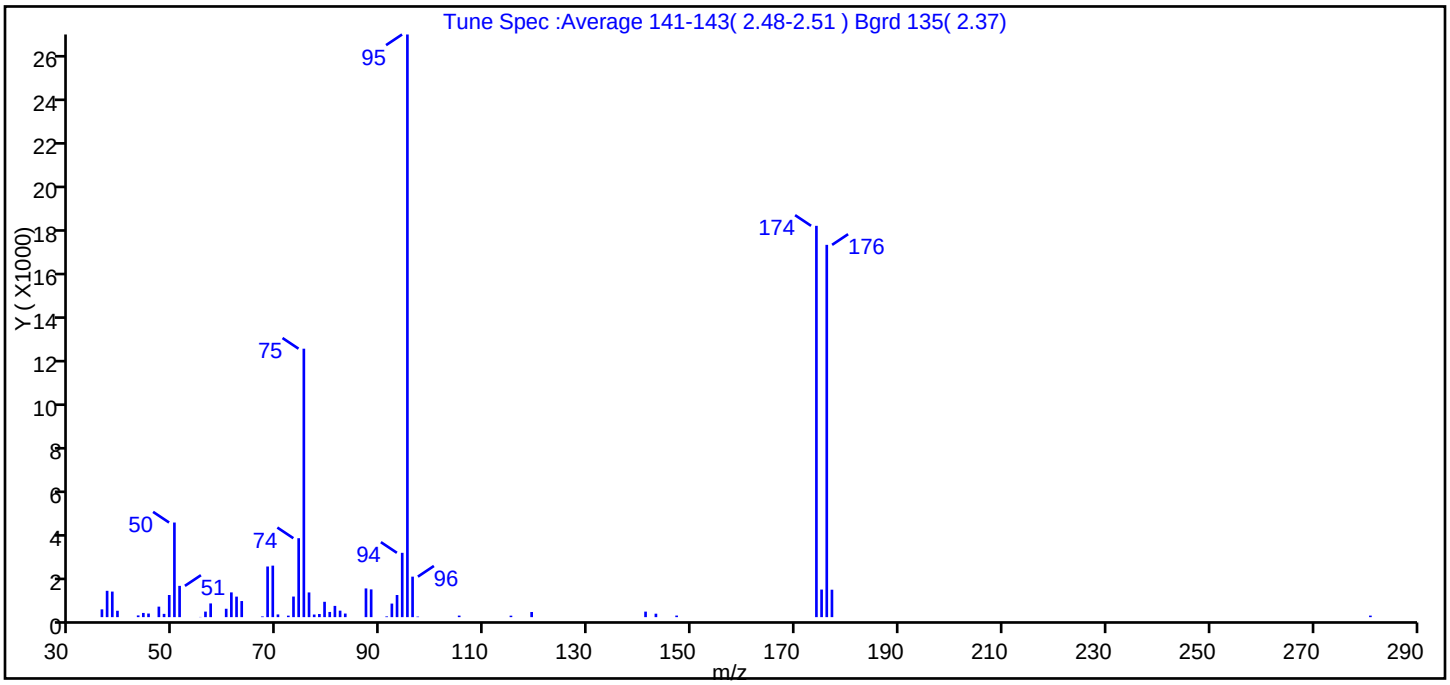
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4157.D
Injection Date: 12-Feb-2018 07:56:30 Instrument ID: VMS_H
Lims ID: BFB
Client ID:
Operator ID: moanm ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.2
75	30 to 60% of m/z 95	46.1
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	67.2
175	5 to 9% of m/z 174	4.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	63.9 (95.1)
177	5 to 9% of m/z 176	4.7 (7.4)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4157.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 12-Feb-2018 07:56:30
Spectrum: Tune Spec :Average 141-143(2.48-2.51) Bgrd 135(2.37)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 55

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	354	57.00	623	77.00	119	96.00	1839
37.00	1196	60.00	381	78.00	142	97.00	25
38.00	1161	61.00	1124	79.00	697	105.00	70
39.00	290	62.00	932	80.00	236	115.00	67
43.00	78	63.00	731	81.00	511	119.00	234
44.00	191	67.00	32	82.00	295	141.00	251
45.00	164	68.00	2300	83.00	163	143.00	157
47.00	477	69.00	2339	87.00	1304	147.00	72
48.00	149	70.00	123	88.00	1260	174.00	17768
49.00	1005	72.00	68	91.00	34	175.00	1253
50.00	4296	73.00	935	92.00	616	176.00	16904
51.00	1420	74.00	3584	93.00	1005	177.00	1246
55.00	9	75.00	12189	94.00	2921	281.00	70
56.00	252	76.00	1122	95.00	26456		

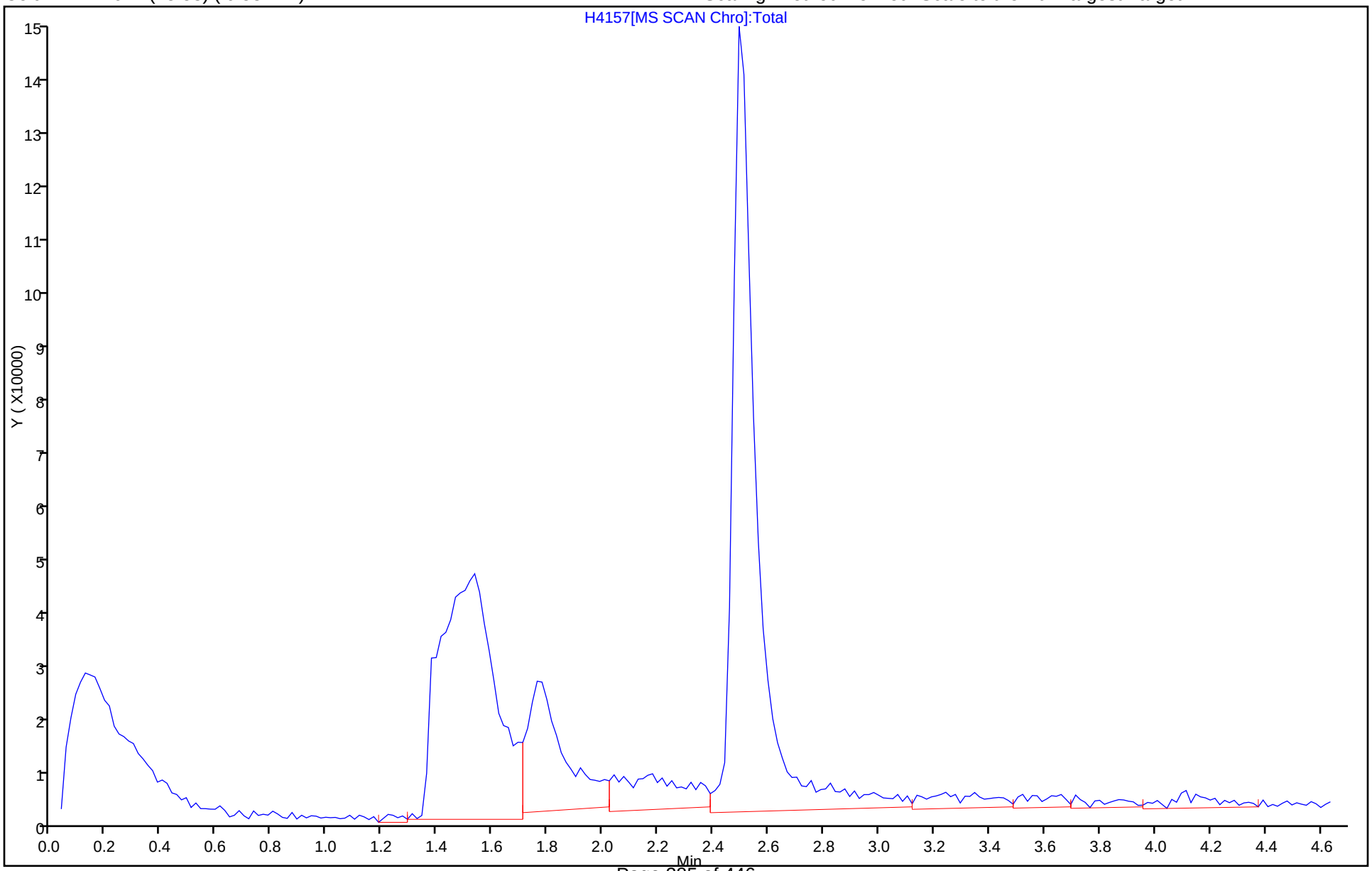
Report Date: 12-Feb-2018 17:40:16 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4157.D

Injection Date:	12-Feb-2018 07:56:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	99
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-404562/6

Matrix: Water | Lab File ID: H4162.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-404562/6

Matrix: Water | Lab File ID: H4162.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-404562/6

Matrix: Water | Lab File ID: H4162.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	107		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4162.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 12-Feb-2018 09:33:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:31:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.012	3.975	0.037	0	91032	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.763	-0.015	98	564171	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.103	11.118	-0.015	87	150166	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.135	14.132	0.003	97	246054	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.911	5.912	-0.001	93	291333	9.50	10.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.329	6.330	-0.001	0	120084	9.50	9.85	
$ 10 Toluene-d8 (Surr)	98	8.873	8.874	-0.001	93	554723	9.50	9.52	
$ 11 4-Bromofluorobenzene (Surr	95	12.776	12.777	-0.001	85	311879	9.50	9.11	
$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
$ 7 BFB	95		2.494					ND	
27 Chlorotrifluoroethene	116		2.173					ND	
28 Dichlorodifluoromethane	85		2.181					ND	
30 Chloromethane	50		2.303					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62		2.425					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.640					ND	
35 Bromomethane	94		2.703					ND	
36 Chloroethane	64		2.773					ND	
37 Dichlorofluoromethane	67		2.947					ND	
38 Trichlorofluoromethane	101		3.000					ND	
39 Ethanol	45		3.177					ND	
40 Ethyl ether	59		3.226					ND	
43 Propene oxide	58		3.316					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
44 Acrolein	56		3.383					ND	
45 1,1-Dichloroethene	96		3.487					ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.505					ND	
47 Acetone	43		3.522					ND	
49 Isopropyl alcohol	45		3.647					ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.662					ND	
50 Carbon disulfide	76		3.731					ND	
52 3-Chloro-1-propene	41		3.818					ND	
51 Acetonitrile	41		3.821					ND	
53 Methyl acetate	43		3.836					ND	
54 Methylene Chloride	84		3.958					ND	
55 2-Methyl-2-propanol	59		4.080					ND	
57 Acrylonitrile	53		4.202					ND	
58 trans-1,2-Dichloroethene	96		4.237					ND	
56 Methyl tert-butyl ether	73		4.237					ND	
59 Hexane	57		4.498					ND	
60 1,1-Dichloroethane	63		4.690					ND	
61 Vinyl acetate	43		4.724					ND	
62 Isopropyl ether	87		4.745					ND	
63 2-Chloro-1,3-butadiene	53		4.780					ND	
64 Tert-butyl ethyl ether	59		5.163					ND	
66 2,2-Dichloropropane	77		5.352					ND	
65 cis-1,2-Dichloroethene	96		5.352					ND	
67 2-Butanone (MEK)	43		5.369					ND	
69 Ethyl acetate	43		5.424					ND	
70 Propionitrile	54		5.442					ND	
71 sec-Butyl Alcohol	45		5.596					ND	
72 Methacrylonitrile	41		5.616					ND	
73 Chlorobromomethane	128		5.648					ND	
75 Chloroform	83		5.717					ND	
74 Tetrahydrofuran	42		5.717					ND	
76 1,1,1-Trichloroethane	97		5.961					ND	
77 Cyclohexane	56		6.031					ND	
78 1,1-Dichloropropene	75		6.153					ND	
79 Carbon tetrachloride	117		6.170					ND	
80 Isobutyl alcohol	41		6.310					ND	
81 Benzene	78		6.414					ND	
82 1,2-Dichloroethane	62		6.432					ND	
83 Tert-amyl methyl ether	73		6.539					ND	
84 n-Heptane	43		6.711					ND	
85 n-Butanol	56		7.219					ND	
86 Trichloroethene	95		7.233					ND	
88 2-Pentanone	43		7.477					ND	
89 Methylcyclohexane	55		7.477					ND	
90 1,2-Dichloropropane	63		7.529					ND	
91 Methyl methacrylate	100		7.672					ND	
92 Dibromomethane	93		7.704					ND	
93 1,4-Dioxane	88		7.721					ND	
94 Dichlorobromomethane	83		7.895					ND	
95 2-Nitropropane	41		8.194					ND	
96 2-Chloroethyl vinyl ether	63		8.505					ND	
97 cis-1,3-Dichloropropene	75		8.505					ND	
98 4-Methyl-2-pentanone (MIBK	43		8.732					ND	
99 Toluene	91		8.975					ND	
100 trans-1,3-Dichloropropene	75		9.289					ND	
101 Ethyl methacrylate	69		9.428					ND	
102 1,1,2-Trichloroethane	97		9.550					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.759					ND	
104 1,3-Dichloropropane	76		9.794					ND	
105 2-Hexanone	43		9.934					ND	
107 Tetrahydrothiophene	60		10.097					ND	
108 Chlorodibromomethane	129		10.160					ND	
109 Ethylene Dibromide	107		10.334					ND	
110 1-Chlorohexane	91		11.118					ND	
111 Chlorobenzene	112		11.153					ND	
112 1,1,1,2-Tetrachloroethane	131		11.293					ND	
113 Ethylbenzene	106		11.327					ND	
114 m-Xylene & p-Xylene	106		11.519					ND	
115 o-Xylene	106		12.077					ND	
116 Styrene	104		12.111					ND	
117 Bromoform	173		12.355					ND	
118 Isopropylbenzene	105		12.582					ND	
119 cis-1,4-Dichloro-2-butene	53		12.689					ND	
120 Cyclohexanone	55		12.721					ND	U
122 Bromobenzene	156		12.965					ND	
121 1,1,2,2-Tetrachloroethane	83		12.983					ND	
123 1,2,3-Trichloropropane	110		13.035					ND	U
124 trans-1,4-Dichloro-2-buten	53		13.052					ND	
125 N-Propylbenzene	120		13.105					ND	
126 2-Chlorotoluene	126		13.209					ND	
127 1,3,5-Trimethylbenzene	105		13.314					ND	
128 4-Chlorotoluene	126		13.331					ND	
129 tert-Butylbenzene	119		13.697					ND	
22 Pentachloroethane	167		13.716					ND	
130 1,2,4-Trimethylbenzene	105		13.749					ND	
131 sec-Butylbenzene	134		13.941					ND	
132 1,3-Dichlorobenzene	146		14.063					ND	
133 4-Isopropyltoluene	119		14.115					ND	
134 1,4-Dichlorobenzene	146		14.167					ND	
135 1,2,3-Trimethylbenzene	105		14.223					ND	
137 n-Butylbenzene	91		14.551					ND	
138 1,2-Dichlorobenzene	146		14.568					ND	
139 1,2-Dibromo-3-Chloropropan	157		15.369					ND	
140 1,3,5-Trichlorobenzene	180		15.547					ND	
141 1,2,4-Trichlorobenzene	180		16.119					ND	
142 Hexachlorobutadiene	225		16.275					ND	
143 Naphthalene	128		16.345					ND	
144 1,2,3-Trichlorobenzene	180		16.572					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
162 1-Chlorohexane TIC	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000				ND		
18 2,2-Dimethylpentane	1		0.000				ND		
S 151 1,2-Dichloroethene, Total	96		2.000				ND		
S 148 1,3-Dichloropropene, Total	1		0.000				ND		
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1		0.000				ND		
S 146 Xylenes, Total (URS)	1		0.000				ND		
S 149 1,2-Dichloroethene, Total	1		0.000				ND		
S 150 Xylenes, Total	106		0.000				ND		
S 147 Total BTEX	1		0.000				ND		
T 165 Cyclohexane TIC	56		6.023				ND		
T 163 Methyl cyclohexane TIC	55		7.469				ND		U
T 26 2,3-dichloro-1-propene TIC	75		0.000				ND		
T 154 Dicyclopentadiene TIC	1		0.000				ND		
T 156 1,3-Butadiene TIC	1		0.000				ND		
T 68 Propene oxide TIC	58		0.000				ND		
T 155 4-Ethyltoluene TIC	1		0.000				ND		
T 25 Dichloroacetonitrile TIC	74		0.000				ND		
T 161 n-Nonane TIC	1		0.000				ND		
T 153 Propene TIC	1		0.000				ND		

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

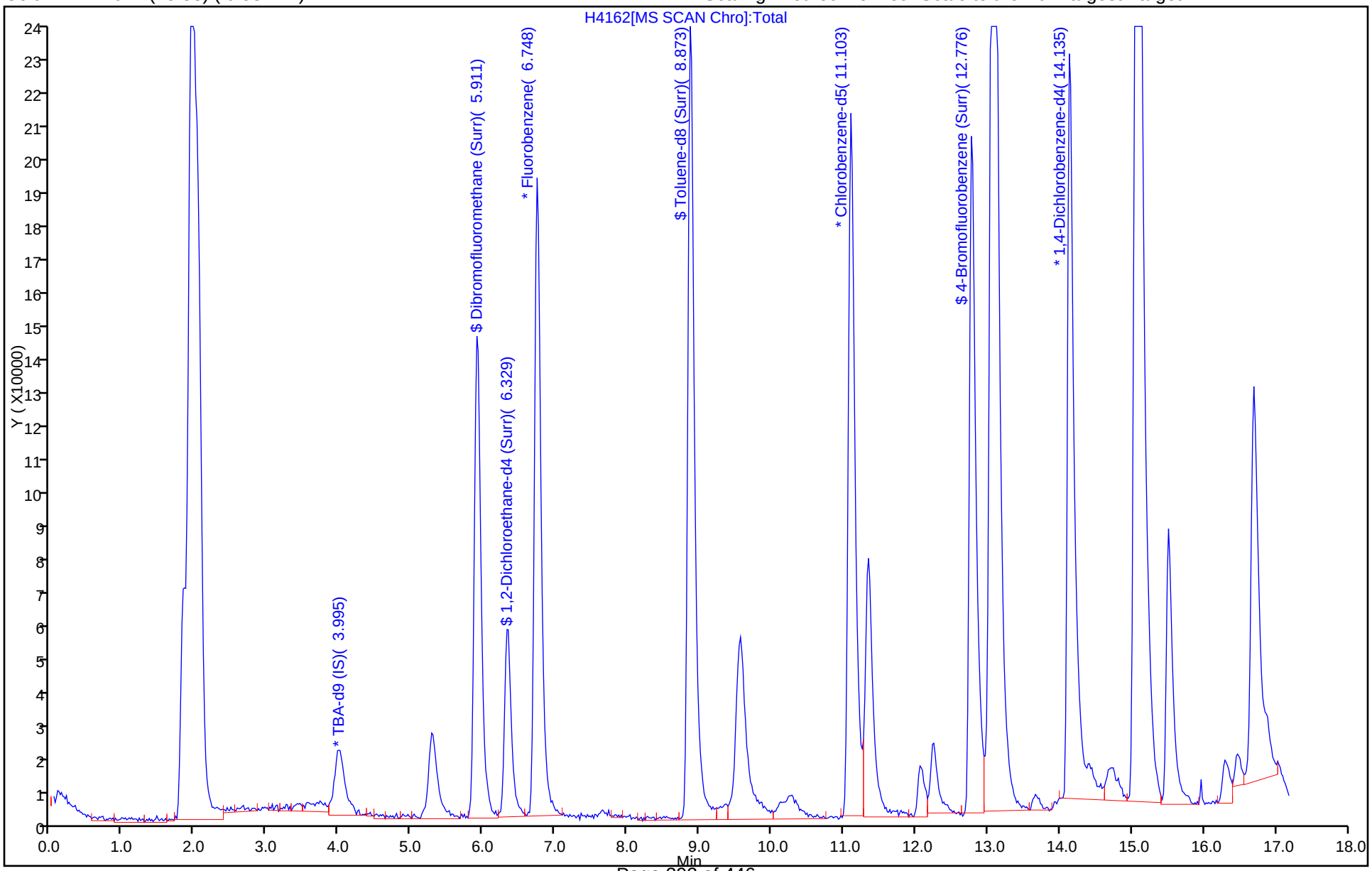
Report Date: 12-Feb-2018 17:40:21 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4162.D

Injection Date:	12-Feb-2018 09:33:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4162.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 12-Feb-2018 09:33:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:31:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.2	107.13
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.85	103.65
$ 10 Toluene-d8 (Surr)	9.50	9.52	100.24
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.11	95.91

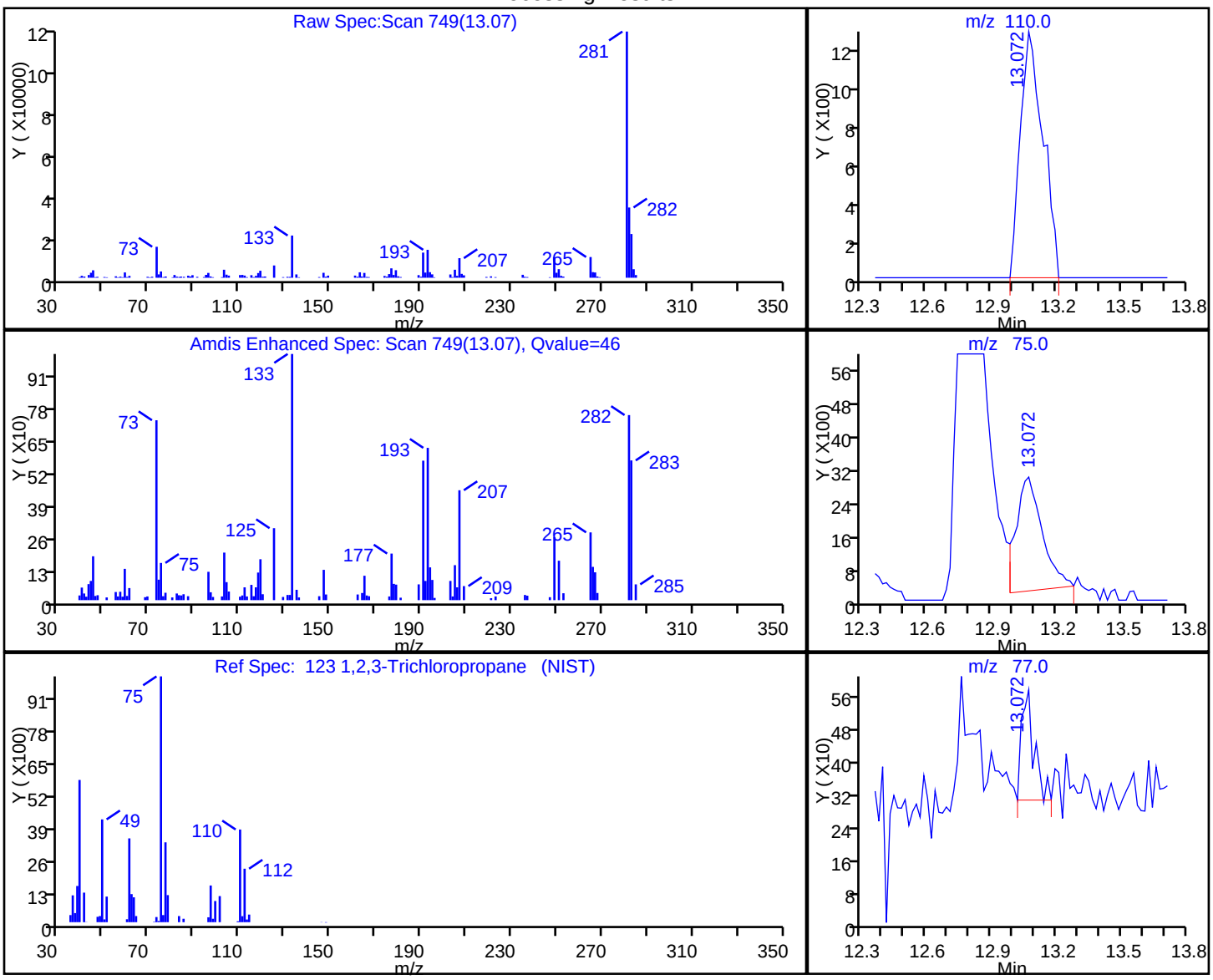
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4162.D
Injection Date: 12-Feb-2018 09:33:30 Instrument ID: VMS_H
Lims ID: mb
Client ID:
Operator ID: moanm ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

123 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
13.07	110.00	9112	1.895392
13.07	75.00	23047	
13.07	77.00	1084	

Reviewer: moanm, 12-Feb-2018 17:31:34
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-404562/4

Matrix: Water | Lab File ID: H4160.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 08:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.11		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	4.10		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.14		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	4.26		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	4.28		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	4.52		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	4.38		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	4.83		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	4.65		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	4.70		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	4.46		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	4.79	J	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.28		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.89		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	4.29		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.24		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	4.68		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	4.46		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	5.13		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	5.05		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	4.93		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.05		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	18.5		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	4.18		1.0	0.40	0.17
591-78-6	2-Hexanone	15.7		5.0	4.0	1.4
106-43-4	4-Chlorotoluene	4.89		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	4.55		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	17.4		5.0	3.2	1.0
67-64-1	Acetone	19.3		10	6.4	1.9
71-43-2	Benzene	4.66		1.0	0.40	0.16
108-86-1	Bromobenzene	5.07		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.53		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.41		1.0	0.40	0.17
75-25-2	Bromoform	5.08		1.0	0.40	0.19
74-83-9	Bromomethane	4.42		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.36		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-404562/4

Matrix: Water | Lab File ID: H4160.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 08:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	3.94		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.99		1.0	0.40	0.17
75-00-3	Chloroethane	4.45		2.0	1.6	0.41
67-66-3	Chloroform	4.43		1.0	0.40	0.16
74-87-3	Chloromethane	3.85		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	4.63		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.19		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.63		1.0	0.40	0.17
74-95-3	Dibromomethane	4.35		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	3.47		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.90		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.60		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.52		1.0	0.40	0.19
179601-23-1	m,p-Xylene	4.89		2.0	0.80	0.34
74-88-4	Methyl iodide	4.54		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.49	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.91	J	5.0	0.80	0.32
91-20-3	Naphthalene	4.25		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.33		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.40		1.0	0.40	0.16
95-47-6	o-Xylene	5.16		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.16		1.0	0.40	0.17
100-42-5	Styrene	5.11		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.43		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.98		1.0	0.40	0.20
108-88-3	Toluene	4.58		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	4.61		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.82		1.0	0.40	0.19
79-01-6	Trichloroethene	4.53		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.06		2.0	0.80	0.29
108-05-4	Vinyl acetate	8.42		3.0	2.0	0.94
75-01-4	Vinyl chloride	3.91		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.1		2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-404562/4

Matrix: Water | Lab File ID: H4160.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 08:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	104		80-119
2037-26-5	Toluene-d8 (Surr)	108		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4160.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 12-Feb-2018 08:49:30 ALS Bottle#: 12 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 09:22:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.997	3.975	0.022	0	101826	250.0	250.0	
* 2 Fluorobenzene	96	6.750	6.763	-0.013	98	580066	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.105	11.118	-0.013	91	141061	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.137	14.132	0.005	97	255531	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.914	5.912	0.002	93	291556	9.50	9.91	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.332	6.330	0.002	0	125457	9.50	10.0	
$ 10 Toluene-d8 (Surr)	98	8.875	8.874	0.001	93	561331	9.50	10.3	
$ 11 4-Bromofluorobenzene (Surr	95	12.778	12.777	0.001	85	329682	9.50	9.27	
28 Dichlorodifluoromethane	85	2.185	2.181	0.004	98	118304	5.00	3.47	
30 Chloromethane	50	2.290	2.303	-0.013	98	58754	5.00	3.85	
32 Vinyl chloride	62	2.412	2.425	-0.013	97	66401	5.00	3.91	
35 Bromomethane	94	2.708	2.703	0.005	91	80476	5.00	4.42	
36 Chloroethane	64	2.778	2.773	0.005	99	46089	5.00	4.45	
37 Dichlorofluoromethane	67	2.952	2.947	0.005	97	187001	5.00	4.49	
38 Trichlorofluoromethane	101	3.004	3.000	0.004	98	186288	5.00	4.06	
40 Ethyl ether	59	3.231	3.226	0.005	91	38190	5.00	4.85	
44 Acrolein	56	3.387	3.383	0.004	98	30257	50.0	62.1	
45 1,1-Dichloroethene	96	3.474	3.487	-0.013	98	89287	5.00	4.52	
46 1,1,2-Trichloro-1,2,2-trif	151	3.509	3.505	0.004	97	128042	5.00	4.43	
47 Acetone	43	3.527	3.522	0.005	34	22465	20.0	19.3	
48 Iodomethane	142	3.649	3.662	-0.013	100	229278	5.00	4.54	
50 Carbon disulfide	76	3.718	3.731	-0.013	99	295572	5.00	4.36	
52 3-Chloro-1-propene	41	3.823	3.818	0.005	84	113719	5.00	4.46	
53 Methyl acetate	43	3.823	3.836	-0.013	74	86643	25.0	23.0	
54 Methylene Chloride	84	3.945	3.958	-0.013	91	78449	5.00	4.91	
55 2-Methyl-2-propanol	59	4.084	4.080	0.004	92	22090	50.0	48.1	
57 Acrylonitrile	53	4.206	4.202	0.004	47	47170	50.0	44.4	
58 trans-1,2-Dichloroethene	96	4.224	4.237	-0.013	98	100061	5.00	4.61	
56 Methyl tert-butyl ether	73	4.224	4.237	-0.013	84	133900	5.00	4.49	
59 Hexane	57	4.485	4.498	-0.013	93	118810	5.00	4.61	
60 1,1-Dichloroethane	63	4.677	4.690	-0.013	95	155257	5.00	4.28	
61 Vinyl acetate	43	4.711	4.724	-0.013	97	137887	10.0	8.42	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
66 2,2-Dichloropropane	77	5.356	5.352	0.004	89	163281	5.00	4.05	
65 cis-1,2-Dichloroethene	96	5.339	5.352	-0.013	83	102801	5.00	4.63	
67 2-Butanone (MEK)	43	5.356	5.369	-0.013	45	42388	20.0	18.5	
71 sec-Butyl Alcohol	45	5.583	5.596	-0.013	96	67488	150.0	151.7	
73 Chlorobromomethane	128	5.635	5.648	-0.013	95	48848	5.00	4.53	
75 Chloroform	83	5.722	5.717	0.005	91	191112	5.00	4.43	
74 Tetrahydrofuran	42	5.687	5.717	-0.030	38	13233	10.0	8.03	
76 1,1,1-Trichloroethane	97	5.966	5.961	0.005	97	180540	5.00	4.10	
77 Cyclohexane	56	6.018	6.031	-0.013	88	138028	5.00	4.34	
78 1,1-Dichloropropene	75	6.158	6.153	0.005	96	151241	5.00	4.38	
79 Carbon tetrachloride	117	6.158	6.170	-0.012	96	169462	5.00	3.94	
80 Isobutyl alcohol	41	6.297	6.310	-0.013	57	21134	125.0	121.6	
81 Benzene	78	6.401	6.414	-0.013	96	273859	5.00	4.66	
82 1,2-Dichloroethane	62	6.436	6.432	0.004	97	72810	5.00	4.29	
84 n-Heptane	43	6.715	6.711	0.004	94	162226	5.00	4.25	
86 Trichloroethene	95	7.238	7.233	0.005	98	127297	5.00	4.53	
88 2-Pentanone	43	7.482	7.477	0.005	72	100468	20.0	9.68	
89 Methylcyclohexane	55	7.482	7.477	0.005	91	127370	5.00	4.13	
90 1,2-Dichloropropane	63	7.516	7.529	-0.013	97	94940	5.00	4.68	
92 Dibromomethane	93	7.691	7.704	-0.013	96	60263	5.00	4.35	
93 1,4-Dioxane	88	7.726	7.721	0.005	29	5482	100.0	71.6	
94 Dichlorobromomethane	83	7.882	7.895	-0.013	99	164561	5.00	4.41	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.510	8.505	0.005	96	137217	5.00	5.19	
98 4-Methyl-2-pentanone (MIBK	43	8.736	8.732	0.004	96	148641	20.0	17.4	
99 Toluene	91	8.980	8.975	0.005	99	321572	5.00	4.58	
100 trans-1,3-Dichloropropene	75	9.294	9.289	0.005	90	102937	5.00	4.82	
101 Ethyl methacrylate	69	9.433	9.428	0.005	87	68430	5.00	4.85	
102 1,1,2-Trichloroethane	97	9.555	9.550	0.005	88	66732	5.00	4.26	
103 Tetrachloroethene	164	9.764	9.759	0.005	97	115612	5.00	4.98	
104 1,3-Dichloropropane	76	9.799	9.794	0.005	87	101257	5.00	5.05	
105 2-Hexanone	43	9.938	9.934	0.004	97	83867	20.0	15.7	
108 Chlorodibromomethane	129	10.147	10.160	-0.013	90	120222	5.00	4.63	
109 Ethylene Dibromide	107	10.339	10.334	0.005	97	82552	5.00	5.28	
110 1-Chlorohexane	91	11.123	11.118	0.005	87	151317	5.00	4.54	
111 Chlorobenzene	112	11.158	11.153	0.005	95	219095	5.00	4.99	
112 1,1,1,2-Tetrachloroethane	131	11.280	11.293	-0.013	92	123589	5.00	5.11	
113 Ethylbenzene	106	11.332	11.327	0.005	98	102198	5.00	4.90	
114 m-Xylene & p-Xylene	106	11.506	11.519	-0.013	0	150509	5.00	4.89	
115 o-Xylene	106	12.081	12.077	0.004	97	133373	5.00	5.16	
116 Styrene	104	12.099	12.111	-0.012	94	197002	5.00	5.11	
117 Bromoform	173	12.377	12.355	0.022	95	68036	5.00	5.08	
118 Isopropylbenzene	105	12.586	12.582	0.004	96	412461	5.00	4.52	
120 Cyclohexanone	55	12.708	12.721	-0.013	90	38505	200.0	201.3	
122 Bromobenzene	156	12.970	12.965	0.005	95	112248	5.00	5.07	
121 1,1,2,2-Tetrachloroethane	83	12.970	12.983	-0.013	94	85188	5.00	5.14	
123 1,2,3-Trichloropropane	110	13.022	13.035	-0.013	80	21294	5.00	4.65	
124 trans-1,4-Dichloro-2-buten	53	13.057	13.052	0.005	62	13806	5.00	4.37	
125 N-Propylbenzene	120	13.092	13.105	-0.013	99	96859	5.00	4.40	
126 2-Chlorotoluene	126	13.196	13.209	-0.013	97	74862	5.00	4.18	
127 1,3,5-Trimethylbenzene	105	13.318	13.314	0.004	95	312255	5.00	4.46	
128 4-Chlorotoluene	126	13.336	13.331	0.005	98	104169	5.00	4.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.701	13.697	0.004	92	340631	5.00	4.43	
130 1,2,4-Trimethylbenzene	105	13.754	13.749	0.005	96	282548	5.00	4.46	
131 sec-Butylbenzene	134	13.945	13.941	0.004	94	83087	5.00	4.16	
132 1,3-Dichlorobenzene	146	14.067	14.063	0.004	97	152130	5.00	5.13	
133 4-Isopropyltoluene	119	14.102	14.115	-0.013	97	383593	5.00	4.55	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	247899	5.00	4.93	
137 n-Butylbenzene	91	14.538	14.551	-0.013	98	361949	5.00	4.33	
138 1,2-Dichlorobenzene	146	14.572	14.568	0.004	97	163440	5.00	4.89	
139 1,2-Dibromo-3-Chloropropan	157	15.356	15.369	-0.013	90	14714	5.00	4.79	
141 1,2,4-Trichlorobenzene	180	16.123	16.119	0.004	95	98155	5.00	4.70	
142 Hexachlorobutadiene	225	16.280	16.275	0.005	97	109090	5.00	4.60	
143 Naphthalene	128	16.350	16.345	0.005	97	88652	5.00	4.25	
144 1,2,3-Trichlorobenzene	180	16.576	16.572	0.004	96	77177	5.00	4.83	
S 151 1,2-Dichloroethene, Total	96				0		10.0	9.24	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.0	
S 145 Trihalomethanes, Total	1				0		20.0	18.6	
S 146 Xylenes, Total (URS)	1				0		10.0	10.0	
S 149 1,2-Dichloroethene, Total	1				0		5.00	9.24	
S 150 Xylenes, Total	106				0		10.0	10.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main B_00020	Amount Added:	2.50	Units: uL	
MV-Gas/Ket B_00040	Amount Added:	2.50	Units: uL	
MV-SS 2-Cleve_00042	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

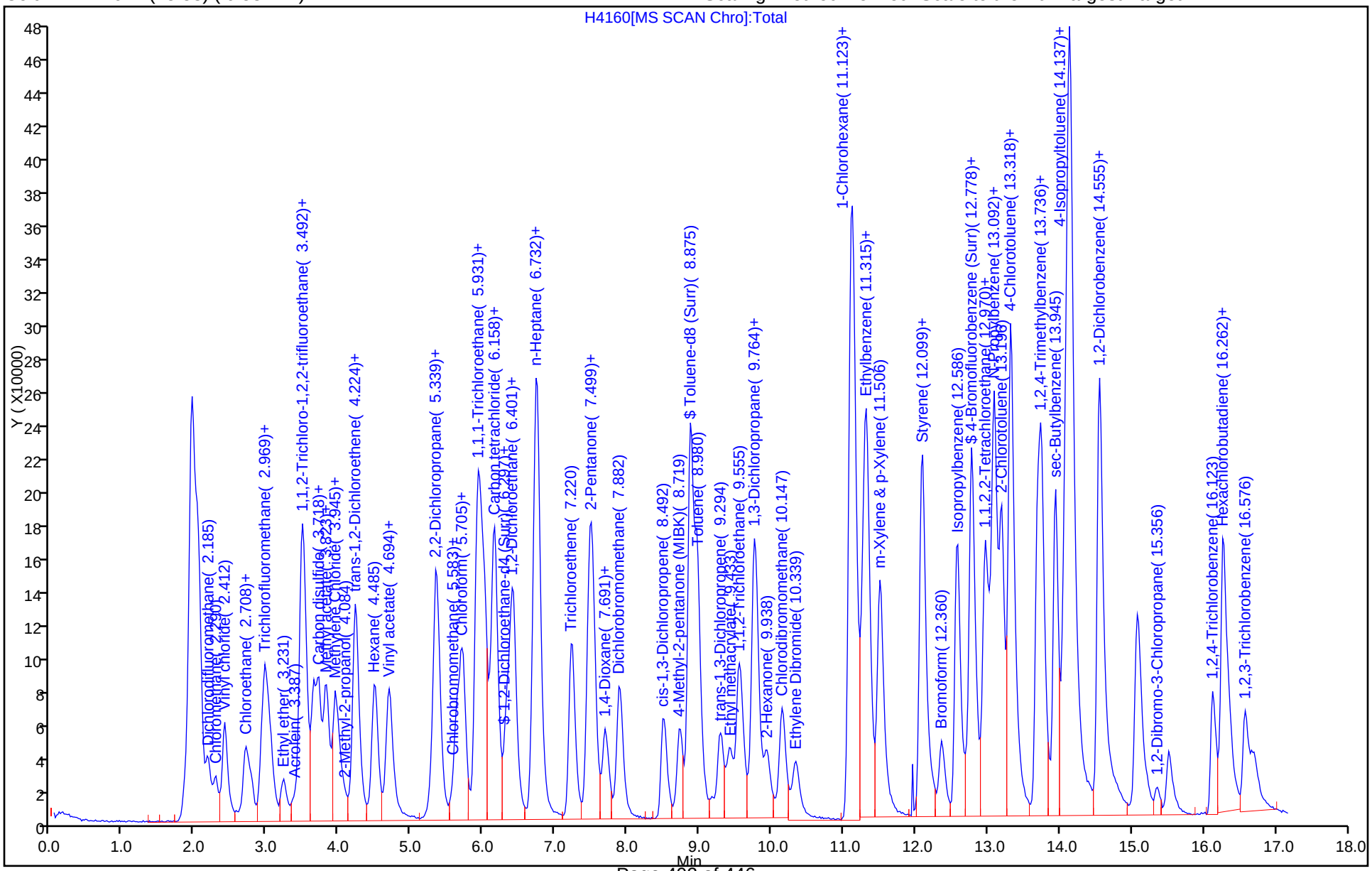
Report Date: 12-Feb-2018 17:40:19 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4160.D

Injection Date:	12-Feb-2018 08:49:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4160.D				
Lims ID:	lcs				
Client ID:					
Sample Type:	LCS				
Inject. Date:	12-Feb-2018 08:49:30	ALS Bottle#:	12	Worklist Smp#:	4
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	lcs				
Operator ID:	moanm	Instrument ID:	VMS_H		
Method:	\\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Feb-2018 17:40:18	Calib Date:	05-Feb-2018 09:34:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	XAWRK011				

First Level Reviewer: moanm Date: 12-Feb-2018 09:22:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.91	104.27
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	10.0	105.32
$ 10 Toluene-d8 (Surr)	9.50	10.3	107.98
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.27	97.63

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-404562/10 IN2

Matrix: Water | Lab File ID: H4163.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	4.47	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	107		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4163.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 12-Feb-2018 09:55:30 ALS Bottle#: 15 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs s
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 10:16:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.999	3.975	0.023	0	98675	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.763	-0.012	98	574694	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.107	11.118	-0.011	91	153410	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.138	14.132	0.006	95	251529	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.915	5.912	0.003	93	296291	9.50	10.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.333	6.330	0.003	0	127607	9.50	10.3	
$ 10 Toluene-d8 (Surr)	98	8.877	8.874	0.003	93	560043	9.50	9.41	
$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.777	0.002	85	323579	9.50	9.25	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.197	3.177	0.020	91	16240	300.0	513.2	
43 Propene oxide	58	3.302	3.316	-0.014	95	204330	500.0	279.1	
49 Isopropyl alcohol	45	3.667	3.647	0.020	95	12588	50.0	54.0	
51 Acetonitrile	41	3.789	3.821	-0.032	69	5425	50.0	22.8	
62 Isopropyl ether	87	4.730	4.745	-0.015	96	69238	5.00	4.47	
63 2-Chloro-1,3-butadiene	53	4.783	4.780	0.002	89	104971	5.00	3.60	
64 Tert-butyl ethyl ether	59	5.148	5.163	-0.015	97	219272	5.00	4.43	
69 Ethyl acetate	43	5.427	5.424	0.003	98	55736	10.0	8.78	
70 Propionitrile	54	5.445	5.442	0.003	49	19752	50.0	50.8	
72 Methacrylonitrile	41	5.619	5.616	0.003	93	149399	50.0	44.3	
83 Tert-amyl methyl ether	73	6.542	6.539	0.003	97	198488	5.00	4.75	
85 n-Butanol	56	7.204	7.219	-0.015	88	11160	125.0	117.0	
91 Methyl methacrylate	100	7.675	7.672	0.003	91	27183	10.0	9.27	
95 2-Nitropropane	41	8.197	8.194	0.003	96	13906	10.0	8.55	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.675	12.689	-0.014	0	24142	10.0	8.96	
135 1,2,3-Trimethylbenzene	105	14.225	14.223	0.002	99	321507	5.00	5.27	
140 1,3,5-Trichlorobenzene	180	15.549	15.547	0.002	96	162286	5.00	5.10	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00019	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

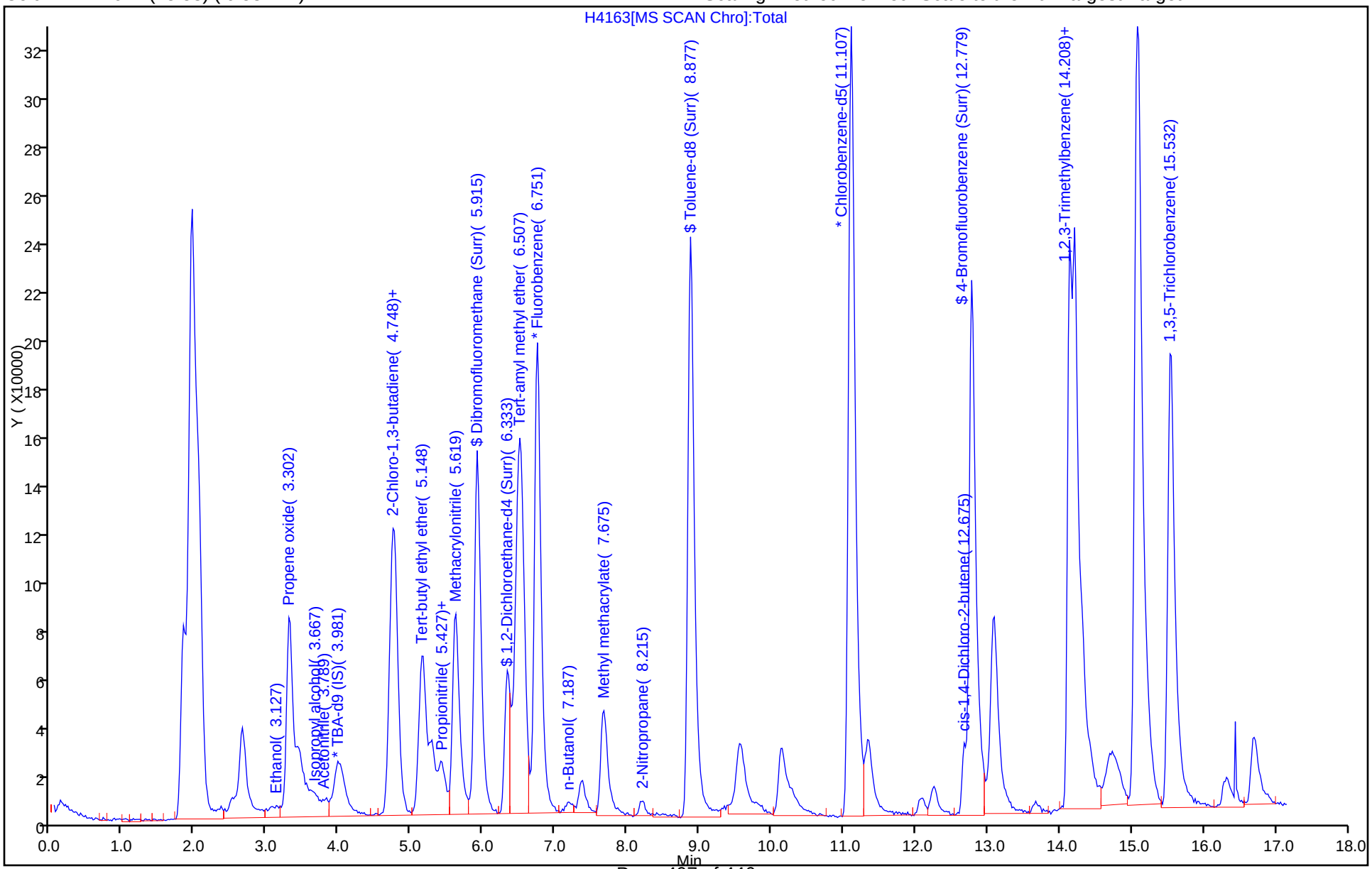
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4163.D

Injection Date:	12-Feb-2018 09:55:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	lcs			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4163.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 12-Feb-2018 09:55:30 ALS Bottle#: 15 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs s
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 10:16:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.2	106.95
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	10.3	108.13
$ 10 Toluene-d8 (Surr)	9.50	9.41	99.06
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.25	97.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-404562/5

Matrix: Water | Lab File ID: H4161.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.08		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	4.31		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.11		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	4.69		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	4.35		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	4.70		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	4.57		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	4.77		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	5.07		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	5.08		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	4.59		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	5.52		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.20		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.82		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	4.32		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.30		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	4.74		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	4.59		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	5.02		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	5.14		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	4.99		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.38		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	19.3		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	4.70		1.0	0.40	0.17
591-78-6	2-Hexanone	19.8	Q	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	4.93		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	4.57		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	19.6		5.0	3.2	1.0
67-64-1	Acetone	20.9		10	6.4	1.9
71-43-2	Benzene	4.65		1.0	0.40	0.16
108-86-1	Bromobenzene	5.01		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.64		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.53		1.0	0.40	0.17
75-25-2	Bromoform	5.29		1.0	0.40	0.19
74-83-9	Bromomethane	4.49		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.57		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-404562/5

Matrix: Water | Lab File ID: H4161.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	4.18		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.96		1.0	0.40	0.17
75-00-3	Chloroethane	4.54		2.0	1.6	0.41
67-66-3	Chloroform	4.47		1.0	0.40	0.16
74-87-3	Chloromethane	3.95		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	4.59		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.19		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.99		1.0	0.40	0.17
74-95-3	Dibromomethane	4.48		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	3.37		2.0	0.80	0.31
100-41-4	Ethylbenzene	5.24		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.97		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.65		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.09		2.0	0.80	0.34
74-88-4	Methyl iodide	4.57		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.67	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.91	J	5.0	0.80	0.32
91-20-3	Naphthalene	5.13		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.58		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.48		1.0	0.40	0.16
95-47-6	o-Xylene	5.10		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.54		1.0	0.40	0.17
100-42-5	Styrene	5.14		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.49		1.0	0.40	0.16
127-18-4	Tetrachloroethene	5.15		1.0	0.40	0.20
108-88-3	Toluene	4.73		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	4.71		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.94		1.0	0.40	0.19
79-01-6	Trichloroethene	4.69		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.12		2.0	0.80	0.29
108-05-4	Vinyl acetate	9.85		3.0	2.0	0.94
75-01-4	Vinyl chloride	3.95		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.2		2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-404562/5

Matrix: Water | Lab File ID: H4161.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 09:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	110		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4161.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 12-Feb-2018 09:11:30 ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:31:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.992	3.975	0.017	0	109831	250.0	250.0	
* 2 Fluorobenzene	96	6.745	6.763	-0.018	98	574033	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.101	11.118	-0.017	91	141071	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.150	14.132	0.018	97	260392	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.909	5.912	-0.003	93	292906	9.50	10.1	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.327	6.330	-0.003	0	128710	9.50	10.4	
$ 10 Toluene-d8 (Surr)	98	8.871	8.874	-0.003	93	574484	9.50	10.5	
$ 11 4-Bromofluorobenzene (Surr	95	12.773	12.777	-0.004	85	338612	9.50	9.35	
28 Dichlorodifluoromethane	85	2.180	2.181	-0.001	98	113577	5.00	3.37	
30 Chloromethane	50	2.285	2.303	-0.018	97	59712	5.00	3.95	
32 Vinyl chloride	62	2.407	2.425	-0.018	98	66414	5.00	3.95	
35 Bromomethane	94	2.703	2.703	0.000	91	80937	5.00	4.49	
36 Chloroethane	64	2.773	2.773	0.000	99	46467	5.00	4.54	
37 Dichlorofluoromethane	67	2.947	2.947	0.000	97	193477	5.00	4.70	
38 Trichlorofluoromethane	101	2.999	3.000	-0.001	99	187235	5.00	4.12	
40 Ethyl ether	59	3.226	3.226	0.000	92	38314	5.00	4.92	
44 Acrolein	56	3.365	3.383	-0.018	94	28117	50.0	58.3	
45 1,1-Dichloroethene	96	3.470	3.487	-0.017	98	91843	5.00	4.70	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.505	0.000	97	133373	5.00	4.67	
47 Acetone	43	3.522	3.522	0.000	33	24164	20.0	20.9	
48 Iodomethane	142	3.644	3.662	-0.018	100	228554	5.00	4.57	
50 Carbon disulfide	76	3.714	3.731	-0.017	99	306686	5.00	4.57	
52 3-Chloro-1-propene	41	3.818	3.818	0.000	84	111255	5.00	4.41	
53 Methyl acetate	43	3.818	3.836	-0.018	76	90135	25.0	24.2	
54 Methylene Chloride	84	3.940	3.958	-0.018	90	77626	5.00	4.91	
55 2-Methyl-2-propanol	59	4.079	4.080	-0.001	97	22061	50.0	44.1	
57 Acrylonitrile	53	4.201	4.202	-0.001	98	48634	50.0	46.2	
58 trans-1,2-Dichloroethene	96	4.236	4.237	-0.001	99	101115	5.00	4.71	
56 Methyl tert-butyl ether	73	4.236	4.237	-0.001	98	137822	5.00	4.67	
59 Hexane	57	4.498	4.498	0.000	94	125188	5.00	4.86	
60 1,1-Dichloroethane	63	4.672	4.690	-0.018	95	156146	5.00	4.35	
61 Vinyl acetate	43	4.707	4.724	-0.017	97	159604	10.0	9.85	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
66 2,2-Dichloropropane	77	5.351	5.352	-0.001	91	172894	5.00	4.38	
65 cis-1,2-Dichloroethene	96	5.334	5.352	-0.018	81	100700	5.00	4.59	
67 2-Butanone (MEK)	43	5.369	5.369	0.000	60	43572	20.0	19.3	
71 sec-Butyl Alcohol	45	5.595	5.596	-0.001	96	64934	150.0	135.4	
73 Chlorobromomethane	128	5.630	5.648	-0.018	95	49550	5.00	4.64	
75 Chloroform	83	5.717	5.717	0.000	92	190673	5.00	4.47	
74 Tetrahydrofuran	42	5.700	5.717	-0.017	46	13998	10.0	8.59	
76 1,1,1-Trichloroethane	97	5.961	5.961	0.000	98	187730	5.00	4.31	
77 Cyclohexane	56	6.031	6.031	0.000	87	141158	5.00	4.50	
78 1,1-Dichloropropene	75	6.153	6.153	0.000	97	156048	5.00	4.57	
79 Carbon tetrachloride	117	6.153	6.170	-0.017	97	177842	5.00	4.18	
80 Isobutyl alcohol	41	6.310	6.310	0.000	35	20467	125.0	109.1	
81 Benzene	78	6.414	6.414	0.000	96	270007	5.00	4.65	
82 1,2-Dichloroethane	62	6.431	6.432	-0.001	96	72703	5.00	4.32	
84 n-Heptane	43	6.710	6.711	-0.001	93	162724	5.00	4.31	
86 Trichloroethene	95	7.233	7.233	0.000	99	130199	5.00	4.69	
88 2-Pentanone	43	7.459	7.477	-0.018	69	94904	20.0	9.24	
89 Methylcyclohexane	55	7.477	7.477	0.000	90	135722	5.00	4.44	
90 1,2-Dichloropropane	63	7.529	7.529	0.000	96	95154	5.00	4.74	
92 Dibromomethane	93	7.686	7.704	-0.018	96	61479	5.00	4.48	
93 1,4-Dioxane	88	7.721	7.721	0.000	29	6185	100.0	81.7	
94 Dichlorobromomethane	83	7.895	7.895	0.000	99	167160	5.00	4.53	
96 2-Chloroethyl vinyl ether	63		8.505				ND	ND	
97 cis-1,3-Dichloropropene	75	8.505	8.505	0.000	96	137056	5.00	5.19	
98 4-Methyl-2-pentanone (MIBK	43	8.731	8.732	-0.001	97	165762	20.0	19.6	
99 Toluene	91	8.975	8.975	0.000	99	328830	5.00	4.73	
100 trans-1,3-Dichloropropene	75	9.289	9.289	0.000	92	104419	5.00	4.94	
101 Ethyl methacrylate	69	9.428	9.428	0.000	87	70222	5.00	4.97	
102 1,1,2-Trichloroethane	97	9.550	9.550	0.000	81	71501	5.00	4.69	
103 Tetrachloroethene	164	9.759	9.759	0.000	97	119446	5.00	5.15	
104 1,3-Dichloropropane	76	9.794	9.794	0.000	87	102920	5.00	5.14	
105 2-Hexanone	43	9.933	9.934	-0.001	97	107279	20.0	19.8	
108 Chlorodibromomethane	129	10.142	10.160	-0.018	90	129553	5.00	4.99	
109 Ethylene Dibromide	107	10.334	10.334	0.000	98	81394	5.00	5.20	
110 1-Chlorohexane	91	11.118	11.118	0.000	90	157649	5.00	4.73	
111 Chlorobenzene	112	11.153	11.153	0.000	95	218041	5.00	4.96	
112 1,1,1,2-Tetrachloroethane	131	11.275	11.293	-0.018	90	122977	5.00	5.08	
113 Ethylbenzene	106	11.327	11.327	0.000	98	109193	5.00	5.24	
114 m-Xylene & p-Xylene	106	11.501	11.519	-0.018	0	156730	5.00	5.09	
115 o-Xylene	106	12.076	12.077	-0.001	98	131843	5.00	5.10	
116 Styrene	104	12.111	12.111	0.000	94	198383	5.00	5.14	
117 Bromoform	173	12.355	12.355	0.000	95	70872	5.00	5.29	
118 Isopropylbenzene	105	12.582	12.582	0.000	96	432387	5.00	4.65	
120 Cyclohexanone	55	12.721	12.721	0.000	90	40183	200.0	210.0	
122 Bromobenzene	156	12.965	12.965	0.000	95	113129	5.00	5.01	
121 1,1,2,2-Tetrachloroethane	83	12.965	12.983	-0.018	93	86246	5.00	5.11	
123 1,2,3-Trichloropropane	110	13.017	13.035	-0.018	81	23544	5.00	5.07	
124 trans-1,4-Dichloro-2-buten	53	13.035	13.052	-0.017	67	14467	5.00	4.50	
125 N-Propylbenzene	120	13.104	13.105	-0.001	98	100469	5.00	4.48	
126 2-Chlorotoluene	126	13.209	13.209	0.000	97	85856	5.00	4.70	
127 1,3,5-Trimethylbenzene	105	13.313	13.314	-0.001	94	327784	5.00	4.59	
128 4-Chlorotoluene	126	13.331	13.331	0.000	98	107014	5.00	4.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.697	13.697	0.000	92	351762	5.00	4.49	
130 1,2,4-Trimethylbenzene	105	13.749	13.749	0.000	96	296118	5.00	4.59	
131 sec-Butylbenzene	134	13.941	13.941	-0.001	94	92433	5.00	4.54	
132 1,3-Dichlorobenzene	146	14.062	14.063	-0.001	96	151773	5.00	5.02	
133 4-Isopropyltoluene	119	14.097	14.115	-0.018	97	392457	5.00	4.57	
134 1,4-Dichlorobenzene	146	14.167	14.167	0.000	95	255599	5.00	4.99	
137 n-Butylbenzene	91	14.550	14.551	-0.001	97	390164	5.00	4.58	
138 1,2-Dichlorobenzene	146	14.568	14.568	0.000	97	164077	5.00	4.82	
139 1,2-Dibromo-3-Chloropropan	157	15.352	15.369	-0.017	92	17285	5.00	5.52	
141 1,2,4-Trichlorobenzene	180	16.136	16.119	0.017	95	108317	5.00	5.08	
142 Hexachlorobutadiene	225	16.275	16.275	0.000	97	120080	5.00	4.97	
143 Naphthalene	128	16.345	16.345	0.000	98	109038	5.00	5.13	
144 1,2,3-Trichlorobenzene	180	16.571	16.572	-0.001	94	77730	5.00	4.77	
S 151 1,2-Dichloroethene, Total	96				0		10.0	9.30	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.1	
S 145 Trihalomethanes, Total	1				0		20.0	19.3	
S 146 Xylenes, Total (URS)	1				0		10.0	10.2	
S 149 1,2-Dichloroethene, Total	1				0		5.00	9.30	
S 150 Xylenes, Total	106				0		10.0	10.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Main B_00020	Amount Added:	2.50	Units: uL	
MV-Gas/Ket B_00040	Amount Added:	2.50	Units: uL	
MV-SS 2-Cleve_00042	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

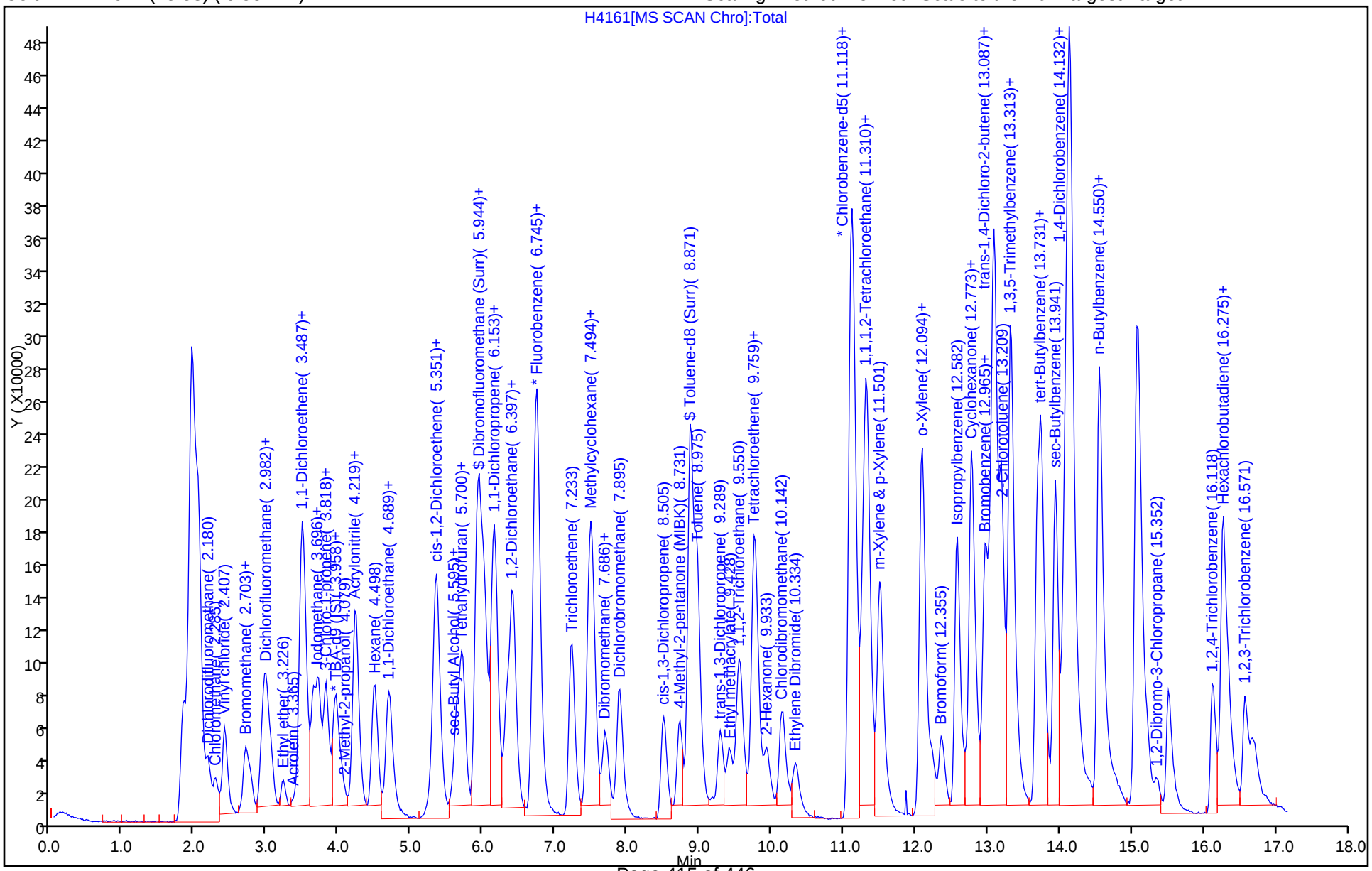
Report Date: 12-Feb-2018 17:40:20 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4161.D

Injection Date:	12-Feb-2018 09:11:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4161.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 12-Feb-2018 09:11:30 ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:40:18 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 17:31:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	10.1	105.85
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	10.4	109.19
$ 10 Toluene-d8 (Surr)	9.50	10.5	110.50
$ 11 4-Bromofluorobenzene (Surr)	9.50	9.35	98.40

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-105986-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-404562/11 IN2

Matrix: Water | Lab File ID: H4164.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 02/12/2018 10:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 404562 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	4.37	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	91		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4164.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 12-Feb-2018 10:17:30 ALS Bottle#: 16 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 11:09:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.010	3.975	0.035	0	101963	250.0	250.0	
* 2 Fluorobenzene	96	6.745	6.763	-0.018	98	598864	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.101	11.118	-0.017	88	159376	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.150	14.132	0.018	96	261932	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.909	5.912	-0.003	93	294397	9.50	9.69	
$ 9 1,2-Dichloroethane-d4 (Sur	65	6.327	6.330	-0.003	0	124812	9.50	9.64	
$ 10 Toluene-d8 (Surr)	98	8.871	8.874	-0.003	93	566354	9.50	9.16	
$ 11 4-Bromofluorobenzene (Surr	95	12.773	12.777	-0.004	88	314752	9.50	8.64	
34 Ethylene oxide	43		2.640				ND	ND	
39 Ethanol	45	3.191	3.177	0.014	47	17500	300.0	532.1	
43 Propene oxide	58	3.313	3.316	-0.003	95	206718	500.0	271.0	
49 Isopropyl alcohol	45		3.647				ND	ND	
51 Acetonitrile	41	3.801	3.821	-0.020	75	3031	50.0	12.2	
62 Isopropyl ether	87	4.724	4.745	-0.021	97	70455	5.00	4.37	
63 2-Chloro-1,3-butadiene	53	4.777	4.780	-0.003	89	114748	5.00	3.78	
64 Tert-butyl ethyl ether	59	5.142	5.163	-0.021	97	216644	5.00	4.20	
69 Ethyl acetate	43	5.421	5.424	-0.003	99	50339	10.0	7.61	
70 Propionitrile	54	5.456	5.442	0.014	92	19033	50.0	47.4	
72 Methacrylonitrile	41	5.613	5.616	-0.003	93	142276	50.0	40.5	
83 Tert-amyl methyl ether	73	6.536	6.539	-0.003	98	191995	5.00	4.41	
85 n-Butanol	56	7.198	7.219	-0.021	81	11265	125.0	113.9	
91 Methyl methacrylate	100	7.669	7.672	-0.003	92	26871	10.0	8.79	
95 2-Nitropropane	41	8.191	8.194	-0.003	94	12149	10.0	7.17	
107 Tetrahydrothiophene	60		10.097				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.686	12.689	-0.003	0	22868	10.0	8.15	
135 1,2,3-Trimethylbenzene	105	14.219	14.223	-0.004	98	326582	5.00	5.14	
140 1,3,5-Trichlorobenzene	180	15.544	15.547	-0.003	95	166810	5.00	5.04	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00019	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00090	Amount Added:	0.76	Units: uL	Run Reagent

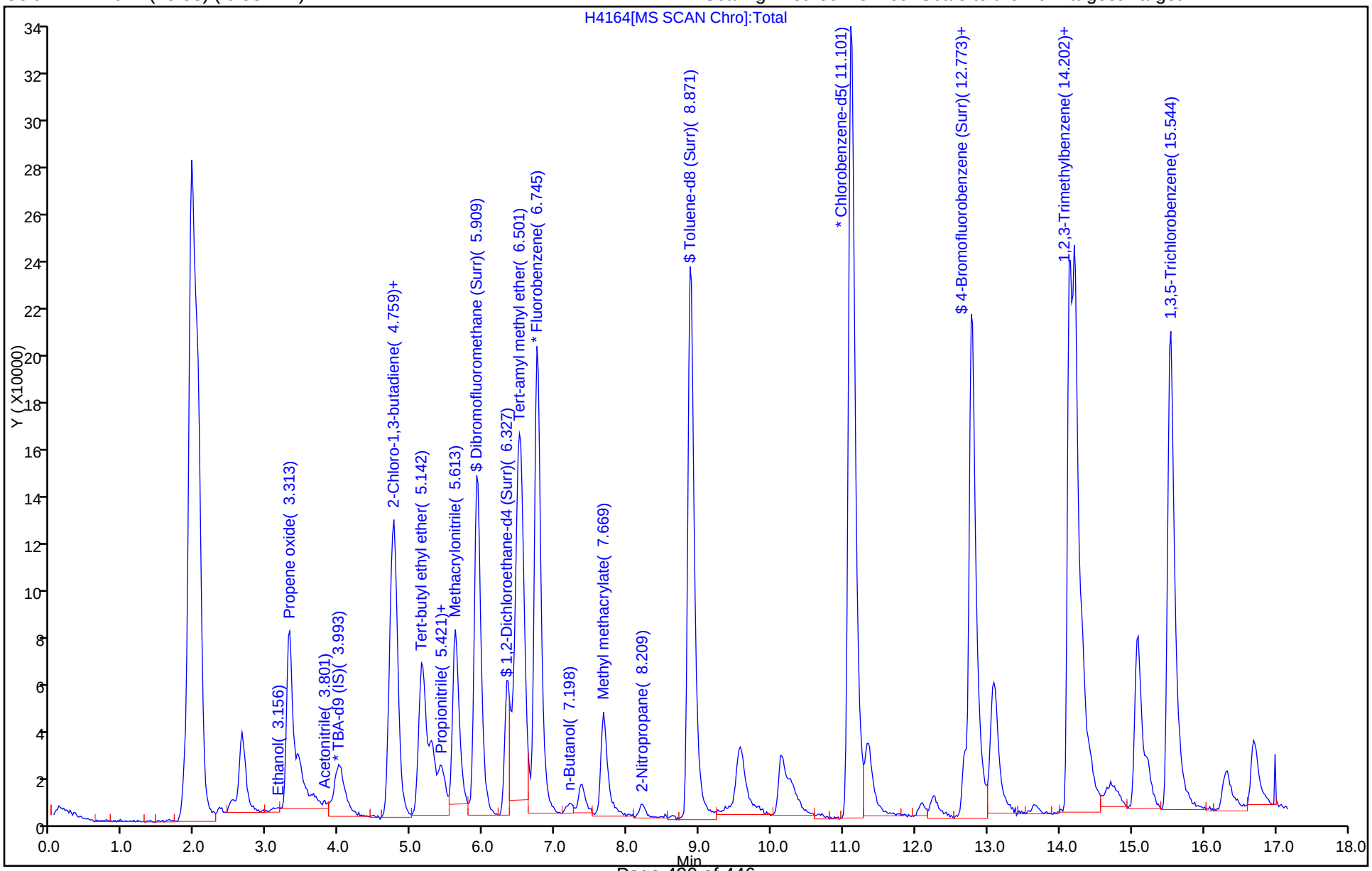
Report Date: 12-Feb-2018 17:39:55 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4164.D

Injection Date:	12-Feb-2018 10:17:30	Instrument ID:	VMS_H	Operator ID:	moanm
Lims ID:	lcsd			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSH_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\H4164.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 12-Feb-2018 10:17:30 ALS Bottle#: 16 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd s
Operator ID: moanm Instrument ID: VMS_H

Method: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Feb-2018 17:38:56 Calib Date: 05-Feb-2018 09:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b\H4020.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: moanm Date: 12-Feb-2018 11:09:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	9.50	9.69	101.98
$ 9 1,2-Dichloroethane-d4 (Surr)	9.50	9.64	101.49
$ 10 Toluene-d8 (Surr)	9.50	9.16	96.42
$ 11 4-Bromofluorobenzene (Surr)	9.50	8.64	90.93

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Start Date: 01/29/2018 09:18

Analysis Batch Number: 403042 End Date: 01/29/2018 15:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-403042/1		01/29/2018 09:18	1	H3791.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/2		01/29/2018 10:19	1	H3794.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/3		01/29/2018 10:40	1	H3795.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/4		01/29/2018 11:02	1	H3796.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/5		01/29/2018 11:24	1	H3797.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/6		01/29/2018 11:46	1	H3798.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/7		01/29/2018 12:08	1	H3799.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/8		01/29/2018 12:30	1	H3800.D	DB-624 (75.53) 0.53(mm)
ICV 280-403042/9		01/29/2018 13:14	1	H3802.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/10		01/29/2018 13:35	1	H3803.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/11		01/29/2018 13:57	1	H3804.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/12		01/29/2018 14:19	1	H3805.D	DB-624 (75.53) 0.53(mm)
ICIS 280-403042/13		01/29/2018 14:41	1	H3806.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/14		01/29/2018 15:03	1	H3807.D	DB-624 (75.53) 0.53(mm)
IC 280-403042/15		01/29/2018 15:25	1	H3808.D	DB-624 (75.53) 0.53(mm)
ICV 280-403042/16		01/29/2018 15:47	1	H3809.D	DB-624 (75.53) 0.53(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Start Date: 02/05/2018 07:29

Analysis Batch Number: 403825 End Date: 02/05/2018 17:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-403825/1		02/05/2018 07:29	1	H4014.D	DB-624 (75.53) 0.53(mm)
CCV 280-403825/2		02/05/2018 07:43	1		DB-624 (75.53) 0.53(mm)
IC 280-403825/10		02/05/2018 08:05	1	H4016.D	DB-624 (75.53) 0.53(mm)
IC 280-403825/11		02/05/2018 08:28	1	H4017.D	DB-624 (75.53) 0.53(mm)
IC 280-403825/12		02/05/2018 08:49	1	H4018.D	DB-624 (75.53) 0.53(mm)
IC 280-403825/13		02/05/2018 09:11	1	H4019.D	DB-624 (75.53) 0.53(mm)
IC 280-403825/14		02/05/2018 09:34	1	H4020.D	DB-624 (75.53) 0.53(mm)
ICV 280-403825/15		02/05/2018 09:56	1	H4021.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 10:18	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 10:40	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 11:02	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 11:24	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 11:46	4		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 12:08	1		DB-624 (75.53) 0.53(mm)
CCVC 280-403825/22		02/05/2018 12:30	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 12:52	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 13:14	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 13:36	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 13:59	10		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 14:21	4		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 14:43	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 15:05	10		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 15:27	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 15:48	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 16:10	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 16:32	2000		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 16:54	400		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/05/2018 17:16	1		DB-624 (75.53) 0.53(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Instrument ID: VMS_H Start Date: 02/12/2018 07:56

Analysis Batch Number: 404562 End Date: 02/12/2018 18:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-404562/1		02/12/2018 07:56	1	H4157.D	DB-624 (75.53) 0.53(mm)
CCV 280-404562/2		02/12/2018 08:05	1	H4158.D	DB-624 (75.53) 0.53(mm)
CCV 280-404562/3		02/12/2018 08:27	1	H4159.D	DB-624 (75.53) 0.53(mm)
LCS 280-404562/4		02/12/2018 08:49	1	H4160.D	DB-624 (75.53) 0.53(mm)
LCSD 280-404562/5		02/12/2018 09:11	1	H4161.D	DB-624 (75.53) 0.53(mm)
MB 280-404562/6		02/12/2018 09:33	1	H4162.D	DB-624 (75.53) 0.53(mm)
LCS 280-404562/10 IN2		02/12/2018 09:55	1	H4163.D	DB-624 (75.53) 0.53(mm)
LCSD 280-404562/11 IN2		02/12/2018 10:17	1	H4164.D	DB-624 (75.53) 0.53(mm)
280-105986-1		02/12/2018 10:38	1	H4165.D	DB-624 (75.53) 0.53(mm)
280-105986-2		02/12/2018 11:01	1	H4166.D	DB-624 (75.53) 0.53(mm)
280-105986-3		02/12/2018 11:22	1	H4167.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 11:44	1		DB-624 (75.53) 0.53(mm)
280-105986-4		02/12/2018 12:10	1	H4169.D	DB-624 (75.53) 0.53(mm)
280-105986-5		02/12/2018 12:32	1	H4170.D	DB-624 (75.53) 0.53(mm)
280-105986-6		02/12/2018 12:54	1	H4171.D	DB-624 (75.53) 0.53(mm)
280-105986-7		02/12/2018 13:16	1	H4172.D	DB-624 (75.53) 0.53(mm)
280-105986-8		02/12/2018 13:37	1	H4173.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 13:59	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 14:22	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 14:43	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 15:05	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 15:27	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 15:49	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 16:11	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 16:33	1		DB-624 (75.53) 0.53(mm)
CCVC 280-404562/28		02/12/2018 16:55	1	H4182.D	DB-624 (75.53) 0.53(mm)
CCVC 280-404562/29		02/12/2018 17:17	1	H4183.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 17:39	10		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 18:01	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		02/12/2018 18:23	1		DB-624 (75.53) 0.53(mm)

Sequence Name: C:\HPCHEM\1\SEQUENCE\021218AM.S
Comment:
Operator: moanm
Data Path: C:\HPCHEM\1\DATA\021218am\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: H
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (2)0mL/5mL/5g)

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Tune Time: 7:56 - 18:23 (Circle)
Lims Batch: 404562

WC 67145

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	H4153	BFB	bfb
2	Sample	10	H4154	8260	blk
3	Sample	11	H4155	8260	ccv
4	Sample	12	H4156	8260	ccv
5	Sample	99	H4157	BFB	bfb
6	Sample	10	H4158	8260	ccv
7	Sample	11	H4159	8260	ccv
8	Sample	12	H4160	8260	lcs
9	Sample	13	H4161	8260	lcsd
10	Sample	14	H4162	8260	mb
11	Sample	15	H4163	8260	lcs s
12	Sample	16	H4164	8260	lcsd s
13	Sample	17	H4165	8260	280-105986-A-1 ph<2
14	Sample	18	H4166	8260	280-105986-B-2 ph<2
15	Sample	19	H4167	8260	280-105986-B-3 ph<2
16	Sample	20	H4168	8260	280-106018-B-1 ph<2 ~SSV PMT
17	Sample	21	H4169	8260	280-105986-B-4 ph<2
18	Sample	22	H4170	8260	280-105986-B-5 ph<2
19	Sample	23	H4171	8260	280-105986-A-6 ph<2
20	Sample	24	H4172	8260	280-105986-A-7 ph<2
21	Sample	25	H4173	8260	280-105986-A-8 ph<2
22	Sample	26	H4174	8260	280-106018-B-1 ph<2
23	Sample	27	H4175	8260	280-106206-A-3 ph<2
24	Sample	28	H4176	8260	280-106206-F-9 ph<2
25	Sample	29	H4177	8260	280-106247-B-1 ph<2
26	Sample	30	H4178	8260	280-106247-E-2 ph<2
27	Sample	31	H4179	8260	280-106247-G-3 ph<2
28	Sample	32	H4180	8260	280-106247-G-4 ph<2
29	Sample	33	H4181	8260	280-106247-F-5 ph<2
30	Sample	34	H4182	8260	ccvc
31	Sample	35	H4183	8260	ccvc s
32	Sample	36	H4184	8260	280-106218-D-3 ph<2 2mL ~Right
33	Sample	37	H4185	8260	280-106218-D-6 ph<2 ~ Dilution
34	Sample	38	H4186	8260	280-106218-E-7 ph<2
35	Sample	39	H4187	8260	blk

M

2-13-18

Sample Request Form: 46412

den_msvoa_totalbacklog 2/12/2018 10:16:47 AM Assigned to:Moan, Matthew R

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-105986-1	775VMW-5_0118		8260B_DOD5	8260B_DOD5	02/13 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-2	775VMW-5_0118-a		8260B_DOD5	8260B_DOD5	02/13 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-3	775MW-6_0118		8260B_DOD5	8260B_DOD5	02/14 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-4	775MW-27_0118		8260B_DOD5	8260B_DOD5	02/14 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-5	775VMW-8_0118		8260B_DOD5	8260B_DOD5	02/14 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-6	775-AB_013018		8260B_DOD5	8260B_DOD5	02/13 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-7	775-AB_013118		8260B_DOD5	8260B_DOD5	02/14 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-105986-8	775TB_013118		8260B_DOD5	8260B_DOD5	02/13 23:59	02/19/18	SKR	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-106206-3	SS031-TRIPBLANK-01		8260B_DOD5	8260B_DOD5	02/21 23:59	02/14/18	DRB	IL	MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										
280-106206-9	SS031-EQUIPBLANK-01		8260B_DOD5	8260B_DOD5	02/21 23:59	02/14/18	DRB	IL	W005 & Mtls-Strge & MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										

Sample Request Form: 46412

den_msvoa_totalbacklog 2/12/2018 10:16:47 AM Assigned to:Moan, Matthew R

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-106247-1	SS031-TRIPBLANK-02	20mL	8260B_DOD5	8260B_DOD5	02/22 23:59	02/15/18	DRB	IL	MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										
280-106247-2	SS031-DPW-001-10	40	8260B_DOD5	8260B_DOD5	02/22 23:59	02/15/18	DRB	IL	Mtls-Strge & W012 & MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										
280-106247-3	SS031-DPW-004-7	40	8260B_DOD5	8260B_DOD5	02/22 23:59	02/15/18	DRB	IL	W012 & Mtls-Strge & MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										
280-106247-4	SS031-DPW-005-9	40	8260B_DOD5	8260B_DOD5	02/22 23:59	02/15/18	DRB	IL	W012 & Mtls-Strge & MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										
280-106247-5	SS031-FIELDBLANK-01	40	8260B_DOD5	8260B_DOD5	02/22 23:59	02/15/18	DRB	IL	W012 & Mtls-Strge & MS-Strge	Unconfirmed
M Q5Rev122115/Std Var App/DIL3										

018-1 40 4

Sample Request Form: 46413

den_msvoa_totalbacklog 2/12/2018 10:18:37 AM Assigned to:Moan, Matthew R

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-106218-3	ST007-GW-7VEP-6-02072018		8260_DoD	8260_DoD	02/21 23:59	02/26/18	JNI	OK	W008 & GC-Strge & MS-Strge	Unconfirmed
M Q4.2 / DIL1 / Use DF										
L 426128.09.KA.03										
280-106218-6	ST007-GW-7VEP-9-02072018		8260_DoD	8260_DoD	02/21 23:59	02/26/18	JNI	OK	GC-Strge & W008 & MS-Strge	Unconfirmed
M Q4.2 / DIL1 / Use DF										
280-106218-7	ST007-GW-2-41B-02072018		8260_DoD	8260_DoD	02/21 23:59	02/26/18	JNI	OK	MS-Strge & GC-Strge & W008	Unconfirmed
M Q4.2 / DIL1 / Use DF										

TestAmerica Laboratories
Worklist Report

Worklist Name: 021218am Worklist Number: 67145
Instrument Name: VMS_H Chrom Method: AQ_VMSH_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_H\20180212-67145.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_H
Run Reagent: MV-568718-D_00008 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00090 Amount Added: 0.760, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0067145-001	# 1 BFB	MV-BFB_00025	BFB	voaWater	1.000	uL	1.000
280-0067145-002	# 2 ccv	MV-Main A_00033 MV-568718-D_00008 MV-Gas/Ket A_00069 MV-2cleve+AVA_00033	CCV	voaWater	20.00	mL	1.000
280-0067145-003	# 3 ccv	MV-Supp A_00028	CCV	voaWater	20.00	mL	1.000
280-0067145-004	# 4 lcs	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	LCS	voaWater	20.00	mL	1.000
280-0067145-005	# 5 lcsd	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	LCSD	voaWater	20.00	mL	1.000
280-0067145-006	# 6 mb		MB	voaWater	20.00	mL	1.000
280-0067145-007	# 7 280-100725-A-1		Client	voaWater	20.00	uL	1.000
280-0067145-008	# 8 280-100725-A-2		Client	voaWater	20.00	mL	1.000
280-0067145-009	# 9 280-100725-A-3		Client	voaWater	20.00	mL	1.000
280-0067145-010	#10 lcs	MV-Supp B_00019	LCS	voaWater	20.00	mL	1.000
280-0067145-011	#11 lcsd	MV-Supp B_00019	LCSD	voaWater	20.00	mL	1.000
280-0067145-012	#12 280-105986-A-1		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0067145-013	#13 280-105986-B-2		Client	voaWater	20.00	mL	1.000
280-0067145-014	#14 280-105986-B-3		Client	voaWater	20.00	mL	1.000
280-0067145-015	#15 280-106018-B-1		Client	voaWater	20.00	mL	1.000
280-0067145-016	#16 280-105986-B-4		Client	voaWater	20.00	mL	1.000
280-0067145-017	#17 280-105986-B-5		Client	voaWater	20.00	mL	1.000
280-0067145-018	#18 280-105986-A-6		Client	voaWater	20.00	mL	1.000
280-0067145-019	#19 280-105986-A-7		Client	voaWater	20.00	mL	1.000
280-0067145-020	#20 280-105986-A-8		Client	voaWater	20.00	mL	1.000
280-0067145-034	#34 280-106018-B-1		Client	voaWater	20.00	mL	1.000
280-0067145-021	#21 280-106206-A-3		Client	voaWater	20.00	mL	1.000
280-0067145-022	#22 280-106206-F-9		Client	voaWater	20.00	mL	1.000
280-0067145-023	#23 280-106247-B-1		Client	voaWater	20.00	mL	1.000
280-0067145-024	#24 280-106247-E-2		Client	voaWater	20.00	mL	1.000
280-0067145-025	#25 280-106247-G-3		Client	voaWater	20.00	mL	1.000
280-0067145-026	#26 280-106247-G-4		Client	voaWater	20.00	mL	1.000
280-0067145-027	#27 280-106247-F-5		Client	voaWater	20.00	mL	1.000
280-0067145-028	#28 ccvc	MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00033	CCVC	voaWater	20.00	mL	1.000
280-0067145-029	#29 ccvc	MV-Supp A_00028	CCVC	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0067145-030	#30 280-106218-D-3		Client	voaWater	20.00	mL	10.00
280-0067145-031	#31 280-106218-D-6		Client	voaWater	20.00	mL	1.000
280-0067145-032	#32 280-106218-E-7		Client	voaWater	20.00	mL	1.000
280-0067145-033	#33 Samp 33		Client	voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\012918i.S
Comment:
Operator: moanm
Data Path: C:\HPCHEM\1\DATA\012918i\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Test America Denver
Instrument: 1-4
AGMS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 09.18-15:47
Tune Details: 403042

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	H3791	BFB	bfb 09.18
2	Sample	10	H3792	8260	blk
3	Sample	11	H3793	8260	blk
4	Sample	12	H3794	8260	ic
5	Sample	13	H3795	8260	ic
6	Sample	14	H3796	8260	ic
7	Sample	15	H3797	8260	ic
8	Sample	16	H3798	8260	ic
9	Sample	17	H3799	8260	ic
10	Sample	18	H3800	8260	ic
11	Sample	19	H3801	8260	blk
12	Sample	20	H3802	8260	icv
13	Sample	21	H3803	8260	ic
14	Sample	22	H3804	8260	ic
15	Sample	23	H3805	8260	ic
16	Sample	24	H3806	8260	icis
17	Sample	25	H3807	8260	ic
18	Sample	26	H3808	8260	ic
19	Sample	27	H3809	8260	icv 15:47
20	Sample	28	H3810	8260	280-105844-B-26
21	Sample	29	H3811	8260	280-105844-B-27
22	Sample	30	H3812	8260	280-105844-D-28
23	Sample	31	H3813	8260	280-105844-E-29
24	Sample	32	H3814	8260	280-105844-B-30
25	Sample	33	H3815	8260	280-105844-C-31
26	Sample	34	H3816	8260	280-105844-D-32
27	Sample	35	H3817	8260	280-105844-B-34
28	Sample	36	H3818	8260	280-105844-A-35
29	Sample	37	H3819	8260	Blank
30	Sample	37	H3820	8260	280-105863-G-24
31	Sample	38	H3821	8260	280-105863-F-25
32	Sample	39	H3822	8260	280-105863-G-27
33	Sample	40	H3823	8260	280-105863-G-28
34	Sample	41	H3824	8260	280-105863-G-29
35	Sample	42	H3825	8260	280-105863-D-30
36	Sample	43	H3826	8260	280-105863-G-31
37	Sample	44	H3827	8260	280-105863-G-32
38	Sample	45	H3828	8260	280-105863-G-33
39					

1-30-18 Tan

1-30-18

screens

MAIN/supp ICAL
calib ID: 31506, 31507
WL: 66769
ICIS/ICV: 13/9, 16

Q4/Q5 except for: 2-pentanone, propene oxide, 2-chloro-1,3-butadiene

1st level: 1-30-18 Tan

2nd level:

** no ICAL for 2-Clevo, 1,4-dioxane, ethylene oxide, IPA, acetonitrile, tetrahydrothiophene

TestAmerica Laboratories
Worklist Report

Worklist Name: 012918i Worklist Number: 66769
Instrument Name: VMS_H Chrom Method: AQ_VMSH_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_H\20180129-66769.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_H
Run Reagent: MV-568718-D_00008 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00090 Amount Added: 0.840, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066769-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0066769-002	# 2 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	1	voaWater	20.00	mL	1.000
280-0066769-003	# 3 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	2	voaWater	20.00	mL	1.000
280-0066769-004	# 4 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	3	voaWater	20.00	mL	1.000
280-0066769-005	# 5 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	4	voaWater	20.00	mL	1.000
280-0066769-006	# 6 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	5	voaWater	20.00	mL	1.000
280-0066769-007	# 7 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	6	voaWater	20.00	mL	1.000
280-0066769-008	# 8 ic	MV-568718-D_00008 MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00032	IC	7	voaWater	20.00	mL	1.000
280-0066769-009	# 9 icv	MV-568718-D_00008 MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	ICV		voaWater	20.00	mL	1.000
280-0066769-010	#10 ic	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066769-011	#11 ic	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	IC	3	voaWater	20.00	mL	1.000
280-0066769-012	#12 ic	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	IC	4	voaWater	20.00	mL	1.000
280-0066769-013	#13 icis	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	ICIS	5	voaWater	20.00	mL	1.000
280-0066769-014	#14 ic	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	IC	6	voaWater	20.00	mL	1.000
280-0066769-015	#15 ic	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp A_00028	IC	7	voaWater	20.00	mL	1.000
280-0066769-016	#16 icv	MV-568718-D_00008 MV-ARCH SS A_00090 MV-Supp B_00019	ICV		voaWater	20.00	mL	1.000
280-0066769-017	#17 Screens		Client		voaWater	20.00	mL	1.000
280-0066769-018	#18 280-105844-B-26		Client		voaWater	20.00	mL	1.000
280-0066769-019	#19 280-105844-B-27		Client		voaWater	20.00	mL	1.000
280-0066769-020	#20 280-105844-D-28		Client		voaWater	20.00	mL	1.000
280-0066769-021	#21 280-105844-E-29		Client		voaWater	20.00	mL	1.000
280-0066769-022	#22 280-105844-B-30		Client		voaWater	20.00	mL	1.000
280-0066769-023	#23 280-105844-C-31		Client		voaWater	20.00	mL	1.000
280-0066769-024	#24 280-105844-D-32		Client		voaWater	20.00	mL	1.000
280-0066769-025	#25 280-105844-B-34		Client		voaWater	20.00	mL	1.000
280-0066769-026	#26 280-105844-A-35		Client		voaWater	20.00	mL	1.000
280-0066769-027	#27 280-105863-G-24		Client		voaWater	20.00	mL	1.000
280-0066769-028	#28 280-105863-F-25		Client		voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066769-029	#29 280-105863-G-27		Client		voaWater	20.00	mL	1.000
280-0066769-030	#30 280-105863-G-28		Client		voaWater	20.00	mL	1.000
280-0066769-031	#31 280-105863-G-29		Client		voaWater	20.00	mL	1.000
280-0066769-032	#32 280-105863-D-30		Client		voaWater	20.00	mL	1.000
280-0066769-033	#33 280-105863-G-31		Client		voaWater	20.00	mL	1.000
280-0066769-034	#34 280-105863-G-32		Client		voaWater	20.00	mL	1.000
280-0066769-035	#35 280-105863-G-33		Client		voaWater	20.00	mL	1.000
280-0066769-036	#36 Samp 36		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\020518AM.S
Comment:
Operator: moanm
Data Path: C:\HPCHEM\1\DATA\020518am\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: 6H
MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 7-29-17:16
Line Batch: 403825
~~66910~~ 66945 2-6-18

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	H4009	BFB	bfb
2	Sample	10	H4010	8260	ccv
3	Sample	99	H4011	BFB	bfb
4	Sample	10	H4012	8260	ccv
5	Sample	11	H4013	8260	ccv
6	Sample	99	H4014	BFB	bfb
7	Sample	10	H4015	8260	ccv
8	Sample	11	H4016	8260	ic
9	Sample	12	H4017	8260	ic
10	Sample	13	H4018	8260	ic
11	Sample	14	H4019	8260	ic
12	Sample	15	H4020	8260	ic
13	Sample	16	H4021	8260	icv
14	Sample	17	H4022	8260	lcs
15	Sample	18	H4023	8260	lcsd
16	Sample	19	H4024	8260	mb
17	Sample	20	H4025	8260	280-106018-D-9 ph<2
18	Sample	21	H4026	8260	280-106018-E-13 ph<2 5mL-DI only
19	Sample	22	H4027	8260	280-106018-C-15 ph<2
20	Sample	23	H4028	8260	ccvc
21	Sample	24	H4029	8260	280-105992-E-1 ph<2
22	Sample	25	H4030	8260	280-105992-D-1 ph<2 MS
23	Sample	26	H4031	8260	280-105992-D-1 ph<2 MSD
24	Sample	27	H4032	8260	280-106002-C-4 ph~2 - DM
25	Sample	28	H4033	8260	280-106002-D-8 ph<2 5mL
26	Sample	29	H4034	8260	280-106002-C-13 ph<2
27	Sample	30	H4035	8260	280-106002-C-13 ph<2 2mL-DI only needed
28	Sample	31	H4036	8260	280-106002-A-14 ph<2
29	Sample	32	H4037	8260	280-106002-B-15 ph<2
30	Sample	33	H4038	8260	280-105896-A-2 ph<2
31	Sample	34	H4039	8260	280-105896-B-3 ph<2 0.01mL-DI only
32	Sample	35	H4040	8260	280-105896-B-5 ph<2 0.05mL-DI only
33	Sample	36	H4041	8260	280-105932-A-1 ph<2
34	Sample	37	H4042	8260	blk
35	Sample	38	H4043	8260	primer

J-6-18

Surr only
403825
ICV: 15

2nd level: Tan 2-7-18

TestAmerica Laboratories
Worklist Report

Worklist Name: 020518am Worklist Number: 66945
Instrument Name: VMS_H Chrom Method: AQ_VMSH_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_H\20180205-66945.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_H
Run Reagent: MV-568718-D_00008 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00090 Amount Added: 0.760, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066945-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0066945-002	# 2 ccv	MV-Main A_00033 MV-568718-D_00008 MV-Gas/Ket A_00069 MV-2cleve+AVA_00033	CCV		voaWater	20.00	mL	1.000
280-0066945-003	# 3 ccv	MV-Supp A_00028	CCV		voaWater	20.00	mL	1.000
280-0066945-004	# 4 lcs	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	LCS		voaWater	20.00	mL	1.000
280-0066945-005	# 5 lcsd	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	LCSD		voaWater	20.00	mL	1.000
280-0066945-006	# 6 mb		MB		voaWater	20.00	mL	1.000
280-0066945-007	# 7 280-100725-A-1		Client		voaWater	20.00	uL	1.000
280-0066945-008	# 8 280-100725-A-2		Client		voaWater	20.00	mL	1.000
280-0066945-009	# 9 280-100725-A-3		Client		voaWater	20.00	mL	1.000
280-0066945-010	#10 ic	MV-568718-D_00008 MV-ARCH SS A_00090	IC	3	voaWater	20.00	mL	1.000
280-0066945-011	#11 ic	MV-568718-D_00008 MV-ARCH SS A_00090	IC	4	voaWater	20.00	mL	1.000
280-0066945-012	#12 ic	MV-568718-D_00008 MV-ARCH SS A_00090	IC	5	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066945-013	#13 ic	MV-568718-D_00008 MV-ARCH SS A_00090	IC	6	voaWater	20.00	mL	1.000
280-0066945-014	#14 ic	MV-568718-D_00008 MV-ARCH SS A_00090	IC	7	voaWater	20.00	mL	1.000
280-0066945-015	#15 icv	MV-568718-D_00008 MV-ARCH SS A_00090	ICV		voaWater	20.00	mL	1.000
280-0066945-016	#16 lcs	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	LCS		voaWater	20.00	mL	1.000
280-0066945-017	#17 lcsd	MV-SS 2-Cleve_00042 MV-Gas/Ket B_00040 MV-Main B_00020	LCSD		voaWater	20.00	mL	1.000
280-0066945-018	#18 mb		MB		voaWater	20.00	mL	1.000
280-0066945-019	#19 280-106018-D-9		Client		voaWater	20.00	mL	1.000
280-0066945-020	#20 280-106018-E-13		Client		voaWater	20.00	mL	4.000
280-0066945-021	#21 280-106018-C-15		Client		voaWater	20.00	mL	1.000
280-0066945-022	#22 ccvc	MV-Main A_00033 MV-Gas/Ket A_00069 MV-2cleve+AVA_00033	CCVC		voaWater	20.00	mL	1.000
280-0066945-023	#23 280-105992-E-1		Client		voaWater	20.00	mL	1.000
280-0066945-024	#24 280-105992-D-1 MS	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	MS		voaWater	20.00	mL	1.000
280-0066945-025	#25 280-105992-D-1 MSD	MV-Main B_00020 MV-Gas/Ket B_00040 MV-SS 2-Cleve_00042	MSD		voaWater	20.00	mL	1.000
280-0066945-026	#26 280-106002-C-4		Client		voaWater	20.00	mL	10.00
280-0066945-027	#27 280-106002-D-8		Client		voaWater	20.00	mL	4.000
280-0066945-028	#28 280-106002-C-13		Client		voaWater	20.00	mL	1.000
280-0066945-029	#29 280-106002-C-13		Client		voaWater	20.00	mL	10.00
280-0066945-030	#30 280-106002-A-14		Client		voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0066945-031	#31 280-106002-B-15		Client		voaWater	20.00	mL	1.000
280-0066945-032	#32 280-105896-A-2		Client		voaWater	20.00	mL	1.000
280-0066945-033	#33 280-105896-B-3		Client		voaWater	20.00	mL	2000.0
280-0066945-034	#34 280-105896-B-5		Client		voaWater	20.00	mL	400.0
280-0066945-035	#35 280-105932-A-1		Client		voaWater	20.00	mL	1.000
280-0066945-036	#36 Samp 36		Client		voaWater	20.00	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Batch Number: 404562 Batch Start Date: 02/12/18 07:56 Batch Analyst: Moan, Matthew R

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00033	MV-568718-D 00008	MV-ARCH SS A 00090	MV-BFB 00025
BFB 280-404562/1		8260B		1 uL	1 uL				1 uL
CCV 280-404562/2		8260B		20 mL	20 mL	5 uL	1 uL		
CCV 280-404562/3		8260B		20 mL	20 mL		1 uL	0.76 uL	
LCS 280-404562/4		8260B		20 mL	20 mL		1 uL	0.76 uL	
LCSD 280-404562/5		8260B		20 mL	20 mL		1 uL	0.76 uL	
MB 280-404562/6		8260B		20 mL	20 mL		1 uL	0.76 uL	
LCS 280-404562/10		8260B		20 mL	20 mL		1 uL	0.76 uL	
LCSD 280-404562/11		8260B		20 mL	20 mL		1 uL	0.76 uL	
280-105986-A-1	775VMW-5_0118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-B-2	775VMW-5_0118-a	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-B-3	775MW-6_0118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-B-4	775MW-27_0118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-B-5	775VMW-8_0118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-A-6	775-AB_013018	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-A-7	775-AB_013118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
280-105986-A-8	775TB_013118	8260B	T	20 mL	20 mL		1 uL	0.76 uL	
CCVC 280-404562/28		8260B		20 mL	20 mL	5 uL	1 uL	0.76 uL	
CCVC 280-404562/29		8260B		20 mL	20 mL		1 uL	0.76 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00069	MV-Gas/Ket B 00040	MV-Main A 00033	MV-Main B 00020	MV-SS 2-Cleve 00042	MV-Supp A 00028
BFB 280-404562/1		8260B							
CCV 280-404562/2		8260B		5 uL		5 uL			
CCV 280-404562/3		8260B							5 uL
LCS 280-404562/4		8260B			2.5 uL		2.5 uL	2.5 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Batch Number: 404562 Batch Start Date: 02/12/18 07:56 Batch Analyst: Moan, Matthew R

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00069	MV-Gas/Ket B 00040	MV-Main A 00033	MV-Main B 00020	MV-SS 2-Cleve 00042	MV-Supp A 00028
LCSD 280-404562/5		8260B			2.5 uL		2.5 uL	2.5 uL	
MB 280-404562/6		8260B							
LCS 280-404562/10		8260B							
LCSD 280-404562/11		8260B							
280-105986-A-1	775VMW-5_0118	8260B	T						
280-105986-B-2	775VMW-5_0118-a	8260B	T						
280-105986-B-3	775MW-6_0118	8260B	T						
280-105986-B-4	775MW-27_0118	8260B	T						
280-105986-B-5	775VMW-8_0118	8260B	T						
280-105986-A-6	775-AB_013018	8260B	T						
280-105986-A-7	775-AB_013118	8260B	T						
280-105986-A-8	775TB_013118	8260B	T						
CCVC 280-404562/28		8260B		5 uL		5 uL			
CCVC 280-404562/29		8260B							5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00019					
BFB 280-404562/1		8260B							
CCV 280-404562/2		8260B							
CCV 280-404562/3		8260B							
LCS 280-404562/4		8260B							
LCSD 280-404562/5		8260B							
MB 280-404562/6		8260B							
LCS 280-404562/10		8260B		2.5 uL					
LCSD 280-404562/11		8260B		2.5 uL					
280-105986-A-1	775VMW-5_0118	8260B	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-105986-1

SDG No.:

Batch Number: 404562 Batch Start Date: 02/12/18 07:56 Batch Analyst: Moan, Matthew R

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00019					
280-105986-B-2	775VMW-5_0118-a	8260B	T						
280-105986-B-3	775MW-6_0118	8260B	T						
280-105986-B-4	775MW-27_0118	8260B	T						
280-105986-B-5	775VMW-8_0118	8260B	T						
280-105986-A-6	775-AB_013018	8260B	T						
280-105986-A-7	775-AB_013118	8260B	T						
280-105986-A-8	775TB_013118	8260B	T						
CCVC 280-404562/28		8260B							
CCVC 280-404562/29		8260B							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
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Client Information	Sampler: Josh Crowlund	Lab PM: Rothmeyer, Stephanie K	Carrier Tracking No(s)	COC No: 280-71402-23958.1
Client Contact: Marcia Olive	Phone: 585-319-0284	E-Mail: stephanie.rothmeyer@testamericainc.com		Page: Page 1 of 1
Company: Bhate Environmental		Analysis Requested		Job #:
Address: 445 Union Blvd Ste.129	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80226				
Phone: 303-597-2450(Tel)	PO#: Purchase Order not required			Other:
Email: molive@bhate.com	WO#:			
Project Name: Griffiss AFB, NY - SD052 Performance Mon	Project #: 28015823			
Site: SD052-02	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_DOD5 - Total VOCs - LTM QAPP List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
775MW-5_0118	01.30.18	13:40	REG	W			✓	3	
775MW-5_0118B	01.30.18	13:40	REG	W			✓	3	
775MW-6_0118	01.31.18	11:45	REG	W			✓	3	
775MW-27_0118	01.31.18	13:30	REG	W			✓	3	
775MW-3_0118	01.31.18	15:30	REG	W			✓	3	
775-AB_013018	01.30.18	13:45	AB	W			✓	2	
775-AB_013118	01.31.18	11:50	AB	W			✓	2	
775-TB_013118	01.31.18	—	TB	W			✓	2	

280-105986 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☑ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) IV

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: S 2-1-18		
Relinquished by: Josh Crowlund	Date/Time: 01.31.18/16:15	Company: Parsons	Received by:	Date/Time: 2-1-18 0900	Company: TA-Den
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.1 + 0.1 IR# 5 transferred by OT 2-1-18

Ver: 08/04/2016

Revised COC Received 2/1/18 NCB

TestAmerica Denver

Chain of Custody Record

TestAmerica

Client Information	Sampler: Jo Crawford	Lab PM: Rothmeyer, Stephanie K	Carrier Tracking No(s):	COC No: 280-75403-23658.1
Client Contact: Project Mgr	Phone: 585-319-0284	E-Mail: stephanie.rothmeyer@testamericainc.com		Page: Page 1 of 1
Company: Parsons Env-Homewood				Job #:
Address: 445 Union Blvd Ste 120	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S2; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80228				
Phone: 303-987-2460(Tel)	PO #: Purchase Order not required			
Email: mallve@parsons.com	WO #:			
Project Name: Griffiss AFB, NY - SD052 Performance Mon	Project #: 28018823			
Site: SD052-02	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Special Instructions/Note:
775MW-5_0118 775MW-5_0118	01.30.18	13:40	REG	W	✓	
775MW-5_0118B 775MW-5_0118	01.30.18	13:40	REG	W	✓	
775MW-6_0118	01.31.18	11:45	REG	W	✓	
775MW-27_0118	01.31.18	13:30	REG	W	✓	
775MW-8_0118 775MW-8_0118	01.31.18	15:30	REG	W	✓	
775-AB_013018	01.30.18	13:45	AB	W	✓	
775-AB_013118	01.31.18	11:50	AB	W	✓	
775-TB_013118	01.31.18	—	TB	W	✓	

DO NOT ANALYZE AMBIENT BLANKS

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☑ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ___ Months

Deliverable Requested: I, II, III, IV, Other (specify): IV

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Jo Crawford	01.31.18/16:15	Parsons			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-105986-1

Login Number: 105986
List Number: 1
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Griffiss Air Force Base, New York, on April 19, 2018. Five aqueous samples, one field duplicate, and associated quality control (QC) blank were collected from site SD052-02 Building 775 for performance monitoring. All analyses were performed by TestAmerica Laboratories, Inc., Arvada, Colorado. The specific samples included in this validation were:

Sample Identification	Matrix	Collection Date	Lab Package	Analyses (USEPA Method Number)
775VMW-5_0418	Water	4/19/18	280-108840	VOCs (SW8260B)*
775VMW-5_0418a				
775MW-6_0418				
775VMW-8_0418				
775MW-27_0418				
775-EW-1R_0418				
775-TB_041918				

Notes: TB – Trip Blank; USEPA – United States Environmental Protection Agency; VOCs – Volatile Organic Compounds; SW – Solid Waste
*TestAmerica Denver holds both Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) and New York National Environmental Laboratory Accreditation Program (NELAP) certifications for method 8260B. The reporting limits for all analytes are much lower by 8260B compared to 8260C.

This data was validated against the laboratory's quality assurance (QA)/QC limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, January 2017) and per requirements of the DoD Quality Systems Manual (QSM), Version 5.0, as specified in the project-specific Quality Assurance Project Plan (QAPP).

Sample Handling and Holding Times

The samples were properly preserved and transferred under chain-of-custody to the laboratory for analysis and analyzed within the required holding time (+/- 12 hours) with the exception of the re-analysis of sample 775VMW-8_0418. Only trichloroethene was reported from this run and was qualified as estimated, "J".

Method Blank

Methylene chloride was detected in the method blank. This common laboratory contaminant was not detected in any of the samples and required no qualification.

Blank Spike Sample (Laboratory Control Sample)/Surrogates

The laboratory control sample (LCS)/LCS duplicate (LCSD) recoveries were within control limits for all analytes.

The surrogate recovery of 1,2-dichloroethane-d4 was above control limits in samples 775VMW-8_0418 and 775EW-1R_0418. The positively identified compounds were qualified as estimated, "J".

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

The MS/MSD recoveries and/or relative percent difference (RPD), when reported, were within control limits.

Project Specific Quality Assurance/Quality Control

The RPD between the sample and duplicate were within project defined control limits.

No ambient blank was collected with this data package.

Calibration Verification Data

The continuing calibration verification (CCV) for naphthalene (-20.1%) was slightly below control limits. This analyte is considered a poor performer and not detected in any sample. Therefore, using professional judgment no qualification was deemed necessary.

Overall Assessment of Data

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Results

Sample Identification	Compound	Result and Qualifier (µg/L)	Reason Code
775VMW-8_0418	1,1,1-Trichloroethane Trichloroethene	0.29 J 16 J	Surr > HT
775EW-1R_0418	Acetone Bromoform Dibromochloromethane	18 J 12 J 0.30 J	Surr >
Notes: µg/L – micrograms per liter; HT – Hold time exceedance; Surr > - surrogate recovery above control limits			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-108840-1

Job Description: Griffiss AFB, NY - SD052 Performance Mon

For:
Bhate Environmental
445 Union Blvd Ste.129
Lakewood, CO 80226

Attention: Marcia Olive

Approved for release.
Stephanie K Rothmeyer
Project Manager I
5/16/2018 10:39 AM

Stephanie K Rothmeyer, Project Manager I
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0182
stephanie.rothmeyer@testamericainc.com
05/16/2018

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

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

CASE NARRATIVE

Client: Bhate Environmental

Project: Griffiss AFB, NY - SD052 Performance Mon

Report Number: 280-108840-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 4/21/2018 at 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6º C.

Per previous sampling events, the samples were logged for Total VOCs - SD052 QAPP List, rather than LTM QAPP list as listed on the COC. The client was notified on 4/23/18.

Per client request via email on 4/24/18, the following sample was cancelled for analysis: 775AB_041918 (280-108840-7).

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples 775VMW-5_0418 (280-108840-1), 775VMW-5_0418a (280-108840-2), 775VMW-6_0418 (280-108840-3), 775VMW-8_0418 (280-108840-4), 775MW-27_0418 (280-108840-5), 775EW-1R_0418 (280-108840-6) and 775TB_041918 (280-108840-8) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 05/03/2018 and 05/04/2018.

Methylene Chloride was detected in method blank MB 280-413691/8 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J”. However, because the result concentration was less than ½ the reporting limit, no corrective action was necessary.

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria high for 775VMW-8_0418 (280-108840-4) and 775EW-1R_0418 (280-108840-6). These samples did not contain any target analytes associated with this surrogate; therefore, re-analysis was not performed. Associated results are flagged "Q".

Reanalysis of the following sample was performed outside of the analytical holding time due to surrogate failure: 775VMW-8_0418 (280-108840-4). The original analysis had a surrogate failure high with an associated hit; therefore, the sample was reanalyzed with passing QC. Only Trichloroethene was affected.

The continuing calibration verification (CCV) associated with batch 280-413691 recovered outside acceptance criteria, low biased, for Naphthalene. This analyte is considered a poor performer. The samples could not be re-analyzed within holding time; therefore, the data have been reported. Associated results are flagged "Q".

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

Detection Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

TestAmerica Job ID: 280-108840-1

Client Sample ID: 775VMW-5_0418 — Lab Sample ID: 280-108840-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.17	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	36		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-5_0418a — Lab Sample ID: 280-108840-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.17	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	36		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-6_0418 — Lab Sample ID: 280-108840-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.29	J	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	10		10	1.9	ug/L	1		8260B	Total/NA
Chloroform	1.5		1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	33		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-8_0418 — Lab Sample ID: 280-108840-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.29	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene - RA	16	H	1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-27_0418 — Lab Sample ID: 280-108840-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.27	J	1.0	0.16	ug/L	1		8260B	Total/NA
Chloroform	0.36	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	22		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775EW-1R_0418 — Lab Sample ID: 280-108840-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		10	1.9	ug/L	1		8260B	Total/NA
Bromoform	12		1.0	0.19	ug/L	1		8260B	Total/NA
Dibromochloromethane	0.30	J	1.0	0.17	ug/L	1		8260B	Total/NA

Client Sample ID: 775TB_041918 — Lab Sample ID: 280-108840-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 775VMW-5_0418
Lab Sample ID: 280-108840-1

Date Collected: 04/19/18 15:48
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 20:48	1
1,1,1-Trichloroethane	**0.17**	**J**	1.0	0.16	ug/L			05/03/18 20:48	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 20:48	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 20:48	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 20:48	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 20:48	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 20:48	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 20:48	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 20:48	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 20:48	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 20:48	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 20:48	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 20:48	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 20:48	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 20:48	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 20:48	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 20:48	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 20:48	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 20:48	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 20:48	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 20:48	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 20:48	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 20:48	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 20:48	1
Acetone	6.4	U M	10	1.9	ug/L			05/03/18 20:48	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 20:48	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 20:48	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 20:48	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 20:48	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 20:48	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 20:48	1
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 20:48	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 20:48	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 20:48	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 20:48	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 20:48	1

Client Sample ID: 775VMW-5_0418
Lab Sample ID: 280-108840-1

Date Collected: 04/19/18 15:48
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 20:48	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 20:48	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 20:48	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 20:48	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 20:48	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 20:48	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 20:48	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 20:48	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:48	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 20:48	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:48	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 20:48	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			05/03/18 20:48	1
Trichloroethene	**36**		1.0	0.16	ug/L			05/03/18 20:48	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 20:48	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 20:48	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 20:48	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*		*05/03/18 20:48*	*1*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*05/03/18 20:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*05/03/18 20:48*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/03/18 20:48*	*1*

Client Sample ID: 775VMW-5_0418a
Lab Sample ID: 280-108840-2

Date Collected: 04/19/18 15:48
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 21:08	1
1,1,1-Trichloroethane	**0.17**	**J**	1.0	0.16	ug/L			05/03/18 21:08	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 21:08	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 21:08	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 21:08	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 21:08	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 21:08	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 21:08	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 21:08	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:08	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:08	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 21:08	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 21:08	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 21:08	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 21:08	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 21:08	1

Client Sample ID: 775VMW-5_0418a
Lab Sample ID: 280-108840-2

Date Collected: 04/19/18 15:48
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 21:08	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:08	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 21:08	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 21:08	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 21:08	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 21:08	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 21:08	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 21:08	1
Acetone	6.4	U M	10	1.9	ug/L			05/03/18 21:08	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 21:08	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 21:08	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 21:08	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 21:08	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 21:08	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 21:08	1
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 21:08	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:08	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 21:08	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 21:08	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 21:08	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 21:08	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 21:08	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 21:08	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 21:08	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 21:08	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 21:08	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:08	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 21:08	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:08	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 21:08	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:08	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:08	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			05/03/18 21:08	1

Client Sample ID: 775VMW-5_0418a
Lab Sample ID: 280-108840-2
Date Collected: 04/19/18 15:48
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**36**		1.0	0.16	ug/L			05/03/18 21:08	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 21:08	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 21:08	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 21:08	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*05/03/18 21:08*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*05/03/18 21:08*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*05/03/18 21:08*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/03/18 21:08*	*1*

Client Sample ID: 775VMW-6_0418
Lab Sample ID: 280-108840-3
Date Collected: 04/19/18 12:55
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 21:29	1
1,1,1-Trichloroethane	**0.29**	**J**	1.0	0.16	ug/L			05/03/18 21:29	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 21:29	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 21:29	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 21:29	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 21:29	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 21:29	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 21:29	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 21:29	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:29	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:29	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 21:29	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 21:29	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 21:29	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 21:29	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 21:29	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 21:29	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:29	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 21:29	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 21:29	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 21:29	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 21:29	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 21:29	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 21:29	1
Acetone	**10**		10	1.9	ug/L			05/03/18 21:29	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 21:29	1

Client Sample ID: 775VMW-6_0418
Lab Sample ID: 280-108840-3
Date Collected: 04/19/18 12:55
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 21:29	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 21:29	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 21:29	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 21:29	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 21:29	1
Chloroform	**1.5**		1.0	0.16	ug/L			05/03/18 21:29	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 21:29	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:29	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 21:29	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 21:29	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 21:29	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 21:29	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 21:29	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 21:29	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 21:29	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 21:29	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 21:29	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:29	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 21:29	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:29	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 21:29	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:29	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:29	1
trans-1,3-Dichloropropene	0.40	U M	1.0	0.19	ug/L			05/03/18 21:29	1
Trichloroethene	**33**		1.0	0.16	ug/L			05/03/18 21:29	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 21:29	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 21:29	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 21:29	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*05/03/18 21:29*	*1*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*05/03/18 21:29*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*05/03/18 21:29*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/03/18 21:29*	*1*

Client Sample ID: 775VMW-8_0418
Lab Sample ID: 280-108840-4

Date Collected: 04/19/18 11:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 21:49	1
1,1,1-Trichloroethane	**0.29**	**J**	1.0	0.16	ug/L			05/03/18 21:49	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 21:49	1
1,1,2-Trichloroethane	0.80	U Q	1.0	0.32	ug/L			05/03/18 21:49	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 21:49	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 21:49	1
1,1-Dichloropropene	0.40	U Q	1.0	0.15	ug/L			05/03/18 21:49	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 21:49	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 21:49	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:49	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:49	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 21:49	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 21:49	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 21:49	1
1,2-Dichloroethane	0.40	U Q	1.0	0.13	ug/L			05/03/18 21:49	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 21:49	1
1,2-Dichloropropane	0.40	U Q	1.0	0.13	ug/L			05/03/18 21:49	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 21:49	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 21:49	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 21:49	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 21:49	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 21:49	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 21:49	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
4-Methyl-2-pentanone (MIBK)	3.2	U Q	5.0	1.0	ug/L			05/03/18 21:49	1
Acetone	6.4	U M	10	1.9	ug/L			05/03/18 21:49	1
Benzene	0.40	U Q	1.0	0.16	ug/L			05/03/18 21:49	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 21:49	1
Bromodichloromethane	0.40	U Q	1.0	0.17	ug/L			05/03/18 21:49	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 21:49	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 21:49	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 21:49	1
Carbon tetrachloride	0.40	U Q	2.0	0.19	ug/L			05/03/18 21:49	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 21:49	1
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 21:49	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:49	1
cis-1,3-Dichloropropene	0.40	U Q	1.0	0.16	ug/L			05/03/18 21:49	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
Dibromomethane	0.40	U Q	1.0	0.17	ug/L			05/03/18 21:49	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 21:49	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 21:49	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 21:49	1

Client Sample ID: 775VMW-8_0418
Lab Sample ID: 280-108840-4
Date Collected: 04/19/18 11:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 21:49	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 21:49	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 21:49	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 21:49	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 21:49	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 21:49	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 21:49	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 21:49	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 21:49	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 21:49	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 21:49	1
Toluene	0.40	U Q	1.0	0.17	ug/L			05/03/18 21:49	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 21:49	1
trans-1,3-Dichloropropene	0.40	U M Q	1.0	0.19	ug/L			05/03/18 21:49	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 21:49	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 21:49	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 21:49	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*	*Q*	*81 - 118*		*05/03/18 21:49*	*1*
4-Bromofluorobenzene (Surr)	*111*		*85 - 114*		*05/03/18 21:49*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/03/18 21:49*	*1*
Toluene-d8 (Surr)	*107*		*89 - 112*		*05/03/18 21:49*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**16**	**H**	1.0	0.16	ug/L			05/04/18 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*05/04/18 21:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/04/18 21:40*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/04/18 21:40*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*05/04/18 21:40*	*1*

Client Sample ID: 775MW-27_0418
Lab Sample ID: 280-108840-5
Date Collected: 04/19/18 14:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 22:09	1
1,1,1-Trichloroethane	**0.27**	**J**	1.0	0.16	ug/L			05/03/18 22:09	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 22:09	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 22:09	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 22:09	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 22:09	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 22:09	1

Client Sample ID: 775MW-27_0418
Lab Sample ID: 280-108840-5
Date Collected: 04/19/18 14:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 22:09	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 22:09	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 22:09	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 22:09	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 22:09	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 22:09	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 22:09	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 22:09	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 22:09	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 22:09	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 22:09	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 22:09	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 22:09	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 22:09	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 22:09	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 22:09	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 22:09	1
Acetone	6.4	U	10	1.9	ug/L			05/03/18 22:09	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 22:09	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 22:09	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 22:09	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 22:09	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 22:09	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 22:09	1
Chloroform	**0.36**	**J**	1.0	0.16	ug/L			05/03/18 22:09	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 22:09	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 22:09	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 22:09	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 22:09	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 22:09	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 22:09	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 22:09	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 22:09	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 22:09	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 22:09	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 22:09	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 22:09	1

Client Sample ID: 775MW-27_0418
Lab Sample ID: 280-108840-5

Date Collected: 04/19/18 14:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 22:09	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:09	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 22:09	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 22:09	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 22:09	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			05/03/18 22:09	1
Trichloroethene	**22**		1.0	0.16	ug/L			05/03/18 22:09	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 22:09	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 22:09	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 22:09	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*81 - 118*		*05/03/18 22:09*	*1*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*		*05/03/18 22:09*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/03/18 22:09*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*05/03/18 22:09*	*1*

Client Sample ID: 775EW-1R_0418
Lab Sample ID: 280-108840-6

Date Collected: 04/19/18 14:45
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 22:29	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 22:29	1
1,1,2-Trichloroethane	0.80	U Q	1.0	0.32	ug/L			05/03/18 22:29	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 22:29	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 22:29	1
1,1-Dichloropropene	0.40	U Q	1.0	0.15	ug/L			05/03/18 22:29	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 22:29	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 22:29	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 22:29	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 22:29	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 22:29	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 22:29	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 22:29	1
1,2-Dichloroethane	0.40	U Q	1.0	0.13	ug/L			05/03/18 22:29	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 22:29	1
1,2-Dichloropropane	0.40	U Q	1.0	0.13	ug/L			05/03/18 22:29	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 22:29	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 22:29	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 22:29	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 22:29	1

Client Sample ID: 775EW-1R_0418
Lab Sample ID: 280-108840-6

Date Collected: 04/19/18 14:45
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 22:29	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 22:29	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
4-Methyl-2-pentanone (MIBK)	3.2	U Q	5.0	1.0	ug/L			05/03/18 22:29	1
Acetone	**18**		10	1.9	ug/L			05/03/18 22:29	1
Benzene	0.40	U Q	1.0	0.16	ug/L			05/03/18 22:29	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 22:29	1
Bromodichloromethane	0.40	U Q	1.0	0.17	ug/L			05/03/18 22:29	1
Bromoform	**12**		1.0	0.19	ug/L			05/03/18 22:29	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 22:29	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 22:29	1
Carbon tetrachloride	0.40	U Q	2.0	0.19	ug/L			05/03/18 22:29	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 22:29	1
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 22:29	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 22:29	1
cis-1,3-Dichloropropene	0.40	U Q	1.0	0.16	ug/L			05/03/18 22:29	1
Dibromochloromethane	**0.30**	**J**	1.0	0.17	ug/L			05/03/18 22:29	1
Dibromomethane	0.40	U Q	1.0	0.17	ug/L			05/03/18 22:29	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 22:29	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 22:29	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 22:29	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 22:29	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 22:29	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 22:29	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 22:29	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 22:29	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 22:29	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 22:29	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 22:29	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 22:29	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 22:29	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 22:29	1
Toluene	0.40	U Q	1.0	0.17	ug/L			05/03/18 22:29	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 22:29	1
trans-1,3-Dichloropropene	0.40	U Q	1.0	0.19	ug/L			05/03/18 22:29	1
Trichloroethene	0.40	U Q	1.0	0.16	ug/L			05/03/18 22:29	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 22:29	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 22:29	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 22:29	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*	*Q*	*81 - 118*		*05/03/18 22:29*	*1*

Client Sample ID: 775EW-1R_0418
Lab Sample ID: 280-108840-6

Date Collected: 04/19/18 14:45
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*05/03/18 22:29*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/03/18 22:29*	*1*
Toluene-d8 (Surr)	*90*		*89 - 112*		*05/03/18 22:29*	*1*

Client Sample ID: 775TB_041918
Lab Sample ID: 280-108840-8

Date Collected: 04/19/18 11:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 23:09	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 23:09	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 23:09	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 23:09	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 23:09	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 23:09	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 23:09	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 23:09	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 23:09	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 23:09	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 23:09	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 23:09	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 23:09	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 23:09	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 23:09	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 23:09	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 23:09	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 23:09	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 23:09	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 23:09	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 23:09	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 23:09	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 23:09	1
Acetone	6.4	U M	10	1.9	ug/L			05/03/18 23:09	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 23:09	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 23:09	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 23:09	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 23:09	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 23:09	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 23:09	1

Client Sample ID: 775TB_041918
Lab Sample ID: 280-108840-8
Date Collected: 04/19/18 11:25
Matrix: Water
Date Received: 04/21/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 23:09	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 23:09	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 23:09	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 23:09	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 23:09	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 23:09	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 23:09	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 23:09	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 23:09	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			05/03/18 23:09	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			05/03/18 23:09	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 23:09	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 23:09	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 23:09	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 23:09	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 23:09	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			05/03/18 23:09	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			05/03/18 23:09	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 23:09	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 23:09	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 23:09	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*81 - 118*		*05/03/18 23:09*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*05/03/18 23:09*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/03/18 23:09*	*1*
Toluene-d8 (Surr)	*109*		*89 - 112*		*05/03/18 23:09*	*1*

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

TestAmerica Job ID: 280-108840-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.17	ug/L	8260B
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.32	ug/L	8260B
1,1-Dichloroethane	1.0	0.16	ug/L	8260B
1,1-Dichloroethene	1.0	0.14	ug/L	8260B
1,1-Dichloropropene	1.0	0.15	ug/L	8260B
1,2,3-Trichlorobenzene	1.0	0.18	ug/L	8260B
1,2,3-Trichloropropane	3.0	0.77	ug/L	8260B
1,2,4-Trichlorobenzene	1.0	0.32	ug/L	8260B
1,2,4-Trimethylbenzene	1.0	0.14	ug/L	8260B
1,2-Dibromo-3-Chloropropane	5.0	0.81	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichlorobenzene	1.0	0.13	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.15	ug/L	8260B
1,2-Dichloropropane	1.0	0.13	ug/L	8260B
1,3,5-Trimethylbenzene	1.0	0.14	ug/L	8260B
1,3-Dichlorobenzene	1.0	0.16	ug/L	8260B
1,3-Dichloropropane	1.0	0.15	ug/L	8260B
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260B
2,2-Dichloropropane	1.0	0.20	ug/L	8260B
2-Butanone (MEK)	6.0	1.8	ug/L	8260B
2-Chlorotoluene	1.0	0.17	ug/L	8260B
2-Hexanone	5.0	1.4	ug/L	8260B
4-Chlorotoluene	1.0	0.17	ug/L	8260B
4-Isopropyltoluene	1.0	0.17	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	1.0	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Dibromomethane	1.0	0.17	ug/L	8260B
Dichlorodifluoromethane	2.0	0.31	ug/L	8260B
Diisopropyl ether	10	0.74	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Hexachlorobutadiene	1.0	0.36	ug/L	8260B
Isopropylbenzene	1.0	0.19	ug/L	8260B
m,p-Xylene	2.0	0.34	ug/L	8260B
Methyl iodide	2.0	0.23	ug/L	8260B

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units	Method
Methyl tert-butyl ether	5.0	0.25	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Naphthalene	1.0	0.22	ug/L	8260B
n-Butylbenzene	1.0	0.32	ug/L	8260B
N-Propylbenzene	1.0	0.16	ug/L	8260B
o-Xylene	1.0	0.19	ug/L	8260B
sec-Butylbenzene	1.0	0.17	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
tert-Butylbenzene	1.0	0.16	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Trichlorofluoromethane	2.0	0.29	ug/L	8260B
Vinyl acetate	3.0	0.94	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	2.0	0.19	ug/L	8260B

Surrogate Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

TestAmerica Job ID: 280-108840-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-108840-1	775VMW-5_0418	109	108	101	103
280-108840-2	775VMW-5_0418a	115	104	102	103
280-108840-3	775VMW-6_0418	115	109	102	103
280-108840-4	775VMW-8_0418	119 Q	111	104	107
280-108840-4 - RA	775VMW-8_0418	105	101	103	104
280-108840-5	775MW-27_0418	117	106	103	101
280-108840-6	775EW-1R_0418	120 Q	107	103	90
280-108840-8	775TB_041918	116	102	104	109
LCS 280-413691/12	Lab Control Sample	112	104	101	104
LCS 280-413691/6	Lab Control Sample	115	96	98	102
LCS 280-413840/4	Lab Control Sample	95	97	100	100
LCSD 280-413691/13	Lab Control Sample Dup	114	103	102	97
MB 280-413691/8	Method Blank	115	109	103	102
MB 280-413840/6	Method Blank	97	97	97	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-413691/8
Matrix: Water
Analysis Batch: 413691

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.17	ug/L			05/03/18 20:28	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			05/03/18 20:28	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			05/03/18 20:28	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			05/03/18 20:28	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			05/03/18 20:28	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			05/03/18 20:28	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.18	ug/L			05/03/18 20:28	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			05/03/18 20:28	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			05/03/18 20:28	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 20:28	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			05/03/18 20:28	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			05/03/18 20:28	1
1,2-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			05/03/18 20:28	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			05/03/18 20:28	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			05/03/18 20:28	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			05/03/18 20:28	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			05/03/18 20:28	1
1,3-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
1,3-Dichloropropane	0.80	U	1.0	0.15	ug/L			05/03/18 20:28	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			05/03/18 20:28	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			05/03/18 20:28	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			05/03/18 20:28	1
4-Chlorotoluene	0.80	U	1.0	0.17	ug/L			05/03/18 20:28	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			05/03/18 20:28	1
Acetone	6.4	U	10	1.9	ug/L			05/03/18 20:28	1
Benzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			05/03/18 20:28	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Bromoform	0.40	U	1.0	0.19	ug/L			05/03/18 20:28	1
Bromomethane	0.80	U	2.0	0.21	ug/L			05/03/18 20:28	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			05/03/18 20:28	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			05/03/18 20:28	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Chloroethane	1.6	U	2.0	0.41	ug/L			05/03/18 20:28	1
Chloroform	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
Chloromethane	0.80	U	2.0	0.30	ug/L			05/03/18 20:28	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 20:28	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			05/03/18 20:28	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/03/18 20:28	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-413691/8
Matrix: Water
Analysis Batch: 413691

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			05/03/18 20:28	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			05/03/18 20:28	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			05/03/18 20:28	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			05/03/18 20:28	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			05/03/18 20:28	1
Methylene Chloride	0.355	J	5.0	0.32	ug/L			05/03/18 20:28	1
Naphthalene	0.80	U	1.0	0.22	ug/L			05/03/18 20:28	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			05/03/18 20:28	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
o-Xylene	0.40	U	1.0	0.19	ug/L			05/03/18 20:28	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
Styrene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			05/03/18 20:28	1
Toluene	0.40	U	1.0	0.17	ug/L			05/03/18 20:28	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			05/03/18 20:28	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			05/03/18 20:28	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			05/03/18 20:28	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			05/03/18 20:28	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			05/03/18 20:28	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			05/03/18 20:28	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			05/03/18 20:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*05/03/18 20:28*	*1*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*05/03/18 20:28*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/03/18 20:28*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/03/18 20:28*	*1*

Lab Sample ID: LCS 280-413691/12
Matrix: Water
Analysis Batch: 413691

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diisopropyl ether			5.00	5.71	J	ug/L		114	67 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*81 - 118*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: LCS 280-413691/6
Matrix: Water
Analysis Batch: 413691

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1,2-Tetrachloroethane			5.00	5.28		ug/L		106	78 - 124		

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-413691/6
Matrix: Water
Analysis Batch: 413691

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	5.40		ug/L		108	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.98		ug/L		100	71 - 121
1,1,2-Trichloroethane	5.00	5.02		ug/L		100	80 - 119
1,1-Dichloroethane	5.00	5.52		ug/L		110	77 - 125
1,1-Dichloroethene	5.00	5.08		ug/L		102	71 - 131
1,1-Dichloropropene	5.00	5.54		ug/L		111	79 - 125
1,2,3-Trichlorobenzene	5.00	4.28		ug/L		86	69 - 129
1,2,3-Trichloropropane	5.00	5.11		ug/L		102	73 - 122
1,2,4-Trichlorobenzene	5.00	4.08		ug/L		82	69 - 130
1,2,4-Trimethylbenzene	5.00	5.13		ug/L		103	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	4.03	J	ug/L		81	62 - 128
1,2-Dibromoethane	5.00	5.06		ug/L		101	77 - 121
1,2-Dichlorobenzene	5.00	4.72		ug/L		94	80 - 119
1,2-Dichloroethane	5.00	5.51		ug/L		110	73 - 128
1,2-Dichloroethene, Total	10.0	10.2		ug/L		102	79 - 121
1,2-Dichloropropane	5.00	5.44		ug/L		109	78 - 122
1,3,5-Trimethylbenzene	5.00	5.15		ug/L		103	75 - 124
1,3-Dichlorobenzene	5.00	4.66		ug/L		93	80 - 119
1,3-Dichloropropane	5.00	5.46		ug/L		109	80 - 119
1,4-Dichlorobenzene	5.00	4.64		ug/L		93	79 - 118
2,2-Dichloropropane	5.00	5.40		ug/L		108	60 - 139
2-Butanone (MEK)	20.0	19.1		ug/L		96	56 - 143
2-Chlorotoluene	5.00	4.87		ug/L		97	79 - 122
2-Hexanone	20.0	20.0		ug/L		100	57 - 139
4-Chlorotoluene	5.00	4.75		ug/L		95	78 - 122
4-Isopropyltoluene	5.00	4.91		ug/L		98	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	18.7		ug/L		93	67 - 130
Acetone	20.0	19.8		ug/L		99	39 - 160
Benzene	5.00	5.17		ug/L		103	79 - 120
Bromobenzene	5.00	4.69		ug/L		94	80 - 120
Bromochloromethane	5.00	4.79		ug/L		96	78 - 123
Bromodichloromethane	5.00	5.31		ug/L		106	79 - 125
Bromoform	5.00	4.70		ug/L		94	66 - 130
Bromomethane	5.00	4.89		ug/L		98	53 - 141
Carbon disulfide	5.00	5.21		ug/L		104	64 - 133
Carbon tetrachloride	5.00	5.17		ug/L		103	72 - 136
Chlorobenzene	5.00	5.07		ug/L		101	82 - 118
Chloroethane	5.00	4.82		ug/L		96	60 - 138
Chloroform	5.00	5.51		ug/L		110	79 - 124
Chloromethane	5.00	5.24		ug/L		105	50 - 139
cis-1,2-Dichloroethene	5.00	5.01		ug/L		100	78 - 123
cis-1,3-Dichloropropene	5.00	5.43		ug/L		109	75 - 124
Dibromochloromethane	5.00	4.86		ug/L		97	74 - 126
Dibromomethane	5.00	5.11		ug/L		102	79 - 123
Dichlorodifluoromethane	5.00	5.28		ug/L		106	32 - 152
Ethylbenzene	5.00	5.11		ug/L		102	79 - 121
Hexachlorobutadiene	5.00	4.06		ug/L		81	66 - 134
Isopropylbenzene	5.00	5.10		ug/L		102	72 - 131

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-413691/6
Matrix: Water
Analysis Batch: 413691

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
m,p-Xylene			5.00	5.10		ug/L		102	80 - 121		
Methyl iodide			5.00	4.81		ug/L		96	69 - 131		
Methyl tert-butyl ether			5.00	5.61		ug/L		112	71 - 124		
Methylene Chloride			5.00	5.53		ug/L		111	74 - 124		
Naphthalene			5.00	3.69		ug/L		74	61 - 128		
n-Butylbenzene			5.00	5.15		ug/L		103	75 - 128		
N-Propylbenzene			5.00	4.99		ug/L		100	76 - 126		
o-Xylene			5.00	5.34		ug/L		107	78 - 122		
sec-Butylbenzene			5.00	4.87		ug/L		97	77 - 126		
Styrene			5.00	4.92		ug/L		98	78 - 123		
tert-Butylbenzene			5.00	4.90		ug/L		98	78 - 124		
Tetrachloroethene			5.00	4.84		ug/L		97	74 - 129		
Toluene			5.00	5.04		ug/L		101	80 - 121		
trans-1,2-Dichloroethene			5.00	5.21		ug/L		104	75 - 124		
trans-1,3-Dichloropropene			5.00	5.57		ug/L		111	73 - 127		
Trichloroethene			5.00	5.20		ug/L		104	79 - 123		
Trichlorofluoromethane			5.00	4.81		ug/L		96	65 - 141		
Vinyl acetate			10.0	10.8		ug/L		108	54 - 146		
Vinyl chloride			5.00	5.01		ug/L		100	58 - 137		
Xylenes, Total			10.0	10.4		ug/L		104	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 280-413691/13
Matrix: Water
Analysis Batch: 413691

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diisopropyl ether			5.00	6.02	J	ug/L		120	67 - 128	NaN	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: MB 280-413840/6
Matrix: Water
Analysis Batch: 413840

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Diisopropyl ether	2.0	U	10	0.74	ug/L			05/04/18 21:20	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			05/04/18 21:20	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-413840/6
Matrix: Water
Analysis Batch: 413840

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		05/04/18 21:20	1
4-Bromofluorobenzene (Surr)	97		85 - 114		05/04/18 21:20	1
Dibromofluoromethane (Surr)	97		80 - 119		05/04/18 21:20	1
Toluene-d8 (Surr)	102		89 - 112		05/04/18 21:20	1

Lab Sample ID: LCS 280-413840/4
Matrix: Water
Analysis Batch: 413840

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichloroethene			5.00	4.80		ug/L		96	79 - 123		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	100		89 - 112

QC Association Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

TestAmerica Job ID: 280-108840-1

GC/MS VOA

Analysis Batch: 413691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-108840-1	775VMW-5_0418	Total/NA	Water	8260B	
280-108840-2	775VMW-5_0418a	Total/NA	Water	8260B	
280-108840-3	775VMW-6_0418	Total/NA	Water	8260B	
280-108840-4	775VMW-8_0418	Total/NA	Water	8260B	
280-108840-5	775MW-27_0418	Total/NA	Water	8260B	
280-108840-6	775EW-1R_0418	Total/NA	Water	8260B	
280-108840-8	775TB_041918	Total/NA	Water	8260B	
MB 280-413691/8	Method Blank	Total/NA	Water	8260B	
LCS 280-413691/12	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-413691/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-413691/13	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 413840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-108840-4 - RA	775VMW-8_0418	Total/NA	Water	8260B	
MB 280-413840/6	Method Blank	Total/NA	Water	8260B	
LCS 280-413840/4	Lab Control Sample	Total/NA	Water	8260B	

Client Sample ID: 775VMW-5_0418
Date Collected: 04/19/18 15:48
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 20:48	RSN	TAL DEN

Client Sample ID: 775VMW-5_0418a
Date Collected: 04/19/18 15:48
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 21:08	RSN	TAL DEN

Client Sample ID: 775VMW-6_0418
Date Collected: 04/19/18 12:55
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 21:29	RSN	TAL DEN

Client Sample ID: 775VMW-8_0418
Date Collected: 04/19/18 11:25
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 21:49	RSN	TAL DEN
Total/NA	Analysis	8260B	RA	1	20 mL	20 mL	413840	05/04/18 21:40	RSN	TAL DEN

Client Sample ID: 775MW-27_0418
Date Collected: 04/19/18 14:25
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 22:09	RSN	TAL DEN

Client Sample ID: 775EW-1R_0418
Date Collected: 04/19/18 14:45
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 22:29	RSN	TAL DEN

Lab Chronicle

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

TestAmerica Job ID: 280-108840-1

Client Sample ID: 775TB_041918
Date Collected: 04/19/18 11:25
Date Received: 04/21/18 08:45

Lab Sample ID: 280-108840-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	413691	05/03/18 23:09	RSN	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-108840-1
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

Analysis Method	Prep Method	Matrix	Analyte		
New York	NELAP	2	11964	04-01-19	

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,1,1-Trichloroethane
8260B		Water	1,1,2,2-Tetrachloroethane
8260B		Water	1,1,2-Trichloroethane
8260B		Water	1,1-Dichloroethane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,3-Trichloropropane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	1,2-Dibromoethane
8260B		Water	1,2-Dichlorobenzene
8260B		Water	1,2-Dichloroethane
8260B		Water	1,2-Dichloroethene, Total
8260B		Water	1,2-Dichloropropane
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichlorobenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Butanone (MEK)
8260B		Water	2-Chlorotoluene
8260B		Water	2-Hexanone
8260B		Water	4-Chlorotoluene
8260B		Water	4-Isopropyltoluene
8260B		Water	4-Methyl-2-pentanone (MIBK)
8260B		Water	Acetone
8260B		Water	Benzene
8260B		Water	Bromobenzene
8260B		Water	Bromochloromethane
8260B		Water	Bromodichloromethane
8260B		Water	Bromoform
8260B		Water	Bromomethane
8260B		Water	Carbon disulfide
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chloroethane
8260B		Water	Chloroform
8260B		Water	Chloromethane
8260B		Water	cis-1,2-Dichloroethene

Laboratory: TestAmerica Denver (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11964	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	cis-1,3-Dichloropropene
8260B		Water	Dibromochloromethane
8260B		Water	Dibromomethane
8260B		Water	Dichlorodifluoromethane
8260B		Water	Diisopropyl ether
8260B		Water	Ethylbenzene
8260B		Water	Hexachlorobutadiene
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	Methyl iodide
8260B		Water	Methyl tert-butyl ether
8260B		Water	Methylene Chloride
8260B		Water	Naphthalene
8260B		Water	n-Butylbenzene
8260B		Water	N-Propylbenzene
8260B		Water	o-Xylene
8260B		Water	sec-Butylbenzene
8260B		Water	Styrene
8260B		Water	tert-Butylbenzene
8260B		Water	Tetrachloroethene
8260B		Water	Toluene
8260B		Water	trans-1,2-Dichloroethene
8260B		Water	trans-1,3-Dichloropropene
8260B		Water	Trichloroethene
8260B		Water	Trichlorofluoromethane
8260B		Water	Vinyl acetate
8260B		Water	Vinyl chloride
8260B		Water	Xylenes, Total

Method Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-108840-1
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-108840-1
Project/Site: Griffiss AFB, NY - SD052 Performance Mon

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-108840-1	775VMW-5_0418	Water	04/19/18 15:48	04/21/18 08:45
280-108840-2	775VMW-5_0418a	Water	04/19/18 15:48	04/21/18 08:45
280-108840-3	775VMW-6_0418	Water	04/19/18 12:55	04/21/18 08:45
280-108840-4	775VMW-8_0418	Water	04/19/18 11:25	04/21/18 08:45
280-108840-5	775MW-27_0418	Water	04/19/18 14:25	04/21/18 08:45
280-108840-6	775EW-1R_0418	Water	04/19/18 14:45	04/21/18 08:45
280-108840-8	775TB_041918	Water	04/19/18 11:25	04/21/18 08:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 413150

Lab Sample ID: IC 280-413150/10 Client Sample ID:

Date Analyzed: 04/30/18 10:43 Lab File ID: G7315.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluorobenzene	6.90	Split Peak	ilczyszyn d	04/30/18 12:03
2-Butanone (MEK)		Invalid Compound ID	ilczyszyn d	04/30/18 12:04
Acetone		Invalid Compound ID	ilczyszyn d	04/30/18 12:03
Cyclohexanone		Invalid Compound ID	ilczyszyn d	04/30/18 12:04
Isobutyl alcohol		Invalid Compound ID	ilczyszyn d	04/30/18 12:04
Methyl tert-butyl ether		Invalid Compound ID	ilczyszyn d	04/30/18 12:08
Methylene Chloride		Invalid Compound ID	ilczyszyn d	04/30/18 12:03
Naphthalene		Invalid Compound ID	ilczyszyn d	05/01/18 08:02
sec-Butyl Alcohol		Invalid Compound ID	ilczyszyn d	04/30/18 12:04
t-Butyl alcohol		Invalid Compound ID	ilczyszyn d	04/30/18 12:03

Lab Sample ID: IC 280-413150/11 Client Sample ID:

Date Analyzed: 04/30/18 11:03 Lab File ID: G7316.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.42	Peak Tail	ilczyszyn d	04/30/18 13:31
2-Chloroethyl vinyl ether		Invalid Compound ID	ilczyszyn d	04/30/18 12:05
Methyl tert-butyl ether		Invalid Compound ID	ilczyszyn d	04/30/18 12:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 413150

Lab Sample ID: IC 280-413150/12 Client Sample ID:

Date Analyzed: 04/30/18 11:23 Lab File ID: G7317.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.42	Peak Tail	ilczyszyn d	04/30/18 13:31

Lab Sample ID: IC 280-413150/13 Client Sample ID:

Date Analyzed: 04/30/18 11:43 Lab File ID: G7318.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.42	Peak Tail	ilczyszyn d	04/30/18 13:30

Lab Sample ID: IC 280-413150/14 Client Sample ID:

Date Analyzed: 04/30/18 12:03 Lab File ID: G7319.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.42	Peak Tail	ilczyszyn d	04/30/18 13:30

Lab Sample ID: IC 280-413150/15 Client Sample ID:

Date Analyzed: 04/30/18 12:24 Lab File ID: G7320.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.42	Peak Tail	ilczyszyn d	04/30/18 13:30

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 413691

Lab Sample ID: CCV 280-413691/2 Client Sample ID:

Date Analyzed: 05/03/18 19:08 Lab File ID: G7519.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.39	Split Peak	newcomer	05/04/18 17:09

Lab Sample ID: 280-108840-1 Client Sample ID: 775VMW-5_0418

Date Analyzed: 05/03/18 20:48 Lab File ID: G7524.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	05/04/18 17:22

Lab Sample ID: 280-108840-2 Client Sample ID: 775VMW-5_0418a

Date Analyzed: 05/03/18 21:08 Lab File ID: G7525.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	05/04/18 17:23

Lab Sample ID: 280-108840-3 Client Sample ID: 775VMW-6_0418

Date Analyzed: 05/03/18 21:29 Lab File ID: G7526.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,3-Dichloropropene		Invalid Compound ID	newcomer	05/04/18 17:23

Lab Sample ID: 280-108840-4 Client Sample ID: 775VMW-8_0418

Date Analyzed: 05/03/18 21:49 Lab File ID: G7527.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	05/04/18 17:24
trans-1,3-Dichloropropene		Invalid Compound ID	newcomer	05/04/18 17:24

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 413691

Lab Sample ID: 280-108840-8 Client Sample ID: 775TB_041918

Date Analyzed: 05/03/18 23:09 Lab File ID: G7531.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	05/04/18 17:28

Lab Sample ID: CCVC 280-413691/37 Client Sample ID:

Date Analyzed: 05/04/18 05:32 Lab File ID: G7550.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.38	Assign Peak	newcomer	05/04/18 18:17

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 412973

Lab Sample ID: ICV 280-412973/23 Client Sample ID:

Date Analyzed: 04/27/18 19:03 Lab File ID: G2_2326.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol		Invalid Compound ID	ilczyszyn d	04/28/18 07:56
Isopropyl alcohol		Invalid Compound ID	ilczyszyn d	04/28/18 07:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 413564

Lab Sample ID: STD003 280-413564/11 IC Client Sample ID:

Date Analyzed: 05/02/18 22:54 Lab File ID: G2_2537.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2-Dichloropropane	5.78	Assign Peak	newcomer	05/03/18 01:47
1,2-Dichloroethane	7.07	Assign Peak	newcomer	05/03/18 01:47
1,2-Dichloroethane-d4 (Surr)		Invalid Compound ID	newcomer	05/03/18 01:46
4-Bromofluorobenzene (Surr)		Invalid Compound ID	newcomer	05/03/18 01:46
Acrylonitrile		Invalid Compound ID	newcomer	05/03/18 01:46
Dibromofluoromethane (Surr)		Invalid Compound ID	newcomer	05/03/18 01:46
Toluene-d8 (Surr)		Invalid Compound ID	newcomer	05/03/18 01:46

Lab Sample ID: STD01 280-413564/12 IC Client Sample ID:

Date Analyzed: 05/02/18 23:14 Lab File ID: G2_2538.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	6.20	Assign Peak	newcomer	05/03/18 02:10
1,2-Dichloroethane-d4 (Surr)		Invalid Compound ID	newcomer	05/03/18 01:48
4-Bromofluorobenzene (Surr)		Invalid Compound ID	newcomer	05/03/18 01:48
Dibromofluoromethane (Surr)		Invalid Compound ID	newcomer	05/03/18 01:48
Toluene-d8 (Surr)		Invalid Compound ID	newcomer	05/03/18 01:48

Lab Sample ID: STD30 280-413564/16 IC Client Sample ID:

Date Analyzed: 05/03/18 00:35 Lab File ID: G2_2542.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	6.17	Peak Tail	newcomer	05/03/18 02:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 413564

Lab Sample ID: STD60 280-413564/17 IC Client Sample ID:

Date Analyzed: 05/03/18 00:55 Lab File ID: G2_2543.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	6.17	Peak Tail	newcomer	05/03/18 02:07
2-Chlorotoluene	11.96	Assign Peak	newcomer	05/03/18 01:55

Lab Sample ID: STD003 280-413564/19 IC Client Sample ID:

Date Analyzed: 05/03/18 01:55 Lab File ID: G2_2546.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Hexanone		Invalid Compound ID	ilczyszyn d	05/03/18 07:27
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	ilczyszyn d	05/03/18 07:27
Cyclohexanone		Invalid Compound ID	ilczyszyn d	05/03/18 07:28

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-2cleve+AVA_00034	05/31/18	03/25/18	P&T Methanol, Lot 177891	10 mL	MV-568720_00020	202.5 uL	Acrolein	399.938 ug/mL
					MV-569723_00003	160 uL	2-Chloroethyl vinyl ether	40 ug/mL
					MV-569724_00014	160 uL	Vinyl acetate	80 ug/mL
.MV-568720_00020	05/31/18		RESTEK, Lot A0132611		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569723_00003	01/31/20		RESTEK, Lot A0123891		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00014	07/31/18		RESTEK, Lot A0134268		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-568718-D_00010	05/31/22		RESTEK, Lot A0127975		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-568718-D_00014	05/31/22		RESTEK, Lot A0127975		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00090	06/21/18	12/21/17	P&T Methanol, Lot 177891	100 mL	MV-567650_00027	10 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-ARCH SS A_00093	09/27/18	03/27/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-ARCH SS A_00095	10/18/18	04/18/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00025							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-Gas/Ket A_00072	10/10/18	04/10/18	P&T Methanol, Lot 177891	10 mL	MV-569721_00004	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722_00006	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Dichlorofluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
					MV-569727_00006	640 uL	Cyclohexanone	1600 ug/mL
.MV-569721_00004	01/31/20	RESTEK, Lot A0123890			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00006	01/31/20	RESTEK, Lot A0124278			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569727_00006	03/31/19	RESTEK, Lot A0118487			(Purchased Reagent)		Cyclohexanone	25000 ug/mL
MV-Gas/Ket B_00041	08/25/18	02/25/18	P&T Methanol, Lot 177891	10 mL	MV-569721.sec_00005	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722.sec_00004	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MV-569721.sec_00005	01/31/20	RESTEK, Lot A0113880			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	12500 ug/mL
.MV-569722.sec_00004	01/31/20	RESTEK, Lot A0124116			(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Main A_00036	06/30/18	04/27/18	P&T Methanol, Lot 177891	20 mL	MV-571992_00001	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	400 ug/mL
							3-Chloro-1-propene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Acrylonitrile	400 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Dibromomethane	40 ug/mL
							Ethyl ether	40 ug/mL
							Ethyl methacrylate	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexane	40 ug/mL
							Isobutyl alcohol	1000 ug/mL
							Isopropylbenzene	40 ug/mL
							m,p-Xylene	40 ug/mL
							Methyl acetate	80 ug/mL
							Methyl iodide	40 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Tetrahydrofuran	80 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							trans-1,4-Dichloro-2-butene	40 ug/mL
							Trichloroethene	40 ug/mL
					MV-CUS17739_00002	800 uL	1-Chlorohexane	40 ug/mL
							2-Pentanone	160 ug/mL
							sec-Butyl Alcohol	1200 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00002	07/31/19		Ultra, Lot CR-2819		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-Main A_00036	06/30/18	04/27/18	P&T Methanol, Lot 177891	20 mL	MV-571992_00001	320 uL	1,2-Dichloroethene, Total	80 ug/mL
							Xylenes, Total	80 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Main B_00020	07/25/18	01/25/18	P&T Methanol, Lot 127999	20 mL	MV-569720.sec_00002	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloroethene, Total	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Dibromomethane	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Isopropylbenzene	40 ug/mL
							m,p-Xylene	40 ug/mL
							Methyl iodide	40 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							Trichloroethene	40 ug/mL
							Xylenes, Total	80 ug/mL
.MV-569720.sec_00002	07/31/18		RESTEK, Lot A0120604		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-SS 2-Cleve_00042	04/30/18	01/01/18	P&T Methanol, Lot 177891	10 mL	MV-569724.sec_00016	160 uL	Vinyl acetate	80 ug/mL
.MV-569724.sec_00016	04/30/18		RESTEK, Lot A0131389		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-SS 2-Cleve_00043	07/31/18	03/25/18	P&T Methanol, Lot 177891	10 mL	MV-569724.sec_00017	160 uL	Vinyl acetate	80 ug/mL
.MV-569724.sec_00017	07/31/18		RESTEK, Lot A0134378		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-Supp A_00029	06/30/18	03/04/18	P&T Methanol, Lot 12799	10 mL	mv-570808_00003	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
							n-Butanol	1000 ug/mL
					mv-570809_00003	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-571993_00001	160 uL	Acetonitrile	400 ug/mL
							Diisopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-571994_00001	240 uL	Ethanol	2400 ug/mL
					mv-VO-TAOH-5_00004	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
.mv-570808_00003	06/30/18		Restek, Lot A0123685		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00003	06/30/18		Restek, Lot A0123728		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00001	12/31/18		RESTEK, Lot A0123796		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00001	06/30/20		RESTEK, Lot A0128797		(Purchased Reagent)		Ethanol	100000 ug/mL
.mv-VO-TAOH-5_00004	08/19/18		SPEX, Lot TS180220004		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
MV-Supp B_00020	08/19/18	03/04/18	P&T Methanol, Lot 127999	10 mL	mv-571993.sec_00001	160 uL	Diisopropyl ether	40 ug/mL
.mv-571993.sec_00001	12/31/18		RESTEK, Lot A0123771		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL

Reagent

MV-567650_00027

RESTEK®
110 Benner Circle
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

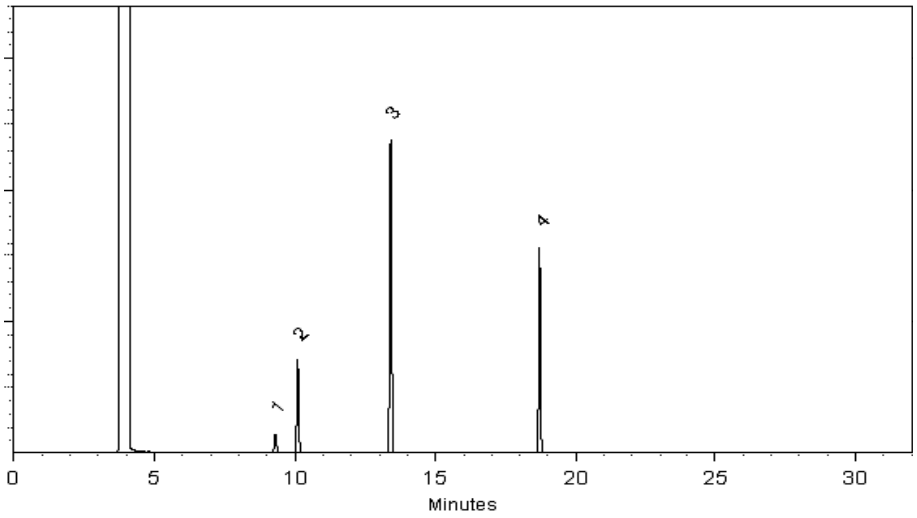
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00010

RESTEK®
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Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol	5,022.1 µg/mL	+/- 29.1976 µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot I-201)		+/- 107.5241 µg/mL	Unstressed
	Purity 99%		+/- 110.6500 µg/mL	Stressed
2	2-Butanone-d5	1,257.5 µg/mL	+/- 7.3114 µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M-276)		+/- 26.9239 µg/mL	Unstressed
	Purity 99%		+/- 27.7067 µg/mL	Stressed
3	Fluorobenzene	250.8 µg/mL	+/- 1.4613 µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/- 5.3699 µg/mL	Unstressed
	Purity 99%		+/- 5.5259 µg/mL	Stressed
4	1,4-Dioxane-d8	5,009.4 µg/mL	+/- 29.1236 µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot I-19942)		+/- 107.2514 µg/mL	Unstressed
	Purity 99%		+/- 110.3694 µg/mL	Stressed
5	Chlorobenzene-d5	251.7 µg/mL	+/- 1.4666 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-21944)		+/- 5.3891 µg/mL	Unstressed
	Purity 99%		+/- 5.5458 µg/mL	Stressed
6	1,4-Dichlorobenzene-d4	251.3 µg/mL	+/- 1.4645 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 5.3813 µg/mL	Unstressed
	Purity 99%		+/- 5.5377 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

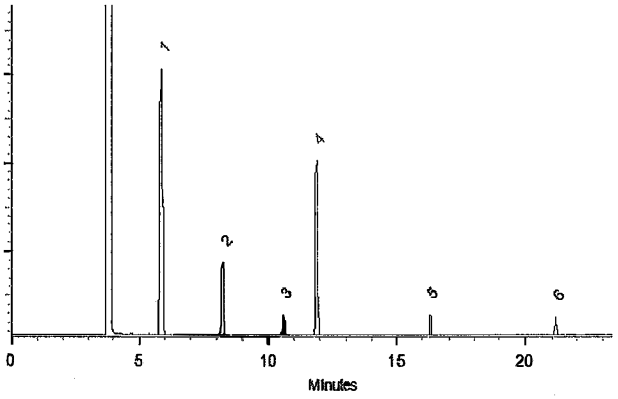
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00014

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

rec'd 3/1/18

Catalog No.: 568718 **Lot No.:** A0127975

Description: 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size: 5 mL **Pkg Amt:** > 5 mL

Expiration Date: May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 Purity 99%	(Lot I-201)	5,022.1	µg/mL	+/- 29.1976 +/- 107.5241 +/- 110.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 CAS # 24313-50-6 Purity 99%	(Lot M-276)	1,257.5	µg/mL	+/- 7.3114 +/- 26.9239 +/- 27.7067	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene CAS # 462-06-6 Purity 99%	(Lot BCBK8171V)	250.8	µg/mL	+/- 1.4613 +/- 5.3699 +/- 5.5259	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99%	(Lot I-19942)	5,009.4	µg/mL	+/- 29.1236 +/- 107.2514 +/- 110.3694	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99%	(Lot PR-21944)	251.7	µg/mL	+/- 1.4666 +/- 5.3891 +/- 5.5458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99%	(Lot PR-18488)	251.3	µg/mL	+/- 1.4645 +/- 5.3813 +/- 5.5377	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

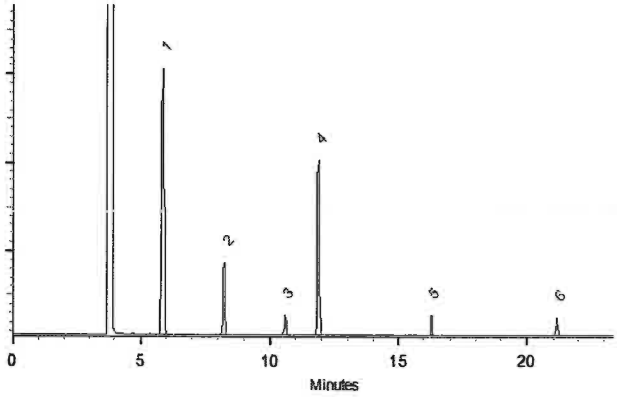
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569720.sec_00002

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0120604

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 98%	2,501.1 µg/mL	+/- 14.5415 µg/mL +/- 150.9014 µg/mL +/- 151.2597 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 150.9040 µg/mL +/- 151.2622 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 2767000) **Purity** 99%	2,500.8 µg/mL	+/- 14.5396 µg/mL +/- 150.8813 µg/mL +/- 151.2395 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,004.1 µg/mL	+/- 145.3683 µg/mL +/- 1,508.6067 µg/mL +/- 1,512.1884 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 µg/mL +/- 150.8964 µg/mL +/- 151.2547 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9.SEC (Lot 6WOXM) **Purity** 99%	12,501.6 µg/mL	+/- 72.6817 µg/mL +/- 754.2781 µg/mL +/- 756.0689 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot VEBOC) **Purity** 98%	2,501.0 µg/mL	+/- 14.5408 µg/mL +/- 150.8940 µg/mL +/- 151.2522 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
9	Carbon disulfide		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
10	Acrylonitrile		25,020.0	µg/mL	+/-	145.4608	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot UERIL-DA)			+/-	1,509.5667	µg/mL	Unstressed
	Purity 99%				+/-	1,513.1507	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	150.8866	µg/mL	Unstressed
	Purity 98%				+/-	151.2448	µg/mL	Stressed
12	n-Hexane (C6)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
13	1,1-Dichloroethane		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 5035700)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot GI01)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,501.3	µg/mL	+/-	14.5426	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	150.9125	µg/mL	Unstressed
	Purity 97%				+/-	151.2708	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,503.0	µg/mL	+/-	363.3788	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot 83NHH)			+/-	3,771.0811	µg/mL	Unstressed
	Purity 99%				+/-	3,780.0343	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZAQTA-MS)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
18	Bromochloromethane		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 1775400)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
19	Tetrahydrofuran		5,000.3	µg/mL	+/-	29.0719	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot K3V7J-SJ)			+/-	301.6872	µg/mL	Unstressed
	Purity 99%				+/-	302.4035	µg/mL	Stressed
20	1,1,1-Trichloroethane		2,501.3	µg/mL	+/-	14.5429	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot CS160712)			+/-	150.9162	µg/mL	Unstressed
	Purity 98%				+/-	151.2745	µg/mL	Stressed
21	Cyclohexane		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
22	1,1-Dichloropropene		2,500.4	µg/mL	+/-	14.5378	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 4672600)			+/-	150.8626	µg/mL	Unstressed
	Purity 96%				+/-	151.2208	µg/mL	Stressed
23	Carbon tetrachloride		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed

24	n-Heptane (C7)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot OGM01)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
25	1,2-Dichloroethane		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot FO6PK)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
26	Benzene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
27	Trichloroethene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
28	Methylcyclohexane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	150.9492	µg/mL	Unstressed
	Purity 99%				+/-	151.3076	µg/mL	Stressed
29	1,2-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot OGG01)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
30	Bromodichloromethane		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 10171168)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
31	1,4-Dioxane		50,014.8	µg/mL	+/-	290.7749	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot CHA4A)			+/-	3,017.6100	µg/mL	Unstressed
	Purity 99%				+/-	3,024.7743	µg/mL	Stressed
32	Dibromomethane		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot FGI01-OICH)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
34	Toluene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
35	Ethyl methacrylate		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot MLWYK-LS)			+/-	150.9341	µg/mL	Unstressed
	Purity 99%				+/-	151.2925	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot 2ECIC)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 3440900)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
38	1,3-Dichloropropane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot AGN01-EFPC)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
39	Tetrachloroethene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed

40	Dibromochloromethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10181507)			+/-	150.9491	µg/mL	Unstressed
	Purity 97%				+/-	151.3074	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
42	Chlorobenzene		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
44	Ethylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
45	m-Xylene		1,250.9	µg/mL	+/-	7.2727	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.4708	µg/mL	Unstressed
	Purity 99%				+/-	75.6500	µg/mL	Stressed
46	p-Xylene		1,250.8	µg/mL	+/-	7.2720	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	75.4633	µg/mL	Unstressed
	Purity 99%				+/-	75.6425	µg/mL	Stressed
47	o-Xylene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
48	Styrene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
50	Bromoform		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5139000)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
52	Chloroform		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.5	µg/mL	+/-	14.5436	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	150.9236	µg/mL	Unstressed
	Purity 98%				+/-	151.2819	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed

56	Bromobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
57	1,2,4-Trimethylbenzene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
58	2-Chlorotoluene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
59	4-Chlorotoluene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
60	tert-Butylbenzene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot OGN01-CAI)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
61	1,3,5-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot FGH02-CMLN)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
62	sec-Butylbenzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot OGN01-IMA)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.5	µg/mL	+/-	14.5441	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 1195000)			+/-	150.9278	µg/mL	Unstressed
	Purity 96%				+/-	151.2861	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.9341	µg/mL	Unstressed
	Purity 99%				+/-	151.2925	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
66	n-Butylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot OGN01-PNP)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,500.3	µg/mL	+/-	14.5369	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	150.8539	µg/mL	Unstressed
	Purity 97%				+/-	151.2121	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
70	Hexachlorobutadiene		2,500.7	µg/mL	+/-	14.5394	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 497470099			+/-	150.8792	µg/mL	Unstressed
	Purity 98%				+/-	151.2374	µg/mL	Stressed
71	Naphthalene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	150.8361	µg/mL	Unstressed
	Purity 99%				+/-	151.1942	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,501.6 µg/mL	+/-	14.5444	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.9310	µg/mL	Unstressed
	Purity 98%			+/-	151.2893	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

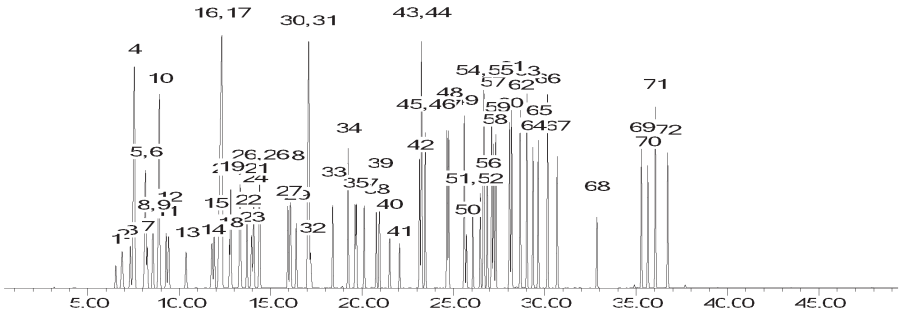
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Jennifer L. Pollino - QC Analyst

Date Mixed: 25-Jul-2016 **Balance:** 1127510105

Date Passed: 28-Jul-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

MV-569721.sec_00005

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

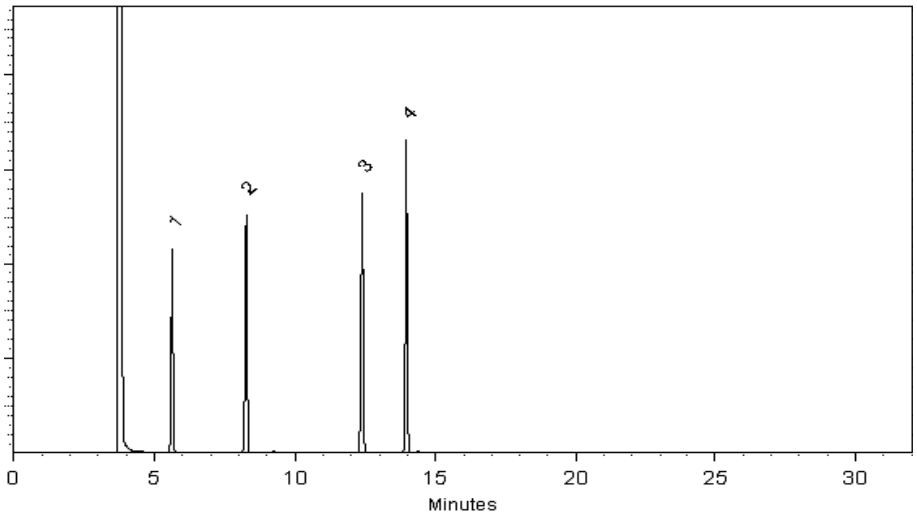
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00004

Rec 7/10/17 MRO
6 x 1 mL vials

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0123890

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1 (Lot SHBH0922V) **Purity** 99%	12,517.5 µg/mL	+/- 72.7778 µg/mL +/- 755.2362 µg/mL +/- 757.0293 µg/mL		Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBF2461V) **Purity** 99%	12,521.8 µg/mL	+/- 72.8025 µg/mL +/- 755.4927 µg/mL +/- 757.2863 µg/mL		Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBG3630V) **Purity** 99%	12,519.8 µg/mL	+/- 72.7909 µg/mL +/- 755.3720 µg/mL +/- 757.1654 µg/mL		Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBW0198V) **Purity** 99%	12,508.5 µg/mL	+/- 72.7255 µg/mL +/- 754.6932 µg/mL +/- 756.4850 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

MV-569722.sec_00004

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0124116

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,503.4 µg/mL	+/- 19.5506 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 140.9699 µg/mL	Unstressed
	Purity 99%		+/- 144.2404 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,508.1 µg/mL	+/- 21.1963 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.4639 µg/mL	Unstressed
	Purity 99%		+/- 144.7353 µg/mL	Stressed
3	Vinyl chloride	2,518.6 µg/mL	+/- 19.4186 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.7924 µg/mL	Unstressed
	Purity 99%		+/- 145.0836 µg/mL	Stressed
4	1,3-Butadiene	2,504.0 µg/mL	+/- 20.5722 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 22331)		+/- 141.1450 µg/mL	Unstressed
	Purity 99%		+/- 144.4130 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,498.5 µg/mL	+/- 19.9806 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 140.7602 µg/mL	Unstressed
	Purity 99%		+/- 144.0229 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,494.9 µg/mL	+/- 17.8868 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 140.2786 µg/mL	Unstressed
	Purity 99%		+/- 143.5429 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,503.4 µg/mL	+/- 20.0421 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 141.0350 µg/mL	Unstressed
	Purity 99%		+/- 144.3039 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,503.2	µg/mL	+/-	18.7037	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q12B-59)			+/-	140.8450	µg/mL	Unstressed
	Purity 99%				+/-	144.1179	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

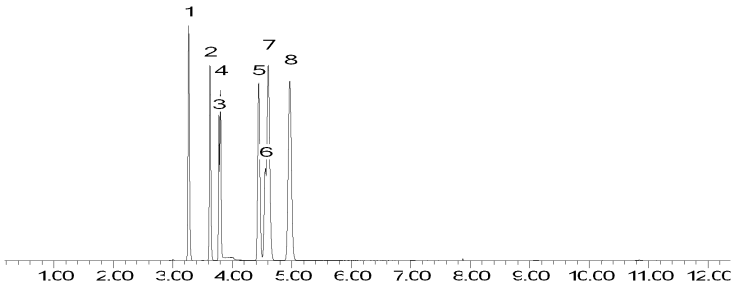
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 12-Jan-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 17-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569722_00006

Rec 7/10/17 [illegible]
6x 1 mL vials

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 569722 **Lot No.:** A0124278

Description: 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot Q167-08) Purity 99%	2,500.5 µg/mL	+/- 16.7232 µg/mL +/- 140.4412 µg/mL +/- 143.7161 µg/mL		Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBG7976V) Purity 99%	2,498.7 µg/mL	+/- 17.4998 µg/mL +/- 140.4406 µg/mL +/- 143.7111 µg/mL		Gravimetric Unstressed Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 1026101231B1) Purity 99%	2,498.4 µg/mL	+/- 16.6753 µg/mL +/- 140.3203 µg/mL +/- 143.5926 µg/mL		Gravimetric Unstressed Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBF3387V) Purity 99%	2,496.9 µg/mL	+/- 17.0619 µg/mL +/- 140.2843 µg/mL +/- 143.5535 µg/mL		Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,500.5 µg/mL	+/- 17.3456 µg/mL +/- 140.5211 µg/mL +/- 143.7944 µg/mL		Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 23593) Purity 99%	2,500.5 µg/mL	+/- 16.8189 µg/mL +/- 140.4526 µg/mL +/- 143.7272 µg/mL		Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot 4938100) Purity 99%	2,500.0 µg/mL	+/- 10.0499 µg/mL +/- 139.7786 µg/mL +/- 143.0675 µg/mL		Gravimetric Unstressed Stressed

Reagent

MV-569723_00003

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0123891

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Chloroethyl vinyl ether	2,503.5 µg/mL	+/- 14.5556 µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKBS6526V)		+/- 53.6004 µg/mL	Unstressed
	Purity 98%		+/- 55.1587 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

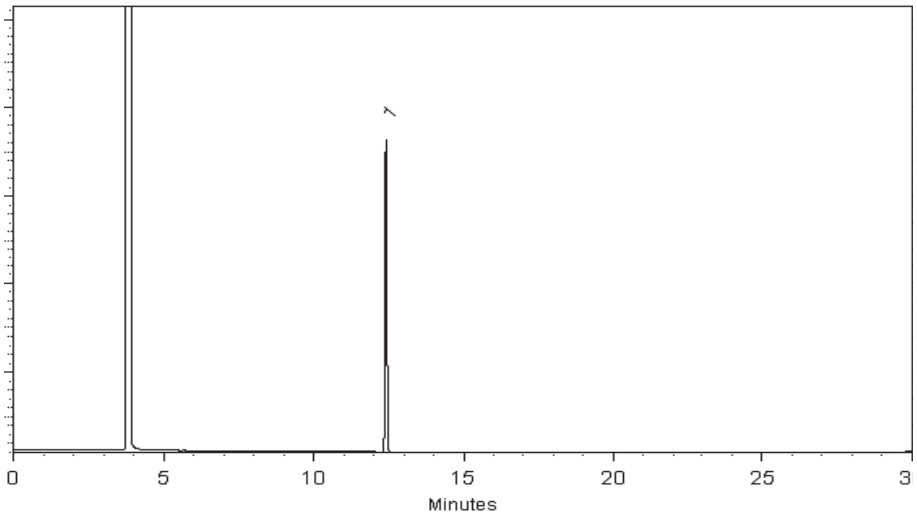
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 03-Jan-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Catalog No. : 569724.SEC **Lot No.:** A0131389

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,008.0 µg/mL	+/- 29.3897 µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot F3Z5C)		+/- 302.1812 µg/mL	Unstressed
	Purity 99%		+/- 302.8985 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

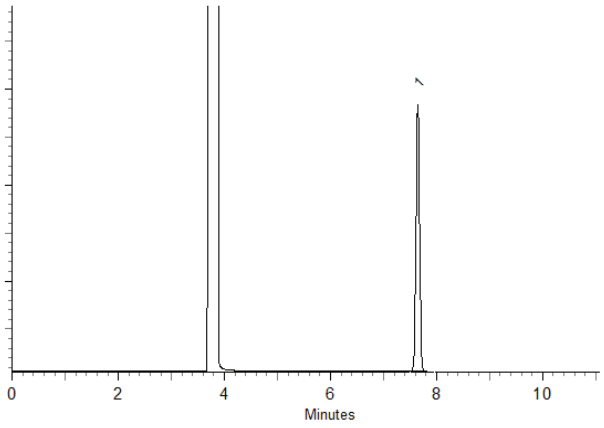
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 05-Oct-2017 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Catalog No. : 569727 **Lot No.:** A0118487

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,000.4 µg/mL	+/- 146.3826 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.4819 µg/mL	Unstressed
	Purity 99%		+/- 1,512.0629 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

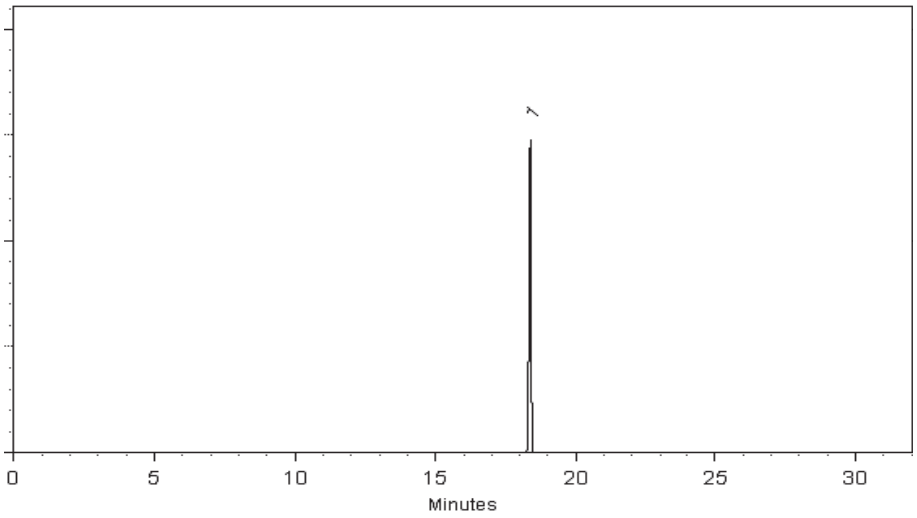
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

Date Mixed: 31-Mar-2016 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Apr-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808 **Lot No.:** A0123685

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2500-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	2-Propanol (isopropanol)		25,022.0	µg/mL	+/- 145.4725	µg/mL	Gravimetric
	CAS # 67-63-0	(Lot SHBG8138V)			+/- 1,237.7836	µg/mL	Unstressed
	Purity 99%				+/- 1,268.5622	µg/mL	Stressed
2	Chloroprene (2-chloro-1,3-butadiene)		2,515.5	µg/mL	+/- 14.6253	µg/mL	Gravimetric
	CAS # 126-99-8	(Lot 161201JLM)			+/- 124.4364	µg/mL	Unstressed
	Purity 99%				+/- 127.5306	µg/mL	Stressed
3	Methacrylonitrile		25,000.0	µg/mL	+/- 145.3446	µg/mL	Gravimetric
	CAS # 126-98-7	(Lot 1012014)			+/- 1,236.6953	µg/mL	Unstressed
	Purity 99%				+/- 1,267.4469	µg/mL	Stressed
4	2,2,4-Trimethylpentane (isooctane)		2,508.0	µg/mL	+/- 14.5817	µg/mL	Gravimetric
	CAS # 540-84-1	(Lot SHBD2922V)			+/- 124.0654	µg/mL	Unstressed
	Purity 99%				+/- 127.1504	µg/mL	Stressed
5	1-Butanol		62,715.5	µg/mL	+/- 364.6143	µg/mL	Gravimetric
	CAS # 71-36-3	(Lot SHBF9309V)			+/- 3,102.3986	µg/mL	Unstressed
	Purity 99%				+/- 3,179.5425	µg/mL	Stressed
6	2-Nitropropane		5,007.8	µg/mL	+/- 29.1158	µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCBL0537V)			+/- 247.7251	µg/mL	Unstressed
	Purity 98%				+/- 253.8850	µg/mL	Stressed
7	1-Chlorohexane		2,501.5	µg/mL	+/- 14.5436	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot 05107LK)			+/- 123.7413	µg/mL	Unstressed
	Purity 98%				+/- 126.8183	µg/mL	Stressed

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Catalog No. : 570809 **Lot No.:** A0123728

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2500-5000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Ethyl acetate **CAS #** 141-78-6 **Purity** 99%	(Lot SHBG6401V)	5,003.0	µg/mL	+/- 29.2937 +/- 301.8731 +/- 302.5897	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 **Purity** 99%	(Lot 10129902)	2,508.0	µg/mL	+/- 14.7183 +/- 151.3320 +/- 151.6912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 **Purity** 99%	(Lot 160830A-BL1)	5,011.5	µg/mL	+/- 29.3434 +/- 302.3859 +/- 303.1038	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 **Purity** 99%	(Lot SHBF4442V)	2,505.5	µg/mL	+/- 14.7037 +/- 151.1811 +/- 151.5400	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

mv-571993.sec_00001

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Catalog No. : 571993.sec **Lot No.:** A0123771

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	25,091.5 µg/mL	+/- 146.9162 µg/mL	Gravimetric
	CAS # 75-05-8.SEC (Lot 7KGDA)		+/- 1,241.3442 µg/mL	Unstressed
	Purity 99%		+/- 1,272.2054 µg/mL	Stressed
2	Diisopropyl ether (DIPE)	2,525.0 µg/mL	+/- 14.8179 µg/mL	Gravimetric
	CAS # 108-20-3.SEC (Lot LL7TN-SH)		+/- 124.9211 µg/mL	Unstressed
	Purity 98%		+/- 128.0265 µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)	2,509.0 µg/mL	+/- 14.7242 µg/mL	Gravimetric
	CAS # 637-92-3.SEC (Lot MHBJG-QK)		+/- 124.1310 µg/mL	Unstressed
	Purity 99%		+/- 127.2168 µg/mL	Stressed
4	Propionitrile	25,125.5 µg/mL	+/- 147.1153 µg/mL	Gravimetric
	CAS # 107-12-0.SEC (Lot RTXQL)		+/- 1,243.0263 µg/mL	Unstressed
	Purity 99%		+/- 1,273.9293 µg/mL	Stressed
5	tert-Amyl alcohol	25,056.0 µg/mL	+/- 146.7084 µg/mL	Gravimetric
	CAS # 75-85-4.SEC (Lot MMGO1)		+/- 1,239.5880 µg/mL	Unstressed
	Purity 99%		+/- 1,270.4054 µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)	2,517.5 µg/mL	+/- 14.7741 µg/mL	Gravimetric
	CAS # 994-05-8.SEC (Lot 5614600)		+/- 124.5515 µg/mL	Unstressed
	Purity 99%		+/- 127.6478 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

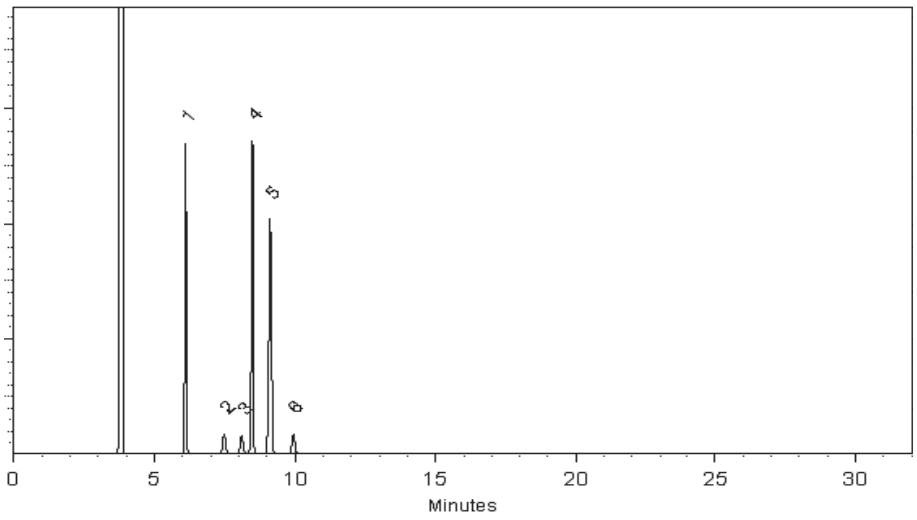
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bradley Meyer - Mix Technician

Date Mixed: 27-Dec-2016 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 30-Dec-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-571993_00001

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate 4322.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate 4322.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material iis intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 571993 **Lot No.:** A0123796

Description: 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Acetonitrile		25,004.5	µg/mL	+/- 145.3705	µg/mL	Gravimetric
	CAS # 75-05-8	(Lot SHBB3177V)			+/- 1,236.9157	µg/mL	Unstressed
	Purity 98%				+/- 1,267.6727	µg/mL	Stressed
2	Diisopropyl ether (DIPE)		2,505.0	µg/mL	+/- 14.5643	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot SHBC0391V)			+/- 123.9170	µg/mL	Unstressed
	Purity 99%				+/- 126.9983	µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE)		2,501.5	µg/mL	+/- 14.5439	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKBT8400V)			+/- 123.7438	µg/mL	Unstressed
	Purity 99%				+/- 126.8208	µg/mL	Stressed
4	Propionitrile		25,003.8	µg/mL	+/- 145.3664	µg/mL	Gravimetric
	CAS # 107-12-0	(Lot BCBM6569V)			+/- 1,236.8808	µg/mL	Unstressed
	Purity 99%				+/- 1,267.6370	µg/mL	Stressed
5	tert-Amyl alcohol		25,006.0	µg/mL	+/- 145.3794	µg/mL	Gravimetric
	CAS # 75-85-4	(Lot STBB1898V)			+/- 1,236.9921	µg/mL	Unstressed
	Purity 99%				+/- 1,267.7510	µg/mL	Stressed
6	tert-Amyl methyl ether (TAME)		2,505.4	µg/mL	+/- 14.5664	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBD8698V)			+/- 123.9353	µg/mL	Unstressed
	Purity 98%				+/- 127.0170	µg/mL	Stressed

Reagent

mv-571994_00001

RESTEK®
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Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 571994 **Lot No.:** A0128797

Description: 8260 Ethanol Standard

8260 Ethanol Standard 100,000 µg/mL, P&T Methanol, 1 mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethanol	100,127.0 µg/mL	+/- 586.2354 µg/mL	Gravimetric
	CAS # 64-17-5 (Lot PG0219)		+/- 2,144.8448 µg/mL	Unstressed
	Purity 99%		+/- 2,207.1354 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

MV-CUS17739_00002

Certificate of Analysis

Custom Standard

Product Number: CUS-17739 **Page:** 1 of 1

Lot Number: CR-2819 **Lot Issue Date:** 19-Jun-2017 **Expiration Date:** 31-Jul-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA Scientific's ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-chlorohexane	000544-10-5	RM04263	998.8 ± 5.0 µg/mL
2-pentanone	000107-87-9	RM03775	4020 ± 20 µg/mL
sec-butanol	000078-92-2	RM01299	30116 ± 151 µg/mL

Matrix: methanol (purge & trap grade)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET ▪ NORTH KINGSTOWN, RHODE ISLAND 02852 ▪ WWW.ULTRASCI.COM

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001,, and calibrated Class A glassware in the manufacturing off these standards.

John Russo
President

Vincent Wang, Ph.D.
Director off QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET - NORTH KINGSTOWN, RHODE ISLAND 02852 - WWW.ULTRASCI.COM

Reagent

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mv-VO-TAOH-5_00004

Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: VO-TAOH-5 **Lot No.** TS180220004

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: 2-20-2018
Expiration Date: 8-19-2018

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality contrc standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTI and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Propylene oxide	75-56-9	50000 µg/mL	99%	50009 µg/mL	± 1750 µg/mL
Ethylene oxide	75-21-8	50000 µg/mL	99.8%	50027 µg/mL	± 1751 µg/mL
cis-1,4-Dichloro-2-butene	1476-11-5	1000 µg/mL	95%	1010 µg/mL	± 35 µg/mL
Tetrahydrothiophene	110-01-0	1000 µg/mL	99%	998 µg/mL	± 35 µg/mL

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 2-20-2018 Certifying Officer: Shannon Mee

Report of Certification

Catalog Number: VO-TAOH-5 **Lot No.** TS1802220004

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: 2-20-2018

Expiration Date: 8-19-2018

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a freezer (-35°C to -10°C). Note: Shipping condit may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicab only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve a one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that shoul removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that con in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identificati are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation h been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appe X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedur 4300 HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bott variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\Sigma u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individu who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breach of warranty, allegc negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liab for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 v1 ID: 32 (um)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
775VMW-5_0418	280-108840-1	101	109	103	108
775VMW-5_0418a	280-108840-2	102	115	103	104
775VMW-6_0418	280-108840-3	102	115	103	109
775VMW-8_0418	280-108840-4	104	119 Q	107	111
775VMW-8_0418 RA	280-108840-4 RA	103	105	104	101
775MW-27_0418	280-108840-5	103	117	101	106
775EW-1R_0418	280-108840-6	103	120 Q	90	107
775TB_041918	280-108840-8	104	116	109	102
	MB 280-413691/8	103	115	102	109
	MB 280-413840/6	97	97	102	97
	LCS 280-413691/6	98	115	102	96
	LCS 280-413691/12	101	112	104	104
	LCS 280-413840/4	100	95	100	97
	LCSD 280-413691/13	102	114	97	103

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G7536.D

Lab ID: LCS 280-413691/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.28	106	78-124	
1,1,1-Trichloroethane	5.00	5.40	108	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.98	100	71-121	
1,1,2-Trichloroethane	5.00	5.02	100	80-119	
1,1-Dichloroethane	5.00	5.52	110	77-125	
1,1-Dichloroethene	5.00	5.08	102	71-131	
1,1-Dichloropropene	5.00	5.54	111	79-125	
1,2,3-Trichlorobenzene	5.00	4.28	86	69-129	
1,2,3-Trichloropropane	5.00	5.11	102	73-122	
1,2,4-Trichlorobenzene	5.00	4.08	82	69-130	
1,2,4-Trimethylbenzene	5.00	5.13	103	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.03 J	81	62-128	
1,2-Dibromoethane	5.00	5.06	101	77-121	
1,2-Dichlorobenzene	5.00	4.72	94	80-119	
1,2-Dichloroethane	5.00	5.51	110	73-128	
1,2-Dichloroethene, Total	10.0	10.2	102	79-121	
1,2-Dichloropropane	5.00	5.44	109	78-122	
1,3,5-Trimethylbenzene	5.00	5.15	103	75-124	
1,3-Dichlorobenzene	5.00	4.66	93	80-119	
1,3-Dichloropropane	5.00	5.46	109	80-119	
1,4-Dichlorobenzene	5.00	4.64	93	79-118	
2,2-Dichloropropane	5.00	5.40	108	60-139	
2-Butanone (MEK)	20.0	19.1	96	56-143	
2-Chlorotoluene	5.00	4.87	97	79-122	
2-Hexanone	20.0	20.0	100	57-139	
4-Chlorotoluene	5.00	4.75	95	78-122	
4-Isopropyltoluene	5.00	4.91	98	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	18.7	93	67-130	
Acetone	20.0	19.8	99	39-160	
Benzene	5.00	5.17	103	79-120	
Bromobenzene	5.00	4.69	94	80-120	
Bromochloromethane	5.00	4.79	96	78-123	
Bromodichloromethane	5.00	5.31	106	79-125	
Bromoform	5.00	4.70	94	66-130	
Bromomethane	5.00	4.89	98	53-141	
Carbon disulfide	5.00	5.21	104	64-133	
Carbon tetrachloride	5.00	5.17	103	72-136	
Chlorobenzene	5.00	5.07	101	82-118	
Chloroethane	5.00	4.82	96	60-138	
Chloroform	5.00	5.51	110	79-124	
Chloromethane	5.00	5.24	105	50-139	
cis-1,2-Dichloroethene	5.00	5.01	100	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G7536.D

Lab ID: LCS 280-413691/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.43	109	75-124	
Dibromochloromethane	5.00	4.86	97	74-126	
Dibromomethane	5.00	5.11	102	79-123	
Dichlorodifluoromethane	5.00	5.28	106	32-152	
Ethylbenzene	5.00	5.11	102	79-121	
Hexachlorobutadiene	5.00	4.06	81	66-134	
Isopropylbenzene	5.00	5.10	102	72-131	
m,p-Xylene	5.00	5.10	102	80-121	
Methyl iodide	5.00	4.81	96	69-131	
Methyl tert-butyl ether	5.00	5.61	112	71-124	
Methylene Chloride	5.00	5.53	111	74-124	
Naphthalene	5.00	3.69	74	61-128	
n-Butylbenzene	5.00	5.15	103	75-128	
N-Propylbenzene	5.00	4.99	100	76-126	
o-Xylene	5.00	5.34	107	78-122	
sec-Butylbenzene	5.00	4.87	97	77-126	
Styrene	5.00	4.92	98	78-123	
tert-Butylbenzene	5.00	4.90	98	78-124	
Tetrachloroethene	5.00	4.84	97	74-129	
Toluene	5.00	5.04	101	80-121	
trans-1,2-Dichloroethene	5.00	5.21	104	75-124	
trans-1,3-Dichloropropene	5.00	5.57	111	73-127	
Trichloroethene	5.00	5.20	104	79-123	
Trichlorofluoromethane	5.00	4.81	96	65-141	
Vinyl acetate	10.0	10.8	108	54-146	
Vinyl chloride	5.00	5.01	100	58-137	
Xylenes, Total	10.0	10.4	104	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G7537.D

Lab ID: LCS 280-413691/12 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diisopropyl ether	5.00	5.71 J	114	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_2664.D

Lab ID: LCS 280-413840/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Trichloroethene	5.00	4.80	96	79-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G7538.D

Lab ID: LCSD 280-413691/13 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Diisopropyl ether	5.00	6.02 J	120	NaN	20	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G7523.D Lab Sample ID: MB 280-413691/8

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_G Date Analyzed: 05/03/2018 20:28

GC Column: DB-624 v1 ID: 32(um)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
775VMW-5_0418	280-108840-1	G7524.D	05/03/2018 20:48
775VMW-5_0418a	280-108840-2	G7525.D	05/03/2018 21:08
775VMW-6_0418	280-108840-3	G7526.D	05/03/2018 21:29
775VMW-8_0418	280-108840-4	G7527.D	05/03/2018 21:49
775MW-27_0418	280-108840-5	G7528.D	05/03/2018 22:09
775EW-1R_0418	280-108840-6	G7529.D	05/03/2018 22:29
775TB_041918	280-108840-8	G7531.D	05/03/2018 23:09
	LCS 280-413691/6	G7536.D	05/04/2018 00:50
	LCS 280-413691/12	G7537.D	05/04/2018 01:10
	LCSD 280-413691/13	G7538.D	05/04/2018 01:30

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G2_2665.D Lab Sample ID: MB 280-413840/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_G2 Date Analyzed: 05/04/2018 21:20

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-413840/4	G2_2664.D	05/04/2018 21:00
775VMW-8_0418 RA	280-108840-4 RA	G2_2666.D	05/04/2018 21:40

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G7207.D BFB Injection Date: 04/27/2018

Instrument ID: VMS_G BFB Injection Time: 10:09

Analysis Batch No.: 412916

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.9	
75	30.0 - 60.0 % of mass 95	42.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.8	(7.3) 1
176	95.0 - 101.0 % of mass 174	77.3	(97.5) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-412916/18	G7217.D	04/27/2018	13:43
	IC 280-412916/19	G7218.D	04/27/2018	14:03
	IC 280-412916/20	G7219.D	04/27/2018	14:24
	ICIS 280-412916/21	G7220.D	04/27/2018	14:44
	IC 280-412916/22	G7221.D	04/27/2018	15:04
	IC 280-412916/23	G7222.D	04/27/2018	15:24
	ICV 280-412916/24	G7223.D	04/27/2018	15:44

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G7312.D BFB Injection Date: 04/30/2018

Instrument ID: VMS_G BFB Injection Time: 09:29

Analysis Batch No.: 413150

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.5	
75	30.0 - 60.0 % of mass 95	42.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	81.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	79.0	(97.5) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-413150/10	G7315.D	04/30/2018	10:43
	IC 280-413150/11	G7316.D	04/30/2018	11:03
	IC 280-413150/12	G7317.D	04/30/2018	11:23
	IC 280-413150/13	G7318.D	04/30/2018	11:43
	IC 280-413150/14	G7319.D	04/30/2018	12:03
	IC 280-413150/15	G7320.D	04/30/2018	12:24
	IC 280-413150/16	G7322.D	04/30/2018	13:57
	ICV 280-413150/17	G7324.D	04/30/2018	14:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G7336.D BFB Injection Date: 04/30/2018

Instrument ID: VMS_G BFB Injection Time: 19:45

Analysis Batch No.: 413243

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	40.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	85.4	
175	5.0 - 9.0 % of mass 174	6.3	(7.4) 1
176	95.0 - 101.0 % of mass 174	82.1	(96.1) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD01 280-413243/10	G7346.D	04/30/2018	23:12
	STD02 280-413243/11	G7347.D	04/30/2018	23:32
	STD05 280-413243/12	G7348.D	04/30/2018	23:52
	STD10 280-413243/13	G7349.D	05/01/2018	00:12
	STD30 280-413243/14	G7350.D	05/01/2018	00:33
	STD60 280-413243/15	G7351.D	05/01/2018	00:53
	ICV 280-413243/16	G7352.D	05/01/2018	01:16

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G7517.D BFB Injection Date: 05/03/2018

Instrument ID: VMS_G BFB Injection Time: 18:24

Analysis Batch No.: 413691

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.1	
75	30.0 - 60.0 % of mass 95	44.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	75.6	
175	5.0 - 9.0 % of mass 174	5.4	(7.2) 1
176	95.0 - 101.0 % of mass 174	73.6	(97.3) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-413691/2	G7519.D	05/03/2018	19:08
	CCV 280-413691/3	G7520.D	05/03/2018	19:28
	CCV 280-413691/4	G7521.D	05/03/2018	19:48
	MB 280-413691/8	G7523.D	05/03/2018	20:28
775VMW-5_0418	280-108840-1	G7524.D	05/03/2018	20:48
775VMW-5_0418a	280-108840-2	G7525.D	05/03/2018	21:08
775VMW-6_0418	280-108840-3	G7526.D	05/03/2018	21:29
775VMW-8_0418	280-108840-4	G7527.D	05/03/2018	21:49
775MW-27_0418	280-108840-5	G7528.D	05/03/2018	22:09
775EW-1R_0418	280-108840-6	G7529.D	05/03/2018	22:29
775TB_041918	280-108840-8	G7531.D	05/03/2018	23:09
	LCS 280-413691/6	G7536.D	05/04/2018	00:50
	LCS 280-413691/12	G7537.D	05/04/2018	01:10
	LCSD 280-413691/13	G7538.D	05/04/2018	01:30
	CCVC 280-413691/37	G7550.D	05/04/2018	05:32
	CCVC 280-413691/38	G7551.D	05/04/2018	05:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G2_2303.D BFB Injection Date: 04/27/2018

Instrument ID: VMS_G2 BFB Injection Time: 11:01

Analysis Batch No.: 412973

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	16.0
75	30.0 - 60.0 % of mass 95	51.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	8.1
173	Less than 2.0 % of mass 174	0.1 (0.1) 1
174	50.0 - 120.00 % of mass 95	86.8
175	5.0 - 9.0 % of mass 174	6.3 (7.2) 1
176	95.0 - 101.0 % of mass 174	86.8 (100.0) 1
177	5.0 - 9.0 % of mass 176	6.4 (7.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-412973/17	G2_2320.D	04/27/2018	16:58
	IC 280-412973/18	G2_2321.D	04/27/2018	17:19
	IC 280-412973/19	G2_2322.D	04/27/2018	17:40
	ICIS 280-412973/20	G2_2323.D	04/27/2018	18:01
	IC 280-412973/21	G2_2324.D	04/27/2018	18:21
	IC 280-412973/22	G2_2325.D	04/27/2018	18:42
	ICV 280-412973/23	G2_2326.D	04/27/2018	19:03

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G2_2535.D BFB Injection Date: 05/02/2018

Instrument ID: VMS_G2 BFB Injection Time: 22:10

Analysis Batch No.: 413564

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.3	
75	30.0 - 60.0 % of mass 95	49.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	80.9	
175	5.0 - 9.0 % of mass 174	5.9	(7.3) 1
176	95.0 - 101.0 % of mass 174	78.0	(96.4) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD003 280-413564/11	G2_2537.D	05/02/2018	22:54
	STD01 280-413564/12	G2_2538.D	05/02/2018	23:14
	STD02 280-413564/13	G2_2539.D	05/02/2018	23:34
	STD05 280-413564/14	G2_2540.D	05/02/2018	23:55
	ICIS 280-413564/15	G2_2541.D	05/03/2018	00:15
	STD30 280-413564/16	G2_2542.D	05/03/2018	00:35
	STD60 280-413564/17	G2_2543.D	05/03/2018	00:55
	ICV 280-413564/18	G2_2545.D	05/03/2018	01:35
	STD003 280-413564/19	G2_2546.D	05/03/2018	01:55
	STD01 280-413564/20	G2_2547.D	05/03/2018	02:15
	STD02 280-413564/21	G2_2548.D	05/03/2018	02:35
	STD05 280-413564/22	G2_2549.D	05/03/2018	02:55
	STD10 280-413564/23	G2_2550.D	05/03/2018	03:15
	STD30 280-413564/24	G2_2551.D	05/03/2018	03:35
	STD60 280-413564/25	G2_2552.D	05/03/2018	03:55

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G2_2590.D BFB Injection Date: 05/03/2018

Instrument ID: VMS_G2 BFB Injection Time: 19:36

Analysis Batch No.: 413693

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	52.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.2	(0.3) 1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2) 1
176	95.0 - 101.0 % of mass 174	76.7	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-413693/2	G2_2595.D	05/03/2018	21:21

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab File ID: G2_2660.D BFB Injection Date: 05/04/2018

Instrument ID: VMS_G2 BFB Injection Time: 19:36

Analysis Batch No.: 413840

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	51.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.3	(0.3) 1
174	50.0 - 120.00 % of mass 95	82.1	
175	5.0 - 9.0 % of mass 174	5.8	(7.1) 1
176	95.0 - 101.0 % of mass 174	82.0	(99.9) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-413840/2	G2_2662.D	05/04/2018	20:19
	CCV 280-413840/3	G2_2663.D	05/04/2018	20:39
	LCS 280-413840/4	G2_2664.D	05/04/2018	21:00
	MB 280-413840/6	G2_2665.D	05/04/2018	21:20
775VMW-8_0418 RA	280-108840-4 RA	G2_2666.D	05/04/2018	21:40
	CCVC 280-413840/14	G2_2670.D	05/04/2018	23:01

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-412916/21 Date Analyzed: 04/27/2018 14:44

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um)

Lab File ID (Standard): G7220.D Heated Purge: (Y/N) N

Calibration ID: 32250

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		117926	4.86	1175541	6.88	227481	9.57
UPPER LIMIT		235852	5.36	2351082	7.38	454962	10.07
LOWER LIMIT		58963	4.36	587771	6.38	113741	9.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-412916/24		118626	4.86	1126003	6.87	215981	9.57
ICV 280-413243/16		157514	4.87	1736808	6.89	338540	9.58
CCV 280-413691/2		115159	4.84	1123321	6.87	213120	9.56
CCV 280-413691/3		120537	4.84	1114172	6.86	218398	9.55
CCV 280-413691/4		133049	4.83	1198935	6.86	230388	9.55
MB 280-413691/8		128633	4.85	1113225	6.86	216435	9.56
280-108840-1	775VMW-5_0418	118796	4.85	1149678	6.86	217264	9.56
280-108840-2	775VMW-5_0418a	129976	4.85	1139605	6.86	216839	9.55
280-108840-3	775VMW-6_0418	131070	4.84	1125514	6.86	217325	9.55
280-108840-4	775VMW-8_0418	133625	4.85	1135273	6.86	214171	9.55
280-108840-5	775MW-27_0418	132688	4.85	1108258	6.86	214250	9.55
280-108840-6	775EW-1R_0418	138198	4.85	1118982	6.86	217567	9.55
280-108840-8	775TB_041918	129817	4.85	1107573	6.87	211130	9.55
LCS 280-413691/6		132213	4.85	1200610	6.86	228569	9.55
LCS 280-413691/12		135156	4.84	1157166	6.86	227946	9.55
LCSD 280-413691/13		135929	4.83	1147233	6.86	232059	9.55
CCVC 280-413691/37		136108	4.83	1270535	6.86	249545	9.54
CCVC 280-413691/38		122061	4.84	1264522	6.85	246473	9.55

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-412916/21 Date Analyzed: 04/27/2018 14:44

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um)

Lab File ID (Standard): G7220.D Heated Purge: (Y/N) N

Calibration ID: 32250

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		261385	11.63				
UPPER LIMIT		522770	12.13				
LOWER LIMIT		130693	11.13				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-412916/24		262997	11.63				
ICV 280-413243/16		378800	11.65				
CCV 280-413691/2		263490	11.62				
CCV 280-413691/3		255562	11.62				
CCV 280-413691/4		285961	11.61				
MB 280-413691/8		243455	11.63				
280-108840-1	775VMW-5_0418	244704	11.63				
280-108840-2	775VMW-5_0418a	246413	11.62				
280-108840-3	775VMW-6_0418	248266	11.61				
280-108840-4	775VMW-8_0418	248384	11.62				
280-108840-5	775MW-27_0418	244129	11.62				
280-108840-6	775EW-1R_0418	249734	11.62				
280-108840-8	775TB_041918	246028	11.62				
LCS 280-413691/6		294828	11.61				
LCS 280-413691/12		256754	11.62				
LCSD 280-413691/13		250399	11.61				
CCVC 280-413691/37		308338	11.62				
CCVC 280-413691/38		278758	11.62				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-412973/20 Date Analyzed: 04/27/2018 18:01

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_2323.D Heated Purge: (Y/N) N

Calibration ID: 32248

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		194445	3.77	1374936	7.37	329823	10.54
UPPER LIMIT		388890	4.27	2749872	7.87	659646	11.04
LOWER LIMIT		97223	3.27	687468	6.87	164912	10.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-412973/23		197545	3.77	1410299	7.37	344521	10.54

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-412973/20 Date Analyzed: 04/27/2018 18:01

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_2323.D Heated Purge: (Y/N) N

Calibration ID: 32248

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		521697	12.65				
UPPER LIMIT		1043394	13.15				
LOWER LIMIT		260849	12.15				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-412973/23		536587	12.65				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-413564/15 Date Analyzed: 05/03/2018 00:15

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_2541.D Heated Purge: (Y/N) N

Calibration ID: 32286

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		214579	3.77	1416946	7.37	323732	10.55
UPPER LIMIT		429158	4.27	2833892	7.87	647464	11.05
LOWER LIMIT		107290	3.27	708473	6.87	161866	10.05
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-413564/18		206492	3.77	1691443	7.37	388155	10.54
CCV 280-413840/2		237128	3.79	1386386	7.37	327287	10.55
CCV 280-413840/3		244158	3.77	1499240	7.37	348250	10.54
LCS 280-413840/4		231571	3.77	1454537	7.37	341814	10.55
MB 280-413840/6		211701	3.77	1456789	7.37	332695	10.55
280-108840-4 RA	775VMW-8_0418 RA	260434	3.77	1399126	7.37	316162	10.54
CCVC 280-413840/14		217132	3.77	1373939	7.37	306517	10.54

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Sample No.: ICIS 280-413564/15 Date Analyzed: 05/03/2018 00:15

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_2541.D Heated Purge: (Y/N) N

Calibration ID: 32286

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		511240	12.65				
UPPER LIMIT		1022480	13.15				
LOWER LIMIT		255620	12.15				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-413564/18		597767	12.65				
CCV 280-413840/2		515773	12.65				
CCV 280-413840/3		522457	12.65				
LCS 280-413840/4		532559	12.65				
MB 280-413840/6		503870	12.65				
280-108840-4 RA	775VMW-8_0418 RA	478128	12.65				
CCVC 280-413840/14		486060	12.65				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418 | Lab Sample ID: 280-108840-1

Matrix: Water | Lab File ID: G7524.D

Analysis Method: 8260B | Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 20:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.17	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418 | Lab Sample ID: 280-108840-1

Matrix: Water | Lab File ID: G7524.D

Analysis Method: 8260B | Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 20:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	36		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418 | Lab Sample ID: 280-108840-1

Matrix: Water | Lab File ID: G7524.D

Analysis Method: 8260B | Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 20:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		81-118
460-00-4	4-Bromofluorobenzene (Surr)	108		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D
Lims ID: 280-108840-A-1
Client ID: 775VMW-5_0418
Sample Type: Client
Inject. Date: 03-May-2018 20:48:30 ALS Bottle#: 16 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-1 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 21:30:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.845	4.834	0.011	0	118796	250.0	
* 1 Fluorobenzene	96	6.862	6.861	0.001	98	1149678	12.5	
* 2 Chlorobenzene-d5	119	9.558	9.548	0.010	91	217264	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.625	11.614	0.011	97	244704	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.282	6.281	0.001	91	325526	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.587	6.586	0.001	0	219429	10.9	
$ 7 Toluene-d8 (Surr)	98	8.210	8.209	0.001	95	1037457	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.621	10.620	0.001	85	291535	10.8	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43		4.549				ND	U
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84	4.924	4.933	-0.009	97	6491	0.1873	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83		6.153				ND	
73 1,1,1-Trichloroethane	97	6.380	6.379	0.001	92	8886	0.1726	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95	7.177	7.176	0.001	93	1384544	36.4	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

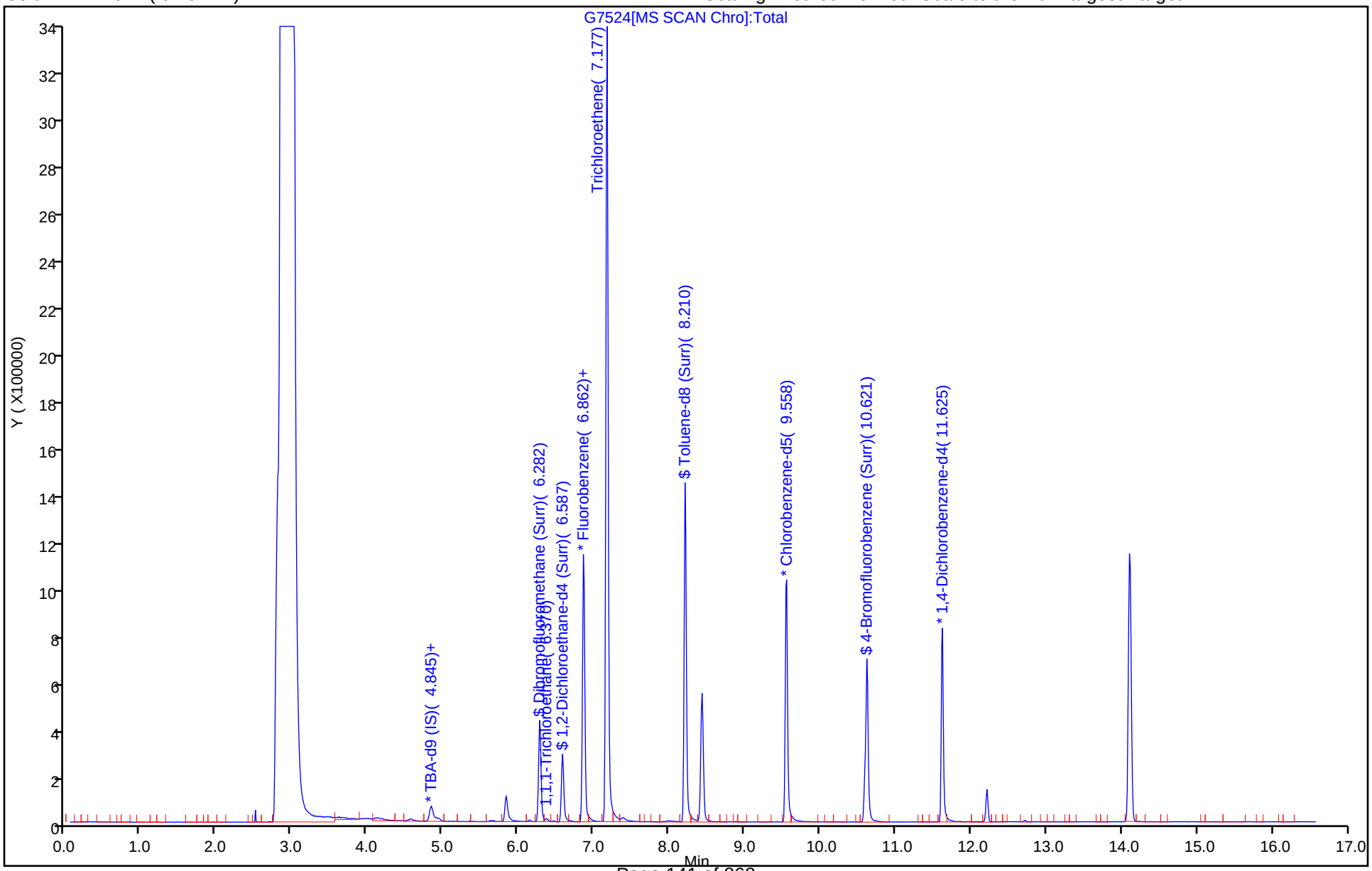
Report Date: 04-May-2018 19:02:21 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D

Injection Date:	03-May-2018 20:48:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-1	Lab Sample ID:	280-108840-1	Worklist Smp#:	14
Client ID:	775VMW-5_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D
Lims ID: 280-108840-A-1
Client ID: 775VMW-5_0418
Sample Type: Client
Inject. Date: 03-May-2018 20:48:30 ALS Bottle#: 16 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-1 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 21:30:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.1	101.09
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.75
$ 7 Toluene-d8 (Surr)	10.0	10.3	103.37
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.8	107.81

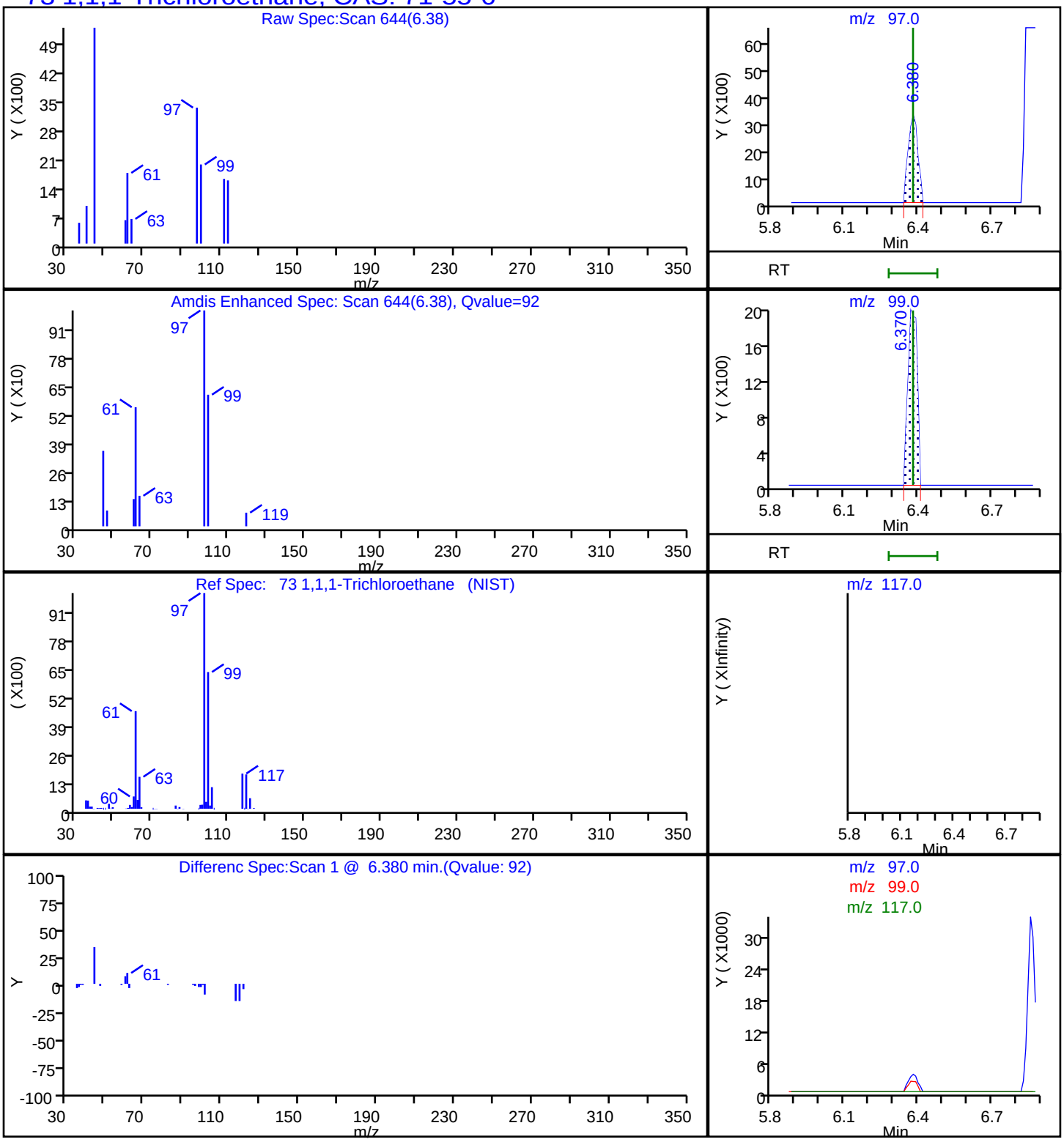
Report Date: 04-May-2018 19:02:21 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D

Injection Date:	03-May-2018 20:48:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-1	Lab Sample ID:	280-108840-1		
Client ID:	775VMW-5_0418				
Operator ID:	newcomer	ALS Bottle#:	16	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

73 1,1,1-Trichloroethane, CAS: 71-55-6



Report Date: 04-May-2018 19:02:21 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D

Injection Date: 03-May-2018 20:48:30 Instrument ID: VMS_G

Lims ID: 280-108840-A-1 Lab Sample ID: 280-108840-1

Client ID: 775VMW-5_0418

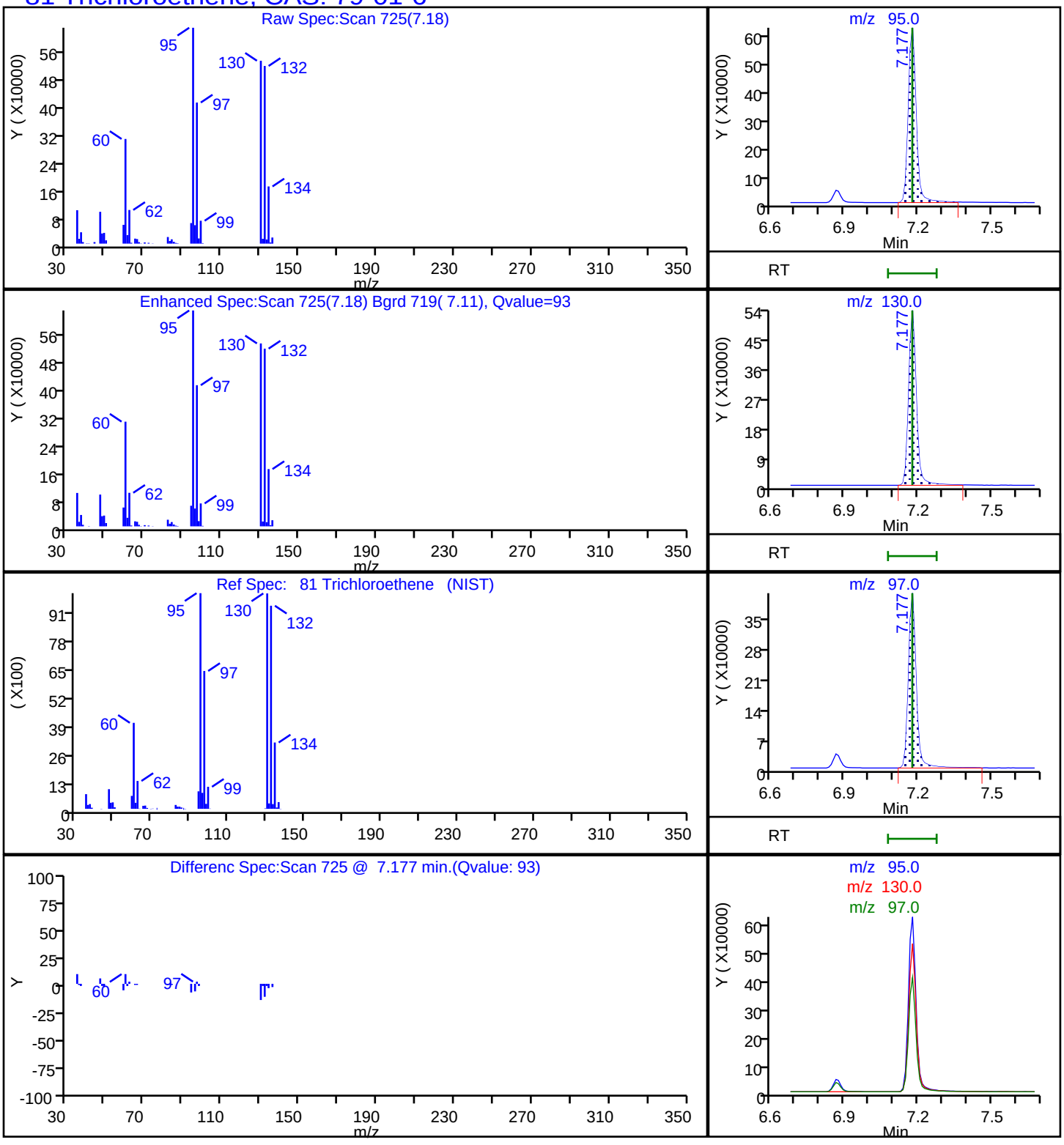
Operator ID: newcomer ALS Bottle#: 16 Worklist Smp#: 14

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

81 Trichloroethene, CAS: 79-01-6



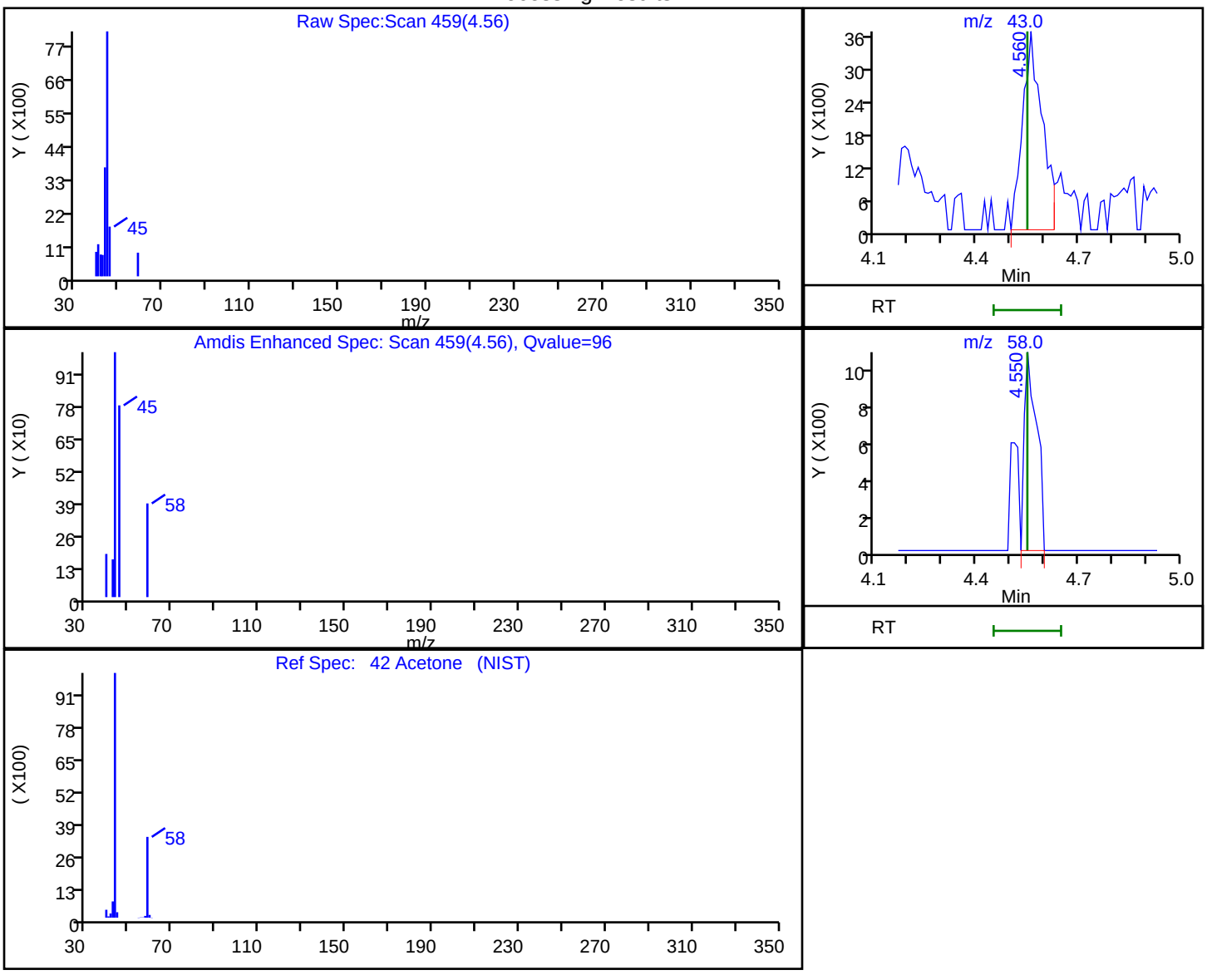
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7524.D				
Injection Date:	03-May-2018 20:48:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-1	Lab Sample ID:	280-108840-1		
Client ID:	775VMW-5_0418				
Operator ID:	newcomer	ALS Bottle#:	16	Worklist Smp#:	14
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.56	43.00	14653	0.490925
4.55	58.00	2566	

Reviewer: newcomer, 04-May-2018 17:22:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418a | Lab Sample ID: 280-108840-2

Matrix: Water | Lab File ID: G7525.D

Analysis Method: 8260B | Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.17	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418a | Lab Sample ID: 280-108840-2

Matrix: Water | Lab File ID: G7525.D

Analysis Method: 8260B | Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	36		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-5_0418a Lab Sample ID: 280-108840-2

Matrix: Water Lab File ID: G7525.D

Analysis Method: 8260B Date Collected: 04/19/2018 15:48

Sample wt/vol: 20(mL) Date Analyzed: 05/03/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 413691 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		81-118
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D
Lims ID: 280-108840-A-2
Client ID: 775VMW-5_0418a
Sample Type: Client
Inject. Date: 03-May-2018 21:08:30 ALS Bottle#: 17 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: d
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 17:23:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.847	4.834	0.013	0	129976	250.0	
* 1 Fluorobenzene	96	6.864	6.861	0.003	98	1139605	12.5	
* 2 Chlorobenzene-d5	119	9.550	9.548	0.002	91	216839	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.617	11.614	0.003	97	246413	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.284	6.281	0.003	91	324471	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.579	6.586	-0.007	0	229080	11.5	
$ 7 Toluene-d8 (Surr)	98	8.212	8.209	0.003	95	1036732	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.623	10.620	0.003	85	283979	10.4	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43		4.549				ND	U
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84		4.933				ND	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83		6.153				ND	
73 1,1,1-Trichloroethane	97	6.372	6.379	-0.007	89	8480	0.1661	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95	7.169	7.176	-0.007	92	1367380	36.3	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

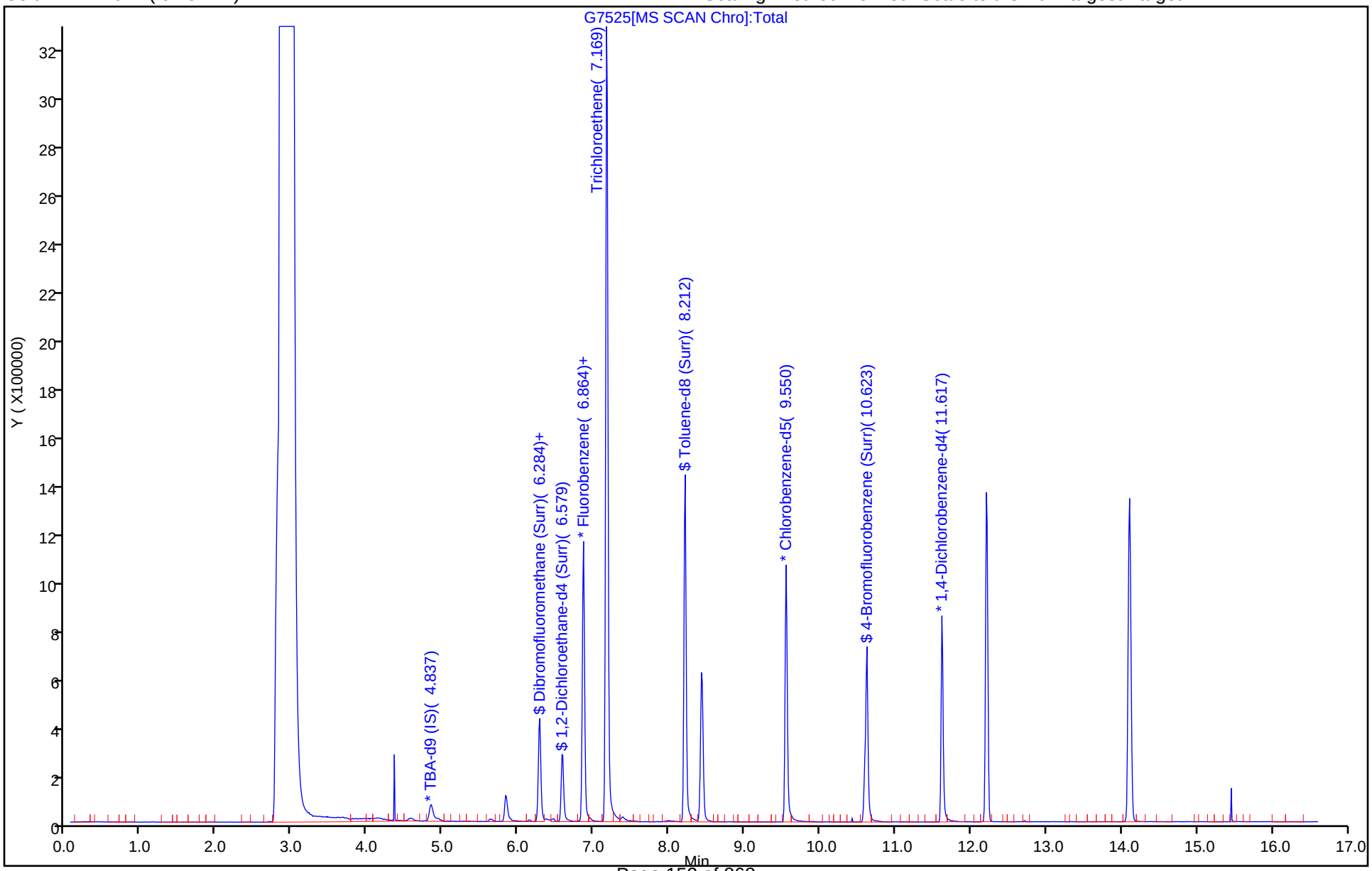
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D

Injection Date:	03-May-2018 21:08:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-2	Lab Sample ID:	280-108840-2	Worklist Smp#:	15
Client ID:	775VMW-5_0418a				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D				
Lims ID:	280-108840-A-2				
Client ID:	775VMW-5_0418a				
Sample Type:	Client				
Inject. Date:	03-May-2018 21:08:30	ALS Bottle#:	17	Worklist Smp#:	15
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	d				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	04-May-2018 19:01:55	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK001				

First Level Reviewer: newcomer Date: 04-May-2018 17:23:26

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.2	101.65
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.5	114.54
$ 7 Toluene-d8 (Surr)	10.0	10.3	103.50
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.4	104.29

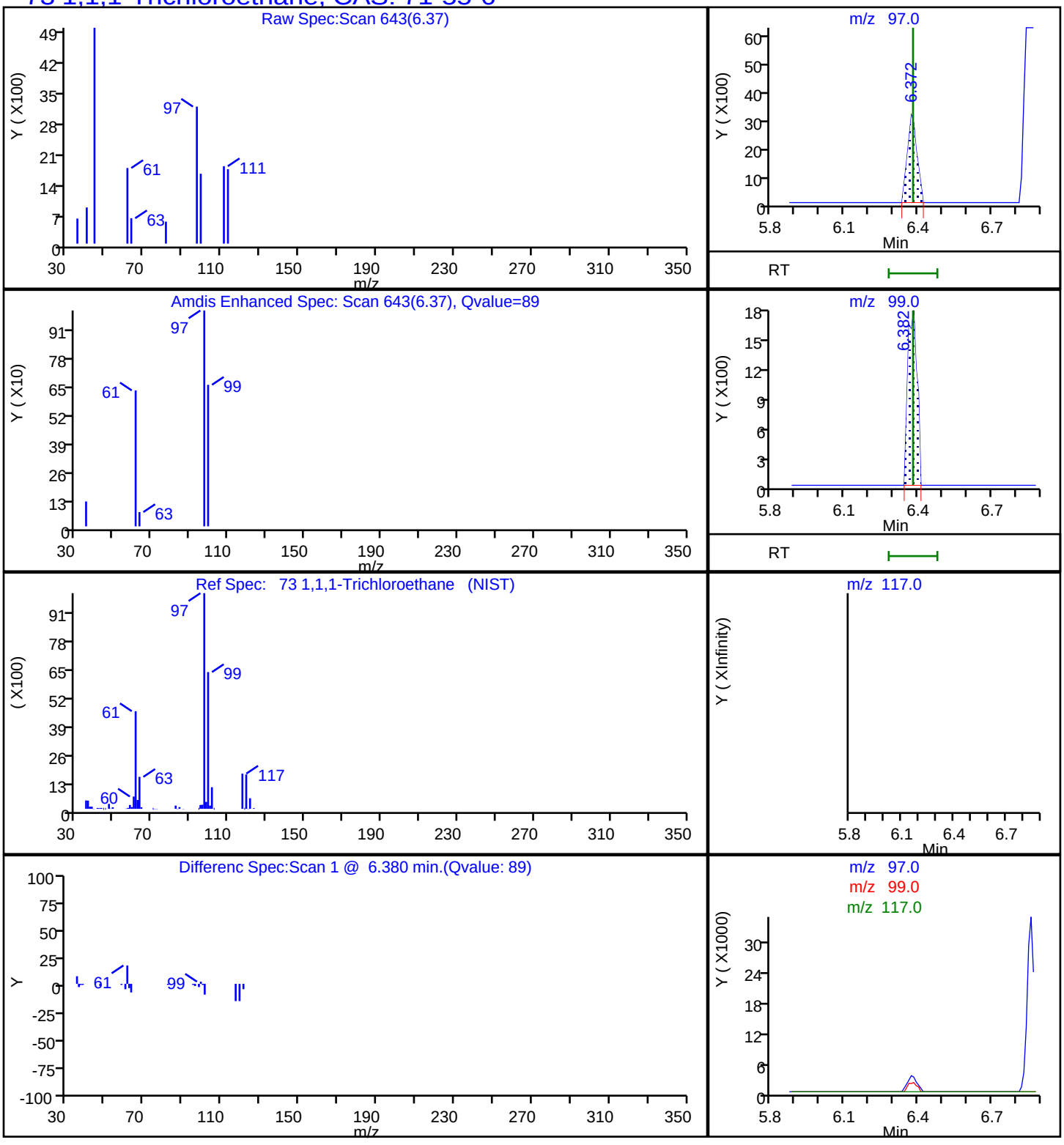
Report Date: 04-May-2018 19:02:28 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D

Injection Date:	03-May-2018 21:08:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-2	Lab Sample ID:	280-108840-2		
Client ID:	775VMW-5_0418a				
Operator ID:	newcomer	ALS Bottle#:	17	Worklist Smp#:	15
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

73 1,1,1-Trichloroethane, CAS: 71-55-6



Report Date: 04-May-2018 19:02:28 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D

Injection Date: 03-May-2018 21:08:30 Instrument ID: VMS_G

Lims ID: 280-108840-A-2 Lab Sample ID: 280-108840-2

Client ID: 775VMW-5_0418a

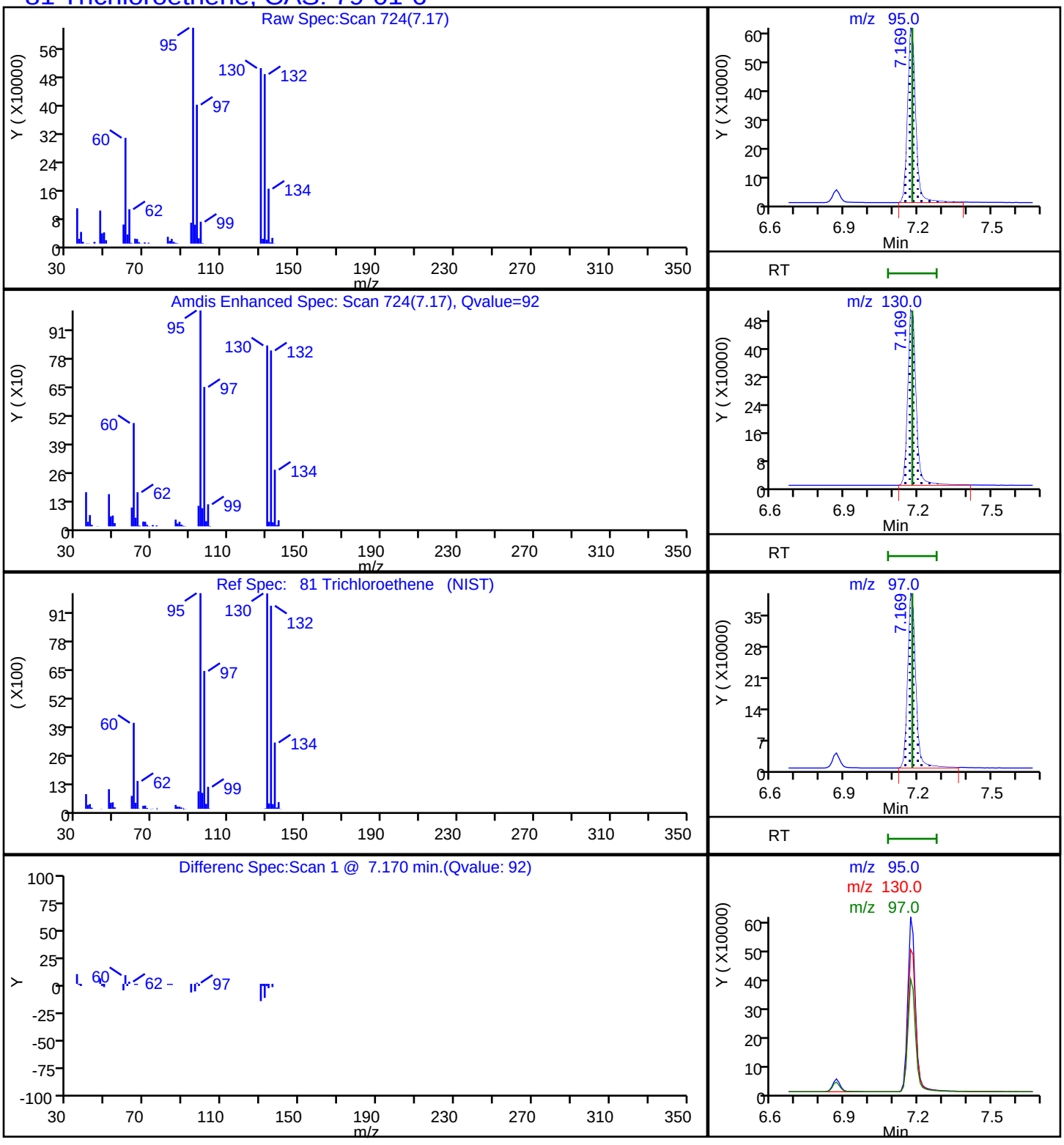
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 15

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

81 Trichloroethene, CAS: 79-01-6



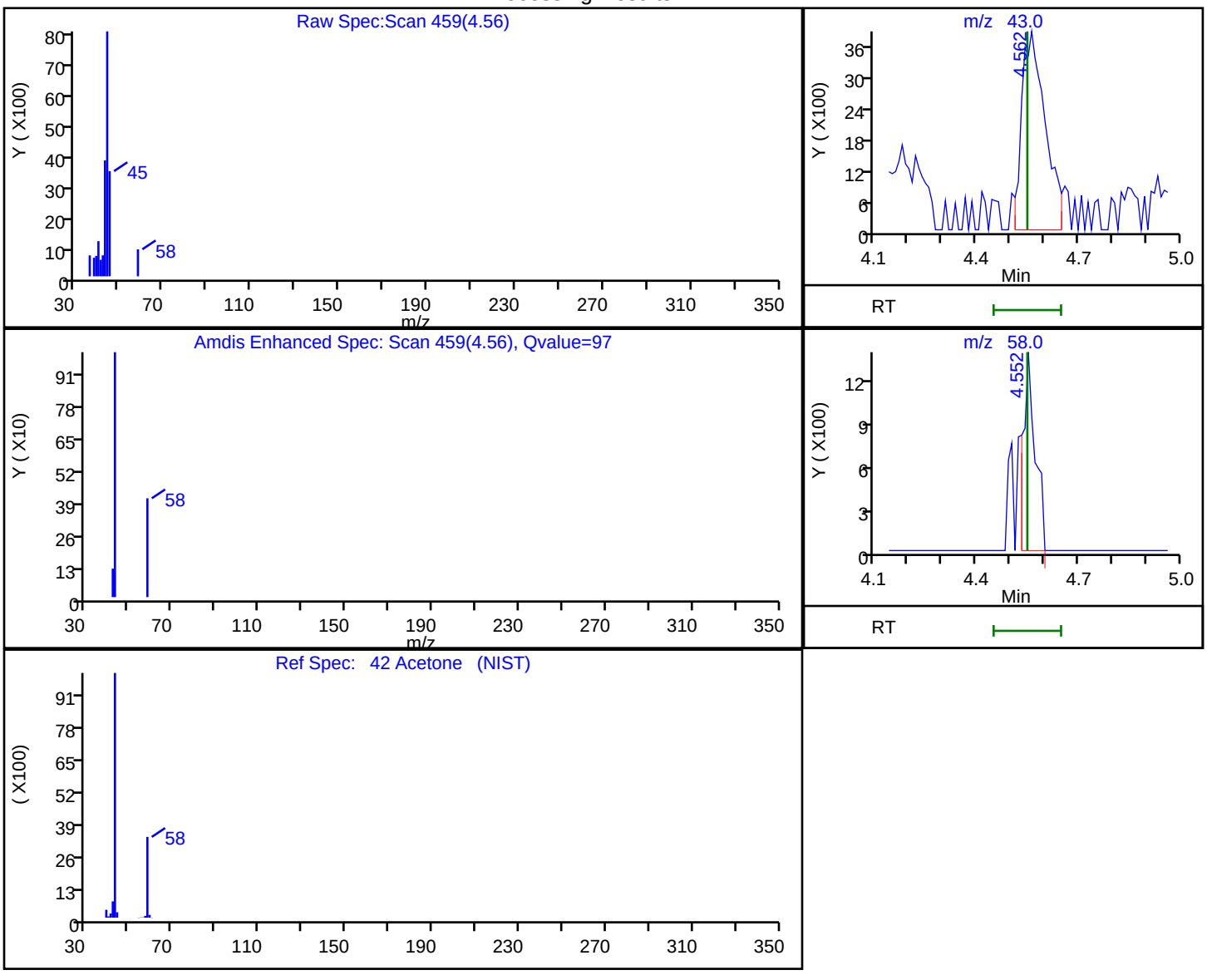
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7525.D				
Injection Date:	03-May-2018 21:08:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-2	Lab Sample ID:	280-108840-2		
Client ID:	775VMW-5_0418a				
Operator ID:	newcomer	ALS Bottle#:	17	Worklist Smp#:	15
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.56	43.00	18560	2.045863
4.55	58.00	3184	

Reviewer: newcomer, 04-May-2018 17:23:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-6_0418 | Lab Sample ID: 280-108840-3

Matrix: Water | Lab File ID: G7526.D

Analysis Method: 8260B | Date Collected: 04/19/2018 12:55

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.29	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	10		10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-6_0418 | Lab Sample ID: 280-108840-3

Matrix: Water | Lab File ID: G7526.D

Analysis Method: 8260B | Date Collected: 04/19/2018 12:55

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.5		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U M	1.0	0.40	0.19
79-01-6	Trichloroethene	33		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-6_0418 | Lab Sample ID: 280-108840-3

Matrix: Water | Lab File ID: G7526.D

Analysis Method: 8260B | Date Collected: 04/19/2018 12:55

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		81-118
460-00-4	4-Bromofluorobenzene (Surr)	109		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D
Lims ID: 280-108840-A-3
Client ID: 775VMW-6_0418
Sample Type: Client
Inject. Date: 03-May-2018 21:29:30 ALS Bottle#: 18 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-3 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 17:24:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.844	4.834	0.010	0	131070	250.0	
* 1 Fluorobenzene	96	6.862	6.861	0.001	98	1125514	12.5	
* 2 Chlorobenzene-d5	119	9.548	9.548	0.000	91	217325	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.614	11.614	0.000	97	248266	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.281	6.281	0.000	91	322841	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.586	6.586	0.000	0	227155	11.5	
$ 7 Toluene-d8 (Surr)	98	8.210	8.209	0.001	95	1032626	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.620	10.620	0.000	85	297724	10.9	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43	4.579	4.549	0.030	41	38856	10.1	
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84	4.933	4.933	0.000	96	5549	0.1635	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83	6.153	6.153	0.000	98	86318	1.50	
73 1,1,1-Trichloroethane	97	6.379	6.379	0.000	95	14818	0.2939	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95	7.176	7.176	0.000	93	1238132	33.3	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	U
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

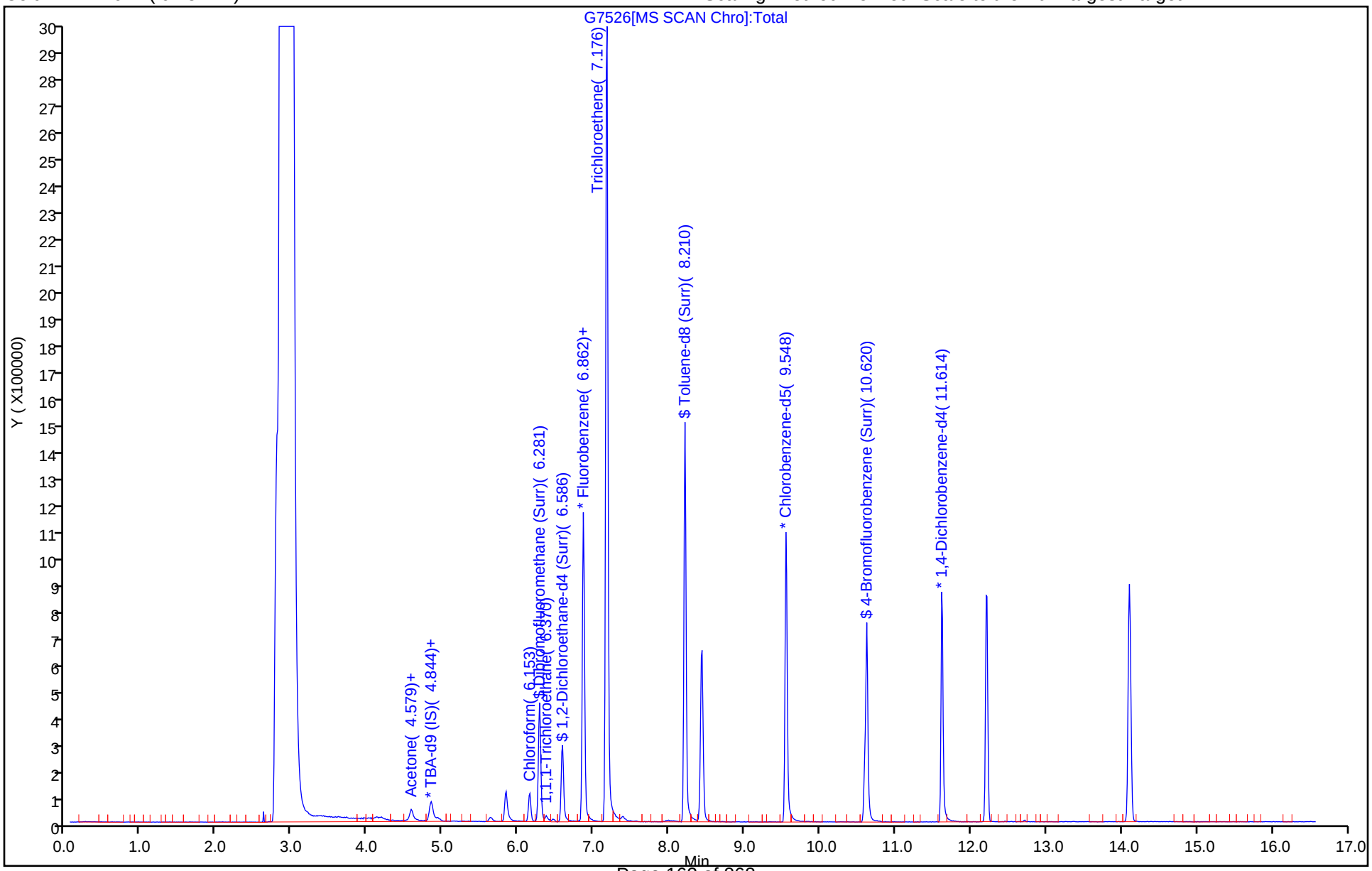
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D

Injection Date:	03-May-2018 21:29:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-3	Lab Sample ID:	280-108840-3	Worklist Smp#:	16
Client ID:	775VMW-6_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D				
Lims ID:	280-108840-A-3				
Client ID:	775VMW-6_0418				
Sample Type:	Client				
Inject. Date:	03-May-2018 21:29:30	ALS Bottle#:	18	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-108840-A-3 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	04-May-2018 19:01:55	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK001				

First Level Reviewer: newcomer Date: 04-May-2018 17:24:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.2	102.41
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.5	115.00
$ 7 Toluene-d8 (Surr)	10.0	10.3	102.86
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.9	108.52

Report Date: 04-May-2018 19:02:59 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D

Injection Date: 03-May-2018 21:29:30 Instrument ID: VMS_G

Lims ID: 280-108840-A-3 Lab Sample ID: 280-108840-3

Client ID: 775VMW-6_0418

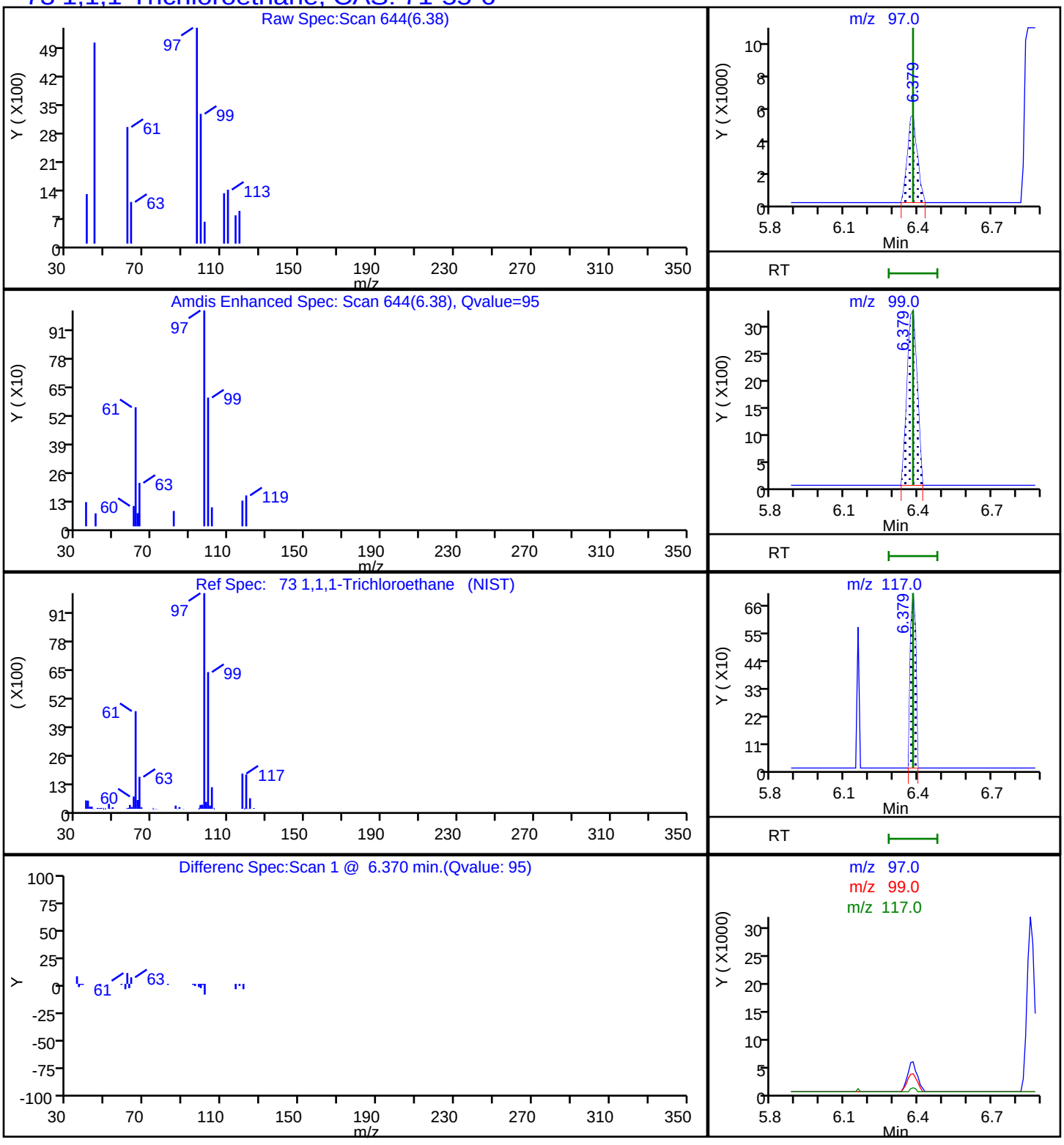
Operator ID: newcomer ALS Bottle#: 18 Worklist Smp#: 16

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

73 1,1,1-Trichloroethane, CAS: 71-55-6



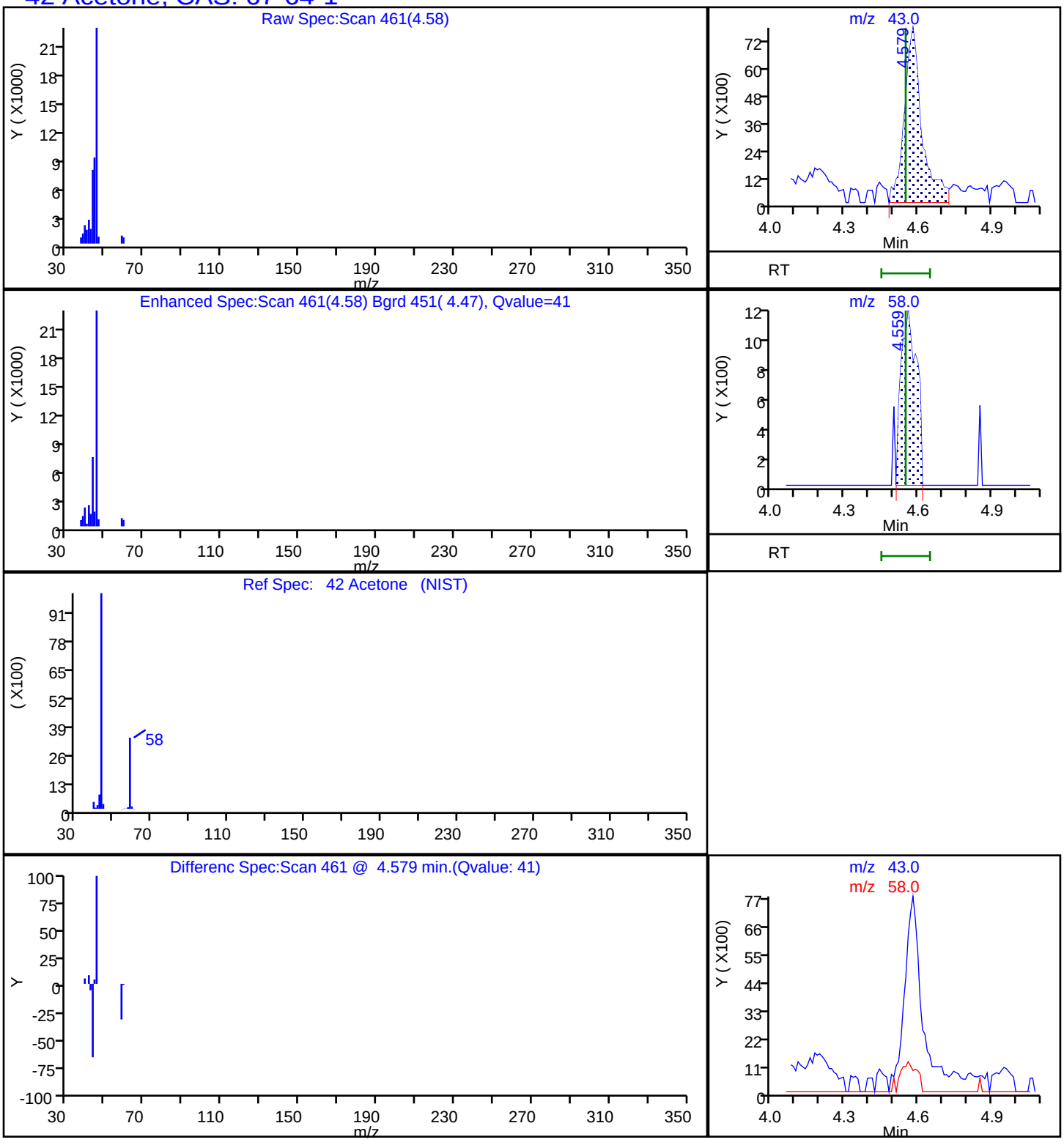
Report Date: 04-May-2018 19:02:58 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D

Injection Date:	03-May-2018 21:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-3	Lab Sample ID:	280-108840-3		
Client ID:	775VMW-6_0418				
Operator ID:	newcomer	ALS Bottle#:	18	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1



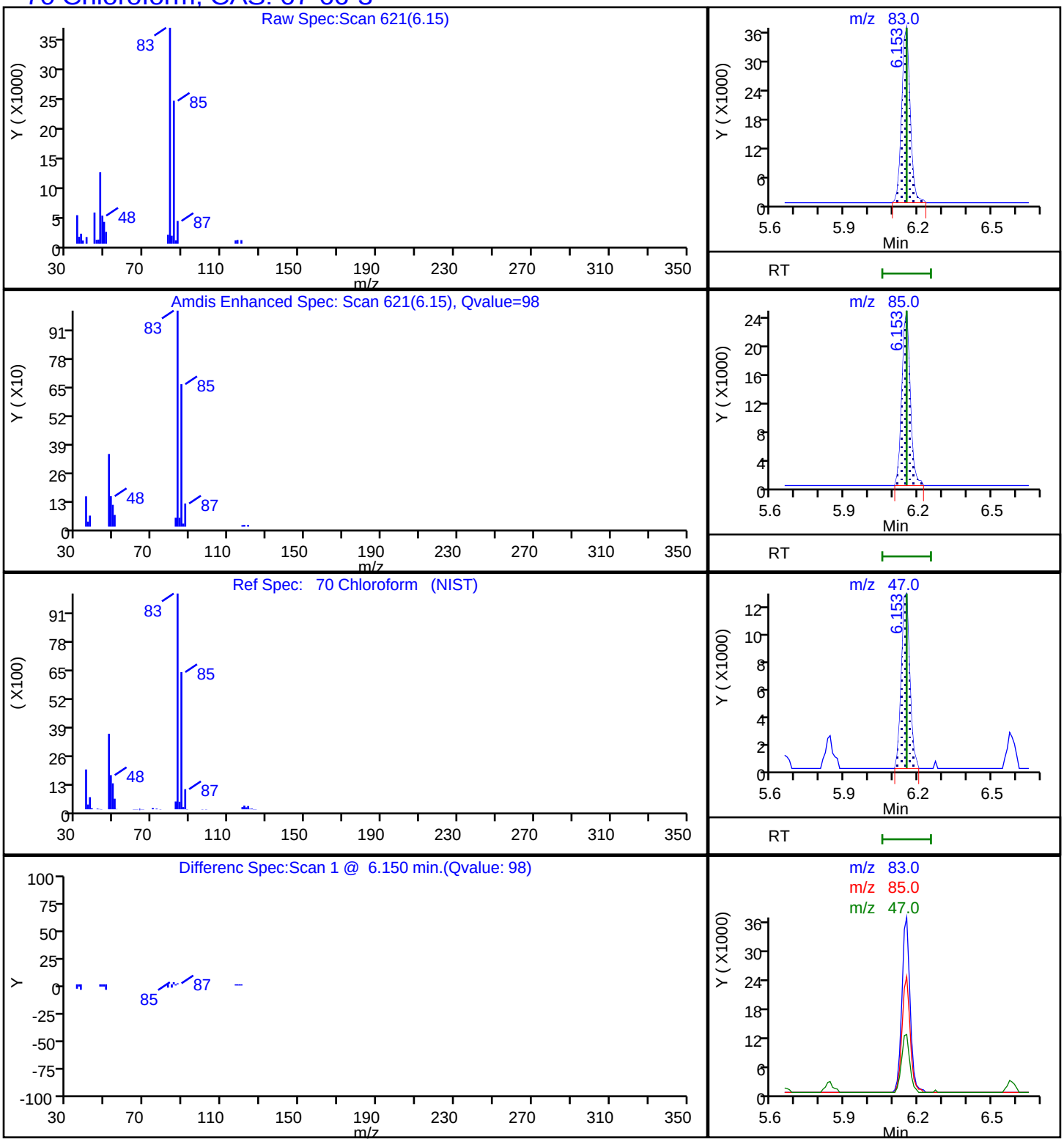
Report Date: 04-May-2018 19:02:59 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D

Injection Date:	03-May-2018 21:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-3	Lab Sample ID:	280-108840-3		
Client ID:	775VMW-6_0418				
Operator ID:	newcomer	ALS Bottle#:	18	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

70 Chloroform, CAS: 67-66-3



Report Date: 04-May-2018 19:02:59 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D

Injection Date: 03-May-2018 21:29:30 Instrument ID: VMS_G

Lims ID: 280-108840-A-3 Lab Sample ID: 280-108840-3

Client ID: 775VMW-6_0418

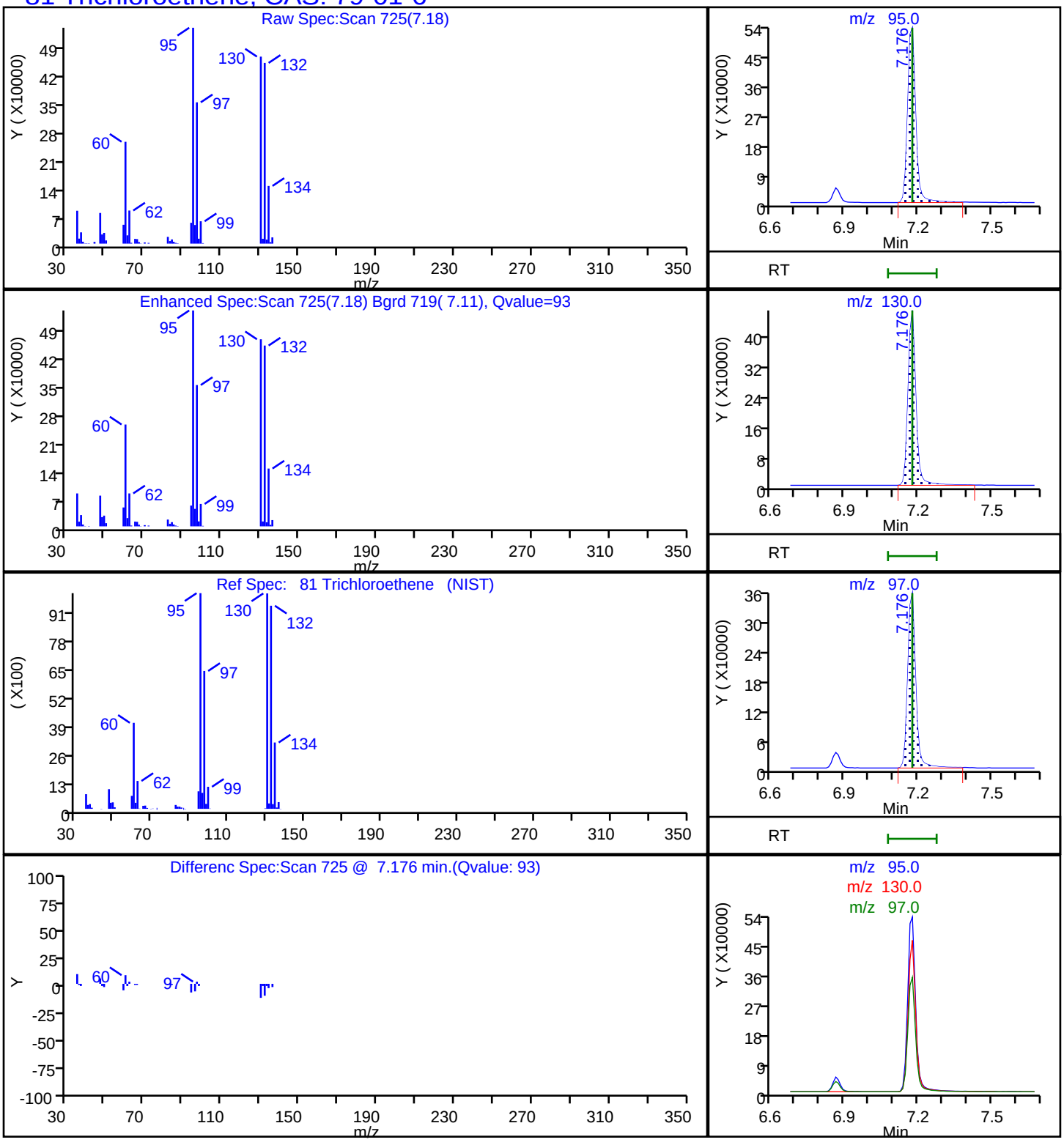
Operator ID: newcomer ALS Bottle#: 18 Worklist Smp#: 16

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

81 Trichloroethene, CAS: 79-01-6



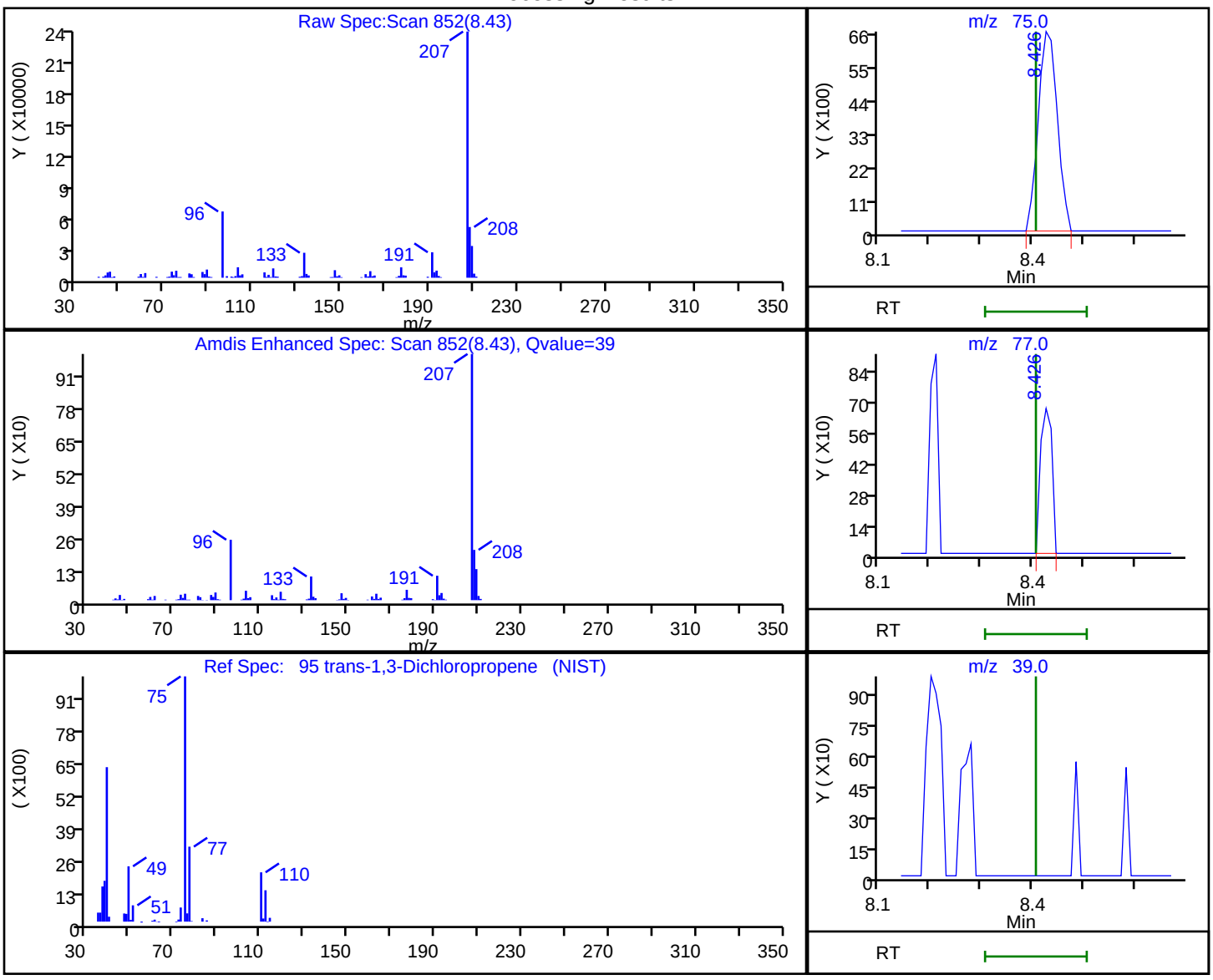
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7526.D				
Injection Date:	03-May-2018 21:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-3	Lab Sample ID:	280-108840-3		
Client ID:	775VMW-6_0418				
Operator ID:	newcomer	ALS Bottle#:	18	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

95 trans-1,3-Dichloropropene, CAS: 10061-02-6

Processing Results



RT	Mass	Response	Amount
8.43	75.00	17293	0.464138
8.43	77.00	1042	
8.40	39.00	0	

Reviewer: newcomer, 04-May-2018 17:24:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-8_0418 | Lab Sample ID: 280-108840-4

Matrix: Water | Lab File ID: G7527.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.29	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U Q	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U Q	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U Q	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U Q	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U Q	5.0	3.2	1.0
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U Q	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U Q	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-8_0418 | Lab Sample ID: 280-108840-4

Matrix: Water | Lab File ID: G7527.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 21:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U Q	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U Q	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U Q	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U Q	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U M Q	1.0	0.40	0.19
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-8_0418 Lab Sample ID: 280-108840-4

Matrix: Water Lab File ID: G7527.D

Analysis Method: 8260B Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) Date Analyzed: 05/03/2018 21:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 413691 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119	Q	81-118
460-00-4	4-Bromofluorobenzene (Surr)	111		85-114
1868-53-7	Dibromofluoromethane (Surr)	104		80-119
2037-26-5	Toluene-d8 (Surr)	107		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D
Lims ID: 280-108840-A-4
Client ID: 775VMW-8_0418
Sample Type: Client
Inject. Date: 03-May-2018 21:49:30 ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-4 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:24:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.845	4.834	0.011	0	133625	250.0	
* 1 Fluorobenzene	96	6.862	6.861	0.001	98	1135273	12.5	
* 2 Chlorobenzene-d5	119	9.548	9.548	0.000	90	214171	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.615	11.614	0.001	97	248384	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.282	6.281	0.001	91	331066	10.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.587	6.586	0.001	0	236914	11.9	
$ 7 Toluene-d8 (Surr)	98	8.210	8.209	0.001	95	1059841	10.7	
$ 8 4-Bromofluorobenzene (Surr	95	10.621	10.620	0.001	85	304455	11.1	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43		4.549				ND	U
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84		4.933				ND	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83		6.153				ND	
73 1,1,1-Trichloroethane	97	6.370	6.379	-0.009	95	14774	0.2905	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95	7.177	7.176	0.001	93	611853	16.3	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	U
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

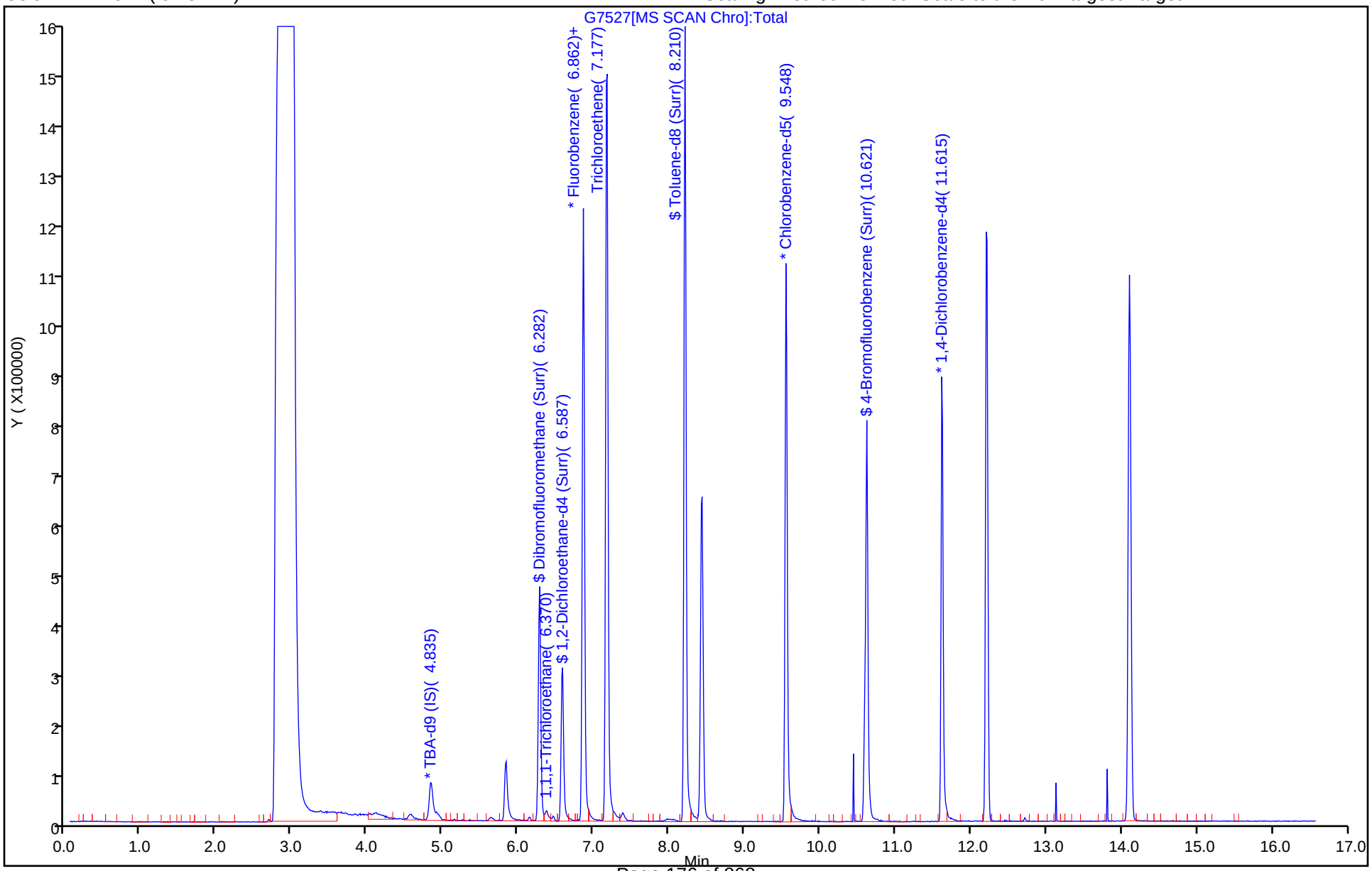
Report Date: 04-May-2018 19:03:10 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D

Injection Date:	03-May-2018 21:49:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-4	Lab Sample ID:	280-108840-4	Worklist Smp#:	17
Client ID:	775VMW-8_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D
Lims ID: 280-108840-A-4
Client ID: 775VMW-8_0418
Sample Type: Client
Inject. Date: 03-May-2018 21:49:30 ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-4 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:24:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.4	104.12
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.9	118.91
$ 7 Toluene-d8 (Surr)	10.0	10.7	107.12
$ 8 4-Bromofluorobenzene (Surr)	10.0	11.1	110.92

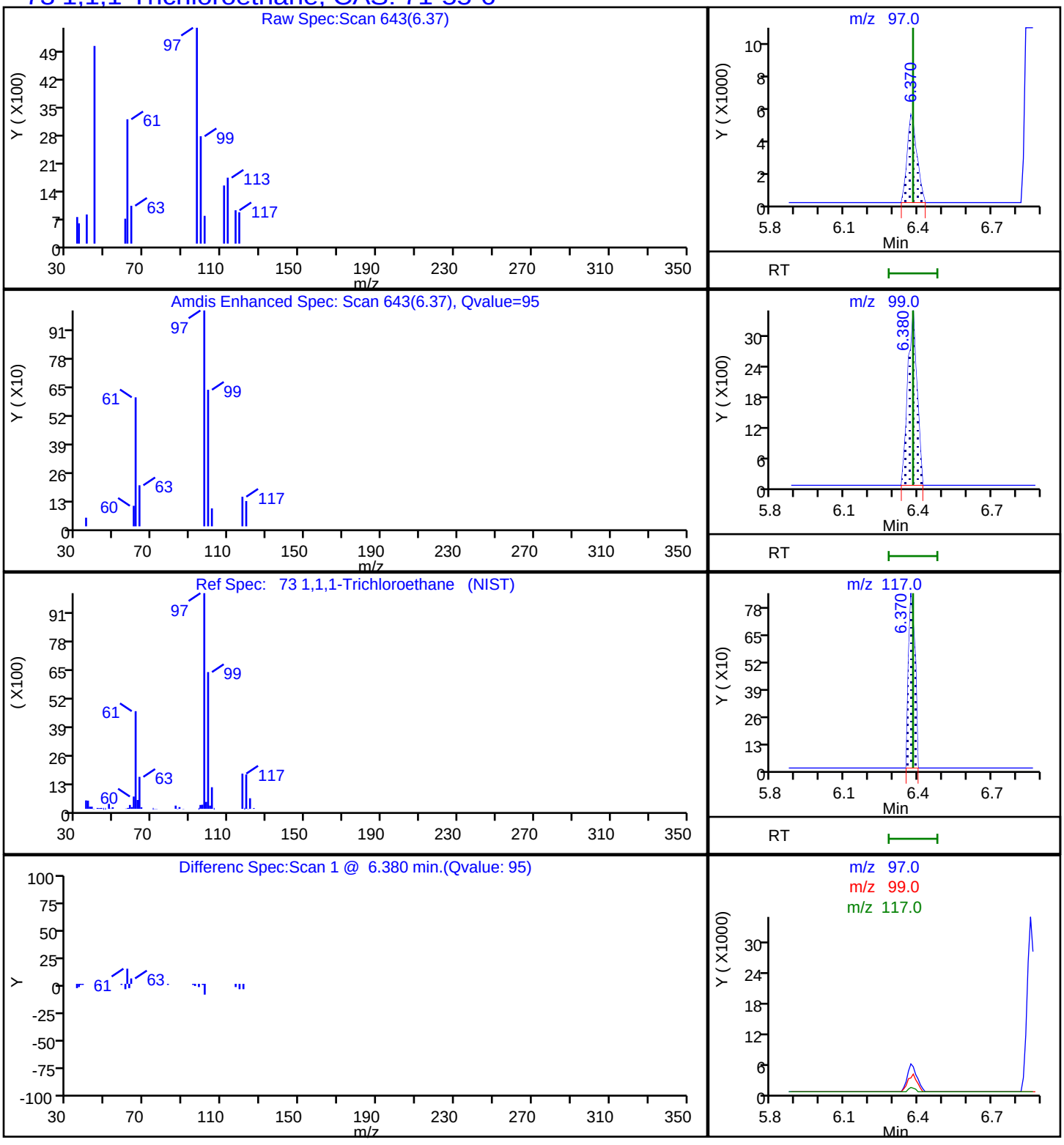
Report Date: 04-May-2018 19:03:11 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D

Injection Date:	03-May-2018 21:49:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-4	Lab Sample ID:	280-108840-4		
Client ID:	775VMW-8_0418				
Operator ID:	newcomer	ALS Bottle#:	19	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

73 1,1,1-Trichloroethane, CAS: 71-55-6



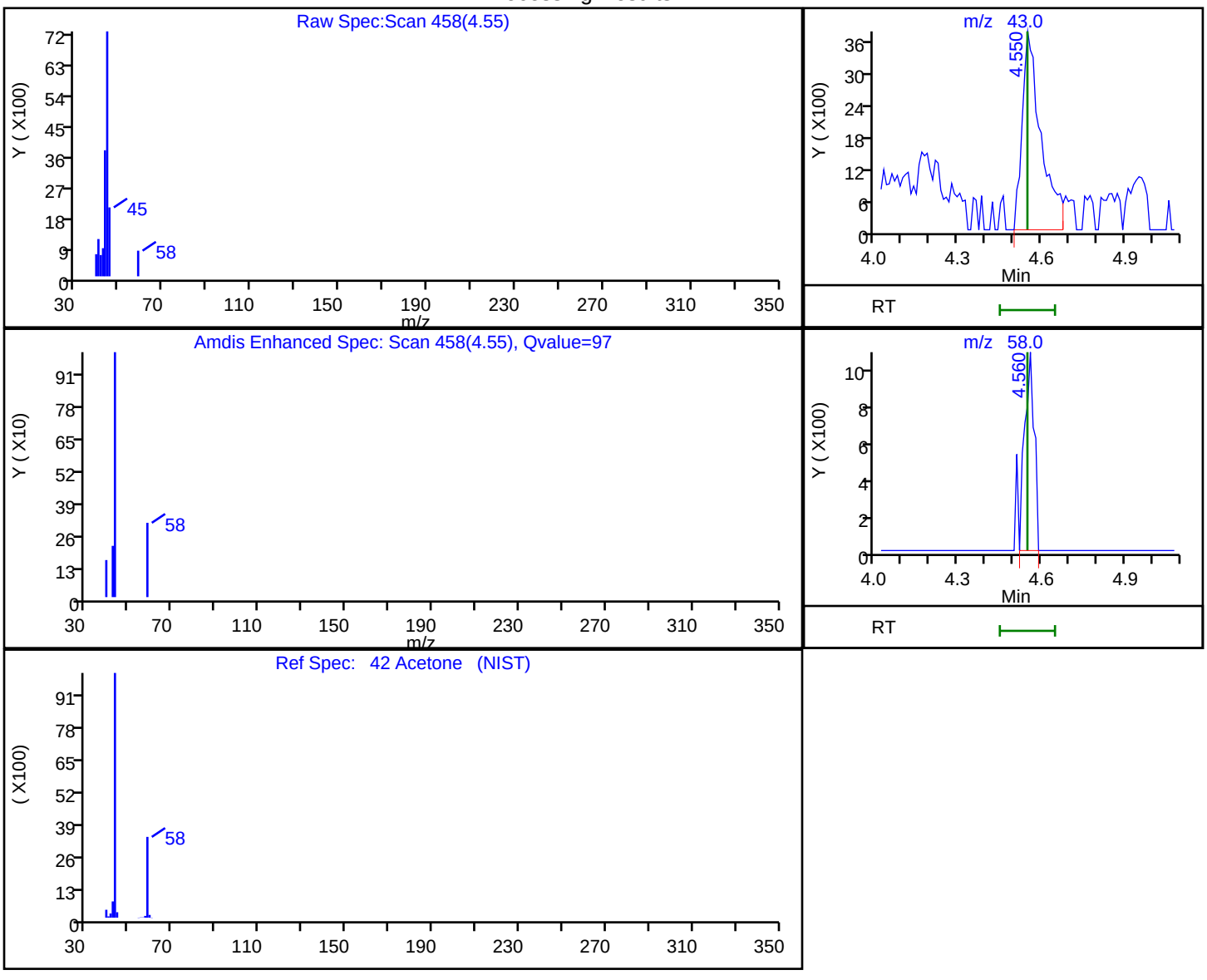
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D				
Injection Date:	03-May-2018 21:49:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-4	Lab Sample ID:	280-108840-4		
Client ID:	775VMW-8_0418				
Operator ID:	newcomer	ALS Bottle#:	19	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.55	43.00	17604	1.703375
4.56	58.00	2470	

Reviewer: newcomer, 04-May-2018 17:26:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

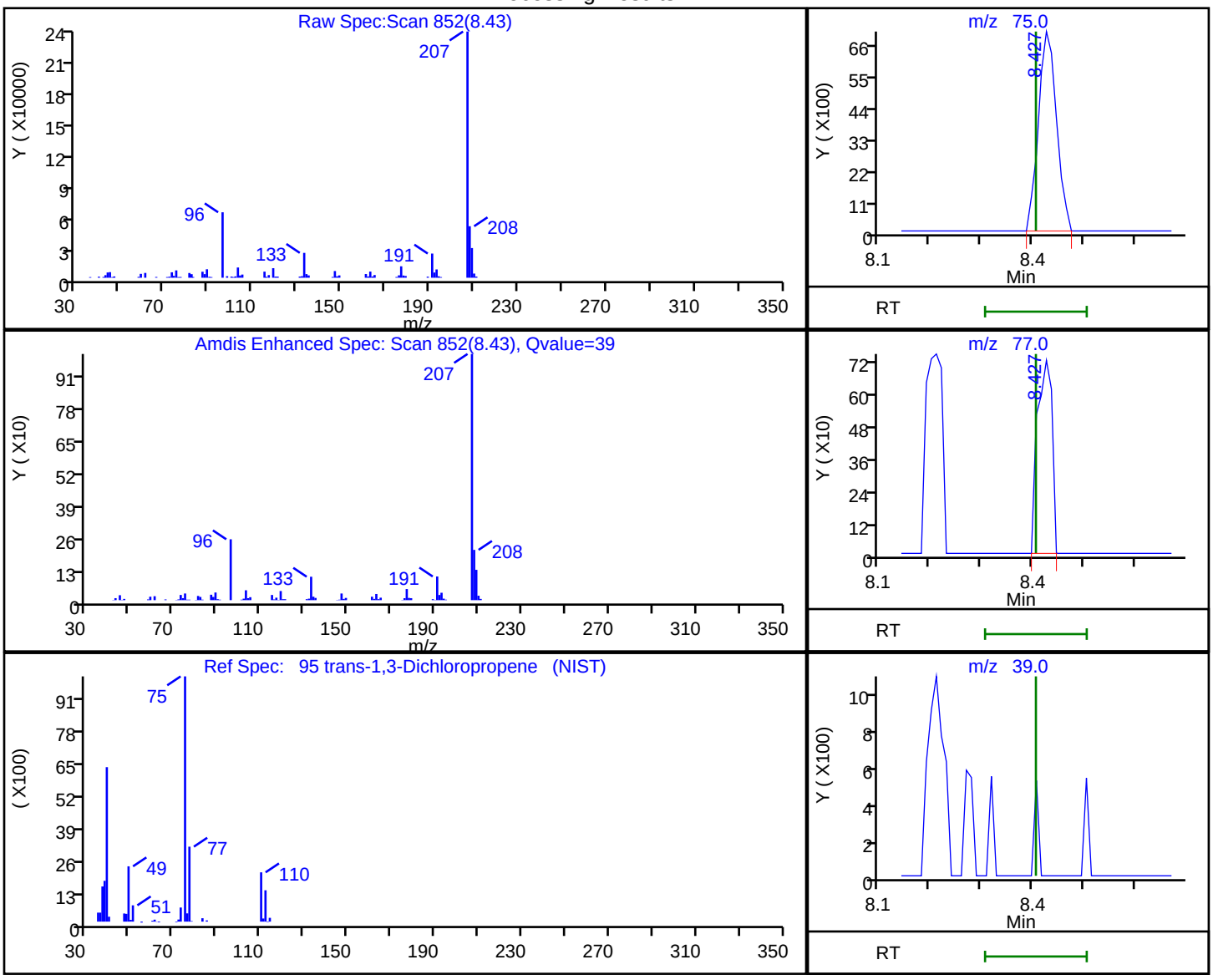
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7527.D				
Injection Date:	03-May-2018 21:49:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-4	Lab Sample ID:	280-108840-4		
Client ID:	775VMW-8_0418				
Operator ID:	newcomer	ALS Bottle#:	19	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

95 trans-1,3-Dichloropropene, CAS: 10061-02-6

Processing Results



RT	Mass	Response	Amount
8.43	75.00	17367	0.460816
8.43	77.00	1454	
8.40	39.00	0	

Reviewer: newcomer, 04-May-2018 17:26:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775VMW-8_0418 RA | Lab Sample ID: 280-108840-4 RA

Matrix: Water | Lab File ID: G2_2666.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 21:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413840 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
79-01-6	Trichloroethene	16	H	1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2666.D
Lims ID: 280-108840-B-4
Client ID: 775VMW-8_0418
Sample Type: Client
Inject. Date: 04-May-2018 21:40:30 ALS Bottle#: 15 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-B-4 pH<2
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 05-May-2018 02:07:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.785	-0.013	0	260434	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	98	1399126	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.546	-0.007	87	316162	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	478128	12.5	
* 5 1,4-Dioxane-d8	96		0.000				ND	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	295021	10.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	100	296527	10.5	
$ 8 Toluene-d8 (Surr)	98	9.117	9.109	0.008	93	1272873	10.4	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	423468	10.1	
12 Dichlorodifluoromethane	85		1.593				ND	
14 Chloromethane	50		1.704				ND	
15 Vinyl chloride	62		1.830				ND	
17 Bromomethane	94		2.137				ND	
18 Chloroethane	64		2.249				ND	
20 Trichlorofluoromethane	101		2.501				ND	
25 1,1-Dichloroethene	96		3.059				ND	
27 Acetone	43		3.129				ND	
28 Iodomethane	142		3.241				ND	
30 Carbon disulfide	76		3.311				ND	
35 Methylene Chloride	84		3.702				ND	
40 trans-1,2-Dichloroethene	96		4.093				ND	
41 Methyl tert-butyl ether	73		4.107				ND	
45 1,1-Dichloroethane	63		4.819				ND	
46 Vinyl acetate	43		4.875				ND	
47 Isopropyl ether	87		4.931				ND	
50 2,2-Dichloropropane	77		5.797				ND	
51 cis-1,2-Dichloroethene	96		5.797				ND	
52 2-Butanone (MEK)	43		5.825				ND	
56 Chlorobromomethane	128		6.163				ND	
59 Chloroform	83		6.328				ND	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	96	14818	0.2402	
62 Carbon tetrachloride	117		6.714				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
63 1,1-Dichloropropene	75		6.735				ND	
64 Benzene	78		6.979				ND	
65 1,2-Dichloroethane	62		7.071				ND	
69 Trichloroethene	95	7.794	7.794	0.000	98	584285	15.5	
72 1,2-Dichloropropane	63		8.087				ND	
75 Dibromomethane	93		8.180				ND	
76 Dichlorobromomethane	83		8.387				ND	
79 cis-1,3-Dichloropropene	75		8.852				ND	
81 4-Methyl-2-pentanone (MIBK	43		9.023				ND	U
82 Toluene	91		9.181				ND	
83 trans-1,3-Dichloropropene	75		9.438				ND	
85 1,1,2-Trichloroethane	97		9.631				ND	
86 Tetrachloroethene	164		9.696				ND	
87 1,3-Dichloropropane	76		9.781				ND	
88 2-Hexanone	43		9.853				ND	
89 Chlorodibromomethane	129		9.989				ND	
90 Ethylene Dibromide	107		10.096				ND	
92 Chlorobenzene	112		10.568				ND	
93 1,1,1,2-Tetrachloroethane	131		10.661				ND	
94 Ethylbenzene	106		10.668				ND	
95 m-Xylene & p-Xylene	106		10.790				ND	
96 o-Xylene	106		11.154				ND	
97 Styrene	104		11.169				ND	
98 Bromoform	173		11.340				ND	
99 Isopropylbenzene	105		11.497				ND	
103 Bromobenzene	156		11.783				ND	
102 1,1,2,2-Tetrachloroethane	83		11.791				ND	
104 1,2,3-Trichloropropane	110		11.841				ND	
106 N-Propylbenzene	120		11.884				ND	
107 2-Chlorotoluene	126		11.962				ND	
108 1,3,5-Trimethylbenzene	105		12.048				ND	
109 4-Chlorotoluene	126		12.077				ND	
110 tert-Butylbenzene	119		12.320				ND	
111 1,2,4-Trimethylbenzene	105		12.370				ND	
112 sec-Butylbenzene	134		12.498				ND	
113 1,3-Dichlorobenzene	146		12.591				ND	
114 4-Isopropyltoluene	119		12.613				ND	
115 1,4-Dichlorobenzene	146		12.670				ND	
117 n-Butylbenzene	91		12.906				ND	
118 1,2-Dichlorobenzene	146		12.920				ND	
119 1,2-Dibromo-3-Chloropropan	157		13.421				ND	
121 1,2,4-Trichlorobenzene	180		13.936				ND	
122 Hexachlorobutadiene	225		14.021				ND	
123 Naphthalene	128		14.114				ND	
124 1,2,3-Trichlorobenzene	180		14.265				ND	
S 143 Xylenes, Total	106		0.000				ND	
S 144 1,2-Dichloroethene, Total	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

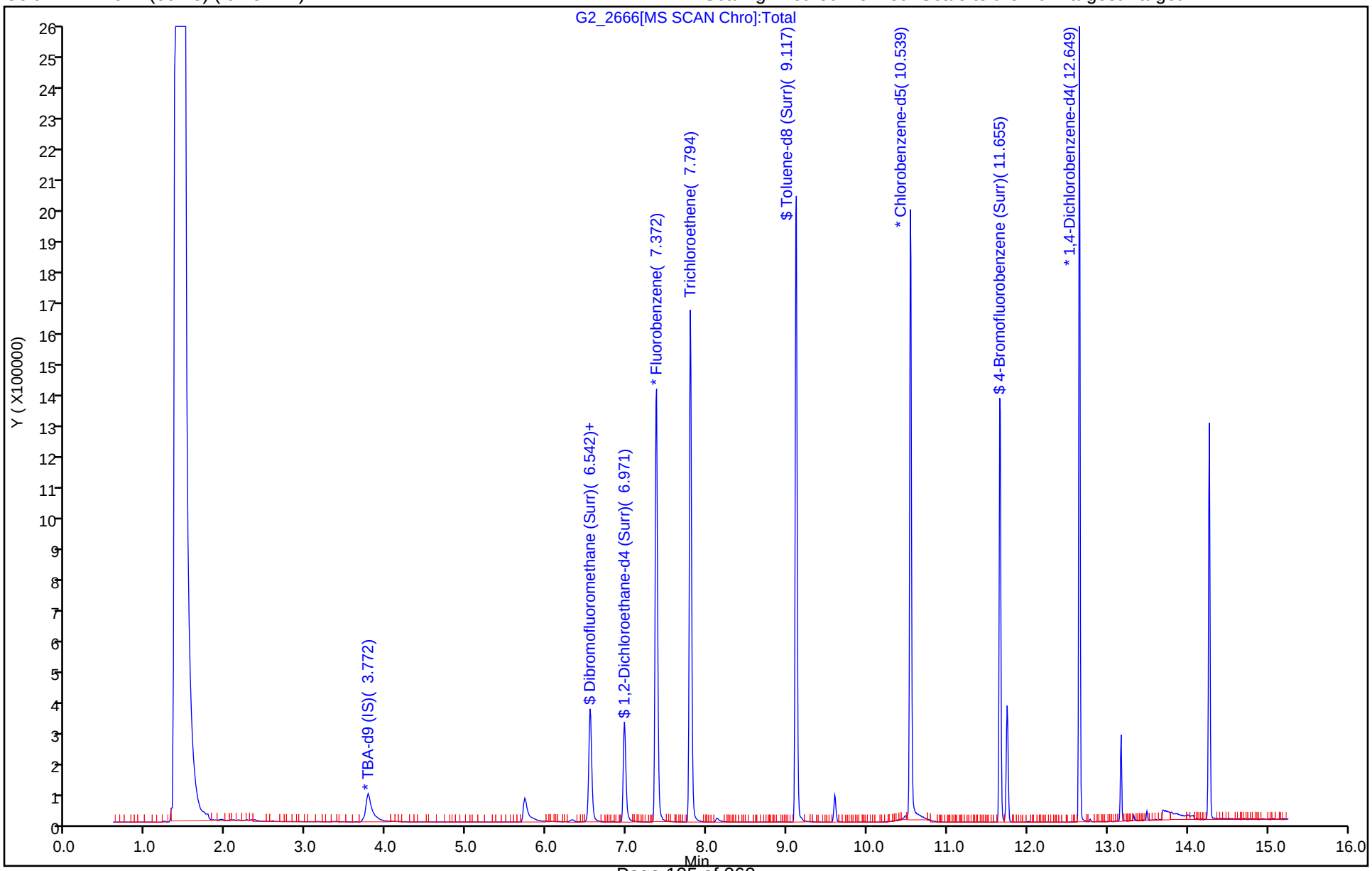
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2666.D

Injection Date:	04-May-2018 21:40:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	280-108840-B-4	Lab Sample ID:	280-108840-4	Worklist Smp#:	10
Client ID:	775VMW-8_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2666.D
Lims ID: 280-108840-B-4
Client ID: 775VMW-8_0418
Sample Type: Client
Inject. Date: 04-May-2018 21:40:30 ALS Bottle#: 15 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-B-4 pH<2
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 05-May-2018 02:07:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	10.3	103.42
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.77
$ 8 Toluene-d8 (Surr)	10.0	10.4	104.05
$ 9 4-Bromofluorobenzene (Surr)	10.0	10.1	100.90

Report Date: 07-May-2018 21:11:56 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2666.D

Injection Date: 04-May-2018 21:40:30 Instrument ID: VMS_G2

Lims ID: 280-108840-B-4 Lab Sample ID: 280-108840-4

Client ID: 775VMW-8_0418

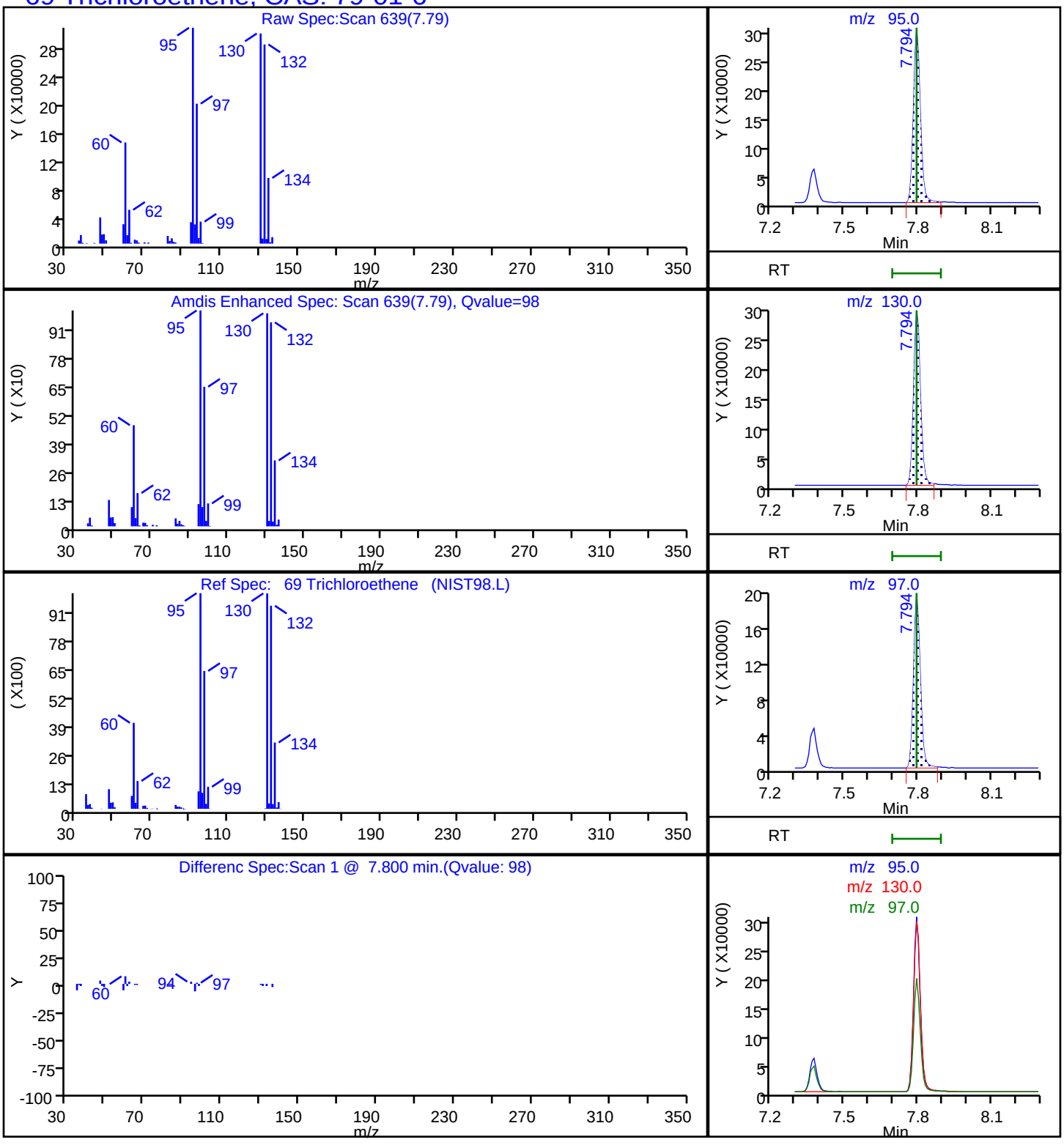
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 10

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

69 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775MW-27_0418 | Lab Sample ID: 280-108840-5

Matrix: Water | Lab File ID: G7528.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.27	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775MW-27_0418 | Lab Sample ID: 280-108840-5

Matrix: Water | Lab File ID: G7528.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.36	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	22		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775MW-27_0418 | Lab Sample ID: 280-108840-5

Matrix: Water | Lab File ID: G7528.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		81-118
460-00-4	4-Bromofluorobenzene (Surr)	106		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D
Lims ID: 280-108840-A-5
Client ID: 775MW-27_0418
Sample Type: Client
Inject. Date: 03-May-2018 22:09:30 ALS Bottle#: 20 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-5 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 17:27:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.846	4.834	0.012	0	132688	250.0	
* 1 Fluorobenzene	96	6.863	6.861	0.002	98	1108258	12.5	
* 2 Chlorobenzene-d5	119	9.549	9.548	0.001	91	214250	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.615	11.614	0.001	97	244129	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.282	6.281	0.001	91	320953	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.587	6.586	0.001	0	227217	11.7	
$ 7 Toluene-d8 (Surr)	98	8.211	8.209	0.002	95	1001325	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.622	10.620	0.002	85	285504	10.6	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43		4.549				ND	
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84	4.924	4.933	-0.009	95	5955	0.1782	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83	6.145	6.153	-0.008	99	20577	0.3639	
73 1,1,1-Trichloroethane	97	6.371	6.379	-0.008	94	13226	0.2664	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95	7.168	7.176	-0.008	92	815057	22.2	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

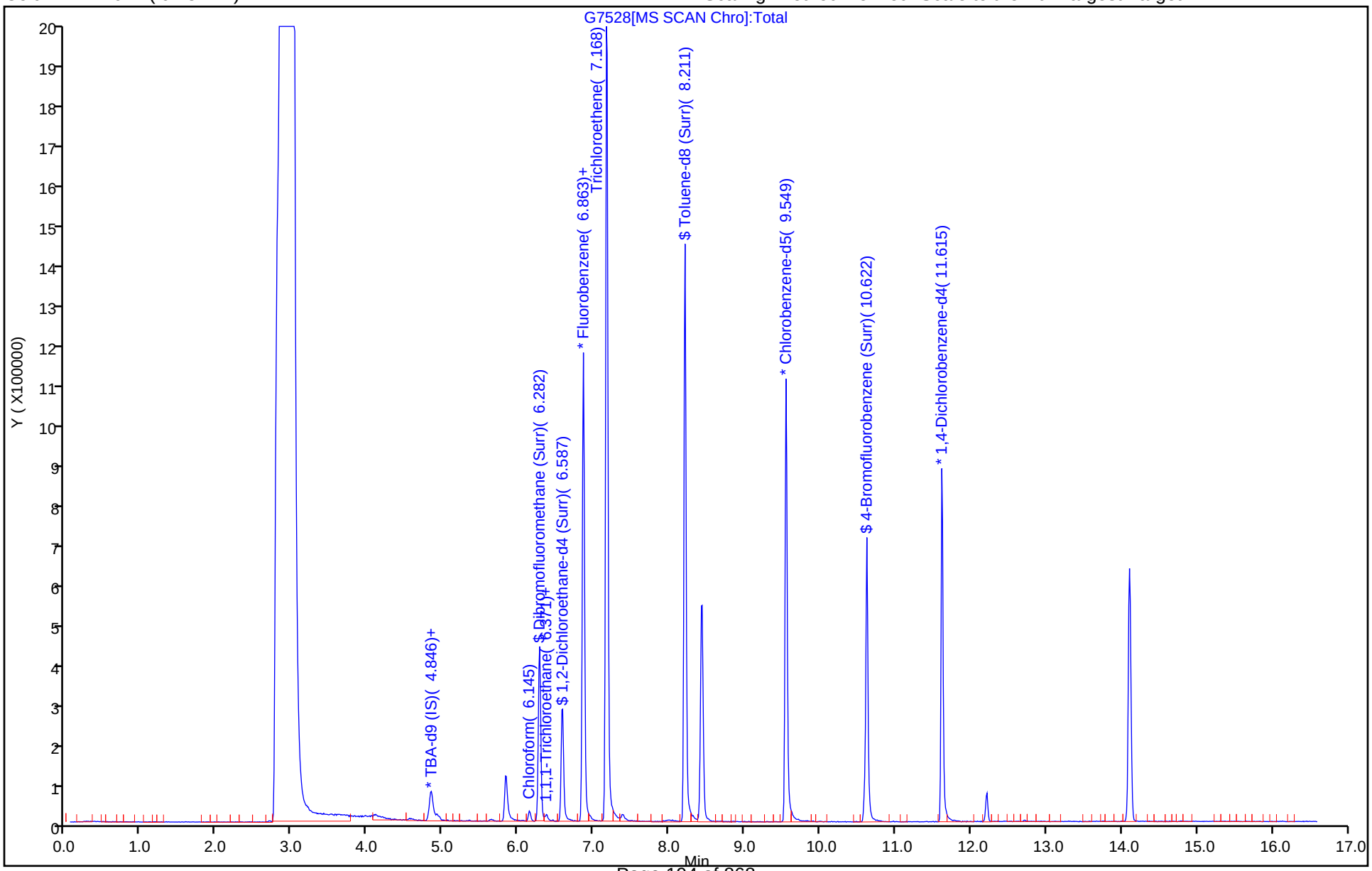
Report Date: 04-May-2018 19:03:28 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D

Injection Date:	03-May-2018 22:09:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-5	Lab Sample ID:	280-108840-5	Worklist Smp#:	18
Client ID:	775MW-27_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D				
Lims ID:	280-108840-A-5				
Client ID:	775MW-27_0418				
Sample Type:	Client				
Inject. Date:	03-May-2018 22:09:30	ALS Bottle#:	20	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-108840-A-5 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	04-May-2018 19:01:55	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK001				

First Level Reviewer: newcomer Date: 04-May-2018 17:27:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.3	103.40
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.7	116.82
$ 7 Toluene-d8 (Surr)	10.0	10.1	101.17
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.6	105.83

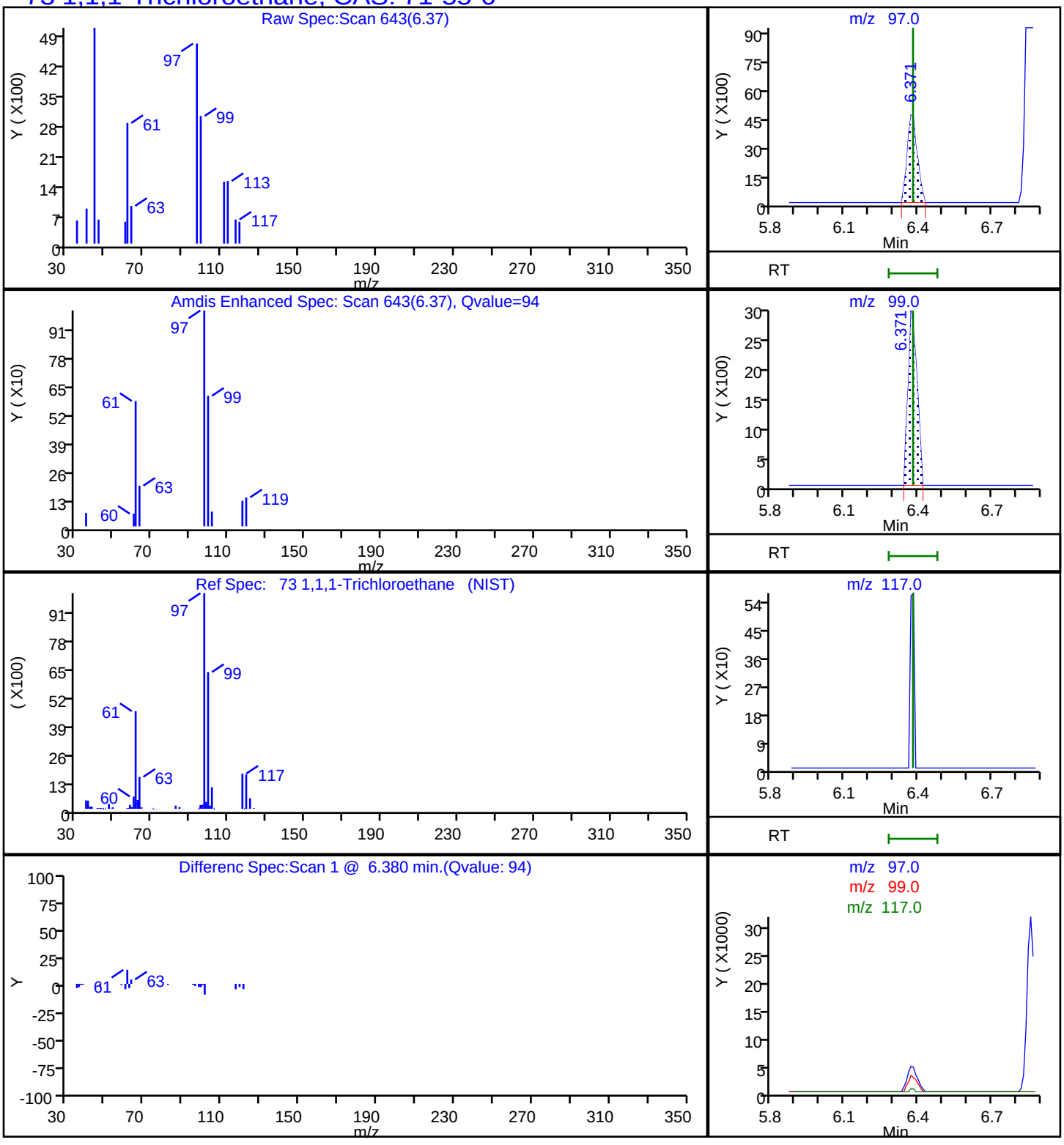
Report Date: 04-May-2018 19:03:29 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D

Injection Date:	03-May-2018 22:09:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-5	Lab Sample ID:	280-108840-5		
Client ID:	775MW-27_0418				
Operator ID:	newcomer	ALS Bottle#:	20	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

73 1,1,1-Trichloroethane, CAS: 71-55-6



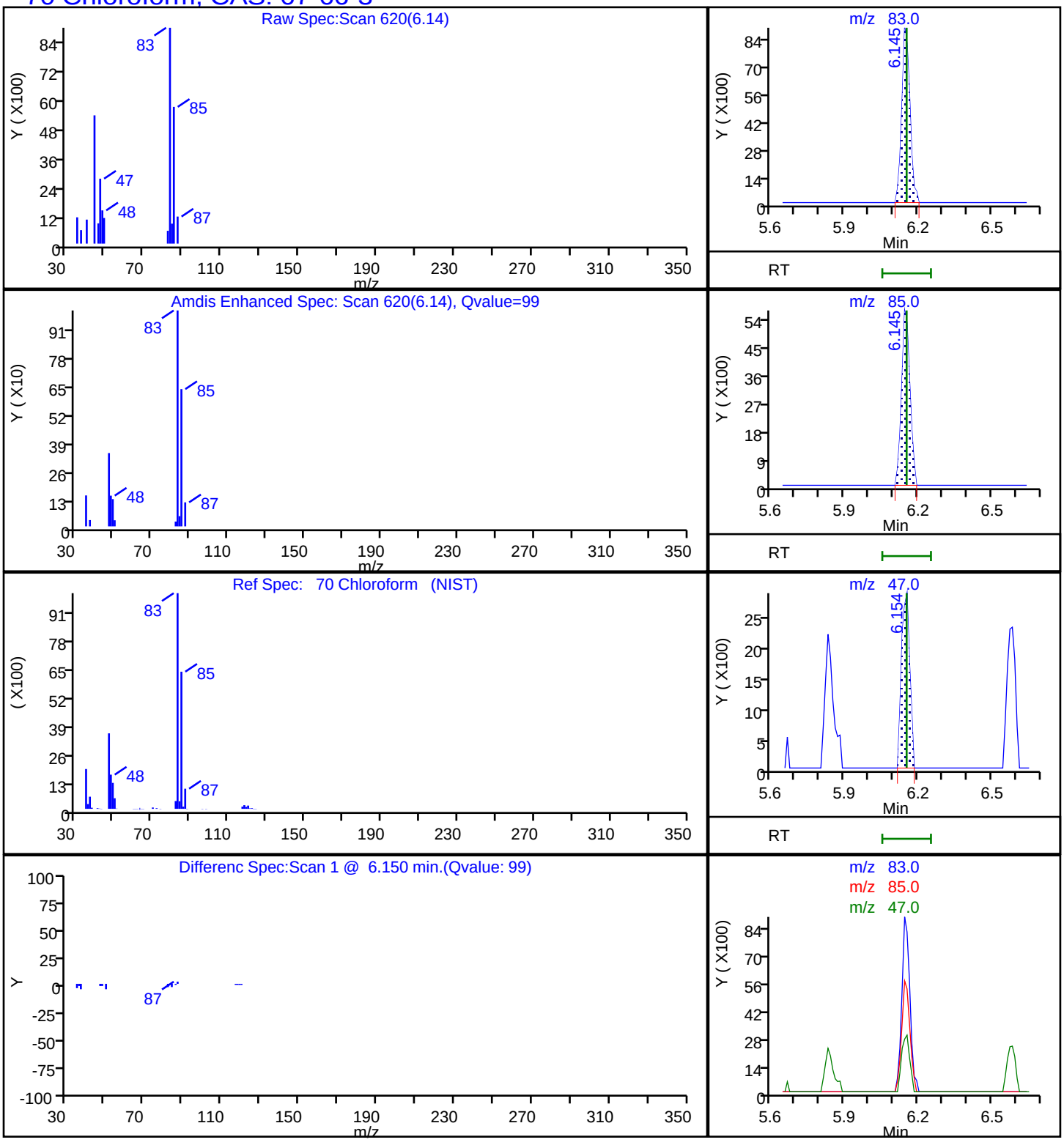
Report Date: 04-May-2018 19:03:29 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D

Injection Date:	03-May-2018 22:09:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-5	Lab Sample ID:	280-108840-5		
Client ID:	775MW-27_0418				
Operator ID:	newcomer	ALS Bottle#:	20	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

70 Chloroform, CAS: 67-66-3



Report Date: 04-May-2018 19:03:29 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7528.D

Injection Date: 03-May-2018 22:09:30 Instrument ID: VMS_G

Lims ID: 280-108840-A-5 Lab Sample ID: 280-108840-5

Client ID: 775MW-27_0418

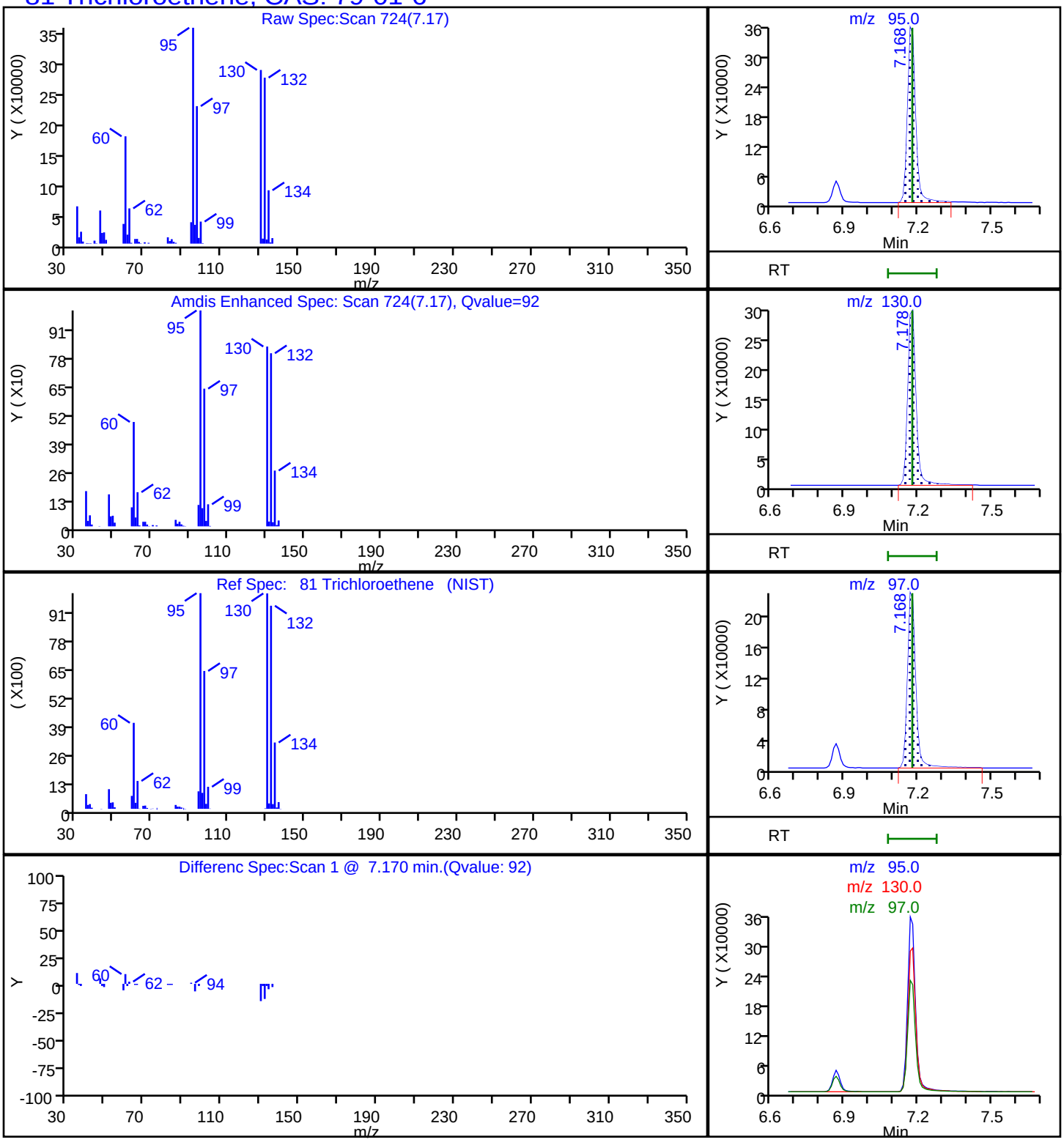
Operator ID: newcomer ALS Bottle#: 20 Worklist Smp#: 18

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

81 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775EW-1R_0418 | Lab Sample ID: 280-108840-6

Matrix: Water | Lab File ID: G7529.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:45

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U Q	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U Q	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U Q	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U Q	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U Q	5.0	3.2	1.0
67-64-1	Acetone	18		10	6.4	1.9
71-43-2	Benzene	0.40	U Q	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U Q	1.0	0.40	0.17
75-25-2	Bromoform	12		1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775EW-1R_0418 | Lab Sample ID: 280-108840-6

Matrix: Water | Lab File ID: G7529.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:45

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U Q	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U Q	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.30	J	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U Q	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U Q	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U Q	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U Q	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775EW-1R_0418 | Lab Sample ID: 280-108840-6

Matrix: Water | Lab File ID: G7529.D

Analysis Method: 8260B | Date Collected: 04/19/2018 14:45

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 22:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	120	Q	81-118
460-00-4	4-Bromofluorobenzene (Surr)	107		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	90		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D
Lims ID: 280-108840-A-6
Client ID: 775EW-1R_0418
Sample Type: Client
Inject. Date: 03-May-2018 22:29:30 ALS Bottle#: 21 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-6 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: ilczyszynd Date: 04-May-2018 08:48:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.846	4.834	0.012	0	138198	250.0	
* 1 Fluorobenzene	96	6.863	6.861	0.002	97	1118982	12.5	
* 2 Chlorobenzene-d5	119	9.549	9.548	0.001	91	217567	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.615	11.614	0.001	97	249734	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.282	6.281	0.001	91	323667	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.577	6.586	-0.009	0	236007	12.0	
$ 7 Toluene-d8 (Surr)	98	8.211	8.209	0.002	95	907015	9.02	
$ 8 4-Bromofluorobenzene (Surr	95	10.622	10.620	0.002	86	294375	10.7	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43	4.551	4.549	0.001	97	58599	17.9	
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84	4.924	4.933	-0.009	96	6455	0.1913	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83		6.153				ND	
73 1,1,1-Trichloroethane	97		6.379				ND	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95		7.176				ND	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129	8.988	8.987	0.001	82	4754	0.2953	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173	10.356	10.354	0.002	91	85342	11.7	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

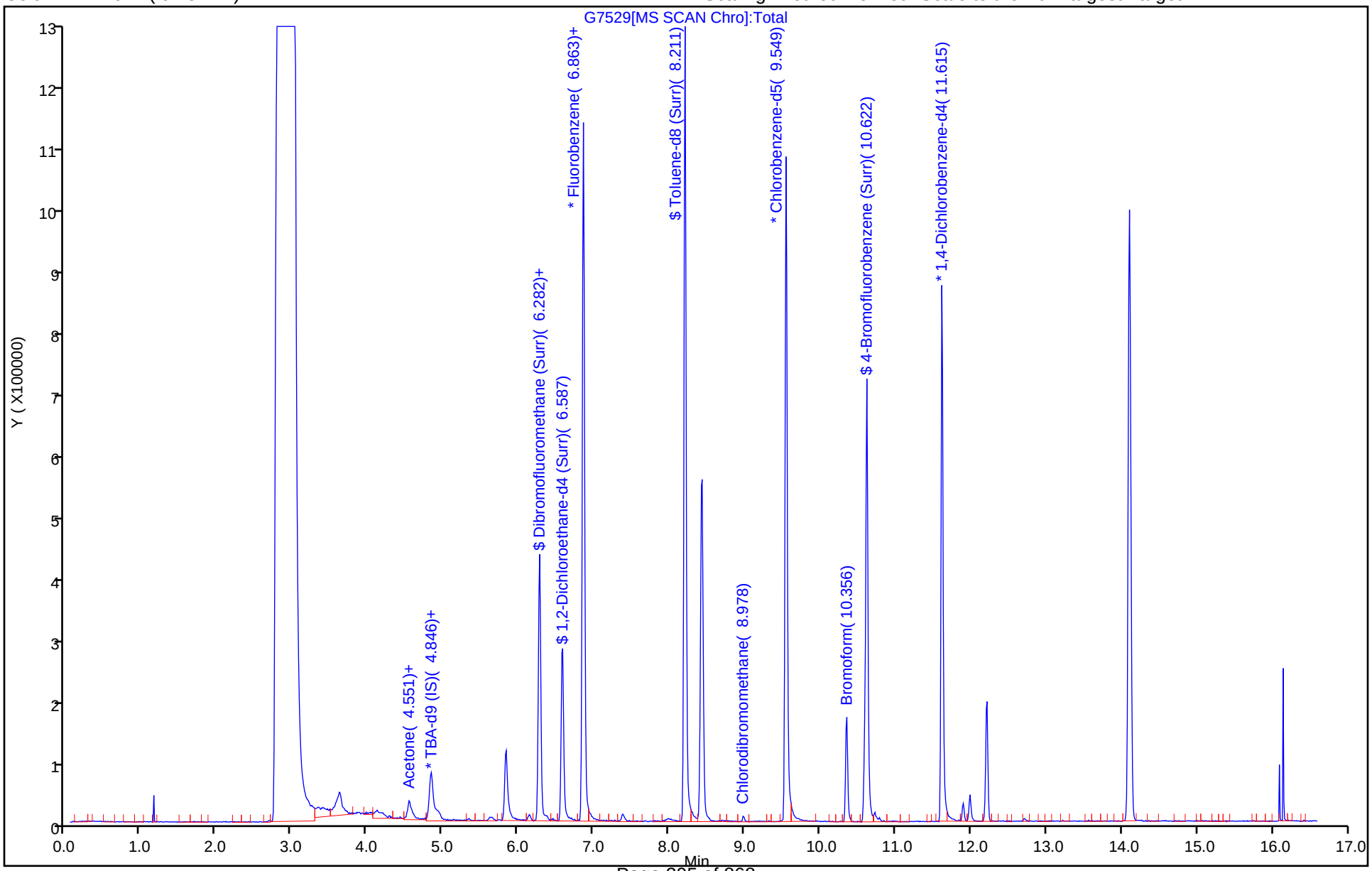
Report Date: 04-May-2018 19:03:42 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D

Injection Date:	03-May-2018 22:29:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-6	Lab Sample ID:	280-108840-6	Worklist Smp#:	19
Client ID:	775EW-1R_0418				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D				
Lims ID:	280-108840-A-6				
Client ID:	775EW-1R_0418				
Sample Type:	Client				
Inject. Date:	03-May-2018 22:29:30	ALS Bottle#:	21	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-108840-A-6 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	04-May-2018 19:01:55	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK001				

First Level Reviewer: ilczyszynd Date: 04-May-2018 08:48:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.3	103.27
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	12.0	120.17
$ 7 Toluene-d8 (Surr)	10.0	9.02	90.24
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.7	106.67

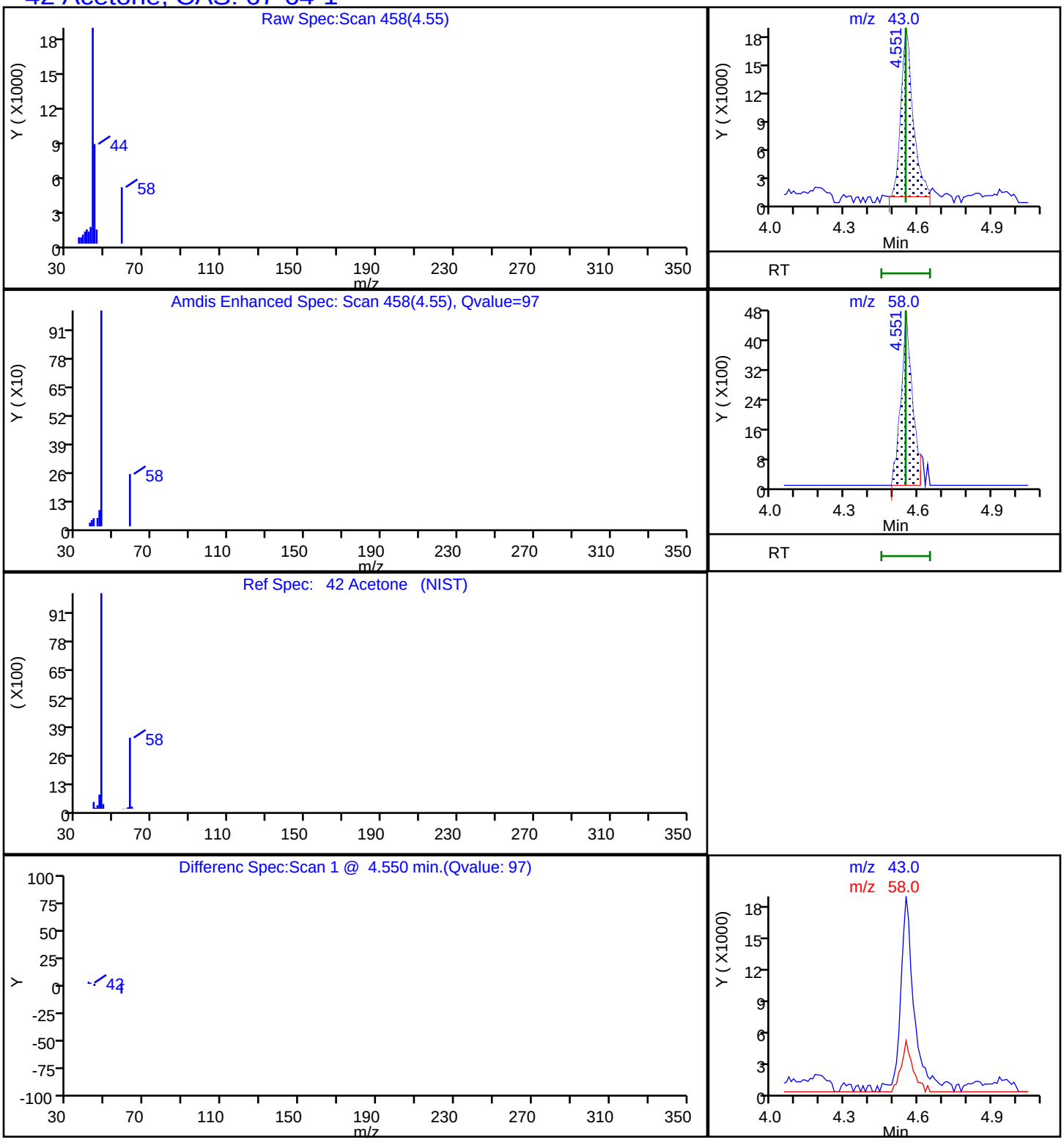
Report Date: 04-May-2018 19:03:42 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D

Injection Date:	03-May-2018 22:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-6	Lab Sample ID:	280-108840-6		
Client ID:	775EW-1R_0418				
Operator ID:	newcomer	ALS Bottle#:	21	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1



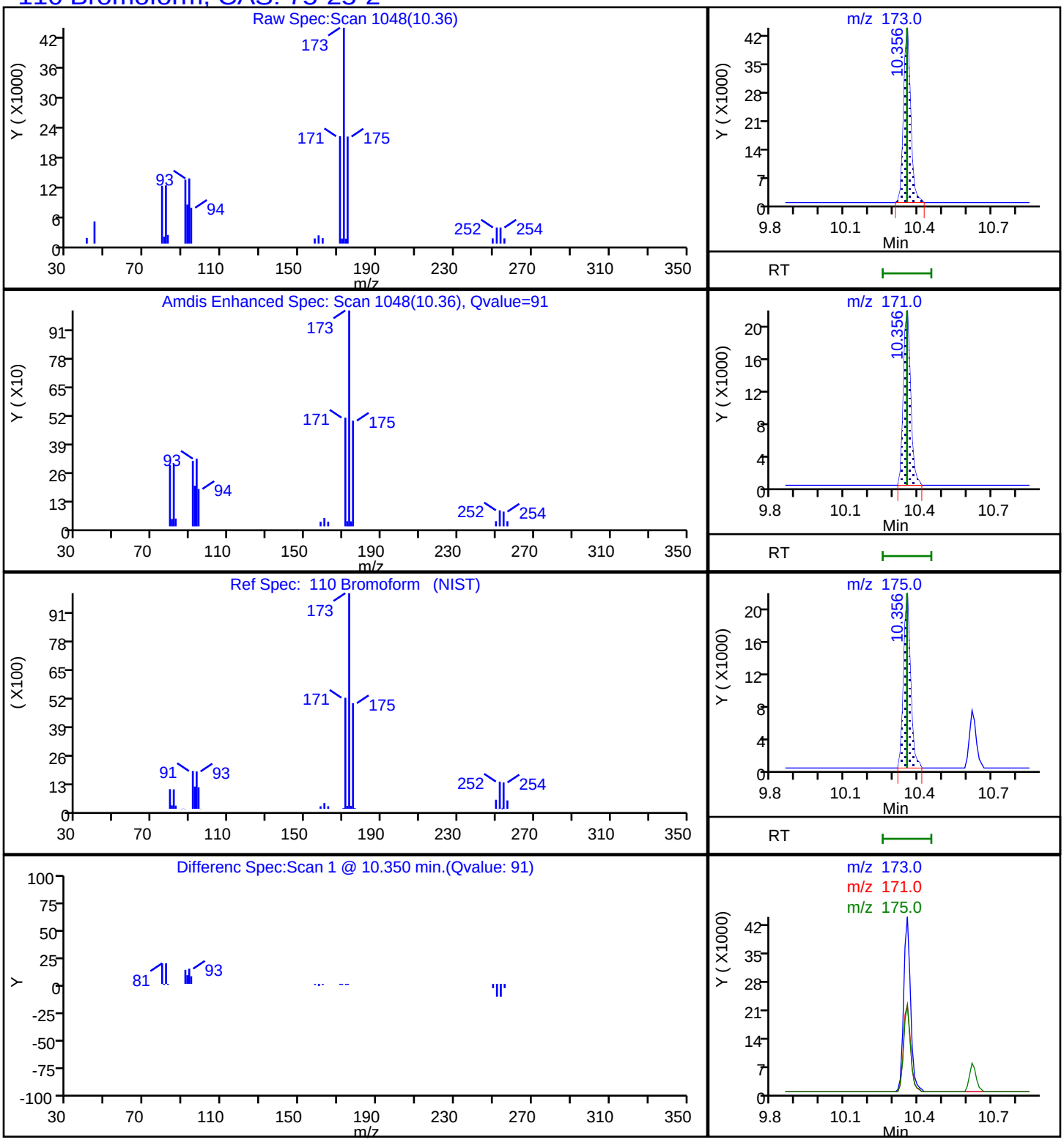
Report Date: 04-May-2018 19:03:43 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D

Injection Date:	03-May-2018 22:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-6	Lab Sample ID:	280-108840-6		
Client ID:	775EW-1R_0418				
Operator ID:	newcomer	ALS Bottle#:	21	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

110 Bromoform, CAS: 75-25-2



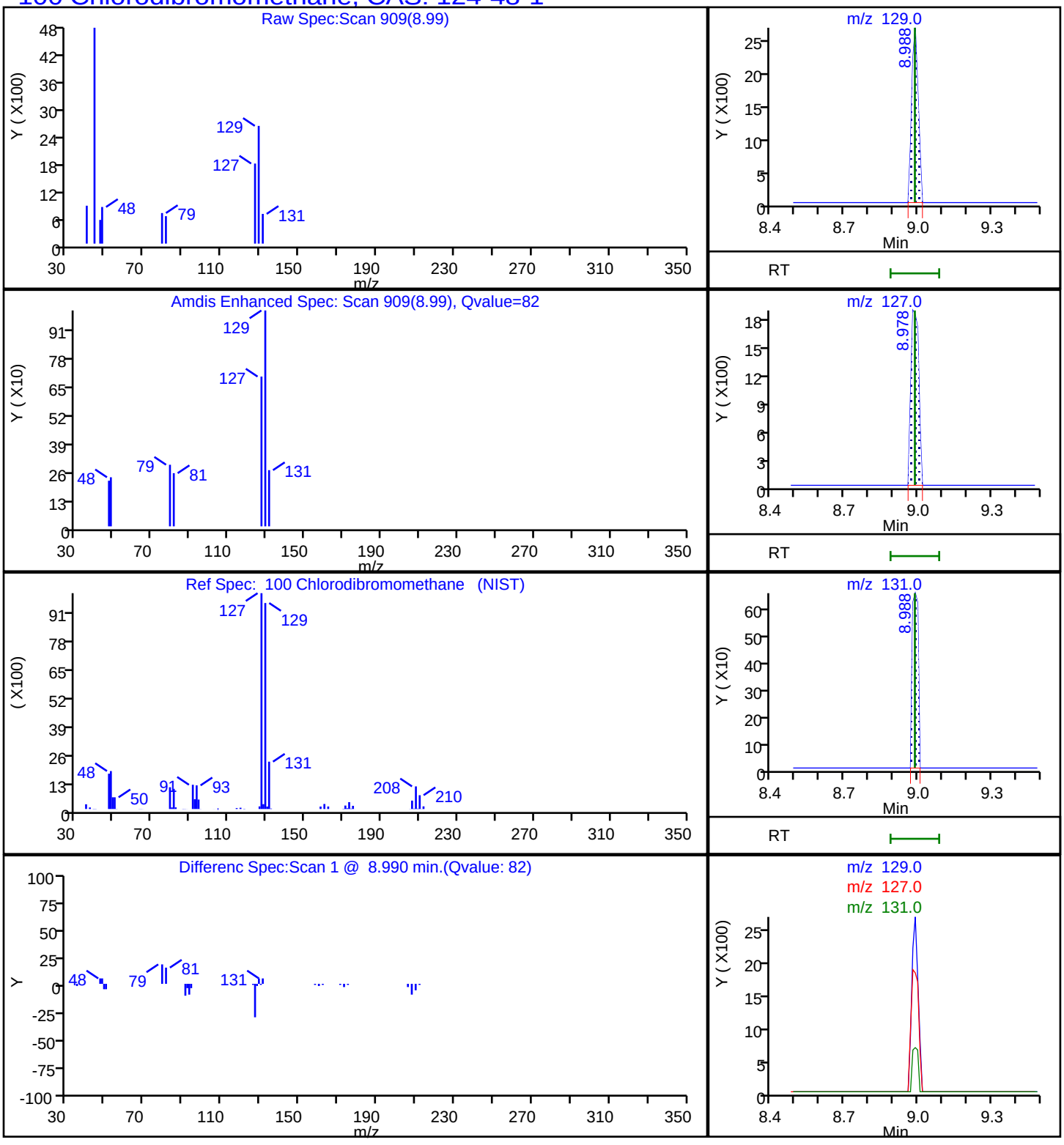
Report Date: 04-May-2018 19:03:43 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7529.D

Injection Date:	03-May-2018 22:29:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-6	Lab Sample ID:	280-108840-6		
Client ID:	775EW-1R_0418				
Operator ID:	newcomer	ALS Bottle#:	21	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

100 Chlorodibromomethane, CAS: 124-48-1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775TB_041918 | Lab Sample ID: 280-108840-8

Matrix: Water | Lab File ID: G7531.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 23:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775TB_041918 | Lab Sample ID: 280-108840-8

Matrix: Water | Lab File ID: G7531.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 23:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U Q	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: 775TB_041918 | Lab Sample ID: 280-108840-8

Matrix: Water | Lab File ID: G7531.D

Analysis Method: 8260B | Date Collected: 04/19/2018 11:25

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 23:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	104		80-119
2037-26-5	Toluene-d8 (Surr)	109		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7531.D
Lims ID: 280-108840-A-8
Client ID: 775TB_041918
Sample Type: Client
Inject. Date: 03-May-2018 23:09:30 ALS Bottle#: 23 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-8 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: ilczyszynd Date: 04-May-2018 08:49:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 150 TBA-d9 (IS)	65	4.850	4.834	0.016	0	129817	250.0	
* 1 Fluorobenzene	96	6.867	6.861	0.006	98	1107573	12.5	
* 2 Chlorobenzene-d5	119	9.554	9.548	0.006	91	211130	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.620	11.614	0.006	97	246028	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.277	6.281	-0.004	91	322283	10.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.582	6.586	-0.004	0	224870	11.6	
$ 7 Toluene-d8 (Surr)	98	8.215	8.209	0.006	95	1060905	10.9	
$ 8 4-Bromofluorobenzene (Surr	95	10.626	10.620	0.006	87	277724	10.2	
25 Dichlorodifluoromethane	85		3.191				ND	
27 Chloromethane	50		3.407				ND	
28 Vinyl chloride	62		3.526				ND	
31 Bromomethane	94		3.870				ND	
32 Chloroethane	64		3.929				ND	
35 Trichlorofluoromethane	101		4.175				ND	
42 Acetone	43		4.549				ND	U
45 1,1-Dichloroethene	96		4.588				ND	
47 Iodomethane	142		4.756				ND	
50 Carbon disulfide	76		4.844				ND	
52 Methylene Chloride	84	4.939	4.933	0.006	92	6402	0.1917	
54 Methyl tert-butyl ether	73		5.129				ND	
55 trans-1,2-Dichloroethene	96		5.159				ND	
57 Vinyl acetate	43		5.444				ND	
58 Isopropyl ether	87		5.457				ND	
59 1,1-Dichloroethane	63		5.484				ND	
62 2-Butanone (MEK)	43		5.887				ND	
66 cis-1,2-Dichloroethene	96		5.936				ND	
67 2,2-Dichloropropane	77		5.966				ND	
69 Chlorobromomethane	128		6.133				ND	
70 Chloroform	83		6.153				ND	
73 1,1,1-Trichloroethane	97		6.379				ND	
75 1,1-Dichloropropene	75		6.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 Carbon tetrachloride	117		6.527				ND	
77 1,2-Dichloroethane	62		6.645				ND	
79 Benzene	78		6.674				ND	
81 Trichloroethene	95		7.176				ND	
84 1,2-Dichloropropane	63		7.363				ND	
87 Dibromomethane	93		7.471				ND	
88 Dichlorobromomethane	83		7.560				ND	
91 cis-1,3-Dichloropropene	75		7.944				ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022				ND	
93 Toluene	91		8.278				ND	
95 trans-1,3-Dichloropropene	75		8.406				ND	
96 1,1,2-Trichloroethane	97		8.583				ND	
98 1,3-Dichloropropane	76		8.760				ND	
97 2-Hexanone	43		8.760				ND	
99 Tetrachloroethene	164		8.800				ND	
100 Chlorodibromomethane	129		8.987				ND	
102 Ethylene Dibromide	107		9.144				ND	
104 Chlorobenzene	112		9.587				ND	
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	
106 Ethylbenzene	106		9.646				ND	
107 m-Xylene & p-Xylene	106		9.754				ND	
108 o-Xylene	106		10.148				ND	
109 Styrene	104		10.148				ND	
110 Bromoform	173		10.354				ND	
111 Isopropylbenzene	105		10.472				ND	
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	
116 1,2,3-Trichloropropane	110		10.758				ND	
117 Bromobenzene	156		10.787				ND	
118 N-Propylbenzene	120		10.827				ND	
120 2-Chlorotoluene	126		10.935				ND	
119 1,3,5-Trimethylbenzene	105		10.955				ND	
121 4-Chlorotoluene	126		11.014				ND	
122 tert-Butylbenzene	119		11.250				ND	
123 1,2,4-Trimethylbenzene	105		11.279				ND	
124 sec-Butylbenzene	134		11.437				ND	
125 4-Isopropyltoluene	119		11.545				ND	
126 1,3-Dichlorobenzene	146		11.574				ND	
127 1,4-Dichlorobenzene	146		11.643				ND	
129 n-Butylbenzene	91		11.909				ND	
130 1,2-Dichlorobenzene	146		11.988				ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	
132 1,2,4-Trichlorobenzene	180		13.592				ND	
133 Hexachlorobutadiene	225		13.759				ND	
134 Naphthalene	128		13.897				ND	
135 1,2,3-Trichlorobenzene	180		14.192				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	
S 141 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

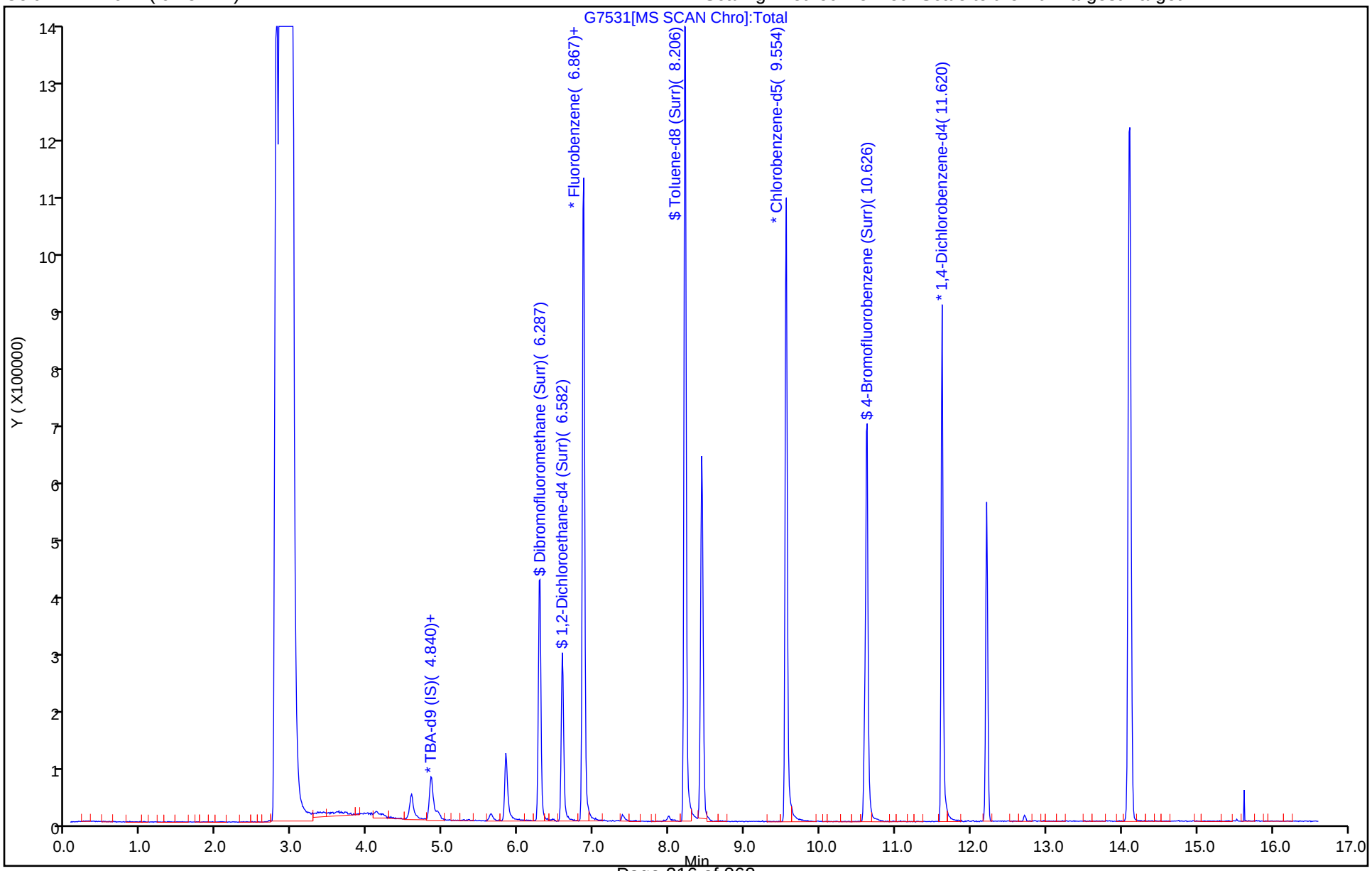
Report Date: 04-May-2018 19:04:14 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7531.D

Injection Date:	03-May-2018 23:09:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	280-108840-A-8	Lab Sample ID:	280-108840-8	Worklist Smp#:	21
Client ID:	775TB_041918				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7531.D
Lims ID: 280-108840-A-8
Client ID: 775TB_041918
Sample Type: Client
Inject. Date: 03-May-2018 23:09:30 ALS Bottle#: 23 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-108840-A-8 pH<2
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: ilczyszynd Date: 04-May-2018 08:49:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.4	103.89
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.6	115.68
$ 7 Toluene-d8 (Surr)	10.0	10.9	108.77
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.2	102.15

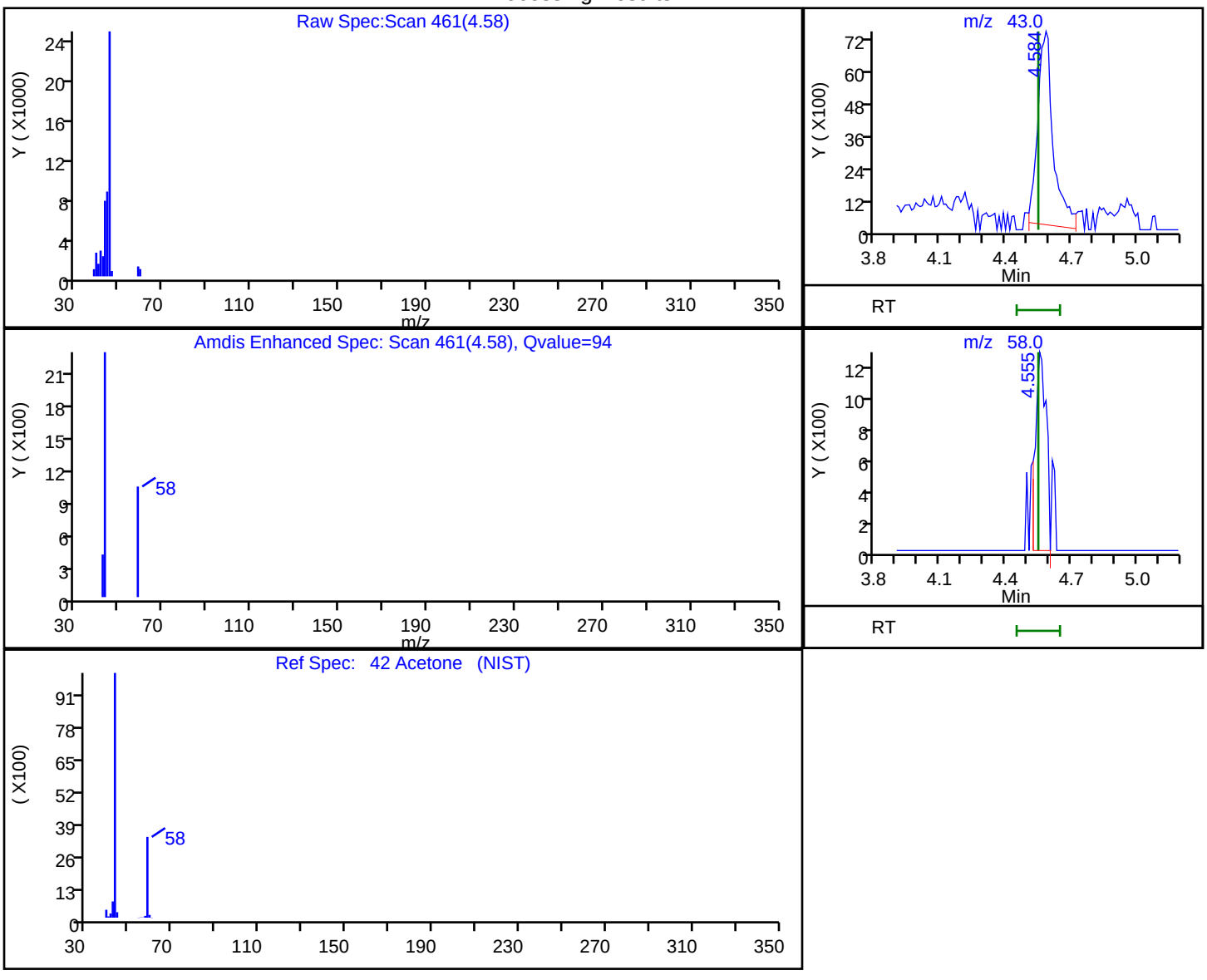
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7531.D				
Injection Date:	03-May-2018 23:09:30	Instrument ID:	VMS_G		
Lims ID:	280-108840-A-8	Lab Sample ID:	280-108840-8		
Client ID:	775TB_041918				
Operator ID:	newcomer	ALS Bottle#:	23	Worklist Smp#:	21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.58	43.00	36529	9.376863
4.55	58.00	4426	

Reviewer: newcomer, 04-May-2018 17:29:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412916

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 13:43 Calibration End Date: 04/27/2018 15:24 Calibration ID: 32250

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-412916/18	G7217.D
Level 2	IC 280-412916/19	G7218.D
Level 3	IC 280-412916/20	G7219.D
Level 4	ICIS 280-412916/21	G7220.D
Level 5	IC 280-412916/22	G7221.D
Level 6	IC 280-412916/23	G7222.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	0.0019 0.0013	0.0017	0.0014	0.0013	0.0013	Lin2	0.0359	0.0013							0.9990		0.9900
Isopropyl alcohol	0.0081 0.0064	0.0071	0.0065	0.0065	0.0058	Ave		0.0067				12.0		15.0			
Acetonitrile	0.0174 0.0159	0.0181	0.0160	0.0156	0.0152	Ave		0.0164				6.9		15.0			
Diisopropyl ether	0.1539 0.1783	0.1680	0.1689	0.1673	0.1694	Ave		0.1676				4.7		15.0			
2-Chloro-1,3-butadiene	0.5442 0.5934	0.5756	0.5770	0.5769	0.5882	Ave		0.5759				3.0		15.0			
Tert-butyl ethyl ether	0.5432 0.6073	0.5609	0.5384	0.5695	0.5815	Ave		0.5668				4.5		15.0			
Ethyl acetate	0.0980 0.0856	0.0793	0.0760	0.0766	0.0806	Ave		0.0827				10.0		15.0			
Propionitrile	0.0107 0.0130	0.0106	0.0116	0.0120	0.0126	Ave		0.0117				8.3		15.0			
Methacrylonitrile	0.0738 0.0797	0.0743	0.0742	0.0768	0.0780	Ave		0.0762				3.2		15.0			
Tert-amyl methyl ether	0.3488 0.4039	0.3715	0.3712	0.3707	0.3881	Ave		0.3757				5.0		15.0			
2-Nitropropane	0.2755 0.2606	0.2845	0.2726	0.2654	0.2622	Ave		0.2701				3.4		15.0			
n-Butanol	0.0015 0.0021	0.0016	0.0010	0.0018	0.0019	Lin	-0.080	0.0021							0.9960		0.9900
Methyl methacrylate	0.0137 0.0250	0.0168	0.0188	0.0200	0.0231	Lin2	-0.019	0.0225							0.9910		0.9900
cis-1,4-Dichloro-2-butene	0.0941 0.1354	0.1012	0.1074	0.1171	0.1304	Ave		0.1142				14.3		15.0			
1,2,3-Trimethylbenzene	3.1520 3.3485	3.2810	3.3470	3.4335	3.4330	Ave		3.3325				3.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412916

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 13:43 Calibration End Date: 04/27/2018 15:24 Calibration ID: 32250

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.3356 0.3332	0.3350	0.3271	0.3218	0.3260	Ave		0.3298				1.7		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2008 0.2003	0.1938	0.1946	0.1931	0.1960	Ave		0.1964				1.7		15.0			
Toluene-d8 (Surr)	5.4976 5.4589	5.5155	5.5659	5.4922	5.5309	Ave		5.5102				0.7		15.0			
4-Bromofluorobenzene (Surr)	1.2318 1.2435	1.2360	1.2472	1.2684	1.3195	Ave		1.2578				2.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412916

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 13:43 Calibration End Date: 04/27/2018 15:24 Calibration ID: 32250

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-412916/18	G7217.D
Level 2	IC 280-412916/19	G7218.D
Level 3	IC 280-412916/20	G7219.D
Level 4	ICIS 280-412916/21	G7220.D
Level 5	IC 280-412916/22	G7221.D
Level 6	IC 280-412916/23	G7222.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol	FB	Lin2	10670 431105	19782	39109	75537	219171	60.0 3600	120	300	600	1800
Isopropyl alcohol	FB	Ave	7715 346640	14098	30536	61312	160779	10.0 600	20.0	50.0	100	300
Acetonitrile	FB	Ave	16492 859562	35823	75353	146963	423718	10.0 600	20.0	50.0	100	300
Diisopropyl ether	FB	Ave	14620 960951	33240	79801	157300	473628	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	51695 3197952	113928	272544	542515	1644191	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	51603 3273090	111015	254308	535596	1625258	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	18618 923179	31400	71785	144002	450521	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Ave	10152 700313	20980	54783	113163	351544	10.0 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	70107 4296921	147141	350448	722327	2181386	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	33133 2176823	73524	175317	348664	1084647	1.00 60.0	2.00	5.00	10.0	30.0
2-Nitropropane	FB	Ave	52331 2808796	112629	257520	499270	1465502	2.00 120	4.00	10.0	20.0	60.0
n-Butanol	FB	Lin	3579 282974	7976	11823	41442	129445	25.0 1500	50.0	125	250	750
Methyl methacrylate	FB	Lin2	2612 269344	6642	17718	37556	129015	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Ave	3901 349767	8720	22303	48953	170669	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	65323 4325078	141376	347653	717972	2247379	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	31882 1795814	66307	154494	302645	911134	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412916

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 13:43 Calibration End Date: 04/27/2018 15:24 Calibration ID: 32250

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane-d4 (Surr)	FB	Ave	19076 1079518	38364	91929	181634	547730	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	97998 5817662	208413	497205	999491	2977887	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	25528 1606180	53257	129550	265243	863811	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7217.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Apr-2018 13:43:30 ALS Bottle#: 19 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:22 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:40:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.855	4.854	0.001	0	112118	250.0	250.0	
* 1 Fluorobenzene	96	6.872	6.871	0.001	98	1187377	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.558	9.557	0.001	87	222819	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.634	11.623	0.011	96	259057	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.292	6.290	0.002	92	31882	1.00	1.02	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.597	6.595	0.002	0	19076	1.00	1.02	
$ 7 Toluene-d8 (Surr)	98	8.220	8.219	0.001	93	97998	1.00	1.00	
$ 8 4-Bromofluorobenzene (Surr	95	10.631	10.629	0.002	90	25528	1.00	0.9793	
30 Ethylene oxide	43	3.812	3.810	0.002	99	47612	100.0	108.4	
34 Ethanol	45	4.186	4.194	-0.008	86	10670	60.0	58.9	
39 Propene oxide	58	4.422	4.421	0.002	95	185567	100.0	96.8	
43 Isopropyl alcohol	45	4.589	4.598	-0.009	95	7715	10.0	12.1	
46 Acetonitrile	41	4.786	4.785	0.001	94	16492	10.0	10.6	
58 Isopropyl ether	87	5.475	5.473	0.002	99	14620	1.00	0.9181	
60 2-Chloro-1,3-butadiene	53	5.573	5.572	0.001	90	51695	1.00	0.9450	
61 Tert-butyl ethyl ether	59	5.760	5.769	-0.009	97	51603	1.00	0.9584	
63 Ethyl acetate	43	5.908	5.906	0.002	93	18618	2.00	2.37	
64 Propionitrile	54	5.947	5.946	0.001	91	10152	10.0	9.10	
68 Methacrylonitrile	41	6.075	6.074	0.001	96	70107	10.0	9.69	
78 Tert-amyl methyl ether	73	6.695	6.703	-0.008	95	33133	1.00	0.9284	
89 2-Nitropropane	41	6.705	6.713	-0.008	45	52331	2.00	2.04	
80 n-Butanol	56	6.951	6.939	0.012	28	3579	25.0	55.8	
83 Methyl methacrylate	100	7.354	7.353	0.001	93	2612	2.00	2.08	
101 Tetrahydrothiophene	60	9.047	9.045	0.002	82	2495	2.00	2.10	
112 cis-1,4-Dichloro-2-butene	53	10.503	10.501	0.002	0	3901	2.00	1.65	
128 1,2,3-Trimethylbenzene	105	11.674	11.672	0.002	98	65323	1.00	0.9458	
11 1,3,5-Trichlorobenzene	180	12.933	12.942	-0.009	97	28877	1.00	0.9716	

Reagents:

MV-ARCH SS A_00090	Amount Added:	0.08	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	0.50	Units: uL

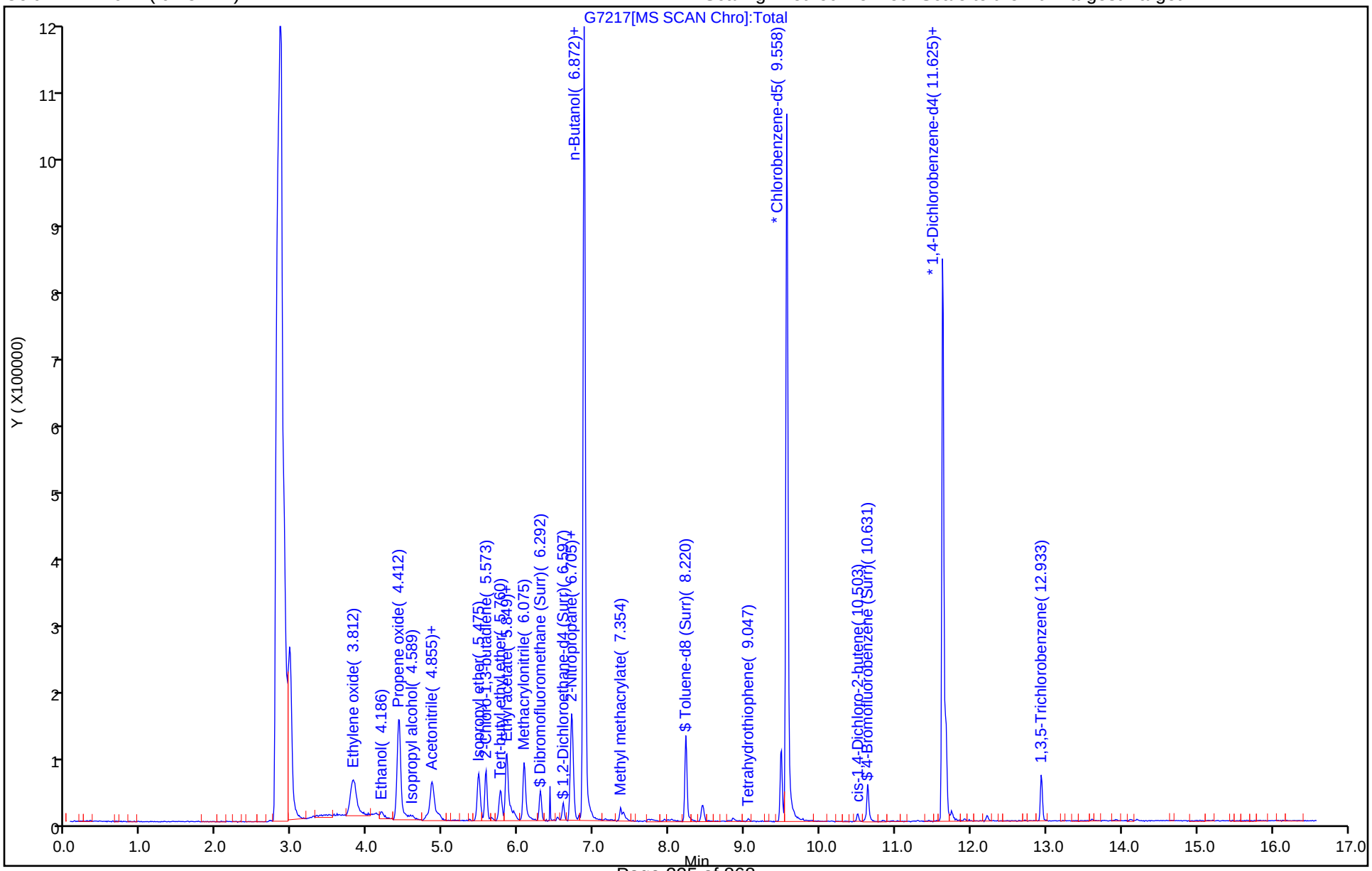
Report Date: 28-Apr-2018 08:16:24 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7217.D

Injection Date:	27-Apr-2018 13:43:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7218.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Apr-2018 14:03:30 ALS Bottle#: 20 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:27 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:40:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.854	4.854	0.000	0	118609	250.0	250.0	
* 1 Fluorobenzene	96	6.871	6.871	0.000	98	1236967	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.567	9.557	0.010	87	236168	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.634	11.623	0.011	96	269307	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.291	6.290	0.001	93	66307	2.00	2.03	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.596	6.595	0.001	0	38364	2.00	1.97	
$ 7 Toluene-d8 (Surr)	98	8.219	8.219	0.000	94	208413	2.00	2.00	
$ 8 4-Bromofluorobenzene (Surr	95	10.630	10.629	0.001	91	53257	2.00	1.97	
30 Ethylene oxide	43	3.811	3.810	0.001	99	104474	200.0	228.2	
34 Ethanol	45	4.195	4.194	0.001	97	19782	120.0	126.3	
39 Propene oxide	58	4.421	4.421	0.001	96	406514	200.0	203.5	
43 Isopropyl alcohol	45	4.598	4.598	0.000	95	14098	20.0	21.2	
46 Acetonitrile	41	4.795	4.785	0.010	96	35823	20.0	22.1	
58 Isopropyl ether	87	5.484	5.473	0.011	99	33240	2.00	2.00	
60 2-Chloro-1,3-butadiene	53	5.573	5.572	0.001	91	113928	2.00	2.00	
61 Tert-butyl ethyl ether	59	5.769	5.769	0.000	98	111015	2.00	1.98	
63 Ethyl acetate	43	5.897	5.906	-0.009	96	31400	4.00	3.84	
64 Propionitrile	54	5.946	5.946	0.000	95	20980	20.0	18.0	
68 Methacrylonitrile	41	6.074	6.074	0.000	97	147141	20.0	19.5	
78 Tert-amyl methyl ether	73	6.704	6.703	0.001	93	73524	2.00	1.98	
89 2-Nitropropane	41	6.714	6.713	0.001	97	112629	4.00	4.21	
80 n-Butanol	56	6.940	6.939	0.001	94	7976	50.0	76.2	
83 Methyl methacrylate	100	7.354	7.353	0.001	96	6642	4.00	3.84	
101 Tetrahydrothiophene	60	9.046	9.045	0.001	91	6060	4.00	3.77	
112 cis-1,4-Dichloro-2-butene	53	10.502	10.501	0.001	0	8720	4.00	3.54	
128 1,2,3-Trimethylbenzene	105	11.673	11.672	0.001	99	141376	2.00	1.97	
11 1,3,5-Trichlorobenzene	180	12.943	12.942	0.000	97	62692	2.00	2.03	

Reagents:

MV-ARCH SS A_00090	Amount Added:	0.16	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	1.00	Units: uL

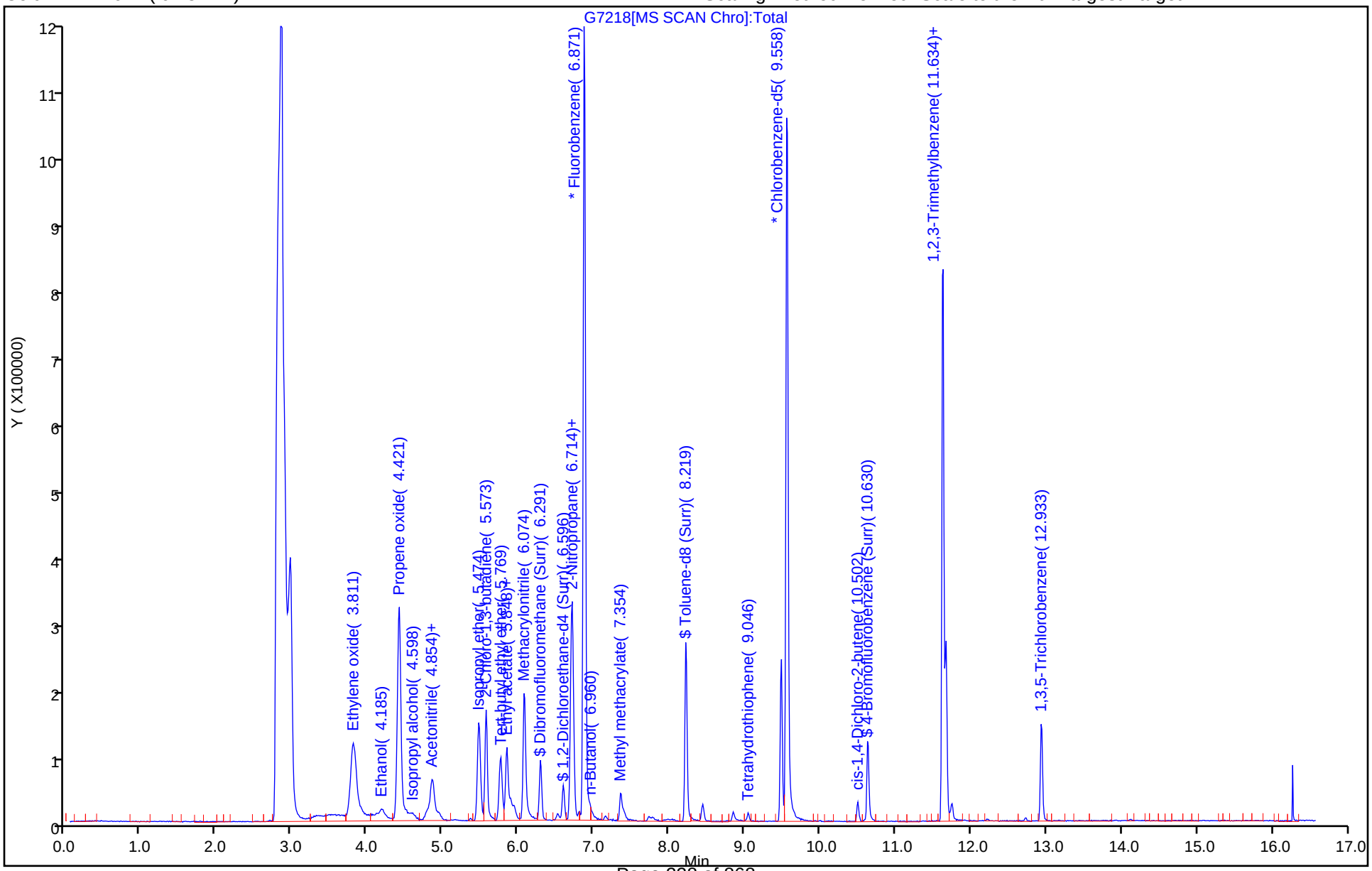
Report Date: 28-Apr-2018 08:16:29 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7218.D

Injection Date:	27-Apr-2018 14:03:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7219.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Apr-2018 14:24:30 ALS Bottle#: 21 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:31 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:40:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.855	4.854	0.001	0	115274	250.0	250.0	
* 1 Fluorobenzene	96	6.873	6.871	0.002	99	1180847	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.559	9.557	0.002	87	223327	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.635	11.623	0.012	95	259673	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.292	6.290	0.002	93	154494	5.00	4.96	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.597	6.595	0.002	0	91929	5.00	4.95	
$ 7 Toluene-d8 (Surr)	98	8.221	8.219	0.002	94	497205	5.00	5.05	
$ 8 4-Bromofluorobenzene (Surr	95	10.631	10.629	0.002	90	129550	5.00	4.96	
30 Ethylene oxide	43	3.812	3.810	0.002	99	226458	500.0	518.2	
34 Ethanol	45	4.186	4.194	-0.008	93	39109	300.0	291.2	
39 Propene oxide	58	4.423	4.421	0.003	96	987701	500.0	518.0	
43 Isopropyl alcohol	45	4.600	4.598	0.002	95	30536	50.0	48.0	
46 Acetonitrile	41	4.787	4.785	0.002	99	75353	50.0	48.8	
58 Isopropyl ether	87	5.475	5.473	0.002	99	79801	5.00	5.04	
60 2-Chloro-1,3-butadiene	53	5.574	5.572	0.002	91	272544	5.00	5.01	
61 Tert-butyl ethyl ether	59	5.761	5.769	-0.008	97	254308	5.00	4.75	
63 Ethyl acetate	43	5.898	5.906	-0.008	97	71785	10.0	9.19	
64 Propionitrile	54	5.938	5.946	-0.008	98	54783	50.0	49.4	
68 Methacrylonitrile	41	6.076	6.074	0.002	96	350448	50.0	48.7	
78 Tert-amyl methyl ether	73	6.705	6.703	0.002	93	175317	5.00	4.94	
89 2-Nitropropane	41	6.715	6.713	0.002	92	257520	10.0	10.1	
80 n-Butanol	56	6.941	6.939	0.002	92	11823	125.0	97.2	
83 Methyl methacrylate	100	7.365	7.353	0.012	95	17718	10.0	9.18	
101 Tetrahydrothiophene	60	9.047	9.045	0.002	94	15483	10.0	8.78	
112 cis-1,4-Dichloro-2-butene	53	10.503	10.501	0.002	0	22303	10.0	9.40	
128 1,2,3-Trimethylbenzene	105	11.674	11.672	0.002	98	347653	5.00	5.02	
11 1,3,5-Trichlorobenzene	180	12.934	12.942	-0.008	97	145737	5.00	4.89	

Reagents:

MV-ARCH SS A_00090	Amount Added:	0.40	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	2.50	Units: uL

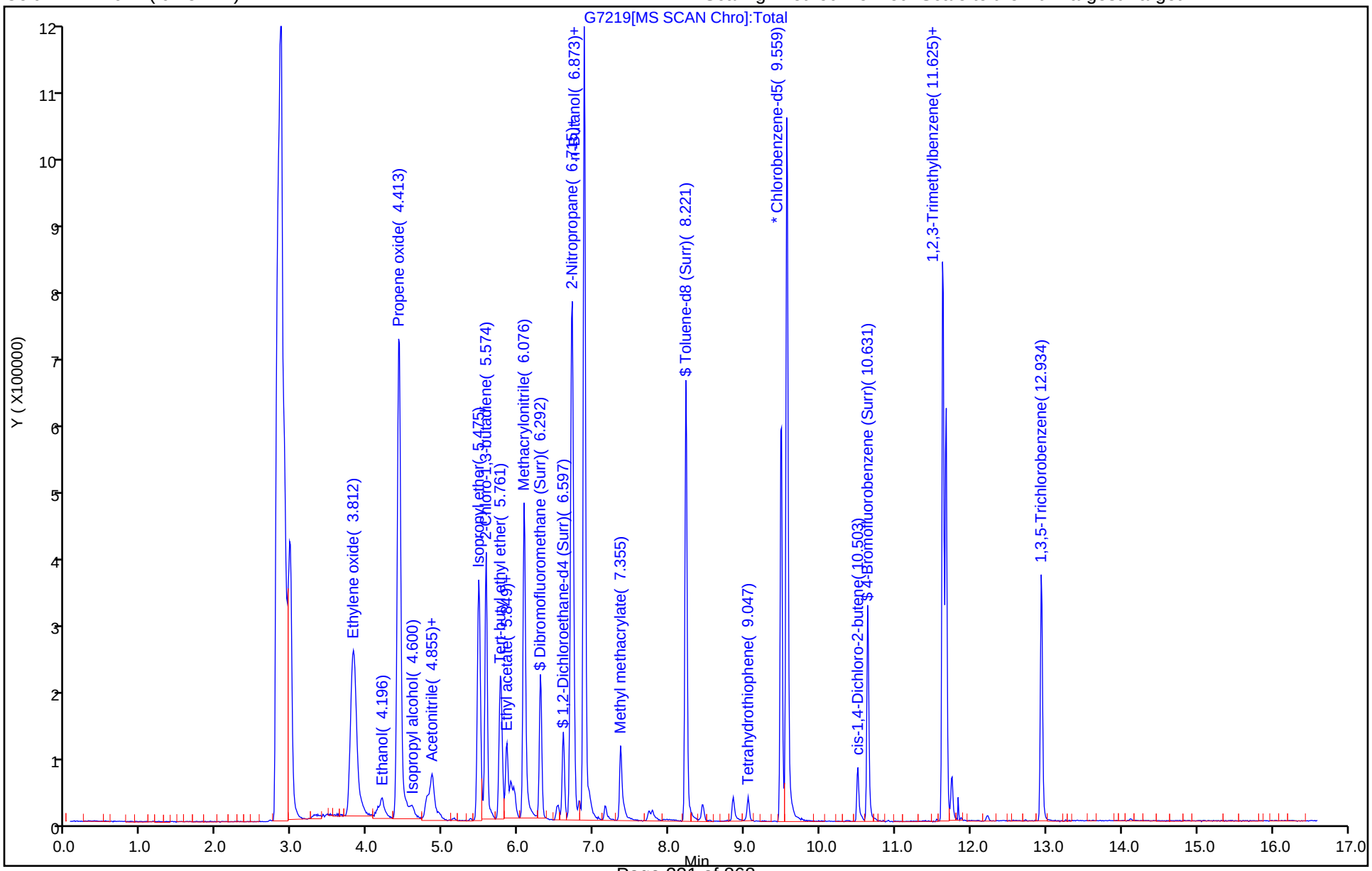
Report Date: 28-Apr-2018 08:16:32 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7219.D

Injection Date:	27-Apr-2018 14:24:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	20
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7220.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 27-Apr-2018 14:44:30 ALS Bottle#: 22 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:38 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:42:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.863	4.863	0.000	0	117926	250.0	250.0	
* 1 Fluorobenzene	96	6.880	6.880	0.000	99	1175541	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.567	9.567	0.000	87	227481	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.633	11.633	0.000	94	261385	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.290	6.290	0.000	92	302645	10.0	9.76	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.595	6.595	0.000	0	181634	10.0	9.83	
$ 7 Toluene-d8 (Surr)	98	8.219	8.219	0.000	94	999491	10.0	9.97	
$ 8 4-Bromofluorobenzene (Surr	95	10.629	10.629	0.000	90	265243	10.0	10.1	
30 Ethylene oxide	43	3.810	3.810	0.000	99	420469	1000.0	966.6	
34 Ethanol	45	4.194	4.194	0.000	98	75537	600.0	591.0	
39 Propene oxide	58	4.421	4.421	0.000	96	1921311	1000.0	1012.2	
43 Isopropyl alcohol	45	4.598	4.598	0.000	71	61312	100.0	96.8	
46 Acetonitrile	41	4.785	4.785	0.000	99	146963	100.0	95.5	
58 Isopropyl ether	87	5.473	5.473	0.000	99	157300	10.0	9.98	
60 2-Chloro-1,3-butadiene	53	5.572	5.572	0.000	91	542515	10.0	10.0	
61 Tert-butyl ethyl ether	59	5.769	5.769	0.000	98	535596	10.0	10.0	
63 Ethyl acetate	43	5.906	5.906	0.000	99	144002	20.0	18.5	
64 Propionitrile	54	5.946	5.946	0.000	98	113163	100.0	102.4	
68 Methacrylonitrile	41	6.074	6.074	0.000	96	722327	100.0	100.9	
78 Tert-amyl methyl ether	73	6.703	6.703	0.000	93	348664	10.0	9.87	
89 2-Nitropropane	41	6.713	6.713	0.000	92	499270	20.0	19.7	
80 n-Butanol	56	6.939	6.939	0.000	96	41442	250.0	246.5	
83 Methyl methacrylate	100	7.353	7.353	0.000	96	37556	20.0	18.6	
101 Tetrahydrothiophene	60	9.045	9.045	0.000	96	37162	20.0	19.6	
112 cis-1,4-Dichloro-2-butene	53	10.501	10.501	0.000	0	48953	20.0	20.5	
128 1,2,3-Trimethylbenzene	105	11.672	11.672	0.000	98	717972	10.0	10.3	
11 1,3,5-Trichlorobenzene	180	12.942	12.942	0.000	97	299954	10.0	10.0	

Reagents:

MV-ARCH SS A_00090	Amount Added:	0.80	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	5.00	Units: uL

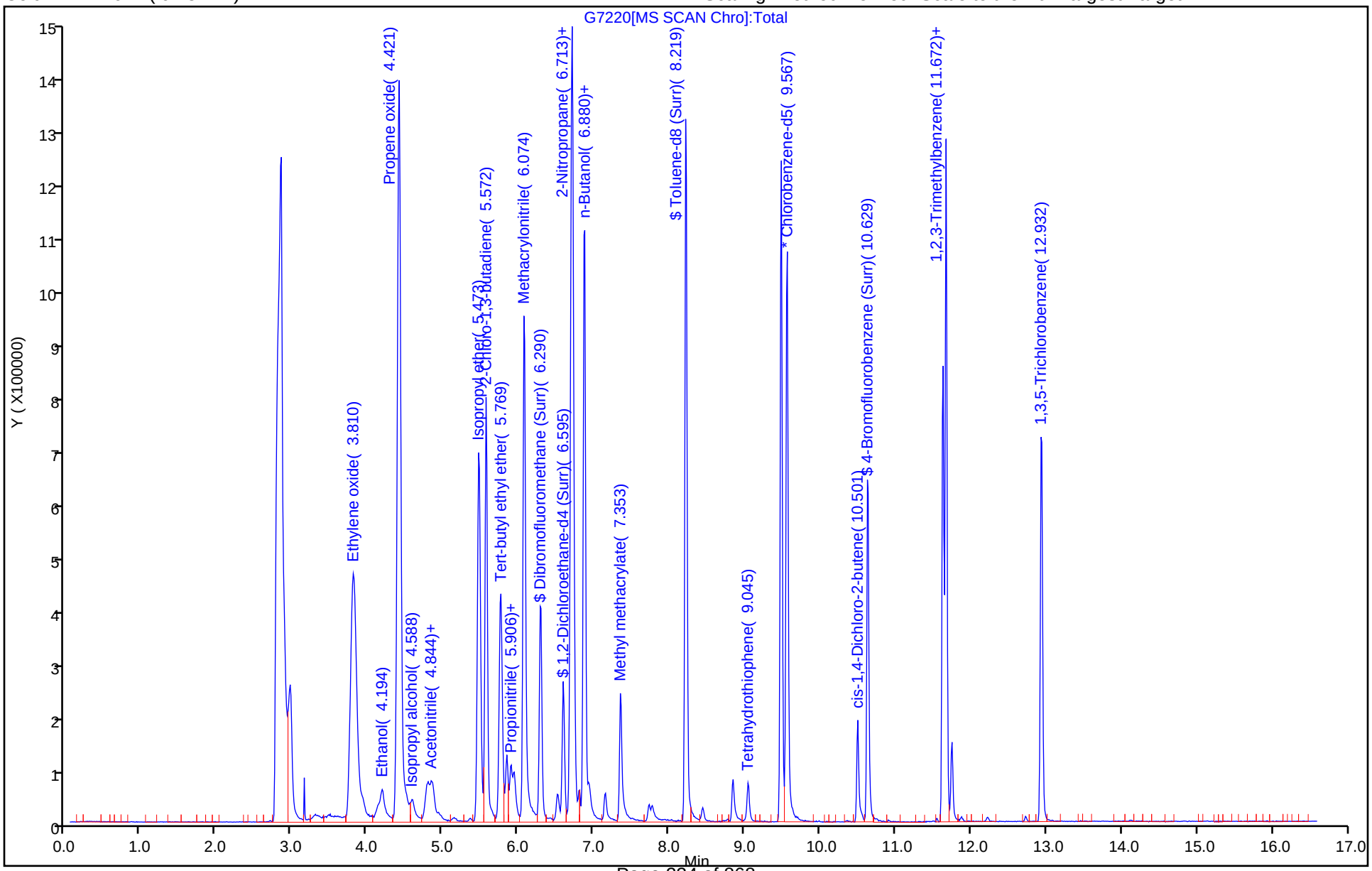
Report Date: 28-Apr-2018 08:16:40 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7220.D

Injection Date:	27-Apr-2018 14:44:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	icis			Worklist Smp#:	21
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7221.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Apr-2018 15:04:30 ALS Bottle#: 23 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:42 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:42:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.855	4.863	-0.008	0	118446	250.0	250.0	
* 1 Fluorobenzene	96	6.882	6.880	0.002	98	1164621	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.568	9.567	0.001	88	224336	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.634	11.633	0.001	96	272765	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.291	6.290	0.001	93	911134	30.0	29.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.596	6.595	0.001	0	547730	30.0	29.9	
$ 7 Toluene-d8 (Surr)	98	8.220	8.219	0.001	94	2977887	30.0	30.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.631	10.629	0.002	91	863811	30.0	31.5	
30 Ethylene oxide	43	3.812	3.810	0.002	99	1195349	3000.0	2773.6	
34 Ethanol	45	4.186	4.194	-0.008	99	219171	1800.0	1784.3	
39 Propene oxide	58	4.422	4.421	0.002	96	5658495	3000.0	3009.1	
43 Isopropyl alcohol	45	4.599	4.598	0.001	99	160779	300.0	256.2	
46 Acetonitrile	41	4.796	4.785	0.011	99	423718	300.0	278.0	
58 Isopropyl ether	87	5.475	5.473	0.002	99	473628	30.0	30.3	
60 2-Chloro-1,3-butadiene	53	5.573	5.572	0.001	91	1644191	30.0	30.6	
61 Tert-butyl ethyl ether	59	5.770	5.769	0.001	98	1625258	30.0	30.8	
63 Ethyl acetate	43	5.898	5.906	-0.008	99	450521	60.0	58.5	
64 Propionitrile	54	5.947	5.946	0.001	99	351544	300.0	321.2	
68 Methacrylonitrile	41	6.075	6.074	0.001	96	2181386	300.0	307.4	
78 Tert-amyl methyl ether	73	6.705	6.703	0.002	90	1084647	30.0	31.0	
89 2-Nitropropane	41	6.714	6.713	0.001	74	1465502	60.0	58.2	
80 n-Butanol	56	6.941	6.939	0.002	97	129445	750.0	695.5	
83 Methyl methacrylate	100	7.354	7.353	0.001	96	129015	60.0	62.3	
101 Tetrahydrothiophene	60	9.046	9.045	0.001	96	122261	60.0	63.4	
112 cis-1,4-Dichloro-2-butene	53	10.503	10.501	0.002	0	170669	60.0	68.5	
128 1,2,3-Trimethylbenzene	105	11.674	11.672	0.002	99	2247379	30.0	30.9	
11 1,3,5-Trichlorobenzene	180	12.943	12.942	0.001	97	969167	30.0	31.0	

Reagents:

MV-ARCH SS A_00090	Amount Added:	2.40	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	15.00	Units: uL

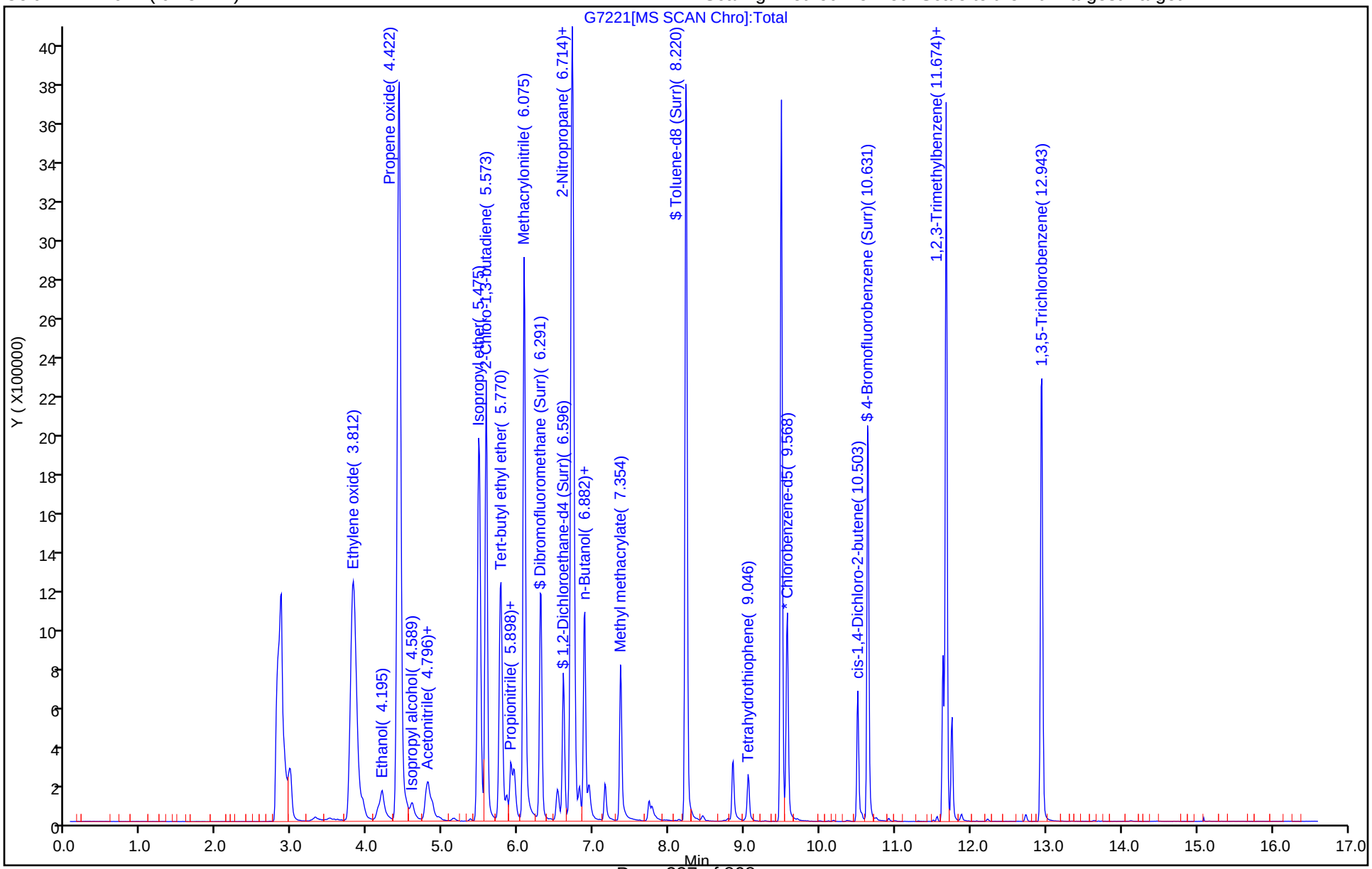
Report Date: 28-Apr-2018 08:16:44 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7221.D

Injection Date:	27-Apr-2018 15:04:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	22
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7222.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Apr-2018 15:24:30 ALS Bottle#: 24 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:49 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:42:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.851	4.863	-0.012	0	118045	250.0	250.0	
* 1 Fluorobenzene	96	6.878	6.880	-0.002	98	1122770	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.564	9.567	-0.003	87	222027	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.630	11.633	-0.003	95	269089	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.297	6.290	0.007	92	1795814	60.0	60.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.592	6.595	-0.003	0	1079518	60.0	61.2	
$ 7 Toluene-d8 (Surr)	98	8.226	8.219	0.007	94	5817662	60.0	59.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.637	10.629	0.007	93	1606180	60.0	59.3	
30 Ethylene oxide	43	3.808	3.810	-0.002	99	2113274	6000.0	5086.2	
34 Ethanol	45	4.182	4.194	-0.012	98	431105	3600.0	3669.3	
39 Propene oxide	58	4.418	4.421	-0.002	96	10475515	6000.0	5778.4	
43 Isopropyl alcohol	45	4.595	4.598	-0.003	100	346640	600.0	573.0	
46 Acetonitrile	41	4.782	4.785	-0.003	99	859562	600.0	585.0	
58 Isopropyl ether	87	5.480	5.473	0.007	100	960951	60.0	63.8	
60 2-Chloro-1,3-butadiene	53	5.569	5.572	-0.003	91	3197952	60.0	61.8	
61 Tert-butyl ethyl ether	59	5.766	5.769	-0.003	98	3273090	60.0	64.3	
63 Ethyl acetate	43	5.904	5.906	-0.002	99	923179	120.0	124.3	
64 Propionitrile	54	5.943	5.946	-0.003	99	700313	600.0	663.6	
68 Methacrylonitrile	41	6.071	6.074	-0.003	96	4296921	600.0	628.2	
78 Tert-amyl methyl ether	73	6.701	6.703	-0.002	96	2176823	60.0	64.5	
89 2-Nitropropane	41	6.720	6.713	0.007	88	2808796	120.0	115.8	
80 n-Butanol	56	6.937	6.939	-0.002	95	282974	1500.0	1528.8	
83 Methyl methacrylate	100	7.360	7.353	0.007	96	269344	120.0	133.8	
101 Tetrahydrothiophene	60	9.042	9.045	-0.003	97	252202	120.0	131.2	
112 cis-1,4-Dichloro-2-butene	53	10.499	10.501	-0.002	0	349767	120.0	142.2	
128 1,2,3-Trimethylbenzene	105	11.670	11.672	-0.002	99	4325078	60.0	60.3	
11 1,3,5-Trichlorobenzene	180	12.939	12.942	-0.003	97	1857658	60.0	60.2	

Reagents:

MV-ARCH SS A_00090	Amount Added:	4.80	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	30.00	Units: uL

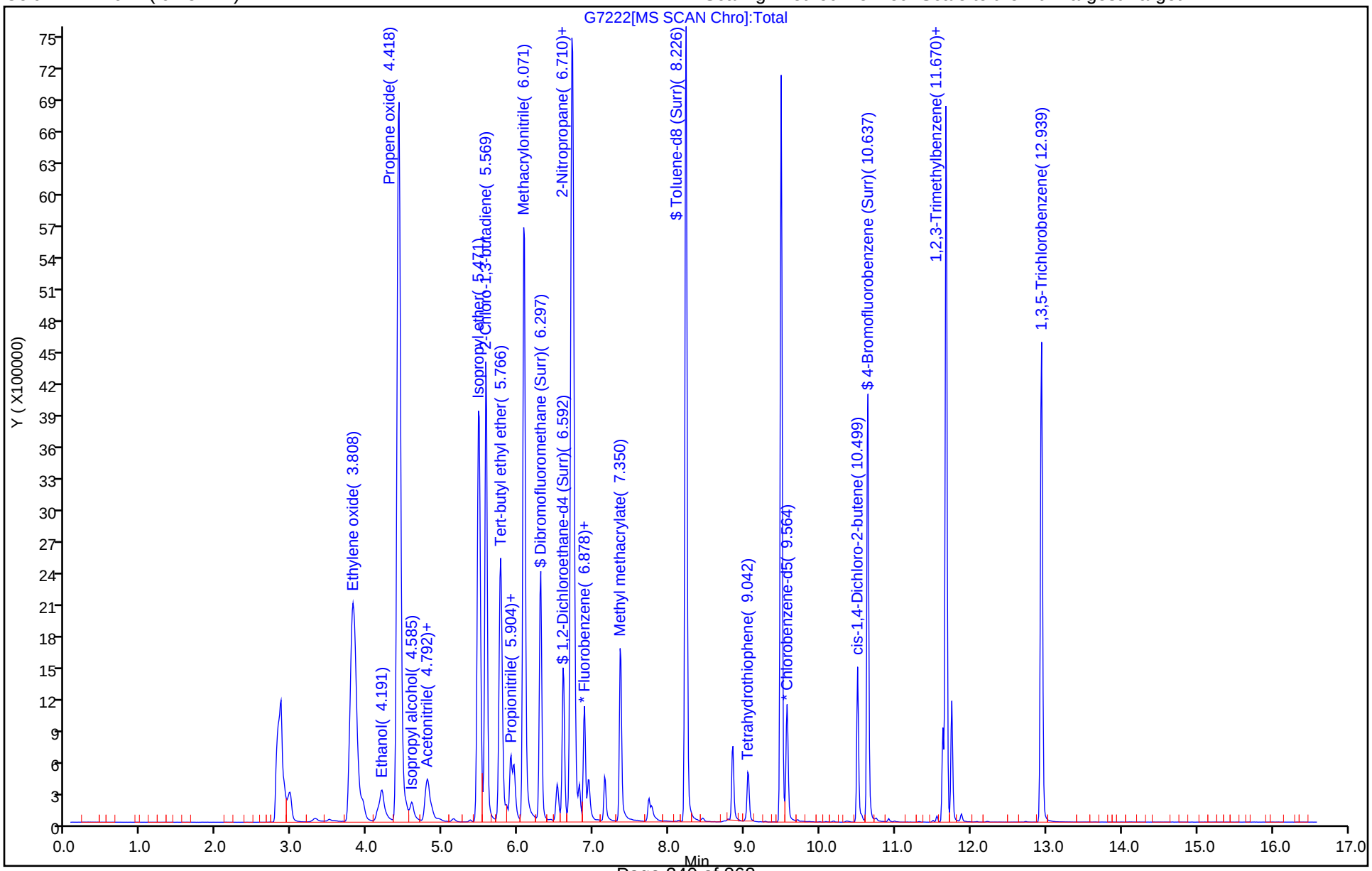
Report Date: 28-Apr-2018 08:16:51 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7222.D

Injection Date:	27-Apr-2018 15:24:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Ethanol

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

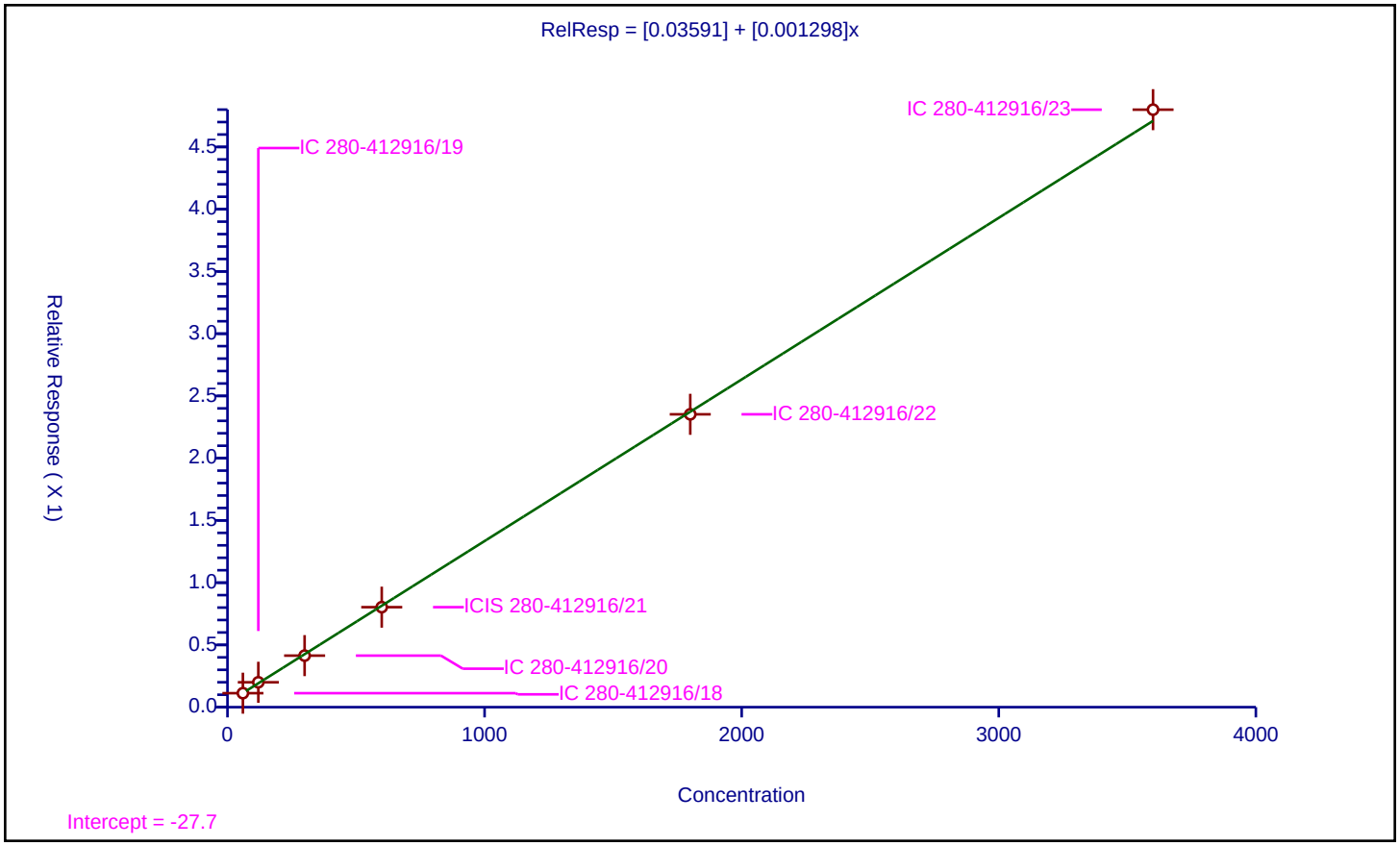
Curve Coefficients

Intercept:	0.03591
Slope:	0.001298

Error Coefficients

Standard Error:	246000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	60.0	0.112327	12.5	1187377.0	0.001872	Y
2	IC 280-412916/19	120.0	0.199904	12.5	1236967.0	0.001666	Y
3	IC 280-412916/20	300.0	0.413993	12.5	1180847.0	0.00138	Y
4	ICIS 280-412916/21	600.0	0.803215	12.5	1175541.0	0.001339	Y
5	IC 280-412916/22	1800.0	2.352385	12.5	1164621.0	0.001307	Y
6	IC 280-412916/23	3600.0	4.799569	12.5	1122770.0	0.001333	Y



Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

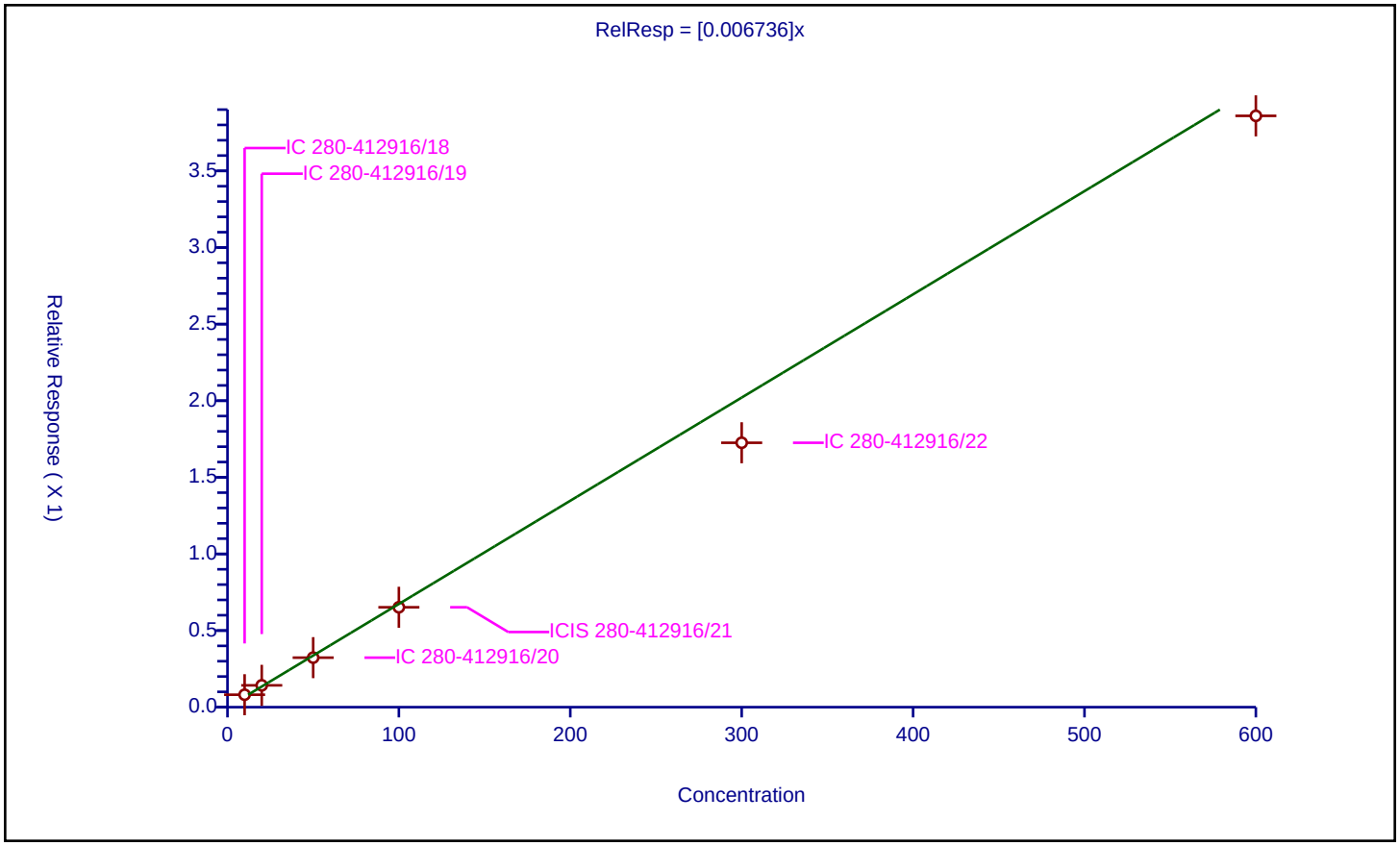
Curve Coefficients

Intercept:	0
Slope:	0.006736

Error Coefficients

Standard Error:	174000
Relative Standard Error:	12.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	10.0	0.081219	12.5	1187377.0	0.008122	Y
2	IC 280-412916/19	20.0	0.142465	12.5	1236967.0	0.007123	Y
3	IC 280-412916/20	50.0	0.323243	12.5	1180847.0	0.006465	Y
4	ICIS 280-412916/21	100.0	0.651955	12.5	1175541.0	0.00652	Y
5	IC 280-412916/22	300.0	1.725658	12.5	1164621.0	0.005752	Y
6	IC 280-412916/23	600.0	3.859205	12.5	1122770.0	0.006432	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

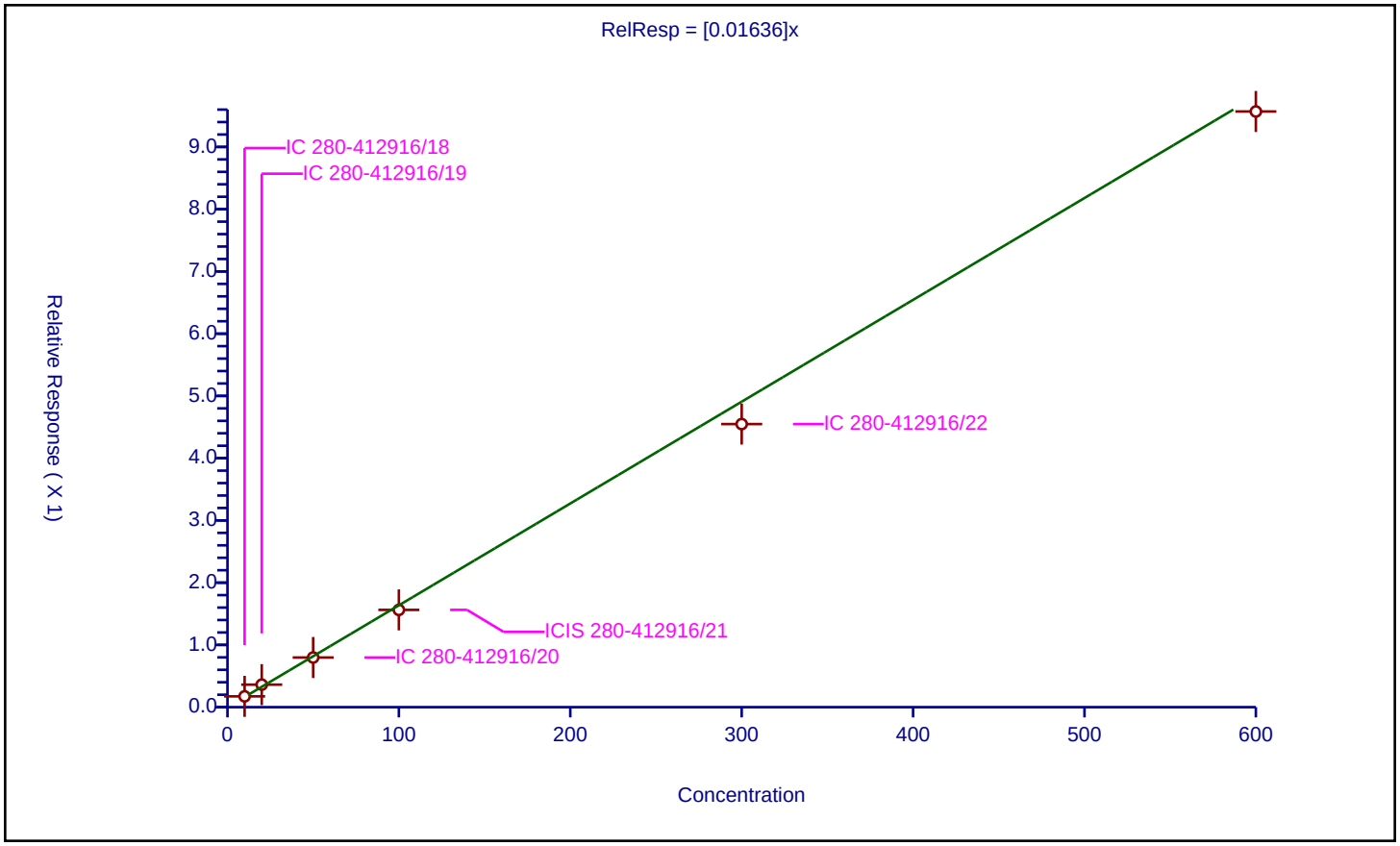
Curve Coefficients

Intercept:	0
Slope:	0.01636

Error Coefficients

Standard Error:	435000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	10.0	0.173618	12.5	1187377.0	0.017362	Y
2	IC 280-412916/19	20.0	0.362004	12.5	1236967.0	0.0181	Y
3	IC 280-412916/20	50.0	0.797658	12.5	1180847.0	0.015953	Y
4	ICIS 280-412916/21	100.0	1.562717	12.5	1175541.0	0.015627	Y
5	IC 280-412916/22	300.0	4.54781	12.5	1164621.0	0.015159	Y
6	IC 280-412916/23	600.0	9.569658	12.5	1122770.0	0.015949	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

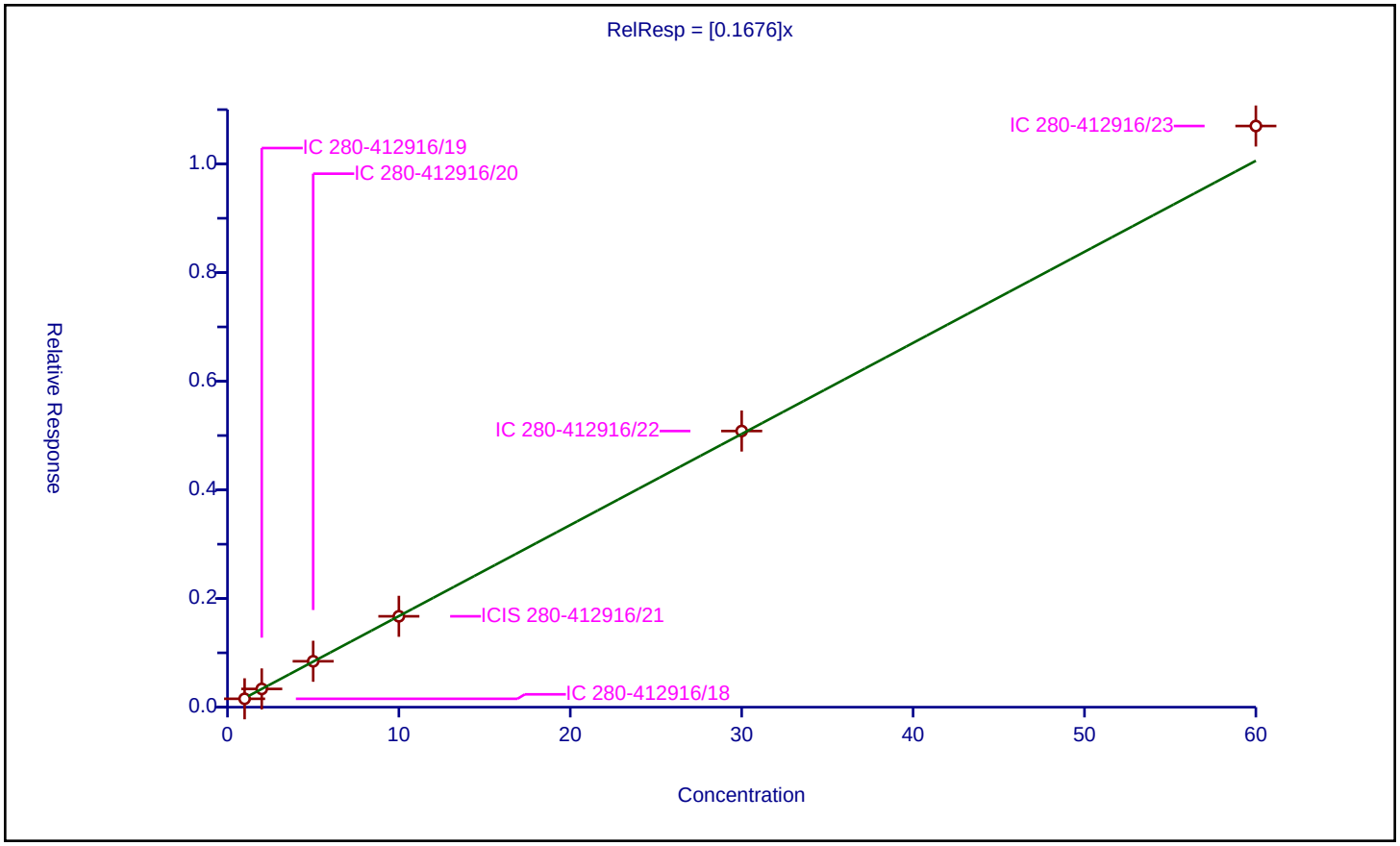
Curve Coefficients

Intercept:	0
Slope:	0.1676

Error Coefficients

Standard Error:	486000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.153911	12.5	1187377.0	0.153911	Y
2	IC 280-412916/19	2.0	0.335902	12.5	1236967.0	0.167951	Y
3	IC 280-412916/20	5.0	0.844743	12.5	1180847.0	0.168949	Y
4	ICIS 280-412916/21	10.0	1.672634	12.5	1175541.0	0.167263	Y
5	IC 280-412916/22	30.0	5.083499	12.5	1164621.0	0.16945	Y
6	IC 280-412916/23	60.0	10.69844	12.5	1122770.0	0.178307	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

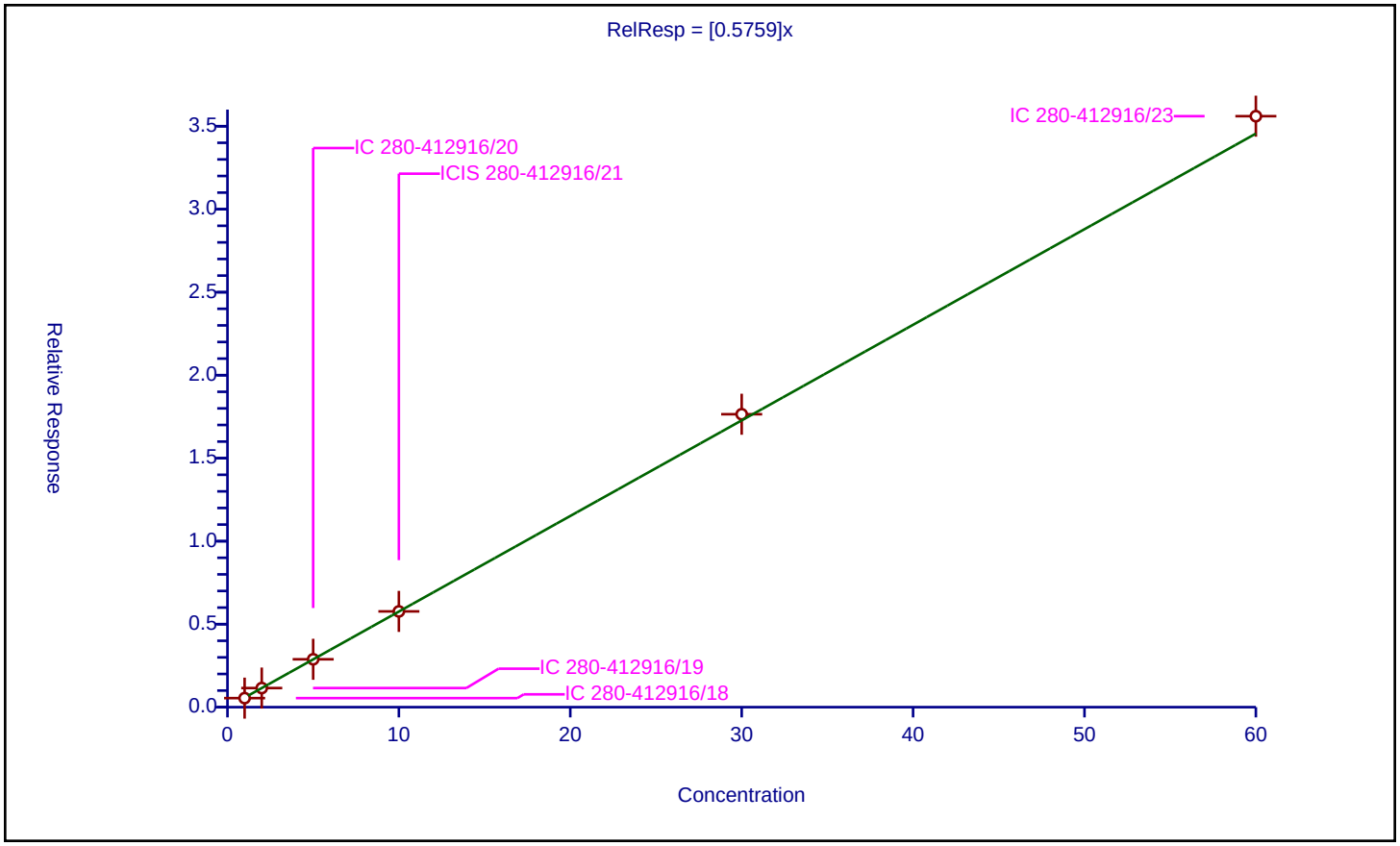
Curve Coefficients

Intercept:	0
Slope:	0.5759

Error Coefficients

Standard Error:	1630000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.544214	12.5	1187377.0	0.544214	Y
2	IC 280-412916/19	2.0	1.151284	12.5	1236967.0	0.575642	Y
3	IC 280-412916/20	5.0	2.885048	12.5	1180847.0	0.57701	Y
4	ICIS 280-412916/21	10.0	5.76878	12.5	1175541.0	0.576878	Y
5	IC 280-412916/22	30.0	17.647275	12.5	1164621.0	0.588243	Y
6	IC 280-412916/23	60.0	35.603374	12.5	1122770.0	0.59339	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

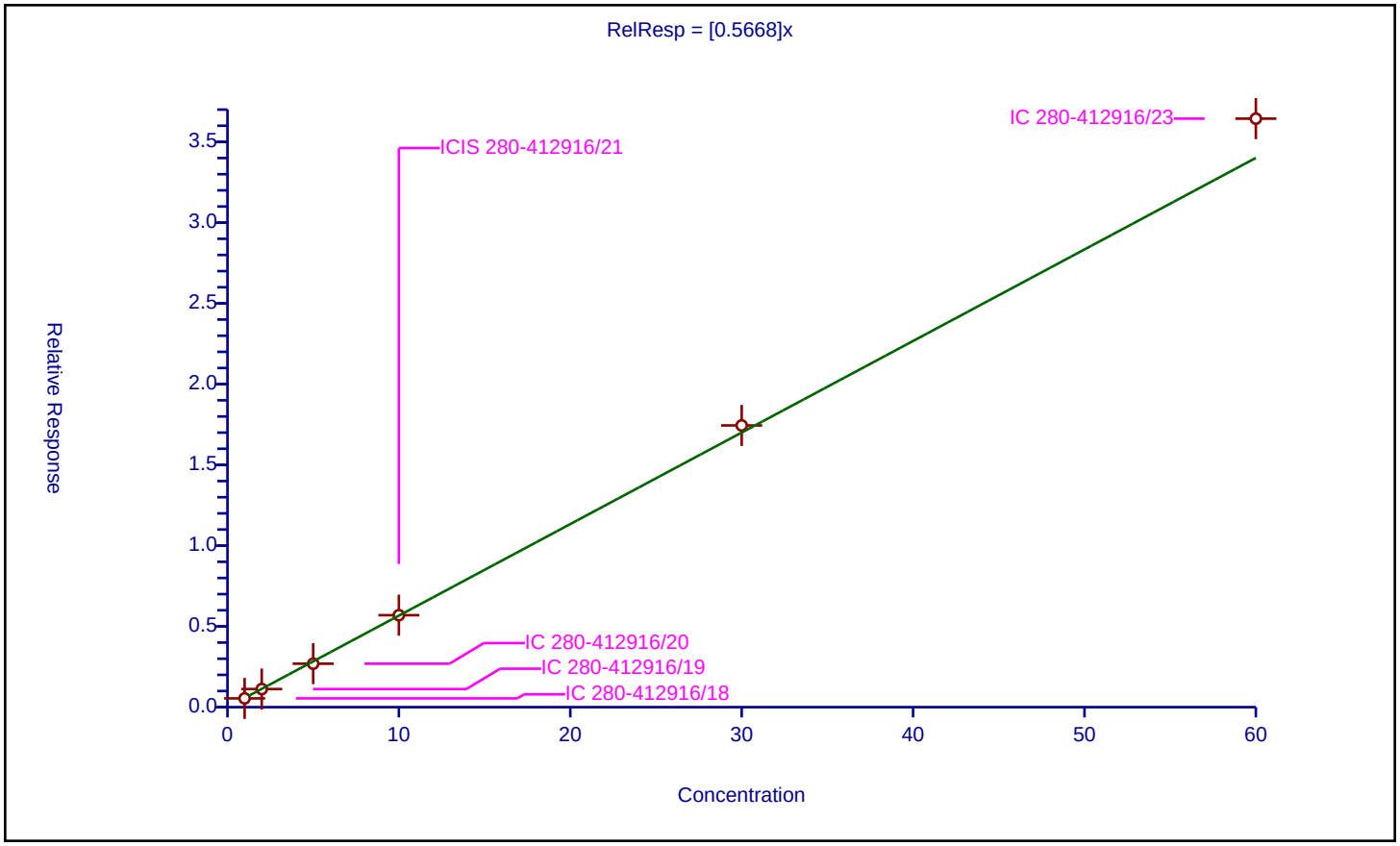
Curve Coefficients

Intercept:	0
Slope:	0.5668

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.543246	12.5	1187377.0	0.543246	Y
2	IC 280-412916/19	2.0	1.121847	12.5	1236967.0	0.560923	Y
3	IC 280-412916/20	5.0	2.692008	12.5	1180847.0	0.538402	Y
4	ICIS 280-412916/21	10.0	5.695208	12.5	1175541.0	0.569521	Y
5	IC 280-412916/22	30.0	17.444065	12.5	1164621.0	0.581469	Y
6	IC 280-412916/23	60.0	36.439899	12.5	1122770.0	0.607332	Y



Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

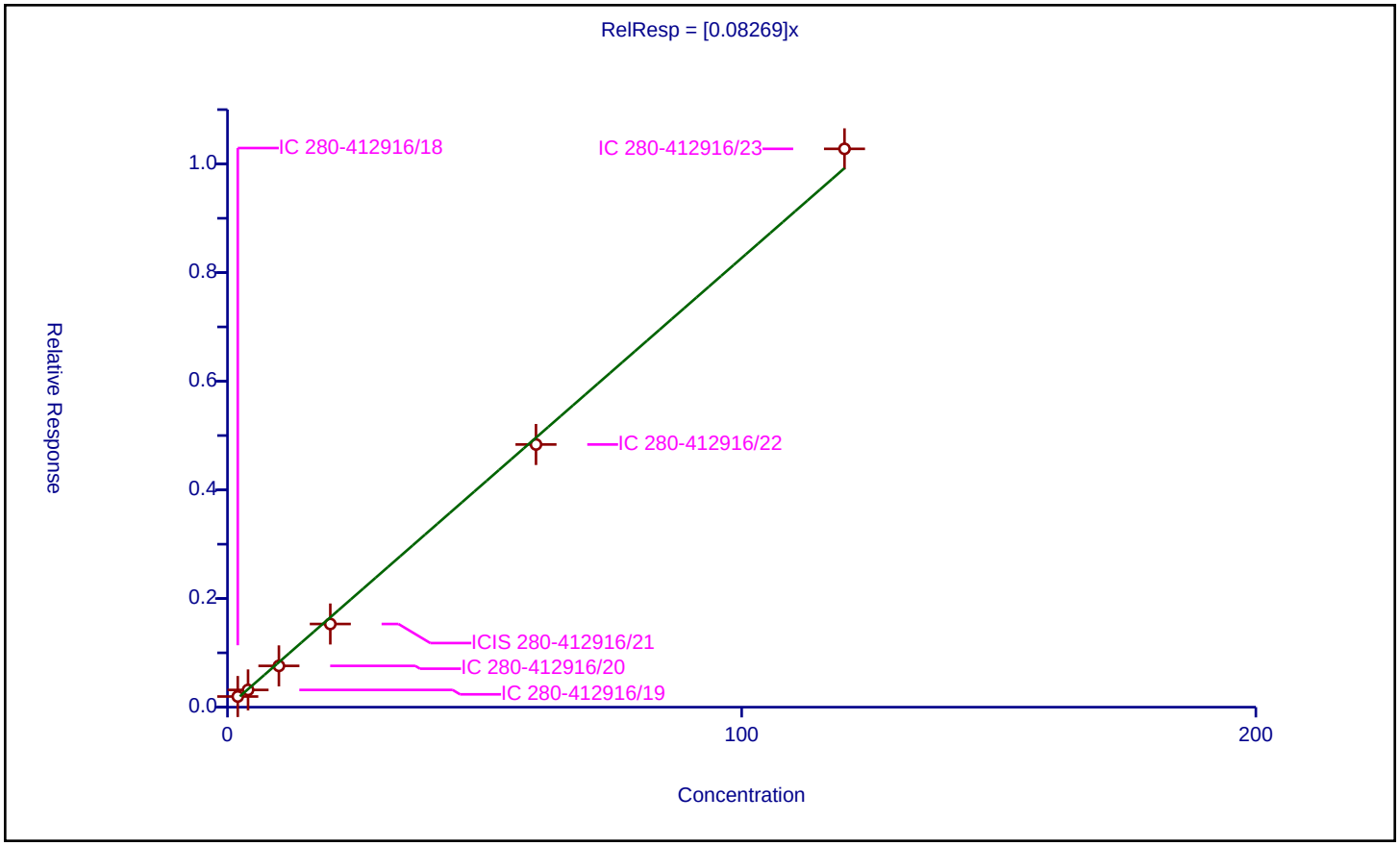
Curve Coefficients

Intercept:	0
Slope:	0.08269

Error Coefficients

Standard Error:	465000
Relative Standard Error:	10.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	2.0	0.195999	12.5	1187377.0	0.098	Y
2	IC 280-412916/19	4.0	0.317308	12.5	1236967.0	0.079327	Y
3	IC 280-412916/20	10.0	0.759889	12.5	1180847.0	0.075989	Y
4	ICIS 280-412916/21	20.0	1.531231	12.5	1175541.0	0.076562	Y
5	IC 280-412916/22	60.0	4.835489	12.5	1164621.0	0.080591	Y
6	IC 280-412916/23	120.0	10.277918	12.5	1122770.0	0.085649	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

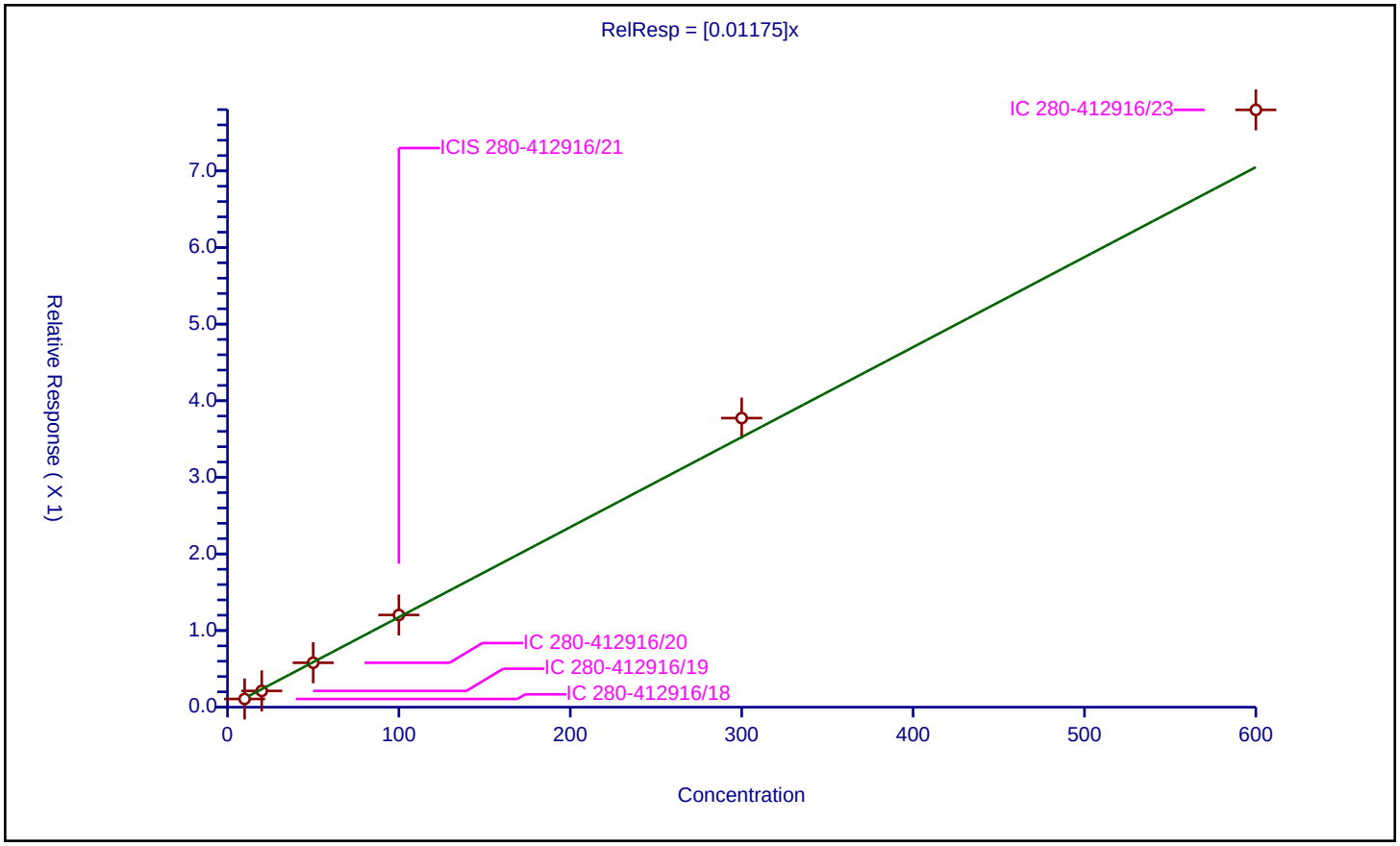
Curve Coefficients

Intercept:	0
Slope:	0.01175

Error Coefficients

Standard Error:	355000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	10.0	0.106874	12.5	1187377.0	0.010687	Y
2	IC 280-412916/19	20.0	0.212011	12.5	1236967.0	0.010601	Y
3	IC 280-412916/20	50.0	0.579912	12.5	1180847.0	0.011598	Y
4	ICIS 280-412916/21	100.0	1.203308	12.5	1175541.0	0.012033	Y
5	IC 280-412916/22	300.0	3.773159	12.5	1164621.0	0.012577	Y
6	IC 280-412916/23	600.0	7.79671	12.5	1122770.0	0.012995	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

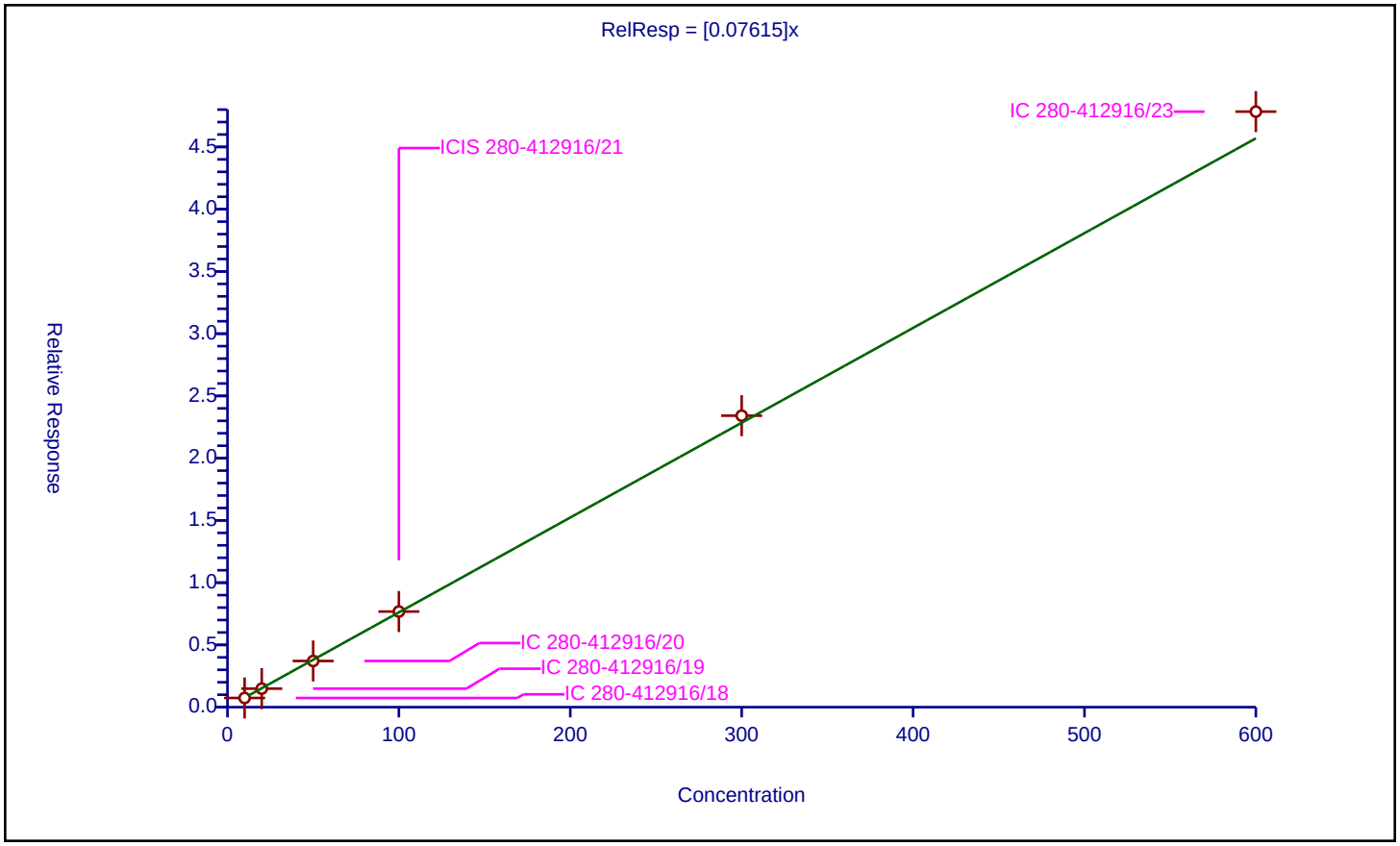
Curve Coefficients

Intercept:	0
Slope:	0.07615

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	10.0	0.738045	12.5	1187377.0	0.073804	Y
2	IC 280-412916/19	20.0	1.486913	12.5	1236967.0	0.074346	Y
3	IC 280-412916/20	50.0	3.70971	12.5	1180847.0	0.074194	Y
4	ICIS 280-412916/21	100.0	7.680793	12.5	1175541.0	0.076808	Y
5	IC 280-412916/22	300.0	23.413046	12.5	1164621.0	0.078043	Y
6	IC 280-412916/23	600.0	47.838393	12.5	1122770.0	0.079731	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

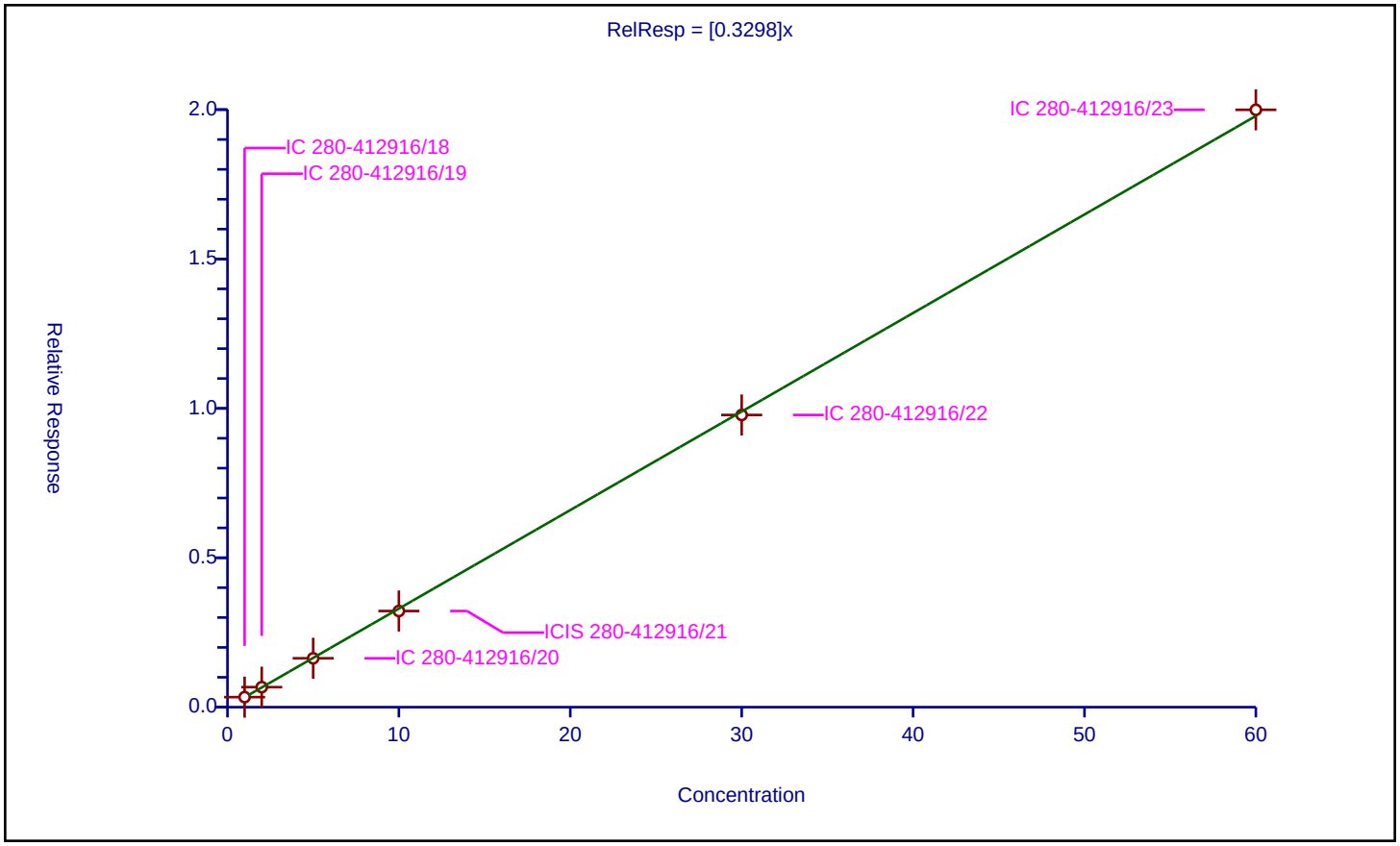
Curve Coefficients

Intercept:	0
Slope:	0.3298

Error Coefficients

Standard Error:	914000
Relative Standard Error:	1.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.335635	12.5	1187377.0	0.335635	Y
2	IC 280-412916/19	2.0	0.670056	12.5	1236967.0	0.335028	Y
3	IC 280-412916/20	5.0	1.635415	12.5	1180847.0	0.327083	Y
4	ICIS 280-412916/21	10.0	3.218146	12.5	1175541.0	0.321815	Y
5	IC 280-412916/22	30.0	9.779297	12.5	1164621.0	0.325977	Y
6	IC 280-412916/23	60.0	19.99312	12.5	1122770.0	0.333219	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

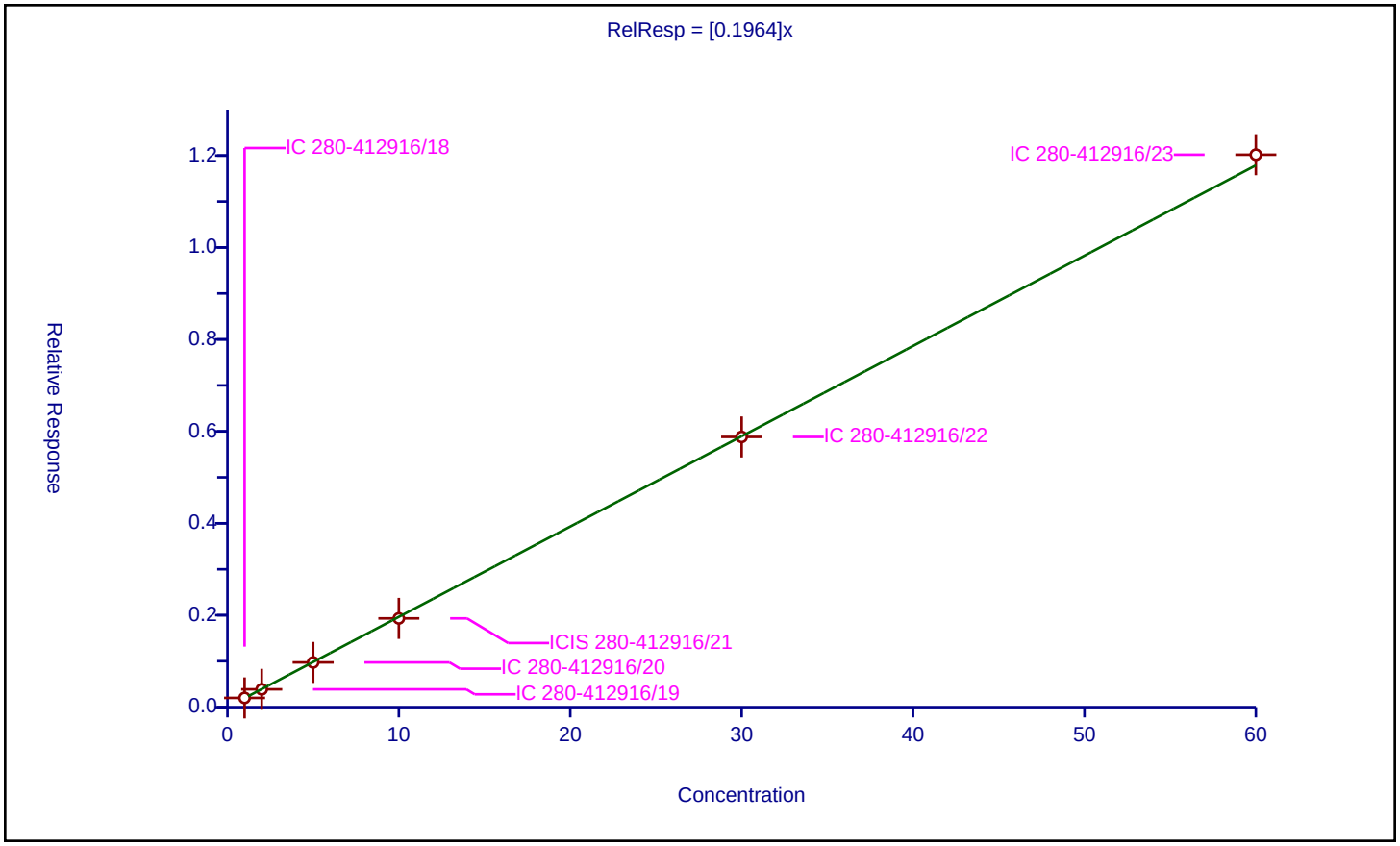
Curve Coefficients

Intercept:	0
Slope:	0.1964

Error Coefficients

Standard Error:	549000
Relative Standard Error:	1.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.200821	12.5	1187377.0	0.200821	Y
2	IC 280-412916/19	2.0	0.387682	12.5	1236967.0	0.193841	Y
3	IC 280-412916/20	5.0	0.973126	12.5	1180847.0	0.194625	Y
4	ICIS 280-412916/21	10.0	1.931387	12.5	1175541.0	0.193139	Y
5	IC 280-412916/22	30.0	5.878844	12.5	1164621.0	0.195961	Y
6	IC 280-412916/23	60.0	12.018468	12.5	1122770.0	0.200308	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

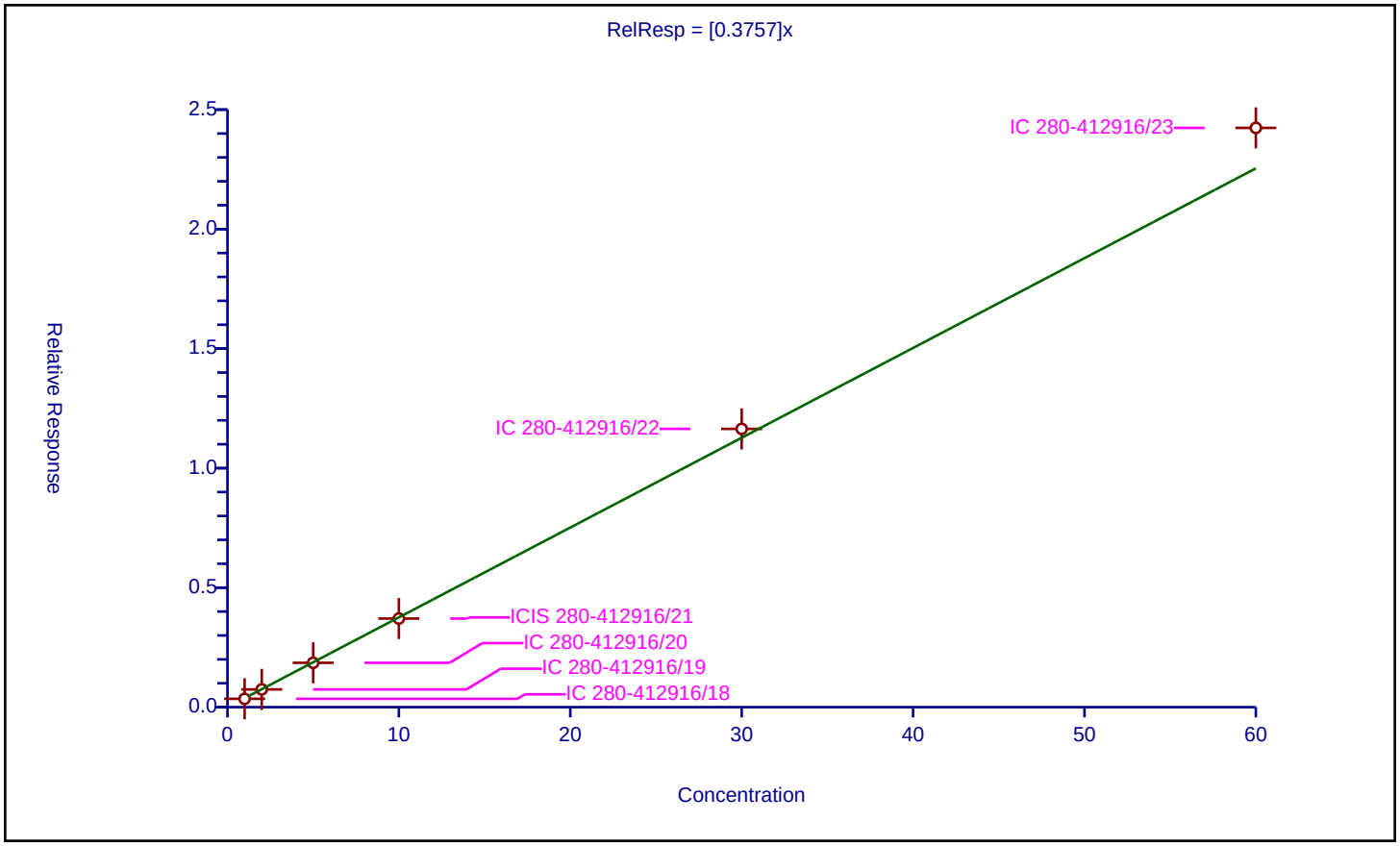
Curve Coefficients

Intercept:	0
Slope:	0.3757

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	0.348805	12.5	1187377.0	0.348805	Y
2	IC 280-412916/19	2.0	0.742987	12.5	1236967.0	0.371493	Y
3	IC 280-412916/20	5.0	1.855839	12.5	1180847.0	0.371168	Y
4	ICIS 280-412916/21	10.0	3.707484	12.5	1175541.0	0.370748	Y
5	IC 280-412916/22	30.0	11.641631	12.5	1164621.0	0.388054	Y
6	IC 280-412916/23	60.0	24.234961	12.5	1122770.0	0.403916	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

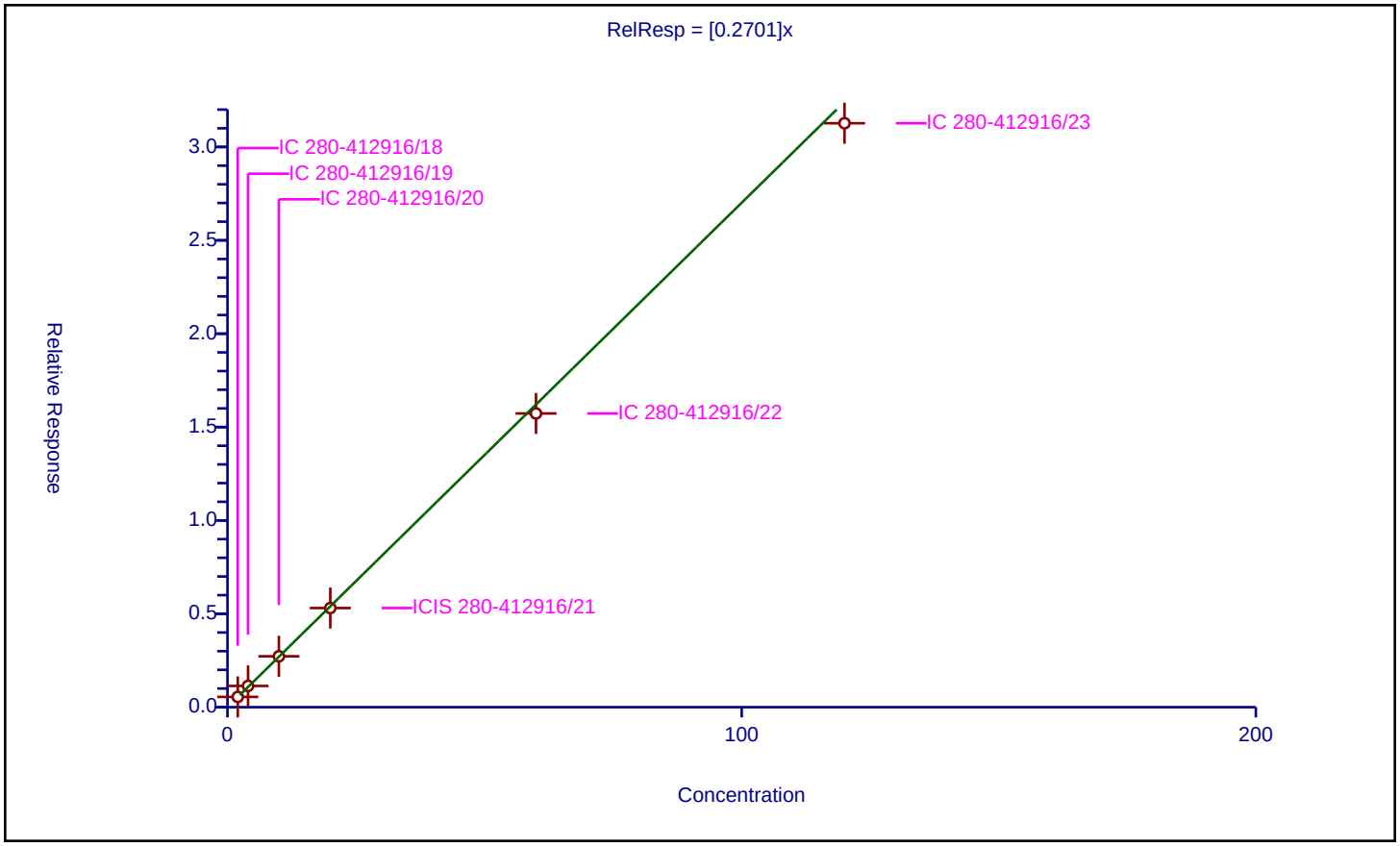
Curve Coefficients

Intercept:	0
Slope:	0.2701

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	2.0	0.55091	12.5	1187377.0	0.275455	Y
2	IC 280-412916/19	4.0	1.138157	12.5	1236967.0	0.284539	Y
3	IC 280-412916/20	10.0	2.726009	12.5	1180847.0	0.272601	Y
4	ICIS 280-412916/21	20.0	5.308939	12.5	1175541.0	0.265447	Y
5	IC 280-412916/22	60.0	15.729388	12.5	1164621.0	0.262156	Y
6	IC 280-412916/23	120.0	31.27083	12.5	1122770.0	0.26059	Y



Calibration / n-Butanol

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

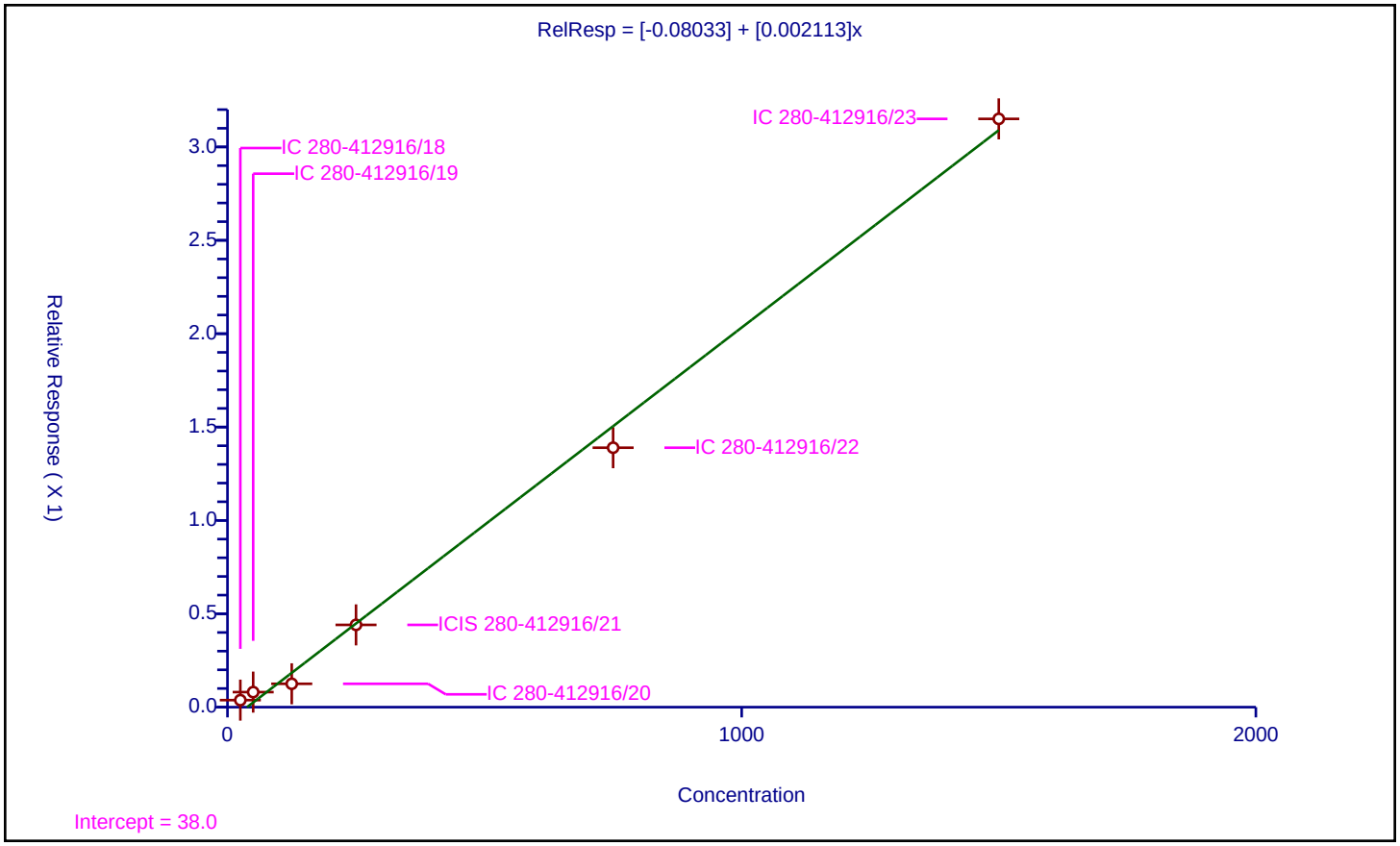
Curve Coefficients

Intercept:	-0.08033
Slope:	0.002113

Error Coefficients

Standard Error:	157000
Relative Standard Error:	68.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	25.0	0.037678	12.5	1187377.0	0.001507	Y
2	IC 280-412916/19	50.0	0.0806	12.5	1236967.0	0.001612	Y
3	IC 280-412916/20	125.0	0.125154	12.5	1180847.0	0.001001	Y
4	ICIS 280-412916/21	250.0	0.440669	12.5	1175541.0	0.001763	Y
5	IC 280-412916/22	750.0	1.389347	12.5	1164621.0	0.001852	Y
6	IC 280-412916/23	1500.0	3.1504	12.5	1122770.0	0.0021	Y



Calibration / Methyl methacrylate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

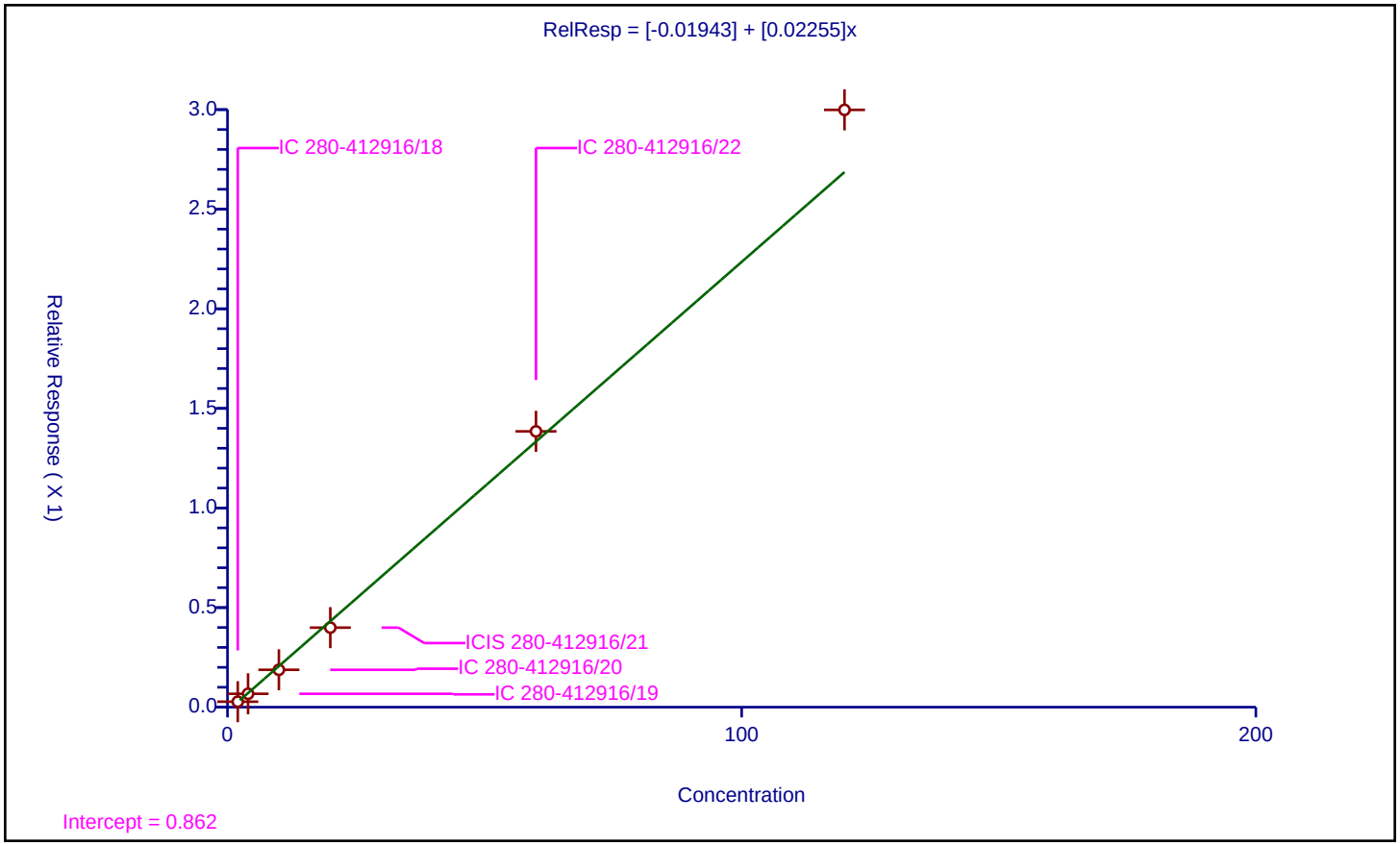
Curve Coefficients

Intercept:	-0.01943
Slope:	0.02255

Error Coefficients

Standard Error:	151000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	2.0	0.027498	12.5	1187377.0	0.013749	Y
2	IC 280-412916/19	4.0	0.06712	12.5	1236967.0	0.01678	Y
3	IC 280-412916/20	10.0	0.187556	12.5	1180847.0	0.018756	Y
4	ICIS 280-412916/21	20.0	0.399348	12.5	1175541.0	0.019967	Y
5	IC 280-412916/22	60.0	1.384732	12.5	1164621.0	0.023079	Y
6	IC 280-412916/23	120.0	2.998655	12.5	1122770.0	0.024989	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

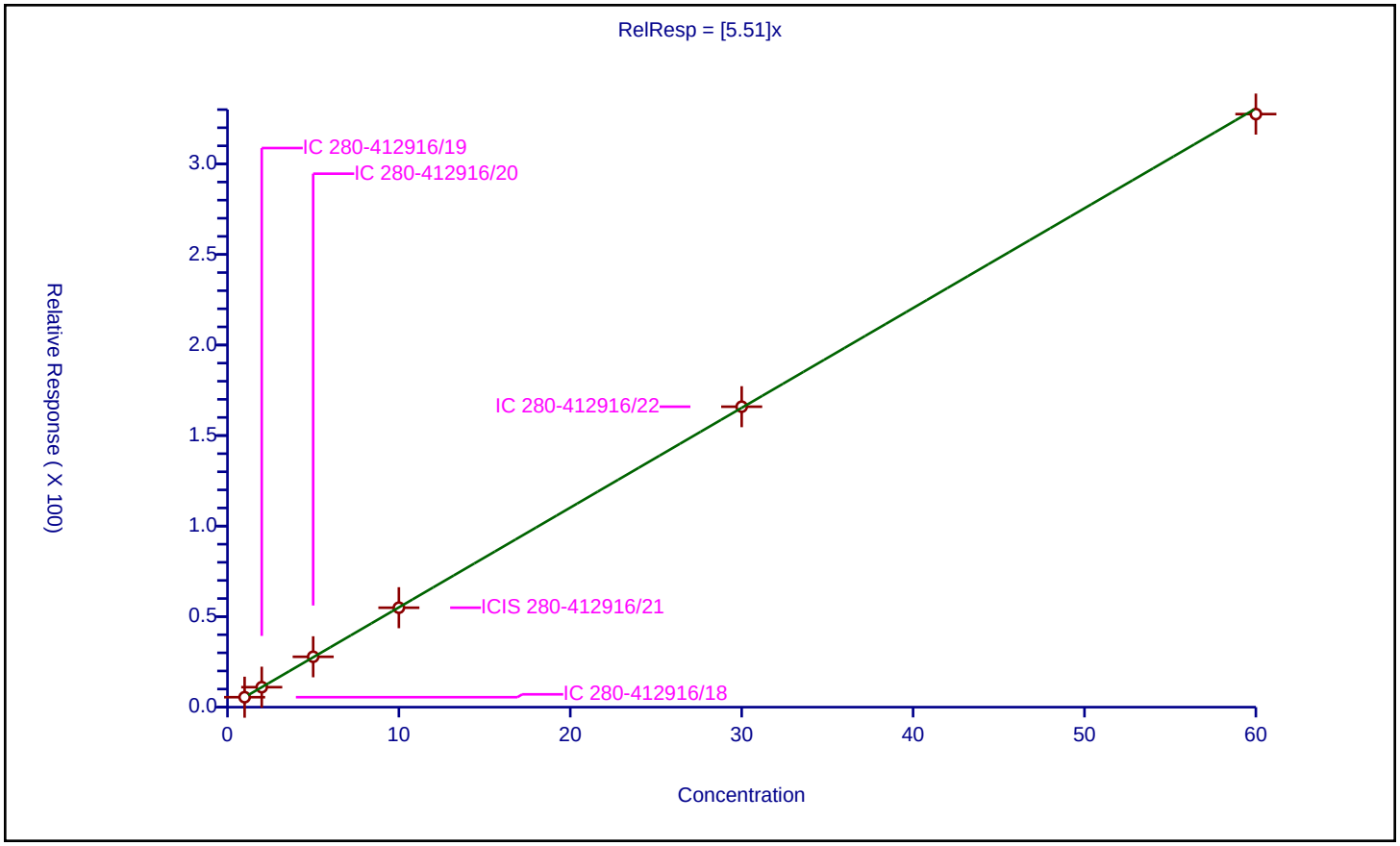
Curve Coefficients

Intercept:	0
Slope:	5.51

Error Coefficients

Standard Error:	2970000
Relative Standard Error:	0.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	5.497624	12.5	222819.0	5.497624	Y
2	IC 280-412916/19	2.0	11.030972	12.5	236168.0	5.515486	Y
3	IC 280-412916/20	5.0	27.829427	12.5	223327.0	5.565885	Y
4	ICIS 280-412916/21	10.0	54.921675	12.5	227481.0	5.492167	Y
5	IC 280-412916/22	30.0	165.927838	12.5	224336.0	5.530928	Y
6	IC 280-412916/23	60.0	327.531224	12.5	222027.0	5.458854	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

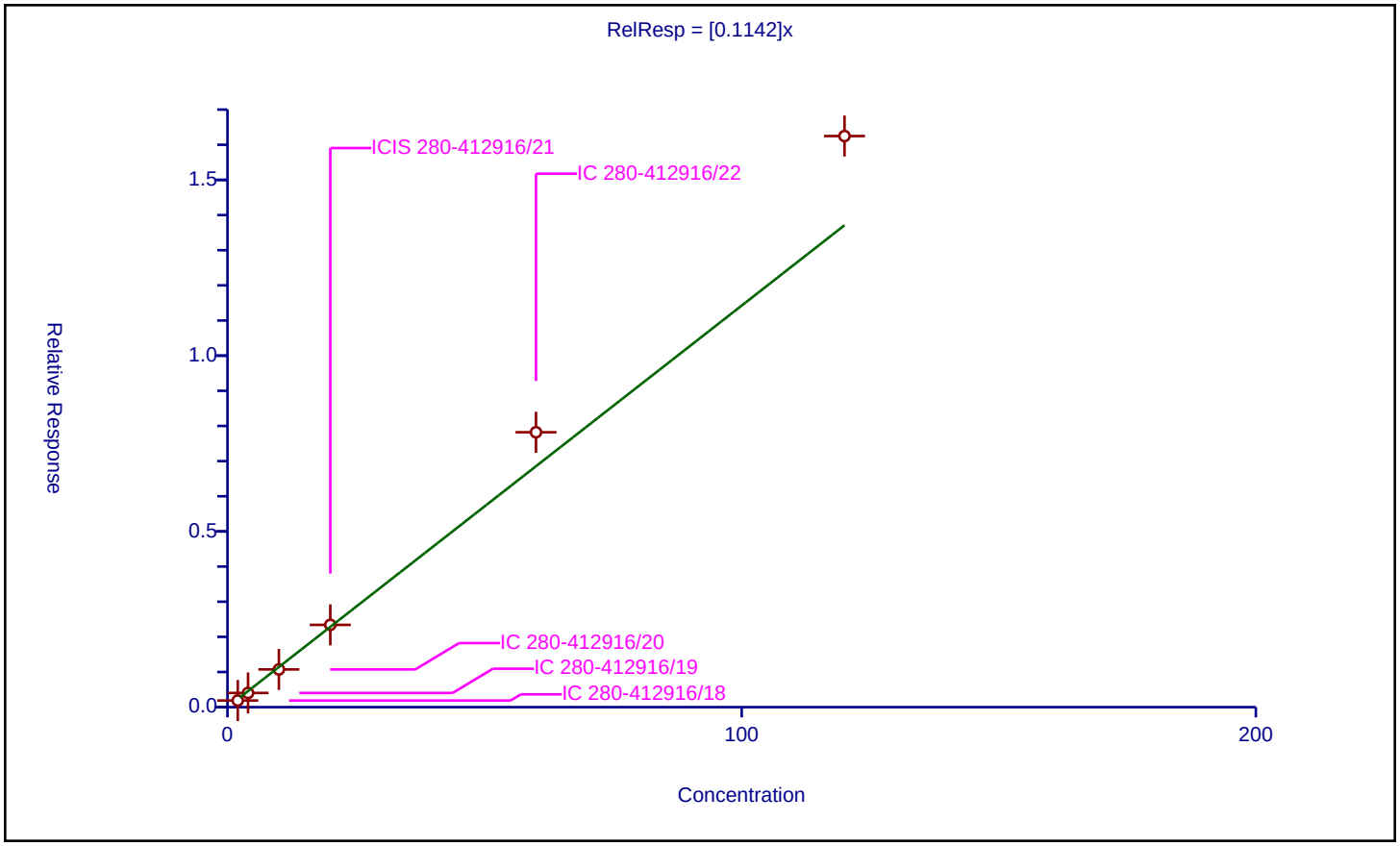
Curve Coefficients

Intercept:	0
Slope:	0.1142

Error Coefficients

Standard Error:	176000
Relative Standard Error:	14.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	2.0	0.188231	12.5	259057.0	0.094115	Y
2	IC 280-412916/19	4.0	0.404743	12.5	269307.0	0.101186	Y
3	IC 280-412916/20	10.0	1.07361	12.5	259673.0	0.107361	Y
4	ICIS 280-412916/21	20.0	2.341039	12.5	261385.0	0.117052	Y
5	IC 280-412916/22	60.0	7.821247	12.5	272765.0	0.130354	Y
6	IC 280-412916/23	120.0	16.247738	12.5	269089.0	0.135398	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

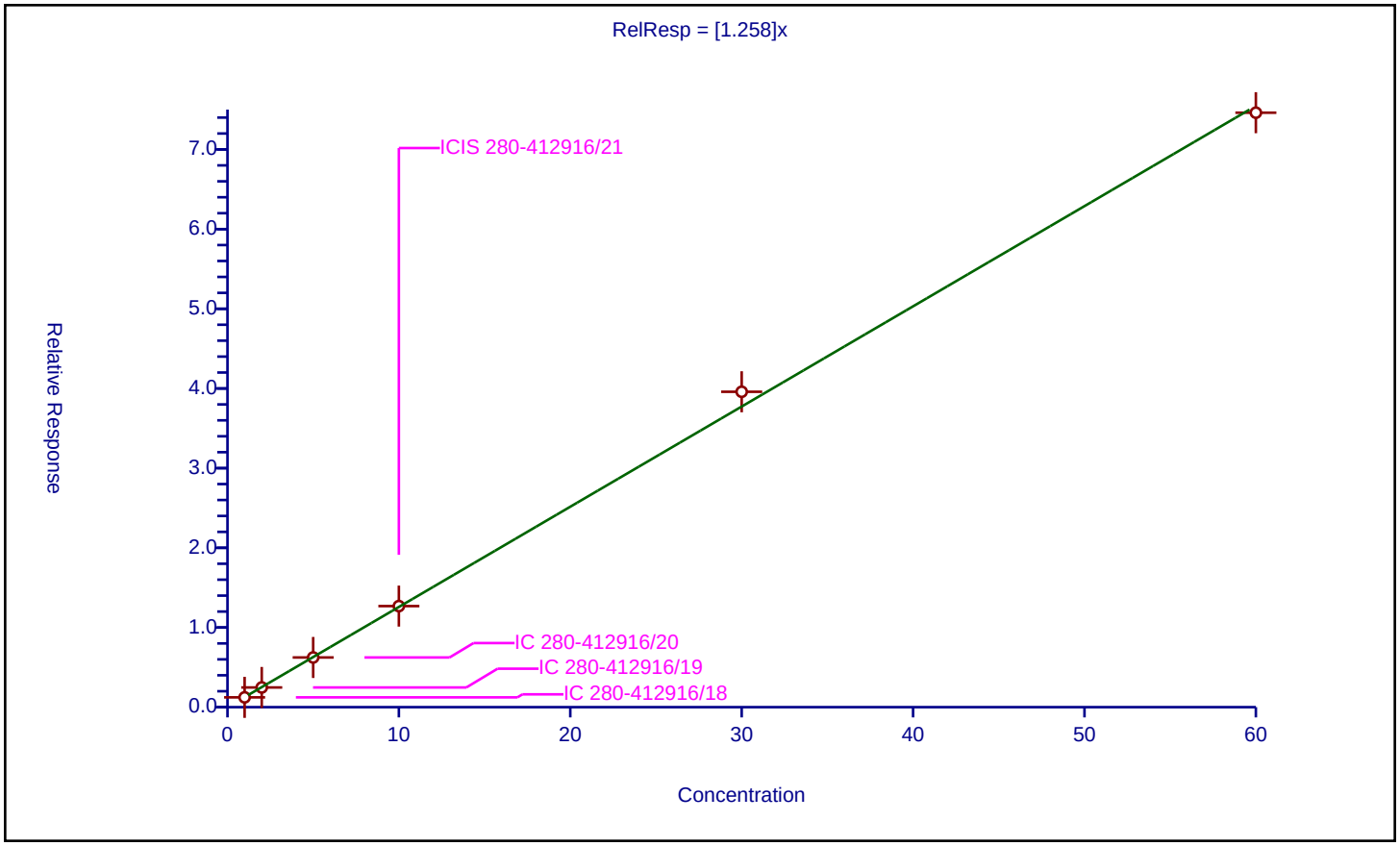
Curve Coefficients

Intercept:	0
Slope:	1.258

Error Coefficients

Standard Error:	827000
Relative Standard Error:	2.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	1.231775	12.5	259057.0	1.231775	Y
2	IC 280-412916/19	2.0	2.471947	12.5	269307.0	1.235973	Y
3	IC 280-412916/20	5.0	6.236209	12.5	259673.0	1.247242	Y
4	ICIS 280-412916/21	10.0	12.684498	12.5	261385.0	1.26845	Y
5	IC 280-412916/22	30.0	39.585861	12.5	272765.0	1.319529	Y
6	IC 280-412916/23	60.0	74.611931	12.5	269089.0	1.243532	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

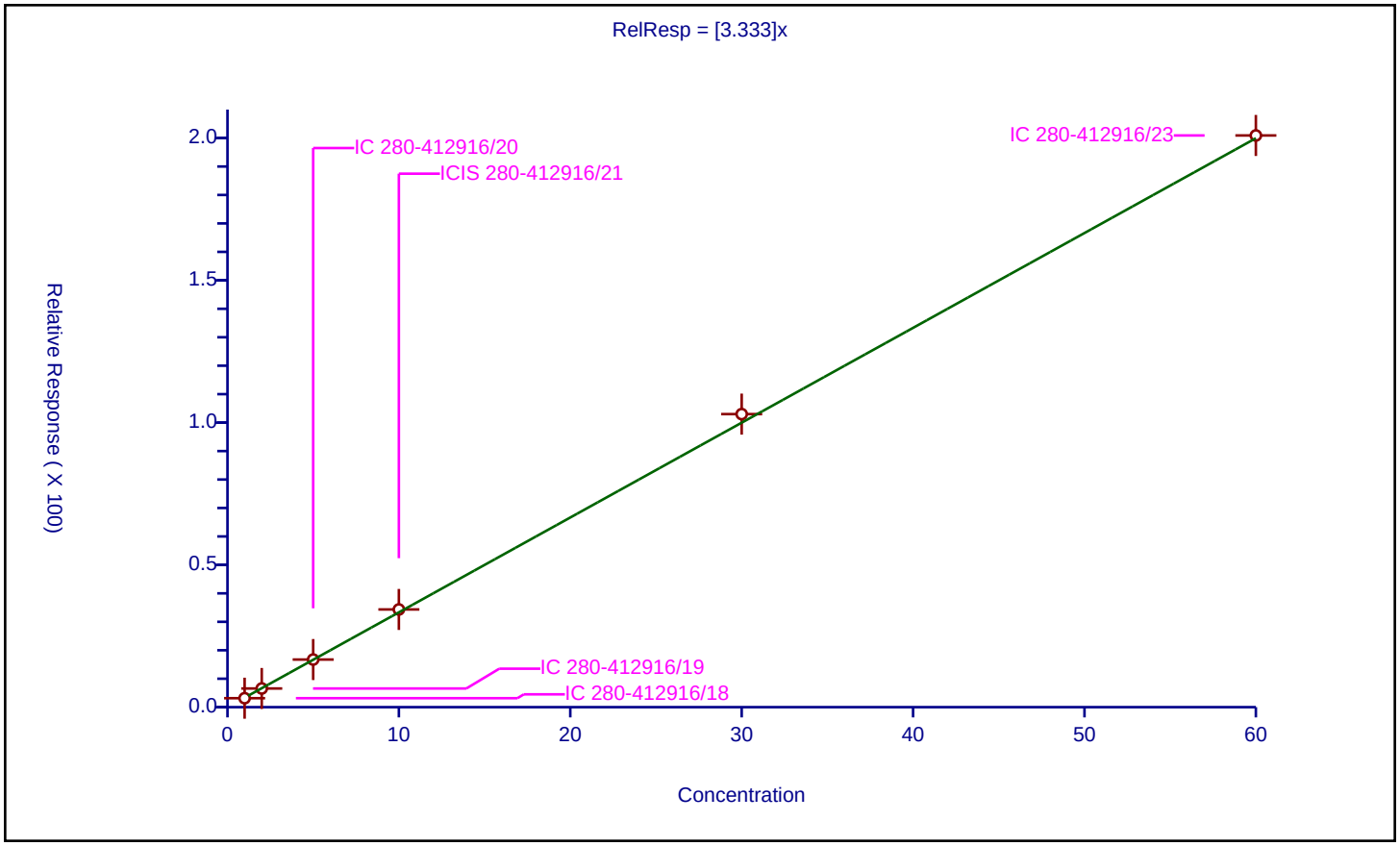
Curve Coefficients

Intercept:	0
Slope:	3.333

Error Coefficients

Standard Error:	2210000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412916/18	1.0	3.151961	12.5	259057.0	3.151961	Y
2	IC 280-412916/19	2.0	6.562028	12.5	269307.0	3.281014	Y
3	IC 280-412916/20	5.0	16.735134	12.5	259673.0	3.347027	Y
4	ICIS 280-412916/21	10.0	34.334985	12.5	261385.0	3.433498	Y
5	IC 280-412916/22	30.0	102.990624	12.5	272765.0	3.433021	Y
6	IC 280-412916/23	60.0	200.912988	12.5	269089.0	3.34855	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-413150/10	G7315.D
Level 2	IC 280-413150/11	G7316.D
Level 3	IC 280-413150/12	G7317.D
Level 4	IC 280-413150/13	G7318.D
Level 5	IC 280-413150/14	G7319.D
Level 6	IC 280-413150/15	G7320.D
Level 7	IC 280-413150/16	G7322.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.5937 0.4682	0.4347 0.4752	0.5093	0.4883	0.4865	Ave		0.4937				10.1		15.0			
Chloromethane	0.7247 0.4484	0.5329 0.4756	0.5075	0.4645	0.4640	Lin2	0.0800	0.4576			0.1000				0.9990		0.9900
Vinyl chloride	0.5096 0.3691	0.4253 +++++	0.4351	0.3908	0.3936	Lin	0.1147	0.3669							1.0000		0.9900
Bromomethane	0.5090 0.2579	0.3493 0.2530	0.3031	0.2691	0.2748	Lin2	0.0759	0.2604							0.9990		0.9900
Chloroethane	0.2922 0.1787	0.2025 0.1808	0.2028	0.1774	0.1889	Lin2	0.0335	0.1785							0.9980		0.9900
Dichlorofluoromethane	0.7939 0.5067	0.5940 0.5520	0.5692	0.5107	0.5183	Lin2	0.0828	0.5165							0.9980		0.9900
Trichlorofluoromethane	0.6241 0.5553	0.6748 0.5883	0.6142	0.6105	0.5148	Ave		0.5974				8.6		15.0			
Ethyl ether	0.1677 0.1421	0.1524 0.1540	0.1478	0.1467	0.1458	Ave		0.1509				5.6		15.0			
Acrolein	0.0180 0.0159	0.0163 0.0165	0.0160	0.0155	0.0156	Ave		0.0163				5.3		15.0			
Acetone	+++++ 0.0294	0.0707 0.0297	0.0452	0.0331	0.0298	Lin1	0.1453	0.0285							0.9980		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3408 0.2727	0.3281 0.2923	0.3178	0.3097	0.3030	Ave		0.3092				7.3		15.0			
1,1-Dichloroethene	0.4749 0.3828	0.4499 0.4126	0.4436	0.4268	0.4228	Ave		0.4305				6.8		30.0			
Methyl iodide	0.7701 0.6738	0.7591 0.7295	0.7279	0.7200	0.7243	Ave		0.7292				4.2		15.0			
Methyl acetate	+++++ 0.0822	0.1034 0.0893	0.0998	0.0910	0.0925	Ave		0.0931				8.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.8258 0.8196	0.9494 0.8688	0.9036	0.9014	0.8939	Ave		0.8804				5.2		15.0			
Carbon disulfide	2.1248 1.8192	2.0716 1.9333	2.1053	2.0339	2.0130	Ave		2.0144				5.3		15.0			
t-Butyl alcohol	+++++ 1.3916	1.7488 1.5193	1.5230	1.5165	1.3942	Ave		1.5156				8.6		15.0			
Methylene Chloride	+++++ 0.3327	0.4284 0.3497	0.4009	0.3813	0.3683	Ave		0.3769				9.2		15.0			
Acrylonitrile	0.0493 0.0381	0.0423 0.0413	0.0398	0.0405	0.0399	Ave		0.0416				8.7		15.0			
Methyl tert-butyl ether	+++++ 0.3538	+++++ 0.3865	0.3649	0.3657	0.3711	Ave		0.3684				3.2		15.0			
trans-1,2-Dichloroethene	0.4894 0.4058	0.4678 0.4284	0.4668	0.4505	0.4443	Ave		0.4504				6.2		15.0			
Hexane	3.7424 3.5486	3.8925 3.5388	3.9550	3.8993	3.8562	Ave		3.7761				4.5		15.0			
Vinyl acetate	0.3670 0.3218	0.2646 0.3409	0.2926	0.2940	0.3096	Ave		0.3129				10.8		15.0			
1,1-Dichloroethane	0.8842 0.6783	0.8147 0.7172	0.7901	0.7691	0.7453	Ave		0.7713			0.1000	8.7		15.0			
2-Butanone (MEK)	+++++ 0.0440	0.0535 0.0479	0.0457	0.0426	0.0418	Ave		0.0459				9.4		15.0			
cis-1,2-Dichloroethene	0.4975 0.3819	0.4274 0.4040	0.4231	0.4161	0.4095	Ave		0.4228				8.6		15.0			
sec-Butyl Alcohol	+++++ 1.3127	1.4393 1.4954	1.4007	1.2711	1.3130	Ave		1.3720				6.3		15.0			
2,2-Dichloropropane	0.6692 0.4818	0.6077 0.5312	0.5553	0.5549	0.5344	Ave		0.5621				10.7		15.0			
Bromochloromethane	0.1443 0.1180	0.1344 0.1280	0.1333	0.1313	0.1310	Ave		0.1315				6.0		15.0			
Chloroform	0.6954 0.5639	0.6827 0.5973	0.6516	0.6456	0.6279	Ave		0.6378				7.2		30.0			
Tetrahydrofuran	+++++ 0.0270	0.0335 0.0307	0.0319	0.0299	0.0301	Ave		0.0305				7.2		15.0			
1,1,1-Trichloroethane	0.6343 0.4927	0.5807 0.5291	0.5741	0.5583	0.5500	Ave		0.5599				7.9		15.0			
Isobutyl alcohol	+++++ 0.4807	0.3732 0.4729	0.4899	0.4673	0.5101	Ave		0.4657				10.2		15.0			
Cyclohexane	0.8703 0.7697	0.8334 0.7899	0.8270	0.8313	0.8435	Ave		0.8236				4.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.6341 0.5444	0.5917 0.5618	0.5957	0.6031	0.5921	Ave		0.5890				4.9		15.0			
Carbon tetrachloride	0.4972 0.4488	0.5205 0.4753	0.5138	0.4993	0.4909	Ave		0.4923				4.9		15.0			
1,2-Dichloroethane	0.3399 0.2493	0.3029 0.2642	0.2932	0.2801	0.2729	Ave		0.2861				10.4		15.0			
Benzene	1.6728 1.3474	1.5484 1.4211	1.5159	1.4732	1.4483	Ave		1.4896				7.0		15.0			
Trichloroethene	0.4612 0.3762	0.4241 0.4009	0.4116	0.4118	0.4079	Ave		0.4134				6.2		15.0			
2-Pentanone	+++++ 0.0656	0.0635 0.0771	0.0545	0.0608	0.0637	Ave		0.0642				11.5		15.0			
1,2-Dichloropropane	0.4252 0.3113	0.3746 0.3259	0.3542	0.3452	0.3468	Ave		0.3547				10.4		30.0			
Methylcyclohexane	0.6850 0.6064	0.6769 0.6331	0.6834	0.6803	0.6767	Ave		0.6631				4.6		15.0			
1,4-Dioxane	+++++ 0.0009	0.0006 0.0010	0.0008	0.0008	0.0009	Lin2	-0.007	0.0009							0.9960		0.9900
Dibromomethane	0.1462 0.1261	0.1442 0.1353	0.1390	0.1382	0.1358	Ave		0.1378				4.8		15.0			
Bromodichloromethane	0.4077 0.3358	0.3630 0.3672	0.3556	0.3643	0.3647	Ave		0.3655				5.9		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0367	+++++ 0.0428	0.0281	0.0268	0.0313	Lin1	-0.048	0.0412							0.9910		0.9900
cis-1,3-Dichloropropene	1.7049 1.9365	1.8797 2.0035	1.8315	1.9028	1.9734	Ave		1.8903				5.3		15.0			
4-Methyl-2-pentanone (MIBK)	0.1073 0.1028	0.0950 0.1111	0.0829	0.0892	0.0975	Ave		0.0980				10.2		15.0			
Toluene	1.6261 1.3041	1.4921 1.3745	1.4166	1.3968	1.4046	Ave		1.4307				7.2		30.0			
trans-1,3-Dichloropropene	0.5075 0.2502	0.3175 0.2783	0.2778	0.2545	0.2662	Lin2	0.0752	0.2517							0.9960		0.9900
Ethyl methacrylate	0.4055 0.6863	0.5731 0.7422	0.5695	0.6219	0.6643	Lin2	-0.084	0.6712							0.9950		0.9900
1,1,2-Trichloroethane	0.1644 0.1371	0.1567 0.1484	0.1528	0.1510	0.1483	Ave		0.1512				5.5		15.0			
1,3-Dichloropropane	1.2552 1.2392	1.4229 1.2376	1.3829	1.3135	1.3103	Ave		1.3088				5.5		15.0			
2-Hexanone	0.2861 0.3111	0.2811 0.3096	0.2307	0.2555	0.2763	Ave		0.2786				10.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.7065 1.4345	1.6957 1.4149	1.6316	1.6079	1.5738	Ave		1.5807				7.4		15.0			
Dibromochloromethane	0.8918 0.9201	0.9217 0.9522	0.9214	0.9260	0.9420	Ave		0.9250				2.1		15.0			
1,2-Dibromoethane	0.6193 0.7103	0.7387 0.7317	0.7384	0.7304	0.7495	Ave		0.7169				6.2		15.0			
1-Chlorohexane	2.0973 2.6626	2.3721 2.6930	2.5126	2.7136	2.7719	Ave		2.5462				9.4		15.0			
Chlorobenzene	4.0415 3.7627	4.2741 3.7391	4.1965	4.0648	4.0034	Ave		4.0117			0.3000	5.0		15.0			
1,1,1,2-Tetrachloroethane	1.0071 1.1020	1.2387 1.0881	1.1953	1.1784	1.2010	Ave		1.1444				7.1		15.0			
Ethylbenzene	1.9798 2.1019	2.2588 2.0667	2.2044	2.2456	2.2852	Ave		2.1632				5.3		30.0			
m,p-Xylene	2.2271 2.5921	2.7377 2.5572	2.6607	2.8359	2.7696	Ave		2.6258				7.7		15.0			
o-Xylene	1.7933 2.2726	2.3612 2.2137	2.4090	2.5035	2.4855	Ave		2.2913				10.6		15.0			
Styrene	2.2707 3.5524	3.0031 3.5651	3.2806	3.6670	3.7237	Lin2	-0.418	3.6039							0.9980		0.9900
Bromoform	0.3357 0.4320	0.4269 0.4700	0.3960	0.4294	0.4330	Ave		0.4176			0.1000	10.1		15.0			
Isopropylbenzene	4.3604 5.3208	5.1968 5.4751	5.2470	5.7506	5.4904	Ave		5.2630				8.3		15.0			
Cyclohexanone	+++++ 0.0135	0.0128 0.0139	0.0125	0.0121	0.0124	Ave		0.0129				5.4		15.0			
1,1,2,2-Tetrachloroethane	0.7073 0.5633	0.6426 0.6037	0.6276	0.6162	0.5964	Ave		0.6224			0.3000	7.2		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1033	0.0411 0.1231	0.1096	0.0999	0.1014	Lin1	-0.068	0.1172							0.9920		0.9900
1,2,3-Trichloropropane	+++++ 0.1115	0.1200 0.1201	0.1205	0.1225	0.1220	Ave		0.1195				3.4		15.0			
Bromobenzene	1.0120 0.9829	1.1003 1.0425	1.0515	1.1003	1.0460	Ave		1.0479				4.1		15.0			
N-Propylbenzene	1.1274 1.3155	1.3634 1.3427	1.3474	1.4745	1.3830	Ave		1.3363				7.9		15.0			
2-Chlorotoluene	1.0987 1.1030	1.2134 1.1027	1.1839	1.2358	1.1705	Ave		1.1583				4.9		15.0			
1,3,5-Trimethylbenzene	3.4861 3.9975	4.2913 4.0127	4.1871	4.5426	4.2547	Ave		4.1103				8.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	1.0382 1.0862	1.1952 1.1316	1.1563	1.2179	1.1378	Ave		1.1376				5.4		15.0			
tert-Butylbenzene	3.2069 3.8342	3.9133 3.9422	3.7828	4.2488	3.9045	Ave		3.8332				8.2		15.0			
1,2,4-Trimethylbenzene	3.0783 3.8906	4.0925 3.9886	3.8570	4.3010	4.0171	Ave		3.8893				9.9		15.0			
sec-Butylbenzene	0.7852 0.9689	0.9739 0.9883	0.9732	1.0580	1.0063	Ave		0.9648				8.8		15.0			
4-Isopropyltoluene	3.3477 4.2494	4.1016 4.3364	4.1959	4.6536	4.3526	Ave		4.1767				9.7		15.0			
1,3-Dichlorobenzene	2.0881 1.8937	2.2106 1.9530	2.1244	2.1327	1.9954	Ave		2.0568				5.5		15.0			
1,4-Dichlorobenzene	2.1830 1.8435	2.2712 1.9207	2.1335	2.1227	1.9903	Ave		2.0664				7.4		15.0			
n-Butylbenzene	3.6578 4.5587	4.2509 4.8553	4.3408	4.8460	4.6228	Ave		4.4475				9.4		15.0			
1,2-Dichlorobenzene	1.5244 1.4755	1.6809 1.5970	1.6121	1.7016	1.5465	Ave		1.5912				5.2		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0606	0.0469 0.0737	0.0494	0.0603	0.0581	Lin1	-0.036	0.0693							0.9910		0.9900
1,2,4-Trichlorobenzene	0.8083 0.9328	0.8046 1.0911	0.7953	0.8976	0.9176	Ave		0.8925				11.8		15.0			
Hexachlorobutadiene	0.7308 0.7153	0.8004 0.8055	0.7429	0.7767	0.7204	Ave		0.7560				5.0		15.0			
Naphthalene	+++++ 0.9525	0.6146 1.1525	0.6416	0.7835	0.8786	Lin1	-0.802	1.0846							0.9900		0.9900
1,2,3-Trichlorobenzene	0.7549 0.6918	0.6882 0.8015	0.6459	0.7279	0.6980	Ave		0.7154				7.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-413150/10	G7315.D
Level 2	IC 280-413150/11	G7316.D
Level 3	IC 280-413150/12	G7317.D
Level 4	IC 280-413150/13	G7318.D
Level 5	IC 280-413150/14	G7319.D
Level 6	IC 280-413150/15	G7320.D
Level 7	IC 280-413150/16	G7322.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	20702 1922471	57280 3859220	133036	332863	656013	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Lin2	25270 1840958	70216 3862475	132552	316587	625691	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Lin	17772 1515361	56041 +++++	113637	266401	530715	0.300 30.0	1.00 +++++	2.00	5.00	10.0
Bromomethane	FB	Lin2	17750 1058920	46021 2054485	79170	183404	370519	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Lin2	10190 733737	26680 1468501	52965	120936	254705	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Lin2	27683 2080466	78275 4482780	148672	348079	698881	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	21765 2279962	88914 4777748	160424	416150	694136	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	5849 583529	20080 1250701	38598	100011	196591	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	6290 651568	21474 1341094	41765	105886	209688	3.00 300	10.00 600	20.0	50.0	100.0
Acetone	FB	Lin1	+++++ 483662	37278 965984	47205	90284	160783	+++++ 120	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	11884 1119523	43233 2373687	83012	211110	408629	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethene	FB	Ave	16562 1571557	59288 3351091	115872	290936	570135	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl iodide	FB	Ave	26854 2766378	100029 5924234	190111	490767	976644	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	+++++ 675405	27238 1451006	52154	124069	249528	+++++ 60.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	28798 3365187	125094 7056262	236015	614380	1205329	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	74096 7469448	272967 15701452	549888	1386329	2714400	0.300 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	+++++ 276075	10294 616303	19077	48528	92561	+++++ 300	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	+++++ 1365843	56443 2840390	104707	259901	496686	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Ave	17183 1562951	55779 3354113	103938	276095	538532	3.00 300	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	+++++ 1452798	+++++ 3139091	95321	249274	500433	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	17067 1666087	61644 3479090	121932	307070	599085	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	27201 2815627	95002 5913666	194550	509936	1012521	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	25593 2642525	69732 5536724	152841	400781	834875	0.600 60.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	30835 2785043	107350 5824443	206368	524225	1004977	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 722037	28174 1556339	47766	116135	225261	+++++ 120	4.00 240	8.00	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	17347 1568120	56313 3281093	110511	283632	552173	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd9	Ave	+++++ 781268	25416 1819791	52637	122019	261500	+++++ 900	30.0 1800	60.0	150	300
2,2-Dichloropropane	FB	Ave	23335 1978127	80070 4314110	145030	378224	720654	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	5033 484588	17711 1039283	34808	89487	176629	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	24251 2315485	89953 4850776	170188	440052	846665	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 221472	8816 498016	16688	40769	81093	+++++ 60.0	2.00 120	4.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	22119 2023087	76524 4297049	149939	380534	741601	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Ave	+++++ 238411	5492 479615	15341	37384	84656	+++++ 750	25.0 1500	50.0	125	250
Cyclohexane	FB	Ave	30348 3160282	109818 6415440	216012	566648	1137336	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	22111 2235436	77973 4562819	155592	411047	798437	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	17337 1842943	68584 3859989	134209	340345	661978	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	11853 1023417	39912 2145395	76591	190924	367985	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	58333 5532478	204029 11541329	395948	1004180	1952934	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	16081 1544845	55883 3255727	107500	280679	550005	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	+++++ 1076983	33452 2503400	56925	165721	343705	+++++ 120	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	14827 1278197	49359 2646562	92513	235262	467638	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	23888 2489886	89191 5142023	178489	463704	912450	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 71199	1469 163869	4036	11145	23702	+++++ 600	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	5098 517737	19003 1098674	36302	94228	183102	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	14216 1378967	47836 2982326	92885	248338	491753	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 150833	+++++ 347889	7342	18293	42142	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	12392 1536505	45877 3347921	90095	248837	518147	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	14973 1689009	50079 3610605	86569	243069	525660	1.20 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	56703 5354661	196607 11162712	370015	952100	1894021	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin2	17696 1027105	41838 2260474	72560	173478	358982	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	2947 544550	13987 1240265	28013	81333	174435	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	5732 563083	20649 1205420	39905	102924	199981	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	9123 983229	34727 2068184	68024	171777	344037	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	8318 987263	27438 2069532	45385	133679	290241	1.20 120	4.00 240	8.00	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	12403 1138169	41385 2364453	80259	210276	413238	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	6482 730066	22495 1591180	45323	121103	247341	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	4501 563574	18029 1222735	36320	95519	196805	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	15244 2112648	57894 4500159	123597	354873	727822	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	29375 2985474	104317 6248340	206428	531578	1051174	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	7320 874366	30233 1818269	58796	154108	315350	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	14390 1667749	55129 3453524	108434	293671	600024	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m,p-Xylene	CBNZ d5	Ave	16187 2056719	66818 4273191	130882	370871	727226	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	13034 1803181	57628 3699186	118501	327404	652624	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Lin2	16504 2818665	73295 5957533	161374	479561	977729	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	2440 342741	10420 785388	19481	56152	113684	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	37067 5294094	156076 11033411	324510	908996	1824030	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	+++++ 427995	12499 930444	24681	63181	130401	+++++ 1200	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	6013 560426	19298 1216544	38813	97408	198130	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	+++++ 102759	1233 248019	6778	15788	33672	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ 110946	3605 242072	7453	19369	40537	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	8603 977988	33044 2100848	65031	173928	347517	0.300 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	9584 1308844	40947 2705861	83332	233079	459476	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	9340 1097489	36443 2222106	73221	195341	388856	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	29635 3977405	128881 8086392	258959	718048	1413484	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	8826 1080730	35895 2280509	71517	192510	378001	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	27261 3814971	117527 7944351	233958	671609	1297147	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	26168 3871015	122910 8037953	238544	679857	1334565	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	6675 964056	29250 1991681	60192	167234	334323	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413150

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 10:43 Calibration End Date: 04/30/2018 13:57 Calibration ID: 32256

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	28458 4228099	123184 8738723	259505	735604	1446019	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	17751 1884189	66392 3935723	131387	337117	662900	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	18557 1834241	68212 3870686	131954	335541	661211	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	31094 4535789	127668 9784499	268468	766007	1535782	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	12959 1468098	50482 3218277	99706	268976	513774	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++ 60257	1408 148509	3055	9526	19316	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	6871 928111	24165 2198770	49185	141889	304834	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	6212 711717	24039 1623287	45948	122767	239348	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Lin1	+++++ 947761	18458 2322512	39681	123844	291874	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	6417 688366	20668 1615125	39946	115058	231884	0.300 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Apr-2018 10:43:30 ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:36 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 01-May-2018 08:02:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.871	4.878	-0.007	0	135309	250.0	250.0	
* 1 Fluorobenzene	96	6.898	6.895	0.003	100	1452979	12.5	12.5	M
* 2 Chlorobenzene-d5	119	9.584	9.591	-0.007	88	302844	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.651	11.647	0.004	97	354202	12.5	12.5	
25 Dichlorodifluoromethane	85	3.218	3.234	-0.016	96	20702	0.3000	0.3607	
27 Chloromethane	50	3.435	3.441	-0.006	99	25270	0.3000	0.3003	
28 Vinyl chloride	62	3.553	3.569	-0.016	71	17772	0.3000	0.1042	
31 Bromomethane	94	3.907	3.904	0.003	92	17750	0.3000	0.2950	
32 Chloroethane	64	3.966	3.963	0.003	95	10190	0.3000	0.3034	
33 Dichlorofluoromethane	67	4.104	4.110	-0.006	95	27683	0.3000	0.3008	
35 Trichlorofluoromethane	101	4.212	4.218	-0.006	97	21765	0.3000	0.3134	
38 Ethyl ether	59	4.350	4.356	-0.006	89	5849	0.3000	0.3334	
41 Acrolein	56	4.478	4.484	-0.006	96	6290	3.00	3.33	
42 Acetone	43		4.582				ND	ND	U
44 1,1,2-Trichloro-1,2,2-trif	151	4.606	4.612	-0.006	95	11884	0.3000	0.3307	
45 1,1-Dichloroethene	96	4.625	4.622	0.003	95	16562	0.3000	0.3310	
47 Iodomethane	142	4.783	4.799	-0.016	99	26854	0.3000	0.3168	
48 Methyl acetate	43		4.828				ND	ND	
49 3-Chloro-1-propene	41	4.871	4.878	-0.007	63	28798	0.3000	0.2814	
50 Carbon disulfide	76	4.881	4.878	0.003	57	74096	0.3000	0.3164	
51 2-Methyl-2-propanol	59		4.937				ND	ND	U
52 Methylene Chloride	84		4.966				ND	ND	U
53 Acrylonitrile	53	5.117	5.114	0.003	95	17183	3.00	3.55	
54 Methyl tert-butyl ether	73		5.163				ND	ND	U
55 trans-1,2-Dichloroethene	96	5.196	5.193	0.003	95	17067	0.3000	0.3260	
56 Hexane	57	5.383	5.380	0.003	91	27201	0.3000	0.2973	
57 Vinyl acetate	43	5.471	5.468	0.003	94	25593	0.6000	0.7036	
59 1,1-Dichloroethane	63	5.511	5.517	-0.006	96	30835	0.3000	0.3439	
62 2-Butanone (MEK)	43		5.921				ND	ND	U
66 cis-1,2-Dichloroethene	96	5.963	5.970	-0.007	82	17347	0.3000	0.3530	
65 sec-Butyl Alcohol	45		5.980				ND	ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.983	5.999	-0.016	89	23335	0.3000	0.3572	
69 Chlorobromomethane	128	6.160	6.167	-0.007	90	5033	0.3000	0.3294	
70 Chloroform	83	6.180	6.186	-0.006	94	24251	0.3000	0.3271	
71 Tetrahydrofuran	42		6.206				ND	ND	
73 1,1,1-Trichloroethane	97	6.406	6.413	-0.007	98	22119	0.3000	0.3399	
72 Isobutyl alcohol	41		6.423				ND	ND	U
74 Cyclohexane	56	6.495	6.491	0.004	96	30348	0.3000	0.3170	
75 1,1-Dichloropropene	75	6.524	6.521	0.003	97	22111	0.3000	0.3230	
76 Carbon tetrachloride	117	6.564	6.560	0.004	94	17337	0.3000	0.3030	
77 1,2-Dichloroethane	62	6.682	6.678	0.004	92	11853	0.3000	0.3565	
79 Benzene	78	6.701	6.708	-0.007	97	58333	0.3000	0.3369	
13 n-Heptane	43		6.826				ND	ND	U
81 Trichloroethene	95	7.203	7.210	-0.007	95	16081	0.3000	0.3347	
82 2-Pentanone	43		7.259				ND	ND	
84 1,2-Dichloropropane	63	7.390	7.397	-0.007	93	14827	0.3000	0.3596	
85 Methylcyclohexane	55	7.420	7.416	0.004	94	23888	0.3000	0.3099	
86 1,4-Dioxane	88		7.466				ND	ND	
87 Dibromomethane	93	7.508	7.505	0.003	94	5098	0.3000	0.3182	
88 Dichlorobromomethane	83	7.587	7.593	-0.006	95	14216	0.3000	0.3346	
90 2-Chloroethyl vinyl ether	63		7.780				ND	ND	
91 cis-1,3-Dichloropropene	75	7.971	7.977	-0.006	85	12392	0.3000	0.2706	
92 4-Methyl-2-pentanone (MIBK	43	8.049	8.056	-0.007	95	14973	1.20	1.31	
93 Toluene	91	8.305	8.312	-0.007	98	56703	0.3000	0.3410	
95 trans-1,3-Dichloropropene	75	8.453	8.430	0.023	39	17696	0.3000	0.3060	
94 Ethyl methacrylate	69	8.453	8.449	0.004	1	2947	0.3000	0.3065	
96 1,1,2-Trichloroethane	97	8.620	8.617	0.003	84	5732	0.3000	0.3260	
98 1,3-Dichloropropane	76	8.787	8.784	0.003	93	9123	0.3000	0.2877	
97 2-Hexanone	43	8.787	8.794	-0.007	46	8318	1.20	1.23	
99 Tetrachloroethene	164	8.827	8.823	0.004	96	12403	0.3000	0.3239	
100 Chlorodibromomethane	129	9.014	9.020	-0.006	88	6482	0.3000	0.2892	
102 Ethylene Dibromide	107	9.181	9.168	0.013	96	4501	0.3000	0.2591	
103 1-Chlorohexane	91	9.506	9.512	-0.006	89	15244	0.3000	0.2471	
104 Chlorobenzene	112	9.614	9.611	0.003	95	29375	0.3000	0.3022	
105 1,1,1,2-Tetrachloroethane	131	9.663	9.660	0.003	76	7320	0.3000	0.2640	
106 Ethylbenzene	106	9.683	9.679	0.004	98	14390	0.3000	0.2746	
107 m-Xylene & p-Xylene	106	9.781	9.788	-0.007	0	16187	0.3000	0.2544	
108 o-Xylene	106	10.175	10.181	-0.006	92	13034	0.3000	0.2348	
109 Styrene	104	10.175	10.181	-0.006	74	16504	0.3000	0.3049	
110 Bromoform	173	10.381	10.388	-0.007	88	2440	0.3000	0.2412	
111 Isopropylbenzene	105	10.500	10.496	0.004	96	37067	0.3000	0.2485	
113 Cyclohexanone	55		10.604				ND	ND	U
114 1,1,2,2-Tetrachloroethane	83	10.716	10.713	0.003	65	6013	0.3000	0.3409	
115 trans-1,4-Dichloro-2-buten	53		10.762				ND	ND	
116 1,2,3-Trichloropropane	110		10.781				ND	ND	
117 Bromobenzene	156	10.814	10.821	-0.007	95	8603	0.3000	0.2897	
118 N-Propylbenzene	120	10.854	10.850	0.004	99	9584	0.3000	0.2531	
120 2-Chlorotoluene	126	10.962	10.959	0.003	95	9340	0.3000	0.2846	
119 1,3,5-Trimethylbenzene	105	10.982	10.978	0.004	93	29635	0.3000	0.2544	
121 4-Chlorotoluene	126	11.041	11.047	-0.006	98	8826	0.3000	0.2738	
122 tert-Butylbenzene	119	11.277	11.273	0.004	94	27261	0.3000	0.2510	
123 1,2,4-Trimethylbenzene	105	11.306	11.313	-0.007	95	26168	0.3000	0.2374	
124 sec-Butylbenzene	134	11.464	11.460	0.004	95	6675	0.3000	0.2441	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.572	11.569	0.003	97	28458	0.3000	0.2405	
126 1,3-Dichlorobenzene	146	11.602	11.598	0.004	96	17751	0.3000	0.3046	
127 1,4-Dichlorobenzene	146	11.670	11.667	0.003	91	18557	0.3000	0.3169	
129 n-Butylbenzene	91	11.936	11.933	0.003	98	31094	0.3000	0.2467	
130 1,2-Dichlorobenzene	146	12.015	12.021	-0.006	93	12959	0.3000	0.2874	
131 1,2-Dibromo-3-Chloropropan	157		12.730				ND	ND	
132 1,2,4-Trichlorobenzene	180	13.629	13.625	0.004	90	6871	0.3000	0.2717	
133 Hexachlorobutadiene	225	13.786	13.792	-0.006	87	6212	0.3000	0.2900	
134 Naphthalene	128		13.940				ND	ND	U
135 1,2,3-Trichlorobenzene	180	14.229	14.225	0.004	88	6417	0.3000	0.3165	
S 142 1,2-Dichloroethene, Total	96				0		0.6000	0.6790	
S 140 1,2-Dichloroethene, Total	1				0		0.6000	0.6790	
S 138 Total BTEX	1				0			1.44	
S 137 Xylenes, Total (URS)	1				0		0.6000	0.4892	
S 141 Xylenes, Total	106				0		0.6000	0.4892	
S 136 Trihalomethanes, Total	1				0		1.20	1.19	
S 139 1,3-Dichloropropene, Total	1				0		0.6000	0.5765	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	0.15	Units: uL
MV-Gas/Ket A_00072	Amount Added:	0.15	Units: uL
MV-2cleve+AVA_00034	Amount Added:	0.15	Units: uL

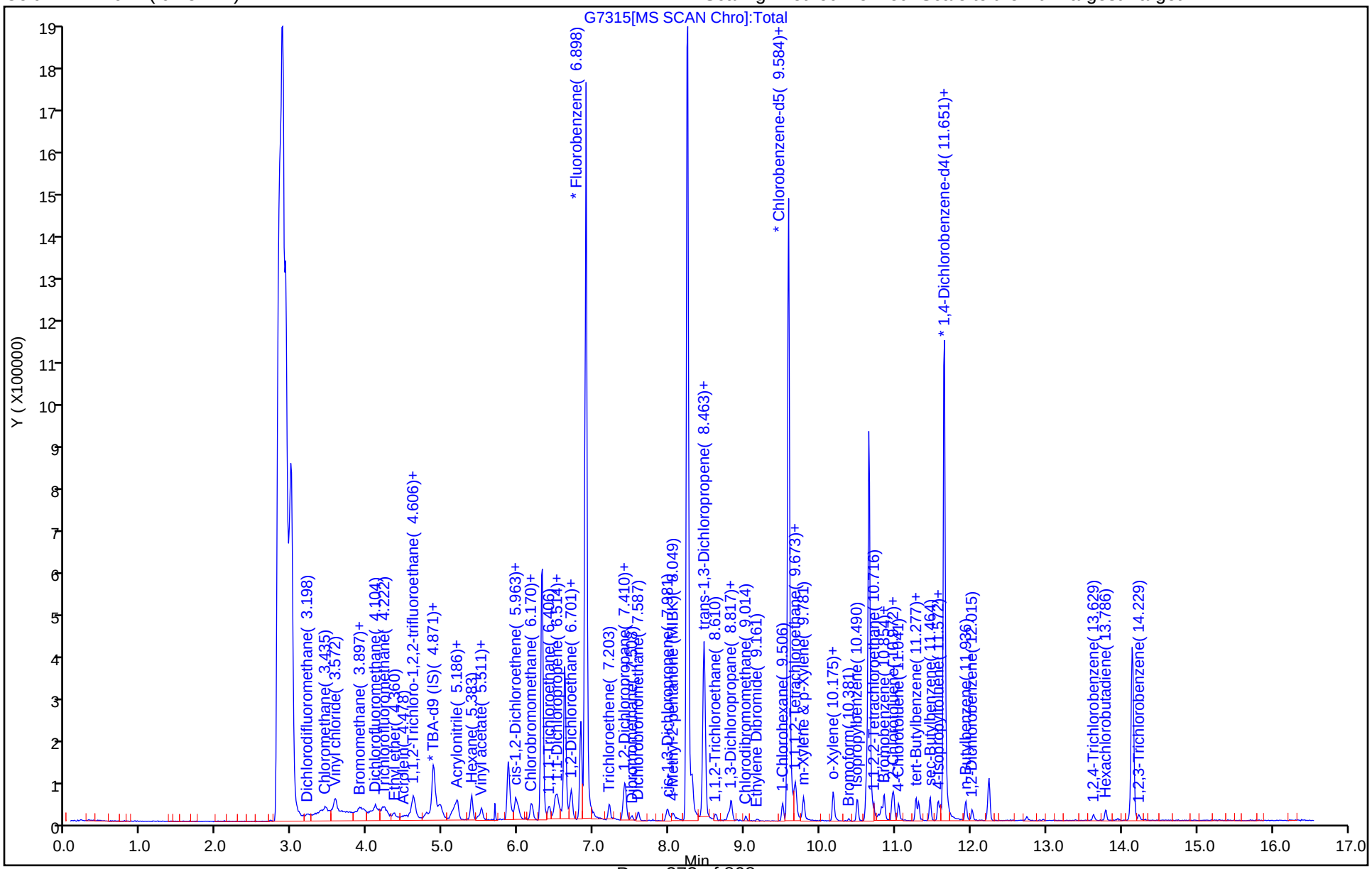
Report Date: 01-May-2018 08:03:38 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D

Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

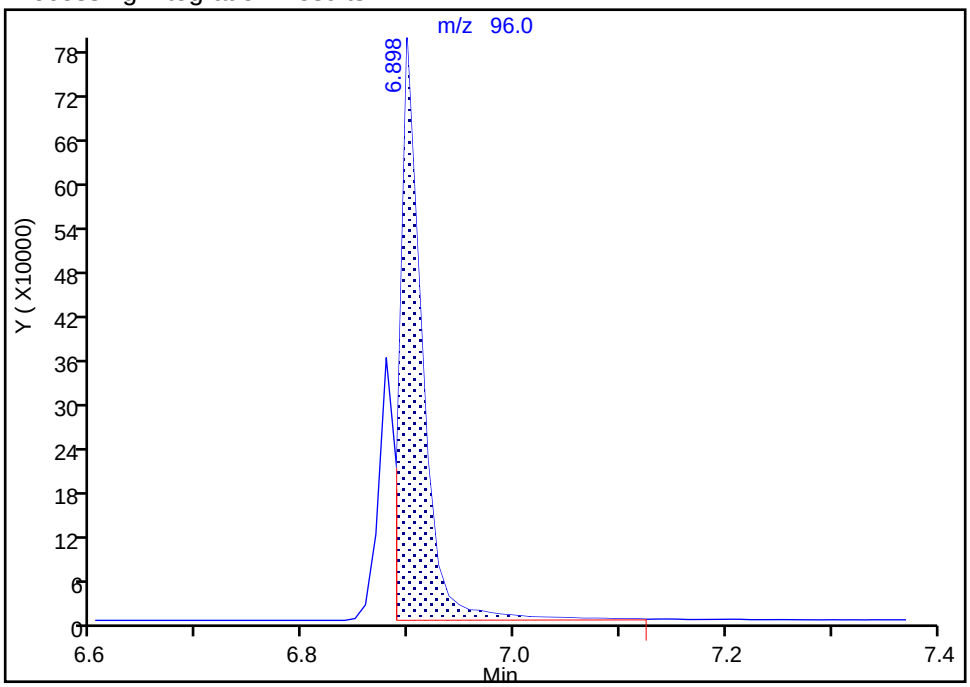
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Injection Date: 30-Apr-2018 10:43:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

* 1 Fluorobenzene, CAS: 462-06-6

Signal: 1

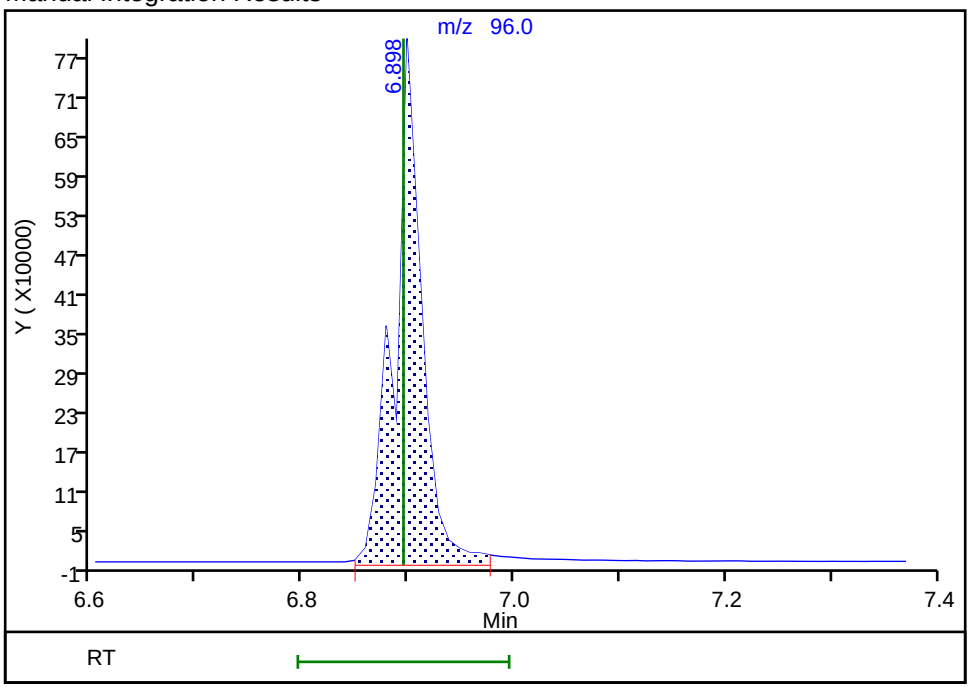
Processing Integration Results

RT: 6.90
Area: 1144766
Amount: 12.500000
Amount Units: ug/l



Manual Integration Results

RT: 6.90
Area: 1452979
Amount: 12.500000
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 12:03:26
Audit Action: Manually Integrated Audit Reason: Split Peak

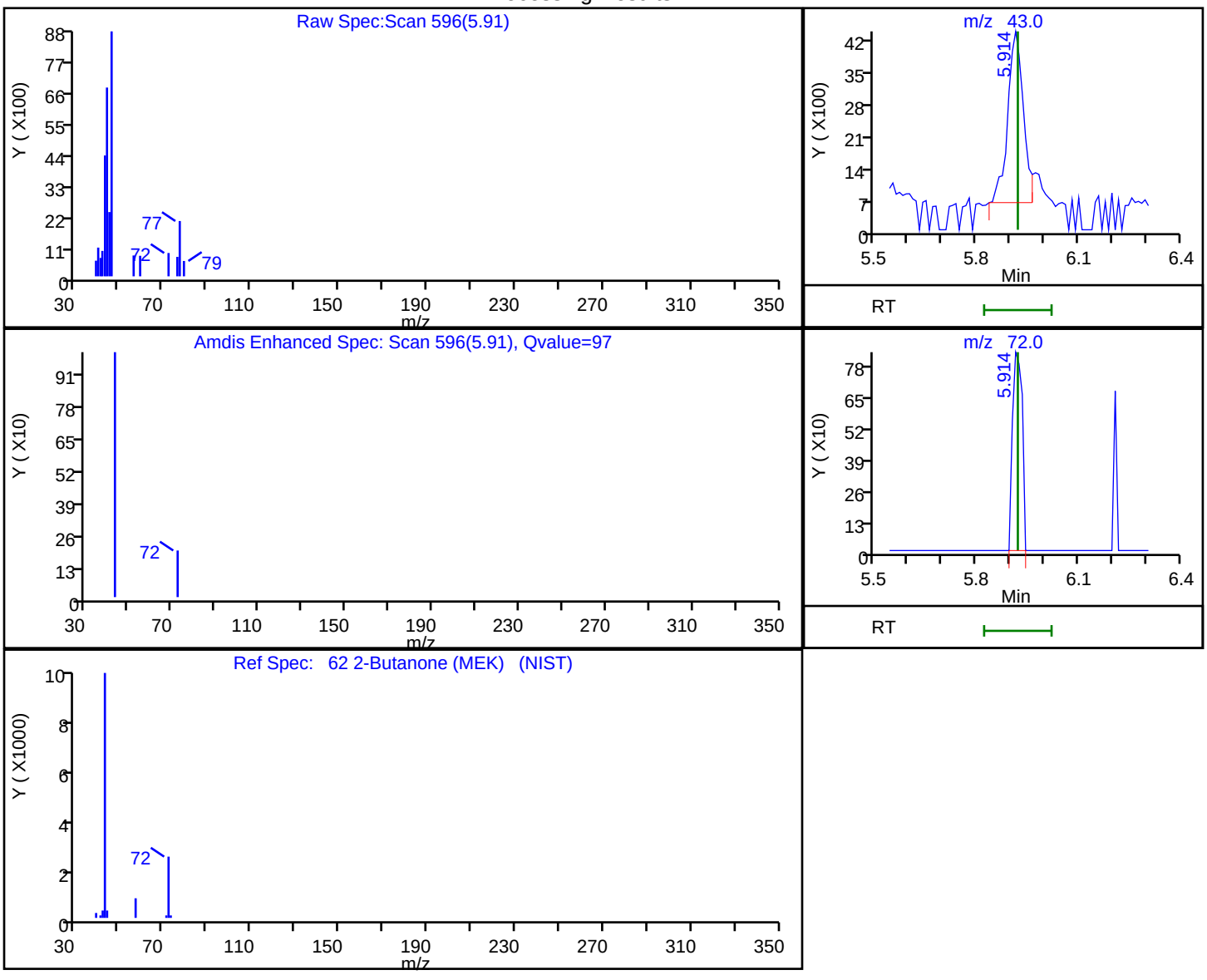
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

62 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
5.91	43.00	12053	1.201318
5.91	72.00	1671	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

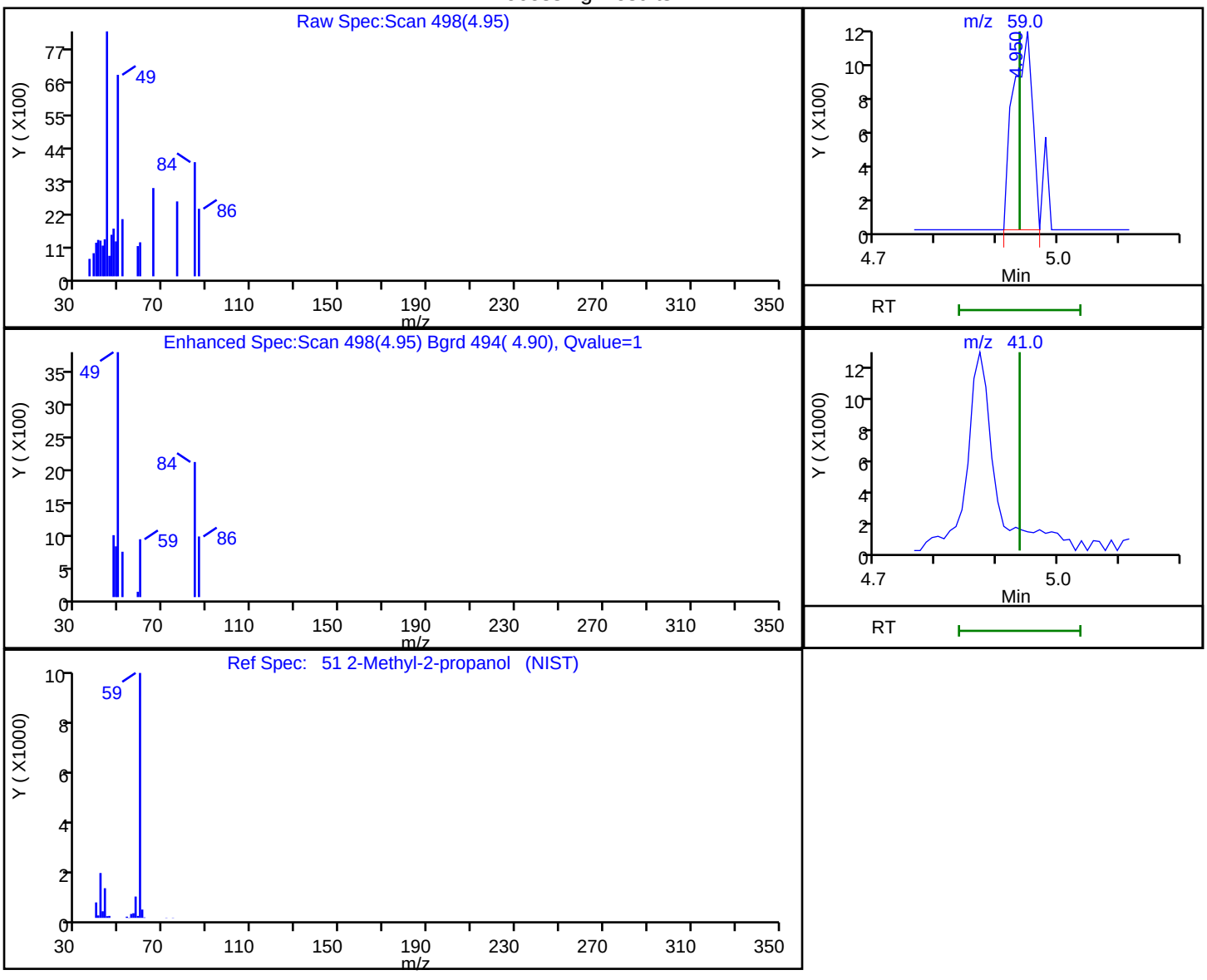
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

51 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
4.95	59.00	2494	2.914433
4.93	41.00	0	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

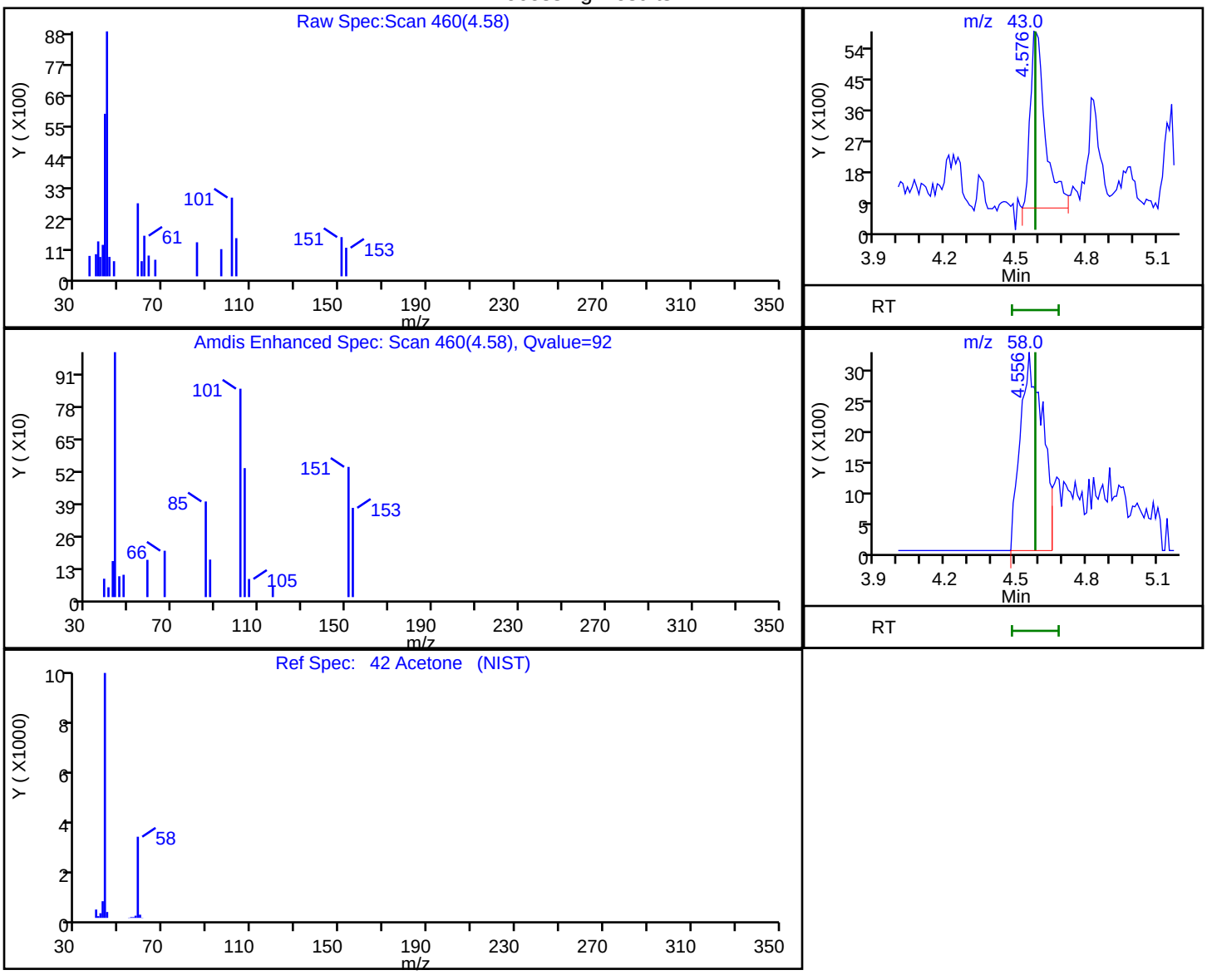
User Disabled Compound Report

TestAmerica Denver

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Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.58	43.00	23437	1.175161
4.56	58.00	21304	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

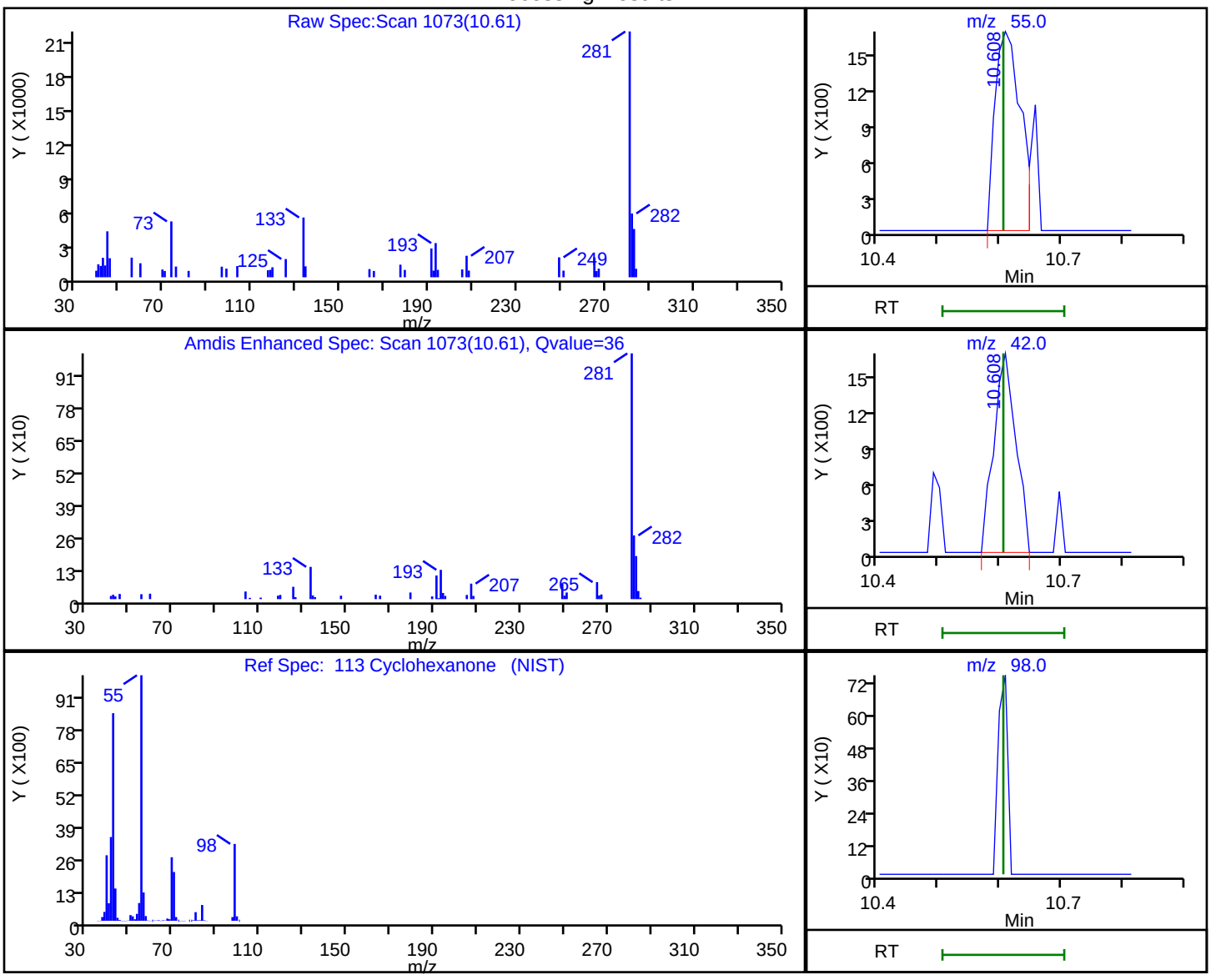
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

113 Cyclohexanone, CAS: 108-94-1

Processing Results



RT	Mass	Response	Amount
10.61	55.00	4929	12.086888
10.61	42.00	4185	
10.60	98.00	0	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

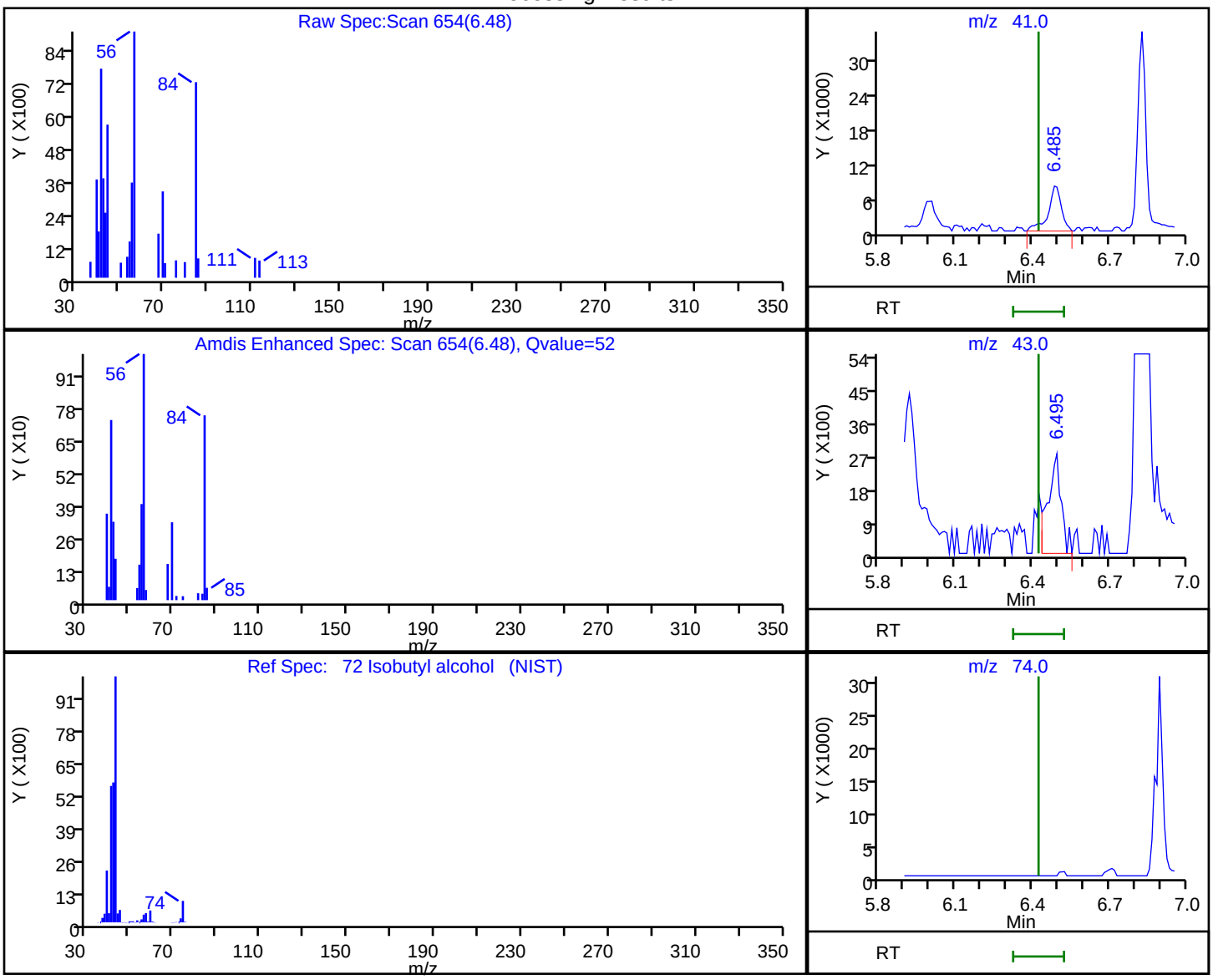
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D
Injection Date: 30-Apr-2018 10:43:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
6.48	41.00	27987	8.545784
6.49	43.00	9748	
6.49	74.00	0	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

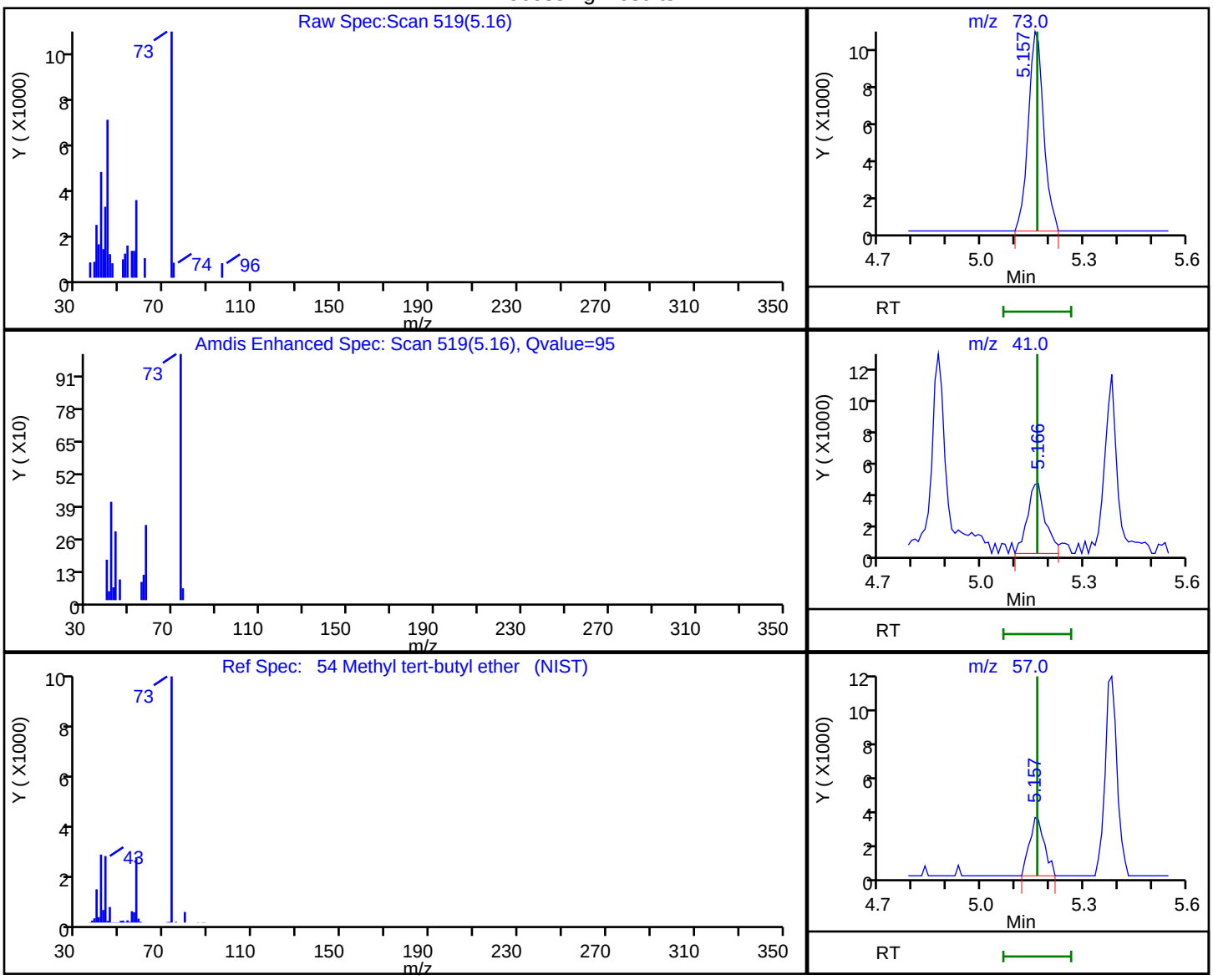
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

54 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
5.16	73.00	32143	0.438212
5.17	41.00	16312	
5.16	57.00	9808	

Reviewer: ilczyszynd, 30-Apr-2018 12:08:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

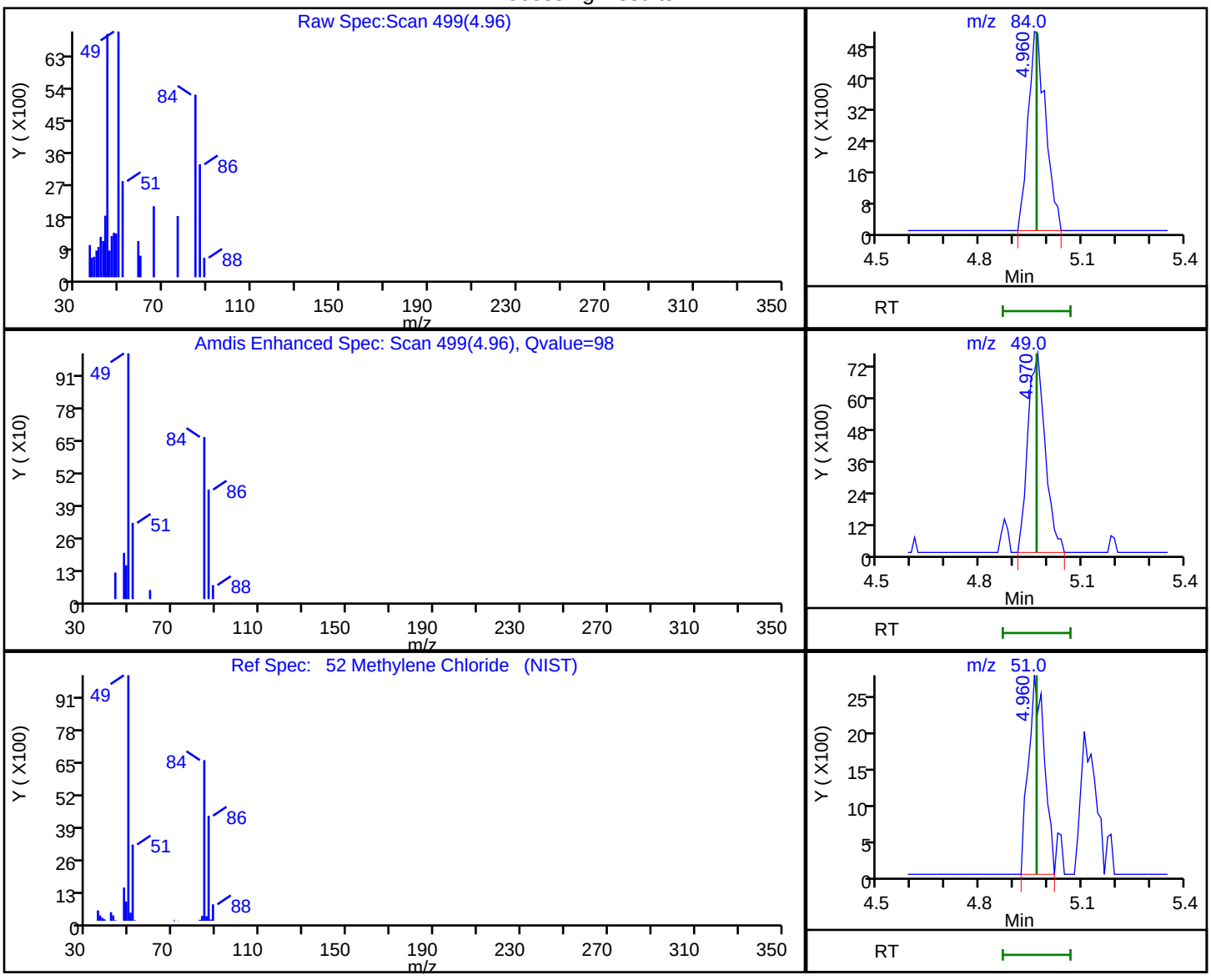
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

52 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
4.96	84.00	18499	0.298886
4.97	49.00	27354	
4.96	51.00	8880	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

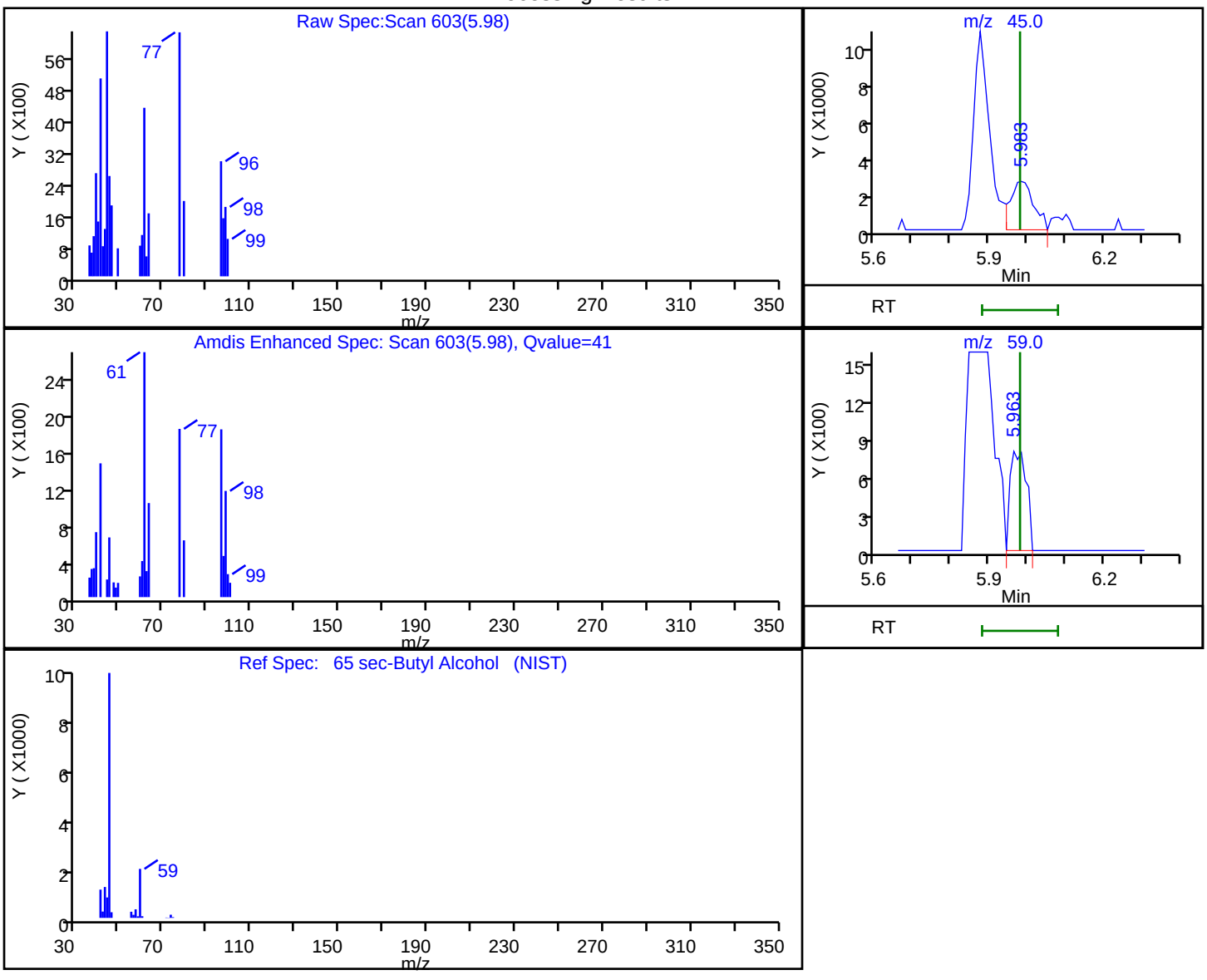
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7315.D				
Injection Date:	30-Apr-2018 10:43:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

65 sec-Butyl Alcohol, CAS: 78-92-2

Processing Results



RT	Mass	Response	Amount
5.98	45.00	10951	9.101122
5.96	59.00	2346	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7316.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Apr-2018 11:03:30 ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:40 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 30-Apr-2018 12:05:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.878	4.878	0.000	0	147155	250.0	250.0	
* 1 Fluorobenzene	96	6.895	6.895	0.000	99	1647099	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.581	9.591	-0.010	88	305082	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.647	11.647	0.000	97	375412	12.5	12.5	
25 Dichlorodifluoromethane	85	3.234	3.234	0.000	99	57280	1.00	0.8805	
27 Chloromethane	50	3.441	3.441	0.000	99	70216	1.00	0.9898	
28 Vinyl chloride	62	3.569	3.569	0.000	68	56041	1.00	0.8466	
31 Bromomethane	94	3.904	3.904	0.000	92	46021	1.00	1.05	
32 Chloroethane	64	3.963	3.963	0.000	96	26680	1.00	0.9465	
33 Dichlorofluoromethane	67	4.110	4.110	0.000	97	78275	1.00	0.9898	
35 Trichlorofluoromethane	101	4.209	4.218	-0.009	98	88914	1.00	1.13	
38 Ethyl ether	59	4.356	4.356	0.000	93	20080	1.00	1.01	
41 Acrolein	56	4.484	4.484	0.000	96	21474	10.0	10.0	
42 Acetone	43	4.592	4.582	0.010	69	37278	4.00	4.83	
44 1,1,2-Trichloro-1,2,2-trif	151	4.612	4.612	0.000	96	43233	1.00	1.06	
45 1,1-Dichloroethene	96	4.622	4.622	0.000	96	59288	1.00	1.05	
47 Iodomethane	142	4.799	4.799	0.000	100	100029	1.00	1.04	
48 Methyl acetate	43	4.828	4.828	0.000	97	27238	2.00	2.22	
50 Carbon disulfide	76	4.878	4.878	0.000	99	272967	1.00	1.03	
49 3-Chloro-1-propene	41	4.878	4.878	0.000	92	125094	1.00	1.08	
51 2-Methyl-2-propanol	59	4.927	4.937	-0.010	29	10294	10.0	11.5	
52 Methylene Chloride	84	4.966	4.966	0.000	98	56443	1.00	1.14	
53 Acrylonitrile	53	5.124	5.114	0.010	99	55779	10.0	10.2	
54 Methyl tert-butyl ether	73		5.163				ND	ND	U
55 trans-1,2-Dichloroethene	96	5.193	5.193	-0.001	96	61644	1.00	1.04	
56 Hexane	57	5.379	5.380	-0.001	92	95002	1.00	1.03	
57 Vinyl acetate	43	5.478	5.468	0.010	97	69732	2.00	1.69	
59 1,1-Dichloroethane	63	5.517	5.517	0.000	96	107350	1.00	1.06	
62 2-Butanone (MEK)	43	5.921	5.921	0.000	97	28174	4.00	4.66	
66 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	85	56313	1.00	1.01	
65 sec-Butyl Alcohol	45	5.980	5.980	0.000	43	25416	30.0	31.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.999	5.999	0.000	92	80070	1.00	1.08	
69 Chlorobromomethane	128	6.167	6.167	0.000	89	17711	1.00	1.02	
70 Chloroform	83	6.186	6.186	0.000	95	89953	1.00	1.07	
71 Tetrahydrofuran	42	6.206	6.206	0.000	43	8816	2.00	2.19	
73 1,1,1-Trichloroethane	97	6.413	6.413	0.000	97	76524	1.00	1.04	
72 Isobutyl alcohol	41	6.422	6.423	0.000	50	5492	25.0	20.0	M
74 Cyclohexane	56	6.491	6.491	0.000	97	109818	1.00	1.01	
75 1,1-Dichloropropene	75	6.521	6.521	0.000	95	77973	1.00	1.00	
76 Carbon tetrachloride	117	6.560	6.560	0.000	95	68584	1.00	1.06	
77 1,2-Dichloroethane	62	6.678	6.678	0.000	95	39912	1.00	1.06	
79 Benzene	78	6.708	6.708	0.000	97	204029	1.00	1.04	
13 n-Heptane	43		6.826				ND	ND	U
81 Trichloroethene	95	7.210	7.210	0.000	96	55883	1.00	1.03	
82 2-Pentanone	43	7.269	7.259	0.010	98	33452	4.00	3.96	
84 1,2-Dichloropropane	63	7.397	7.397	0.000	95	49359	1.00	1.06	
85 Methylcyclohexane	55	7.416	7.416	0.000	97	89191	1.00	1.02	
86 1,4-Dioxane	88	7.465	7.466	-0.001	25	1469	20.0	19.9	
87 Dibromomethane	93	7.505	7.505	0.000	91	19003	1.00	1.05	
88 Dichlorobromomethane	83	7.593	7.593	0.000	98	47836	1.00	0.99	
90 2-Chloroethyl vinyl ether	63		7.780				ND	ND	U
91 cis-1,3-Dichloropropene	75	7.967	7.977	-0.010	87	45877	1.00	0.99	
92 4-Methyl-2-pentanone (MIBK	43	8.056	8.056	0.000	96	50079	4.00	3.88	
93 Toluene	91	8.302	8.312	-0.010	98	196607	1.00	1.04	
95 trans-1,3-Dichloropropene	75	8.440	8.430	0.010	97	41838	1.00	0.9625	
94 Ethyl methacrylate	69	8.449	8.449	0.000	51	13987	1.00	0.9791	
96 1,1,2-Trichloroethane	97	8.617	8.617	0.000	91	20649	1.00	1.04	
98 1,3-Dichloropropane	76	8.784	8.784	0.000	97	34727	1.00	1.09	
97 2-Hexanone	43	8.794	8.794	0.000	53	27438	4.00	4.03	
99 Tetrachloroethene	164	8.823	8.823	0.000	97	41385	1.00	1.07	
100 Chlorodibromomethane	129	9.020	9.020	0.000	90	22495	1.00	1.00	
102 Ethylene Dibromide	107	9.168	9.168	0.000	96	18029	1.00	1.03	
103 1-Chlorohexane	91	9.512	9.512	0.000	90	57894	1.00	0.9316	
104 Chlorobenzene	112	9.611	9.611	0.000	95	104317	1.00	1.07	
105 1,1,1,2-Tetrachloroethane	131	9.660	9.660	0.000	93	30233	1.00	1.08	
106 Ethylbenzene	106	9.679	9.679	0.000	99	55129	1.00	1.04	
107 m-Xylene & p-Xylene	106	9.788	9.788	0.000	0	66818	1.00	1.04	
109 Styrene	104	10.181	10.181	0.000	79	73295	1.00	0.9492	
108 o-Xylene	106	10.181	10.181	0.000	91	57628	1.00	1.03	
110 Bromoform	173	10.388	10.388	0.000	91	10420	1.00	1.02	
111 Isopropylbenzene	105	10.496	10.496	0.000	96	156076	1.00	0.9874	
113 Cyclohexanone	55	10.614	10.604	0.010	36	12499	40.0	39.8	
114 1,1,2,2-Tetrachloroethane	83	10.713	10.713	0.000	90	19298	1.00	1.03	
115 trans-1,4-Dichloro-2-buten	53	10.850	10.762	0.088	34	1233	1.00	0.9275	
116 1,2,3-Trichloropropane	110	10.781	10.781	0.000	82	3605	1.00	1.00	
117 Bromobenzene	156	10.821	10.821	0.000	89	33044	1.00	1.05	
118 N-Propylbenzene	120	10.850	10.850	0.000	99	40947	1.00	1.02	
120 2-Chlorotoluene	126	10.959	10.959	0.000	95	36443	1.00	1.05	
119 1,3,5-Trimethylbenzene	105	10.978	10.978	0.000	94	128881	1.00	1.04	
121 4-Chlorotoluene	126	11.047	11.047	0.000	98	35895	1.00	1.05	
122 tert-Butylbenzene	119	11.273	11.273	0.000	96	117527	1.00	1.02	
123 1,2,4-Trimethylbenzene	105	11.313	11.313	0.000	95	122910	1.00	1.05	
124 sec-Butylbenzene	134	11.460	11.460	0.000	95	29250	1.00	1.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.569	11.569	0.000	98	123184	1.00	0.9820	
126 1,3-Dichlorobenzene	146	11.598	11.598	0.000	96	66392	1.00	1.07	
127 1,4-Dichlorobenzene	146	11.667	11.667	0.000	95	68212	1.00	1.10	
129 n-Butylbenzene	91	11.933	11.933	0.000	99	127668	1.00	0.9558	
130 1,2-Dichlorobenzene	146	12.021	12.021	0.000	96	50482	1.00	1.06	
131 1,2-Dibromo-3-Chloropropan	157	12.730	12.730	0.000	65	1408	1.00	1.20	
132 1,2,4-Trichlorobenzene	180	13.625	13.625	0.000	94	24165	1.00	0.9016	
133 Hexachlorobutadiene	225	13.792	13.792	0.000	95	24039	1.00	1.06	
134 Naphthalene	128	13.940	13.940	0.000	95	18458	1.00	1.31	
135 1,2,3-Trichlorobenzene	180	14.225	14.225	0.000	95	20668	1.00	0.9619	
S 142 1,2-Dichloroethene, Total	96				0		2.00	2.05	
S 141 Xylenes, Total	106				0		2.00	2.07	
S 136 Trihalomethanes, Total	1				0		4.00	4.08	
S 139 1,3-Dichloropropene, Total	1				0		2.00	1.96	
S 137 Xylenes, Total (URS)	1				0		2.00	2.07	
S 140 1,2-Dichloroethene, Total	1				0		2.00	2.05	
S 138 Total BTEX	1				0			5.20	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	0.50	Units: uL
MV-Gas/Ket A_00072	Amount Added:	0.50	Units: uL
MV-2cleve+AVA_00034	Amount Added:	0.50	Units: uL

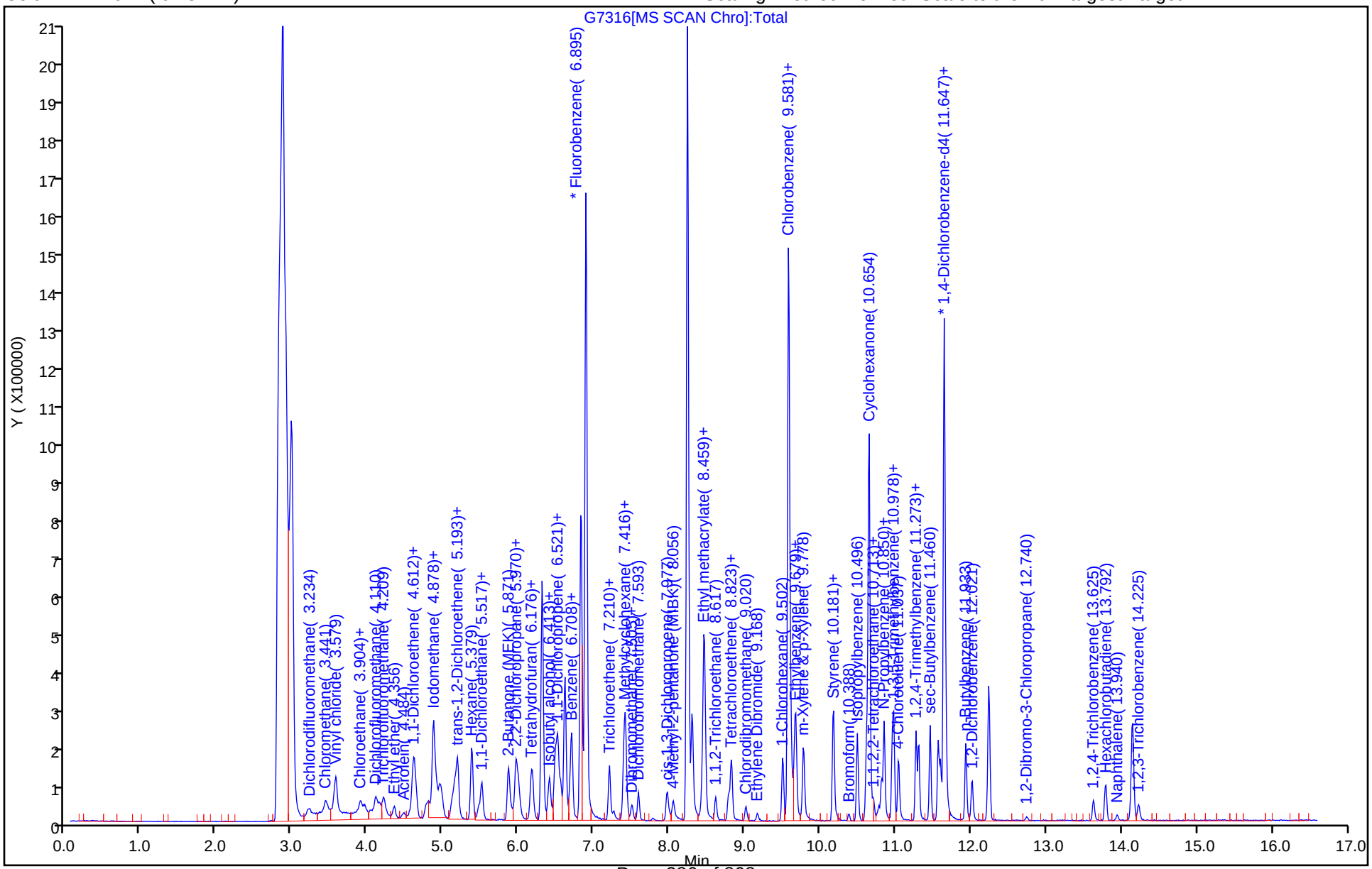
Report Date: 01-May-2018 08:03:41 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7316.D

Injection Date:	30-Apr-2018 11:03:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

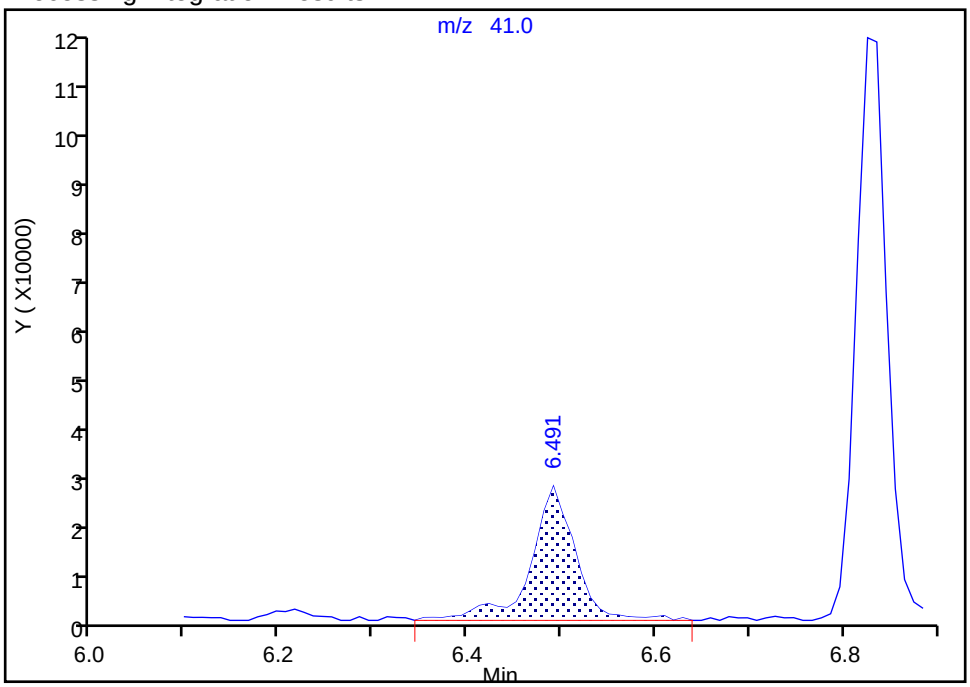
Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7316.D
Injection Date: 30-Apr-2018 11:03:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

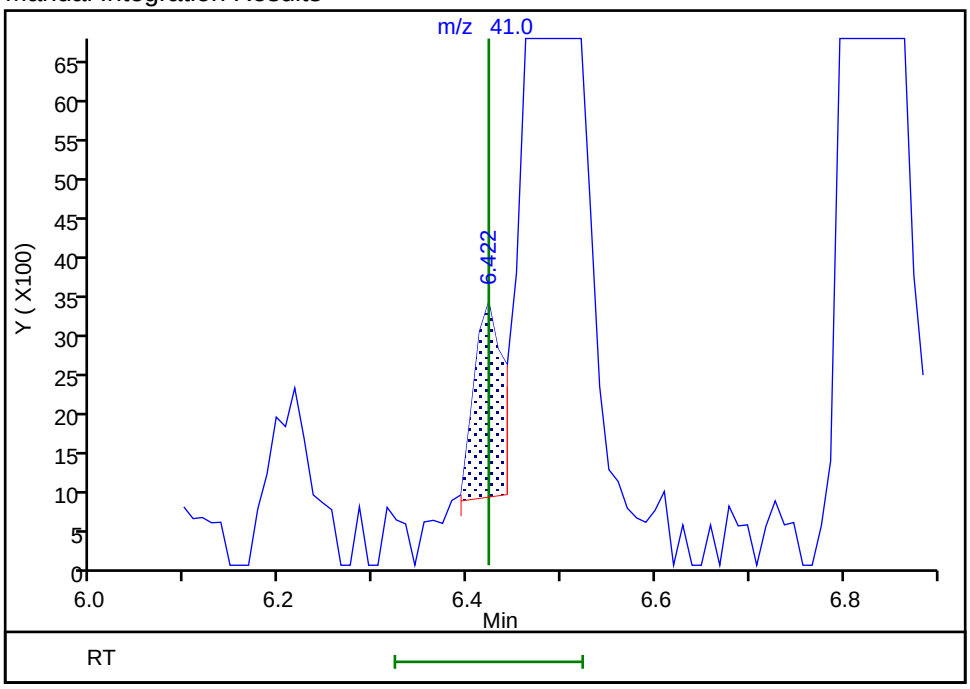
Processing Integration Results

RT: 6.49
Area: 89981
Amount: 94.799559
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 5492
Amount: 20.035501
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 13:31:51
Audit Action: Manually Integrated Audit Reason: Peak Tail

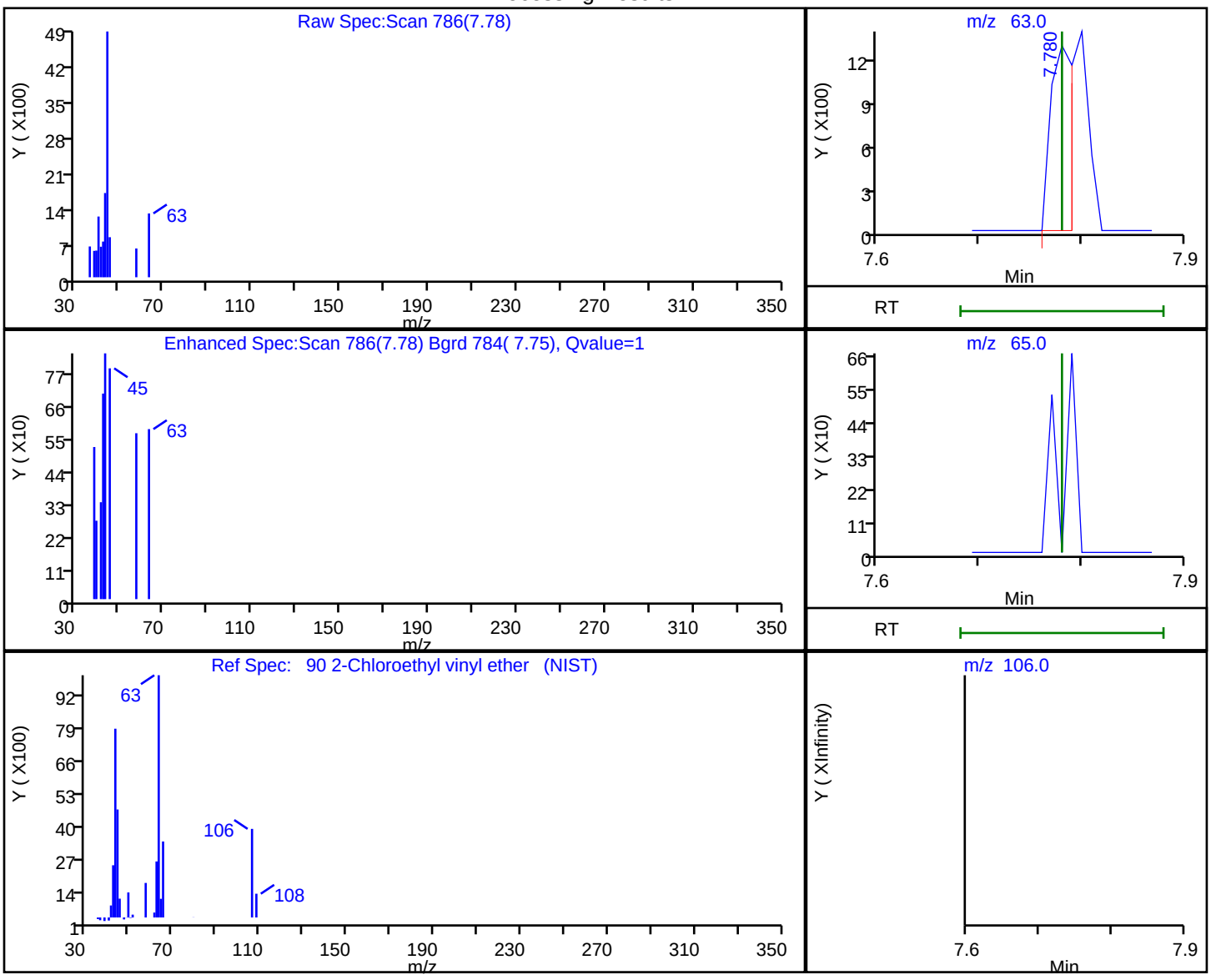
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7316.D				
Injection Date:	30-Apr-2018 11:03:30	Instrument ID:	VMS_G		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	13	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

90 2-Chloroethyl vinyl ether, CAS: 110-75-8

Processing Results



RT	Mass	Response	Amount
7.78	63.00	1984	1.000000
7.78	65.00	0	
7.78	106.00	0	

Reviewer: ilczyszynd, 30-Apr-2018 12:05:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

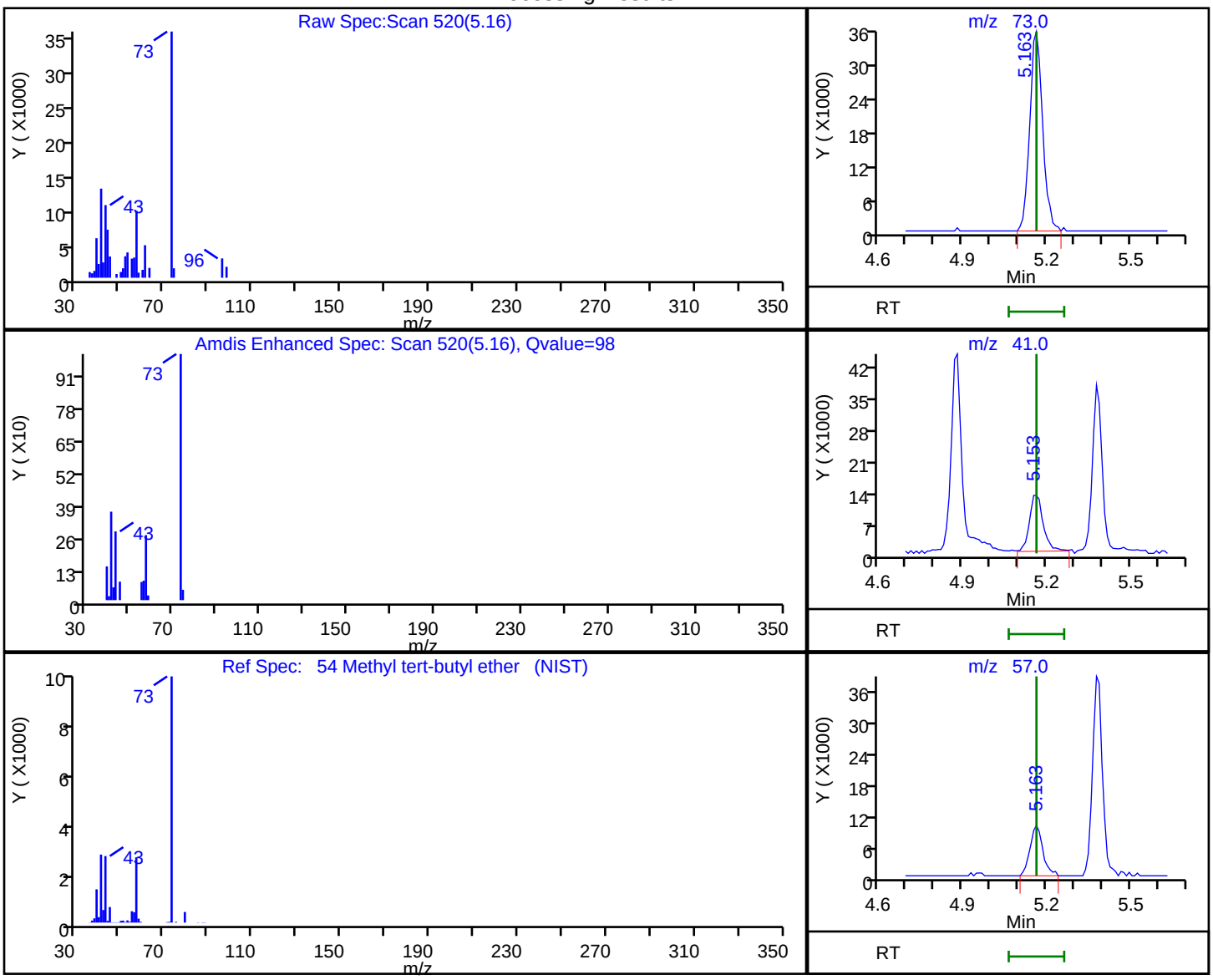
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7316.D
Injection Date: 30-Apr-2018 11:03:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

54 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
5.16	73.00	114865	3.116641
5.15	41.00	43308	
5.16	57.00	31019	

Reviewer: ilczyszynd, 30-Apr-2018 12:10:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7317.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Apr-2018 11:23:30 ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:42 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 30-Apr-2018 12:06:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.876	4.878	-0.002	0	156576	250.0	250.0	
* 1 Fluorobenzene	96	6.893	6.895	-0.002	98	1632446	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.589	9.591	-0.002	87	307442	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.645	11.647	-0.002	96	386545	12.5	12.5	
25 Dichlorodifluoromethane	85	3.223	3.234	-0.011	99	133036	2.00	2.06	
27 Chloromethane	50	3.449	3.441	0.008	99	132552	2.00	2.04	
28 Vinyl chloride	62	3.567	3.569	-0.002	98	113637	2.00	2.06	
31 Bromomethane	94	3.901	3.904	-0.003	91	79170	2.00	2.04	
32 Chloroethane	64	3.970	3.963	0.007	98	52965	2.00	2.08	
33 Dichlorofluoromethane	67	4.108	4.110	-0.002	97	148672	2.00	2.04	
35 Trichlorofluoromethane	101	4.207	4.218	-0.011	98	160424	2.00	2.06	
38 Ethyl ether	59	4.354	4.356	-0.002	93	38598	2.00	1.96	
41 Acrolein	56	4.482	4.484	-0.002	98	41765	20.0	19.7	
42 Acetone	43	4.580	4.582	-0.002	98	47205	8.00	7.59	
44 1,1,2-Trichloro-1,2,2-trif	151	4.610	4.612	-0.002	96	83012	2.00	2.06	
45 1,1-Dichloroethene	96	4.620	4.622	-0.002	98	115872	2.00	2.06	
47 Iodomethane	142	4.797	4.799	-0.002	99	190111	2.00	2.00	
48 Methyl acetate	43	4.826	4.828	-0.002	98	52154	4.00	4.29	
49 3-Chloro-1-propene	41	4.876	4.878	-0.002	90	236015	2.00	2.05	
50 Carbon disulfide	76	4.876	4.878	-0.002	100	549888	2.00	2.09	
51 2-Methyl-2-propanol	59	4.945	4.937	0.007	92	19077	20.0	20.1	
52 Methylene Chloride	84	4.964	4.966	-0.002	99	104707	2.00	2.13	
53 Acrylonitrile	53	5.122	5.114	0.008	98	103938	20.0	19.1	
54 Methyl tert-butyl ether	73	5.161	5.163	-0.002	98	95321	2.00	1.98	
55 trans-1,2-Dichloroethene	96	5.190	5.193	-0.003	96	121932	2.00	2.07	
56 Hexane	57	5.377	5.380	-0.003	92	194550	2.00	2.09	
57 Vinyl acetate	43	5.476	5.468	0.008	96	152841	4.00	3.74	
59 1,1-Dichloroethane	63	5.515	5.517	-0.002	96	206368	2.00	2.05	
62 2-Butanone (MEK)	43	5.919	5.921	-0.002	98	47766	8.00	7.97	
66 cis-1,2-Dichloroethene	96	5.968	5.970	-0.002	84	110511	2.00	2.00	
65 sec-Butyl Alcohol	45	5.978	5.980	-0.002	43	52637	60.0	61.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.997	5.999	-0.002	92	145030	2.00	1.98	
69 Chlorobromomethane	128	6.165	6.167	-0.002	90	34808	2.00	2.03	
70 Chloroform	83	6.184	6.186	-0.002	95	170188	2.00	2.04	
71 Tetrahydrofuran	42	6.214	6.206	0.008	90	16688	4.00	4.19	
73 1,1,1-Trichloroethane	97	6.411	6.413	-0.002	97	149939	2.00	2.05	
72 Isobutyl alcohol	41	6.420	6.423	-0.002	51	15341	50.0	52.6	M
74 Cyclohexane	56	6.489	6.491	-0.002	98	216012	2.00	2.01	
75 1,1-Dichloropropene	75	6.529	6.521	0.008	95	155592	2.00	2.02	
76 Carbon tetrachloride	117	6.558	6.560	-0.002	94	134209	2.00	2.09	
77 1,2-Dichloroethane	62	6.676	6.678	-0.002	94	76591	2.00	2.05	
79 Benzene	78	6.706	6.708	-0.002	97	395948	2.00	2.04	
13 n-Heptane	43	6.834	6.826	0.008	97	245123	2.00	2.02	
81 Trichloroethene	95	7.208	7.210	-0.002	96	107500	2.00	1.99	
82 2-Pentanone	43	7.267	7.259	0.008	97	56925	8.00	6.79	
84 1,2-Dichloropropane	63	7.395	7.397	-0.002	93	92513	2.00	2.00	
85 Methylcyclohexane	55	7.414	7.416	-0.002	97	178489	2.00	2.06	
86 1,4-Dioxane	88	7.463	7.466	-0.003	85	4036	40.0	41.1	
87 Dibromomethane	93	7.503	7.505	-0.002	94	36302	2.00	2.02	
88 Dichlorobromomethane	83	7.591	7.593	-0.002	98	92885	2.00	1.95	
90 2-Chloroethyl vinyl ether	63	7.788	7.780	0.008	86	7342	2.00	2.52	
91 cis-1,3-Dichloropropene	75	7.975	7.977	-0.002	91	90095	2.00	1.94	
92 4-Methyl-2-pentanone (MIBK	43	8.054	8.056	-0.002	96	86569	8.00	6.77	
93 Toluene	91	8.310	8.312	-0.002	98	370015	2.00	1.98	
95 trans-1,3-Dichloropropene	75	8.428	8.430	-0.002	99	72560	2.00	1.91	
94 Ethyl methacrylate	69	8.447	8.449	-0.002	93	28013	2.00	1.82	
96 1,1,2-Trichloroethane	97	8.615	8.617	-0.002	90	39905	2.00	2.02	
98 1,3-Dichloropropane	76	8.782	8.784	-0.002	99	68024	2.00	2.11	
97 2-Hexanone	43	8.792	8.794	-0.002	53	45385	8.00	6.62	
99 Tetrachloroethene	164	8.821	8.823	-0.002	97	80259	2.00	2.06	
100 Chlorodibromomethane	129	9.018	9.020	-0.002	91	45323	2.00	1.99	
102 Ethylene Dibromide	107	9.166	9.168	-0.002	96	36320	2.00	2.06	
103 1-Chlorohexane	91	9.510	9.512	-0.002	93	123597	2.00	1.97	
104 Chlorobenzene	112	9.609	9.611	-0.002	94	206428	2.00	2.09	
105 1,1,1,2-Tetrachloroethane	131	9.658	9.660	-0.002	93	58796	2.00	2.09	
106 Ethylbenzene	106	9.677	9.679	-0.002	99	108434	2.00	2.04	
107 m-Xylene & p-Xylene	106	9.786	9.788	-0.002	0	130882	2.00	2.03	
108 o-Xylene	106	10.179	10.181	-0.002	90	118501	2.00	2.10	
109 Styrene	104	10.179	10.181	-0.002	82	161374	2.00	1.94	
110 Bromoform	173	10.386	10.388	-0.002	93	19481	2.00	1.90	
111 Isopropylbenzene	105	10.494	10.496	-0.002	96	324510	2.00	1.99	
113 Cyclohexanone	55	10.612	10.604	0.008	95	24681	80.0	77.9	
114 1,1,2,2-Tetrachloroethane	83	10.711	10.713	-0.002	91	38813	2.00	2.02	
115 trans-1,4-Dichloro-2-buten	53	10.760	10.762	-0.002	77	6778	2.00	2.45	
116 1,2,3-Trichloropropane	110	10.779	10.781	-0.002	83	7453	2.00	2.02	
117 Bromobenzene	156	10.819	10.821	-0.002	90	65031	2.00	2.01	
118 N-Propylbenzene	120	10.848	10.850	-0.002	99	83332	2.00	2.02	
120 2-Chlorotoluene	126	10.957	10.959	-0.002	95	73221	2.00	2.04	
119 1,3,5-Trimethylbenzene	105	10.976	10.978	-0.002	94	258959	2.00	2.04	
121 4-Chlorotoluene	126	11.045	11.047	-0.002	98	71517	2.00	2.03	
122 tert-Butylbenzene	119	11.271	11.273	-0.002	94	233958	2.00	1.97	
123 1,2,4-Trimethylbenzene	105	11.311	11.313	-0.002	96	238544	2.00	1.98	
124 sec-Butylbenzene	134	11.458	11.460	-0.002	95	60192	2.00	2.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.567	11.569	-0.002	98	259505	2.00	2.01	
126 1,3-Dichlorobenzene	146	11.596	11.598	-0.002	98	131387	2.00	2.07	
127 1,4-Dichlorobenzene	146	11.675	11.667	0.008	93	131954	2.00	2.06	
129 n-Butylbenzene	91	11.931	11.933	-0.002	99	268468	2.00	1.95	
130 1,2-Dichlorobenzene	146	12.019	12.021	-0.002	97	99706	2.00	2.03	
131 1,2-Dibromo-3-Chloropropan	157	12.738	12.730	0.008	73	3055	2.00	1.95	
132 1,2,4-Trichlorobenzene	180	13.633	13.625	0.008	94	49185	2.00	1.78	
133 Hexachlorobutadiene	225	13.790	13.792	-0.002	96	45948	2.00	1.97	
134 Naphthalene	128	13.938	13.940	-0.002	97	39681	2.00	1.92	
135 1,2,3-Trichlorobenzene	180	14.223	14.225	-0.002	93	39946	2.00	1.81	
S 142 1,2-Dichloroethene, Total	96				0		4.00	4.07	
S 140 1,2-Dichloroethene, Total	1				0		4.00	4.07	
S 138 Total BTEX	1				0			10.2	
S 137 Xylenes, Total (URS)	1				0		4.00	4.13	
S 141 Xylenes, Total	106				0		4.00	4.13	
S 136 Trihalomethanes, Total	1				0		8.00	7.88	
S 139 1,3-Dichloropropene, Total	1				0		4.00	3.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	1.00	Units: uL
MV-Gas/Ket A_00072	Amount Added:	1.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	1.00	Units: uL

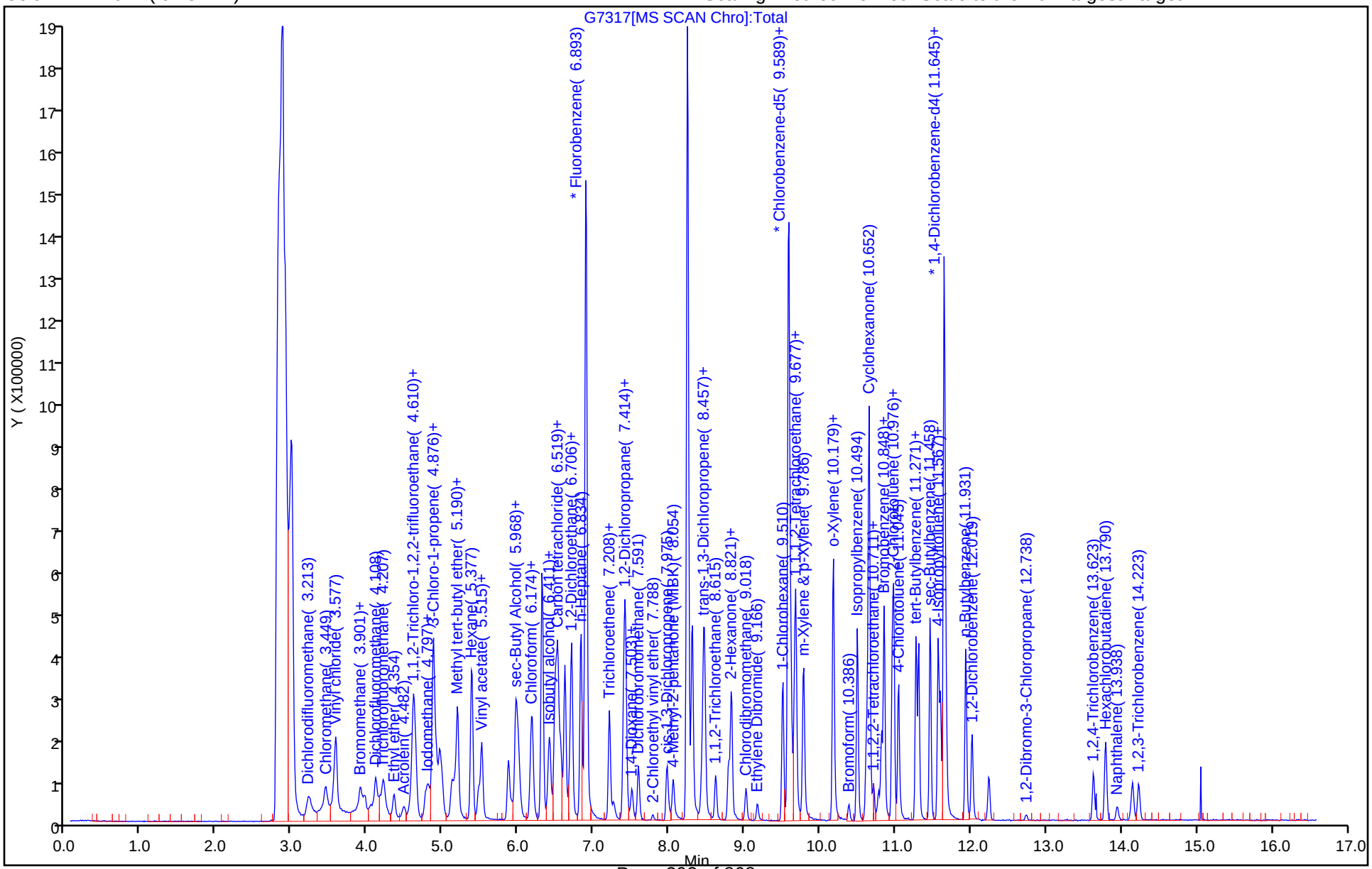
Report Date: 01-May-2018 08:03:43 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7317.D

Injection Date:	30-Apr-2018 11:23:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

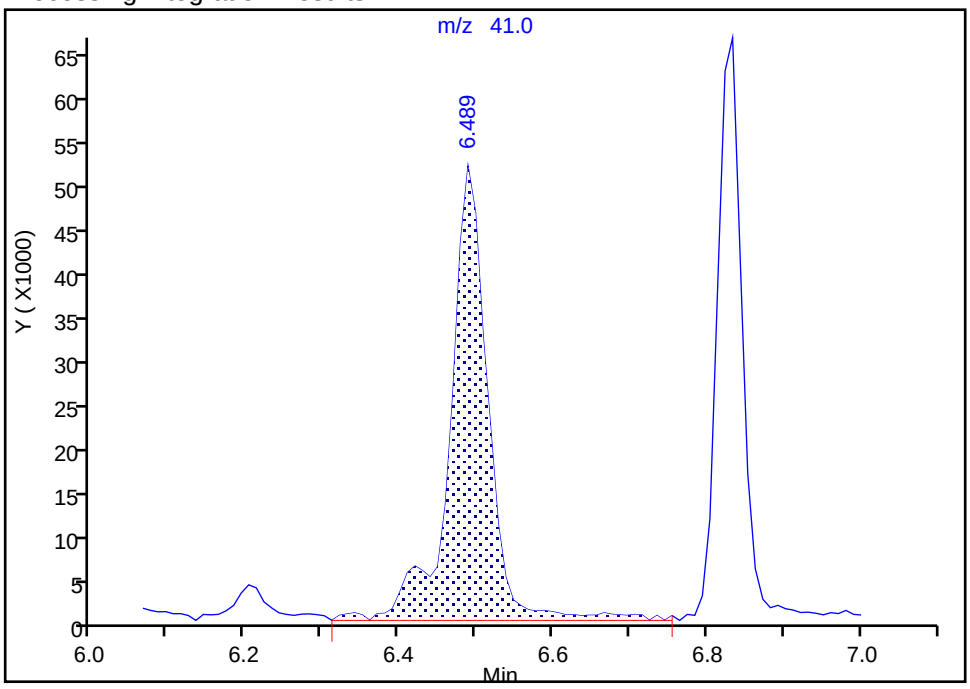
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Injection Date: 30-Apr-2018 11:23:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

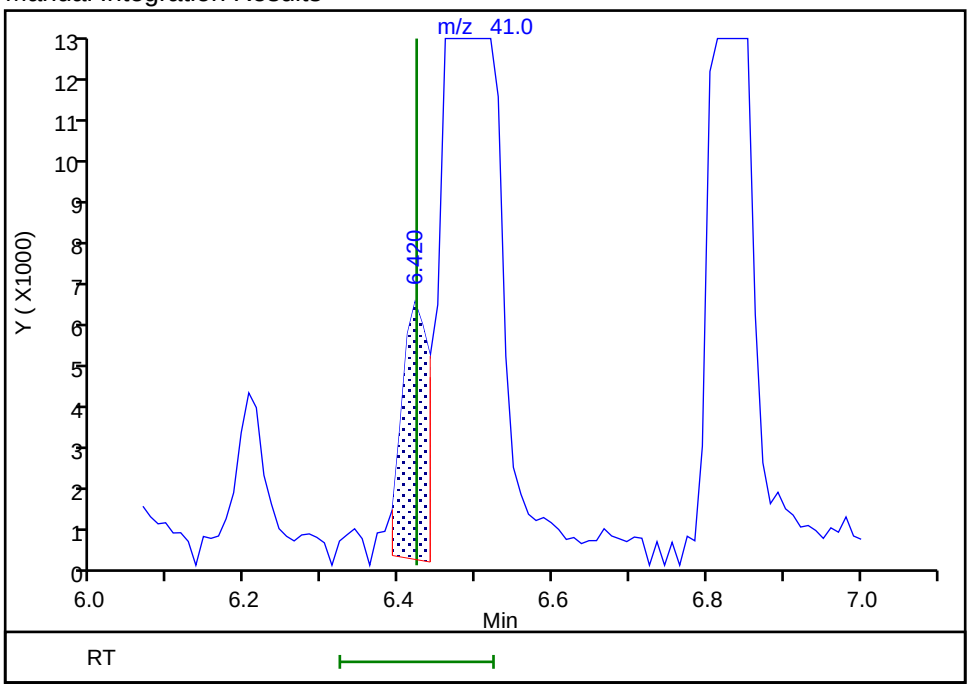
Processing Integration Results

RT: 6.49
Area: 180748
Amount: 108.1309
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 15341
Amount: 52.598479
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 13:31:36
Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7318.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Apr-2018 11:43:30 ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:46 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 30-Apr-2018 12:07:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.876	4.878	-0.002	0	159996	250.0	250.0	
* 1 Fluorobenzene	96	6.903	6.895	0.008	99	1704025	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.589	9.591	-0.002	88	326941	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.645	11.647	-0.002	96	395177	12.5	12.5	
25 Dichlorodifluoromethane	85	3.223	3.234	-0.011	99	332863	5.00	4.95	
27 Chloromethane	50	3.449	3.441	0.008	99	316587	5.00	4.90	
28 Vinyl chloride	62	3.567	3.569	-0.002	98	266401	5.00	5.01	
31 Bromomethane	94	3.911	3.904	0.007	90	183404	5.00	4.88	
32 Chloroethane	64	3.961	3.963	-0.002	98	120936	5.00	4.78	
33 Dichlorofluoromethane	67	4.108	4.110	-0.002	97	348079	5.00	4.78	
35 Trichlorofluoromethane	101	4.216	4.218	-0.002	98	416150	5.00	5.11	
38 Ethyl ether	59	4.354	4.356	-0.002	90	100011	5.00	4.86	
41 Acrolein	56	4.482	4.484	-0.002	99	105886	50.0	47.8	
42 Acetone	43	4.590	4.582	0.008	97	90284	20.0	18.2	
44 1,1,2-Trichloro-1,2,2-trif	151	4.610	4.612	-0.002	95	211110	5.00	5.01	
45 1,1-Dichloroethene	96	4.630	4.622	0.008	96	290936	5.00	4.96	
47 Iodomethane	142	4.797	4.799	-0.002	99	490767	5.00	4.94	
48 Methyl acetate	43	4.826	4.828	-0.002	100	124069	10.0	9.78	
50 Carbon disulfide	76	4.876	4.878	-0.002	99	1386329	5.00	5.05	
49 3-Chloro-1-propene	41	4.876	4.878	-0.002	86	614380	5.00	5.12	
51 2-Methyl-2-propanol	59	4.945	4.937	0.008	94	48528	50.0	50.0	
52 Methylene Chloride	84	4.974	4.966	0.008	99	259901	5.00	5.06	
53 Acrylonitrile	53	5.122	5.114	0.008	97	276095	50.0	48.7	
54 Methyl tert-butyl ether	73	5.161	5.163	-0.002	98	249274	5.00	4.96	
55 trans-1,2-Dichloroethene	96	5.200	5.193	0.007	96	307070	5.00	5.00	
56 Hexane	57	5.387	5.380	0.007	94	509936	5.00	5.16	
57 Vinyl acetate	43	5.476	5.468	0.008	96	400781	10.0	9.40	
59 1,1-Dichloroethane	63	5.515	5.517	-0.002	96	524225	5.00	4.99	
62 2-Butanone (MEK)	43	5.919	5.921	-0.002	97	116135	20.0	18.6	
66 cis-1,2-Dichloroethene	96	5.968	5.970	-0.002	84	283632	5.00	4.92	
65 sec-Butyl Alcohol	45	5.978	5.980	-0.002	95	122019	150.0	139.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.997	5.999	-0.002	92	378224	5.00	4.94	
69 Chlorobromomethane	128	6.165	6.167	-0.002	91	89487	5.00	4.99	
70 Chloroform	83	6.184	6.186	-0.002	95	440052	5.00	5.06	
71 Tetrahydrofuran	42	6.214	6.206	0.008	92	40769	10.0	9.81	
73 1,1,1-Trichloroethane	97	6.411	6.413	-0.002	98	380534	5.00	4.99	
72 Isobutyl alcohol	41	6.421	6.423	-0.002	95	37384	125.0	125.4	M
74 Cyclohexane	56	6.499	6.491	0.008	97	566648	5.00	5.05	
75 1,1-Dichloropropene	75	6.529	6.521	0.008	96	411047	5.00	5.12	
76 Carbon tetrachloride	117	6.558	6.560	-0.002	94	340345	5.00	5.07	
77 1,2-Dichloroethane	62	6.686	6.678	0.008	96	190924	5.00	4.90	
79 Benzene	78	6.706	6.708	-0.002	97	1004180	5.00	4.95	
13 n-Heptane	43	6.834	6.826	0.008	97	645384	5.00	5.10	
81 Trichloroethene	95	7.208	7.210	-0.002	96	280679	5.00	4.98	
82 2-Pentanone	43	7.267	7.259	0.008	97	165721	20.0	18.9	
84 1,2-Dichloropropane	63	7.395	7.397	-0.002	94	235262	5.00	4.87	
85 Methylcyclohexane	55	7.424	7.416	0.008	96	463704	5.00	5.13	
86 1,4-Dioxane	88	7.473	7.466	0.007	87	11145	100.0	95.7	
87 Dibromomethane	93	7.503	7.505	-0.002	91	94228	5.00	5.02	
88 Dichlorobromomethane	83	7.591	7.593	-0.002	98	248338	5.00	4.98	
90 2-Chloroethyl vinyl ether	63	7.778	7.780	-0.002	92	18293	5.00	4.41	
91 cis-1,3-Dichloropropene	75	7.975	7.977	-0.002	93	248837	5.00	5.03	
92 4-Methyl-2-pentanone (MIBK	43	8.054	8.056	-0.002	97	243069	20.0	18.2	
93 Toluene	91	8.310	8.312	-0.002	98	952100	5.00	4.88	
95 trans-1,3-Dichloropropene	75	8.438	8.430	0.008	97	173478	5.00	4.76	
94 Ethyl methacrylate	69	8.447	8.449	-0.002	94	81333	5.00	4.76	
96 1,1,2-Trichloroethane	97	8.615	8.617	-0.002	90	102924	5.00	4.99	
98 1,3-Dichloropropane	76	8.792	8.784	0.008	99	171777	5.00	5.02	
97 2-Hexanone	43	8.792	8.794	-0.002	98	133679	20.0	18.3	
99 Tetrachloroethene	164	8.831	8.823	0.008	96	210276	5.00	5.09	
100 Chlorodibromomethane	129	9.018	9.020	-0.002	91	121103	5.00	5.01	
102 Ethylene Dibromide	107	9.166	9.168	-0.002	99	95519	5.00	5.09	
103 1-Chlorohexane	91	9.510	9.512	-0.002	95	354873	5.00	5.33	
104 Chlorobenzene	112	9.618	9.611	0.007	94	531578	5.00	5.07	
105 1,1,1,2-Tetrachloroethane	131	9.658	9.660	-0.002	95	154108	5.00	5.15	
106 Ethylbenzene	106	9.677	9.679	-0.002	99	293671	5.00	5.19	
107 m-Xylene & p-Xylene	106	9.786	9.788	-0.002	0	370871	5.00	5.40	
109 Styrene	104	10.179	10.181	-0.002	84	479561	5.00	5.20	
108 o-Xylene	106	10.179	10.181	-0.002	89	327404	5.00	5.46	
110 Bromoform	173	10.386	10.388	-0.002	93	56152	5.00	5.14	
111 Isopropylbenzene	105	10.494	10.496	-0.002	96	908996	5.00	5.46	
113 Cyclohexanone	55	10.602	10.604	-0.002	97	63181	200.0	187.6	
114 1,1,2,2-Tetrachloroethane	83	10.711	10.713	-0.002	92	97408	5.00	4.95	
115 trans-1,4-Dichloro-2-buten	53	10.760	10.762	-0.002	83	15788	5.00	4.84	
116 1,2,3-Trichloropropane	110	10.779	10.781	-0.002	81	19369	5.00	5.13	
117 Bromobenzene	156	10.819	10.821	-0.002	90	173928	5.00	5.25	
118 N-Propylbenzene	120	10.848	10.850	-0.002	99	233079	5.00	5.52	
120 2-Chlorotoluene	126	10.957	10.959	-0.002	95	195341	5.00	5.33	
119 1,3,5-Trimethylbenzene	105	10.976	10.978	-0.002	94	718048	5.00	5.53	
121 4-Chlorotoluene	126	11.045	11.047	-0.002	98	192510	5.00	5.35	
122 tert-Butylbenzene	119	11.271	11.273	-0.002	94	671609	5.00	5.54	
123 1,2,4-Trimethylbenzene	105	11.311	11.313	-0.002	98	679857	5.00	5.53	
124 sec-Butylbenzene	134	11.458	11.460	-0.002	95	167234	5.00	5.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.567	11.569	-0.002	98	735604	5.00	5.57	
126 1,3-Dichlorobenzene	146	11.596	11.598	-0.002	97	337117	5.00	5.18	
127 1,4-Dichlorobenzene	146	11.675	11.667	0.008	94	335541	5.00	5.14	
129 n-Butylbenzene	91	11.931	11.933	-0.002	99	766007	5.00	5.45	
130 1,2-Dichlorobenzene	146	12.019	12.021	-0.002	97	268976	5.00	5.35	
131 1,2-Dibromo-3-Chloropropan	157	12.738	12.730	0.008	81	9526	5.00	4.87	
132 1,2,4-Trichlorobenzene	180	13.633	13.625	0.008	95	141889	5.00	5.03	
133 Hexachlorobutadiene	225	13.790	13.792	-0.002	97	122767	5.00	5.14	
134 Naphthalene	128	13.938	13.940	-0.002	97	123844	5.00	4.35	
135 1,2,3-Trichlorobenzene	180	14.223	14.225	-0.002	95	115058	5.00	5.09	
S 142 1,2-Dichloroethene, Total	96				0		10.0	9.92	
S 141 Xylenes, Total	106				0		10.0	10.9	
S 136 Trihalomethanes, Total	1				0		20.0	20.2	
S 139 1,3-Dichloropropene, Total	1				0		10.0	9.79	
S 137 Xylenes, Total (URS)	1				0		10.0	10.9	
S 140 1,2-Dichloroethene, Total	1				0		10.0	9.92	
S 138 Total BTEX	1				0			25.9	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	2.50	Units: uL
MV-Gas/Ket A_00072	Amount Added:	2.50	Units: uL
MV-2cleve+AVA_00034	Amount Added:	2.50	Units: uL

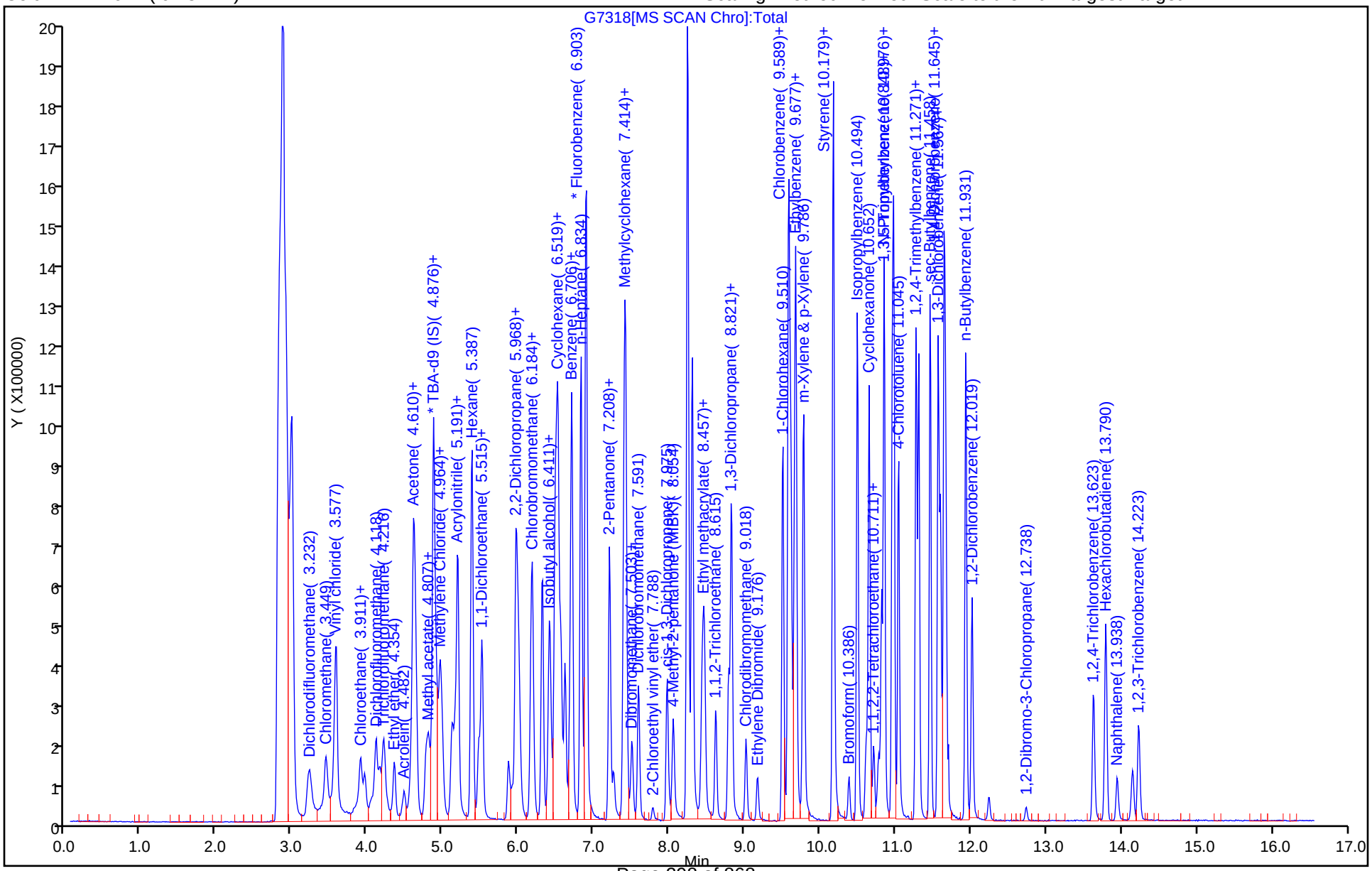
Report Date: 01-May-2018 08:03:47 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7318.D

Injection Date:	30-Apr-2018 11:43:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

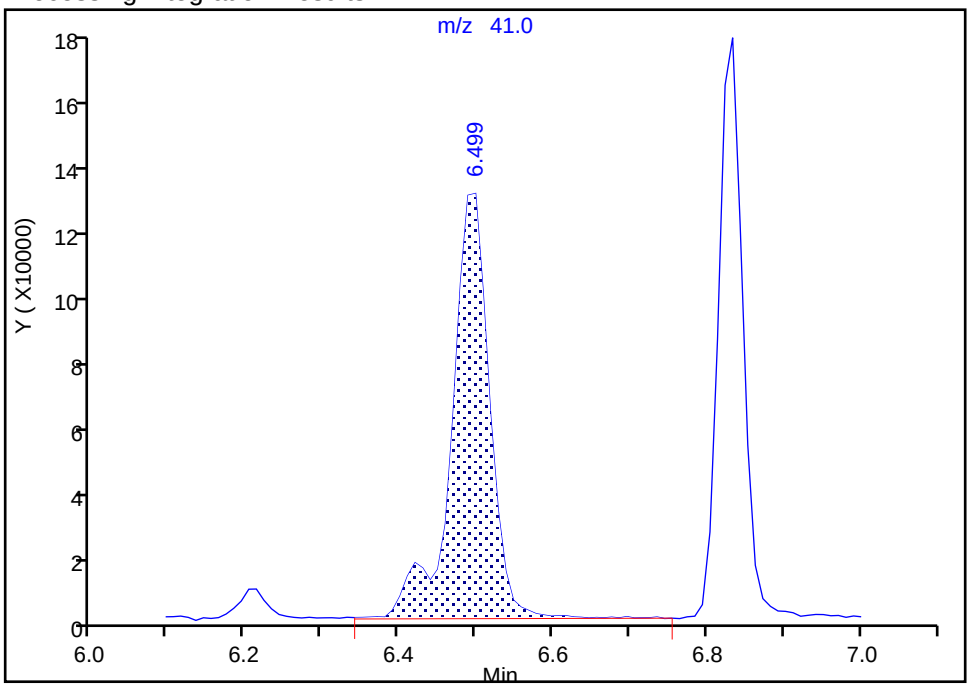
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Injection Date: 30-Apr-2018 11:43:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

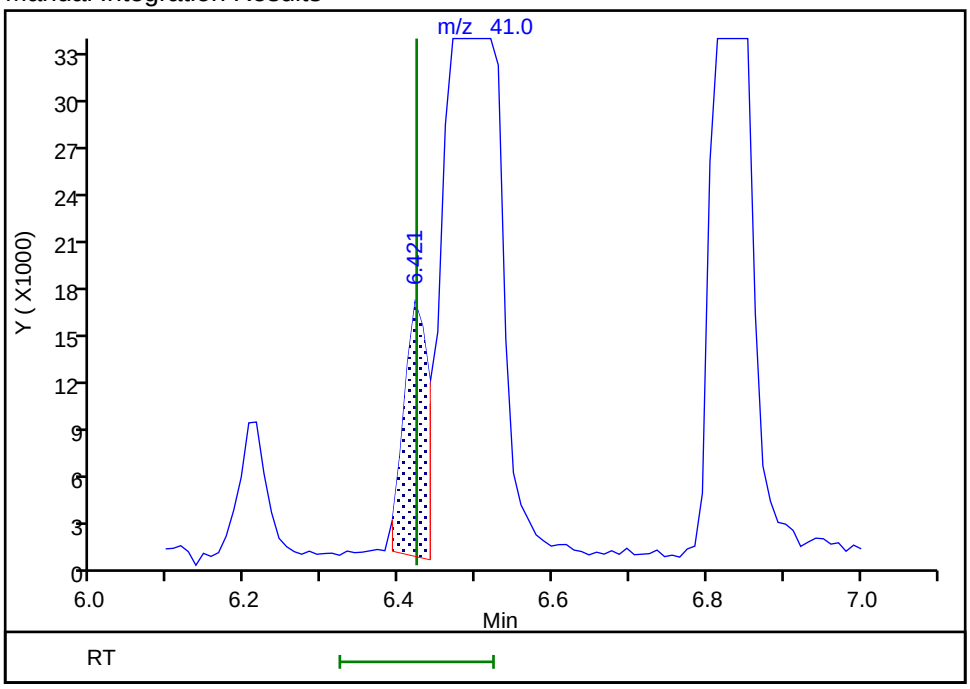
Processing Integration Results

RT: 6.50
Area: 433772
Amount: 185.1908
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 37384
Amount: 125.4358
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 13:30:40
Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7319.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Apr-2018 12:03:30 ALS Bottle#: 16 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:52 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 30-Apr-2018 12:24:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.878	4.878	0.000	0	165974	250.0	250.0	
* 1 Fluorobenzene	96	6.895	6.895	0.000	99	1685538	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.591	9.591	0.000	88	328213	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.647	11.647	0.000	96	415276	12.5	12.5	
25 Dichlorodifluoromethane	85	3.234	3.234	0.000	99	656013	10.0	9.85	
27 Chloromethane	50	3.441	3.441	0.000	99	625691	10.0	9.97	
28 Vinyl chloride	62	3.569	3.569	0.000	98	530715	10.0	10.4	
31 Bromomethane	94	3.904	3.904	0.000	90	370519	10.0	10.3	
32 Chloroethane	64	3.963	3.963	0.000	99	254705	10.0	10.4	
33 Dichlorofluoromethane	67	4.110	4.110	0.000	97	698881	10.0	9.87	
35 Trichlorofluoromethane	101	4.218	4.218	0.000	98	694136	10.0	8.62	
38 Ethyl ether	59	4.356	4.356	0.000	93	196591	10.0	9.66	
41 Acrolein	56	4.484	4.484	0.000	99	209688	100.0	95.6	
42 Acetone	43	4.582	4.582	0.000	98	160783	40.0	36.8	
44 1,1,2-Trichloro-1,2,2-trif	151	4.612	4.612	0.000	95	408629	10.0	9.80	
45 1,1-Dichloroethene	96	4.622	4.622	0.000	96	570135	10.0	9.82	
47 Iodomethane	142	4.799	4.799	0.000	99	976644	10.0	9.93	
48 Methyl acetate	43	4.828	4.828	0.000	98	249528	20.0	19.9	
49 3-Chloro-1-propene	41	4.878	4.878	0.000	87	1205329	10.0	10.2	
50 Carbon disulfide	76	4.878	4.878	0.000	99	2714400	10.0	10.0	
51 2-Methyl-2-propanol	59	4.937	4.937	0.000	94	92561	100.0	92.0	
52 Methylene Chloride	84	4.966	4.966	0.000	98	496686	10.0	9.77	
53 Acrylonitrile	53	5.114	5.114	0.000	99	538532	100.0	96.0	
54 Methyl tert-butyl ether	73	5.163	5.163	0.000	98	500433	10.0	10.1	
55 trans-1,2-Dichloroethene	96	5.193	5.193	0.000	96	599085	10.0	9.86	
56 Hexane	57	5.380	5.380	0.000	95	1012521	10.0	10.2	
57 Vinyl acetate	43	5.468	5.468	0.000	96	834875	20.0	19.8	
59 1,1-Dichloroethane	63	5.517	5.517	0.000	96	1004977	10.0	9.66	
62 2-Butanone (MEK)	43	5.921	5.921	0.000	97	225261	40.0	36.4	
66 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	84	552173	10.0	9.69	
65 sec-Butyl Alcohol	45	5.980	5.980	0.000	96	261500	300.0	287.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.999	5.999	0.000	92	720654	10.0	9.51	
69 Chlorobromomethane	128	6.167	6.167	0.000	91	176629	10.0	9.96	
70 Chloroform	83	6.186	6.186	0.000	95	846665	10.0	9.85	
71 Tetrahydrofuran	42	6.206	6.206	0.000	92	81093	20.0	19.7	
73 1,1,1-Trichloroethane	97	6.413	6.413	0.000	98	741601	10.0	9.82	
72 Isobutyl alcohol	41	6.423	6.423	0.000	96	84656	250.0	273.8	M
74 Cyclohexane	56	6.491	6.491	0.000	97	1137336	10.0	10.2	
75 1,1-Dichloropropene	75	6.521	6.521	0.000	96	798437	10.0	10.1	
76 Carbon tetrachloride	117	6.560	6.560	0.000	95	661978	10.0	9.97	
77 1,2-Dichloroethane	62	6.678	6.678	0.000	96	367985	10.0	9.54	
79 Benzene	78	6.708	6.708	0.000	97	1952934	10.0	9.72	
13 n-Heptane	43	6.826	6.826	0.000	97	1283944	10.0	10.2	
81 Trichloroethene	95	7.210	7.210	0.000	96	550005	10.0	9.87	
82 2-Pentanone	43	7.259	7.259	0.000	97	343705	40.0	39.7	
84 1,2-Dichloropropane	63	7.397	7.397	0.000	94	467638	10.0	9.78	
85 Methylcyclohexane	55	7.416	7.416	0.000	96	912450	10.0	10.2	
86 1,4-Dioxane	88	7.466	7.466	0.000	91	23702	200.0	196.7	
87 Dibromomethane	93	7.505	7.505	0.000	93	183102	10.0	9.85	
88 Dichlorobromomethane	83	7.593	7.593	0.000	98	491753	10.0	9.98	
90 2-Chloroethyl vinyl ether	63	7.780	7.780	0.000	91	42142	10.0	8.73	
91 cis-1,3-Dichloropropene	75	7.977	7.977	0.000	93	518147	10.0	10.4	
92 4-Methyl-2-pentanone (MIBK	43	8.056	8.056	0.000	97	525660	40.0	39.8	
93 Toluene	91	8.312	8.312	0.000	98	1894021	10.0	9.82	
95 trans-1,3-Dichloropropene	75	8.430	8.430	0.000	98	358982	10.0	10.3	
94 Ethyl methacrylate	69	8.449	8.449	0.000	94	174435	10.0	10.0	
96 1,1,2-Trichloroethane	97	8.617	8.617	0.000	90	199981	10.0	9.81	
98 1,3-Dichloropropane	76	8.784	8.784	0.000	99	344037	10.0	10.0	
97 2-Hexanone	43	8.794	8.794	0.000	97	290241	40.0	39.7	
99 Tetrachloroethene	164	8.823	8.823	0.000	97	413238	10.0	9.96	
100 Chlorodibromomethane	129	9.020	9.020	0.000	91	247341	10.0	10.2	
102 Ethylene Dibromide	107	9.168	9.168	0.000	98	196805	10.0	10.5	
103 1-Chlorohexane	91	9.512	9.512	0.000	95	727822	10.0	10.9	
104 Chlorobenzene	112	9.611	9.611	0.000	94	1051174	10.0	9.98	
105 1,1,1,2-Tetrachloroethane	131	9.660	9.660	0.000	97	315350	10.0	10.5	
106 Ethylbenzene	106	9.679	9.679	0.000	99	600024	10.0	10.6	
107 m-Xylene & p-Xylene	106	9.788	9.788	0.000	0	727226	10.0	10.5	
108 o-Xylene	106	10.181	10.181	0.000	88	652624	10.0	10.8	
109 Styrene	104	10.181	10.181	0.000	85	977729	10.0	10.4	
110 Bromoform	173	10.388	10.388	0.000	94	113684	10.0	10.4	
111 Isopropylbenzene	105	10.496	10.496	0.000	96	1824030	10.0	10.4	
113 Cyclohexanone	55	10.604	10.604	0.000	97	130401	400.0	385.8	
114 1,1,2,2-Tetrachloroethane	83	10.713	10.713	0.000	91	198130	10.0	9.58	
115 trans-1,4-Dichloro-2-buten	53	10.762	10.762	0.000	80	33672	10.0	9.22	
116 1,2,3-Trichloropropane	110	10.781	10.781	0.000	82	40537	10.0	10.2	
117 Bromobenzene	156	10.821	10.821	0.000	94	347517	10.0	9.98	
118 N-Propylbenzene	120	10.850	10.850	0.000	99	459476	10.0	10.3	
120 2-Chlorotoluene	126	10.959	10.959	0.000	96	388856	10.0	10.1	
119 1,3,5-Trimethylbenzene	105	10.978	10.978	0.000	94	1413484	10.0	10.4	
121 4-Chlorotoluene	126	11.047	11.047	0.000	98	378001	10.0	10.0	
122 tert-Butylbenzene	119	11.273	11.273	0.000	94	1297147	10.0	10.2	
123 1,2,4-Trimethylbenzene	105	11.313	11.313	0.000	98	1334565	10.0	10.3	
124 sec-Butylbenzene	134	11.460	11.460	0.000	95	334323	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.569	11.569	0.000	98	1446019	10.0	10.4	
126 1,3-Dichlorobenzene	146	11.598	11.598	0.000	99	662900	10.0	9.70	
127 1,4-Dichlorobenzene	146	11.667	11.667	0.000	94	661211	10.0	9.63	
129 n-Butylbenzene	91	11.933	11.933	0.000	99	1535782	10.0	10.4	
130 1,2-Dichlorobenzene	146	12.021	12.021	0.000	97	513774	10.0	9.72	
131 1,2-Dibromo-3-Chloropropan	157	12.730	12.730	0.000	77	19316	10.0	8.91	
132 1,2,4-Trichlorobenzene	180	13.625	13.625	0.000	94	304834	10.0	10.3	
133 Hexachlorobutadiene	225	13.792	13.792	0.000	97	239348	10.0	9.53	
134 Naphthalene	128	13.940	13.940	0.000	97	291874	10.0	8.84	
135 1,2,3-Trichlorobenzene	180	14.225	14.225	0.000	95	231884	10.0	9.76	
S 142 1,2-Dichloroethene, Total	96				0		20.0	19.5	
S 140 1,2-Dichloroethene, Total	1				0		20.0	19.5	
S 138 Total BTEX	1				0			51.5	
S 137 Xylenes, Total (URS)	1				0		20.0	21.4	
S 141 Xylenes, Total	106				0		20.0	21.4	
S 136 Trihalomethanes, Total	1				0		40.0	40.4	
S 139 1,3-Dichloropropene, Total	1				0		20.0	20.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	5.00	Units: uL
MV-Gas/Ket A_00072	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL

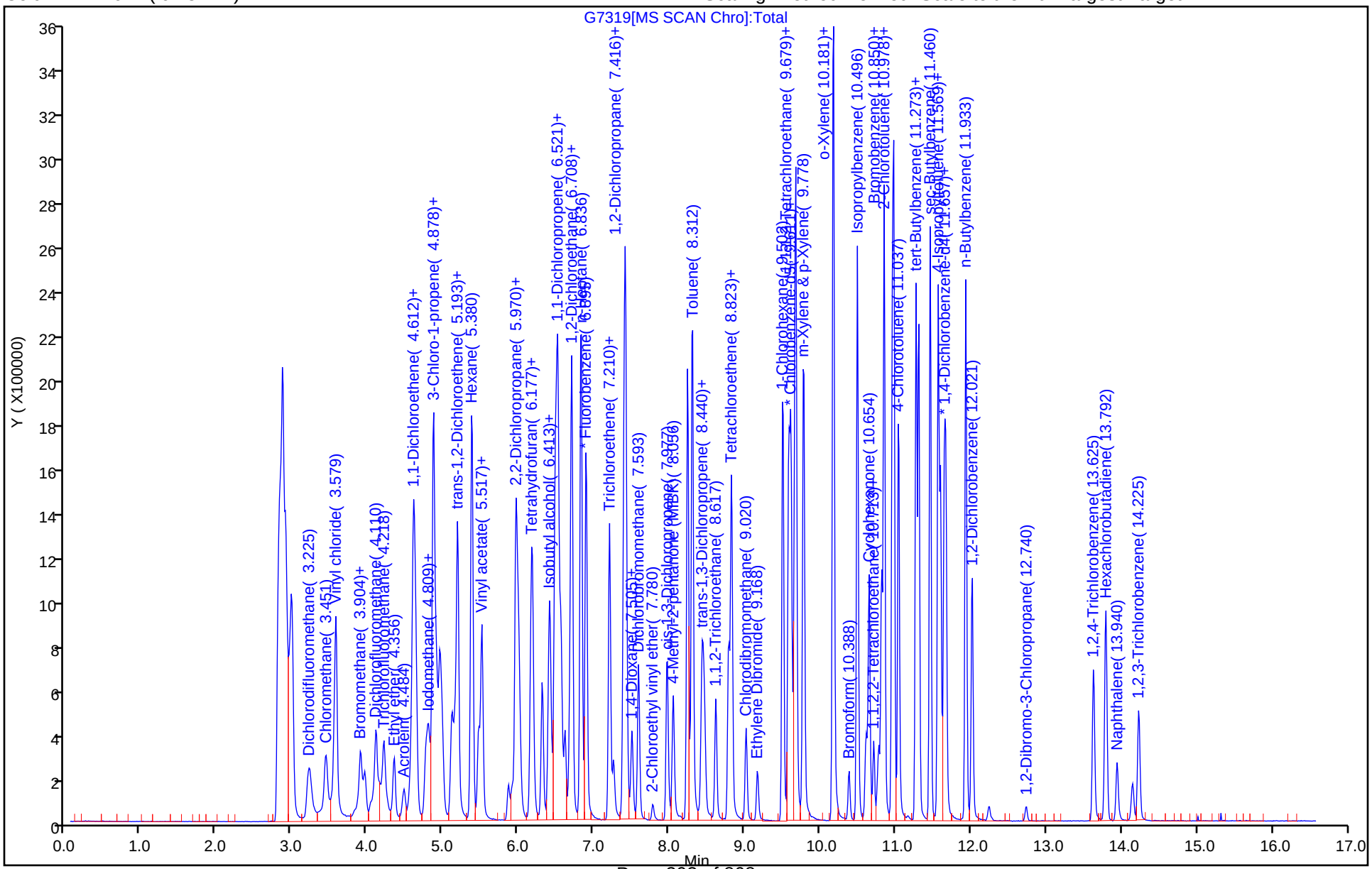
Report Date: 01-May-2018 08:03:54 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7319.D

Injection Date:	30-Apr-2018 12:03:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

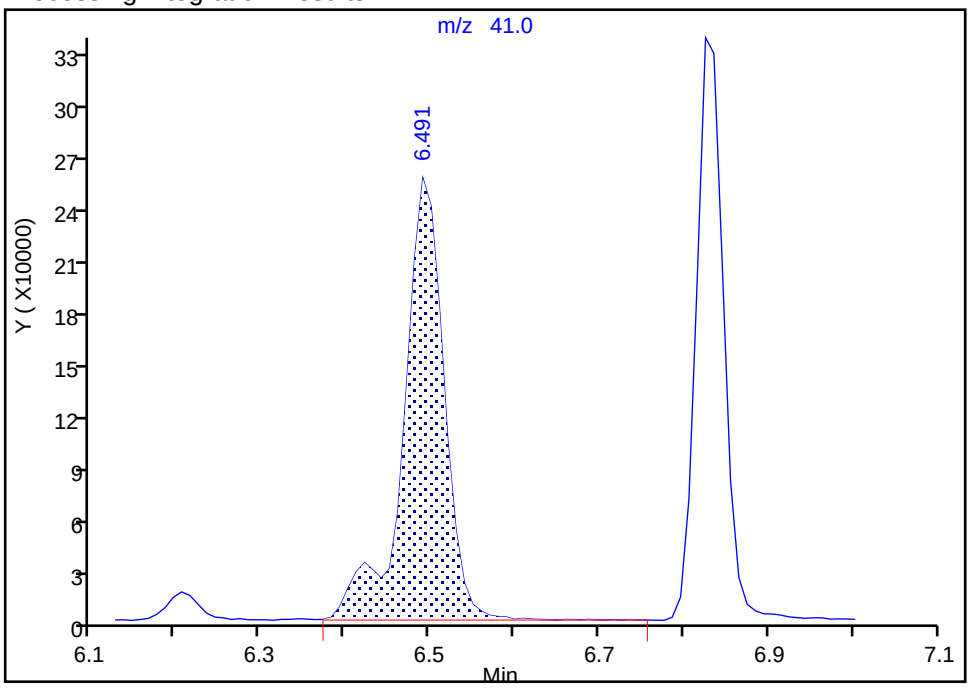
Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7319.D
Injection Date: 30-Apr-2018 12:03:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 16 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

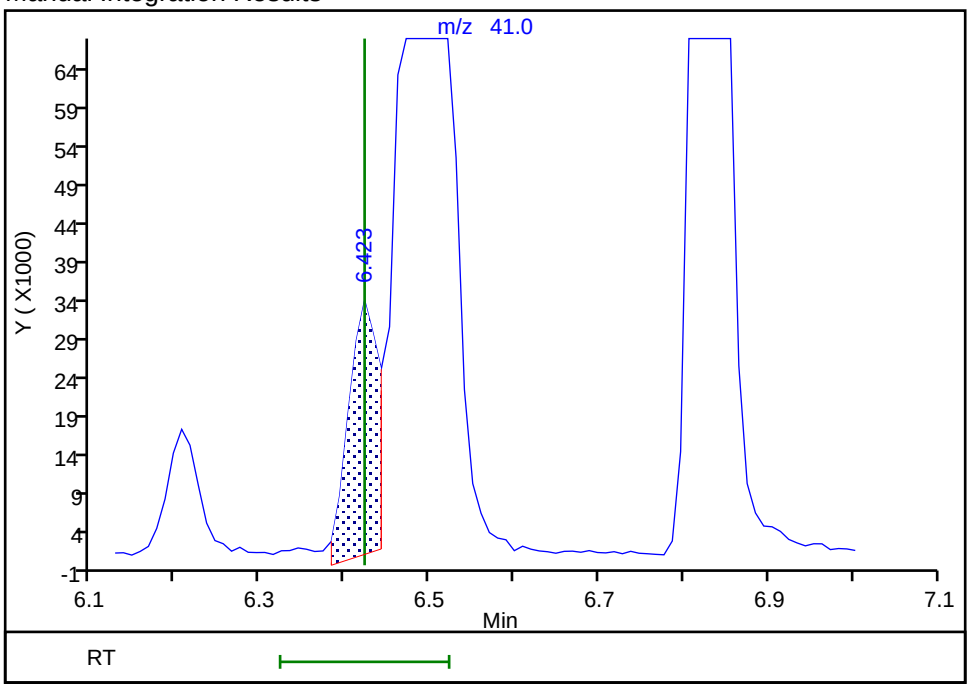
Processing Integration Results

RT: 6.49
Area: 850106
Amount: 279.4403
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 84656
Amount: 273.8182
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 13:30:24
Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7320.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Apr-2018 12:24:30 ALS Bottle#: 17 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:03:57 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 30-Apr-2018 13:30:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.876	4.878	-0.002	0	165317	250.0	250.0	
* 1 Fluorobenzene	96	6.903	6.895	0.008	99	1710805	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.589	9.591	-0.002	86	330604	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.646	11.647	-0.001	96	414574	12.5	12.5	
25 Dichlorodifluoromethane	85	3.223	3.234	-0.011	99	1922471	30.0	28.5	
27 Chloromethane	50	3.440	3.441	-0.001	99	1840958	30.0	29.2	
28 Vinyl chloride	62	3.567	3.569	-0.002	98	1515361	30.0	29.9	
31 Bromomethane	94	3.902	3.904	-0.002	90	1058920	30.0	29.4	
32 Chloroethane	64	3.961	3.963	-0.002	98	733737	30.0	29.8	
33 Dichlorofluoromethane	67	4.109	4.110	-0.001	97	2080466	30.0	29.3	
35 Trichlorofluoromethane	101	4.217	4.218	-0.001	99	2279962	30.0	27.9	
38 Ethyl ether	59	4.355	4.356	-0.001	94	583529	30.0	28.2	
41 Acrolein	56	4.483	4.484	-0.001	99	651568	300.0	292.8	
42 Acetone	43	4.581	4.582	-0.001	98	483662	120.0	119.0	
44 1,1,2-Trichloro-1,2,2-trif	151	4.610	4.612	-0.002	96	1119523	30.0	26.5	
45 1,1-Dichloroethene	96	4.640	4.622	0.018	96	1571557	30.0	26.7	
47 Iodomethane	142	4.797	4.799	-0.002	100	2766378	30.0	27.7	
48 Methyl acetate	43	4.827	4.828	-0.001	100	675405	60.0	53.0	
50 Carbon disulfide	76	4.876	4.878	-0.002	99	7469448	30.0	27.1	
49 3-Chloro-1-propene	41	4.876	4.878	-0.002	93	3365187	30.0	27.9	
51 2-Methyl-2-propanol	59	4.945	4.937	0.008	94	276075	300.0	275.5	
52 Methylene Chloride	84	4.965	4.966	-0.001	99	1365843	30.0	26.5	
53 Acrylonitrile	53	5.122	5.114	0.008	98	1562951	300.0	274.5	
54 Methyl tert-butyl ether	73	5.162	5.163	-0.001	98	1452798	30.0	28.8	
55 trans-1,2-Dichloroethene	96	5.201	5.193	0.008	97	1666087	30.0	27.0	
56 Hexane	57	5.388	5.380	0.008	95	2815627	30.0	28.2	
57 Vinyl acetate	43	5.476	5.468	0.008	96	2642525	60.0	61.7	
59 1,1-Dichloroethane	63	5.516	5.517	-0.001	96	2785043	30.0	26.4	
62 2-Butanone (MEK)	43	5.919	5.921	-0.002	97	722037	120.0	114.9	
66 cis-1,2-Dichloroethene	96	5.968	5.970	-0.002	83	1568120	30.0	27.1	
65 sec-Butyl Alcohol	45	5.978	5.980	-0.002	97	781268	900.0	861.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	5.998	5.999	-0.001	93	1978127	30.0	25.7	
69 Chlorobromomethane	128	6.165	6.167	-0.002	91	484588	30.0	26.9	
70 Chloroform	83	6.185	6.186	-0.001	95	2315485	30.0	26.5	
71 Tetrahydrofuran	42	6.205	6.206	-0.001	92	221472	60.0	53.1	
73 1,1,1-Trichloroethane	97	6.411	6.413	-0.002	98	2023087	30.0	26.4	
72 Isobutyl alcohol	41	6.421	6.423	-0.001	96	238411	750.0	774.2	M
74 Cyclohexane	56	6.500	6.491	0.009	97	3160282	30.0	28.0	
75 1,1-Dichloropropene	75	6.529	6.521	0.008	95	2235436	30.0	27.7	
76 Carbon tetrachloride	117	6.569	6.560	0.009	95	1842943	30.0	27.4	
77 1,2-Dichloroethane	62	6.687	6.678	0.009	96	1023417	30.0	26.1	
79 Benzene	78	6.706	6.708	-0.002	98	5532478	30.0	27.1	
13 n-Heptane	43	6.834	6.826	0.008	97	3631845	30.0	28.6	
81 Trichloroethene	95	7.208	7.210	-0.002	97	1544845	30.0	27.3	
82 2-Pentanone	43	7.257	7.259	-0.002	97	1076983	120.0	122.6	
84 1,2-Dichloropropane	63	7.395	7.397	-0.002	95	1278197	30.0	26.3	
85 Methylcyclohexane	55	7.425	7.416	0.009	96	2489886	30.0	27.4	
86 1,4-Dioxane	88	7.464	7.466	-0.002	97	71199	600.0	566.6	
87 Dibromomethane	93	7.503	7.505	-0.002	93	517737	30.0	27.4	
88 Dichlorobromomethane	83	7.592	7.593	-0.001	98	1378967	30.0	27.6	
90 2-Chloroethyl vinyl ether	63	7.779	7.780	-0.001	92	150833	30.0	27.9	
91 cis-1,3-Dichloropropene	75	7.976	7.977	-0.001	93	1536505	30.0	30.7	
92 4-Methyl-2-pentanone (MIBK	43	8.054	8.056	-0.002	96	1689009	120.0	126.0	
93 Toluene	91	8.310	8.312	-0.002	98	5354661	30.0	27.3	
95 trans-1,3-Dichloropropene	75	8.428	8.430	-0.002	98	1027105	30.0	29.5	
94 Ethyl methacrylate	69	8.448	8.449	-0.001	93	544550	30.0	30.8	
96 1,1,2-Trichloroethane	97	8.615	8.617	-0.002	90	563083	30.0	27.2	
98 1,3-Dichloropropane	76	8.792	8.784	0.008	98	983229	30.0	28.4	
97 2-Hexanone	43	8.792	8.794	-0.002	81	987263	120.0	134.0	
99 Tetrachloroethene	164	8.832	8.823	0.009	98	1138169	30.0	27.2	
100 Chlorodibromomethane	129	9.019	9.020	-0.001	90	730066	30.0	29.8	
102 Ethylene Dibromide	107	9.176	9.168	0.008	99	563574	30.0	29.7	
103 1-Chlorohexane	91	9.511	9.512	-0.001	96	2112648	30.0	31.4	
104 Chlorobenzene	112	9.619	9.611	0.008	95	2985474	30.0	28.1	
105 1,1,1,2-Tetrachloroethane	131	9.668	9.660	0.008	97	874366	30.0	28.9	
106 Ethylbenzene	106	9.678	9.679	-0.001	99	1667749	30.0	29.1	
107 m-Xylene & p-Xylene	106	9.786	9.788	-0.002	0	2056719	30.0	29.6	
109 Styrene	104	10.180	10.181	-0.001	86	2818665	30.0	29.7	
108 o-Xylene	106	10.180	10.181	-0.001	88	1803181	30.0	29.8	
110 Bromoform	173	10.386	10.388	-0.002	94	342741	30.0	31.0	
111 Isopropylbenzene	105	10.495	10.496	-0.001	96	5294094	30.0	30.3	
113 Cyclohexanone	55	10.603	10.604	-0.001	96	427995	1200.0	1257.0	
114 1,1,2,2-Tetrachloroethane	83	10.711	10.713	-0.002	93	560426	30.0	27.1	
115 trans-1,4-Dichloro-2-buten	53	10.760	10.762	-0.002	78	102759	30.0	27.0	
116 1,2,3-Trichloropropane	110	10.780	10.781	-0.001	85	110946	30.0	28.0	
117 Bromobenzene	156	10.819	10.821	-0.002	97	977988	30.0	28.1	
118 N-Propylbenzene	120	10.849	10.850	-0.001	99	1308844	30.0	29.5	
120 2-Chlorotoluene	126	10.957	10.959	-0.002	95	1097489	30.0	28.6	
119 1,3,5-Trimethylbenzene	105	10.977	10.978	-0.001	95	3977405	30.0	29.2	
121 4-Chlorotoluene	126	11.046	11.047	-0.001	98	1080730	30.0	28.6	
122 tert-Butylbenzene	119	11.272	11.273	-0.001	94	3814971	30.0	30.0	
123 1,2,4-Trimethylbenzene	105	11.311	11.313	-0.002	94	3871015	30.0	30.0	
124 sec-Butylbenzene	134	11.469	11.460	0.009	95	964056	30.0	30.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.567	11.569	-0.002	98	4228099	30.0	30.5	
126 1,3-Dichlorobenzene	146	11.597	11.598	-0.001	98	1884189	30.0	27.6	
127 1,4-Dichlorobenzene	146	11.675	11.667	0.008	95	1834241	30.0	26.8	
129 n-Butylbenzene	91	11.931	11.933	-0.002	99	4535789	30.0	30.8	
130 1,2-Dichlorobenzene	146	12.020	12.021	-0.001	97	1468098	30.0	27.8	
131 1,2-Dibromo-3-Chloropropan	157	12.738	12.730	0.008	82	60257	30.0	26.7	
132 1,2,4-Trichlorobenzene	180	13.624	13.625	-0.001	94	928111	30.0	31.4	
133 Hexachlorobutadiene	225	13.791	13.792	-0.001	98	711717	30.0	28.4	
134 Naphthalene	128	13.939	13.940	-0.001	97	947761	30.0	27.1	
135 1,2,3-Trichlorobenzene	180	14.234	14.225	0.009	95	688366	30.0	29.0	
S 142 1,2-Dichloroethene, Total	96				0		60.0	54.1	
S 141 Xylenes, Total	106				0		60.0	59.4	
S 136 Trihalomethanes, Total	1				0		120.0	115.0	
S 139 1,3-Dichloropropene, Total	1				0		60.0	60.2	
S 137 Xylenes, Total (URS)	1				0		60.0	59.4	
S 140 1,2-Dichloroethene, Total	1				0		60.0	54.1	
S 138 Total BTEX	1				0			143.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	15.00	Units: uL
MV-Gas/Ket A_00072	Amount Added:	15.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	15.00	Units: uL

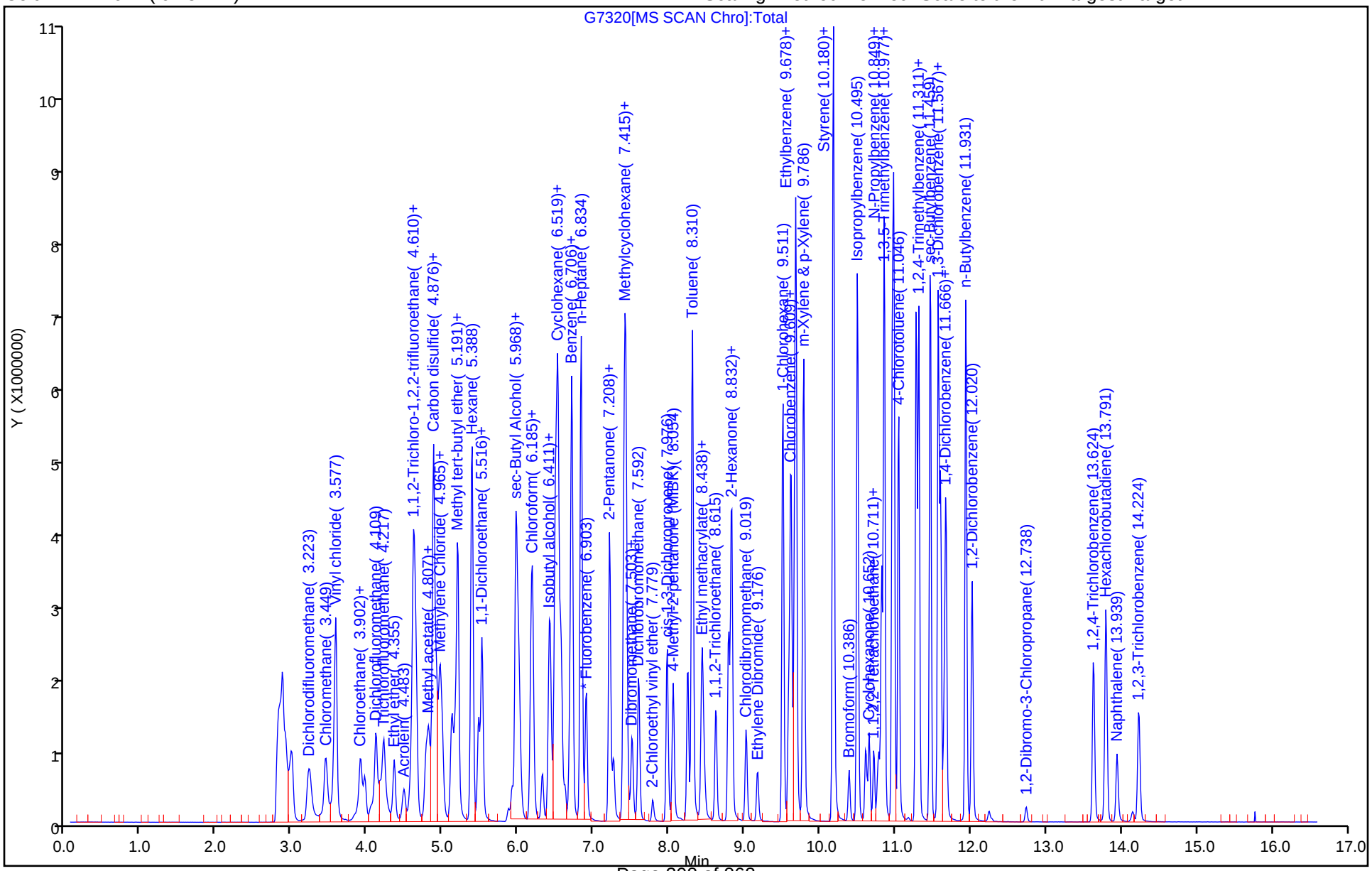
Report Date: 01-May-2018 08:03:59 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7320.D

Injection Date:	30-Apr-2018 12:24:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

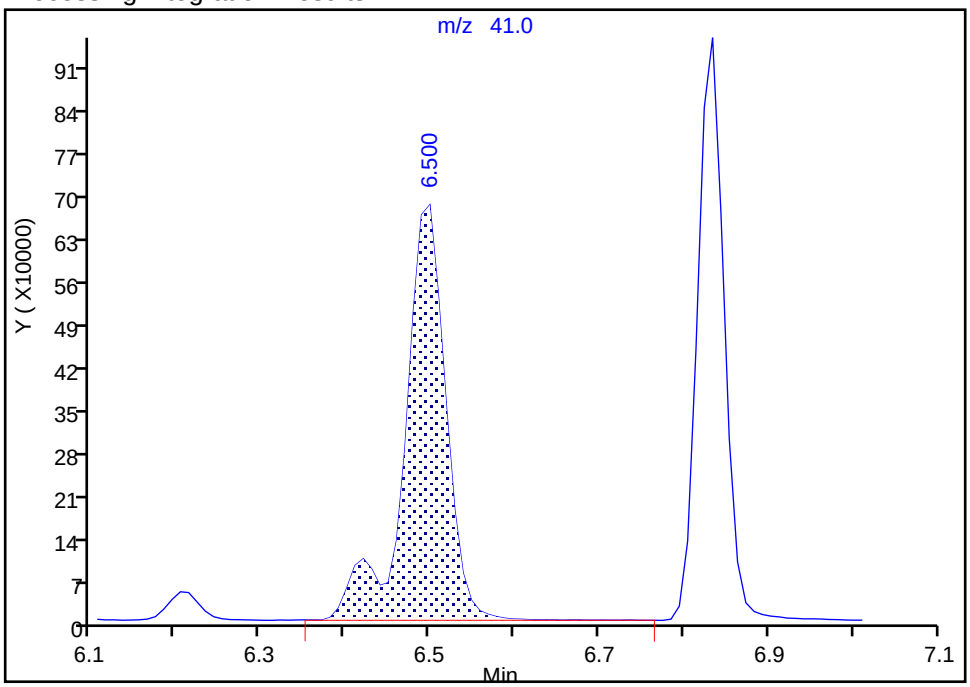
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Injection Date: 30-Apr-2018 12:24:30 Instrument ID: VMS_G
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 17 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

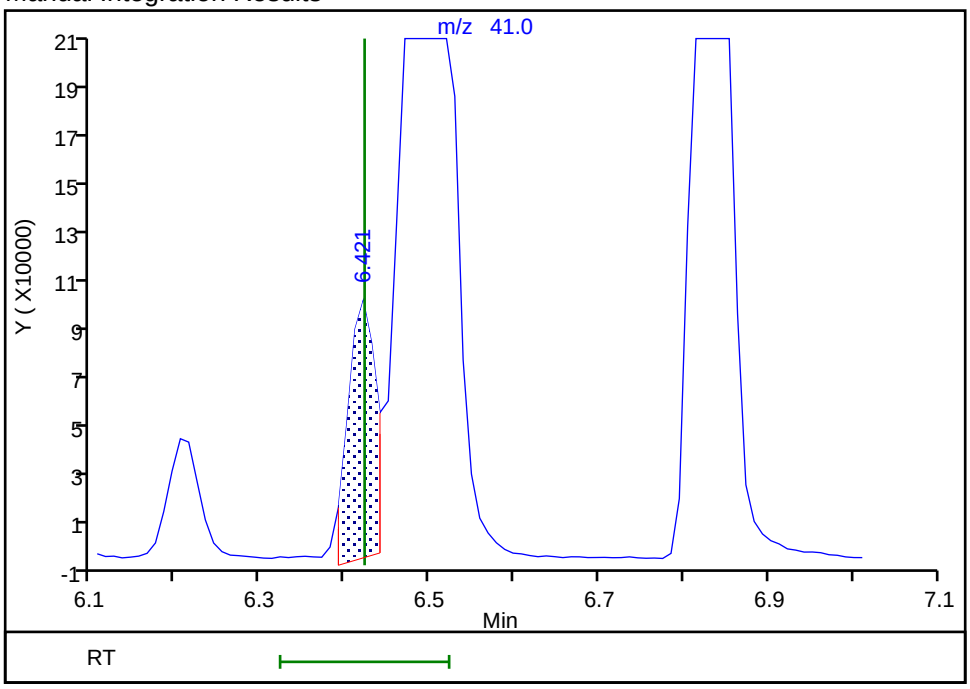
Processing Integration Results

RT: 6.50
Area: 2321152
Amount: 647.3666
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 238411
Amount: 774.2006
Amount Units: ug/l



Reviewer: ilczyszynd, 30-Apr-2018 13:30:06
Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Apr-2018 13:57:30 ALS Bottle#: 19 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub79

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:04:00 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 30-Apr-2018 17:55:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.876	4.878	-0.002	0	169017	250.0	250.0	
* 1 Fluorobenzene	96	6.903	6.895	0.008	99	1691980	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.589	9.591	-0.002	86	348140	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.656	11.647	0.009	96	419835	12.5	12.5	
25 Dichlorodifluoromethane	85	3.223	3.234	-0.011	99	3859220	60.0	57.7	
27 Chloromethane	50	3.449	3.441	0.008	99	3862475	60.0	62.2	
28 Vinyl chloride	62	3.557	3.569	-0.012	98	3044515	60.0	61.0	
31 Bromomethane	94	3.902	3.904	-0.002	90	2054485	60.0	58.0	
32 Chloroethane	64	3.971	3.963	0.008	98	1468501	60.0	60.6	
33 Dichlorofluoromethane	67	4.118	4.110	0.008	97	4482780	60.0	64.0	
35 Trichlorofluoromethane	101	4.217	4.218	-0.001	98	4777748	60.0	59.1	
38 Ethyl ether	59	4.355	4.356	-0.002	94	1250701	60.0	61.2	
41 Acrolein	56	4.482	4.484	-0.002	99	1341094	599.9	609.4	
42 Acetone	43	4.581	4.582	-0.001	98	965984	240.0	245.6	
44 1,1,2-Trichloro-1,2,2-trif	151	4.610	4.612	-0.002	96	2373687	60.0	56.7	
45 1,1-Dichloroethene	96	4.640	4.622	0.018	96	3351091	60.0	57.5	
47 Iodomethane	142	4.797	4.799	-0.002	100	5924234	60.0	60.0	
48 Methyl acetate	43	4.827	4.828	-0.001	100	1451006	120.0	115.2	
49 3-Chloro-1-propene	41	4.876	4.878	-0.002	93	7056262	60.0	59.2	
50 Carbon disulfide	76	4.876	4.878	-0.002	99	15701452	60.0	57.6	
51 2-Methyl-2-propanol	59	4.935	4.937	-0.002	94	616303	600.0	601.5	
52 Methylene Chloride	84	4.965	4.966	-0.001	98	2840390	60.0	55.7	
53 Acrylonitrile	53	5.112	5.114	-0.002	99	3354113	600.0	595.6	
54 Methyl tert-butyl ether	73	5.161	5.163	-0.002	98	3139091	60.0	62.9	
55 trans-1,2-Dichloroethene	96	5.201	5.193	0.008	97	3479090	60.0	57.1	
56 Hexane	57	5.388	5.380	0.008	96	5913666	60.0	56.2	
57 Vinyl acetate	43	5.476	5.468	0.008	96	5536724	120.0	130.7	
59 1,1-Dichloroethane	63	5.516	5.517	-0.001	96	5824443	60.0	55.8	
62 2-Butanone (MEK)	43	5.919	5.921	-0.002	98	1556339	240.0	250.5	
66 cis-1,2-Dichloroethene	96	5.968	5.970	-0.002	83	3281093	60.0	57.3	
65 sec-Butyl Alcohol	45	5.978	5.980	-0.002	98	1819791	1800.0	1961.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	6.008	5.999	0.009	93	4314110	60.0	56.7	
69 Chlorobromomethane	128	6.165	6.167	-0.002	92	1039283	60.0	58.4	
70 Chloroform	83	6.185	6.186	-0.001	95	4850776	60.0	56.2	
71 Tetrahydrofuran	42	6.214	6.206	0.008	93	498016	120.0	120.6	
73 1,1,1-Trichloroethane	97	6.421	6.413	0.008	98	4297049	60.0	56.7	
72 Isobutyl alcohol	41	6.421	6.423	-0.001	47	479615	1500.0	1523.4	
74 Cyclohexane	56	6.500	6.491	0.009	97	6415440	60.0	57.5	
75 1,1-Dichloropropene	75	6.529	6.521	0.008	95	4562819	60.0	57.2	
76 Carbon tetrachloride	117	6.568	6.560	0.008	95	3859989	60.0	57.9	
77 1,2-Dichloroethane	62	6.687	6.678	0.008	95	2145395	60.0	55.4	
79 Benzene	78	6.716	6.708	0.008	98	11541329	60.0	57.2	
13 n-Heptane	43	6.834	6.826	0.008	97	7496386	60.0	59.6	
81 Trichloroethene	95	7.208	7.210	-0.002	97	3255727	60.0	58.2	
82 2-Pentanone	43	7.267	7.259	0.008	97	2503400	240.0	288.2	
84 1,2-Dichloropropane	63	7.405	7.397	0.008	95	2646562	60.0	55.1	
85 Methylcyclohexane	55	7.424	7.416	0.008	96	5142023	60.0	57.3	
86 1,4-Dioxane	88	7.474	7.466	0.008	95	163869	1200.0	1308.0	
87 Dibromomethane	93	7.513	7.505	0.008	93	1098674	60.0	58.9	
88 Dichlorobromomethane	83	7.602	7.593	0.009	98	2982326	60.0	60.3	
90 2-Chloroethyl vinyl ether	63	7.779	7.780	-0.001	92	347889	60.0	63.5	
91 cis-1,3-Dichloropropene	75	7.976	7.977	-0.001	93	3347921	60.0	63.6	
92 4-Methyl-2-pentanone (MIBK	43	8.054	8.056	-0.002	97	3610605	240.0	272.3	
93 Toluene	91	8.310	8.312	-0.002	98	11162712	60.0	57.6	
95 trans-1,3-Dichloropropene	75	8.438	8.430	0.008	98	2260474	60.0	66.0	
94 Ethyl methacrylate	69	8.448	8.449	-0.001	93	1240265	60.0	66.5	
96 1,1,2-Trichloroethane	97	8.625	8.617	0.008	89	1205420	60.0	58.9	
98 1,3-Dichloropropane	76	8.792	8.784	0.008	98	2068184	60.0	56.7	
97 2-Hexanone	43	8.792	8.794	-0.002	83	2069532	240.0	266.7	
99 Tetrachloroethene	164	8.832	8.823	0.009	98	2364453	60.0	53.7	
100 Chlorodibromomethane	129	9.019	9.020	-0.001	90	1591180	60.0	61.8	
102 Ethylene Dibromide	107	9.176	9.168	0.008	99	1222735	60.0	61.2	
103 1-Chlorohexane	91	9.511	9.512	-0.002	96	4500159	60.0	63.5	
104 Chlorobenzene	112	9.619	9.611	0.008	94	6248340	60.0	55.9	
105 1,1,1,2-Tetrachloroethane	131	9.668	9.660	0.008	97	1818269	60.0	57.0	
106 Ethylbenzene	106	9.688	9.679	0.009	99	3453524	60.0	57.3	
107 m-Xylene & p-Xylene	106	9.786	9.788	-0.002	0	4273191	60.0	58.4	
108 o-Xylene	106	10.180	10.181	-0.001	88	3699186	60.0	58.0	
109 Styrene	104	10.180	10.181	-0.001	86	5957533	60.0	59.5	
110 Bromoform	173	10.386	10.388	-0.002	94	785388	60.0	67.5	
111 Isopropylbenzene	105	10.494	10.496	-0.002	96	11033411	60.0	62.4	
113 Cyclohexanone	55	10.603	10.604	-0.001	96	930444	2400.0	2594.9	
114 1,1,2,2-Tetrachloroethane	83	10.711	10.713	-0.002	92	1216544	60.0	58.2	
115 trans-1,4-Dichloro-2-buten	53	10.760	10.762	-0.002	85	248019	60.0	63.6	
116 1,2,3-Trichloropropane	110	10.790	10.781	0.009	86	242072	60.0	60.3	
117 Bromobenzene	156	10.819	10.821	-0.002	94	2100848	60.0	59.7	
118 N-Propylbenzene	120	10.859	10.850	0.009	98	2705861	60.0	60.3	
120 2-Chlorotoluene	126	10.957	10.959	-0.002	96	2222106	60.0	57.1	
119 1,3,5-Trimethylbenzene	105	10.986	10.978	0.008	94	8086392	60.0	58.6	
121 4-Chlorotoluene	126	11.046	11.047	-0.001	98	2280509	60.0	59.7	
122 tert-Butylbenzene	119	11.282	11.273	0.009	93	7944351	60.0	61.7	
123 1,2,4-Trimethylbenzene	105	11.311	11.313	-0.002	94	8037953	60.0	61.5	
124 sec-Butylbenzene	134	11.469	11.460	0.009	95	1991681	60.0	61.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.567	11.569	-0.002	98	8738723	60.0	62.3	
126 1,3-Dichlorobenzene	146	11.597	11.598	-0.001	99	3935723	60.0	57.0	
127 1,4-Dichlorobenzene	146	11.675	11.667	0.008	94	3870686	60.0	55.8	
129 n-Butylbenzene	91	11.931	11.933	-0.002	99	9784499	60.0	65.5	
130 1,2-Dichlorobenzene	146	12.020	12.021	-0.001	97	3218277	60.0	60.2	
131 1,2-Dibromo-3-Chloropropan	157	12.738	12.730	0.008	84	148509	60.0	64.3	
132 1,2,4-Trichlorobenzene	180	13.633	13.625	0.008	94	2198770	60.0	73.4	
133 Hexachlorobutadiene	225	13.801	13.792	0.009	98	1623287	60.0	63.9	
134 Naphthalene	128	13.938	13.940	-0.002	97	2322512	60.0	64.5	
135 1,2,3-Trichlorobenzene	180	14.234	14.225	0.009	95	1615125	60.0	67.2	
S 142 1,2-Dichloroethene, Total	96				0		120.0	114.4	
S 140 1,2-Dichloroethene, Total	1				0		120.0	114.4	
S 138 Total BTEX	1				0			288.6	
S 137 Xylenes, Total (URS)	1				0		120.0	116.4	
S 141 Xylenes, Total	106				0		120.0	116.4	
S 136 Trihalomethanes, Total	1				0		240.0	245.8	
S 139 1,3-Dichloropropene, Total	1				0		120.0	129.6	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	30.00	Units: uL
MV-Gas/Ket A_00072	Amount Added:	30.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	30.00	Units: uL

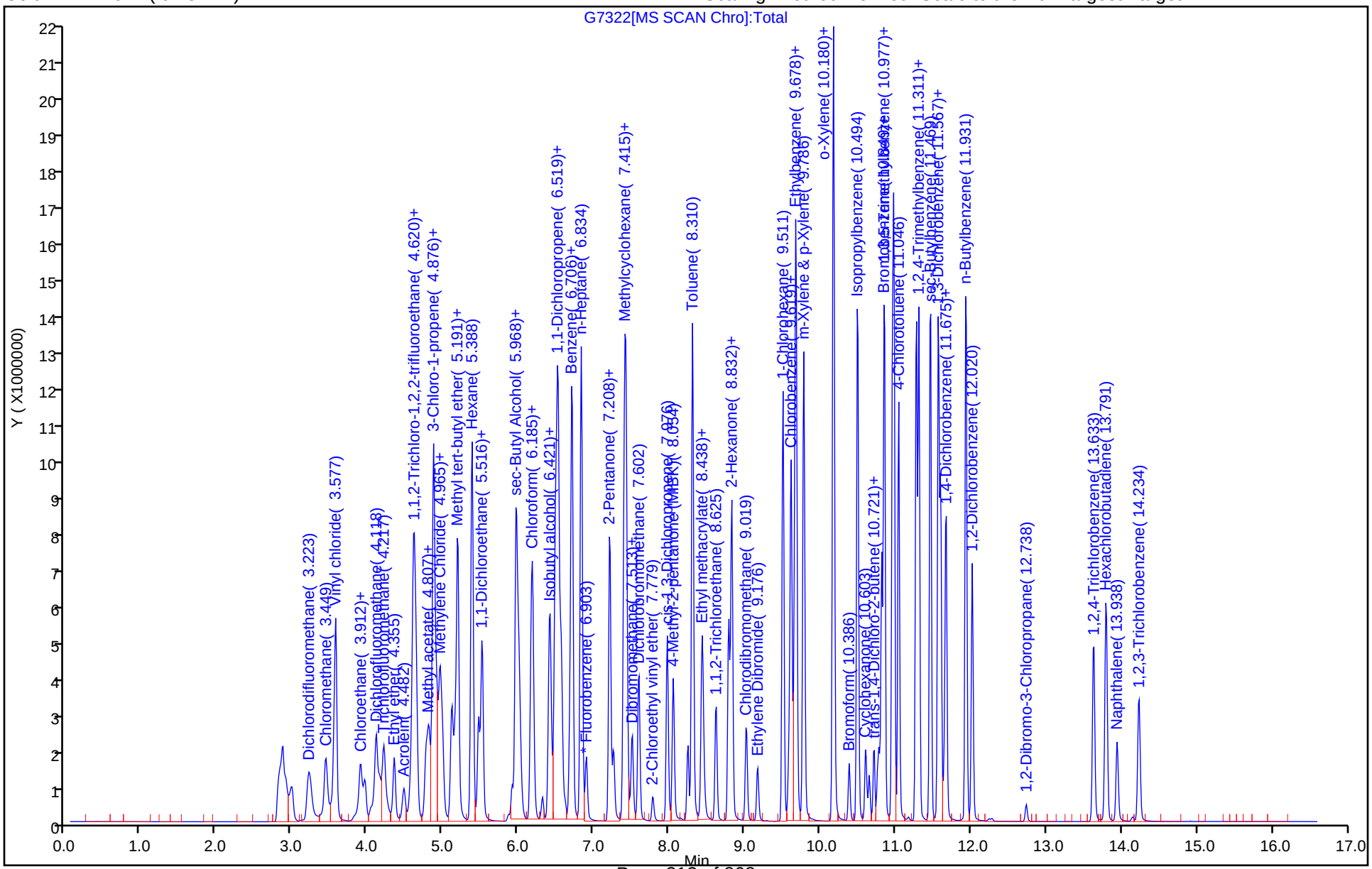
Report Date: 01-May-2018 08:04:01 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Injection Date:	30-Apr-2018 13:57:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

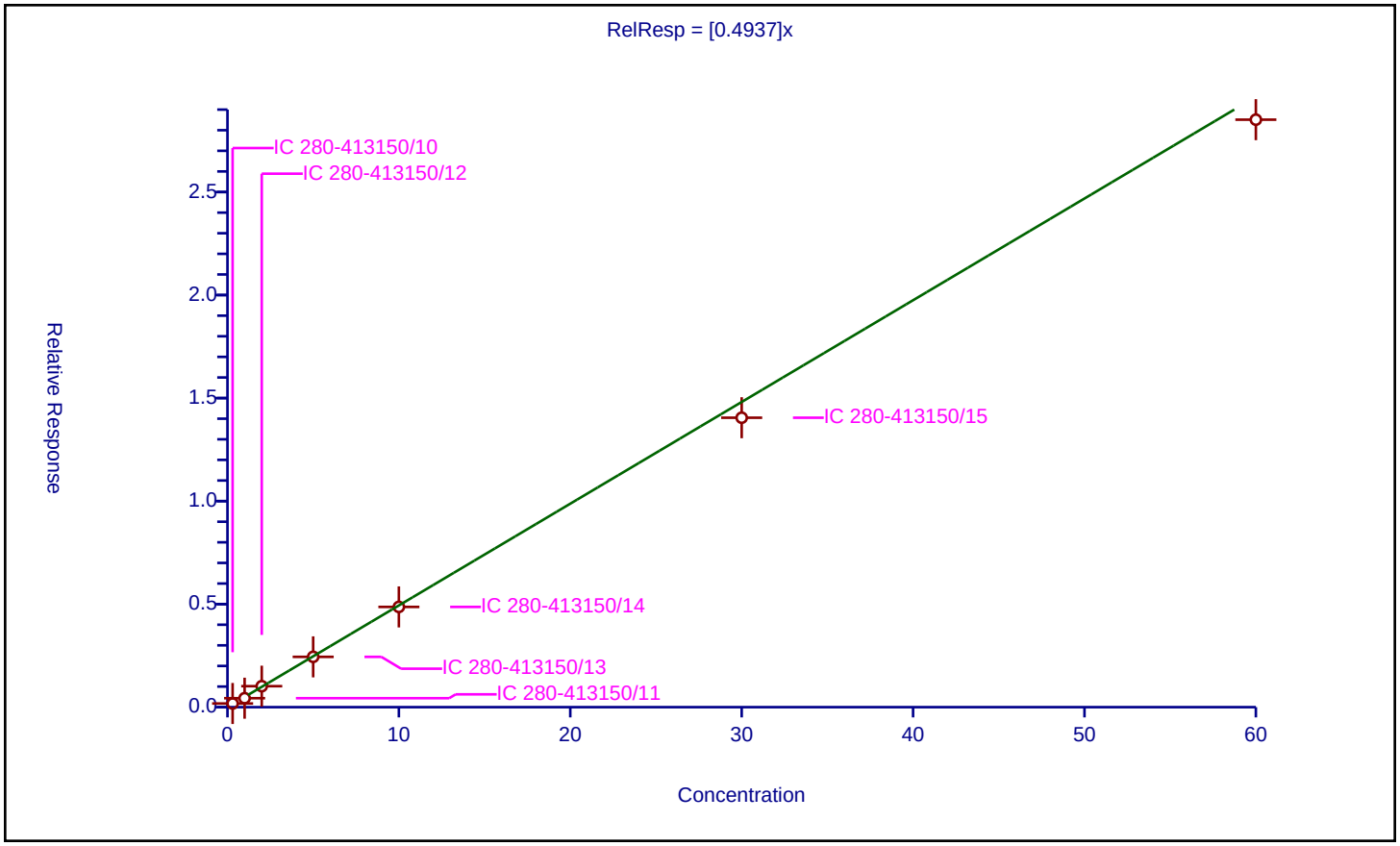
Curve Coefficients

Intercept:	0
Slope:	0.4937

Error Coefficients

Standard Error:	1790000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.1781	12.5	1452979.0	0.593665	Y
2	IC 280-413150/11	1.0	0.434704	12.5	1647099.0	0.434704	Y
3	IC 280-413150/12	2.0	1.018686	12.5	1632446.0	0.509343	Y
4	IC 280-413150/13	5.0	2.441741	12.5	1704025.0	0.488348	Y
5	IC 280-413150/14	10.0	4.865012	12.5	1685538.0	0.486501	Y
6	IC 280-413150/15	30.0	14.046538	12.5	1710805.0	0.468218	Y
7	IC 280-413150/16	60.0	28.511123	12.5	1691980.0	0.475185	Y



Calibration / Chloromethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

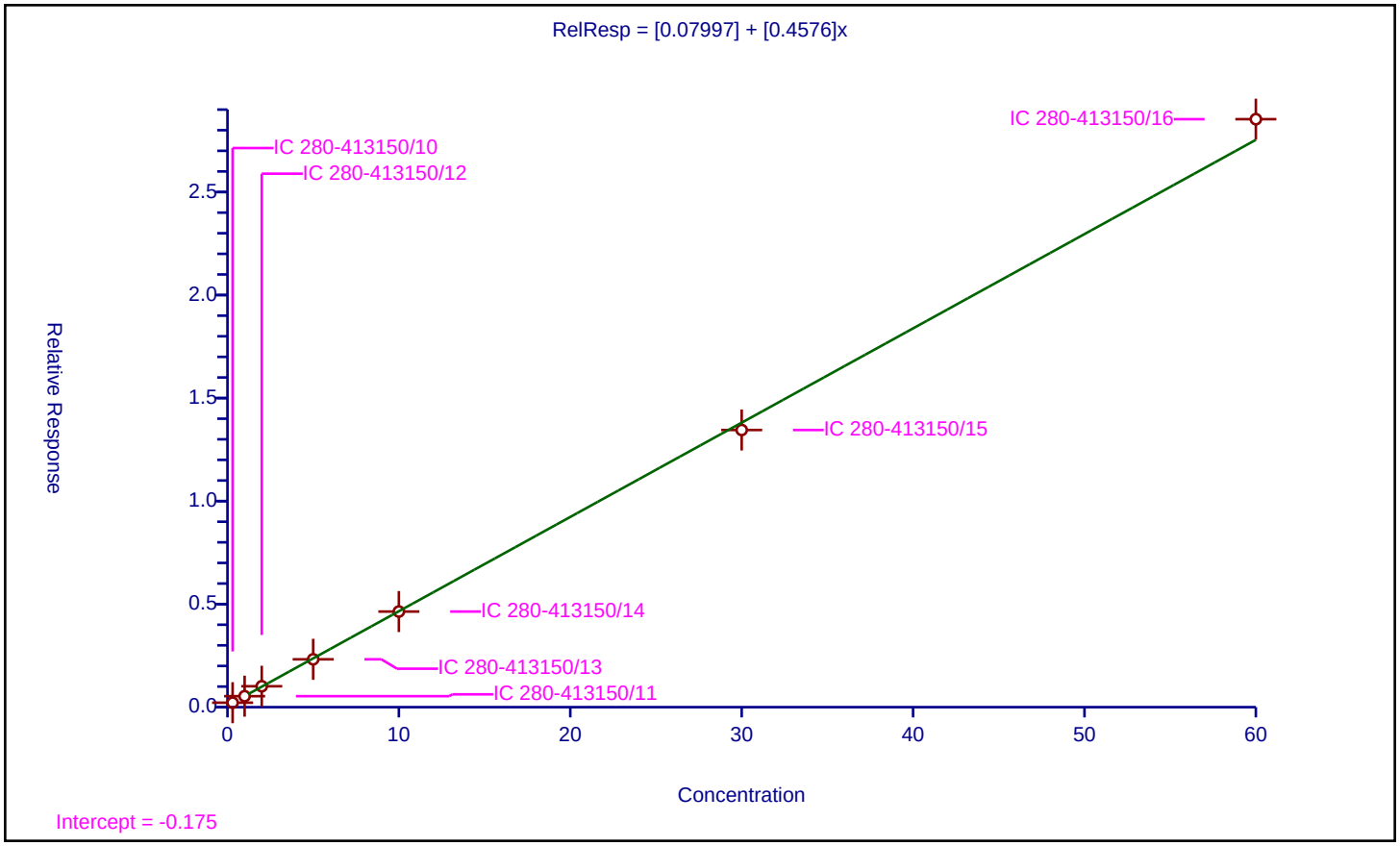
Curve Coefficients

Intercept:	0.07997
Slope:	0.4576

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	2.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.217398	12.5	1452979.0	0.724661	Y
2	IC 280-413150/11	1.0	0.532876	12.5	1647099.0	0.532876	Y
3	IC 280-413150/12	2.0	1.01498	12.5	1632446.0	0.50749	Y
4	IC 280-413150/13	5.0	2.322347	12.5	1704025.0	0.464469	Y
5	IC 280-413150/14	10.0	4.640143	12.5	1685538.0	0.464014	Y
6	IC 280-413150/15	30.0	13.450963	12.5	1710805.0	0.448365	Y
7	IC 280-413150/16	60.0	28.53517	12.5	1691980.0	0.475586	Y



Calibration / Vinyl chloride

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

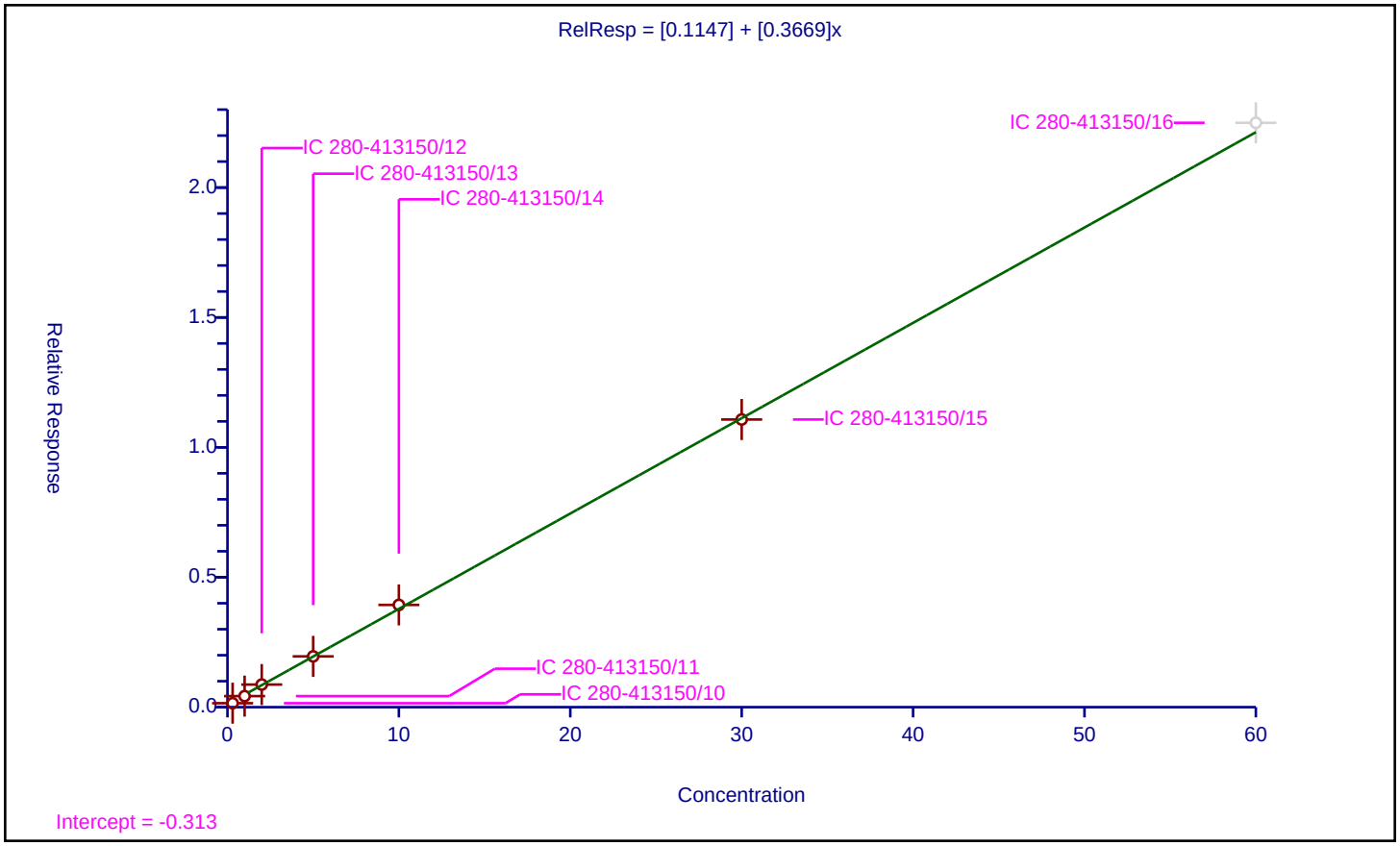
Curve Coefficients

Intercept:	0.1147
Slope:	0.3669

Error Coefficients

Standard Error:	816000
Relative Standard Error:	33.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.152893	12.5	1452979.0	0.509643	Y
2	IC 280-413150/11	1.0	0.425301	12.5	1647099.0	0.425301	Y
3	IC 280-413150/12	2.0	0.870144	12.5	1632446.0	0.435072	Y
4	IC 280-413150/13	5.0	1.954204	12.5	1704025.0	0.390841	Y
5	IC 280-413150/14	10.0	3.935798	12.5	1685538.0	0.39358	Y
6	IC 280-413150/15	30.0	11.071988	12.5	1710805.0	0.369066	Y
7	IC 280-413150/16	60.0	22.49225	12.5	1691980.0	0.374871	N



Calibration / Bromomethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

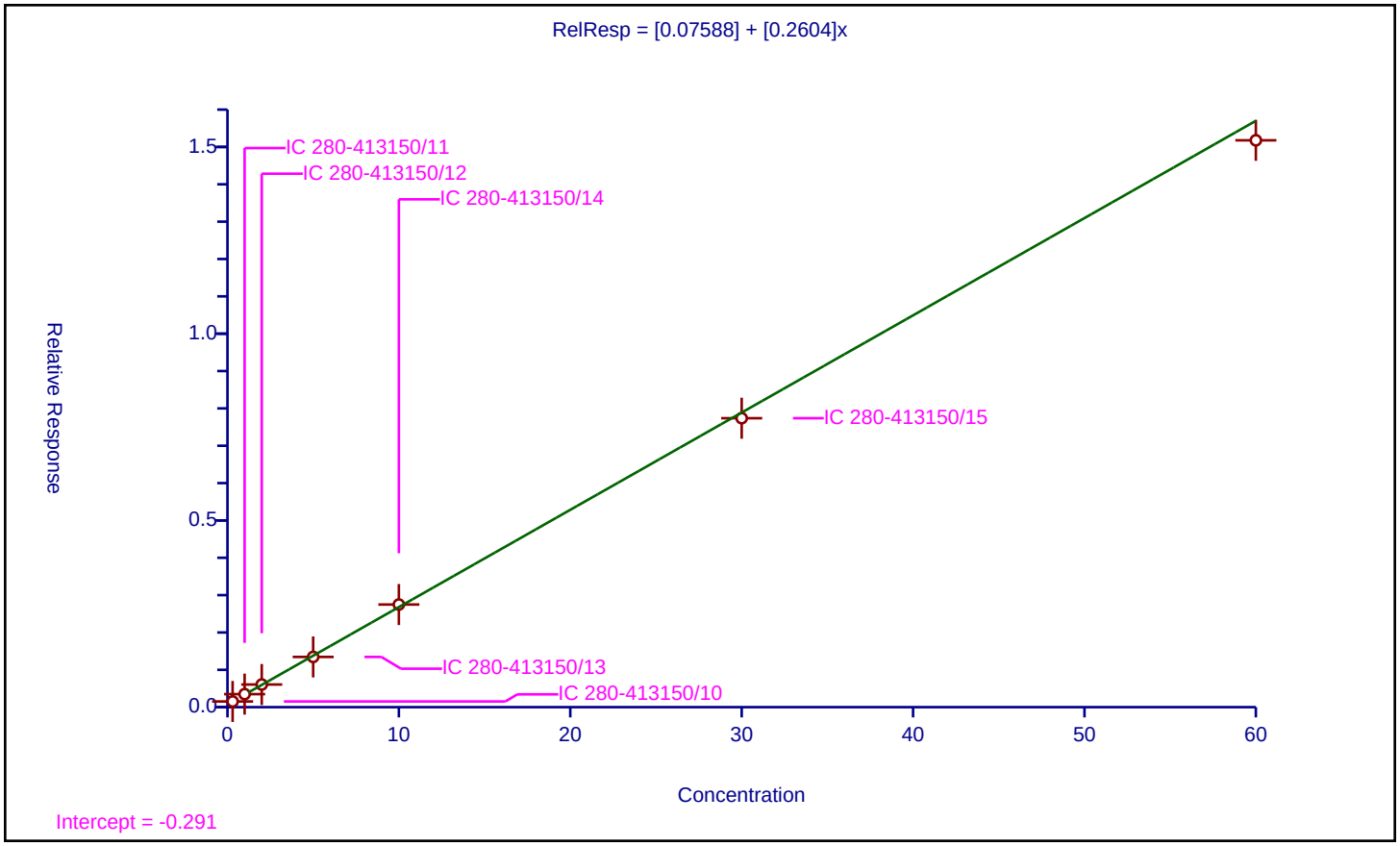
Curve Coefficients

Intercept:	0.07588
Slope:	0.2604

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.152704	12.5	1452979.0	0.509012	Y
2	IC 280-413150/11	1.0	0.349258	12.5	1647099.0	0.349258	Y
3	IC 280-413150/12	2.0	0.606222	12.5	1632446.0	0.303111	Y
4	IC 280-413150/13	5.0	1.345373	12.5	1704025.0	0.269075	Y
5	IC 280-413150/14	10.0	2.74778	12.5	1685538.0	0.274778	Y
6	IC 280-413150/15	30.0	7.737001	12.5	1710805.0	0.2579	Y
7	IC 280-413150/16	60.0	15.178112	12.5	1691980.0	0.252969	Y



Calibration / Chloroethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

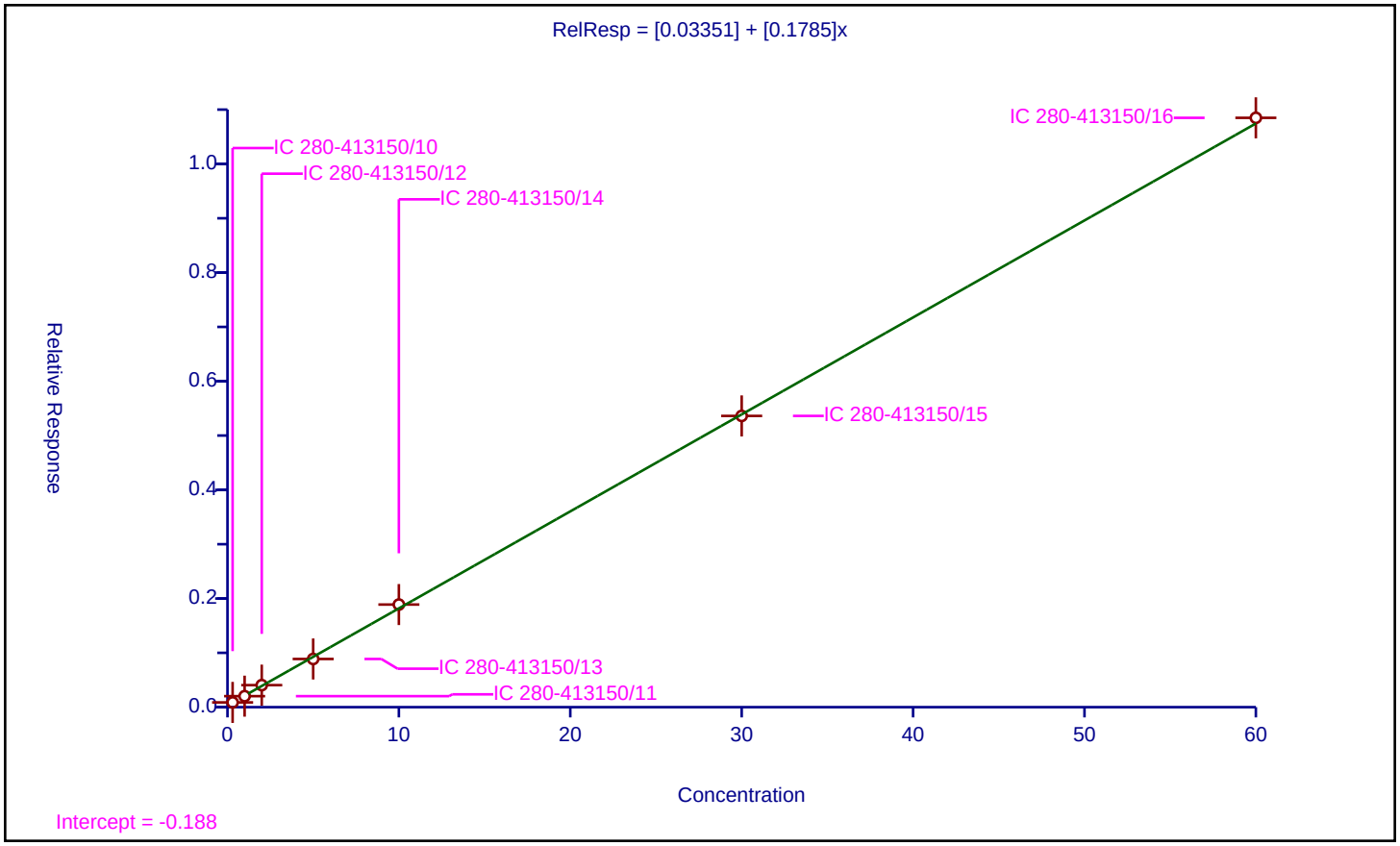
Curve Coefficients

Intercept:	0.03351
Slope:	0.1785

Error Coefficients

Standard Error:	745000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.087665	12.5	1452979.0	0.292216	Y
2	IC 280-413150/11	1.0	0.202477	12.5	1647099.0	0.202477	Y
3	IC 280-413150/12	2.0	0.405565	12.5	1632446.0	0.202782	Y
4	IC 280-413150/13	5.0	0.887135	12.5	1704025.0	0.177427	Y
5	IC 280-413150/14	10.0	1.8889	12.5	1685538.0	0.18889	Y
6	IC 280-413150/15	30.0	5.361051	12.5	1710805.0	0.178702	Y
7	IC 280-413150/16	60.0	10.848983	12.5	1691980.0	0.180816	Y



Calibration / Dichlorofluoromethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

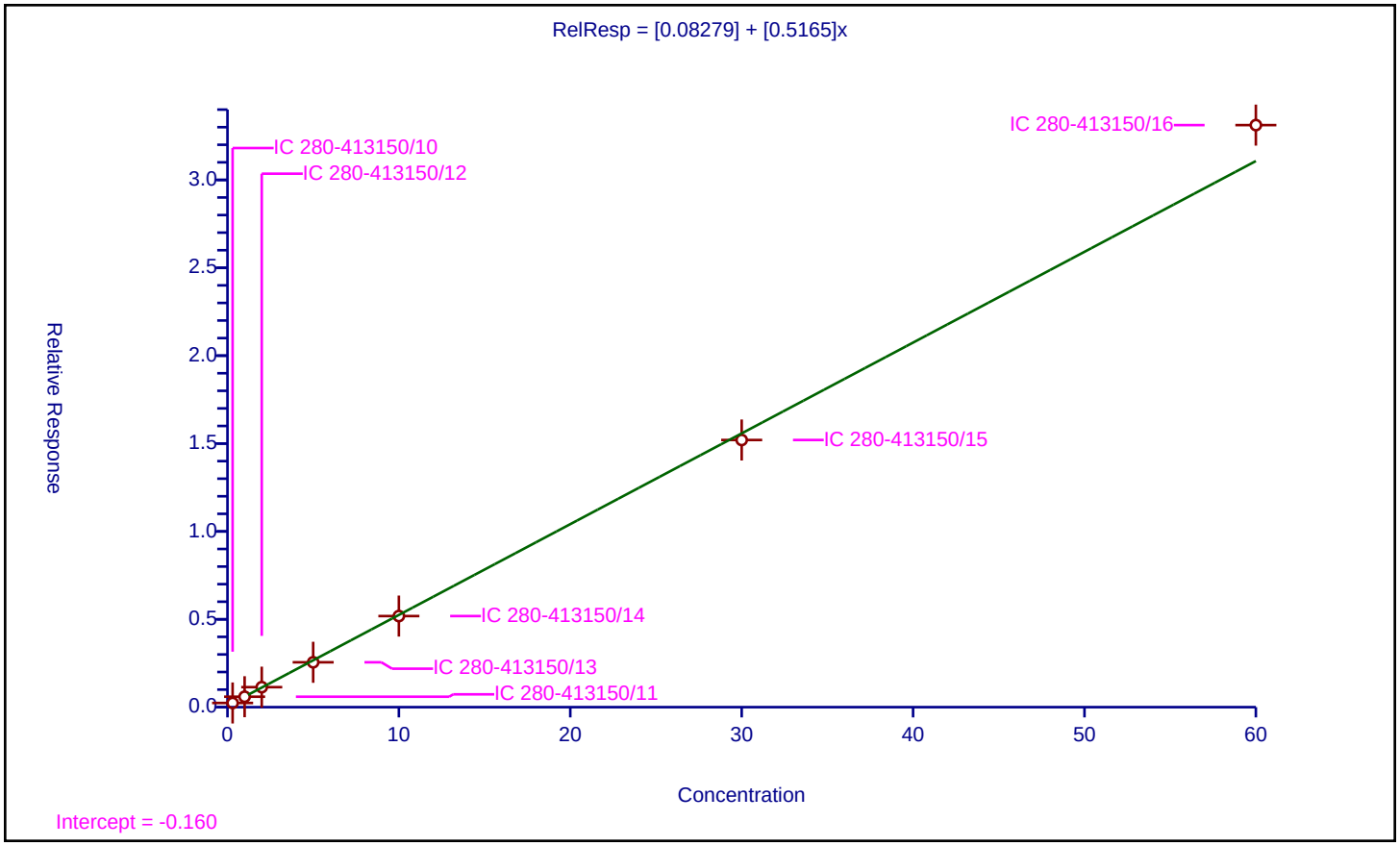
Curve Coefficients

Intercept:	0.08279
Slope:	0.5165

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.238157	12.5	1452979.0	0.793858	Y
2	IC 280-413150/11	1.0	0.594037	12.5	1647099.0	0.594037	Y
3	IC 280-413150/12	2.0	1.138414	12.5	1632446.0	0.569207	Y
4	IC 280-413150/13	5.0	2.553359	12.5	1704025.0	0.510672	Y
5	IC 280-413150/14	10.0	5.182922	12.5	1685538.0	0.518292	Y
6	IC 280-413150/15	30.0	15.200929	12.5	1710805.0	0.506698	Y
7	IC 280-413150/16	60.0	33.117856	12.5	1691980.0	0.551964	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

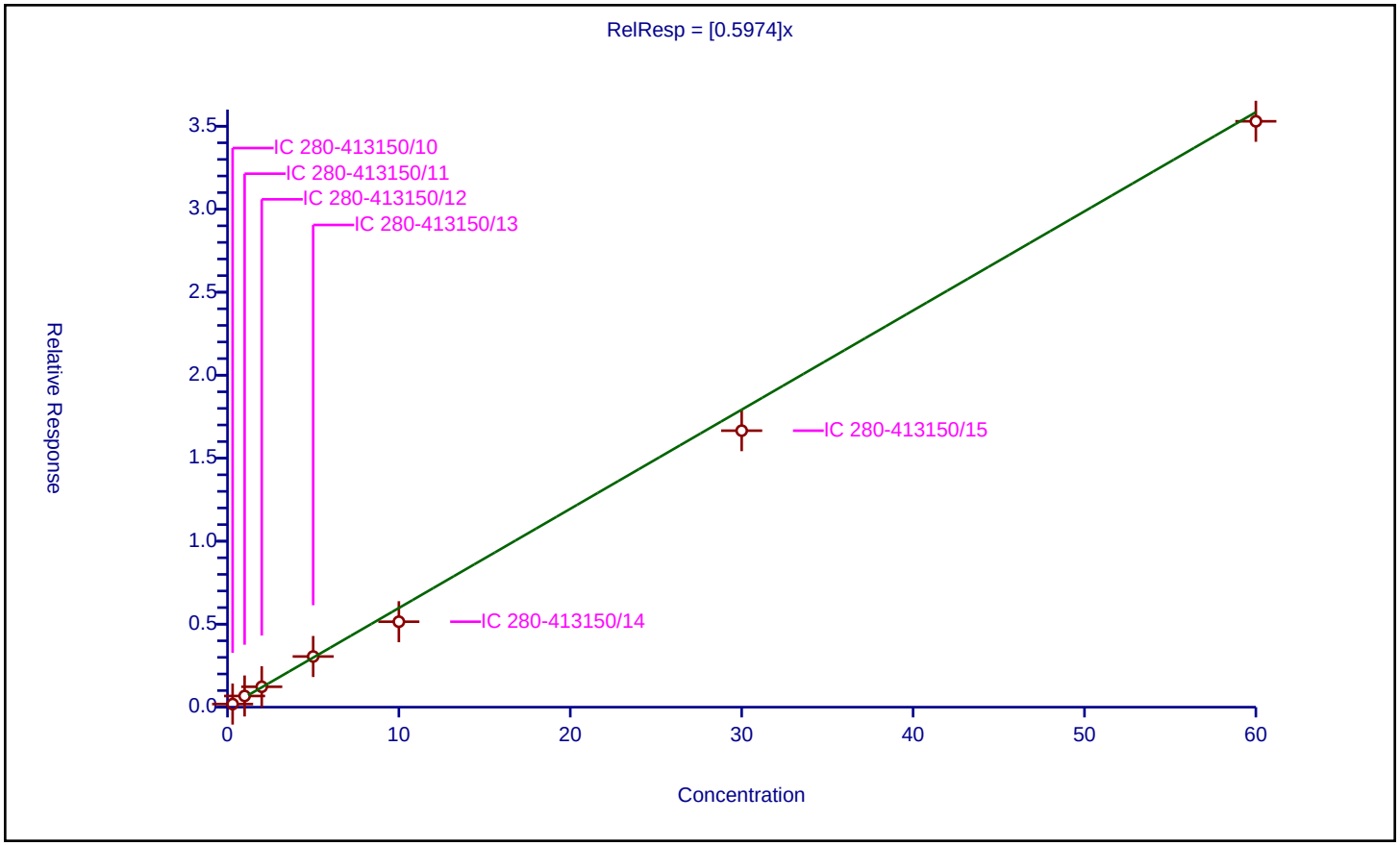
Curve Coefficients

Intercept:	0
Slope:	0.5974

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.187245	12.5	1452979.0	0.624149	Y
2	IC 280-413150/11	1.0	0.674777	12.5	1647099.0	0.674777	Y
3	IC 280-413150/12	2.0	1.228402	12.5	1632446.0	0.614201	Y
4	IC 280-413150/13	5.0	3.052699	12.5	1704025.0	0.61054	Y
5	IC 280-413150/14	10.0	5.147733	12.5	1685538.0	0.514773	Y
6	IC 280-413150/15	30.0	16.658547	12.5	1710805.0	0.555285	Y
7	IC 280-413150/16	60.0	35.297019	12.5	1691980.0	0.588284	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

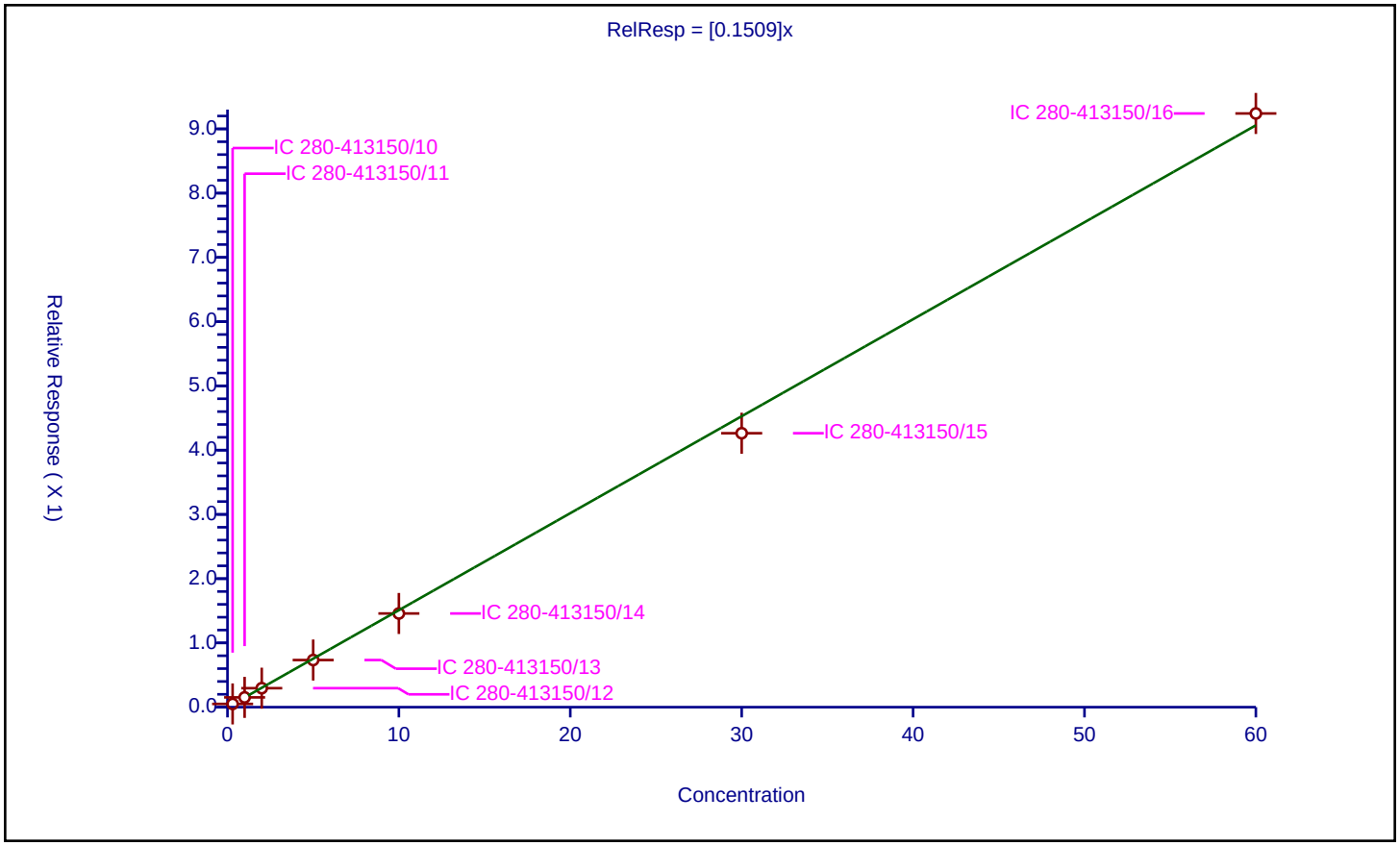
Curve Coefficients

Intercept:	0
Slope:	0.1509

Error Coefficients

Standard Error:	571000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.050319	12.5	1452979.0	0.16773	Y
2	IC 280-413150/11	1.0	0.152389	12.5	1647099.0	0.152389	Y
3	IC 280-413150/12	2.0	0.295553	12.5	1632446.0	0.147777	Y
4	IC 280-413150/13	5.0	0.733638	12.5	1704025.0	0.146728	Y
5	IC 280-413150/14	10.0	1.457925	12.5	1685538.0	0.145792	Y
6	IC 280-413150/15	30.0	4.263556	12.5	1710805.0	0.142119	Y
7	IC 280-413150/16	60.0	9.239922	12.5	1691980.0	0.153999	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

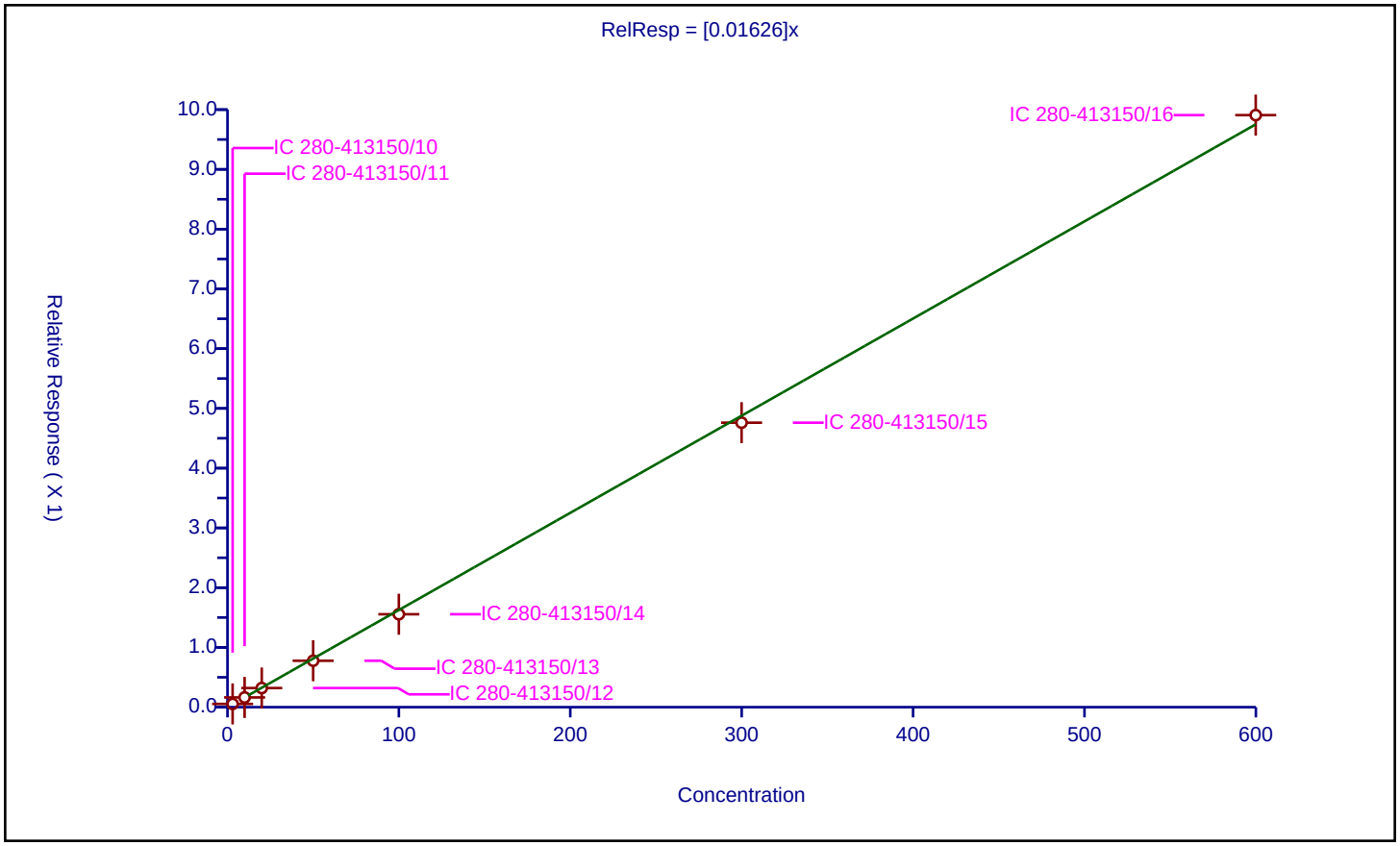
Curve Coefficients

Intercept:	0
Slope:	0.01626

Error Coefficients

Standard Error:	617000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	2.999531	0.054113	12.5	1452979.0	0.01804	Y
2	IC 280-413150/11	9.998438	0.162968	12.5	1647099.0	0.016299	Y
3	IC 280-413150/12	19.996875	0.319804	12.5	1632446.0	0.015993	Y
4	IC 280-413150/13	49.992188	0.776734	12.5	1704025.0	0.015537	Y
5	IC 280-413150/14	99.984375	1.555052	12.5	1685538.0	0.015553	Y
6	IC 280-413150/15	299.953125	4.760683	12.5	1710805.0	0.015871	Y
7	IC 280-413150/16	599.90625	9.907726	12.5	1691980.0	0.016515	Y



Calibration / Acetone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

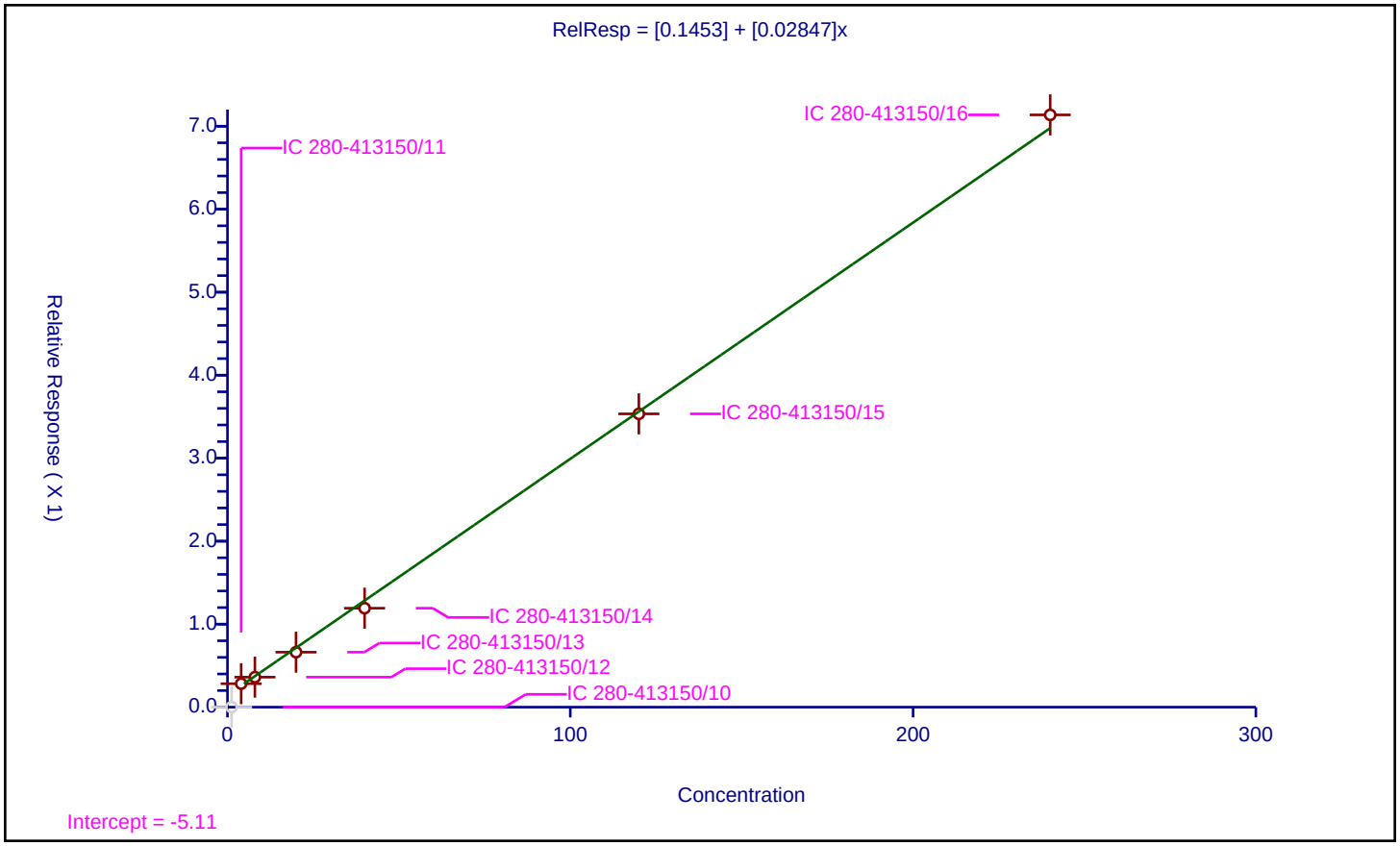
Curve Coefficients

Intercept:	0.1453
Slope:	0.02847

Error Coefficients

Standard Error:	549000
Relative Standard Error:	12.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	1.2	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	4.0	0.282906	12.5	1647099.0	0.070727	Y
3	IC 280-413150/12	8.0	0.361459	12.5	1632446.0	0.045182	Y
4	IC 280-413150/13	20.0	0.662285	12.5	1704025.0	0.033114	Y
5	IC 280-413150/14	40.0	1.192372	12.5	1685538.0	0.029809	Y
6	IC 280-413150/15	120.0	3.533877	12.5	1710805.0	0.029449	Y
7	IC 280-413150/16	240.0	7.136491	12.5	1691980.0	0.029735	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

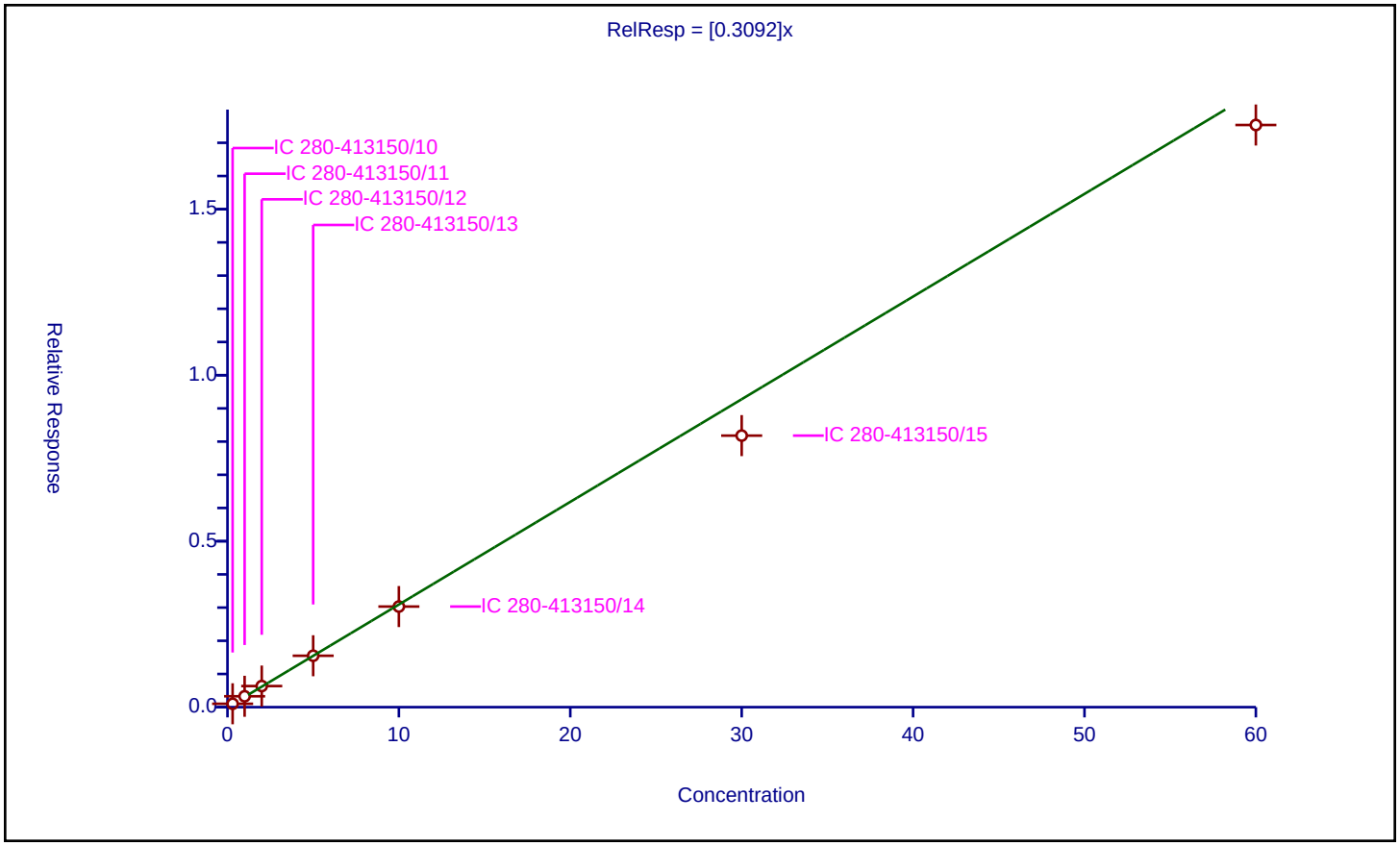
Curve Coefficients

Intercept:	0
Slope:	0.3092

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	7.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.102238	12.5	1452979.0	0.340794	Y
2	IC 280-413150/11	1.0	0.3281	12.5	1647099.0	0.3281	Y
3	IC 280-413150/12	2.0	0.635641	12.5	1632446.0	0.317821	Y
4	IC 280-413150/13	5.0	1.548613	12.5	1704025.0	0.309723	Y
5	IC 280-413150/14	10.0	3.030405	12.5	1685538.0	0.30304	Y
6	IC 280-413150/15	30.0	8.179797	12.5	1710805.0	0.27266	Y
7	IC 280-413150/16	60.0	17.536311	12.5	1691980.0	0.292272	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

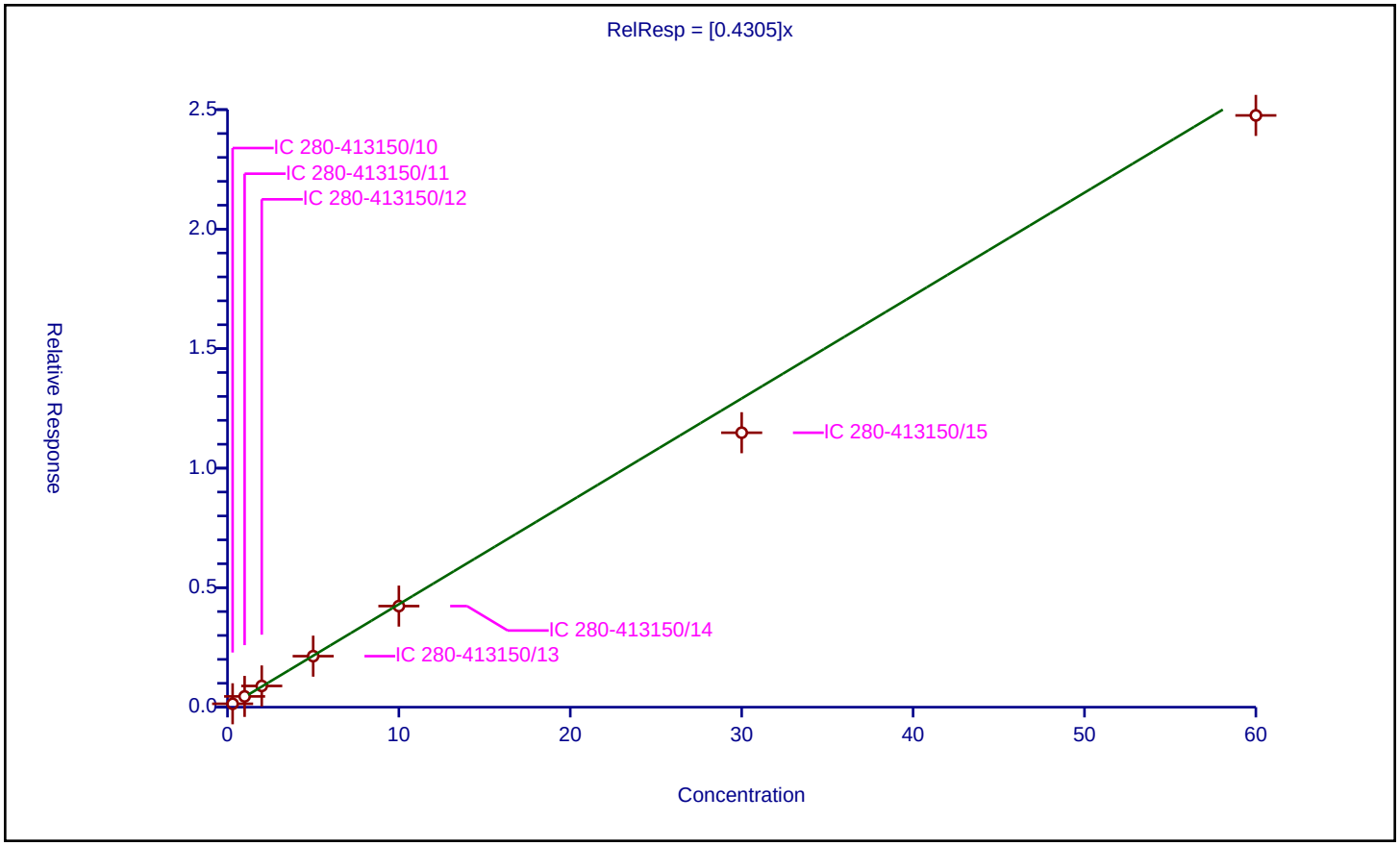
Curve Coefficients

Intercept:	0
Slope:	0.4305

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	6.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.142483	12.5	1452979.0	0.474944	Y
2	IC 280-413150/11	1.0	0.449943	12.5	1647099.0	0.449943	Y
3	IC 280-413150/12	2.0	0.887258	12.5	1632446.0	0.443629	Y
4	IC 280-413150/13	5.0	2.134182	12.5	1704025.0	0.426836	Y
5	IC 280-413150/14	10.0	4.228138	12.5	1685538.0	0.422814	Y
6	IC 280-413150/15	30.0	11.482584	12.5	1710805.0	0.382753	Y
7	IC 280-413150/16	60.0	24.757171	12.5	1691980.0	0.41262	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

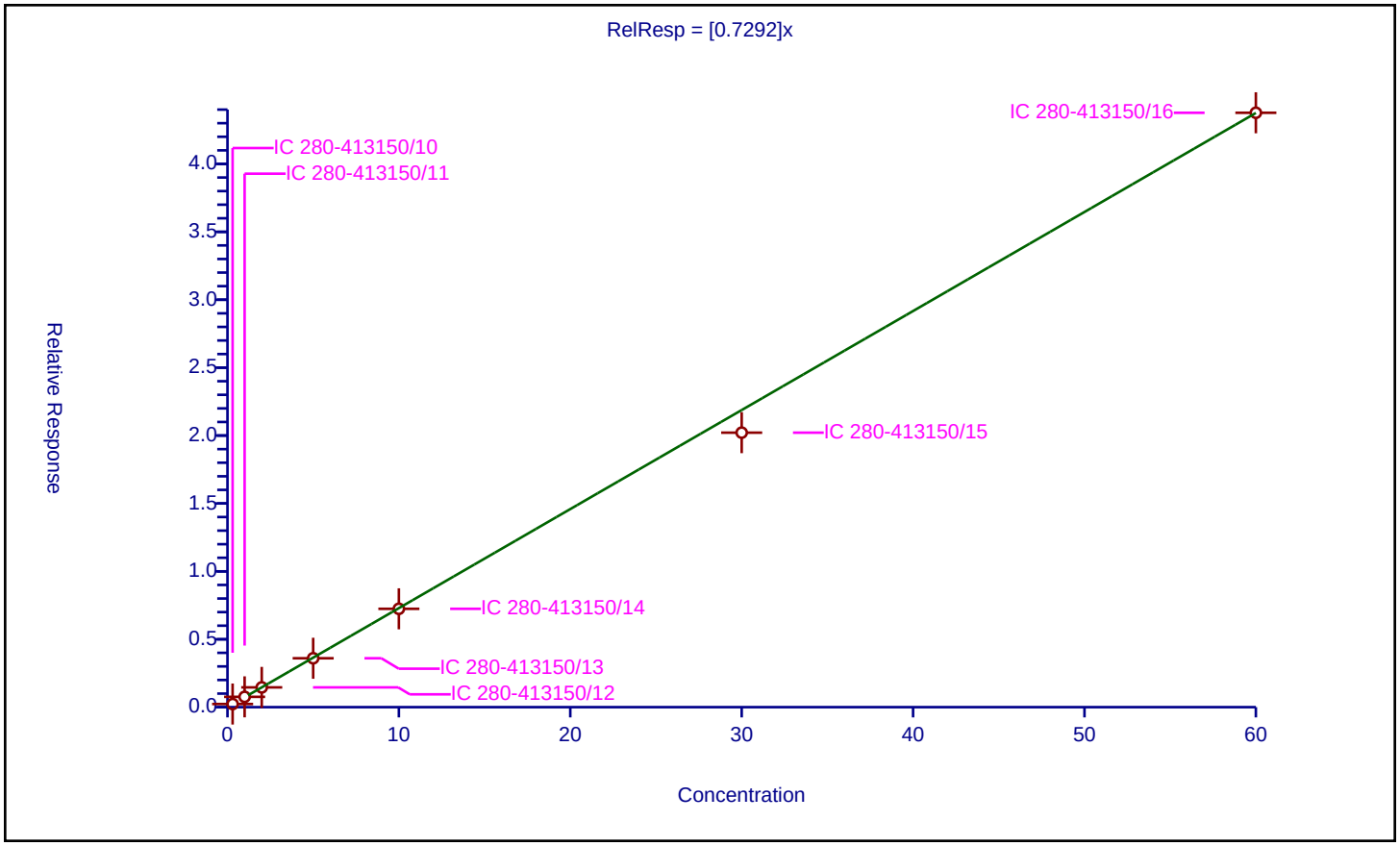
Curve Coefficients

Intercept:	0
Slope:	0.7292

Error Coefficients

Standard Error:	2710000
Relative Standard Error:	4.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.231025	12.5	1452979.0	0.770085	Y
2	IC 280-413150/11	1.0	0.75913	12.5	1647099.0	0.75913	Y
3	IC 280-413150/12	2.0	1.455722	12.5	1632446.0	0.727861	Y
4	IC 280-413150/13	5.0	3.600057	12.5	1704025.0	0.720011	Y
5	IC 280-413150/14	10.0	7.242821	12.5	1685538.0	0.724282	Y
6	IC 280-413150/15	30.0	20.212546	12.5	1710805.0	0.673752	Y
7	IC 280-413150/16	60.0	43.767021	12.5	1691980.0	0.72945	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

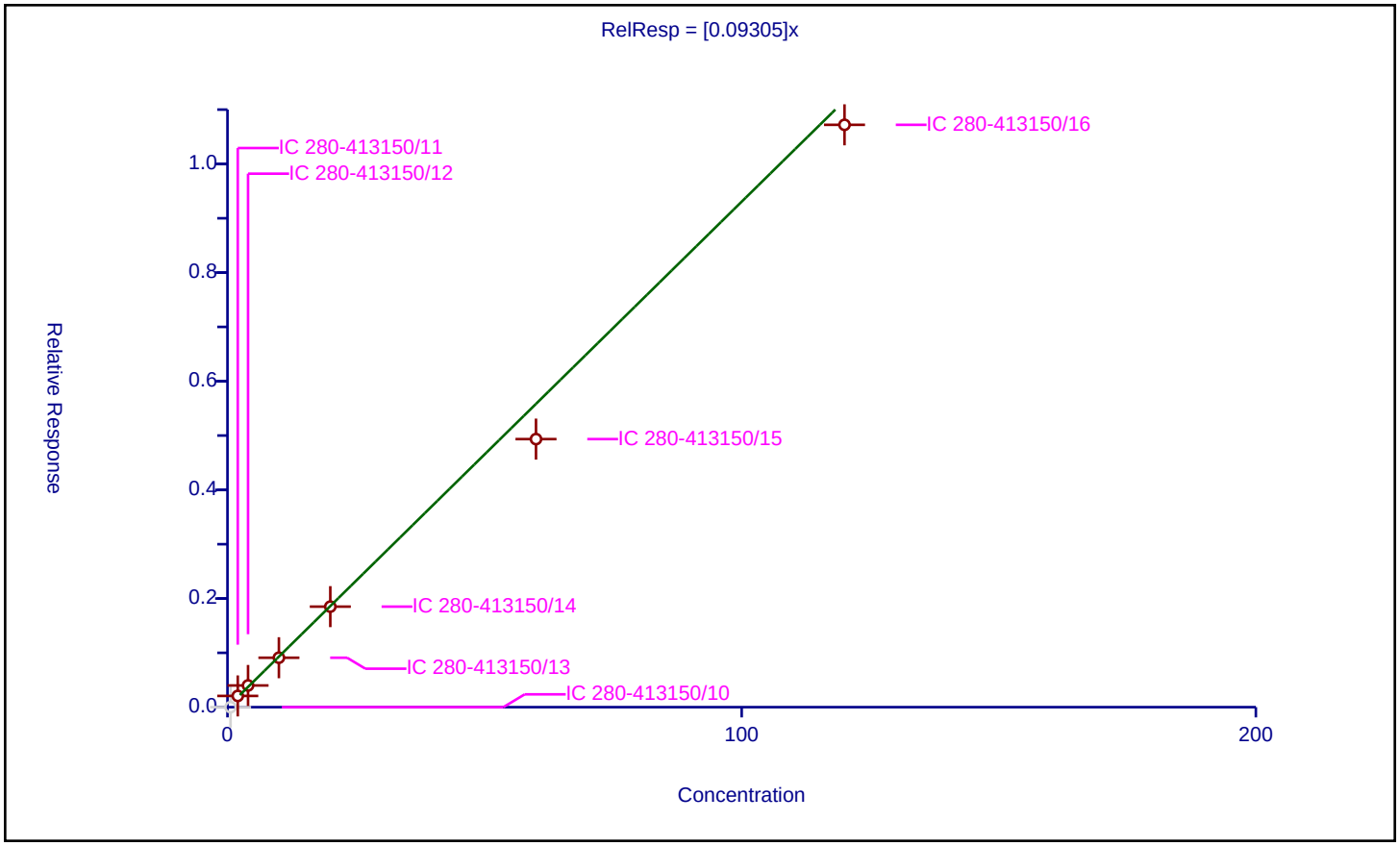
Curve Coefficients

Intercept:	0
Slope:	0.09305

Error Coefficients

Standard Error:	727000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.6	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	2.0	0.206712	12.5	1647099.0	0.103356	Y
3	IC 280-413150/12	4.0	0.399355	12.5	1632446.0	0.099839	Y
4	IC 280-413150/13	10.0	0.910117	12.5	1704025.0	0.091012	Y
5	IC 280-413150/14	20.0	1.850507	12.5	1685538.0	0.092525	Y
6	IC 280-413150/15	60.0	4.934848	12.5	1710805.0	0.082247	Y
7	IC 280-413150/16	120.0	10.719734	12.5	1691980.0	0.089331	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

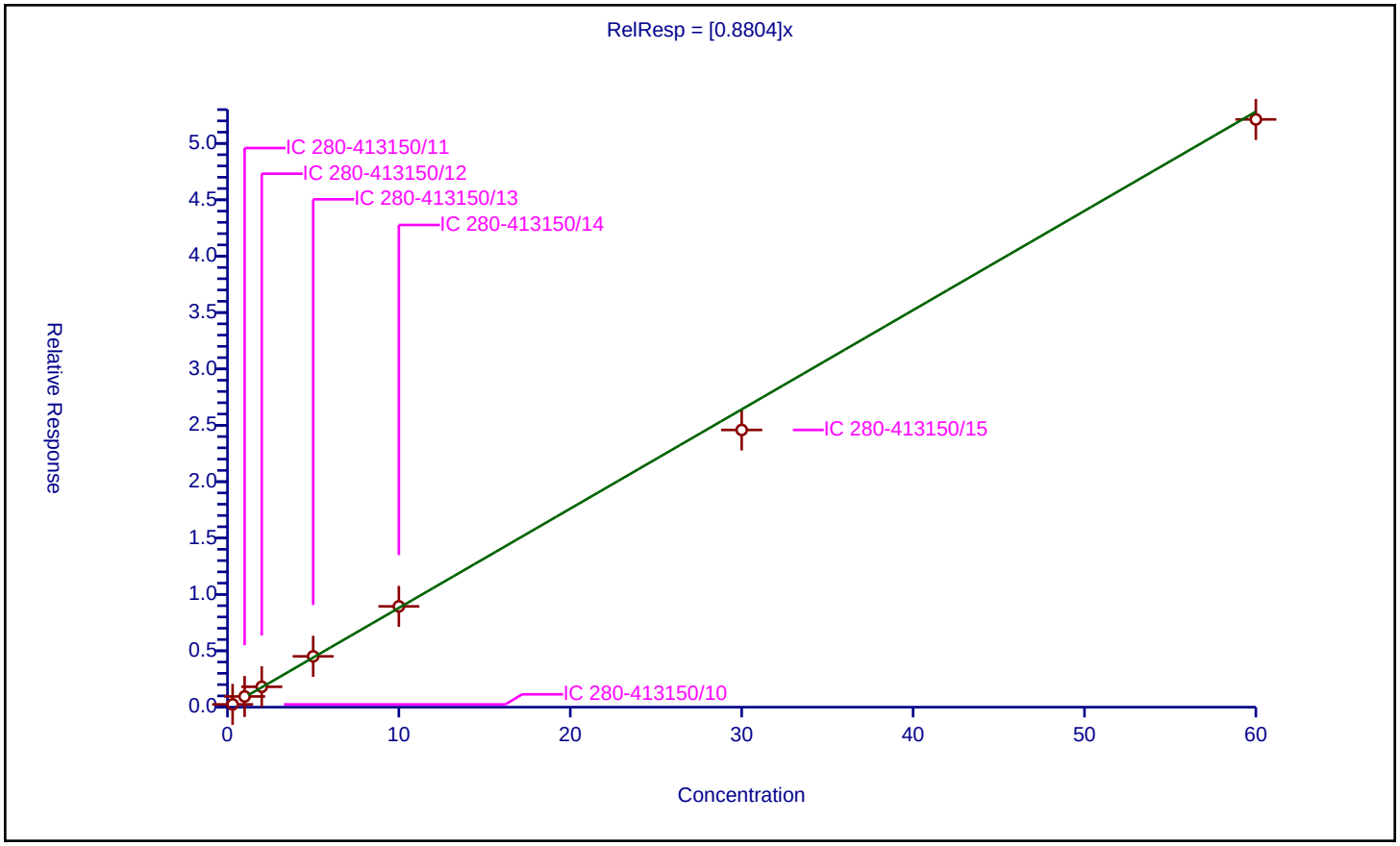
Curve Coefficients

Intercept:	0
Slope:	0.8804

Error Coefficients

Standard Error:	3240000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.24775	12.5	1452979.0	0.825832	Y
2	IC 280-413150/11	1.0	0.949351	12.5	1647099.0	0.949351	Y
3	IC 280-413150/12	2.0	1.807219	12.5	1632446.0	0.90361	Y
4	IC 280-413150/13	5.0	4.506829	12.5	1704025.0	0.901366	Y
5	IC 280-413150/14	10.0	8.938756	12.5	1685538.0	0.893876	Y
6	IC 280-413150/15	30.0	24.587745	12.5	1710805.0	0.819592	Y
7	IC 280-413150/16	60.0	52.130211	12.5	1691980.0	0.868837	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

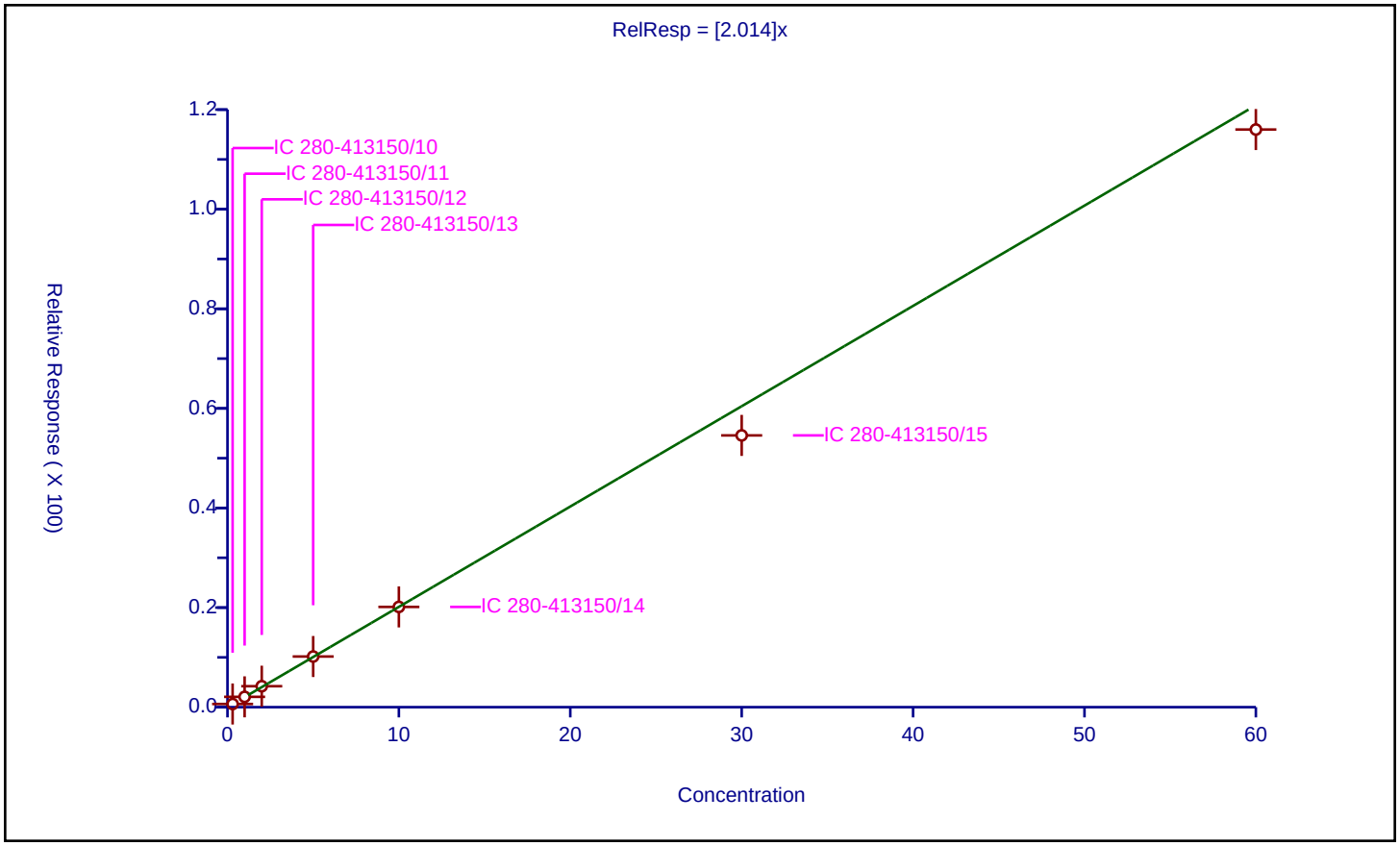
Curve Coefficients

Intercept:	0
Slope:	2.014

Error Coefficients

Standard Error:	7210000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.637449	12.5	1452979.0	2.12483	Y
2	IC 280-413150/11	1.0	2.071574	12.5	1647099.0	2.071574	Y
3	IC 280-413150/12	2.0	4.210614	12.5	1632446.0	2.105307	Y
4	IC 280-413150/13	5.0	10.169518	12.5	1704025.0	2.033904	Y
5	IC 280-413150/14	10.0	20.130071	12.5	1685538.0	2.013007	Y
6	IC 280-413150/15	30.0	54.575536	12.5	1710805.0	1.819185	Y
7	IC 280-413150/16	60.0	115.999096	12.5	1691980.0	1.933318	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

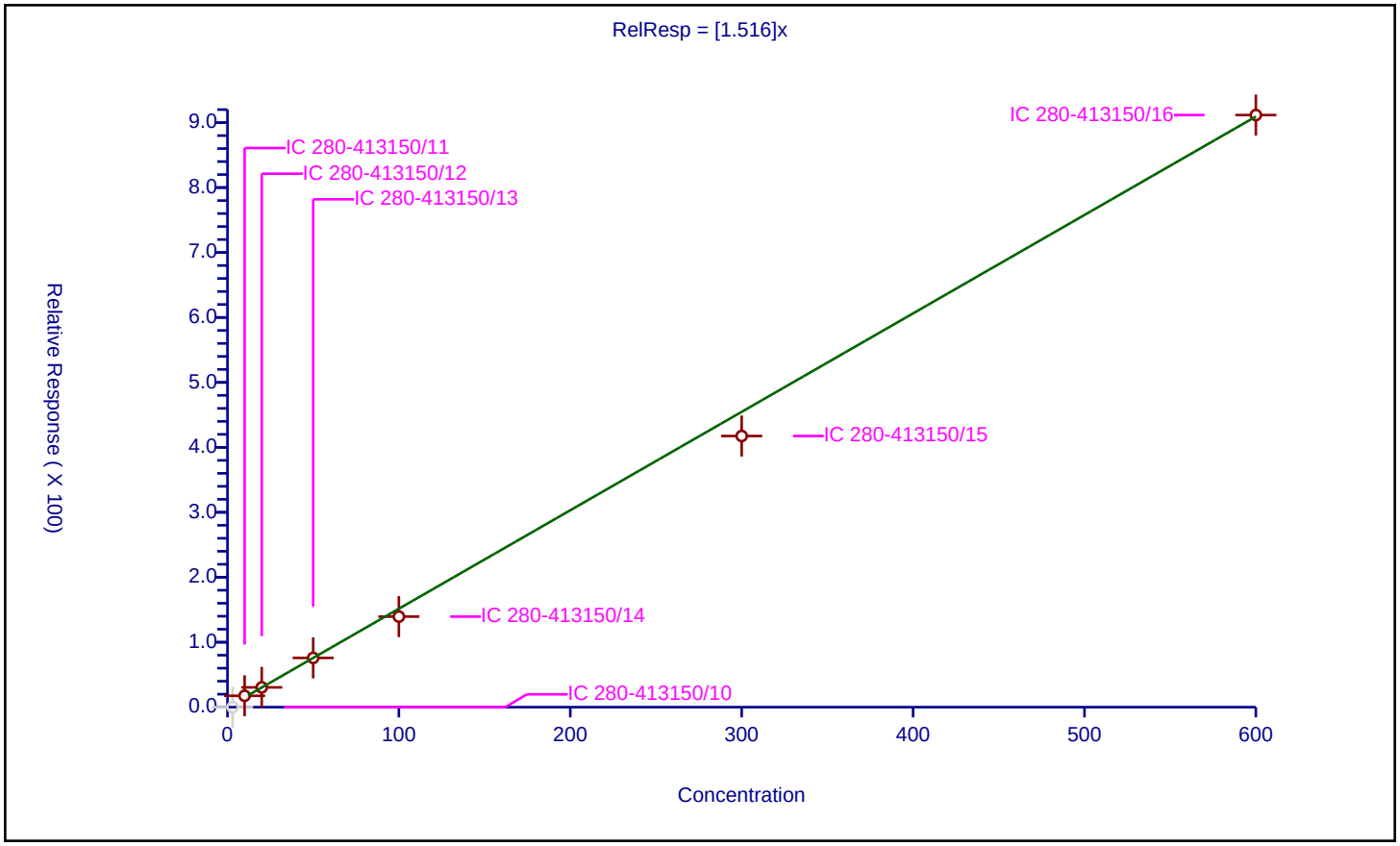
Curve Coefficients

Intercept:	0
Slope:	1.516

Error Coefficients

Standard Error:	305000
Relative Standard Error:	8.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	3.0	0.0	250.0	135309.0	0.0	N
2	IC 280-413150/11	10.0	17.488363	250.0	147155.0	1.748836	Y
3	IC 280-413150/12	20.0	30.459649	250.0	156576.0	1.522982	Y
4	IC 280-413150/13	50.0	75.826896	250.0	159996.0	1.516538	Y
5	IC 280-413150/14	100.0	139.420933	250.0	165974.0	1.394209	Y
6	IC 280-413150/15	300.0	417.493361	250.0	165317.0	1.391645	Y
7	IC 280-413150/16	600.0	911.599129	250.0	169017.0	1.519332	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

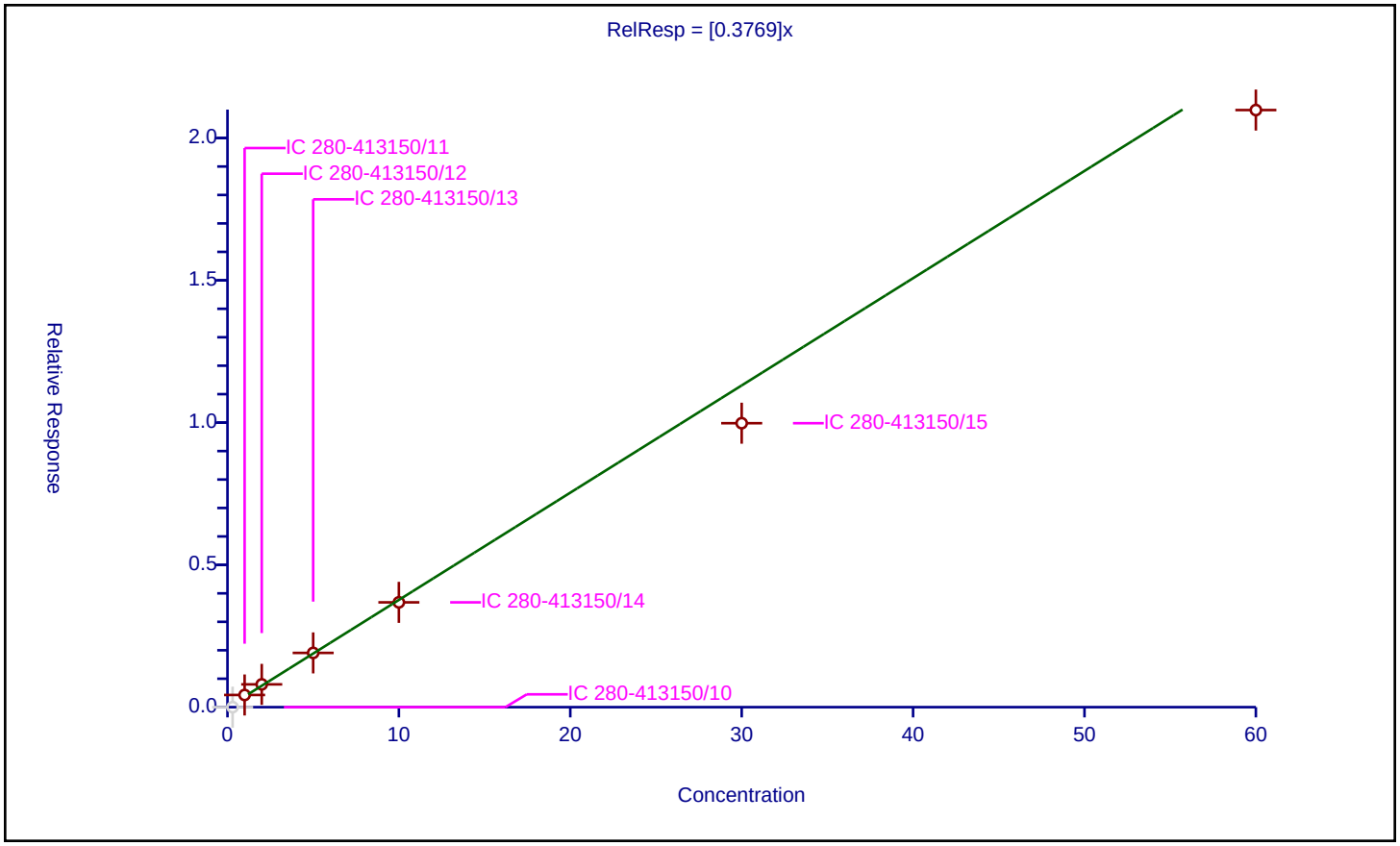
Curve Coefficients

Intercept:	0
Slope:	0.3769

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	9.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	1.0	0.428352	12.5	1647099.0	0.428352	Y
3	IC 280-413150/12	2.0	0.801765	12.5	1632446.0	0.400882	Y
4	IC 280-413150/13	5.0	1.906523	12.5	1704025.0	0.381305	Y
5	IC 280-413150/14	10.0	3.683438	12.5	1685538.0	0.368344	Y
6	IC 280-413150/15	30.0	9.979534	12.5	1710805.0	0.332651	Y
7	IC 280-413150/16	60.0	20.984217	12.5	1691980.0	0.349737	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

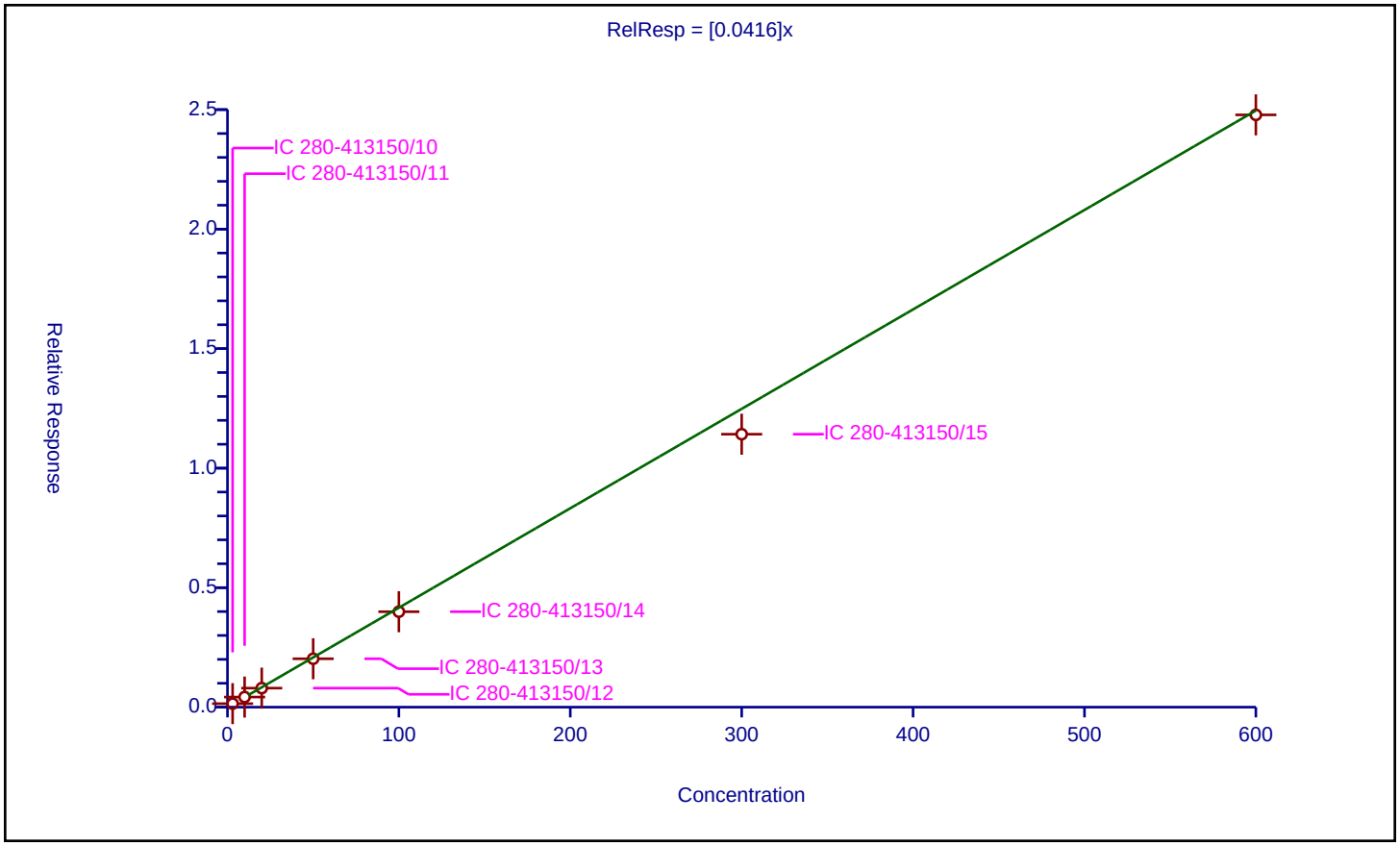
Curve Coefficients

Intercept:	0
Slope:	0.0416

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	3.0	0.147826	12.5	1452979.0	0.049275	Y
2	IC 280-413150/11	10.0	0.423312	12.5	1647099.0	0.042331	Y
3	IC 280-413150/12	20.0	0.795876	12.5	1632446.0	0.039794	Y
4	IC 280-413150/13	50.0	2.025315	12.5	1704025.0	0.040506	Y
5	IC 280-413150/14	100.0	3.993769	12.5	1685538.0	0.039938	Y
6	IC 280-413150/15	300.0	11.419704	12.5	1710805.0	0.038066	Y
7	IC 280-413150/16	600.0	24.779497	12.5	1691980.0	0.041299	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

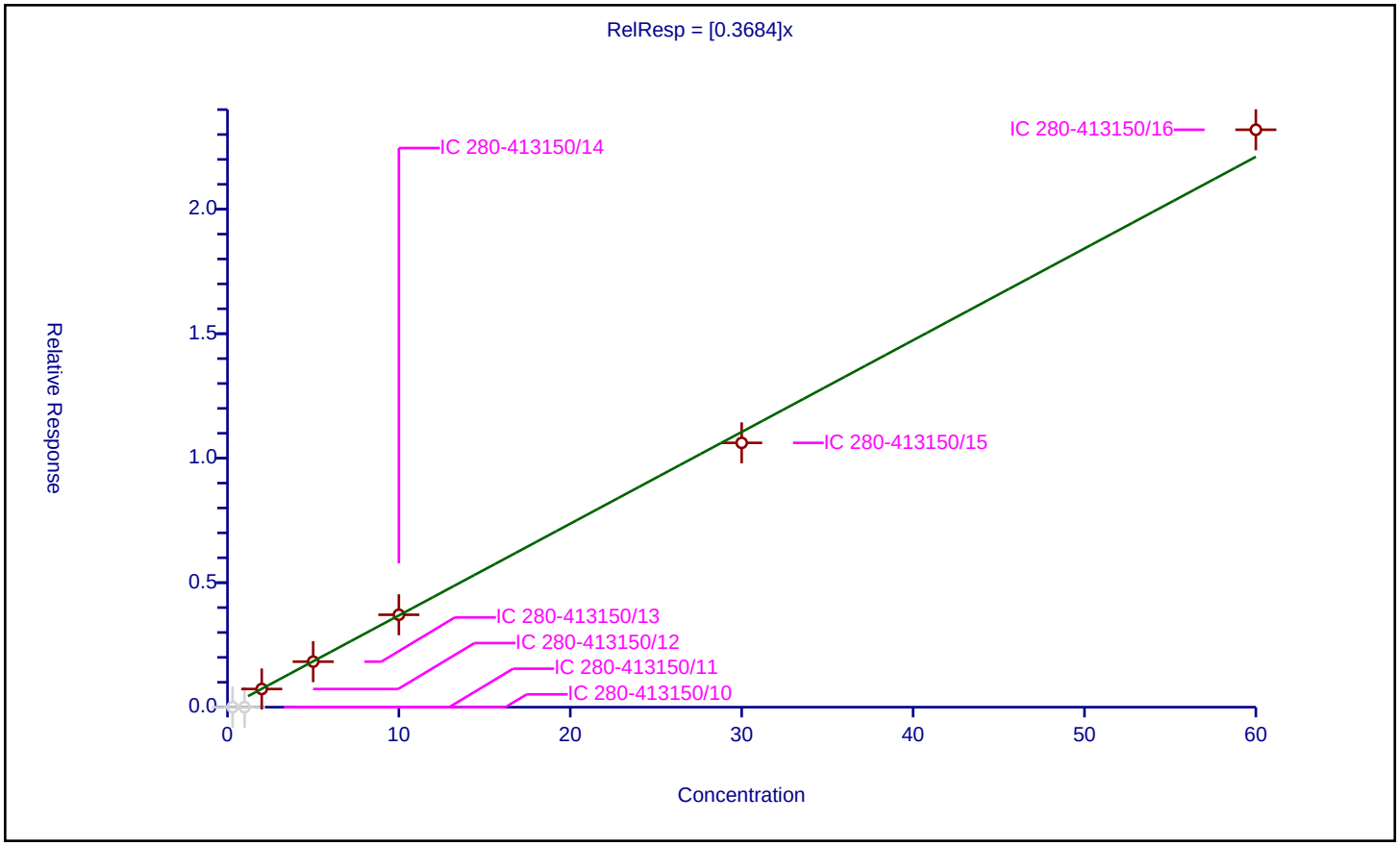
Curve Coefficients

Intercept:	0
Slope:	0.3684

Error Coefficients

Standard Error:	1750000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	1.0	0.0	12.5	1647099.0	0.0	N
3	IC 280-413150/12	2.0	0.729894	12.5	1632446.0	0.364947	Y
4	IC 280-413150/13	5.0	1.828568	12.5	1704025.0	0.365714	Y
5	IC 280-413150/14	10.0	3.711226	12.5	1685538.0	0.371123	Y
6	IC 280-413150/15	30.0	10.614871	12.5	1710805.0	0.353829	Y
7	IC 280-413150/16	60.0	23.190958	12.5	1691980.0	0.386516	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

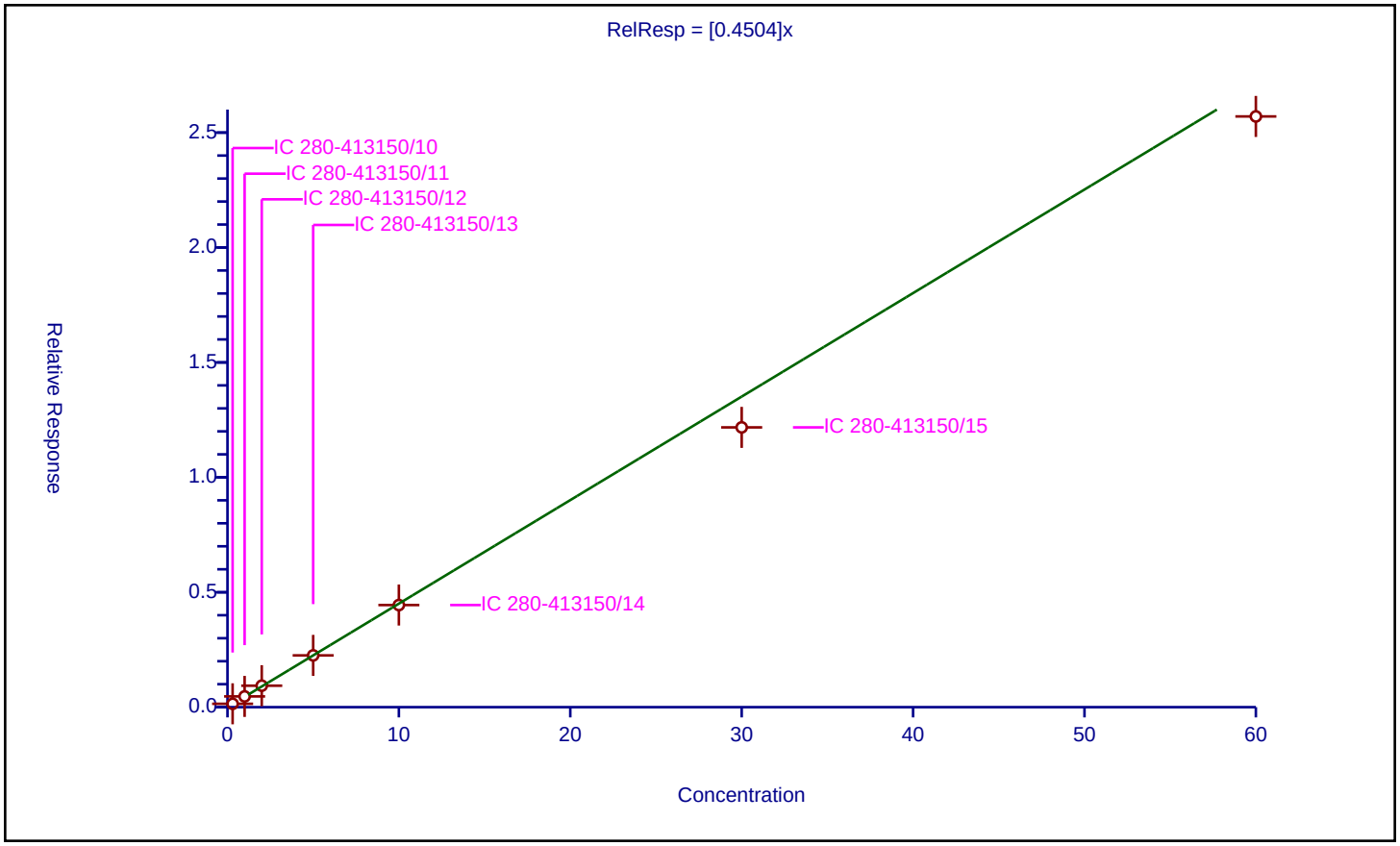
Curve Coefficients

Intercept:	0
Slope:	0.4504

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.146828	12.5	1452979.0	0.489426	Y
2	IC 280-413150/11	1.0	0.467823	12.5	1647099.0	0.467823	Y
3	IC 280-413150/12	2.0	0.93366	12.5	1632446.0	0.46683	Y
4	IC 280-413150/13	5.0	2.252534	12.5	1704025.0	0.450507	Y
5	IC 280-413150/14	10.0	4.442832	12.5	1685538.0	0.444283	Y
6	IC 280-413150/15	30.0	12.173268	12.5	1710805.0	0.405776	Y
7	IC 280-413150/16	60.0	25.702801	12.5	1691980.0	0.42838	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

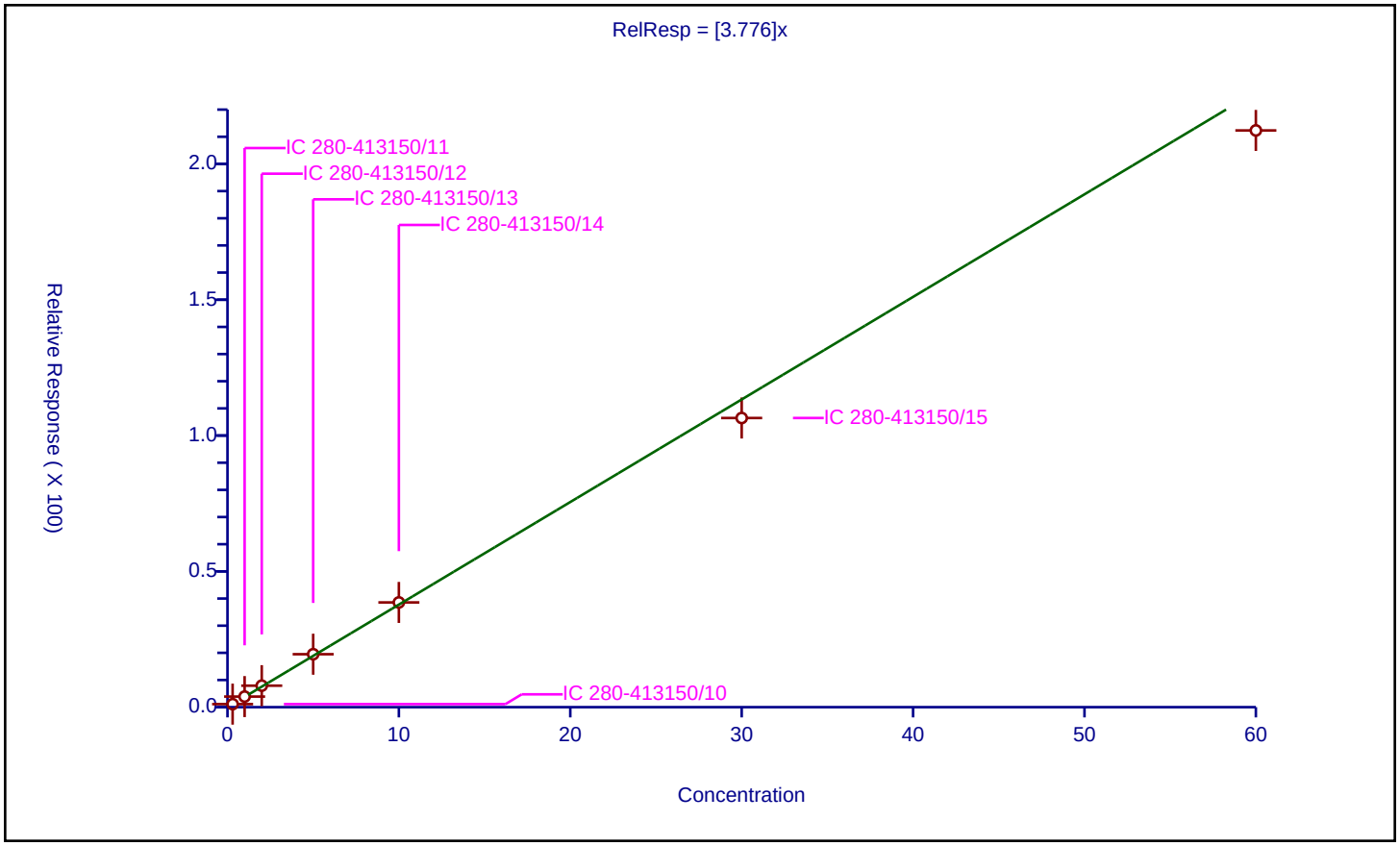
Curve Coefficients

Intercept:	0
Slope:	3.776

Error Coefficients

Standard Error:	2720000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.122732	12.5	302844.0	3.742438	Y
2	IC 280-413150/11	1.0	3.892478	12.5	305082.0	3.892478	Y
3	IC 280-413150/12	2.0	7.910029	12.5	307442.0	3.955014	Y
4	IC 280-413150/13	5.0	19.496484	12.5	326941.0	3.899297	Y
5	IC 280-413150/14	10.0	38.561887	12.5	328213.0	3.856189	Y
6	IC 280-413150/15	30.0	106.457688	12.5	330604.0	3.54859	Y
7	IC 280-413150/16	60.0	212.330743	12.5	348140.0	3.538846	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

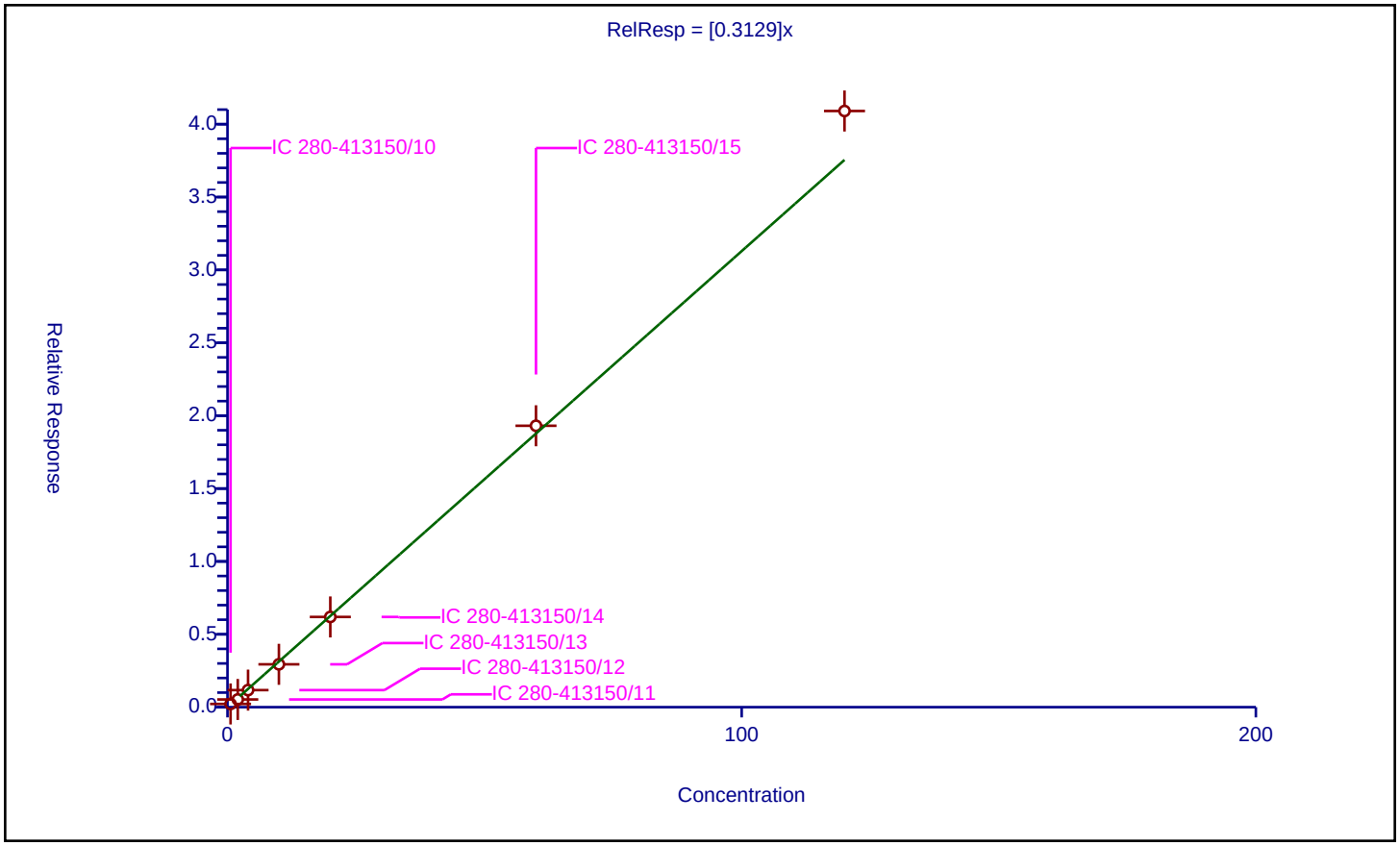
Curve Coefficients

Intercept:	0
Slope:	0.3129

Error Coefficients

Standard Error:	2530000
Relative Standard Error:	10.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.6	0.220177	12.5	1452979.0	0.366962	Y
2	IC 280-413150/11	2.0	0.529203	12.5	1647099.0	0.264602	Y
3	IC 280-413150/12	4.0	1.170337	12.5	1632446.0	0.292584	Y
4	IC 280-413150/13	10.0	2.939958	12.5	1704025.0	0.293996	Y
5	IC 280-413150/14	20.0	6.191458	12.5	1685538.0	0.309573	Y
6	IC 280-413150/15	60.0	19.307614	12.5	1710805.0	0.321794	Y
7	IC 280-413150/16	120.0	40.904177	12.5	1691980.0	0.340868	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

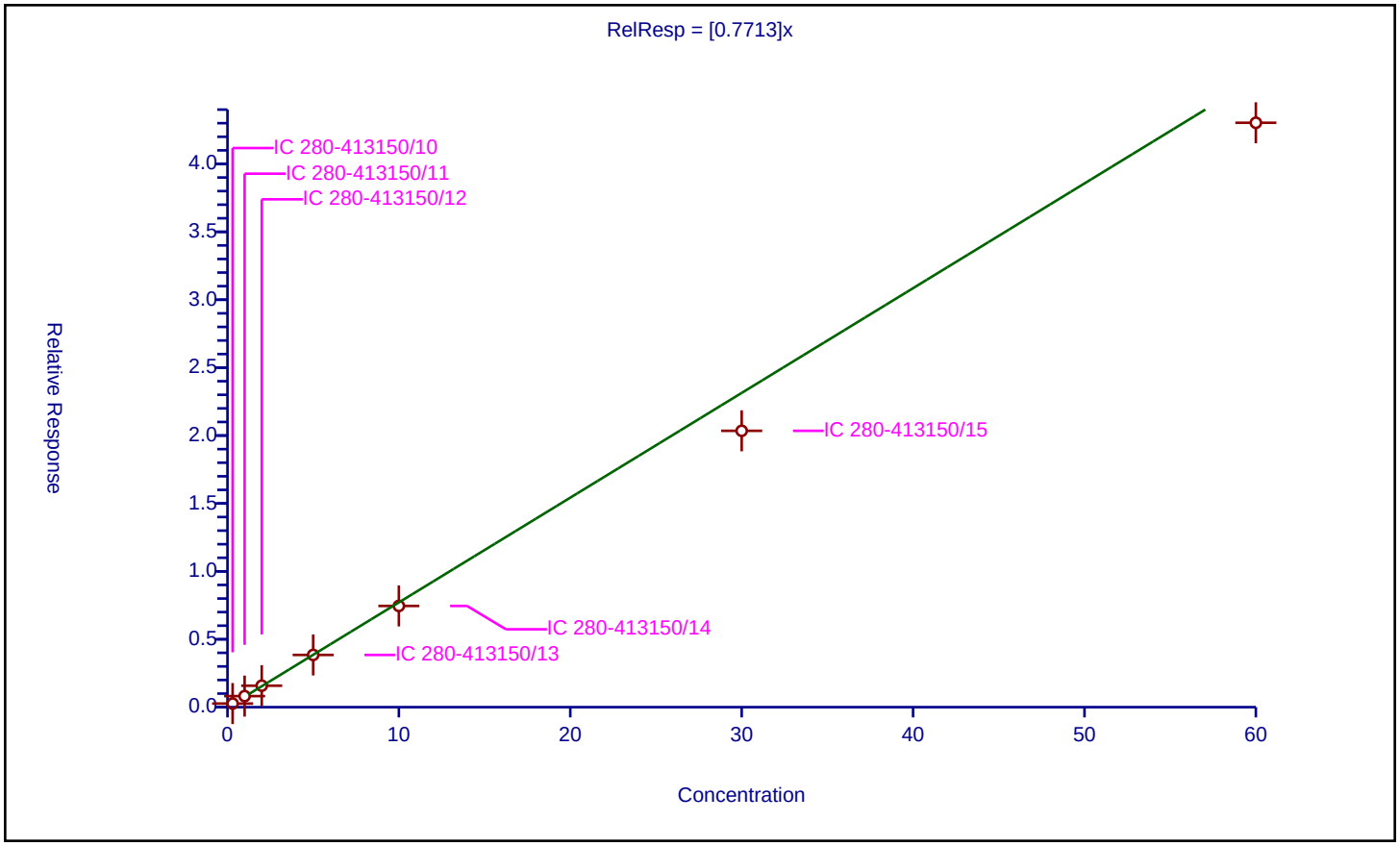
Curve Coefficients

Intercept:	0
Slope:	0.7713

Error Coefficients

Standard Error:	2680000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.265274	12.5	1452979.0	0.884247	Y
2	IC 280-413150/11	1.0	0.81469	12.5	1647099.0	0.81469	Y
3	IC 280-413150/12	2.0	1.580205	12.5	1632446.0	0.790103	Y
4	IC 280-413150/13	5.0	3.845491	12.5	1704025.0	0.769098	Y
5	IC 280-413150/14	10.0	7.452939	12.5	1685538.0	0.745294	Y
6	IC 280-413150/15	30.0	20.348922	12.5	1710805.0	0.678297	Y
7	IC 280-413150/16	60.0	43.029786	12.5	1691980.0	0.717163	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

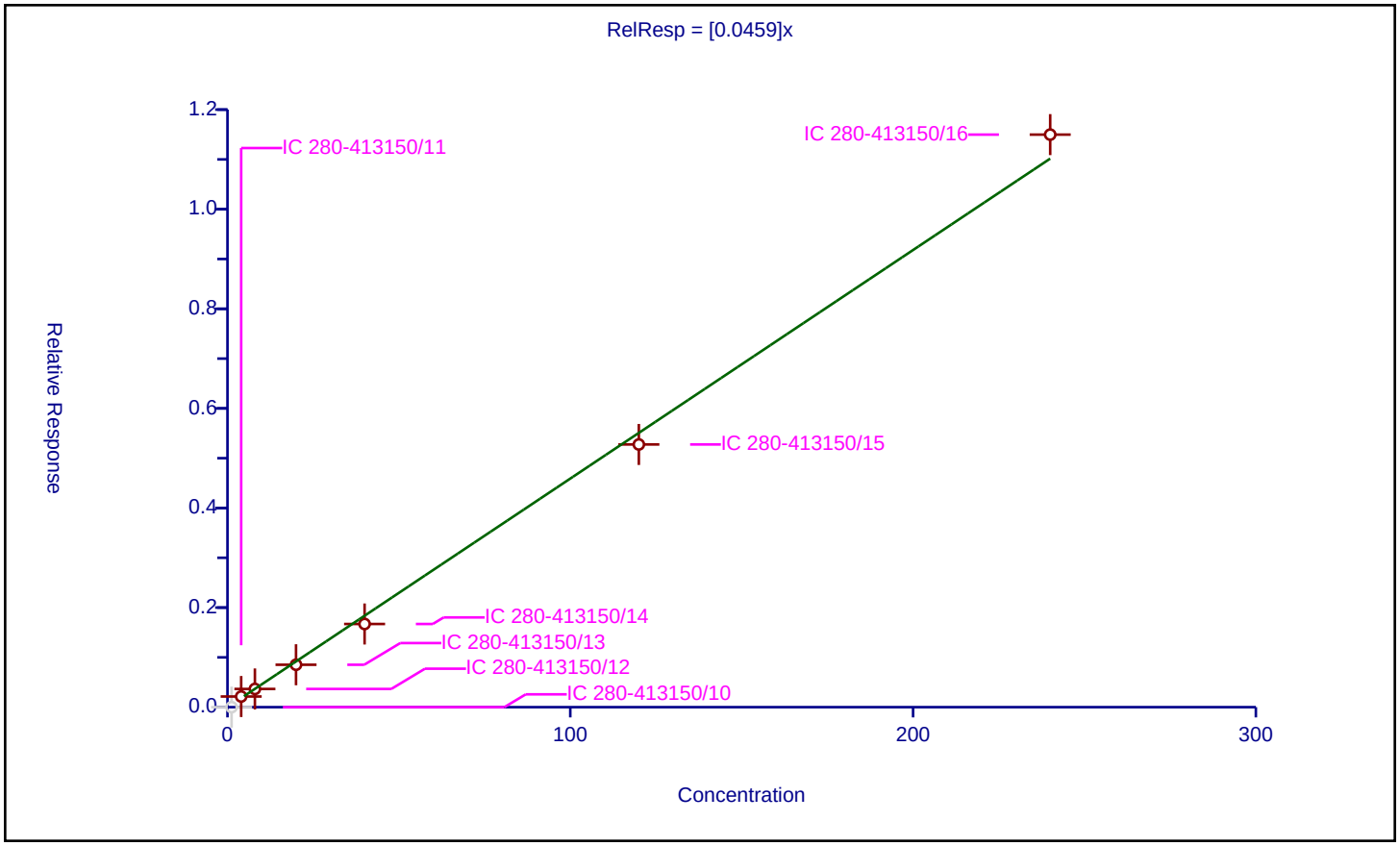
Curve Coefficients

Intercept:	0
Slope:	0.0459

Error Coefficients

Standard Error:	776000
Relative Standard Error:	9.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	1.2	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	4.0	0.213815	12.5	1647099.0	0.053454	Y
3	IC 280-413150/12	8.0	0.365755	12.5	1632446.0	0.045719	Y
4	IC 280-413150/13	20.0	0.851917	12.5	1704025.0	0.042596	Y
5	IC 280-413150/14	40.0	1.670542	12.5	1685538.0	0.041764	Y
6	IC 280-413150/15	120.0	5.275565	12.5	1710805.0	0.043963	Y
7	IC 280-413150/16	240.0	11.497912	12.5	1691980.0	0.047908	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

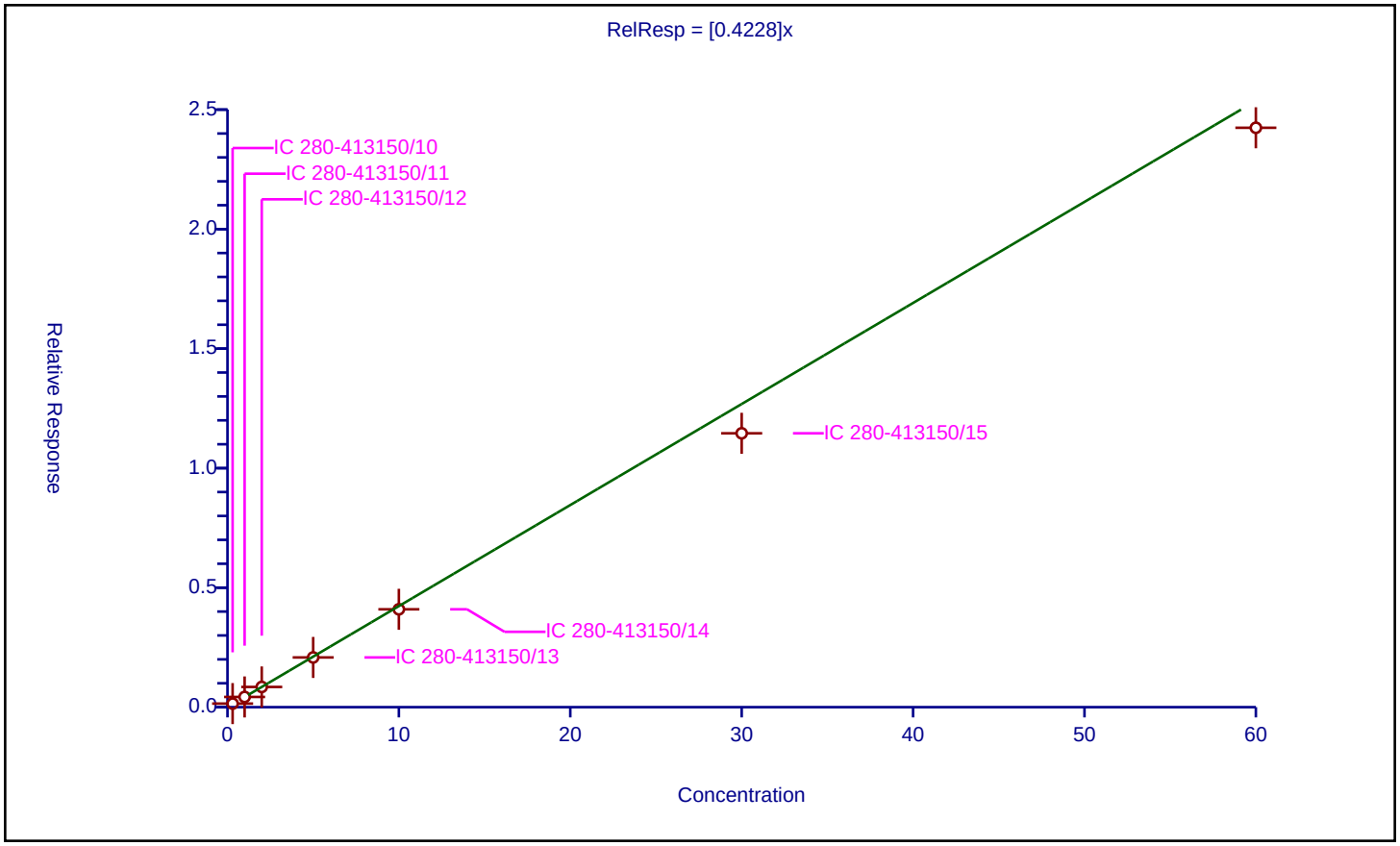
Curve Coefficients

Intercept:	0
Slope:	0.4228

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.149236	12.5	1452979.0	0.497455	Y
2	IC 280-413150/11	1.0	0.427365	12.5	1647099.0	0.427365	Y
3	IC 280-413150/12	2.0	0.846207	12.5	1632446.0	0.423104	Y
4	IC 280-413150/13	5.0	2.080603	12.5	1704025.0	0.416121	Y
5	IC 280-413150/14	10.0	4.094931	12.5	1685538.0	0.409493	Y
6	IC 280-413150/15	30.0	11.457472	12.5	1710805.0	0.381916	Y
7	IC 280-413150/16	60.0	24.24004	12.5	1691980.0	0.404001	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

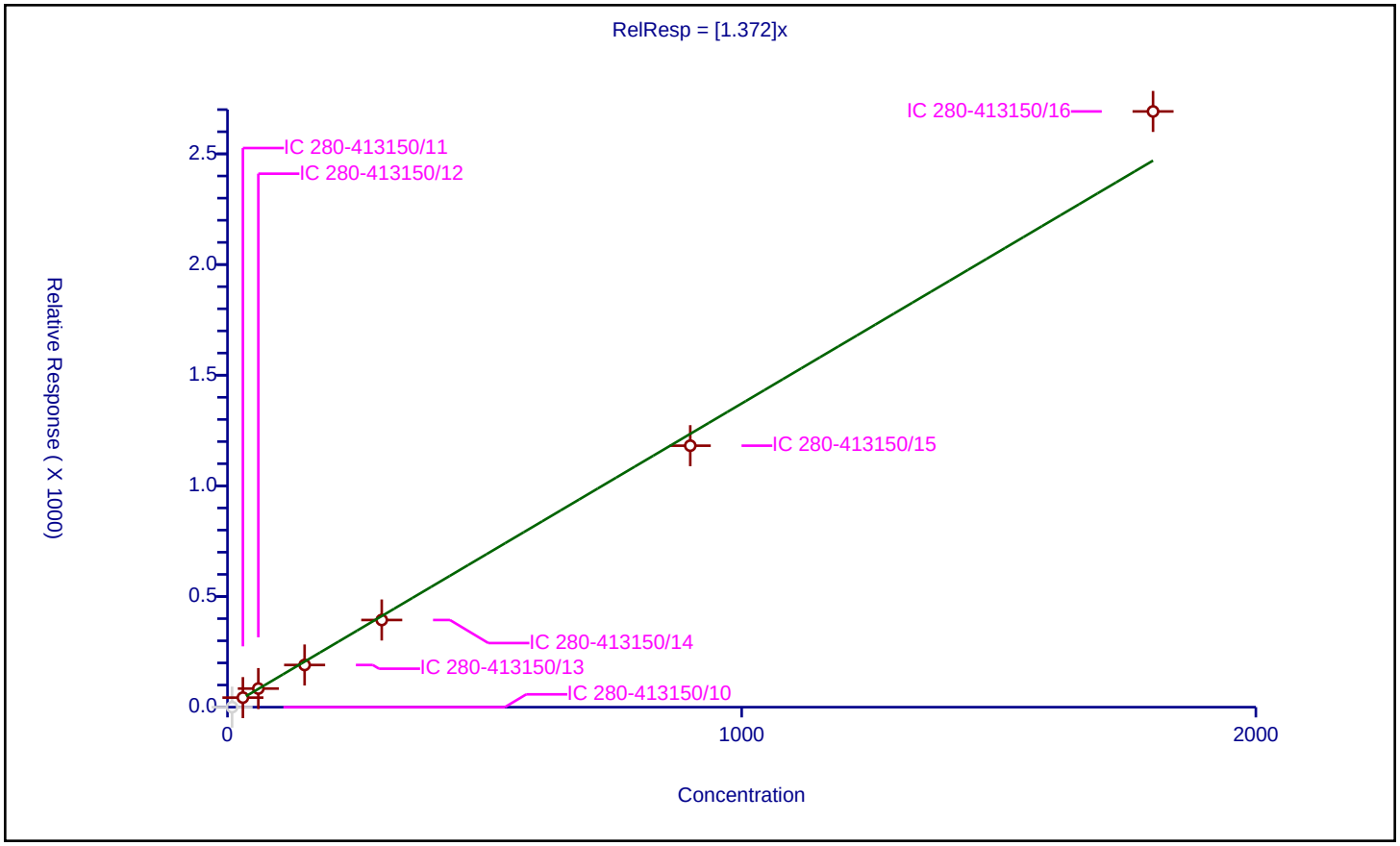
Curve Coefficients

Intercept:	0
Slope:	1.372

Error Coefficients

Standard Error:	894000
Relative Standard Error:	6.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	9.0	0.0	250.0	135309.0	0.0	N
2	IC 280-413150/11	30.0	43.178961	250.0	147155.0	1.439299	Y
3	IC 280-413150/12	60.0	84.043851	250.0	156576.0	1.400731	Y
4	IC 280-413150/13	150.0	190.659454	250.0	159996.0	1.271063	Y
5	IC 280-413150/14	300.0	393.886994	250.0	165974.0	1.312957	Y
6	IC 280-413150/15	900.0	1181.46954	250.0	165317.0	1.312744	Y
7	IC 280-413150/16	1800.0	2691.727755	250.0	169017.0	1.495404	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

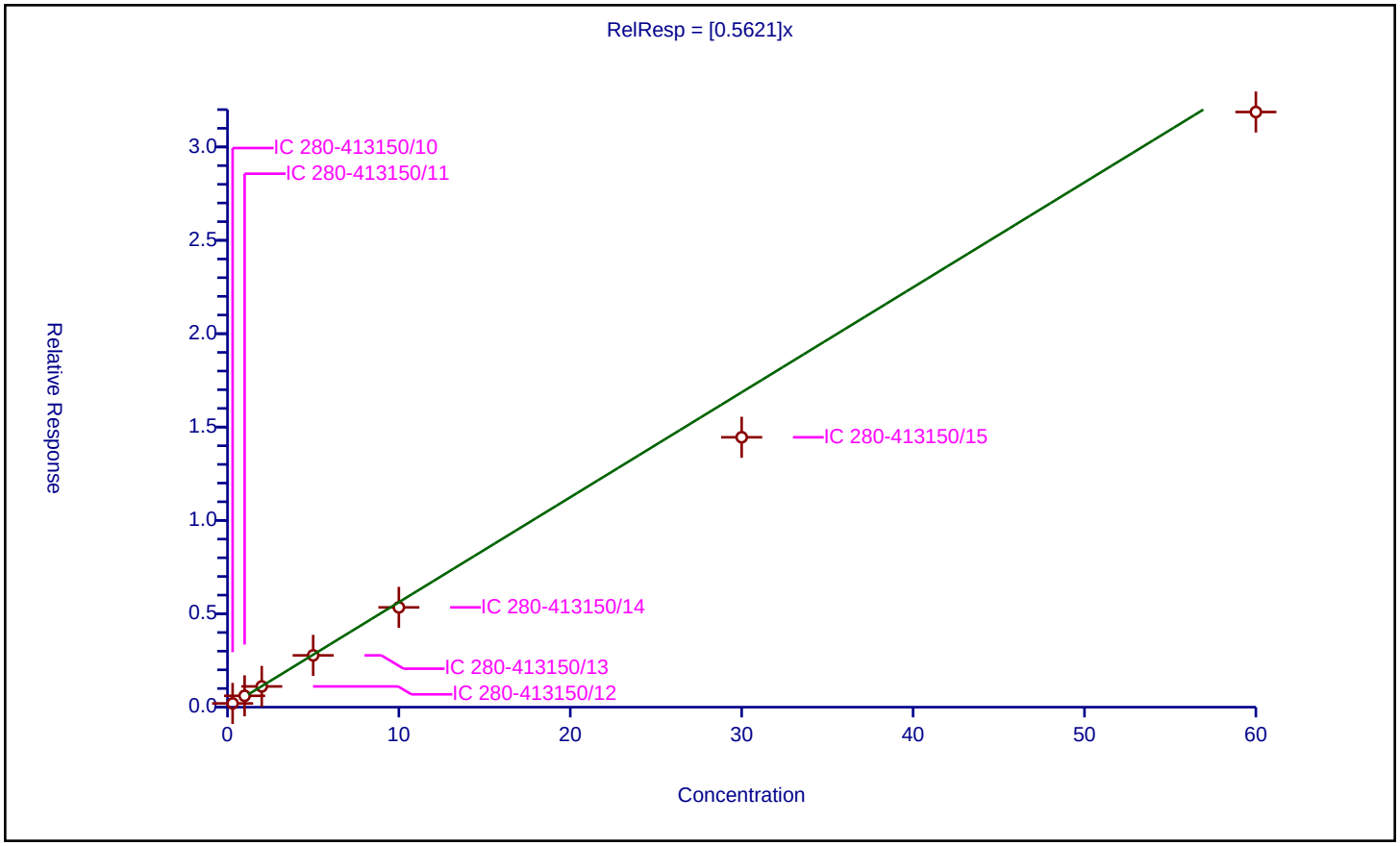
Curve Coefficients

Intercept:	0
Slope:	0.5621

Error Coefficients

Standard Error:	1970000
Relative Standard Error:	10.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.200751	12.5	1452979.0	0.669171	Y
2	IC 280-413150/11	1.0	0.607659	12.5	1647099.0	0.607659	Y
3	IC 280-413150/12	2.0	1.110527	12.5	1632446.0	0.555263	Y
4	IC 280-413150/13	5.0	2.77449	12.5	1704025.0	0.554898	Y
5	IC 280-413150/14	10.0	5.344392	12.5	1685538.0	0.534439	Y
6	IC 280-413150/15	30.0	14.453189	12.5	1710805.0	0.481773	Y
7	IC 280-413150/16	60.0	31.871757	12.5	1691980.0	0.531196	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

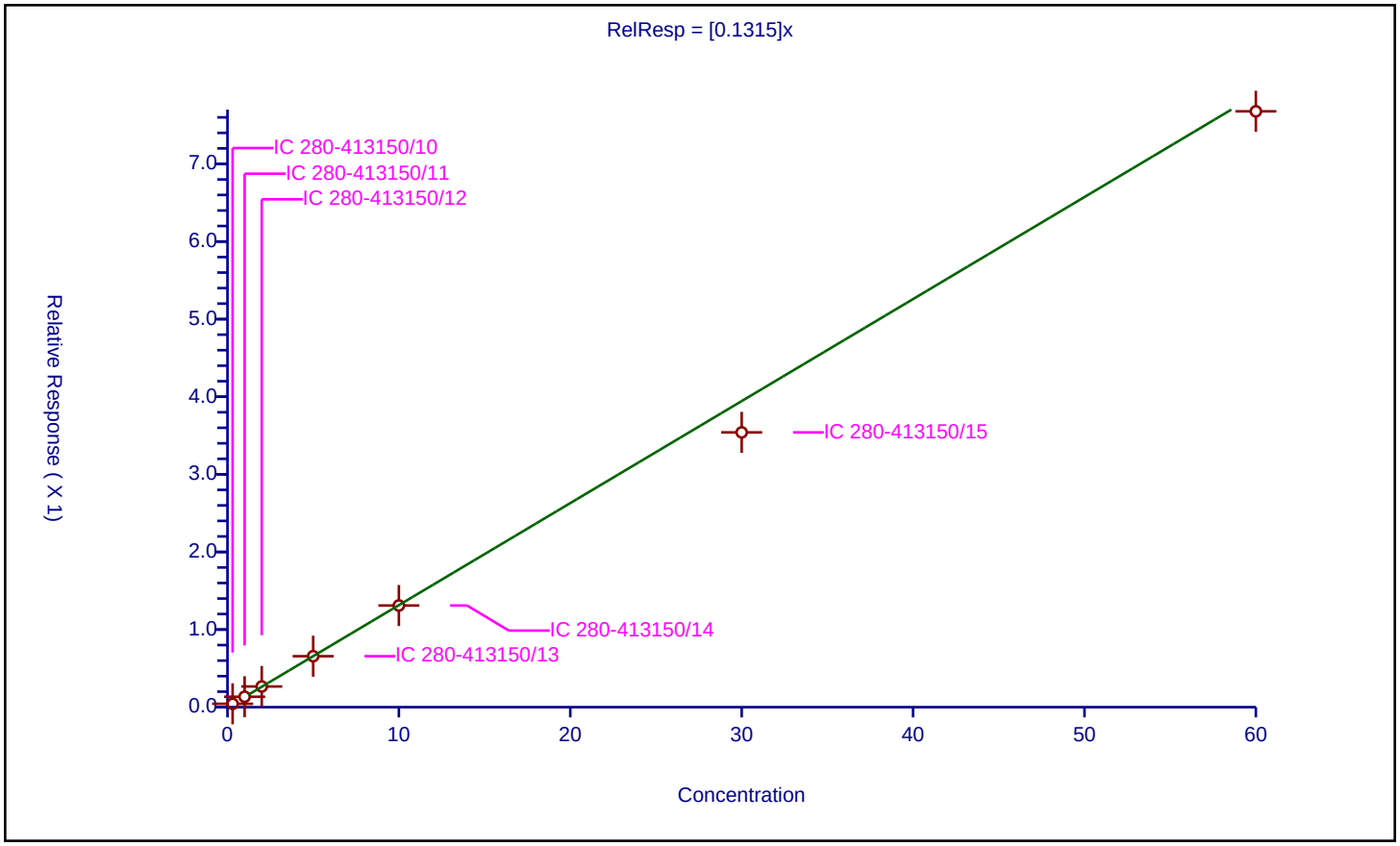
Curve Coefficients

Intercept:	0
Slope:	0.1315

Error Coefficients

Standard Error:	475000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.043299	12.5	1452979.0	0.14433	Y
2	IC 280-413150/11	1.0	0.134411	12.5	1647099.0	0.134411	Y
3	IC 280-413150/12	2.0	0.266533	12.5	1632446.0	0.133266	Y
4	IC 280-413150/13	5.0	0.656438	12.5	1704025.0	0.131288	Y
5	IC 280-413150/14	10.0	1.309886	12.5	1685538.0	0.130989	Y
6	IC 280-413150/15	30.0	3.540643	12.5	1710805.0	0.118021	Y
7	IC 280-413150/16	60.0	7.678009	12.5	1691980.0	0.127967	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

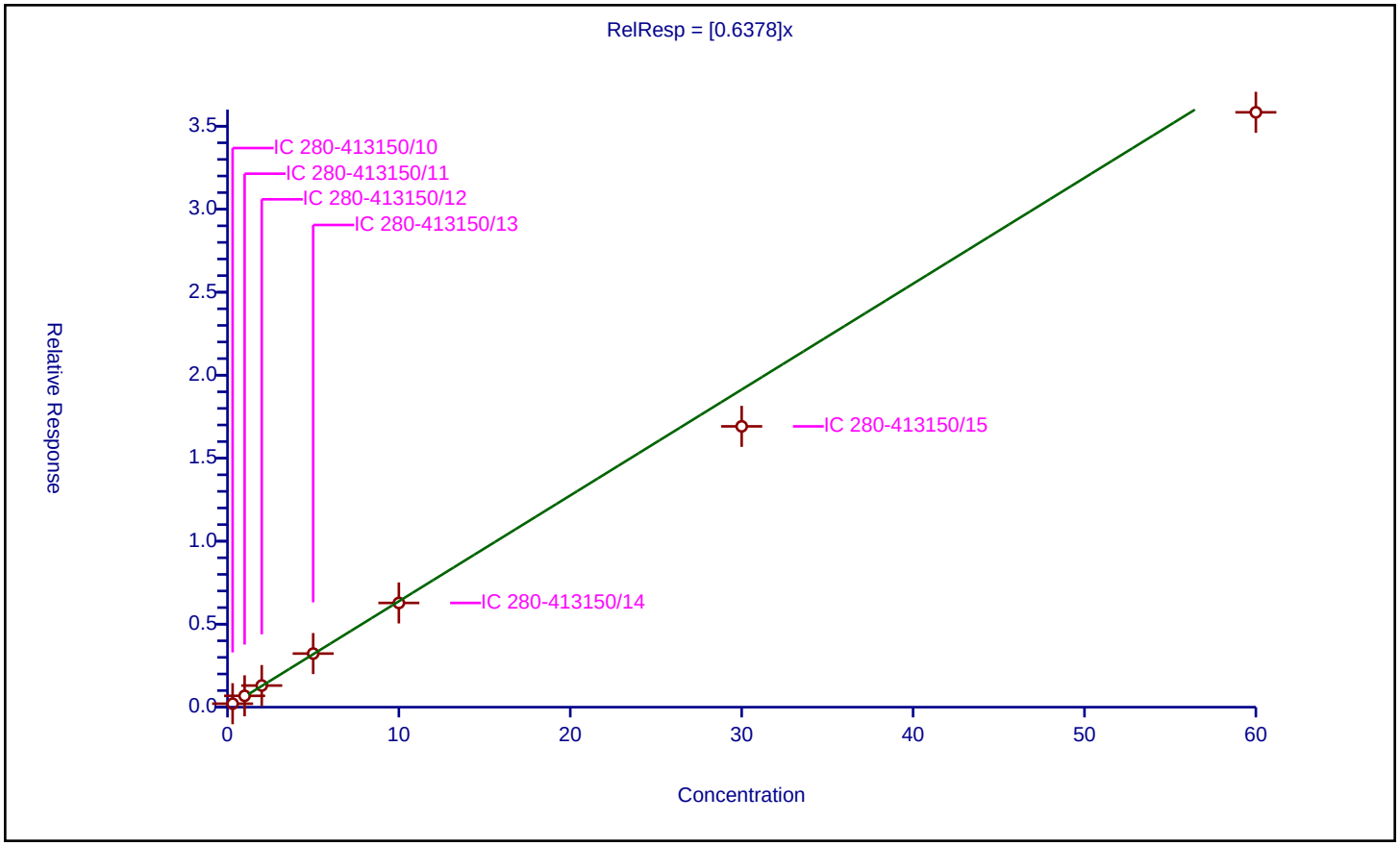
Curve Coefficients

Intercept:	0
Slope:	0.6378

Error Coefficients

Standard Error:	2230000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.208632	12.5	1452979.0	0.695439	Y
2	IC 280-413150/11	1.0	0.682662	12.5	1647099.0	0.682662	Y
3	IC 280-413150/12	2.0	1.303167	12.5	1632446.0	0.651584	Y
4	IC 280-413150/13	5.0	3.228034	12.5	1704025.0	0.645607	Y
5	IC 280-413150/14	10.0	6.278893	12.5	1685538.0	0.627889	Y
6	IC 280-413150/15	30.0	16.918096	12.5	1710805.0	0.563937	Y
7	IC 280-413150/16	60.0	35.836535	12.5	1691980.0	0.597276	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

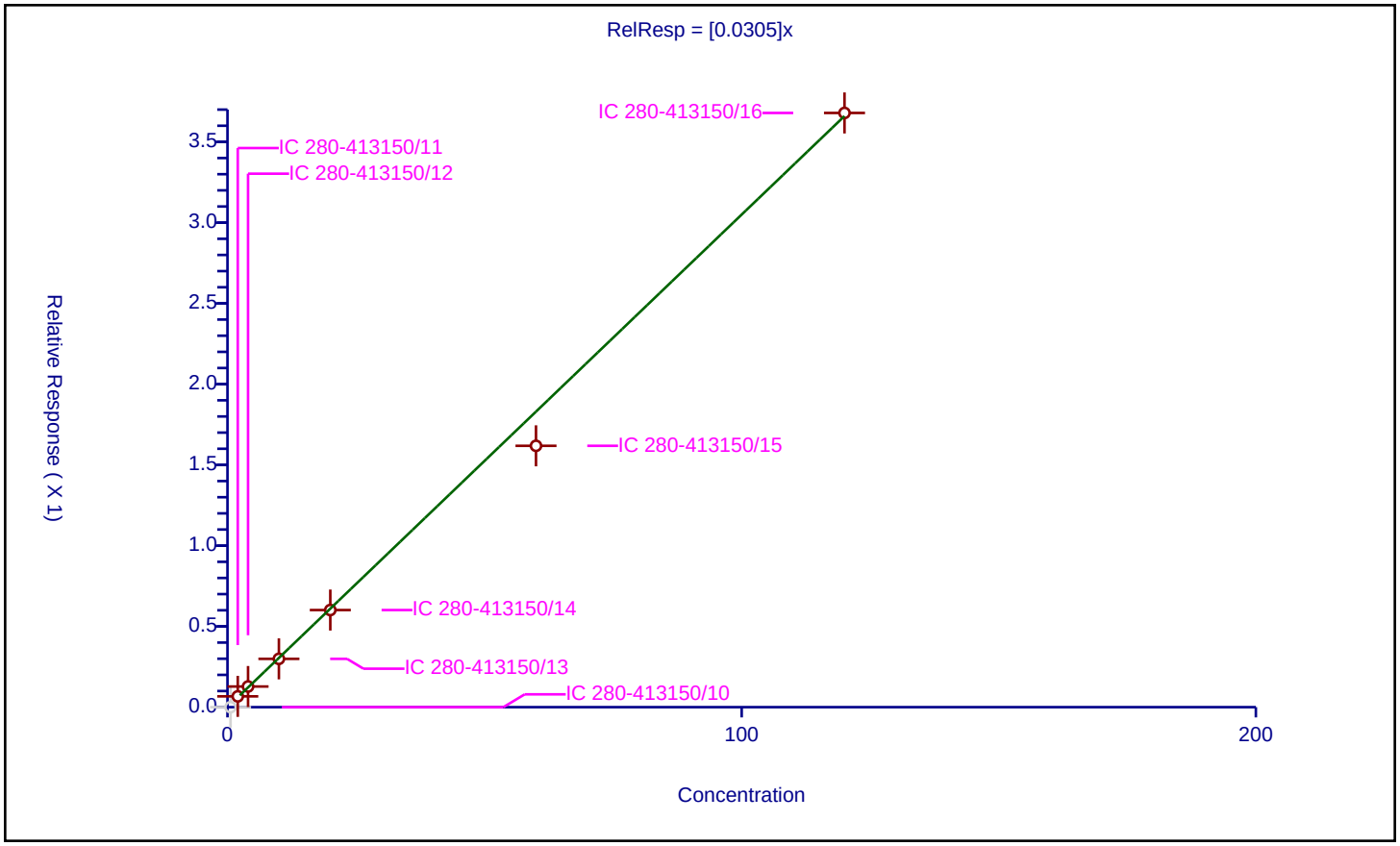
Curve Coefficients

Intercept:	0
Slope:	0.0305

Error Coefficients

Standard Error:	247000
Relative Standard Error:	7.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.6	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	2.0	0.066906	12.5	1647099.0	0.033453	Y
3	IC 280-413150/12	4.0	0.127784	12.5	1632446.0	0.031946	Y
4	IC 280-413150/13	10.0	0.299064	12.5	1704025.0	0.029906	Y
5	IC 280-413150/14	20.0	0.601388	12.5	1685538.0	0.030069	Y
6	IC 280-413150/15	60.0	1.618186	12.5	1710805.0	0.02697	Y
7	IC 280-413150/16	120.0	3.67924	12.5	1691980.0	0.03066	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

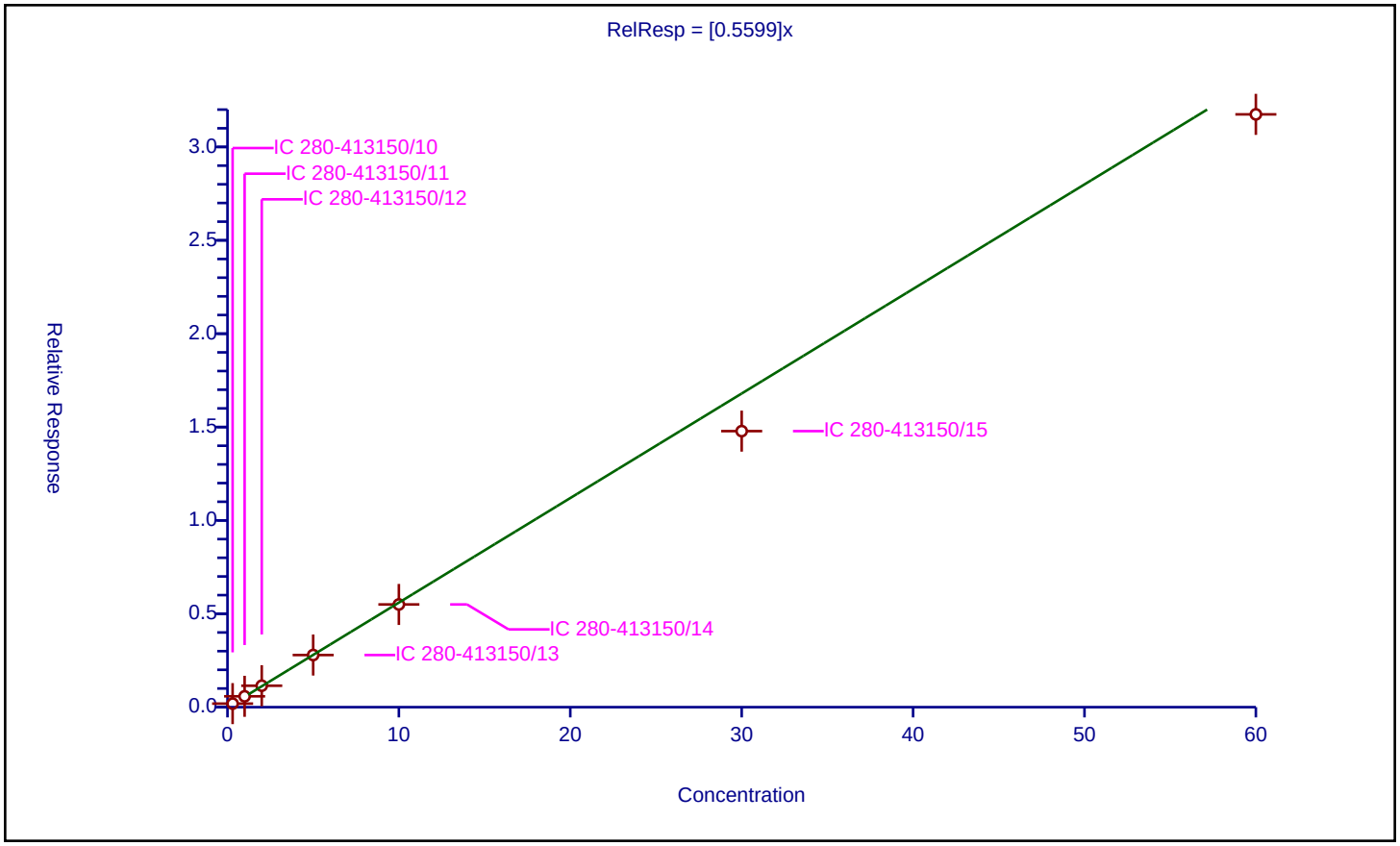
Curve Coefficients

Intercept:	0
Slope:	0.5599

Error Coefficients

Standard Error:	1970000
Relative Standard Error:	7.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.19029	12.5	1452979.0	0.6343	Y
2	IC 280-413150/11	1.0	0.580748	12.5	1647099.0	0.580748	Y
3	IC 280-413150/12	2.0	1.148116	12.5	1632446.0	0.574058	Y
4	IC 280-413150/13	5.0	2.791435	12.5	1704025.0	0.558287	Y
5	IC 280-413150/14	10.0	5.499735	12.5	1685538.0	0.549974	Y
6	IC 280-413150/15	30.0	14.781689	12.5	1710805.0	0.492723	Y
7	IC 280-413150/16	60.0	31.745714	12.5	1691980.0	0.529095	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

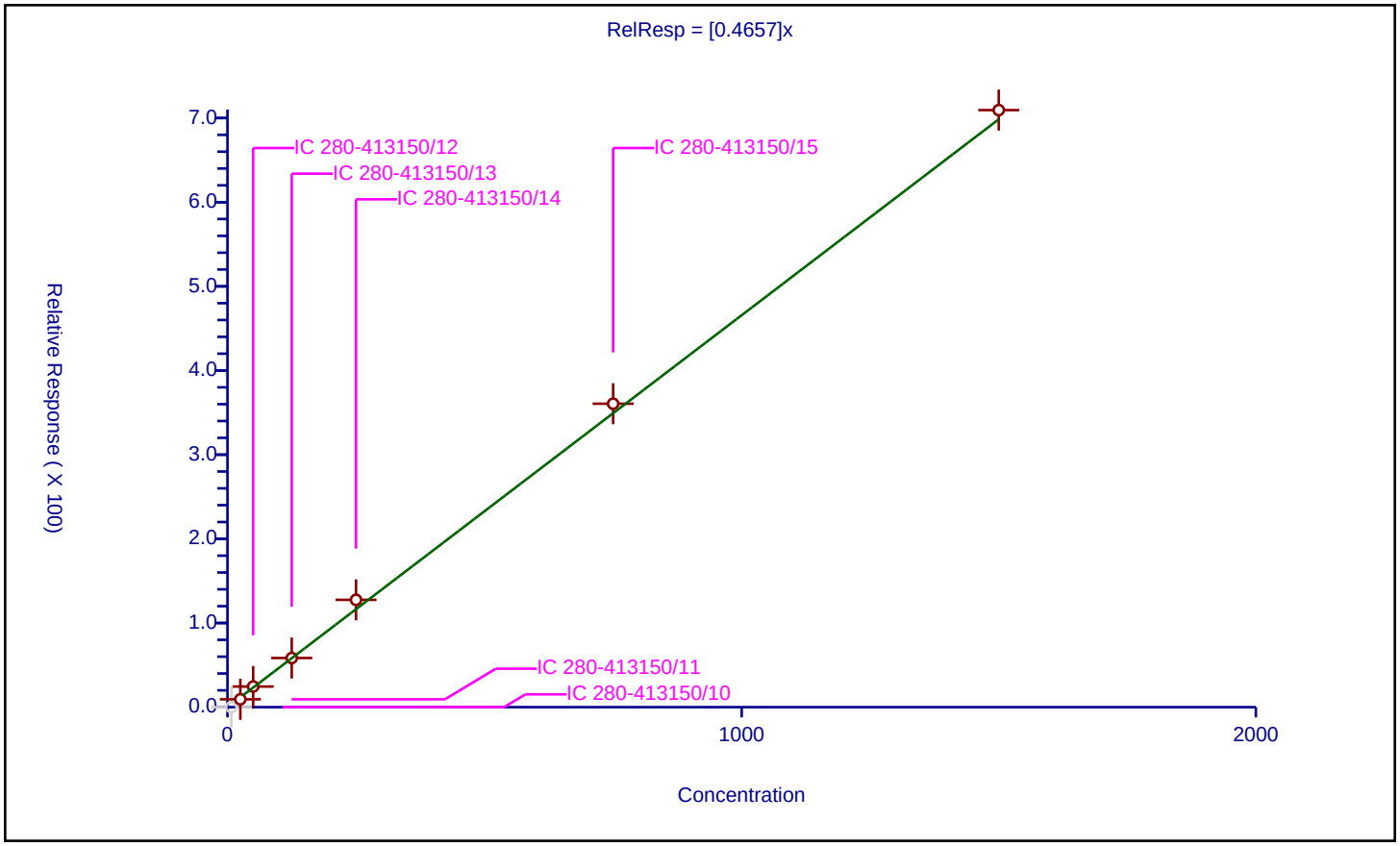
Curve Coefficients

Intercept:	0
Slope:	0.4657

Error Coefficients

Standard Error:	243000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	7.5	0.0	250.0	135309.0	0.0	N
2	IC 280-413150/11	25.0	9.330298	250.0	147155.0	0.373212	Y
3	IC 280-413150/12	50.0	24.494495	250.0	156576.0	0.48989	Y
4	IC 280-413150/13	125.0	58.41396	250.0	159996.0	0.467312	Y
5	IC 280-413150/14	250.0	127.513948	250.0	165974.0	0.510056	Y
6	IC 280-413150/15	750.0	360.536122	250.0	165317.0	0.480715	Y
7	IC 280-413150/16	1500.0	709.418283	250.0	169017.0	0.472946	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

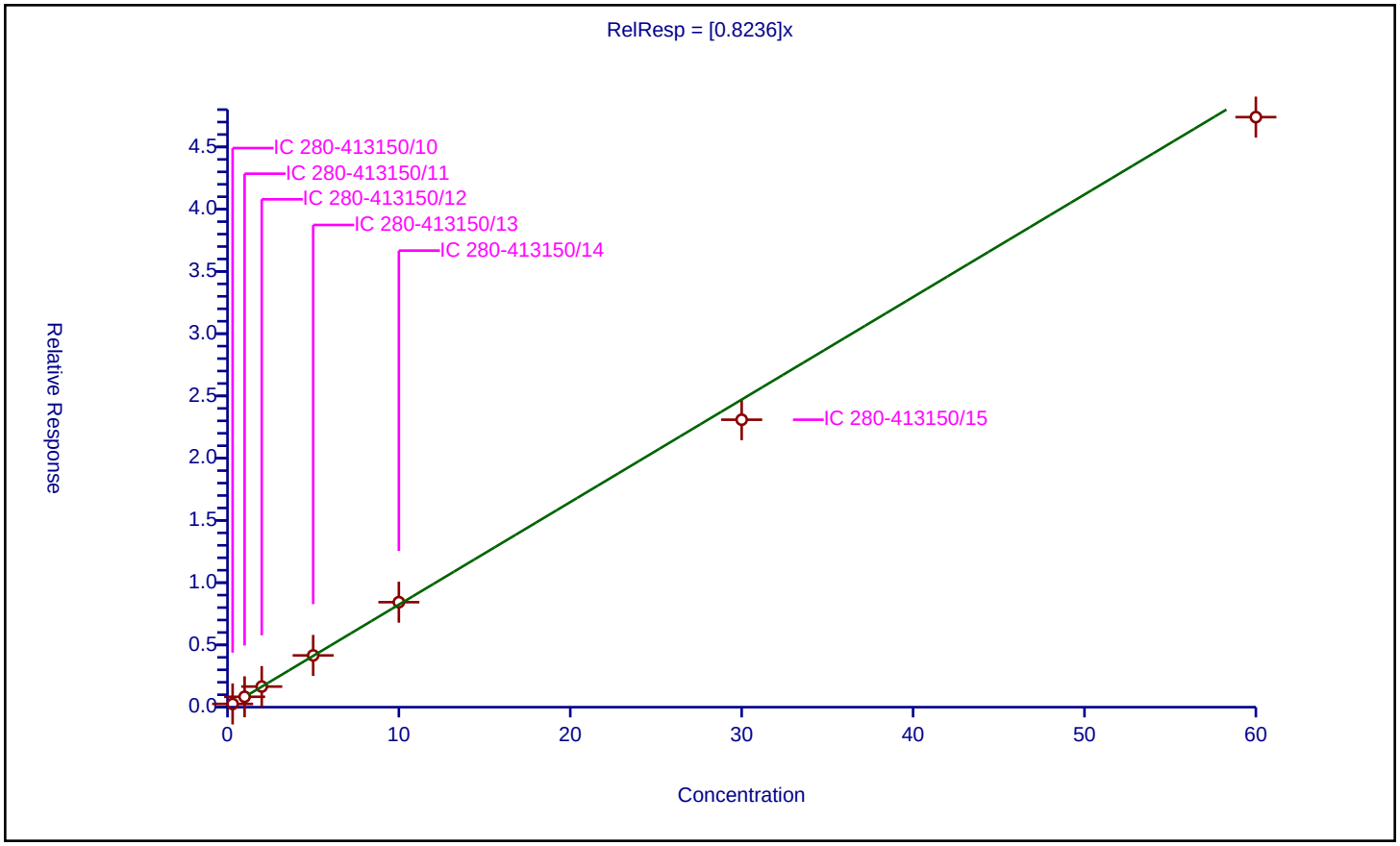
Curve Coefficients

Intercept:	0
Slope:	0.8236

Error Coefficients

Standard Error:	2970000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.261084	12.5	1452979.0	0.870281	Y
2	IC 280-413150/11	1.0	0.83342	12.5	1647099.0	0.83342	Y
3	IC 280-413150/12	2.0	1.654052	12.5	1632446.0	0.827026	Y
4	IC 280-413150/13	5.0	4.156688	12.5	1704025.0	0.831338	Y
5	IC 280-413150/14	10.0	8.434518	12.5	1685538.0	0.843452	Y
6	IC 280-413150/15	30.0	23.090606	12.5	1710805.0	0.769687	Y
7	IC 280-413150/16	60.0	47.39595	12.5	1691980.0	0.789933	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

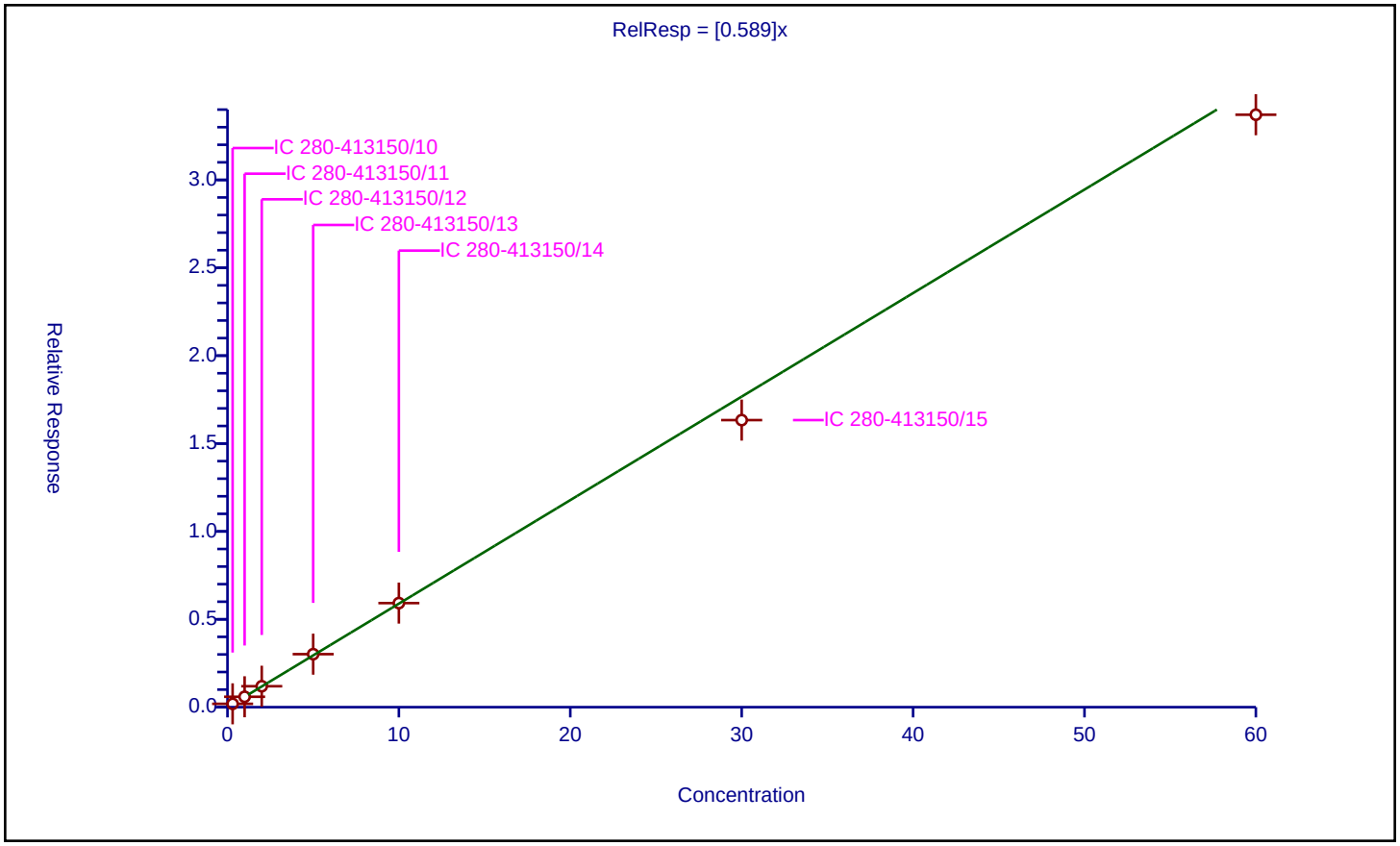
Curve Coefficients

Intercept:	0
Slope:	0.589

Error Coefficients

Standard Error:	2110000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.190221	12.5	1452979.0	0.634071	Y
2	IC 280-413150/11	1.0	0.591745	12.5	1647099.0	0.591745	Y
3	IC 280-413150/12	2.0	1.191402	12.5	1632446.0	0.595701	Y
4	IC 280-413150/13	5.0	3.015265	12.5	1704025.0	0.603053	Y
5	IC 280-413150/14	10.0	5.921233	12.5	1685538.0	0.592123	Y
6	IC 280-413150/15	30.0	16.333217	12.5	1710805.0	0.544441	Y
7	IC 280-413150/16	60.0	33.709168	12.5	1691980.0	0.561819	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

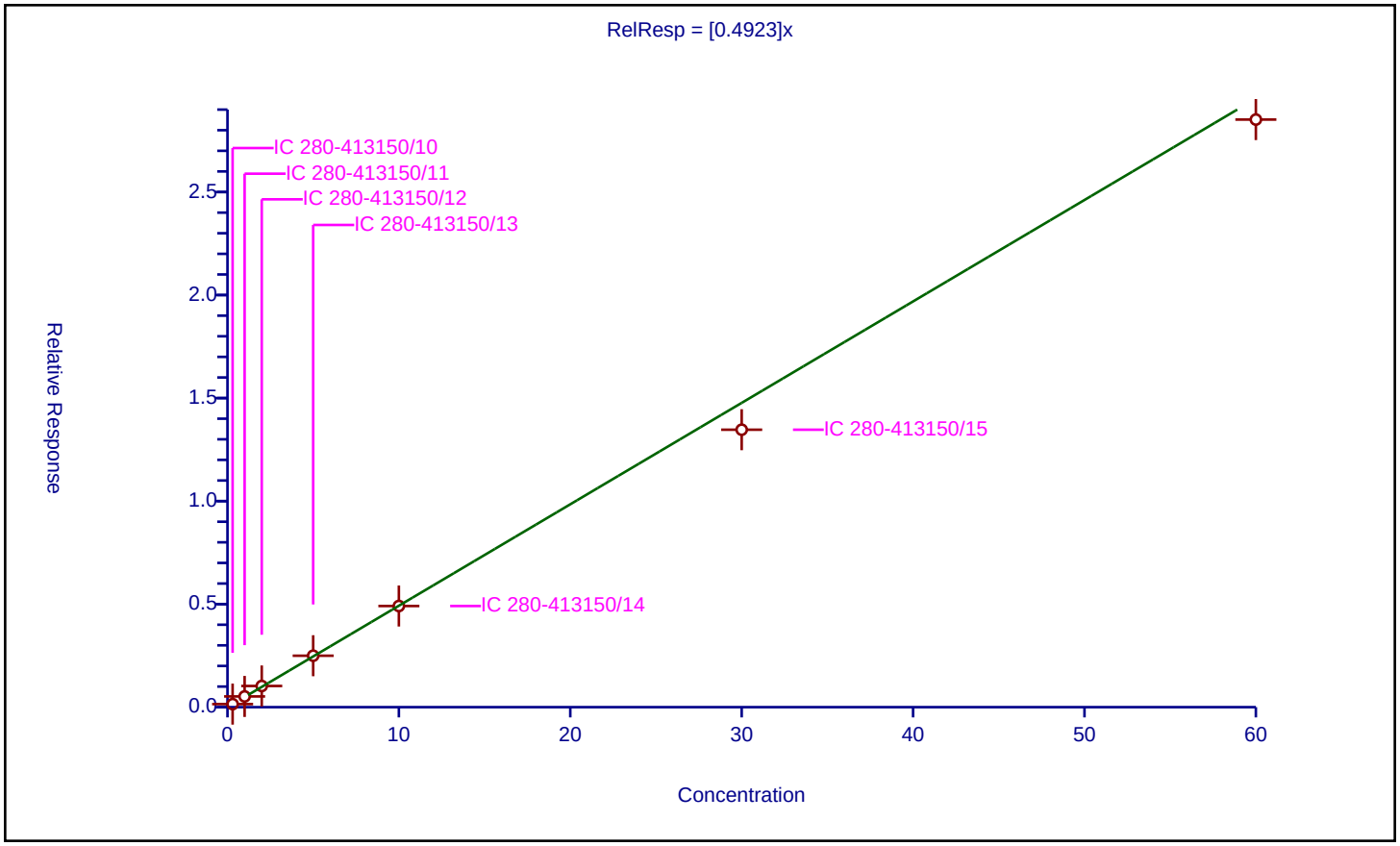
Curve Coefficients

Intercept:	0
Slope:	0.4923

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.14915	12.5	1452979.0	0.497168	Y
2	IC 280-413150/11	1.0	0.520491	12.5	1647099.0	0.520491	Y
3	IC 280-413150/12	2.0	1.027668	12.5	1632446.0	0.513834	Y
4	IC 280-413150/13	5.0	2.496626	12.5	1704025.0	0.499325	Y
5	IC 280-413150/14	10.0	4.909249	12.5	1685538.0	0.490925	Y
6	IC 280-413150/15	30.0	13.465467	12.5	1710805.0	0.448849	Y
7	IC 280-413150/16	60.0	28.516804	12.5	1691980.0	0.47528	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

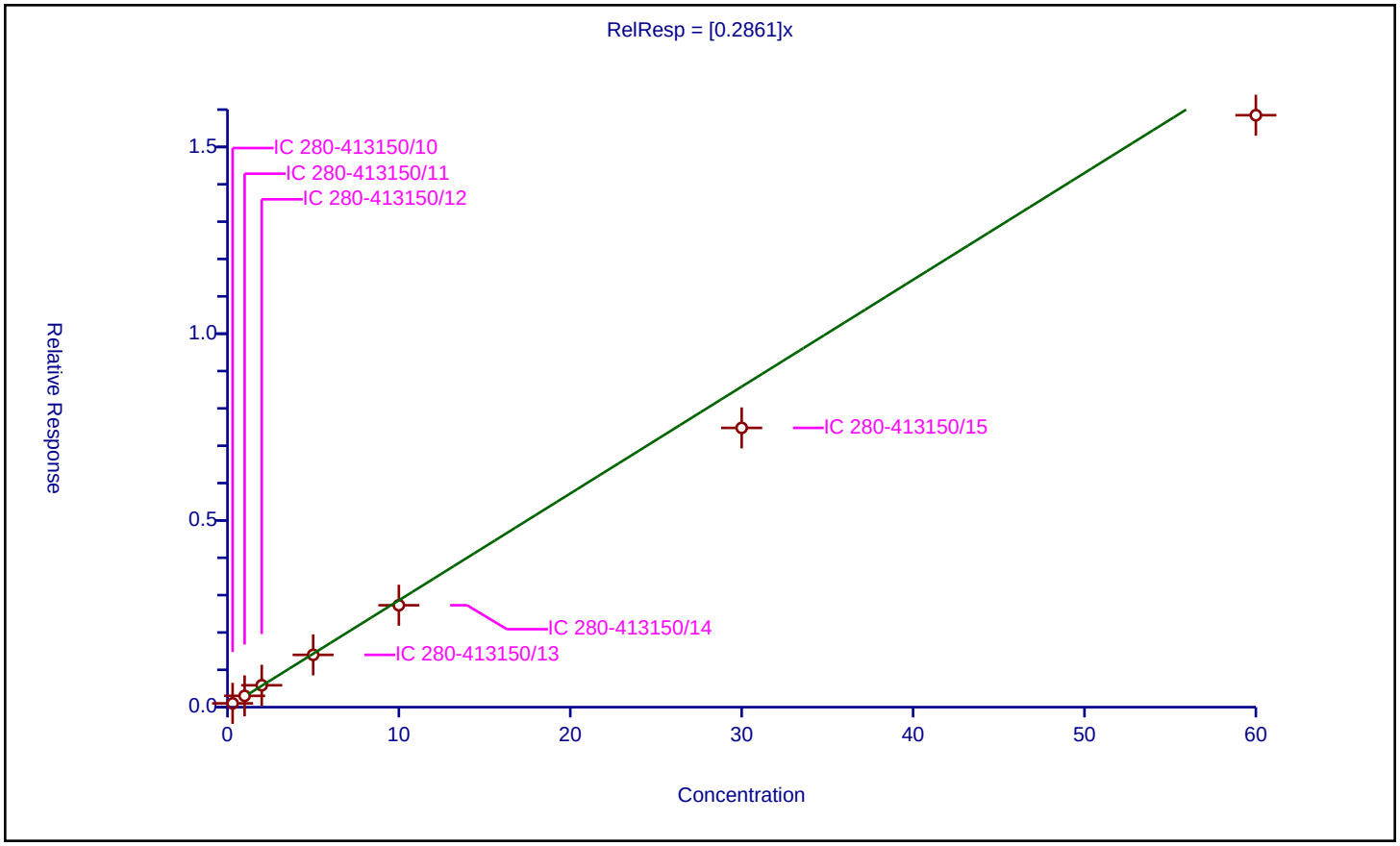
Curve Coefficients

Intercept:	0
Slope:	0.2861

Error Coefficients

Standard Error:	986000
Relative Standard Error:	10.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.101972	12.5	1452979.0	0.339905	Y
2	IC 280-413150/11	1.0	0.302896	12.5	1647099.0	0.302896	Y
3	IC 280-413150/12	2.0	0.586474	12.5	1632446.0	0.293237	Y
4	IC 280-413150/13	5.0	1.400537	12.5	1704025.0	0.280107	Y
5	IC 280-413150/14	10.0	2.728988	12.5	1685538.0	0.272899	Y
6	IC 280-413150/15	30.0	7.477598	12.5	1710805.0	0.249253	Y
7	IC 280-413150/16	60.0	15.849737	12.5	1691980.0	0.264162	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

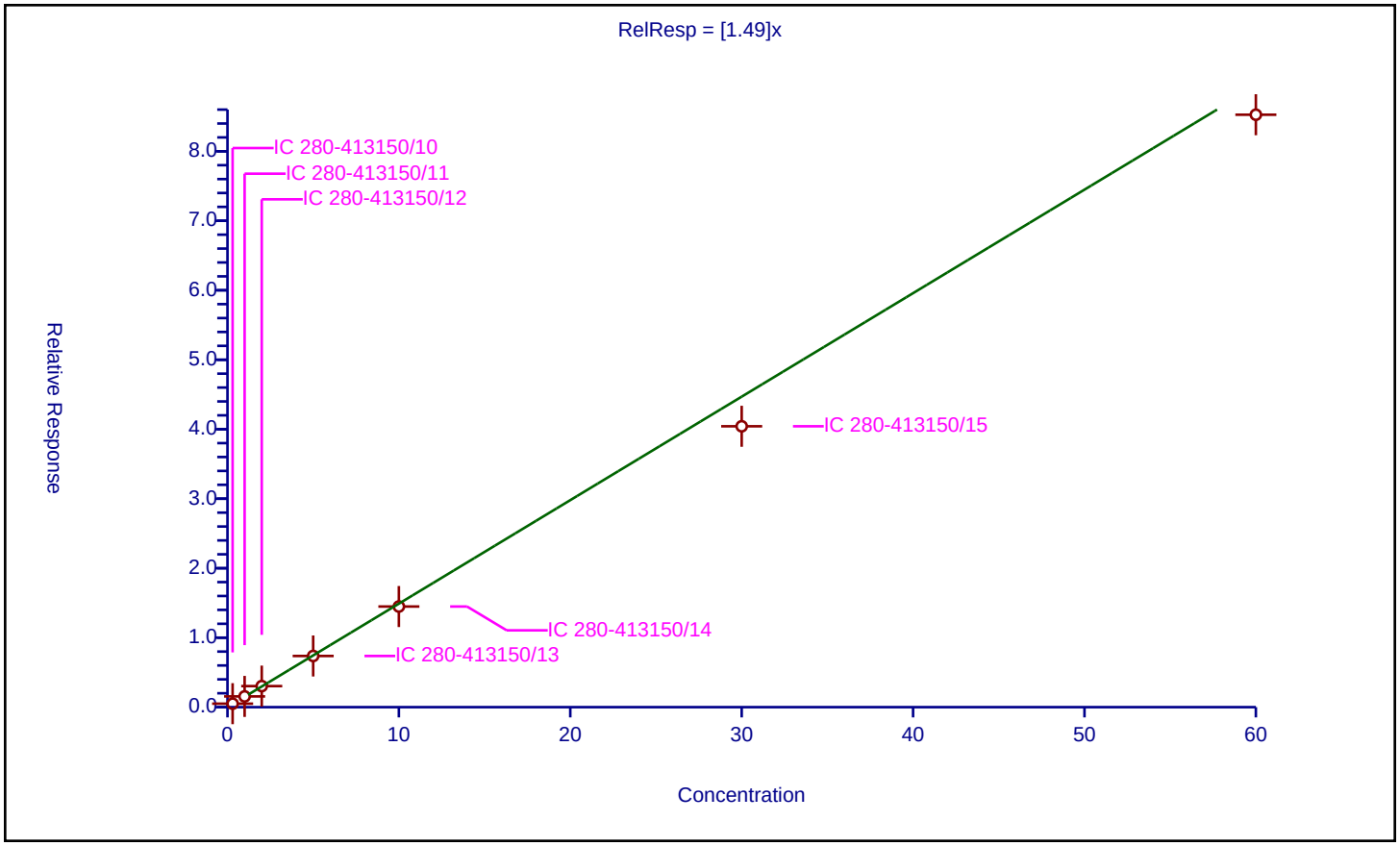
Curve Coefficients

Intercept:	0
Slope:	1.49

Error Coefficients

Standard Error:	5300000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.50184	12.5	1452979.0	1.672799	Y
2	IC 280-413150/11	1.0	1.548397	12.5	1647099.0	1.548397	Y
3	IC 280-413150/12	2.0	3.031861	12.5	1632446.0	1.515931	Y
4	IC 280-413150/13	5.0	7.366236	12.5	1704025.0	1.473247	Y
5	IC 280-413150/14	10.0	14.483017	12.5	1685538.0	1.448302	Y
6	IC 280-413150/15	30.0	40.423061	12.5	1710805.0	1.347435	Y
7	IC 280-413150/16	60.0	85.264963	12.5	1691980.0	1.421083	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

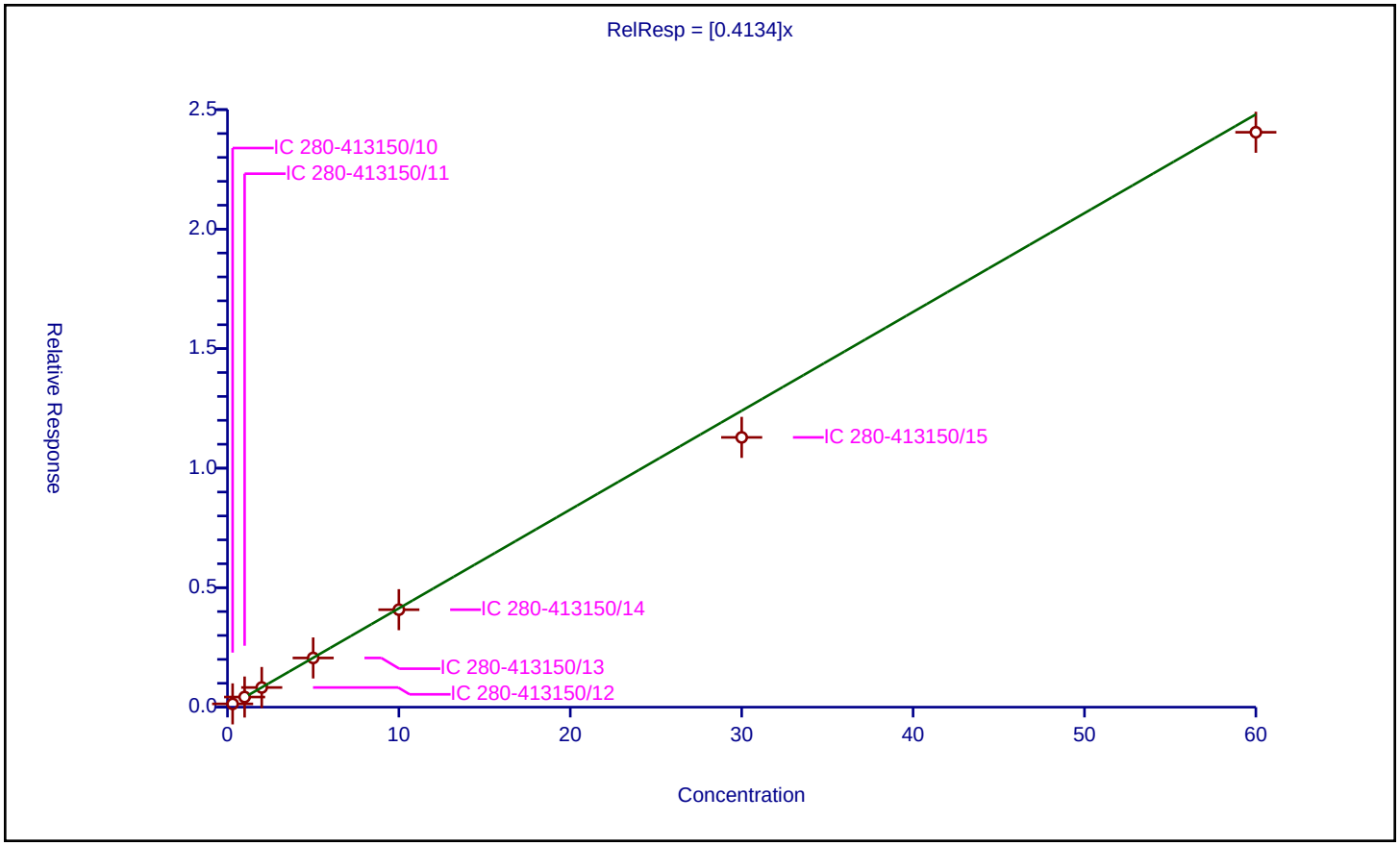
Curve Coefficients

Intercept:	0
Slope:	0.4134

Error Coefficients

Standard Error:	1490000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.138345	12.5	1452979.0	0.46115	Y
2	IC 280-413150/11	1.0	0.424102	12.5	1647099.0	0.424102	Y
3	IC 280-413150/12	2.0	0.823151	12.5	1632446.0	0.411576	Y
4	IC 280-413150/13	5.0	2.058941	12.5	1704025.0	0.411788	Y
5	IC 280-413150/14	10.0	4.078853	12.5	1685538.0	0.407885	Y
6	IC 280-413150/15	30.0	11.287413	12.5	1710805.0	0.376247	Y
7	IC 280-413150/16	60.0	24.052641	12.5	1691980.0	0.400877	Y



Calibration / 2-Pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

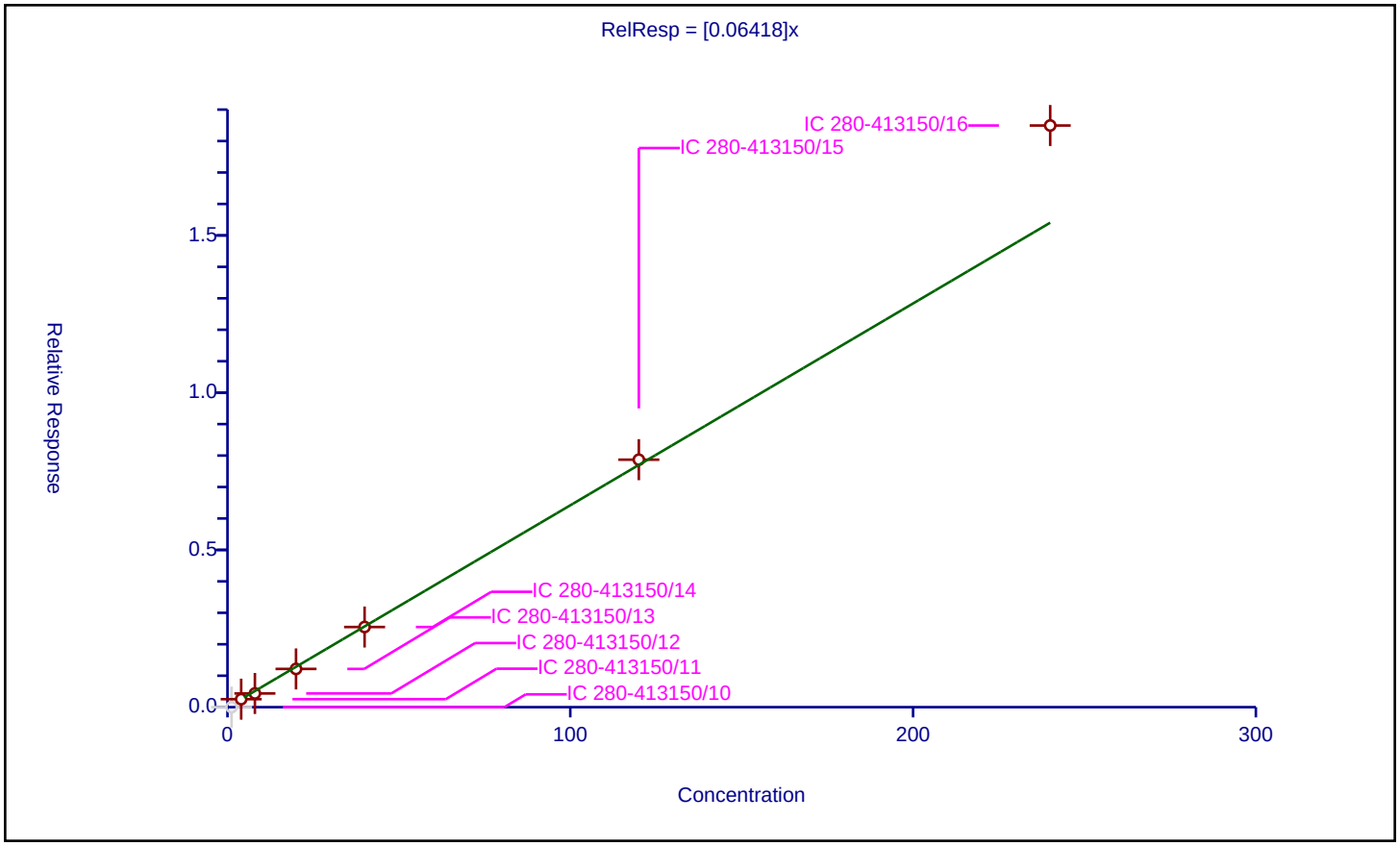
Curve Coefficients

Intercept:	0
Slope:	0.06418

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	11.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	1.2	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	4.0	0.253871	12.5	1647099.0	0.063468	Y
3	IC 280-413150/12	8.0	0.435887	12.5	1632446.0	0.054486	Y
4	IC 280-413150/13	20.0	1.215659	12.5	1704025.0	0.060783	Y
5	IC 280-413150/14	40.0	2.548927	12.5	1685538.0	0.063723	Y
6	IC 280-413150/15	120.0	7.868978	12.5	1710805.0	0.065575	Y
7	IC 280-413150/16	240.0	18.494604	12.5	1691980.0	0.077061	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

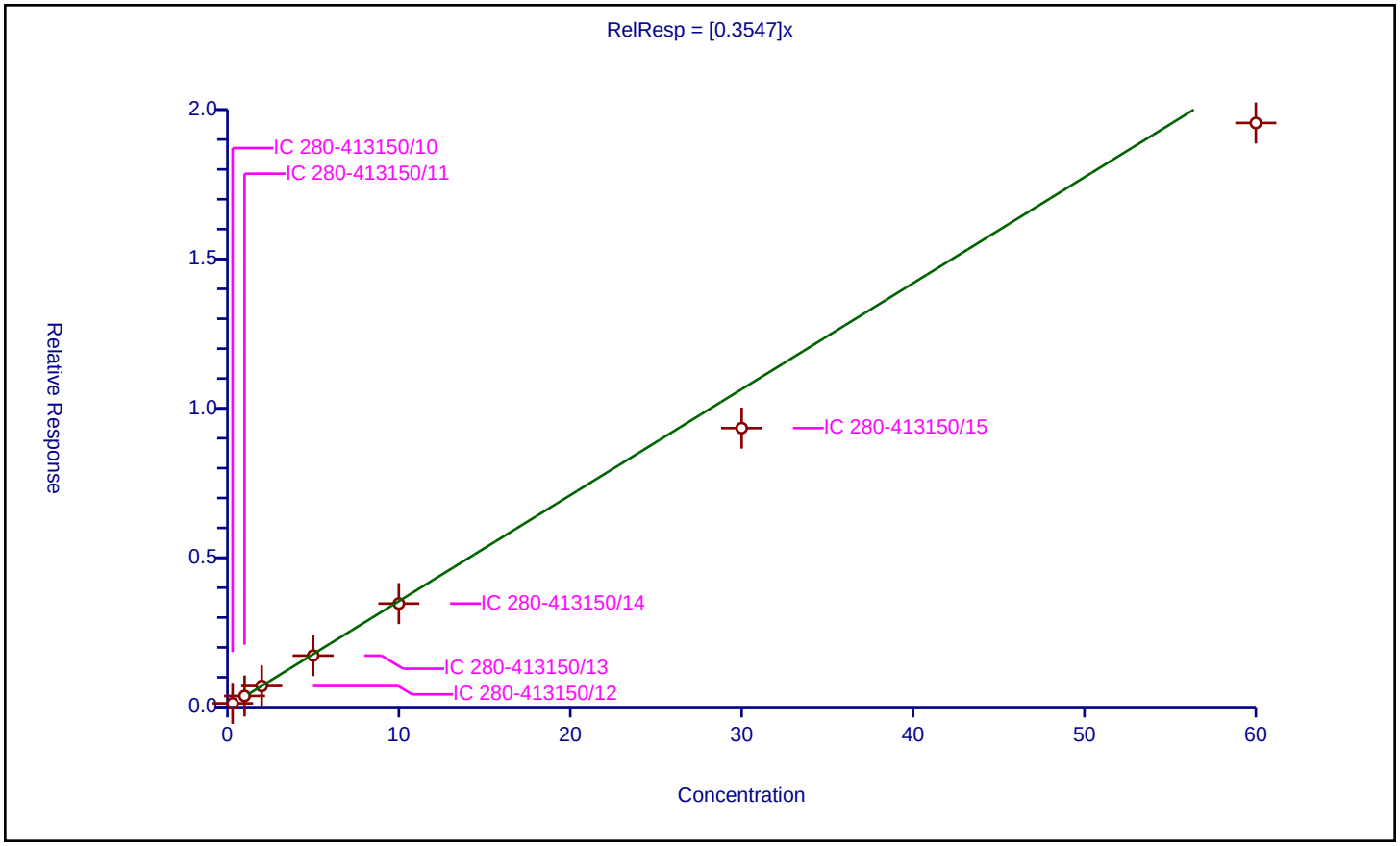
Curve Coefficients

Intercept:	0
Slope:	0.3547

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	10.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.127557	12.5	1452979.0	0.42519	Y
2	IC 280-413150/11	1.0	0.37459	12.5	1647099.0	0.37459	Y
3	IC 280-413150/12	2.0	0.708392	12.5	1632446.0	0.354196	Y
4	IC 280-413150/13	5.0	1.725782	12.5	1704025.0	0.345156	Y
5	IC 280-413150/14	10.0	3.468017	12.5	1685538.0	0.346802	Y
6	IC 280-413150/15	30.0	9.339149	12.5	1710805.0	0.311305	Y
7	IC 280-413150/16	60.0	19.552255	12.5	1691980.0	0.325871	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

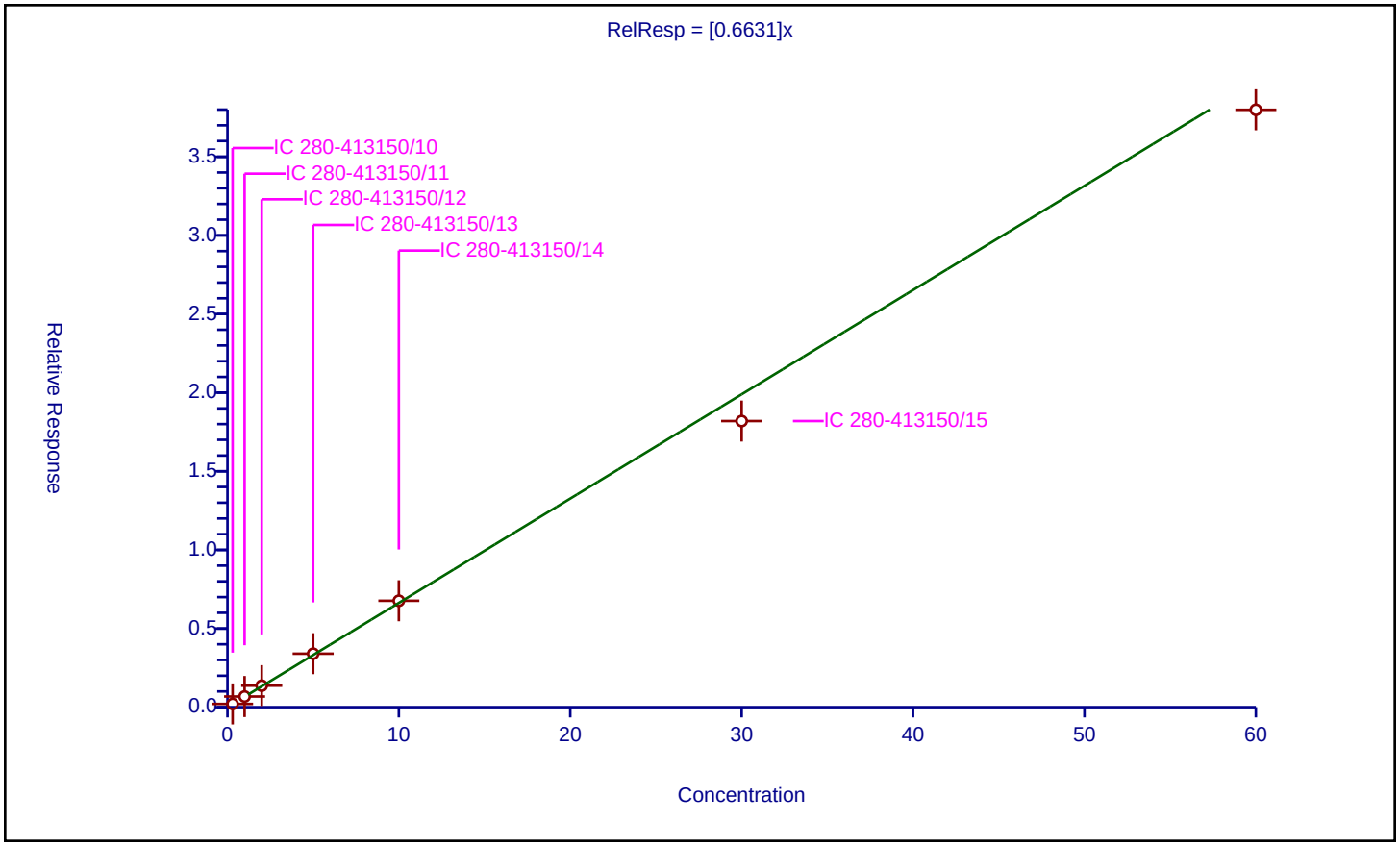
Curve Coefficients

Intercept:	0
Slope:	0.6631

Error Coefficients

Standard Error:	2370000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.205509	12.5	1452979.0	0.685029	Y
2	IC 280-413150/11	1.0	0.676879	12.5	1647099.0	0.676879	Y
3	IC 280-413150/12	2.0	1.36673	12.5	1632446.0	0.683365	Y
4	IC 280-413150/13	5.0	3.401535	12.5	1704025.0	0.680307	Y
5	IC 280-413150/14	10.0	6.766756	12.5	1685538.0	0.676676	Y
6	IC 280-413150/15	30.0	18.192357	12.5	1710805.0	0.606412	Y
7	IC 280-413150/16	60.0	37.988208	12.5	1691980.0	0.633137	Y



Calibration / 1,4-Dioxane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

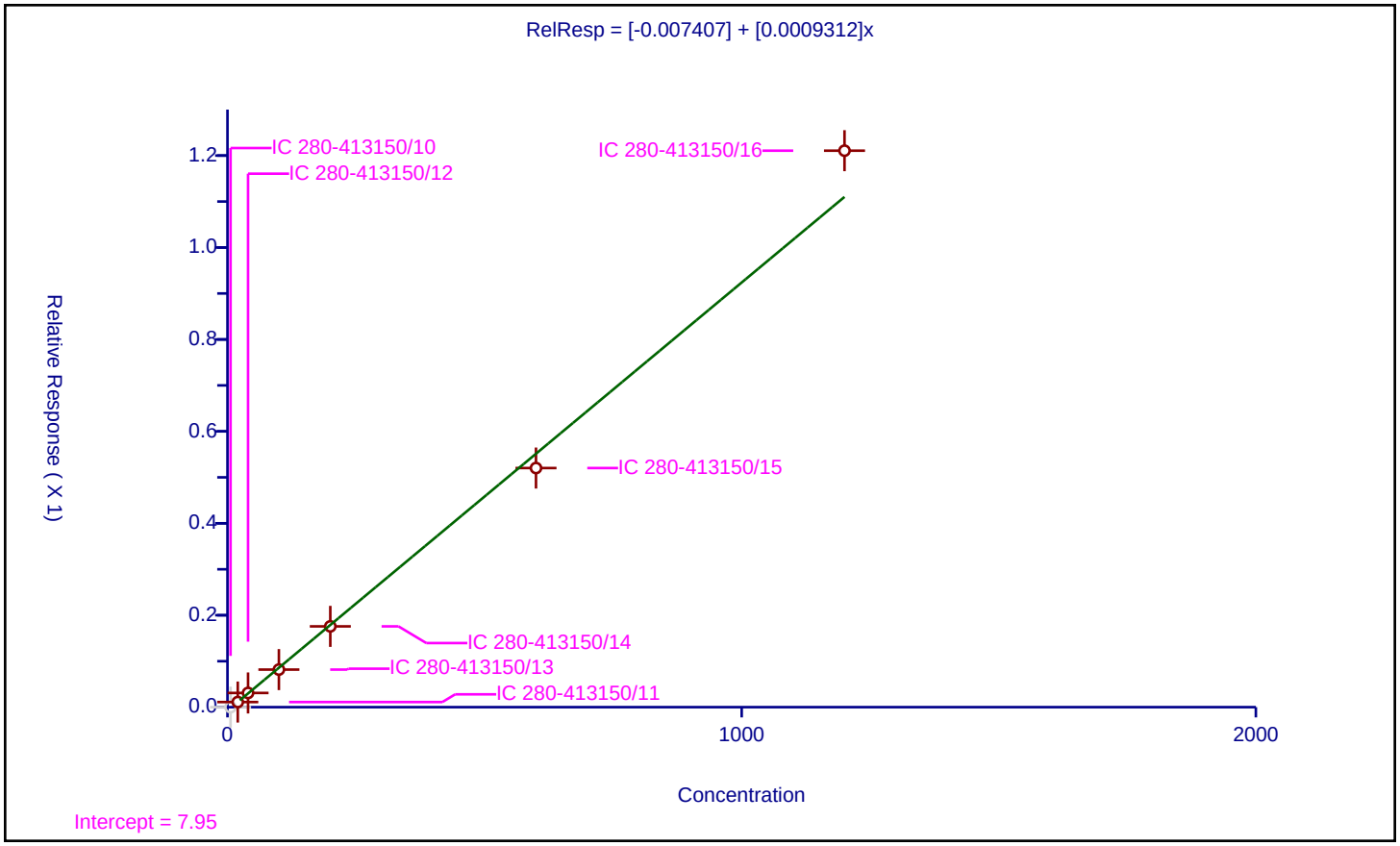
Curve Coefficients

Intercept:	-0.007407
Slope:	0.0009312

Error Coefficients

Standard Error:	90300
Relative Standard Error:	5.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	6.0	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	20.0	0.011148	12.5	1647099.0	0.000557	Y
3	IC 280-413150/12	40.0	0.030905	12.5	1632446.0	0.000773	Y
4	IC 280-413150/13	100.0	0.081755	12.5	1704025.0	0.000818	Y
5	IC 280-413150/14	200.0	0.175775	12.5	1685538.0	0.000879	Y
6	IC 280-413150/15	600.0	0.520216	12.5	1710805.0	0.000867	Y
7	IC 280-413150/16	1200.0	1.21063	12.5	1691980.0	0.001009	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

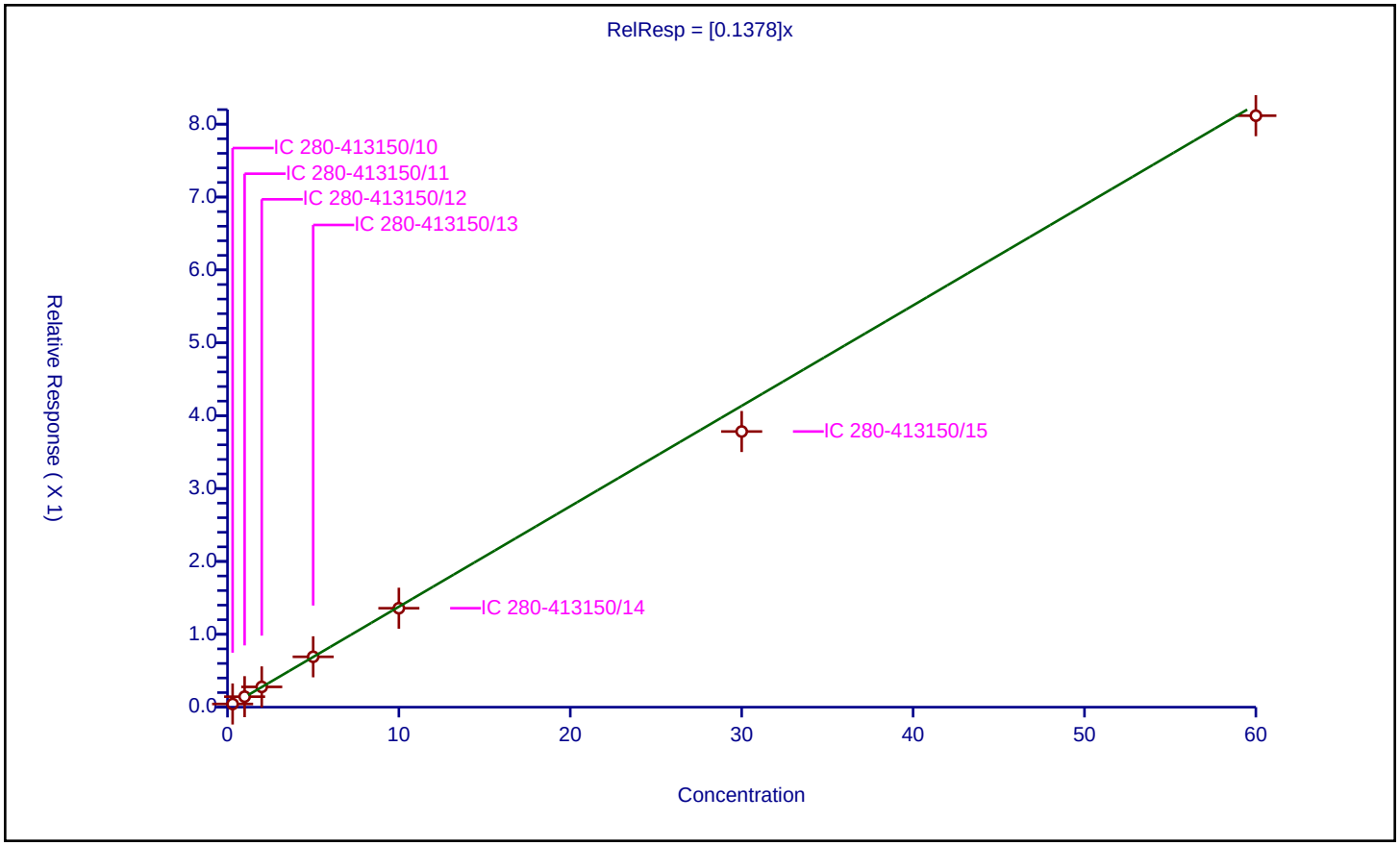
Curve Coefficients

Intercept:	0
Slope:	0.1378

Error Coefficients

Standard Error:	503000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.043858	12.5	1452979.0	0.146194	Y
2	IC 280-413150/11	1.0	0.144216	12.5	1647099.0	0.144216	Y
3	IC 280-413150/12	2.0	0.277972	12.5	1632446.0	0.138986	Y
4	IC 280-413150/13	5.0	0.691216	12.5	1704025.0	0.138243	Y
5	IC 280-413150/14	10.0	1.35789	12.5	1685538.0	0.135789	Y
6	IC 280-413150/15	30.0	3.782846	12.5	1710805.0	0.126095	Y
7	IC 280-413150/16	60.0	8.116777	12.5	1691980.0	0.13528	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

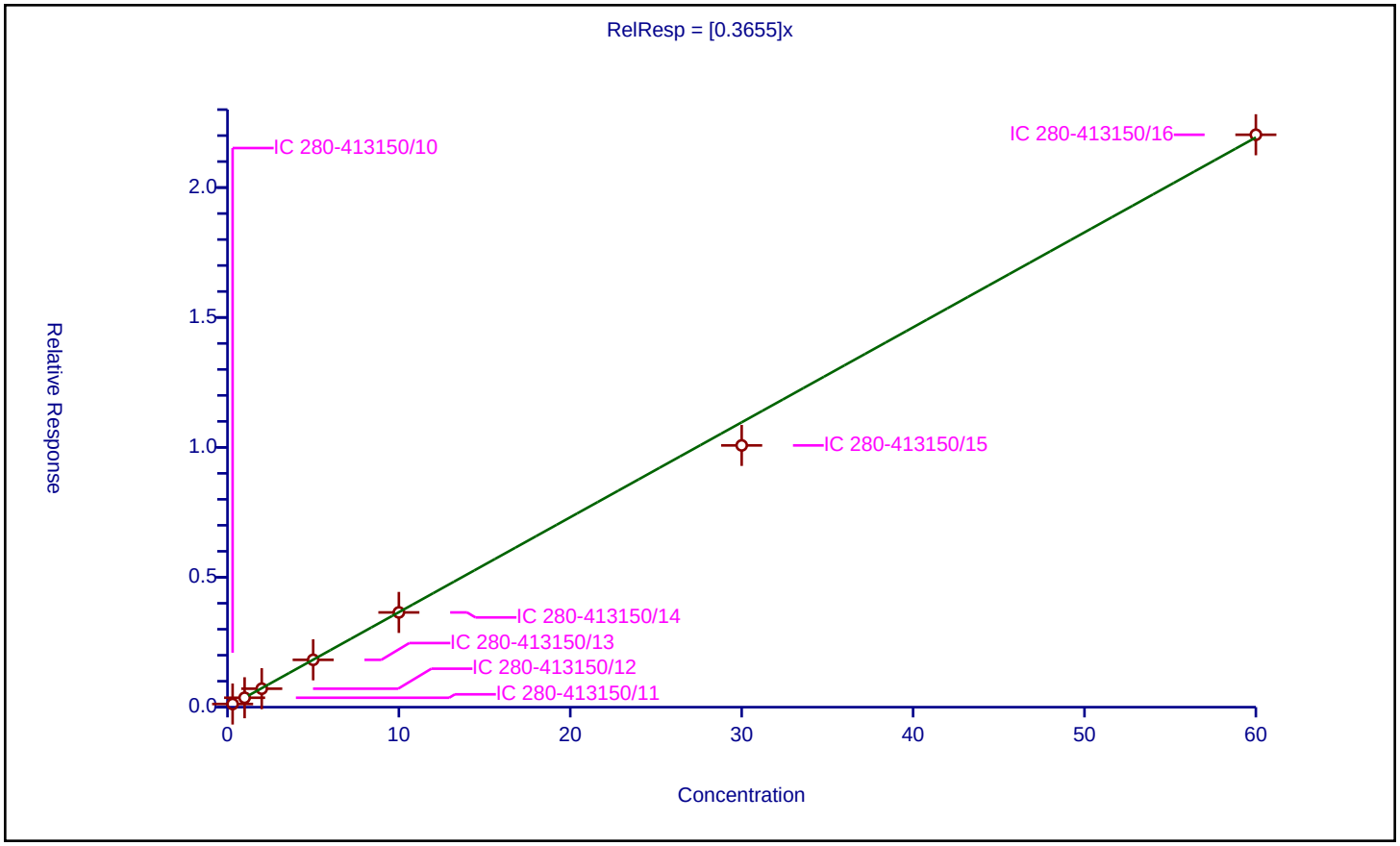
Curve Coefficients

Intercept:	0
Slope:	0.3655

Error Coefficients

Standard Error:	1360000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.1223	12.5	1452979.0	0.407668	Y
2	IC 280-413150/11	1.0	0.363032	12.5	1647099.0	0.363032	Y
3	IC 280-413150/12	2.0	0.711241	12.5	1632446.0	0.35562	Y
4	IC 280-413150/13	5.0	1.821702	12.5	1704025.0	0.36434	Y
5	IC 280-413150/14	10.0	3.646855	12.5	1685538.0	0.364685	Y
6	IC 280-413150/15	30.0	10.075425	12.5	1710805.0	0.335848	Y
7	IC 280-413150/16	60.0	22.032811	12.5	1691980.0	0.367214	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

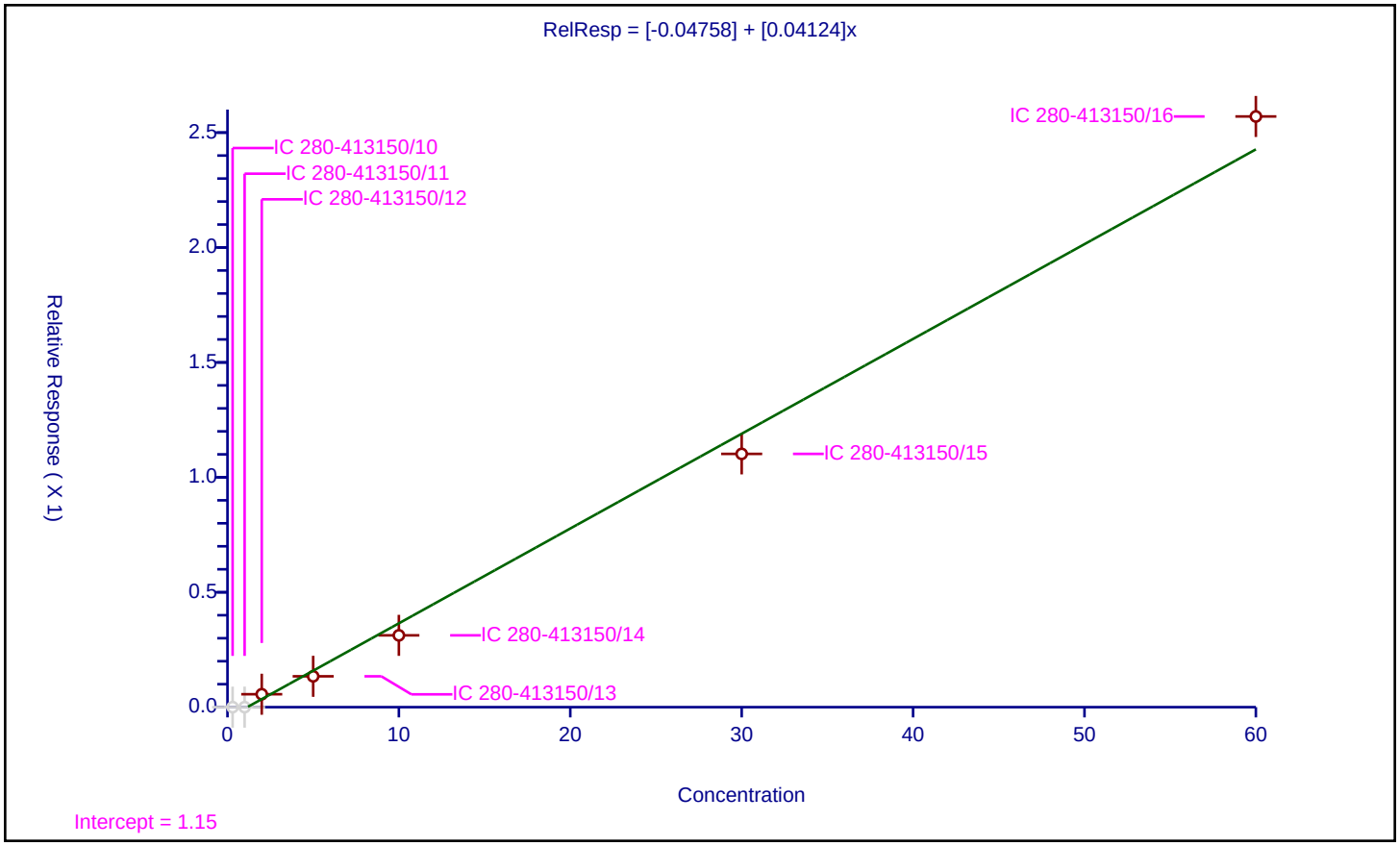
Curve Coefficients

Intercept:	-0.04758
Slope:	0.04124

Error Coefficients

Standard Error:	221000
Relative Standard Error:	18.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	1452979.0	0.0	N
2	IC 280-413150/11	1.0	0.0	12.5	1647099.0	0.0	N
3	IC 280-413150/12	2.0	0.056219	12.5	1632446.0	0.02811	Y
4	IC 280-413150/13	5.0	0.13419	12.5	1704025.0	0.026838	Y
5	IC 280-413150/14	10.0	0.312526	12.5	1685538.0	0.031253	Y
6	IC 280-413150/15	30.0	1.102062	12.5	1710805.0	0.036735	Y
7	IC 280-413150/16	60.0	2.570132	12.5	1691980.0	0.042836	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

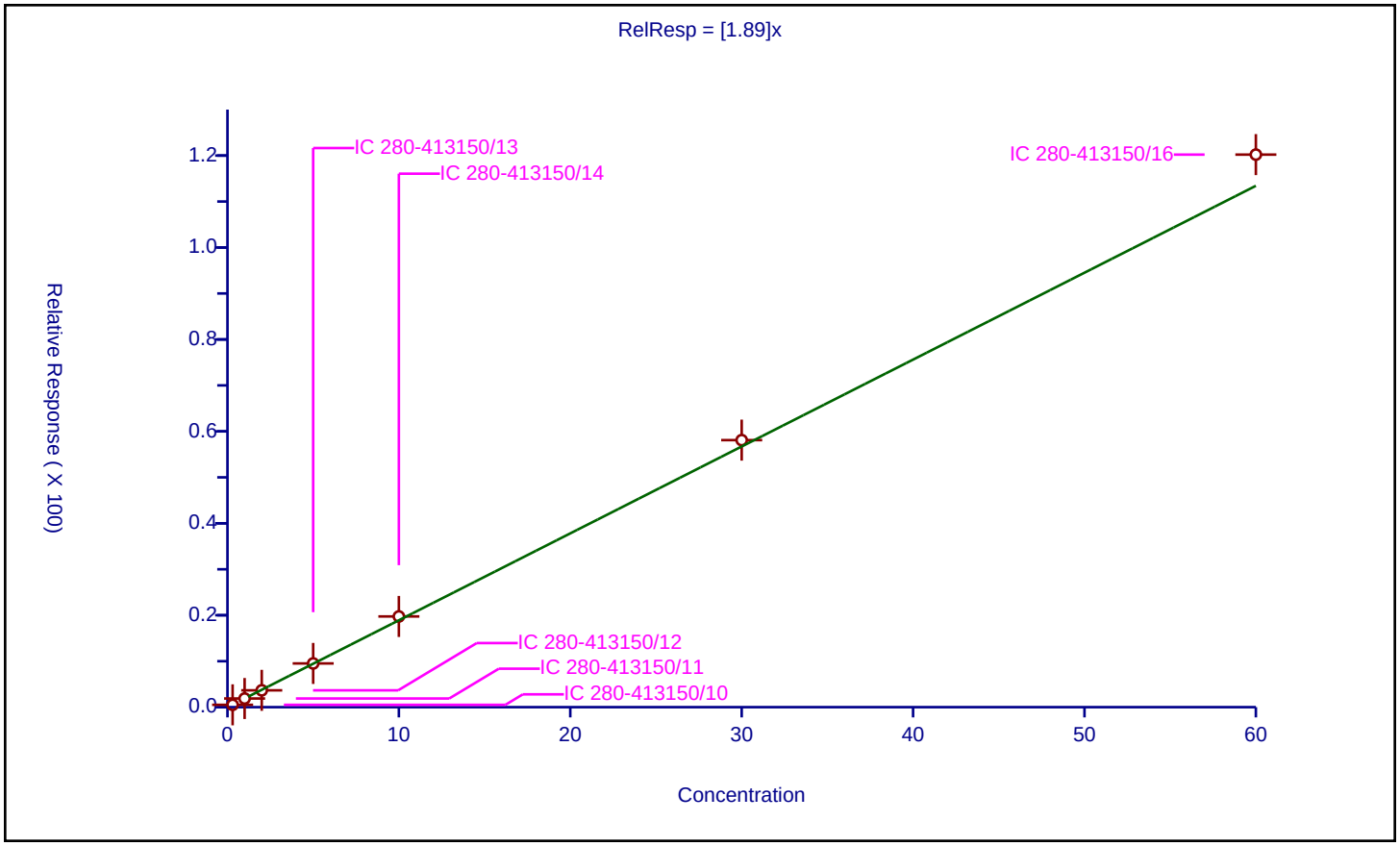
Curve Coefficients

Intercept:	0
Slope:	1.89

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.511484	12.5	302844.0	1.704948	Y
2	IC 280-413150/11	1.0	1.8797	12.5	305082.0	1.8797	Y
3	IC 280-413150/12	2.0	3.663089	12.5	307442.0	1.831545	Y
4	IC 280-413150/13	5.0	9.513834	12.5	326941.0	1.902767	Y
5	IC 280-413150/14	10.0	19.733641	12.5	328213.0	1.973364	Y
6	IC 280-413150/15	30.0	58.094616	12.5	330604.0	1.936487	Y
7	IC 280-413150/16	60.0	120.207424	12.5	348140.0	2.003457	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

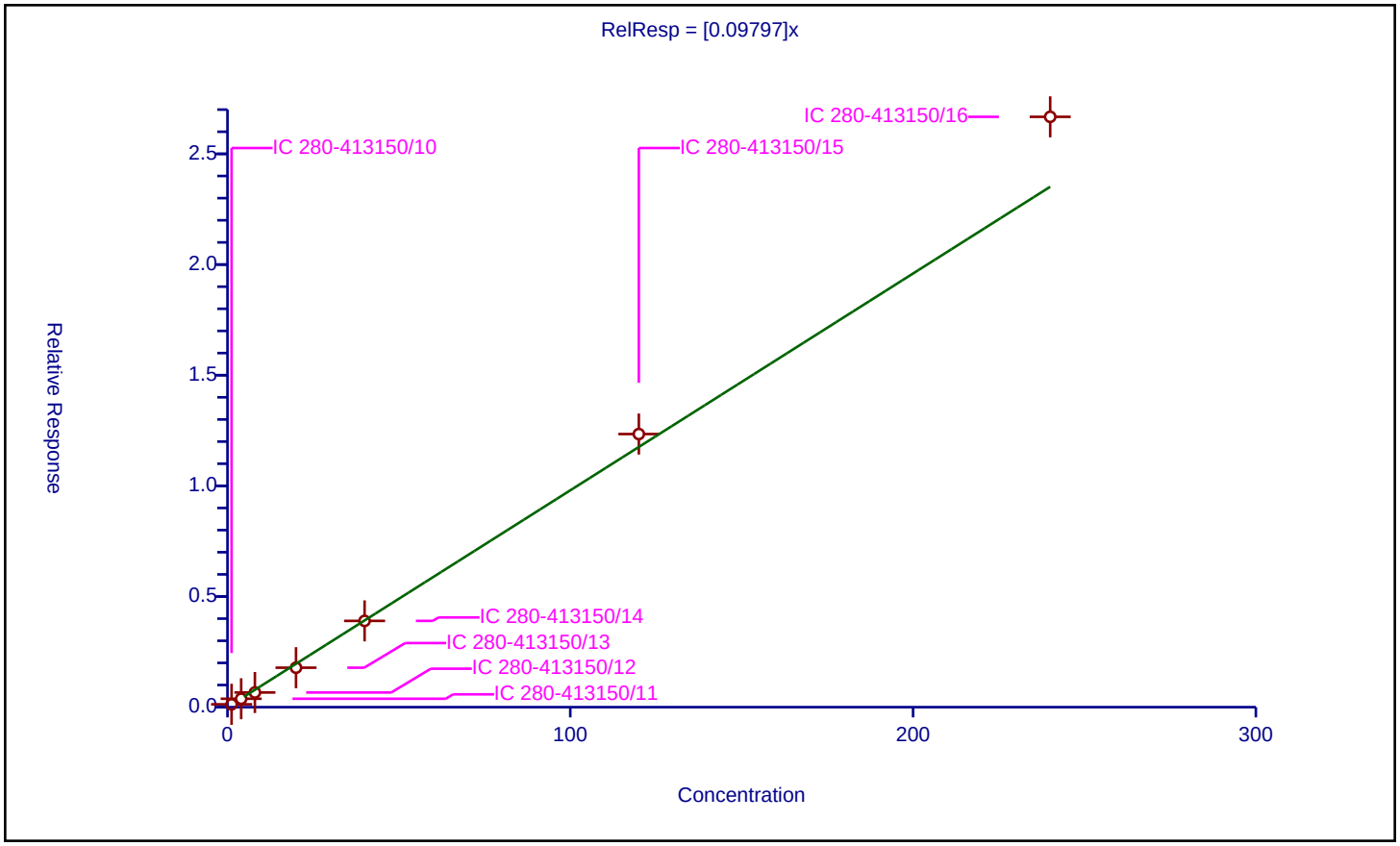
Curve Coefficients

Intercept:	0
Slope:	0.09797

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	10.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	1.2	0.128813	12.5	1452979.0	0.107344	Y
2	IC 280-413150/11	4.0	0.380055	12.5	1647099.0	0.095014	Y
3	IC 280-413150/12	8.0	0.662878	12.5	1632446.0	0.08286	Y
4	IC 280-413150/13	20.0	1.78305	12.5	1704025.0	0.089153	Y
5	IC 280-413150/14	40.0	3.89831	12.5	1685538.0	0.097458	Y
6	IC 280-413150/15	120.0	12.340747	12.5	1710805.0	0.10284	Y
7	IC 280-413150/16	240.0	26.674407	12.5	1691980.0	0.111143	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

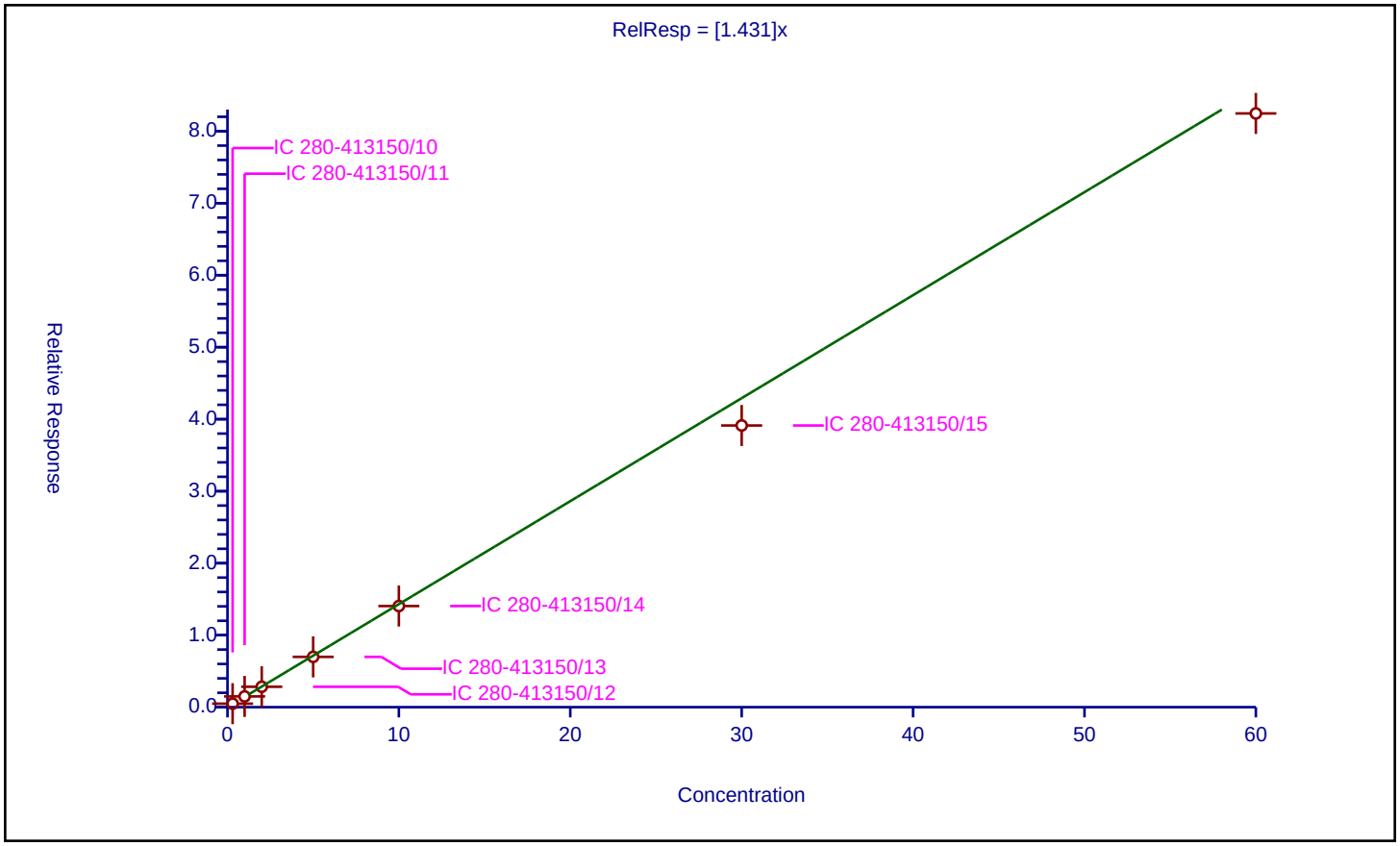
Curve Coefficients

Intercept:	0
Slope:	1.431

Error Coefficients

Standard Error:	5130000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.487817	12.5	1452979.0	1.626056	Y
2	IC 280-413150/11	1.0	1.49207	12.5	1647099.0	1.49207	Y
3	IC 280-413150/12	2.0	2.833287	12.5	1632446.0	1.416643	Y
4	IC 280-413150/13	5.0	6.984199	12.5	1704025.0	1.39684	Y
5	IC 280-413150/14	10.0	14.046116	12.5	1685538.0	1.404612	Y
6	IC 280-413150/15	30.0	39.123841	12.5	1710805.0	1.304128	Y
7	IC 280-413150/16	60.0	82.467819	12.5	1691980.0	1.374464	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

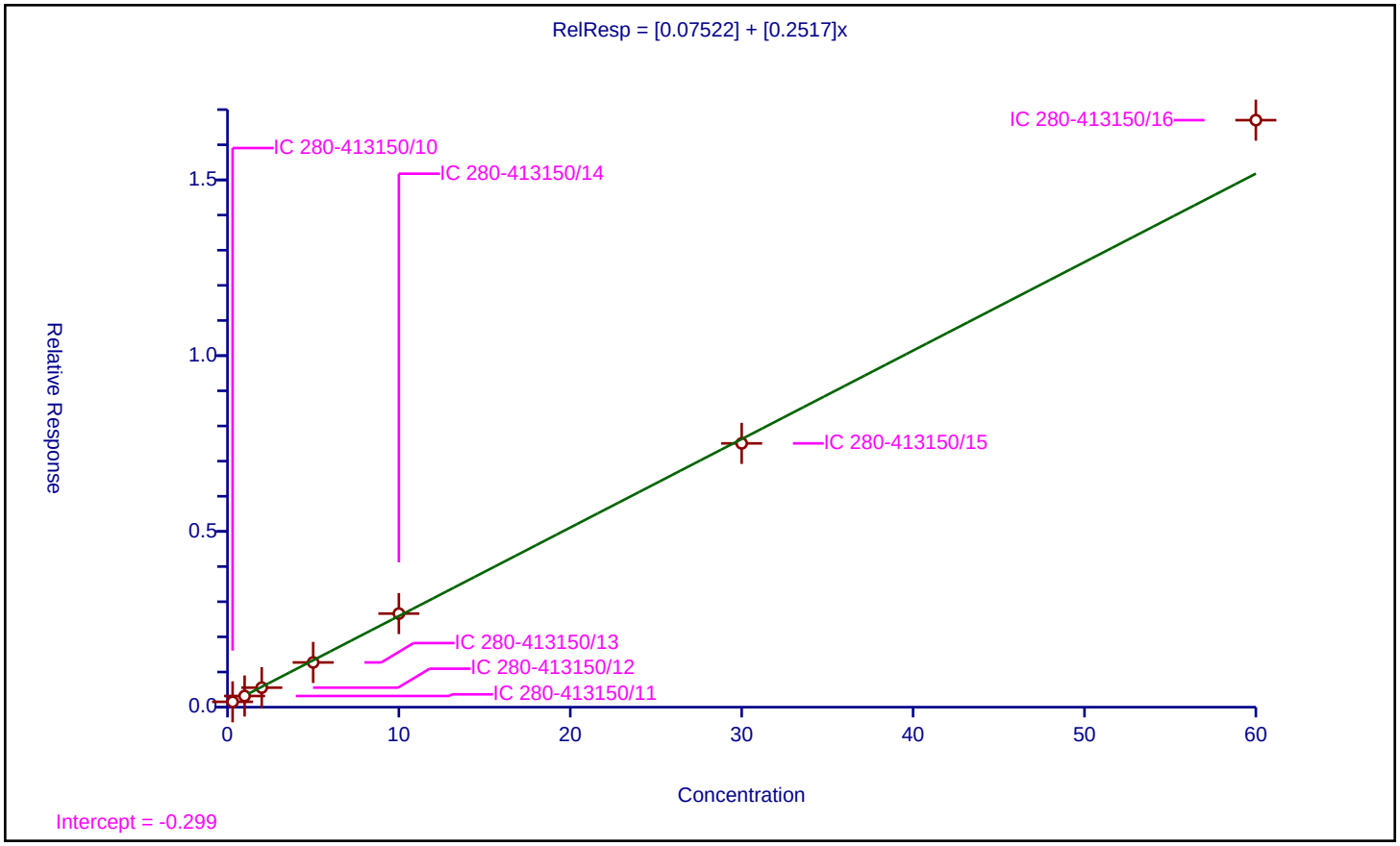
Curve Coefficients

Intercept:	0.07522
Slope:	0.2517

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.152239	12.5	1452979.0	0.507463	Y
2	IC 280-413150/11	1.0	0.317513	12.5	1647099.0	0.317513	Y
3	IC 280-413150/12	2.0	0.555608	12.5	1632446.0	0.277804	Y
4	IC 280-413150/13	5.0	1.272561	12.5	1704025.0	0.254512	Y
5	IC 280-413150/14	10.0	2.662221	12.5	1685538.0	0.266222	Y
6	IC 280-413150/15	30.0	7.504545	12.5	1710805.0	0.250151	Y
7	IC 280-413150/16	60.0	16.699917	12.5	1691980.0	0.278332	Y



Calibration / Ethyl methacrylate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

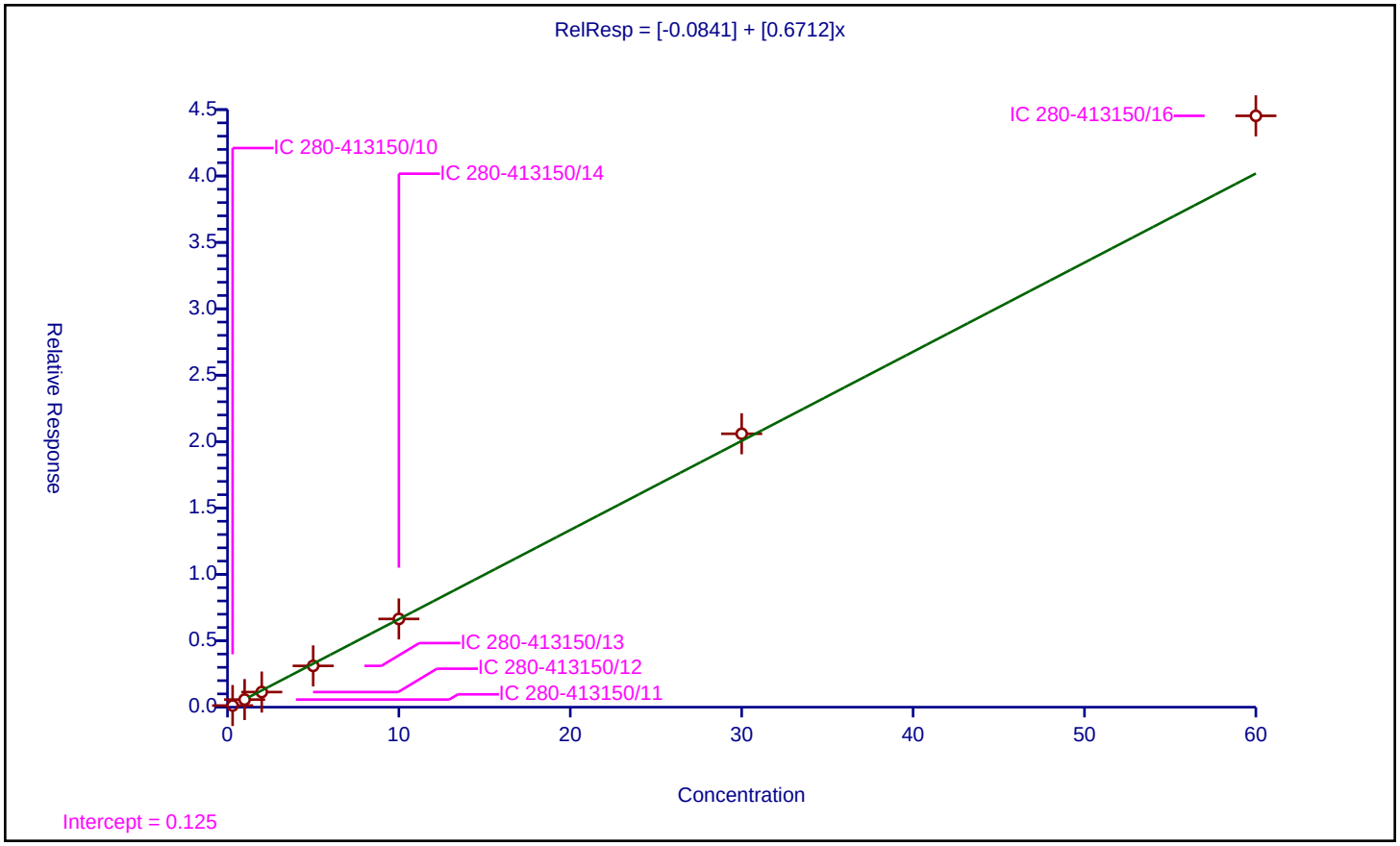
Curve Coefficients

Intercept:	-0.0841
Slope:	0.6712

Error Coefficients

Standard Error:	612000
Relative Standard Error:	6.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.121639	12.5	302844.0	0.405462	Y
2	IC 280-413150/11	1.0	0.573084	12.5	305082.0	0.573084	Y
3	IC 280-413150/12	2.0	1.138955	12.5	307442.0	0.569477	Y
4	IC 280-413150/13	5.0	3.109621	12.5	326941.0	0.621924	Y
5	IC 280-413150/14	10.0	6.643361	12.5	328213.0	0.664336	Y
6	IC 280-413150/15	30.0	20.589209	12.5	330604.0	0.686307	Y
7	IC 280-413150/16	60.0	44.531833	12.5	348140.0	0.742197	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

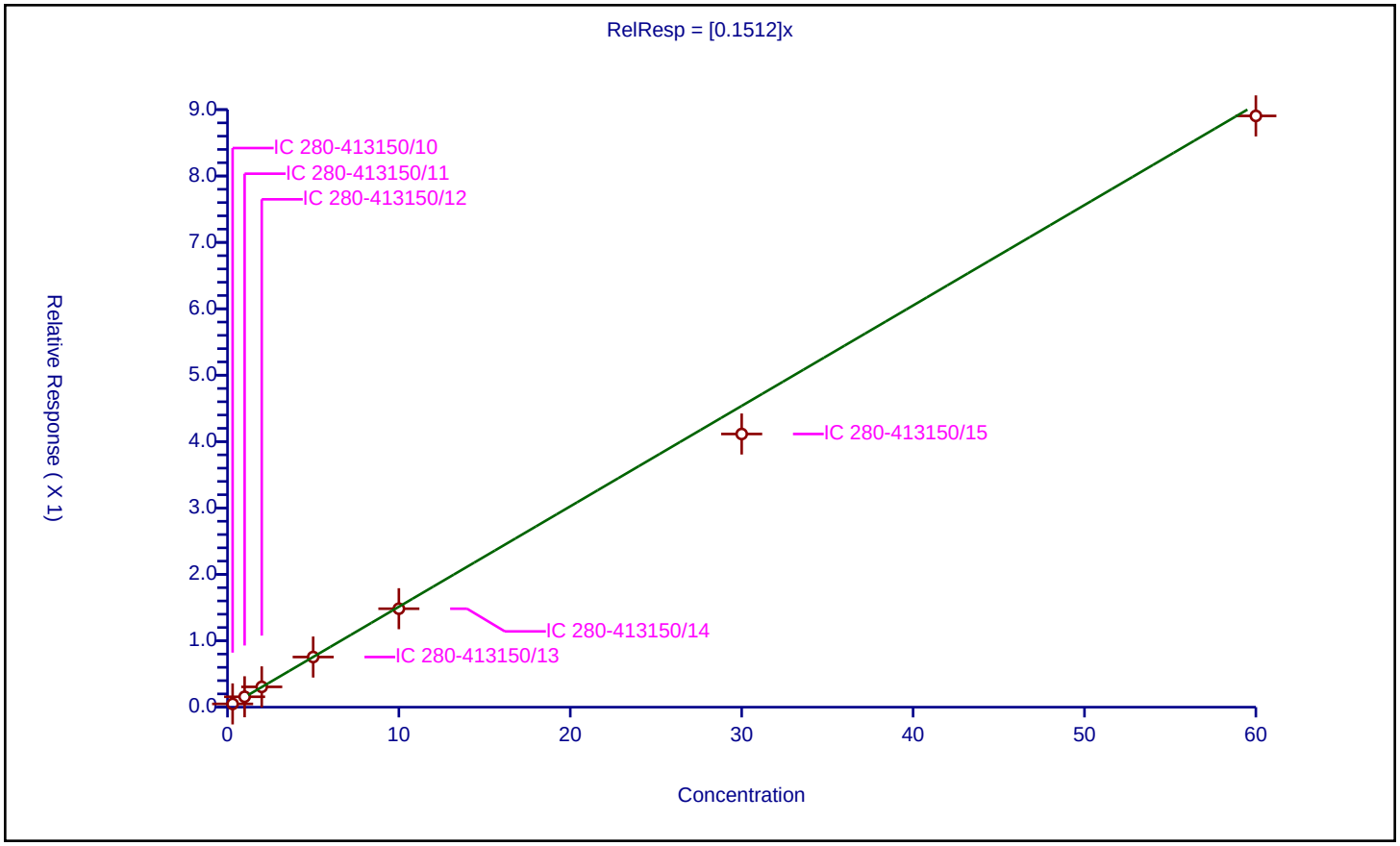
Curve Coefficients

Intercept:	0
Slope:	0.1512

Error Coefficients

Standard Error:	551000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.049312	12.5	1452979.0	0.164375	Y
2	IC 280-413150/11	1.0	0.156707	12.5	1647099.0	0.156707	Y
3	IC 280-413150/12	2.0	0.305561	12.5	1632446.0	0.152781	Y
4	IC 280-413150/13	5.0	0.755007	12.5	1704025.0	0.151001	Y
5	IC 280-413150/14	10.0	1.483065	12.5	1685538.0	0.148307	Y
6	IC 280-413150/15	30.0	4.114167	12.5	1710805.0	0.137139	Y
7	IC 280-413150/16	60.0	8.905395	12.5	1691980.0	0.148423	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

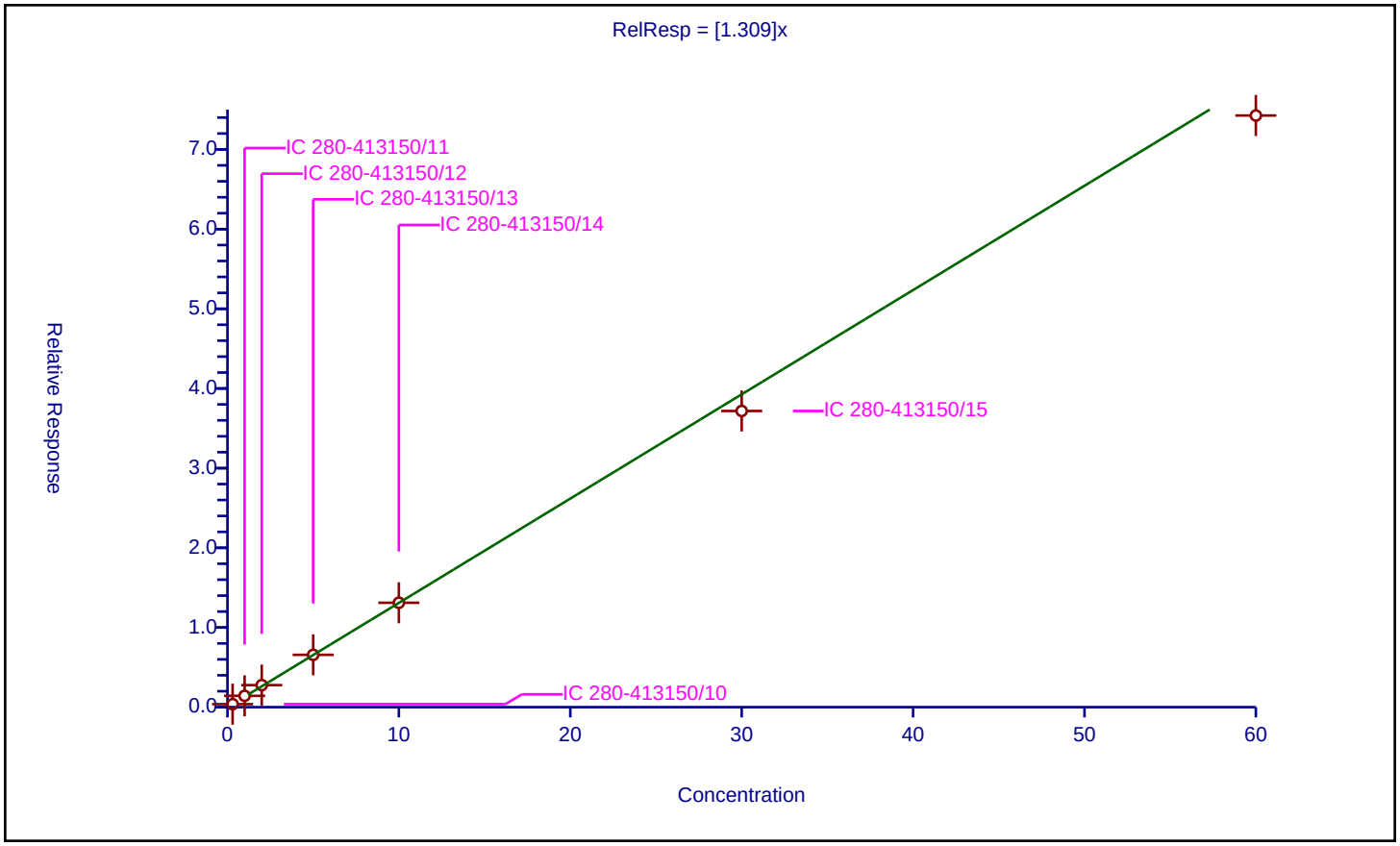
Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	948000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.376555	12.5	302844.0	1.255184	Y
2	IC 280-413150/11	1.0	1.422855	12.5	305082.0	1.422855	Y
3	IC 280-413150/12	2.0	2.765725	12.5	307442.0	1.382862	Y
4	IC 280-413150/13	5.0	6.567584	12.5	326941.0	1.313517	Y
5	IC 280-413150/14	10.0	13.102657	12.5	328213.0	1.310266	Y
6	IC 280-413150/15	30.0	37.17548	12.5	330604.0	1.239183	Y
7	IC 280-413150/16	60.0	74.258344	12.5	348140.0	1.237639	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

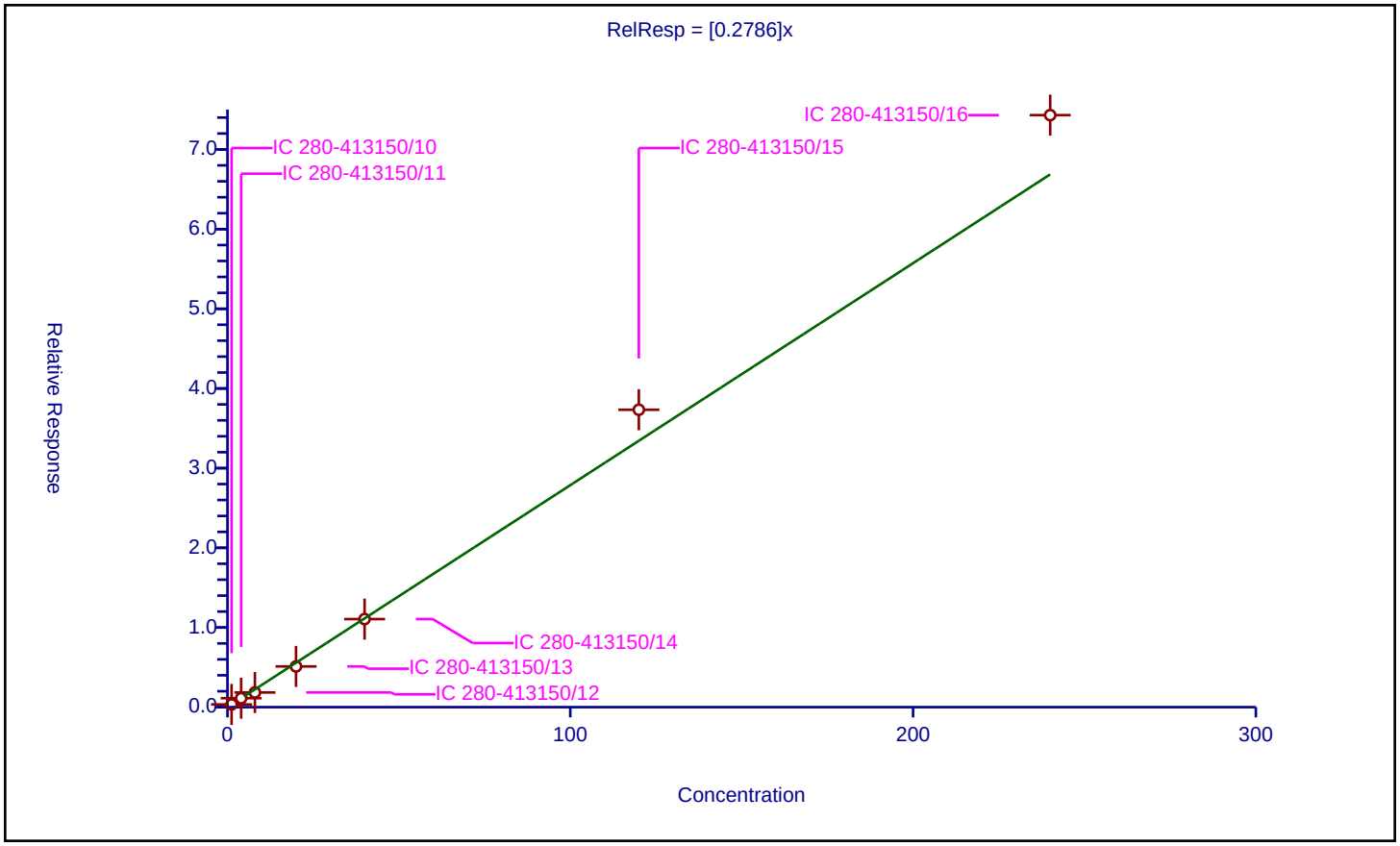
Curve Coefficients

Intercept:	0
Slope:	0.2786

Error Coefficients

Standard Error:	945000
Relative Standard Error:	10.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	1.2	0.343329	12.5	302844.0	0.286107	Y
2	IC 280-413150/11	4.0	1.124206	12.5	305082.0	0.281051	Y
3	IC 280-413150/12	8.0	1.845267	12.5	307442.0	0.230658	Y
4	IC 280-413150/13	20.0	5.110976	12.5	326941.0	0.255549	Y
5	IC 280-413150/14	40.0	11.053835	12.5	328213.0	0.276346	Y
6	IC 280-413150/15	120.0	37.328004	12.5	330604.0	0.311067	Y
7	IC 280-413150/16	240.0	74.306744	12.5	348140.0	0.309611	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

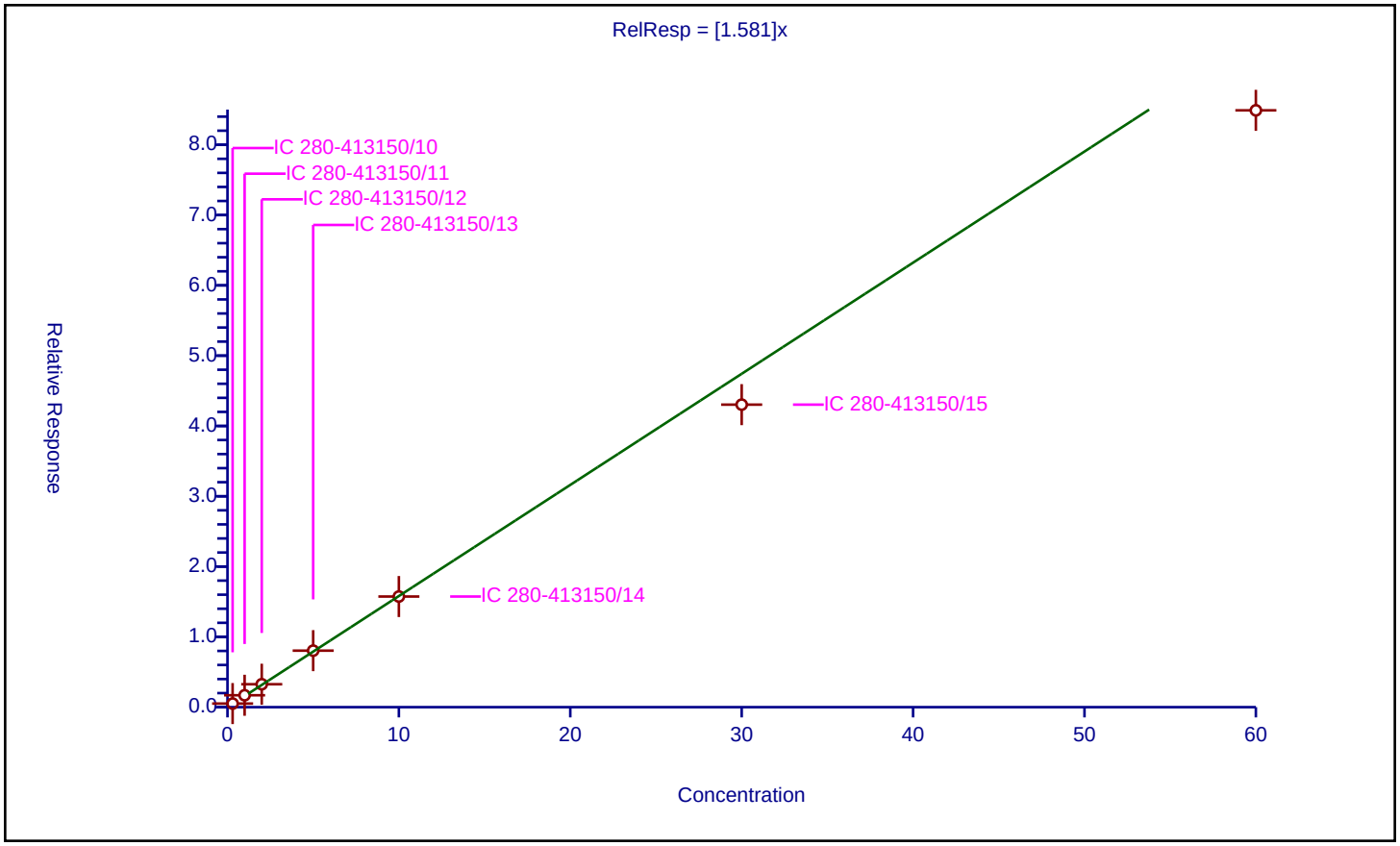
Curve Coefficients

Intercept:	0
Slope:	1.581

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.511938	12.5	302844.0	1.706462	Y
2	IC 280-413150/11	1.0	1.695651	12.5	305082.0	1.695651	Y
3	IC 280-413150/12	2.0	3.263176	12.5	307442.0	1.631588	Y
4	IC 280-413150/13	5.0	8.039524	12.5	326941.0	1.607905	Y
5	IC 280-413150/14	10.0	15.738179	12.5	328213.0	1.573818	Y
6	IC 280-413150/15	30.0	43.033697	12.5	330604.0	1.434457	Y
7	IC 280-413150/16	60.0	84.895911	12.5	348140.0	1.414932	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

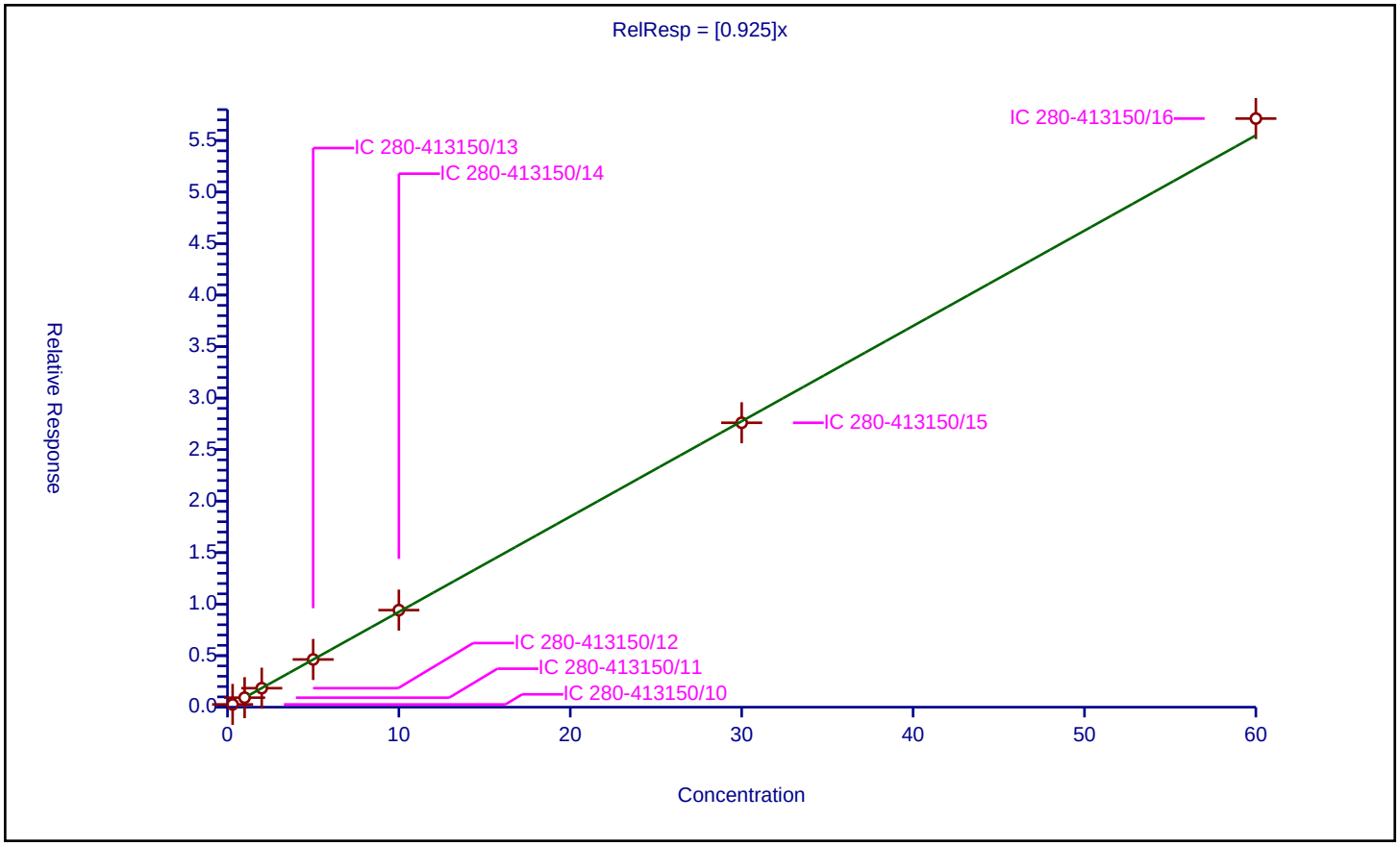
Curve Coefficients

Intercept:	0
Slope:	0.925

Error Coefficients

Standard Error:	724000
Relative Standard Error:	2.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.267547	12.5	302844.0	0.891823	Y
2	IC 280-413150/11	1.0	0.921678	12.5	305082.0	0.921678	Y
3	IC 280-413150/12	2.0	1.842746	12.5	307442.0	0.921373	Y
4	IC 280-413150/13	5.0	4.630155	12.5	326941.0	0.926031	Y
5	IC 280-413150/14	10.0	9.419988	12.5	328213.0	0.941999	Y
6	IC 280-413150/15	30.0	27.603492	12.5	330604.0	0.920116	Y
7	IC 280-413150/16	60.0	57.13147	12.5	348140.0	0.952191	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

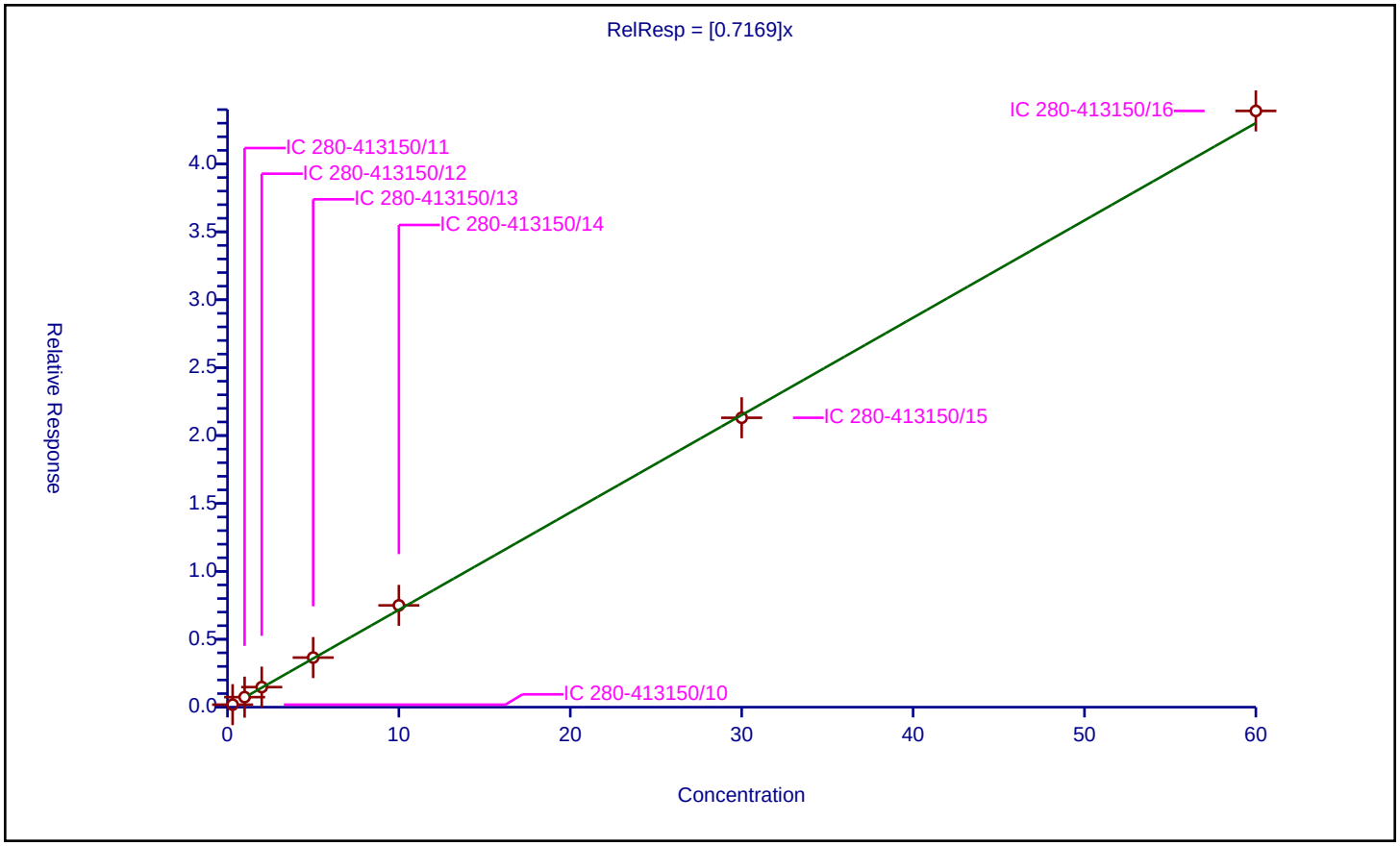
Curve Coefficients

Intercept:	0
Slope:	0.7169

Error Coefficients

Standard Error:	557000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.18578	12.5	302844.0	0.619268	Y
2	IC 280-413150/11	1.0	0.738695	12.5	305082.0	0.738695	Y
3	IC 280-413150/12	2.0	1.476701	12.5	307442.0	0.738351	Y
4	IC 280-413150/13	5.0	3.651997	12.5	326941.0	0.730399	Y
5	IC 280-413150/14	10.0	7.495323	12.5	328213.0	0.749532	Y
6	IC 280-413150/15	30.0	21.308499	12.5	330604.0	0.710283	Y
7	IC 280-413150/16	60.0	43.902417	12.5	348140.0	0.731707	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

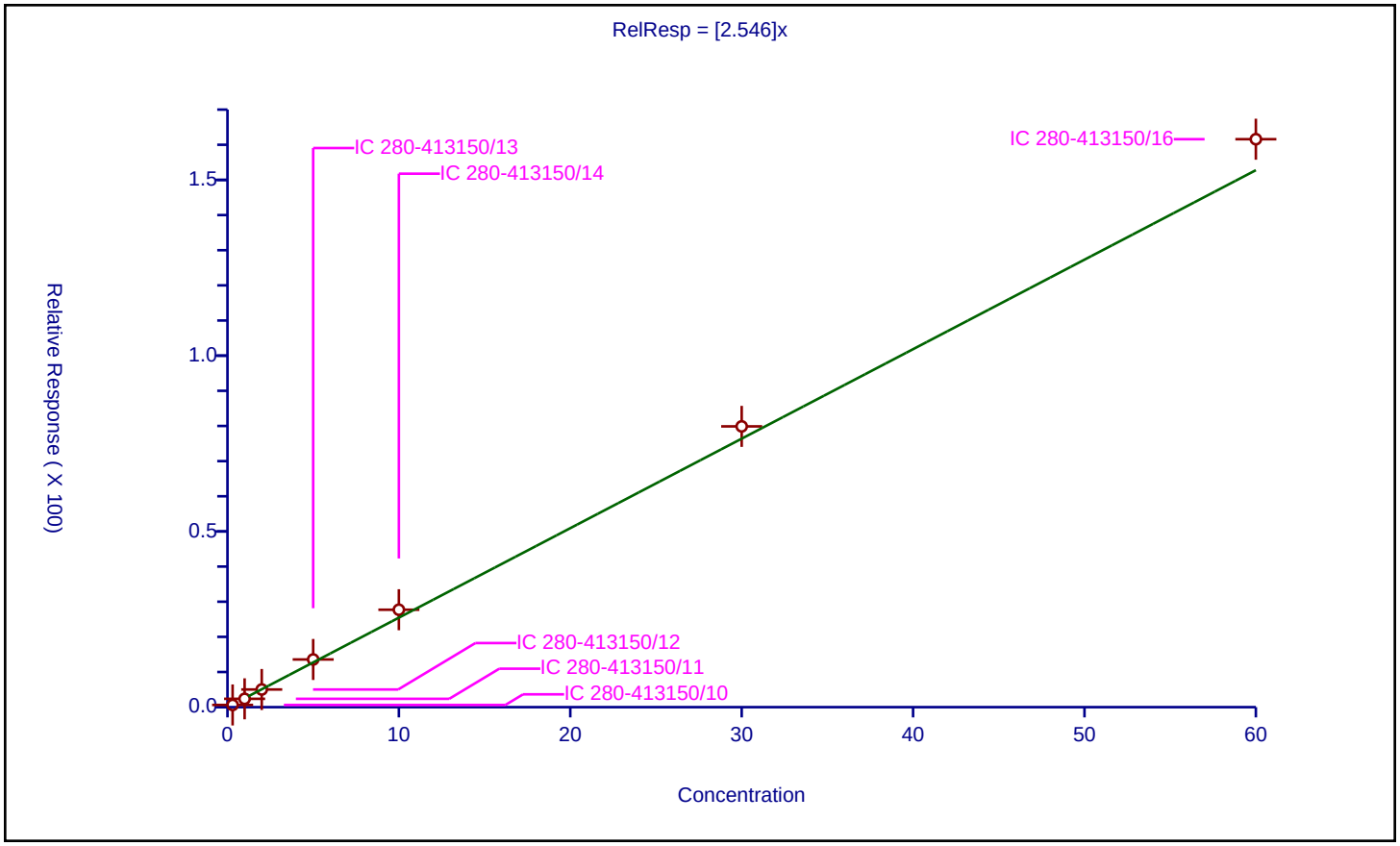
Curve Coefficients

Intercept:	0
Slope:	2.546

Error Coefficients

Standard Error:	2060000
Relative Standard Error:	9.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.629202	12.5	302844.0	2.097339	Y
2	IC 280-413150/11	1.0	2.372067	12.5	305082.0	2.372067	Y
3	IC 280-413150/12	2.0	5.025216	12.5	307442.0	2.512608	Y
4	IC 280-413150/13	5.0	13.56793	12.5	326941.0	2.713586	Y
5	IC 280-413150/14	10.0	27.719118	12.5	328213.0	2.771912	Y
6	IC 280-413150/15	30.0	79.878344	12.5	330604.0	2.662611	Y
7	IC 280-413150/16	60.0	161.578639	12.5	348140.0	2.692977	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

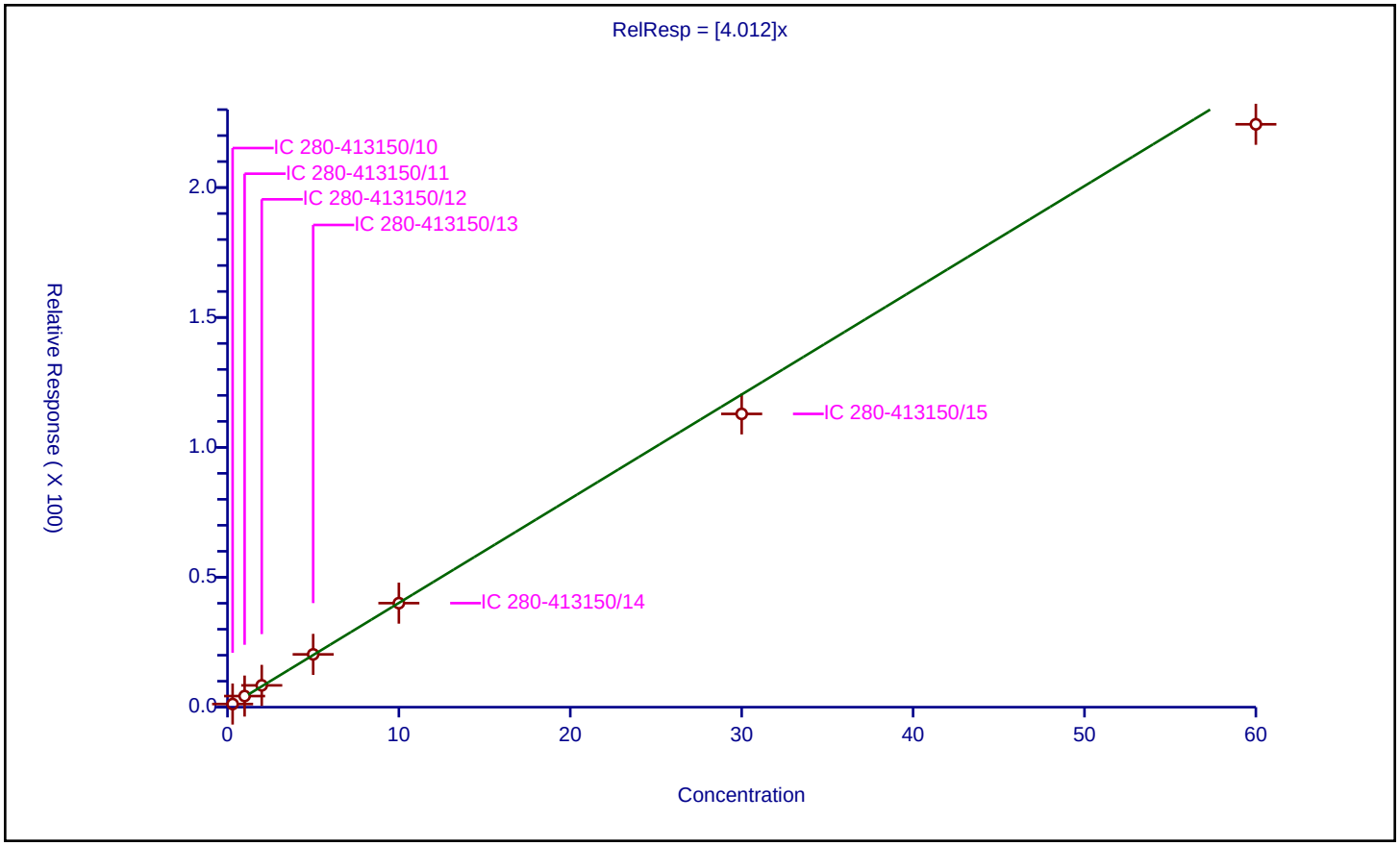
Curve Coefficients

Intercept:	0
Slope:	4.012

Error Coefficients

Standard Error:	2870000
Relative Standard Error:	5.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.212464	12.5	302844.0	4.041547	Y
2	IC 280-413150/11	1.0	4.274138	12.5	305082.0	4.274138	Y
3	IC 280-413150/12	2.0	8.392965	12.5	307442.0	4.196483	Y
4	IC 280-413150/13	5.0	20.323927	12.5	326941.0	4.064785	Y
5	IC 280-413150/14	10.0	40.033987	12.5	328213.0	4.003399	Y
6	IC 280-413150/15	30.0	112.879533	12.5	330604.0	3.762651	Y
7	IC 280-413150/16	60.0	224.347245	12.5	348140.0	3.739121	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

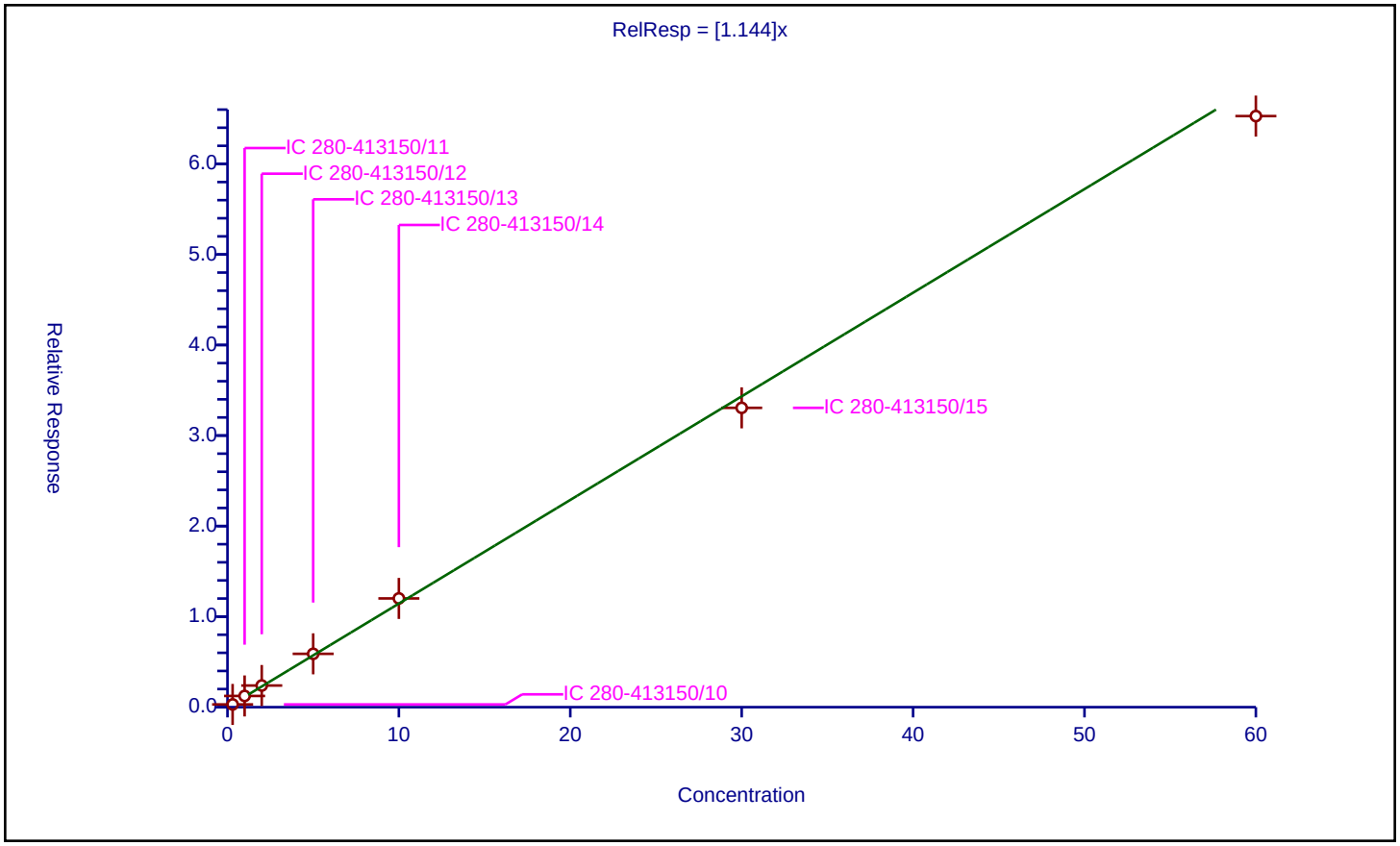
Curve Coefficients

Intercept:	0
Slope:	1.144

Error Coefficients

Standard Error:	836000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.302136	12.5	302844.0	1.007119	Y
2	IC 280-413150/11	1.0	1.238724	12.5	305082.0	1.238724	Y
3	IC 280-413150/12	2.0	2.390532	12.5	307442.0	1.195266	Y
4	IC 280-413150/13	5.0	5.892042	12.5	326941.0	1.178408	Y
5	IC 280-413150/14	10.0	12.010112	12.5	328213.0	1.201011	Y
6	IC 280-413150/15	30.0	33.059415	12.5	330604.0	1.101981	Y
7	IC 280-413150/16	60.0	65.285122	12.5	348140.0	1.088085	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

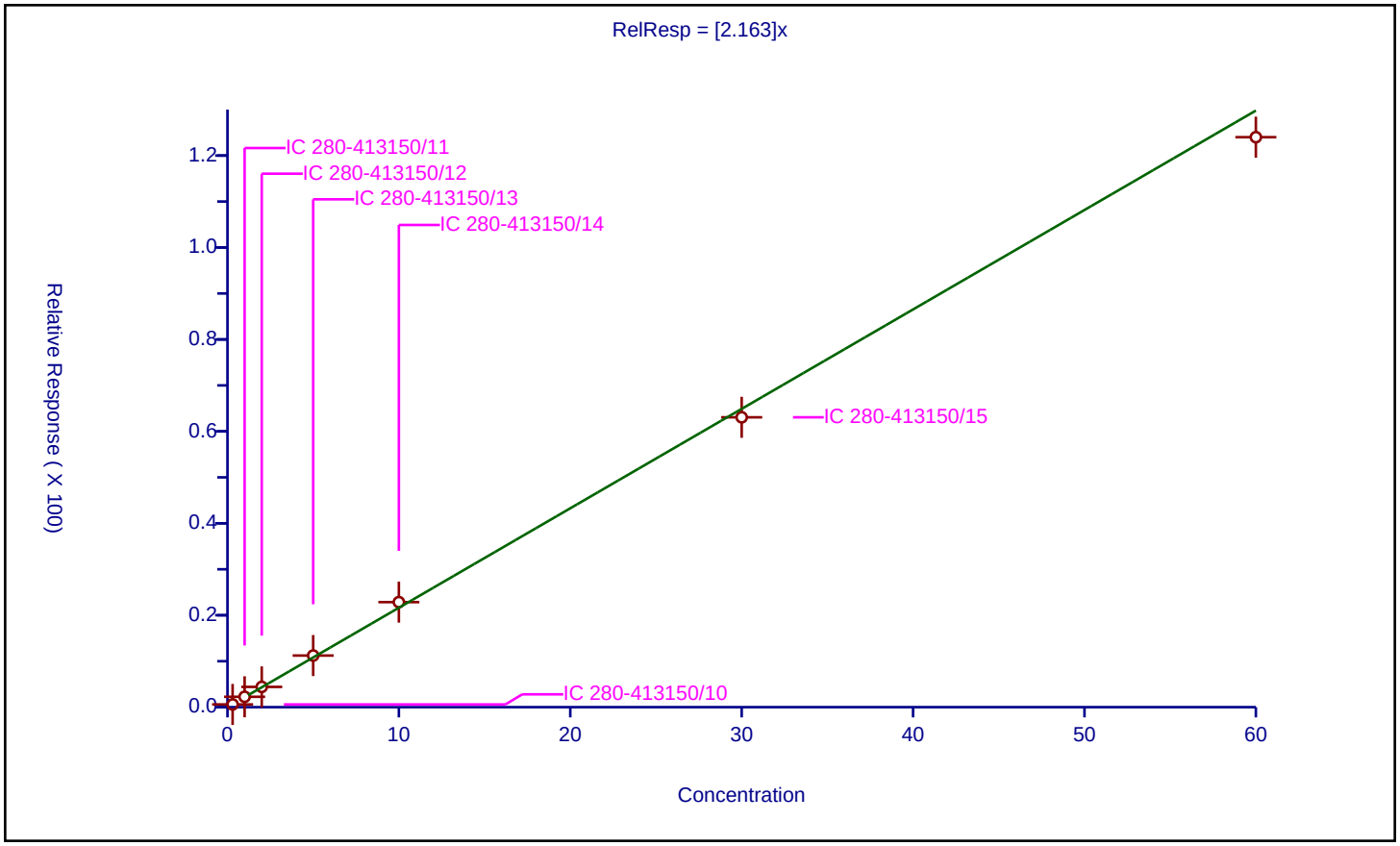
Curve Coefficients

Intercept:	0
Slope:	2.163

Error Coefficients

Standard Error:	1590000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.593953	12.5	302844.0	1.979842	Y
2	IC 280-413150/11	1.0	2.258778	12.5	305082.0	2.258778	Y
3	IC 280-413150/12	2.0	4.408718	12.5	307442.0	2.204359	Y
4	IC 280-413150/13	5.0	11.227982	12.5	326941.0	2.245596	Y
5	IC 280-413150/14	10.0	22.851928	12.5	328213.0	2.285193	Y
6	IC 280-413150/15	30.0	63.056897	12.5	330604.0	2.101897	Y
7	IC 280-413150/16	60.0	123.99911	12.5	348140.0	2.066652	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

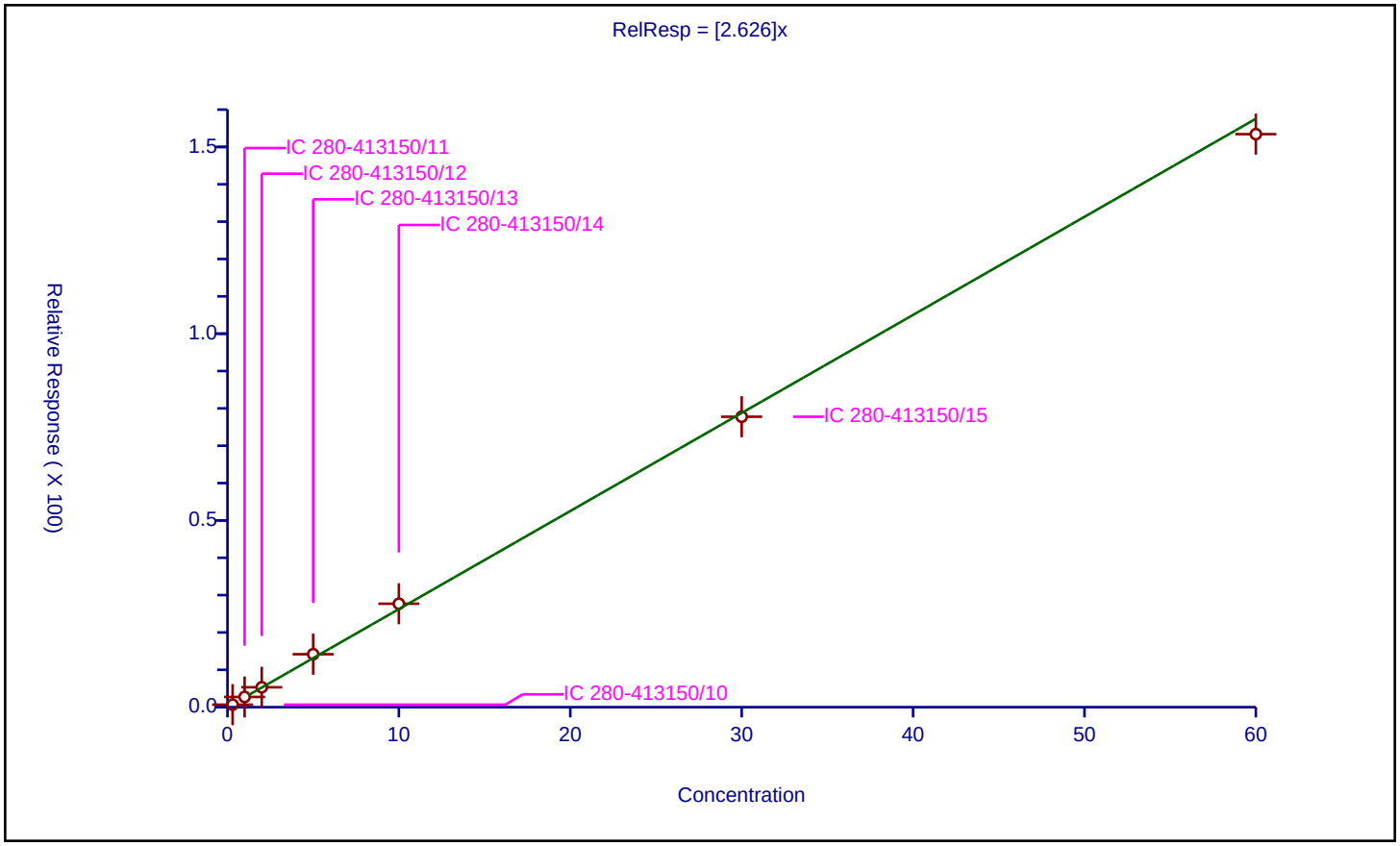
Curve Coefficients

Intercept:	0
Slope:	2.626

Error Coefficients

Standard Error:	1970000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.668125	12.5	302844.0	2.227082	Y
2	IC 280-413150/11	1.0	2.737707	12.5	305082.0	2.737707	Y
3	IC 280-413150/12	2.0	5.32141	12.5	307442.0	2.660705	Y
4	IC 280-413150/13	5.0	14.179584	12.5	326941.0	2.835917	Y
5	IC 280-413150/14	10.0	27.69642	12.5	328213.0	2.769642	Y
6	IC 280-413150/15	30.0	77.763692	12.5	330604.0	2.592123	Y
7	IC 280-413150/16	60.0	153.429332	12.5	348140.0	2.557156	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

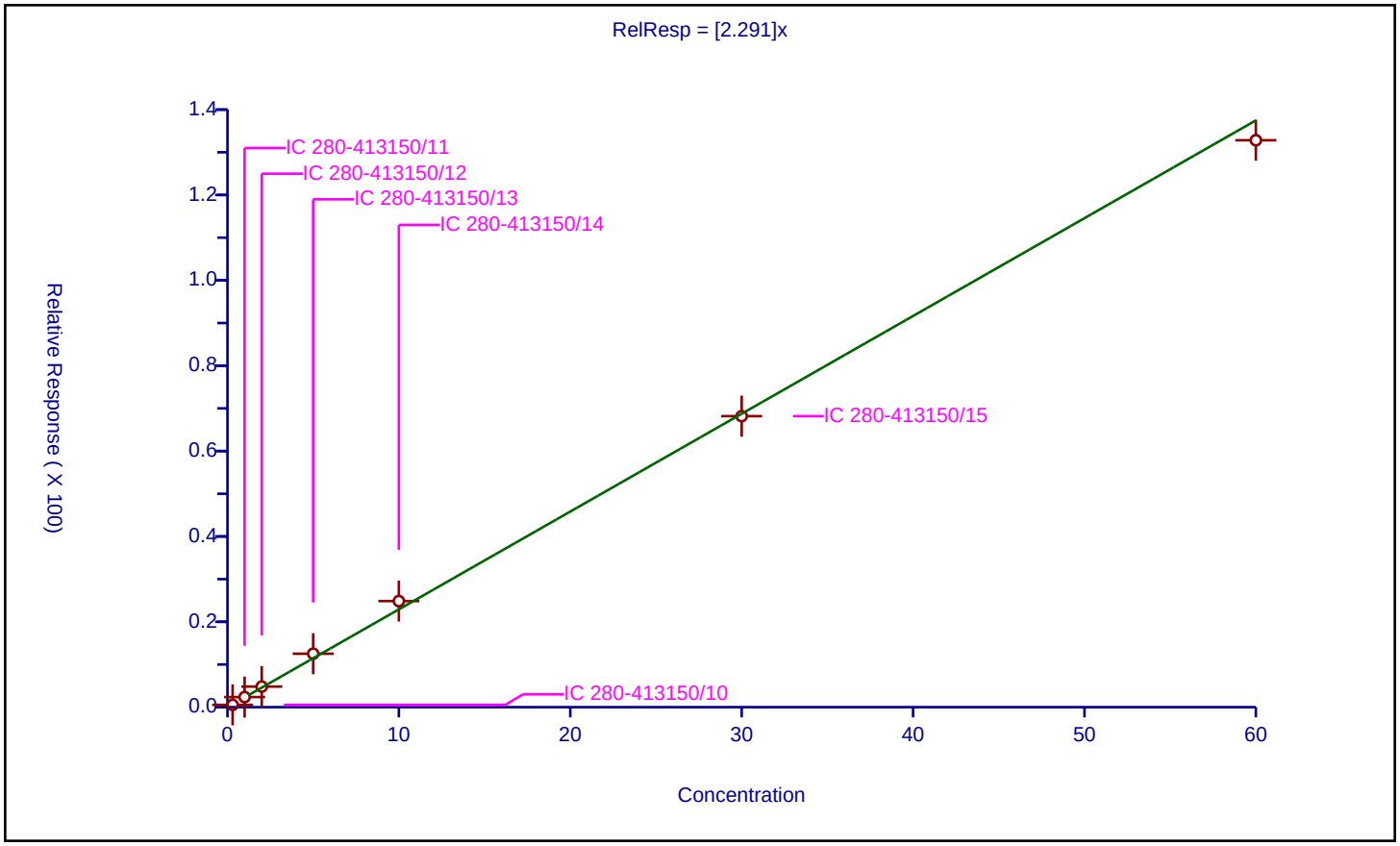
Curve Coefficients

Intercept:	0
Slope:	2.291

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	10.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.537983	12.5	302844.0	1.793278	Y
2	IC 280-413150/11	1.0	2.361168	12.5	305082.0	2.361168	Y
3	IC 280-413150/12	2.0	4.818023	12.5	307442.0	2.409011	Y
4	IC 280-413150/13	5.0	12.517702	12.5	326941.0	2.50354	Y
5	IC 280-413150/14	10.0	24.855201	12.5	328213.0	2.48552	Y
6	IC 280-413150/15	30.0	68.177525	12.5	330604.0	2.272584	Y
7	IC 280-413150/16	60.0	132.819627	12.5	348140.0	2.21366	Y



Calibration / Styrene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

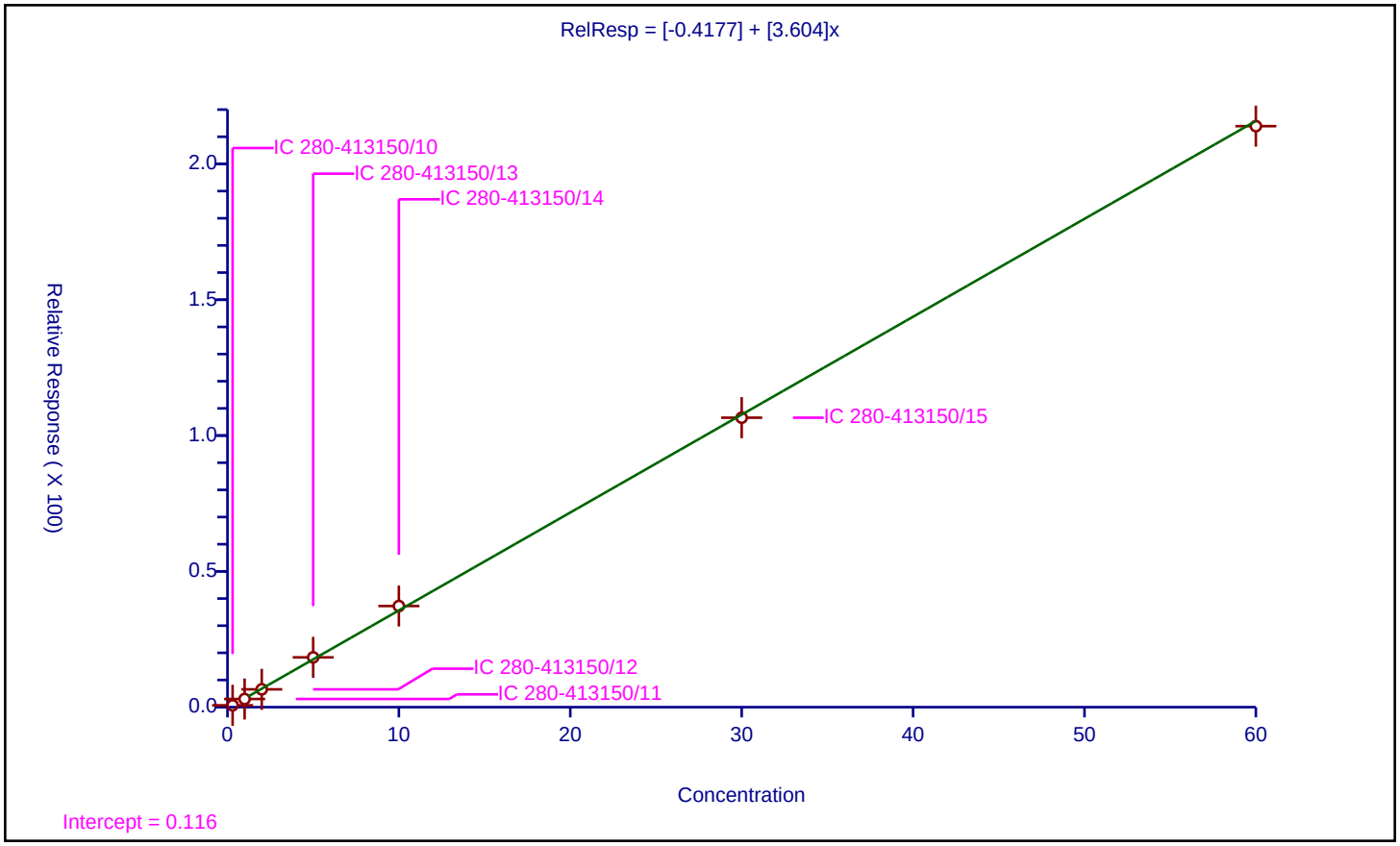
Curve Coefficients

Intercept:	-0.4177
Slope:	3.604

Error Coefficients

Standard Error:	2990000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.681209	12.5	302844.0	2.270696	Y
2	IC 280-413150/11	1.0	3.003086	12.5	305082.0	3.003086	Y
3	IC 280-413150/12	2.0	6.561156	12.5	307442.0	3.280578	Y
4	IC 280-413150/13	5.0	18.335151	12.5	326941.0	3.66703	Y
5	IC 280-413150/14	10.0	37.236832	12.5	328213.0	3.723683	Y
6	IC 280-413150/15	30.0	106.572554	12.5	330604.0	3.552418	Y
7	IC 280-413150/16	60.0	213.905792	12.5	348140.0	3.565097	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

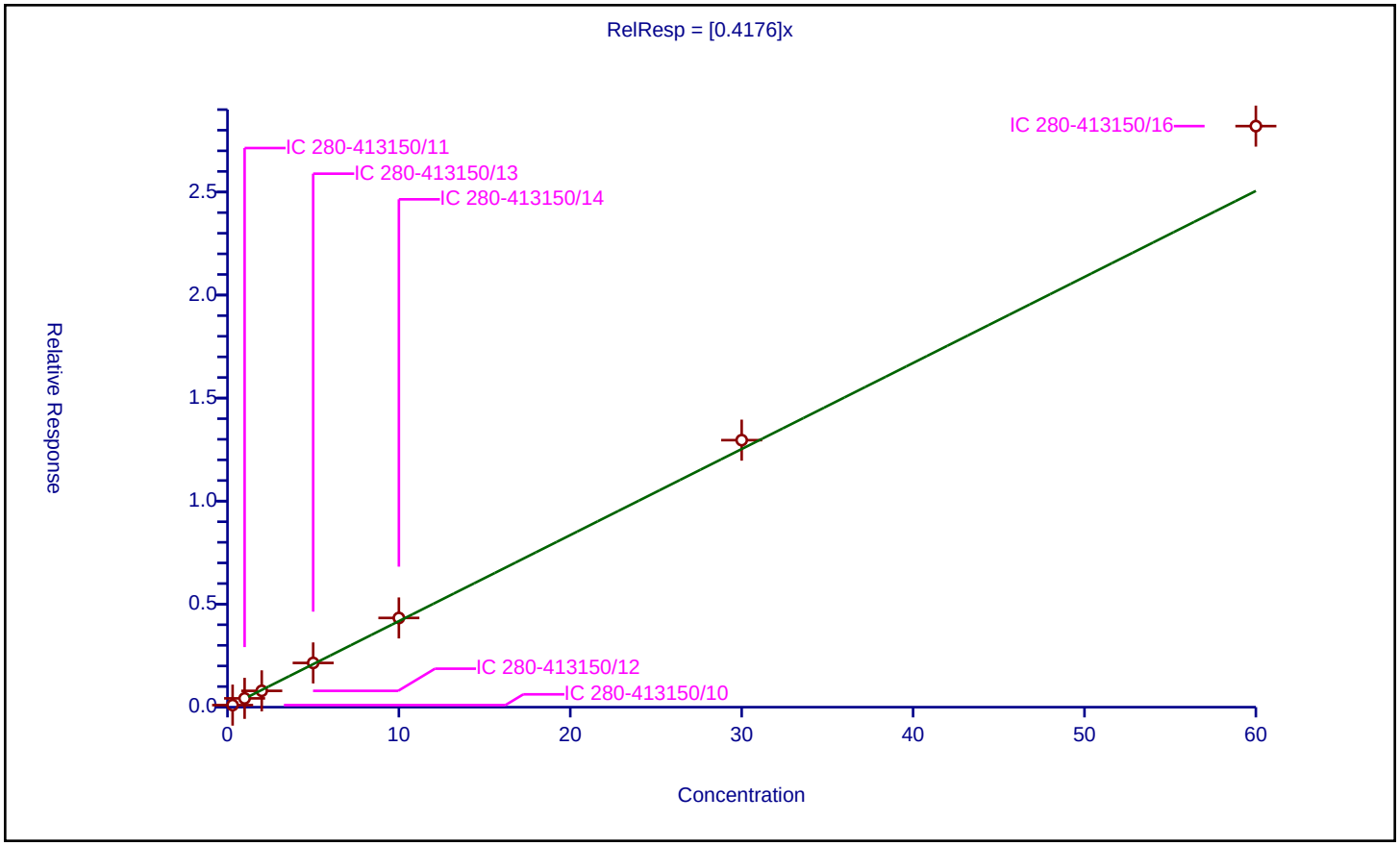
Curve Coefficients

Intercept:	0
Slope:	0.4176

Error Coefficients

Standard Error:	354000
Relative Standard Error:	10.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.100712	12.5	302844.0	0.335706	Y
2	IC 280-413150/11	1.0	0.426934	12.5	305082.0	0.426934	Y
3	IC 280-413150/12	2.0	0.79206	12.5	307442.0	0.39603	Y
4	IC 280-413150/13	5.0	2.146871	12.5	326941.0	0.429374	Y
5	IC 280-413150/14	10.0	4.329658	12.5	328213.0	0.432966	Y
6	IC 280-413150/15	30.0	12.958895	12.5	330604.0	0.431963	Y
7	IC 280-413150/16	60.0	28.199431	12.5	348140.0	0.469991	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

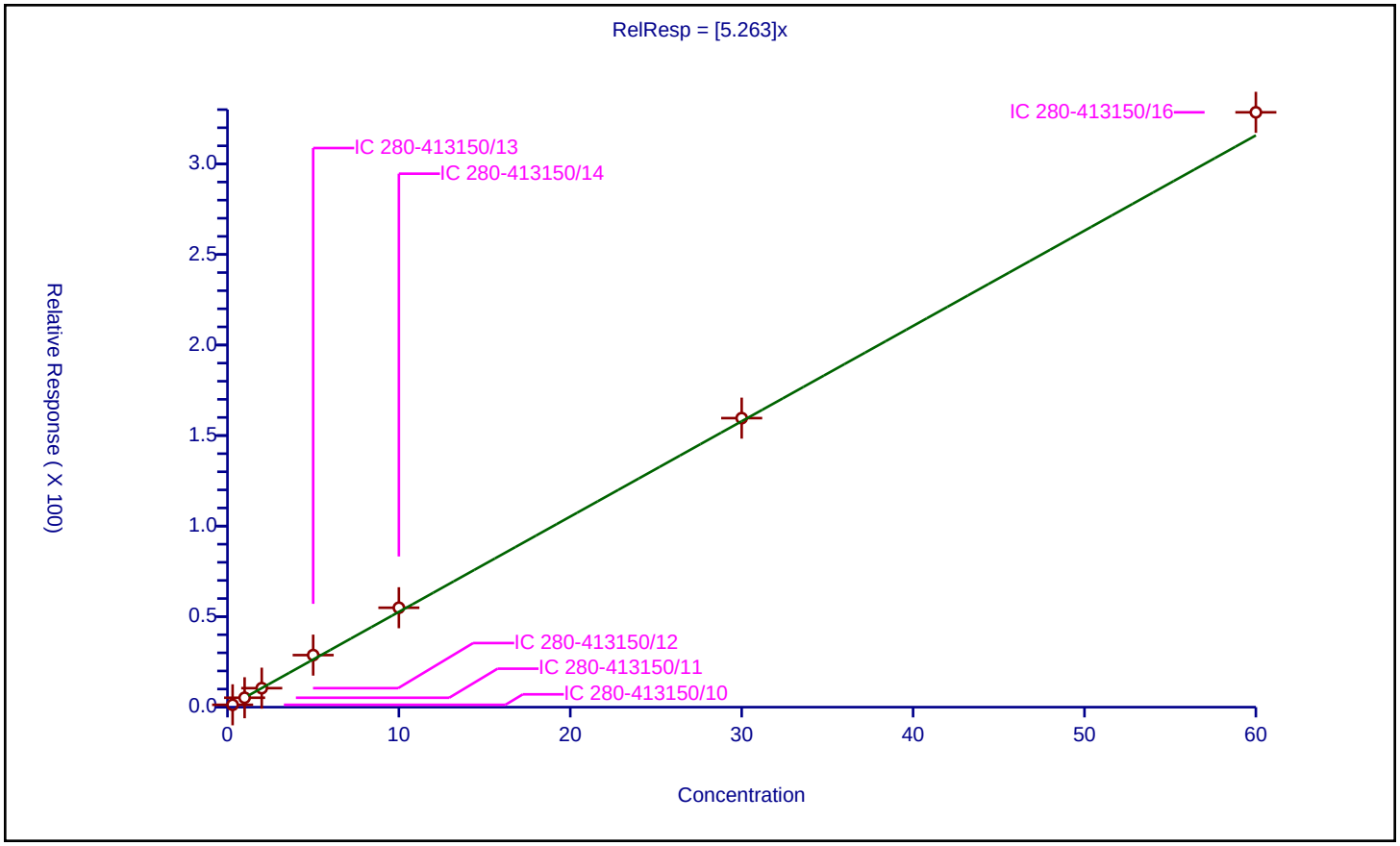
Curve Coefficients

Intercept:	0
Slope:	5.263

Error Coefficients

Standard Error:	5070000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.308117	12.5	354202.0	4.360389	Y
2	IC 280-413150/11	1.0	5.196824	12.5	375412.0	5.196824	Y
3	IC 280-413150/12	2.0	10.493927	12.5	386545.0	5.246963	Y
4	IC 280-413150/13	5.0	28.752812	12.5	395177.0	5.750562	Y
5	IC 280-413150/14	10.0	54.904148	12.5	415276.0	5.490415	Y
6	IC 280-413150/15	30.0	159.624518	12.5	414574.0	5.320817	Y
7	IC 280-413150/16	60.0	328.504383	12.5	419835.0	5.475073	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

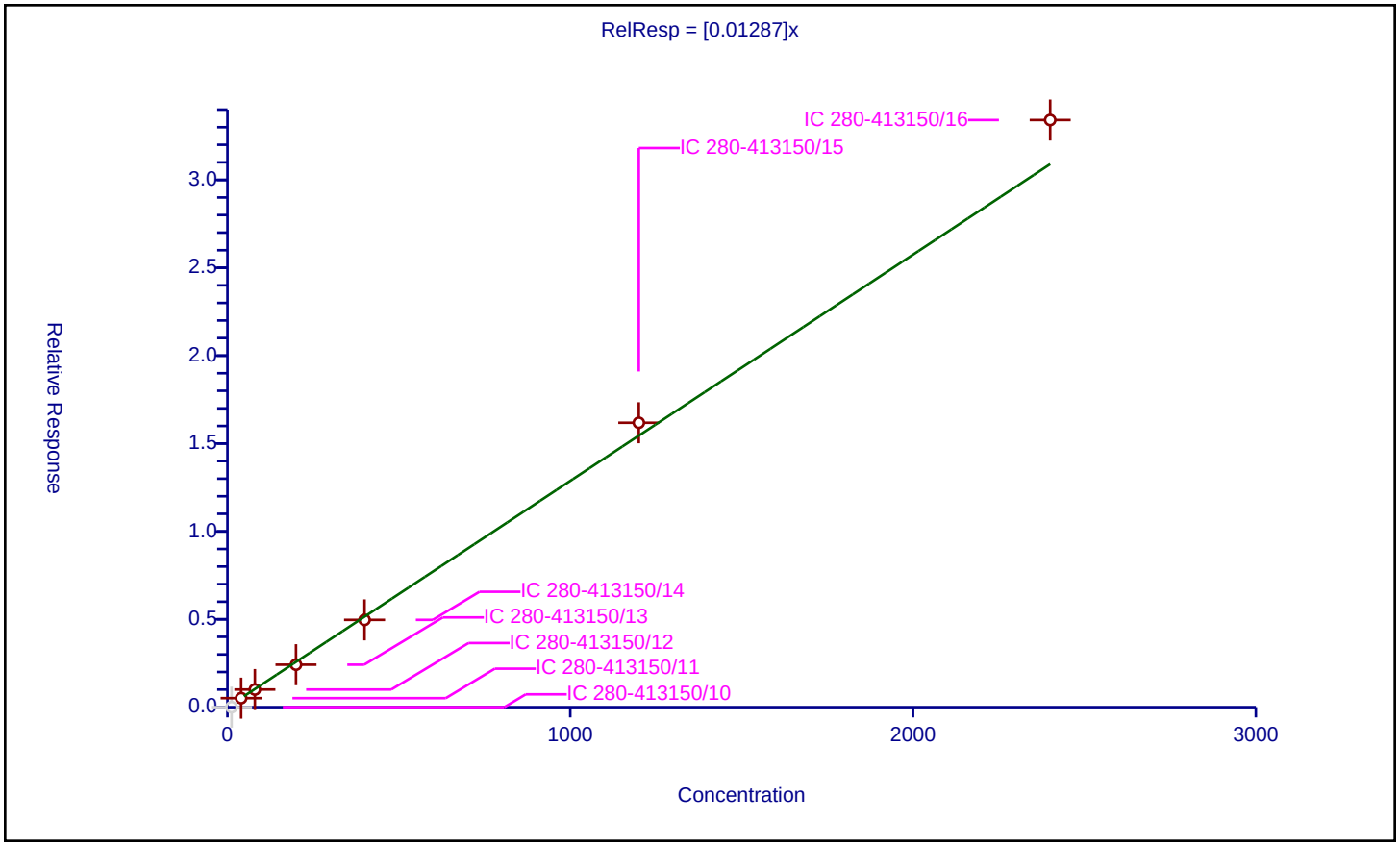
Curve Coefficients

Intercept:	0
Slope:	0.01287

Error Coefficients

Standard Error:	463000
Relative Standard Error:	5.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	12.0	0.0	12.5	302844.0	0.0	N
2	IC 280-413150/11	40.0	0.512116	12.5	305082.0	0.012803	Y
3	IC 280-413150/12	80.0	1.003482	12.5	307442.0	0.012544	Y
4	IC 280-413150/13	200.0	2.415612	12.5	326941.0	0.012078	Y
5	IC 280-413150/14	400.0	4.966325	12.5	328213.0	0.012416	Y
6	IC 280-413150/15	1200.0	16.182313	12.5	330604.0	0.013485	Y
7	IC 280-413150/16	2400.0	33.407681	12.5	348140.0	0.01392	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

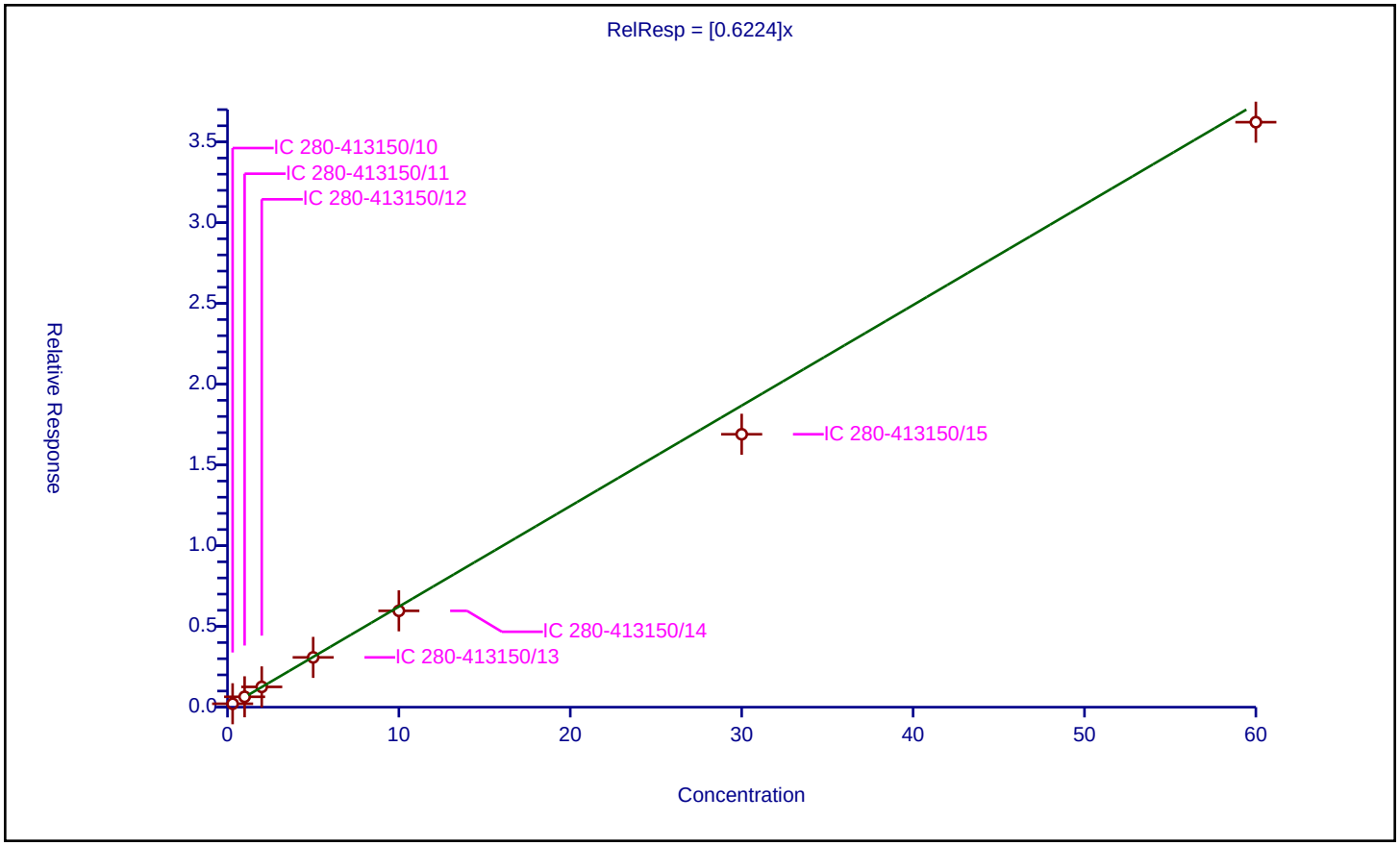
Curve Coefficients

Intercept:	0
Slope:	0.6224

Error Coefficients

Standard Error:	554000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.212202	12.5	354202.0	0.707341	Y
2	IC 280-413150/11	1.0	0.642561	12.5	375412.0	0.642561	Y
3	IC 280-413150/12	2.0	1.255126	12.5	386545.0	0.627563	Y
4	IC 280-413150/13	5.0	3.081151	12.5	395177.0	0.61623	Y
5	IC 280-413150/14	10.0	5.963805	12.5	415276.0	0.59638	Y
6	IC 280-413150/15	30.0	16.897647	12.5	414574.0	0.563255	Y
7	IC 280-413150/16	60.0	36.220896	12.5	419835.0	0.603682	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

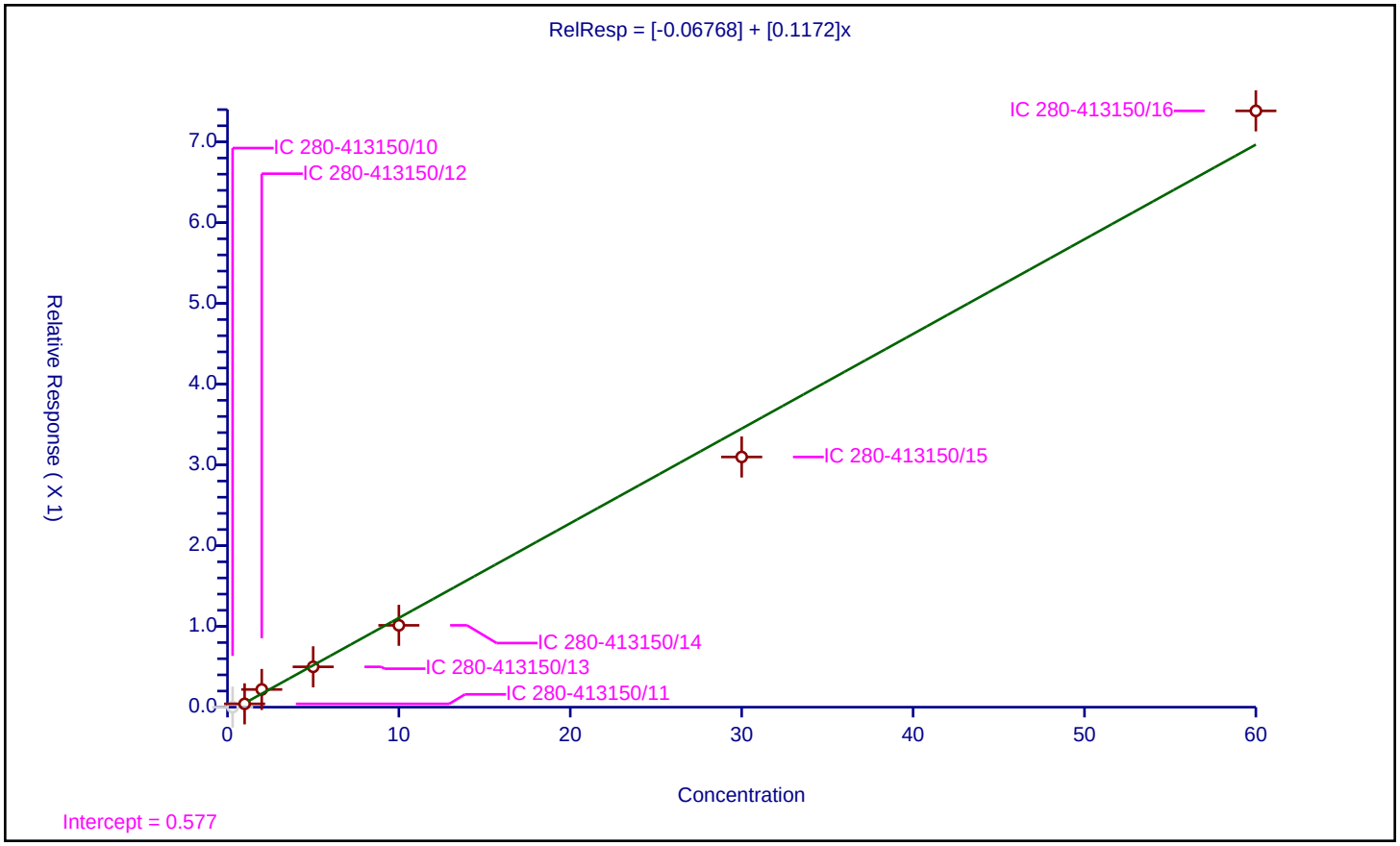
Curve Coefficients

Intercept:	-0.06768
Slope:	0.1172

Error Coefficients

Standard Error:	136000
Relative Standard Error:	13.8
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	354202.0	0.0	N
2	IC 280-413150/11	1.0	0.041055	12.5	375412.0	0.041055	Y
3	IC 280-413150/12	2.0	0.219185	12.5	386545.0	0.109593	Y
4	IC 280-413150/13	5.0	0.499396	12.5	395177.0	0.099879	Y
5	IC 280-413150/14	10.0	1.013543	12.5	415276.0	0.101354	Y
6	IC 280-413150/15	30.0	3.098331	12.5	414574.0	0.103278	Y
7	IC 280-413150/16	60.0	7.384419	12.5	419835.0	0.123074	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

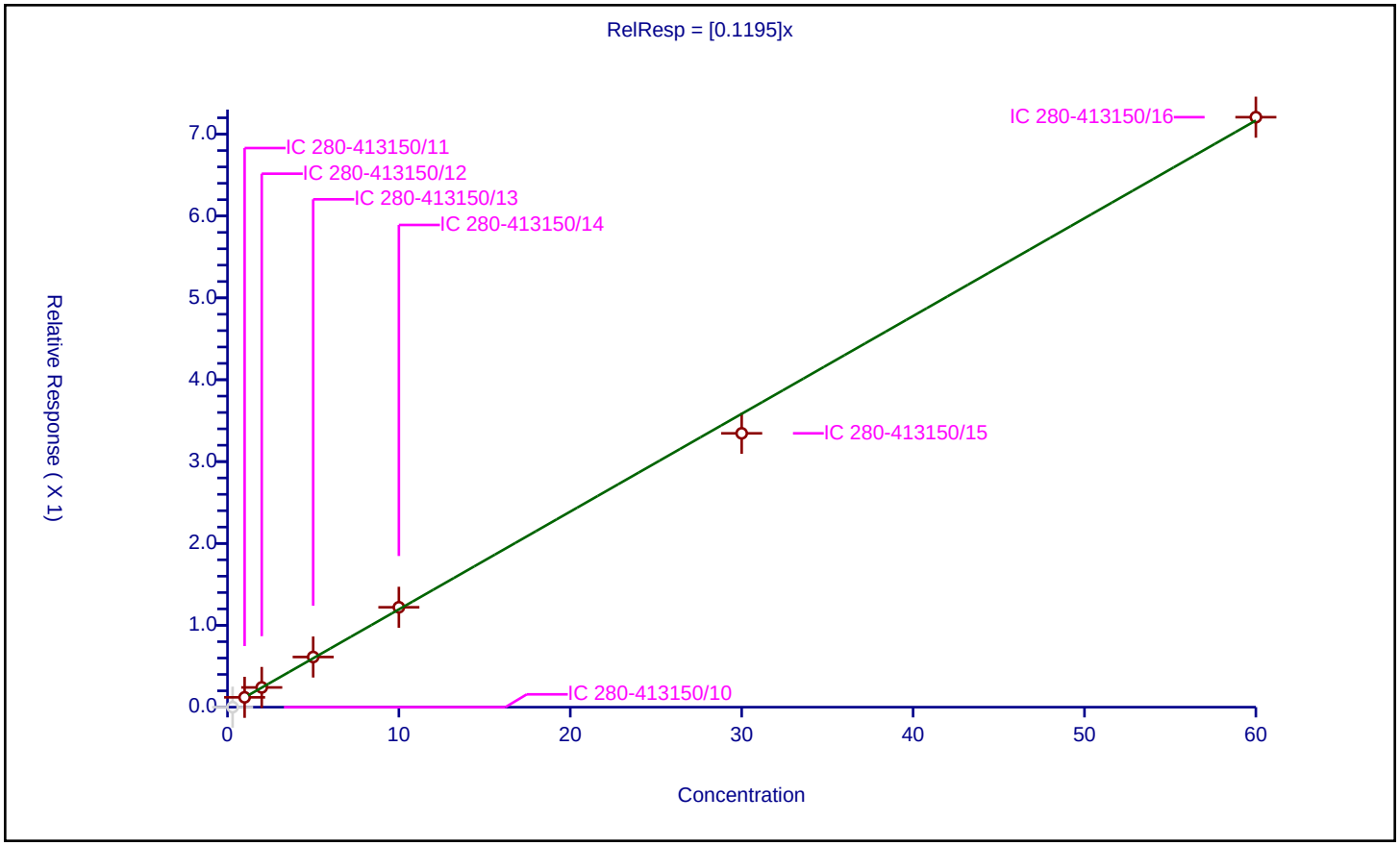
Curve Coefficients

Intercept:	0
Slope:	0.1195

Error Coefficients

Standard Error:	121000
Relative Standard Error:	3.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	354202.0	0.0	N
2	IC 280-413150/11	1.0	0.120035	12.5	375412.0	0.120035	Y
3	IC 280-413150/12	2.0	0.241013	12.5	386545.0	0.120507	Y
4	IC 280-413150/13	5.0	0.612669	12.5	395177.0	0.122534	Y
5	IC 280-413150/14	10.0	1.220182	12.5	415276.0	0.122018	Y
6	IC 280-413150/15	30.0	3.345181	12.5	414574.0	0.111506	Y
7	IC 280-413150/16	60.0	7.207355	12.5	419835.0	0.120123	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

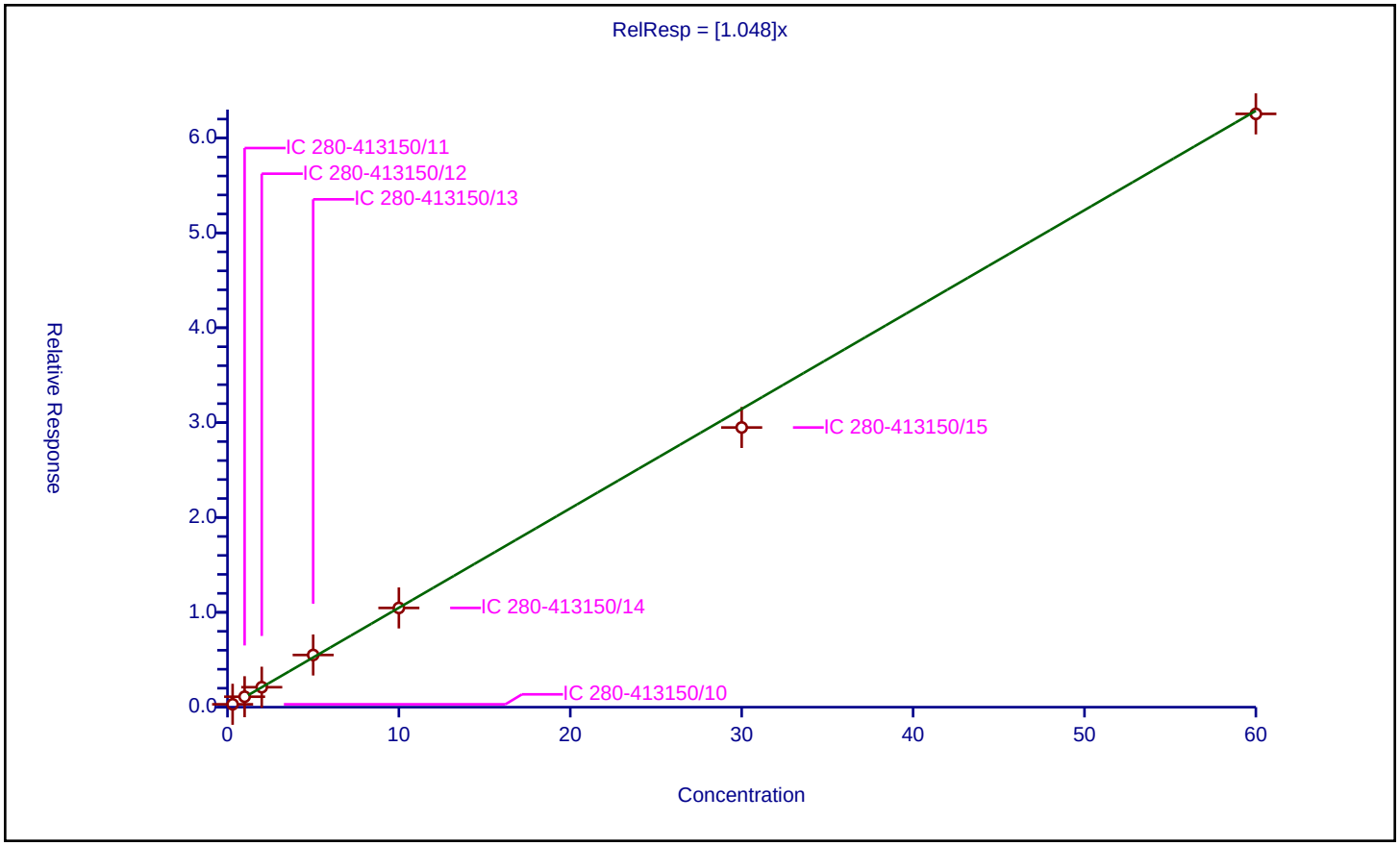
Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	960000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.303605	12.5	354202.0	1.012017	Y
2	IC 280-413150/11	1.0	1.100258	12.5	375412.0	1.100258	Y
3	IC 280-413150/12	2.0	2.102957	12.5	386545.0	1.051478	Y
4	IC 280-413150/13	5.0	5.501585	12.5	395177.0	1.100317	Y
5	IC 280-413150/14	10.0	10.460423	12.5	415276.0	1.046042	Y
6	IC 280-413150/15	30.0	29.487739	12.5	414574.0	0.982925	Y
7	IC 280-413150/16	60.0	62.549811	12.5	419835.0	1.042497	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

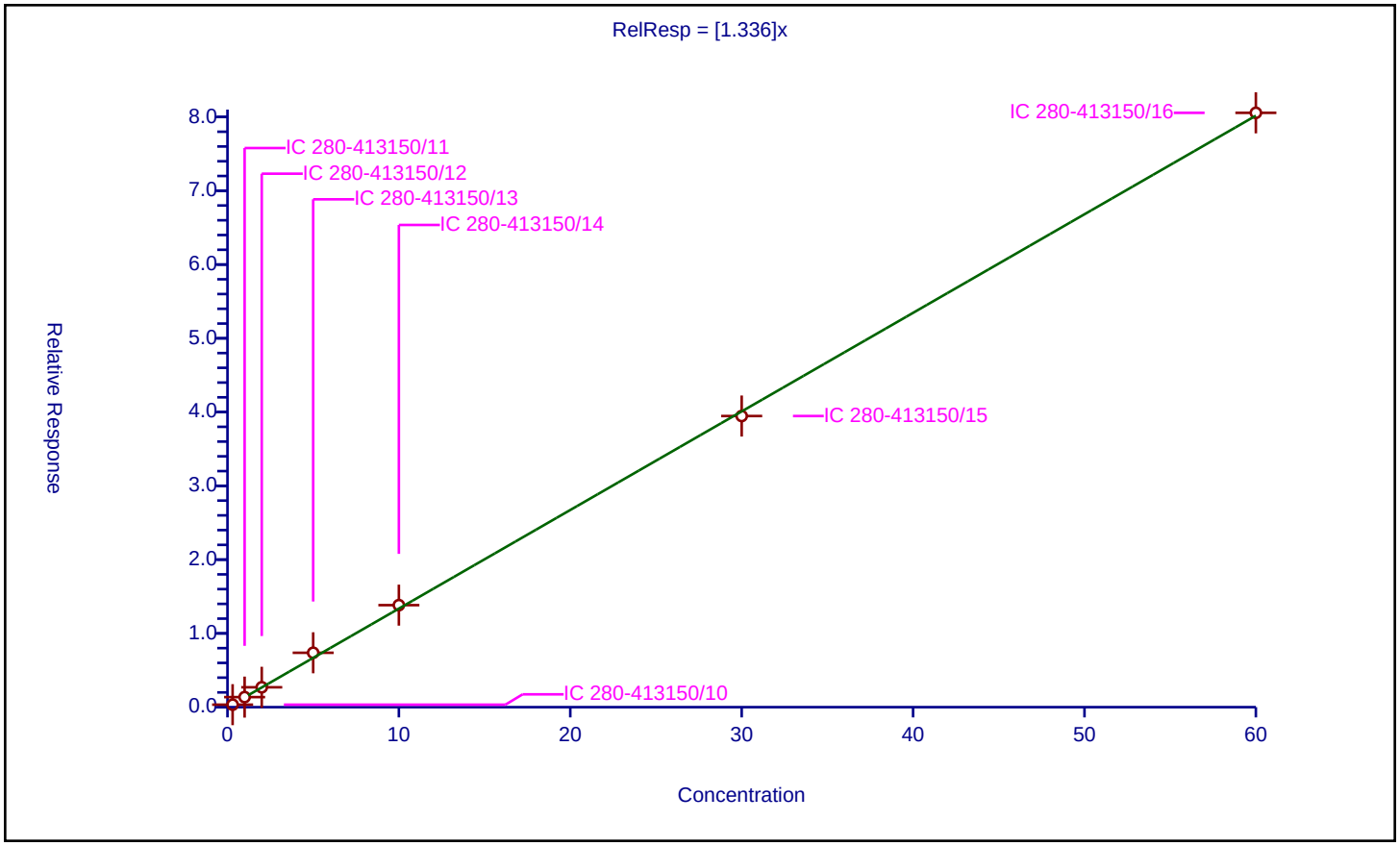
Curve Coefficients

Intercept:	0
Slope:	1.336

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.338225	12.5	354202.0	1.127417	Y
2	IC 280-413150/11	1.0	1.363402	12.5	375412.0	1.363402	Y
3	IC 280-413150/12	2.0	2.69477	12.5	386545.0	1.347385	Y
4	IC 280-413150/13	5.0	7.372614	12.5	395177.0	1.474523	Y
5	IC 280-413150/14	10.0	13.83044	12.5	415276.0	1.383044	Y
6	IC 280-413150/15	30.0	39.463522	12.5	414574.0	1.315451	Y
7	IC 280-413150/16	60.0	80.563227	12.5	419835.0	1.34272	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

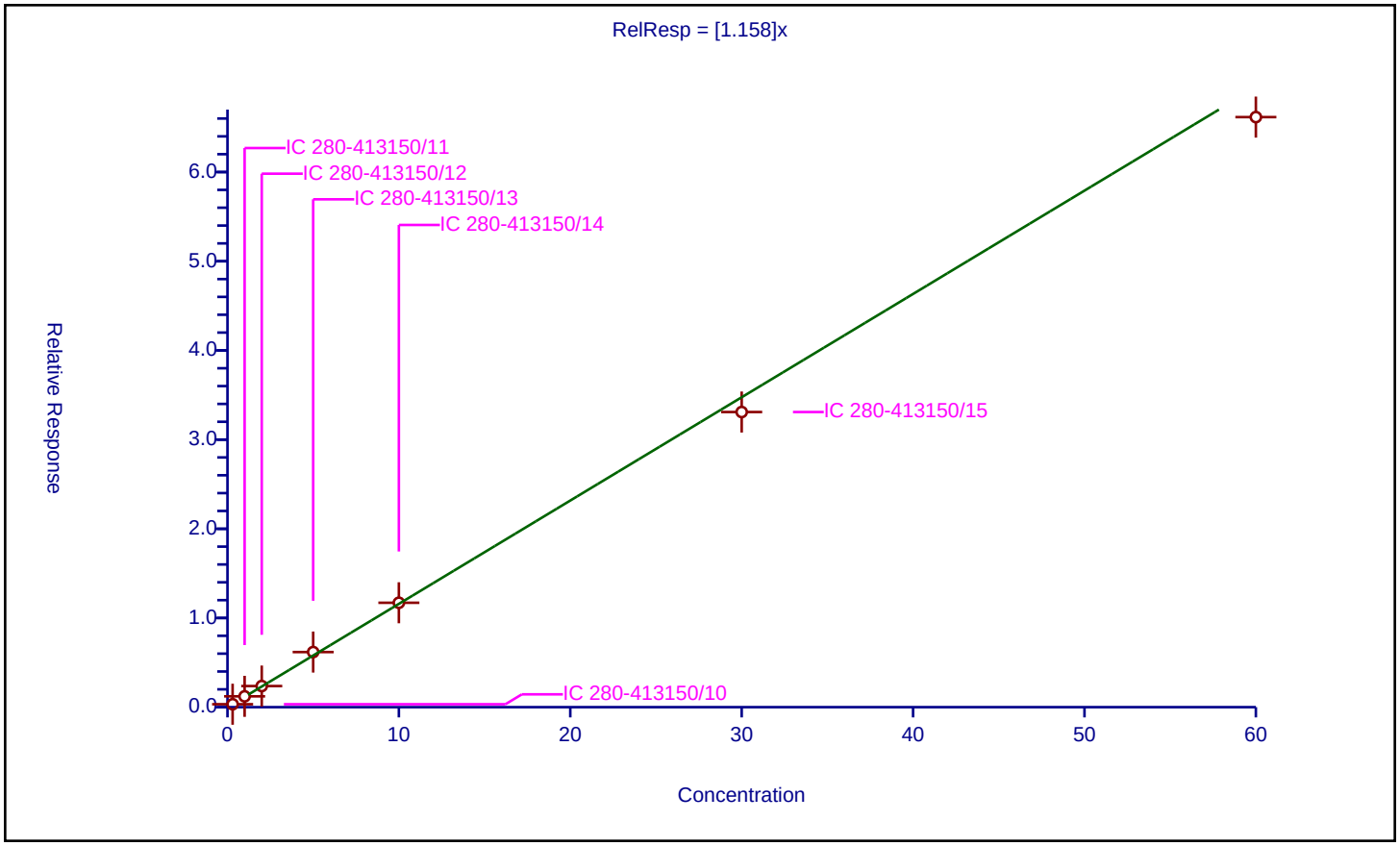
Curve Coefficients

Intercept:	0
Slope:	1.158

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.329614	12.5	354202.0	1.098714	Y
2	IC 280-413150/11	1.0	1.213434	12.5	375412.0	1.213434	Y
3	IC 280-413150/12	2.0	2.367803	12.5	386545.0	1.183902	Y
4	IC 280-413150/13	5.0	6.178908	12.5	395177.0	1.235782	Y
5	IC 280-413150/14	10.0	11.704746	12.5	415276.0	1.170475	Y
6	IC 280-413150/15	30.0	33.090866	12.5	414574.0	1.103029	Y
7	IC 280-413150/16	60.0	66.160099	12.5	419835.0	1.102668	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

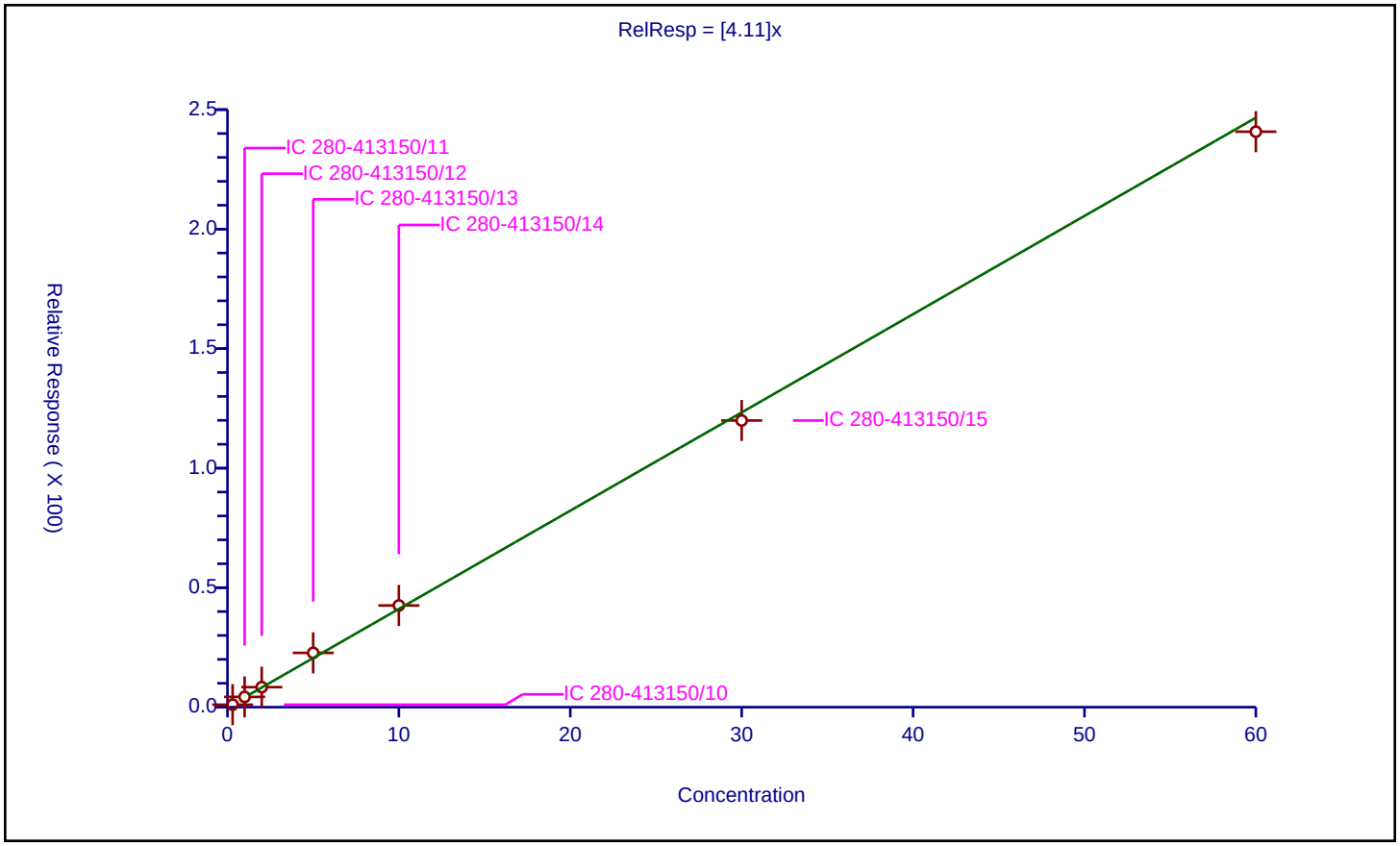
Curve Coefficients

Intercept:	0
Slope:	4.11

Error Coefficients

Standard Error:	3740000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.045837	12.5	354202.0	3.486123	Y
2	IC 280-413150/11	1.0	4.291319	12.5	375412.0	4.291319	Y
3	IC 280-413150/12	2.0	8.374154	12.5	386545.0	4.187077	Y
4	IC 280-413150/13	5.0	22.71286	12.5	395177.0	4.542572	Y
5	IC 280-413150/14	10.0	42.546523	12.5	415276.0	4.254652	Y
6	IC 280-413150/15	30.0	119.924459	12.5	414574.0	3.997482	Y
7	IC 280-413150/16	60.0	240.761013	12.5	419835.0	4.012684	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

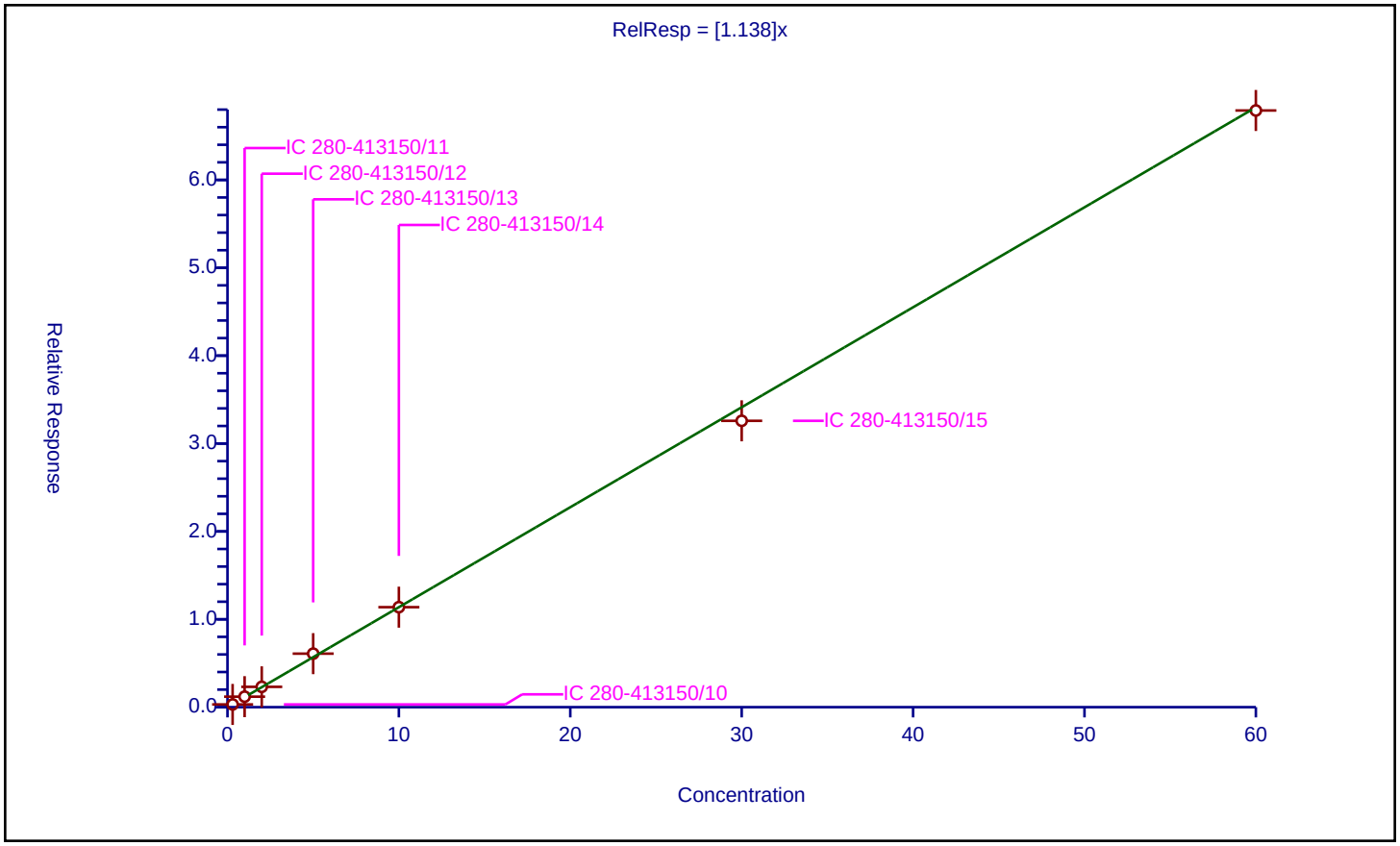
Curve Coefficients

Intercept:	0
Slope:	1.138

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	5.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.311475	12.5	354202.0	1.038249	Y
2	IC 280-413150/11	1.0	1.195187	12.5	375412.0	1.195187	Y
3	IC 280-413150/12	2.0	2.3127	12.5	386545.0	1.15635	Y
4	IC 280-413150/13	5.0	6.08936	12.5	395177.0	1.217872	Y
5	IC 280-413150/14	10.0	11.378005	12.5	415276.0	1.137801	Y
6	IC 280-413150/15	30.0	32.585558	12.5	414574.0	1.086185	Y
7	IC 280-413150/16	60.0	67.898966	12.5	419835.0	1.131649	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

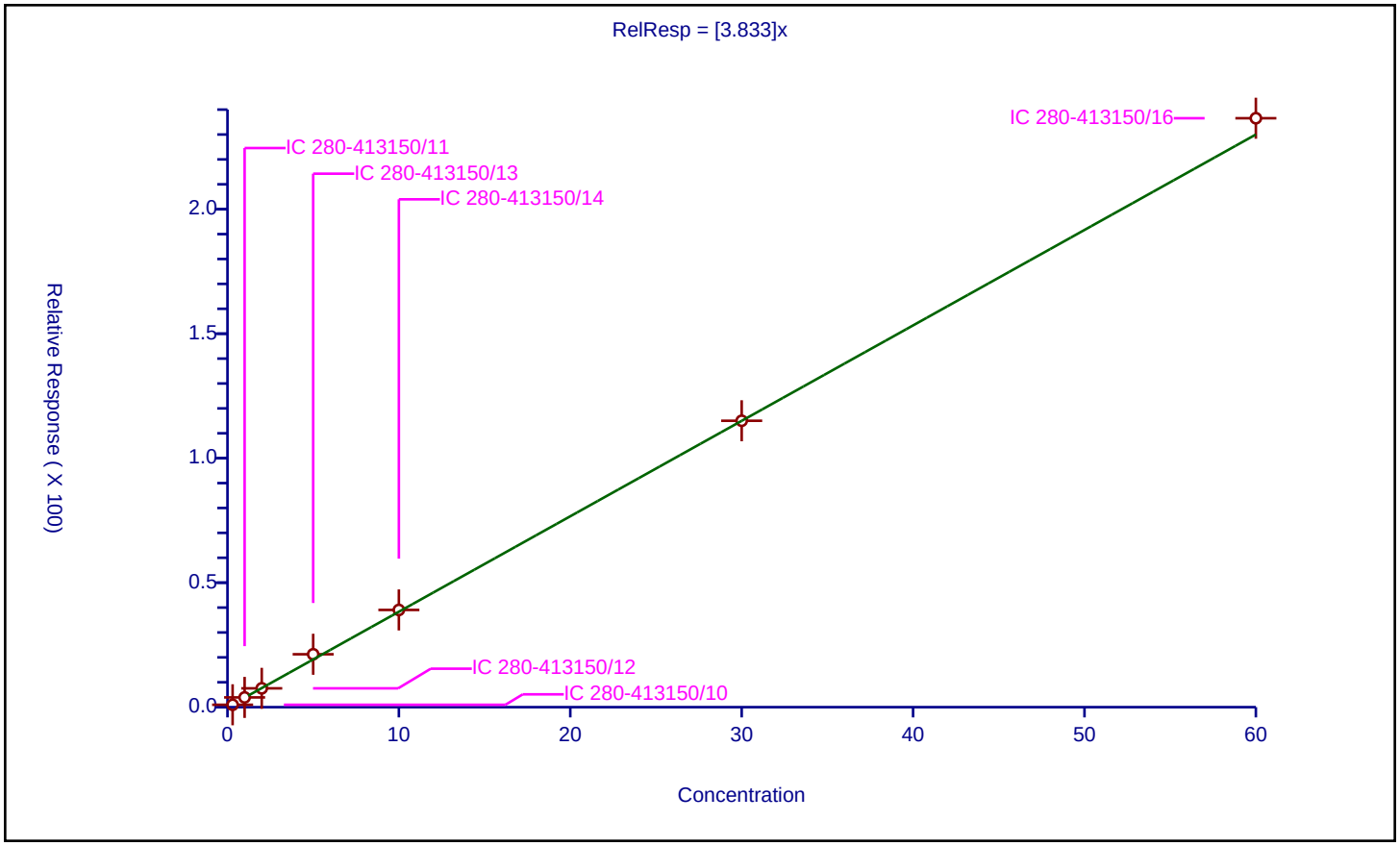
Curve Coefficients

Intercept:	0
Slope:	3.833

Error Coefficients

Standard Error:	3650000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.962057	12.5	354202.0	3.206857	Y
2	IC 280-413150/11	1.0	3.913267	12.5	375412.0	3.913267	Y
3	IC 280-413150/12	2.0	7.565678	12.5	386545.0	3.782839	Y
4	IC 280-413150/13	5.0	21.24393	12.5	395177.0	4.248786	Y
5	IC 280-413150/14	10.0	39.044726	12.5	415276.0	3.904473	Y
6	IC 280-413150/15	30.0	115.026841	12.5	414574.0	3.834228	Y
7	IC 280-413150/16	60.0	236.531941	12.5	419835.0	3.942199	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

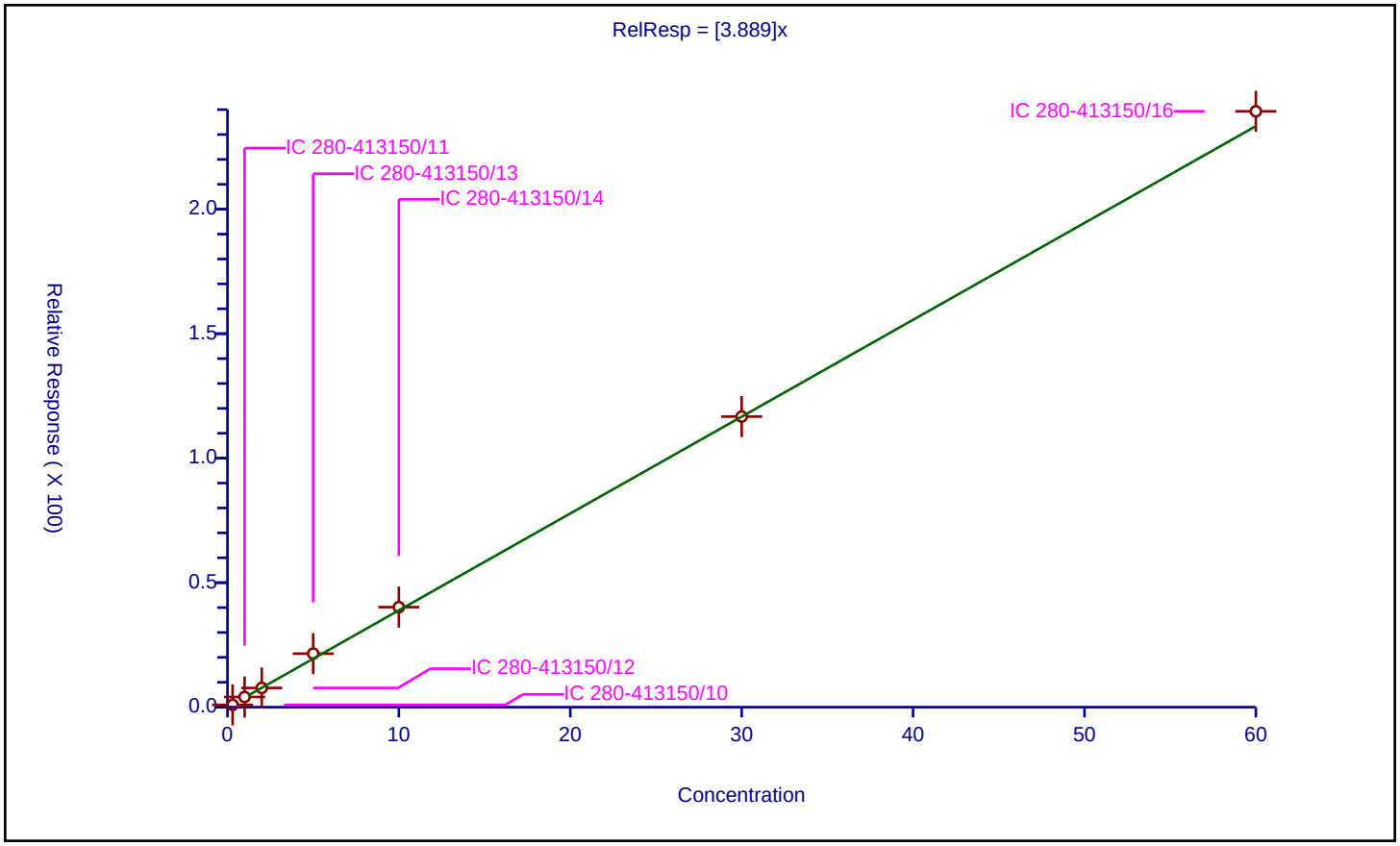
Curve Coefficients

Intercept:	0
Slope:	3.889

Error Coefficients

Standard Error:	3690000
Relative Standard Error:	9.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.923484	12.5	354202.0	3.078281	Y
2	IC 280-413150/11	1.0	4.092504	12.5	375412.0	4.092504	Y
3	IC 280-413150/12	2.0	7.713979	12.5	386545.0	3.856989	Y
4	IC 280-413150/13	5.0	21.504826	12.5	395177.0	4.300965	Y
5	IC 280-413150/14	10.0	40.171025	12.5	415276.0	4.017102	Y
6	IC 280-413150/15	30.0	116.716648	12.5	414574.0	3.890555	Y
7	IC 280-413150/16	60.0	239.31881	12.5	419835.0	3.988647	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

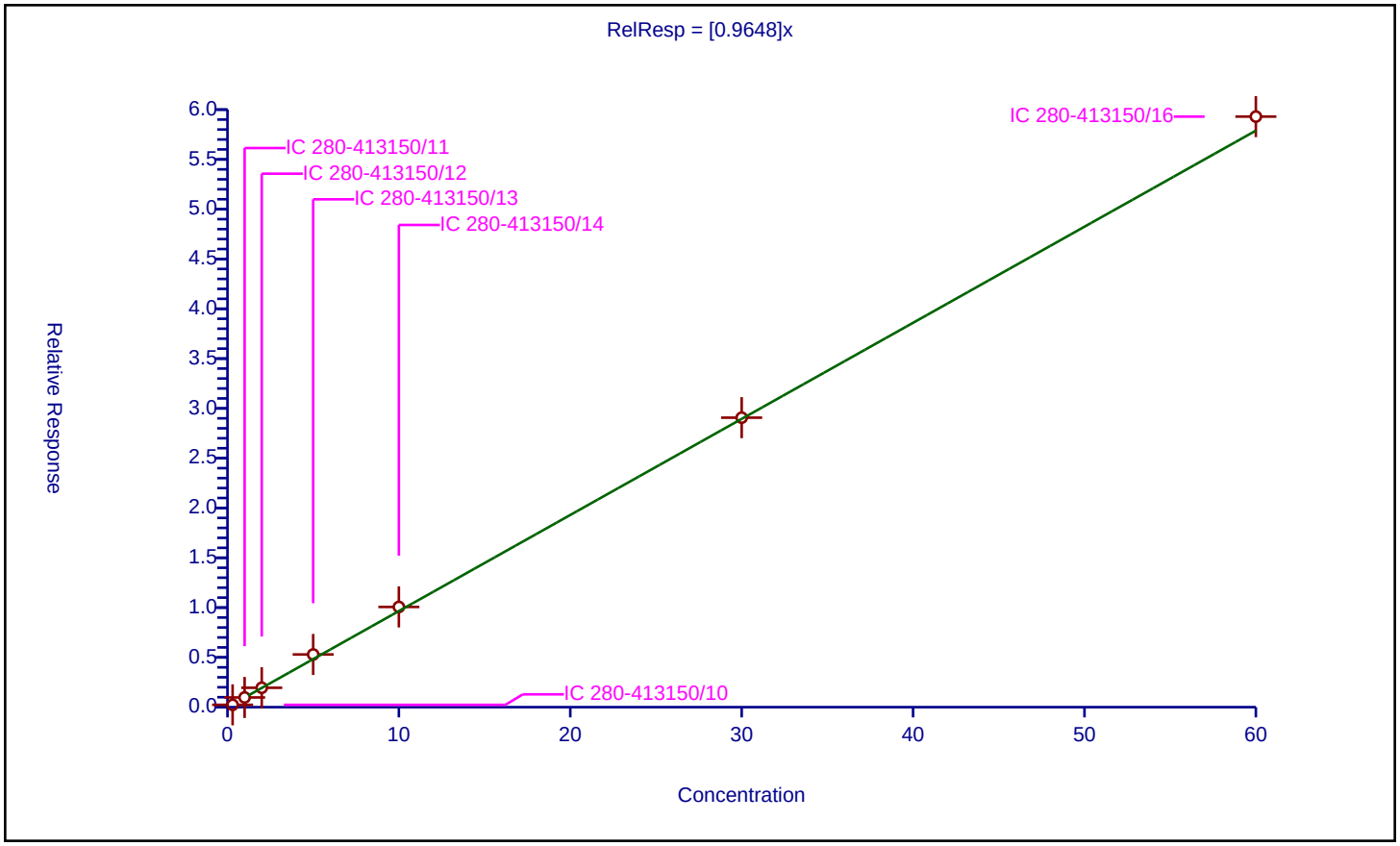
Curve Coefficients

Intercept:	0
Slope:	0.9648

Error Coefficients

Standard Error:	917000
Relative Standard Error:	8.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.235565	12.5	354202.0	0.785216	Y
2	IC 280-413150/11	1.0	0.97393	12.5	375412.0	0.97393	Y
3	IC 280-413150/12	2.0	1.946475	12.5	386545.0	0.973237	Y
4	IC 280-413150/13	5.0	5.289845	12.5	395177.0	1.057969	Y
5	IC 280-413150/14	10.0	10.063277	12.5	415276.0	1.006328	Y
6	IC 280-413150/15	30.0	29.067669	12.5	414574.0	0.968922	Y
7	IC 280-413150/16	60.0	59.299516	12.5	419835.0	0.988325	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

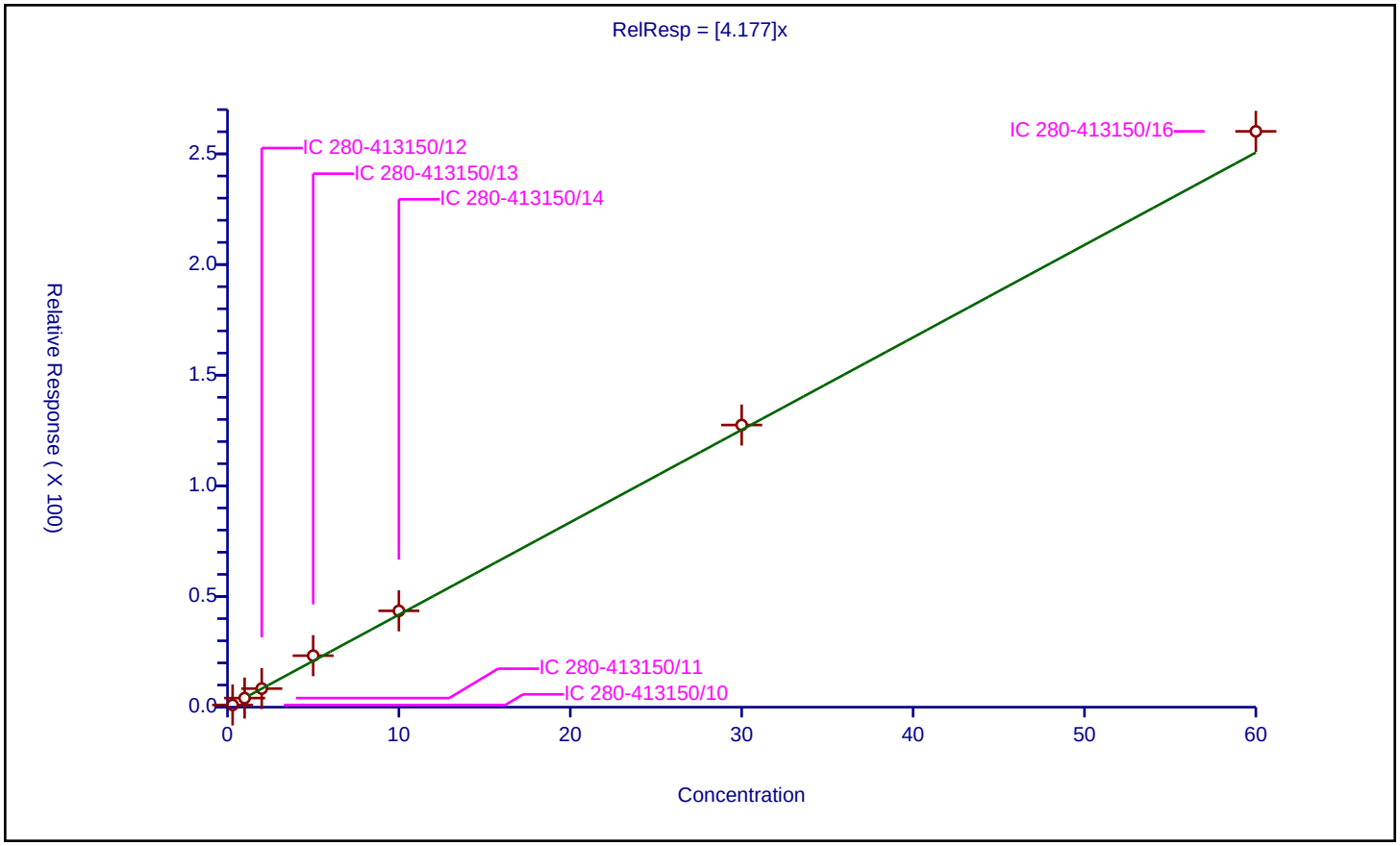
Curve Coefficients

Intercept:	0
Slope:	4.177

Error Coefficients

Standard Error:	4020000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.0043	12.5	354202.0	3.347666	Y
2	IC 280-413150/11	1.0	4.101627	12.5	375412.0	4.101627	Y
3	IC 280-413150/12	2.0	8.391811	12.5	386545.0	4.195905	Y
4	IC 280-413150/13	5.0	23.268181	12.5	395177.0	4.653636	Y
5	IC 280-413150/14	10.0	43.525842	12.5	415276.0	4.352584	Y
6	IC 280-413150/15	30.0	127.483242	12.5	414574.0	4.249441	Y
7	IC 280-413150/16	60.0	260.183257	12.5	419835.0	4.336388	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

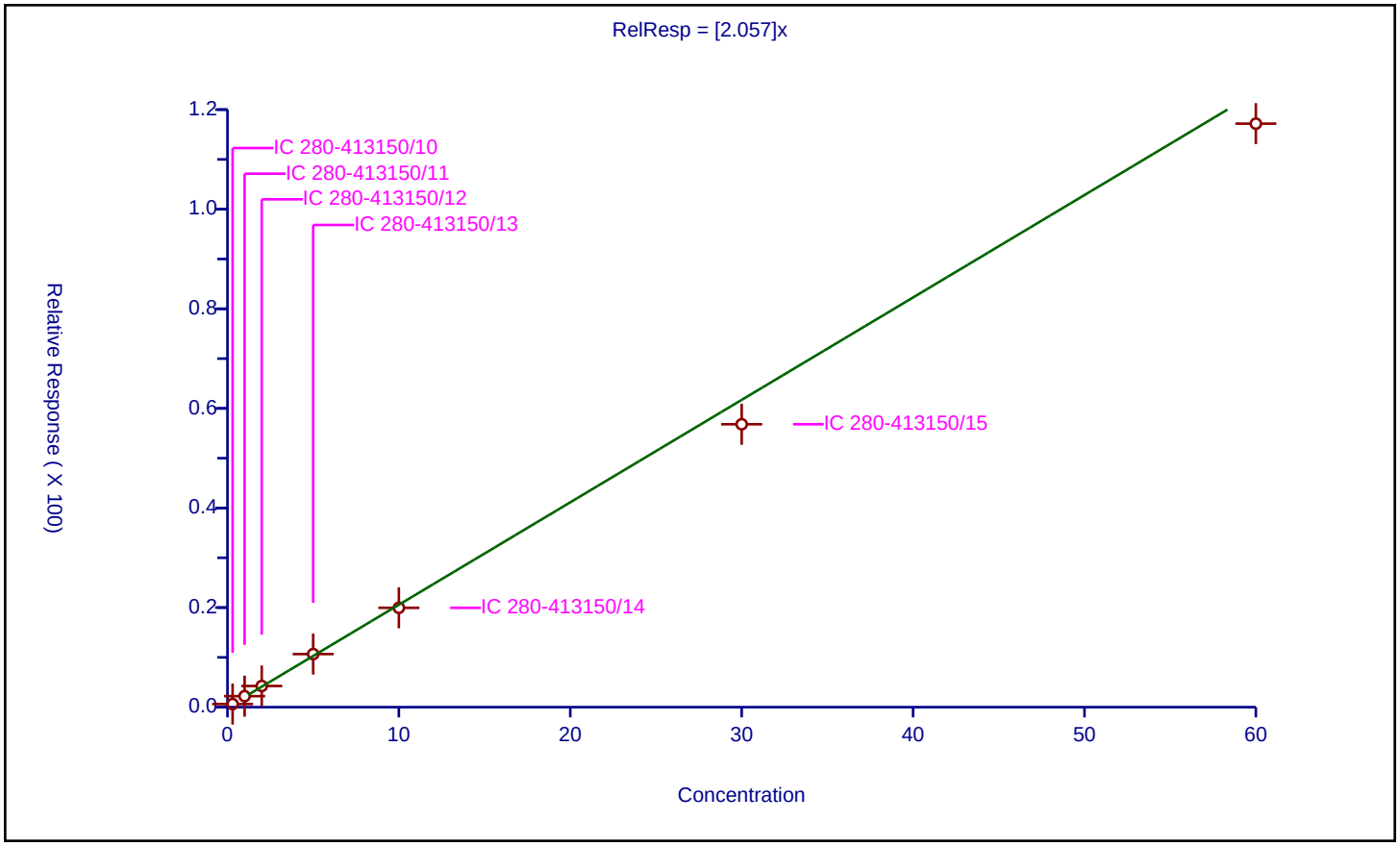
Curve Coefficients

Intercept:	0
Slope:	2.057

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.626443	12.5	354202.0	2.088145	Y
2	IC 280-413150/11	1.0	2.210638	12.5	375412.0	2.210638	Y
3	IC 280-413150/12	2.0	4.248761	12.5	386545.0	2.124381	Y
4	IC 280-413150/13	5.0	10.663481	12.5	395177.0	2.132696	Y
5	IC 280-413150/14	10.0	19.953597	12.5	415276.0	1.99536	Y
6	IC 280-413150/15	30.0	56.810998	12.5	414574.0	1.8937	Y
7	IC 280-413150/16	60.0	117.180648	12.5	419835.0	1.953011	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

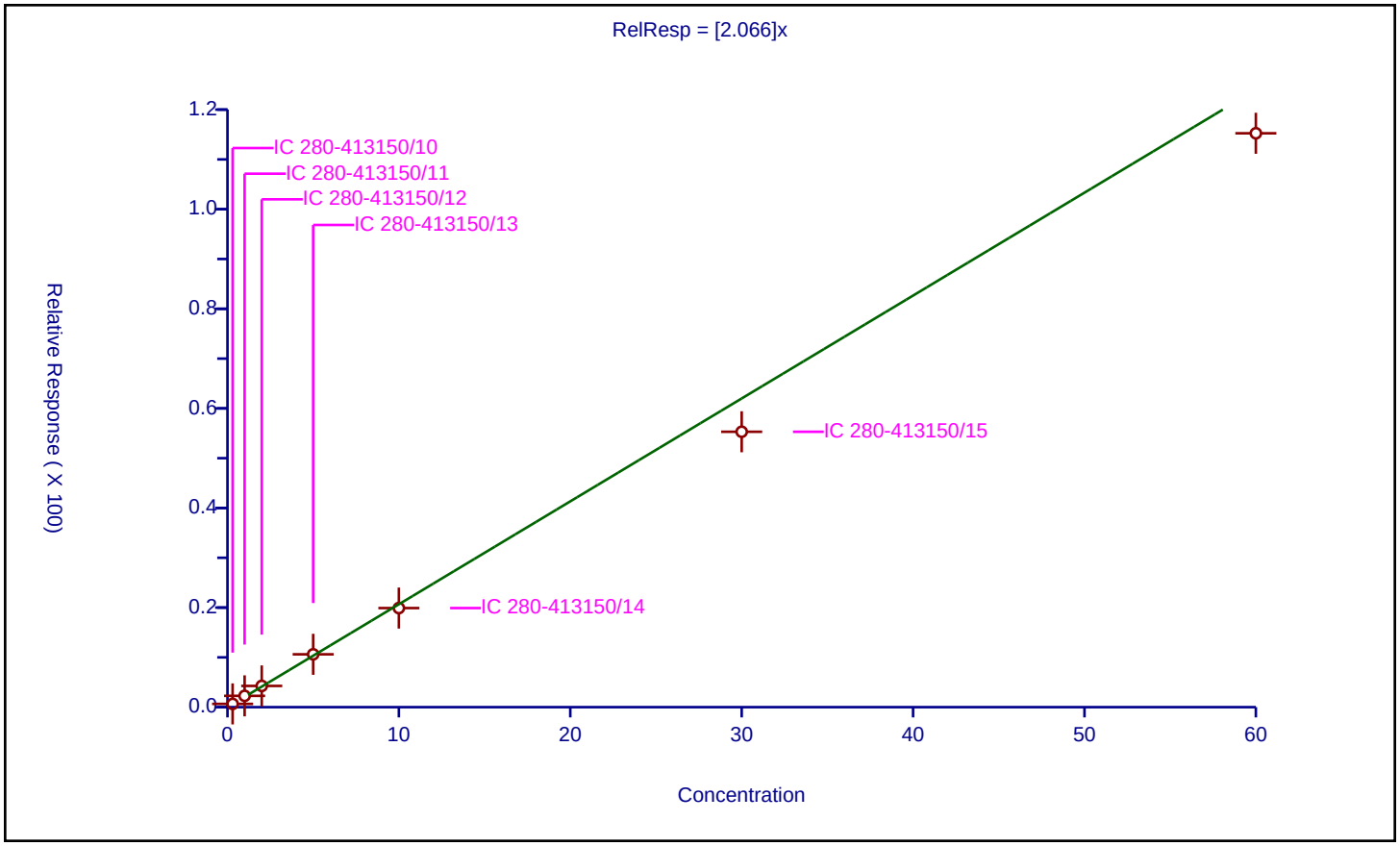
Curve Coefficients

Intercept:	0
Slope:	2.066

Error Coefficients

Standard Error:	1780000
Relative Standard Error:	7.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.654888	12.5	354202.0	2.182959	Y
2	IC 280-413150/11	1.0	2.271238	12.5	375412.0	2.271238	Y
3	IC 280-413150/12	2.0	4.267097	12.5	386545.0	2.133548	Y
4	IC 280-413150/13	5.0	10.61363	12.5	395177.0	2.122726	Y
5	IC 280-413150/14	10.0	19.902757	12.5	415276.0	1.990276	Y
6	IC 280-413150/15	30.0	55.304994	12.5	414574.0	1.8435	Y
7	IC 280-413150/16	60.0	115.244263	12.5	419835.0	1.920738	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

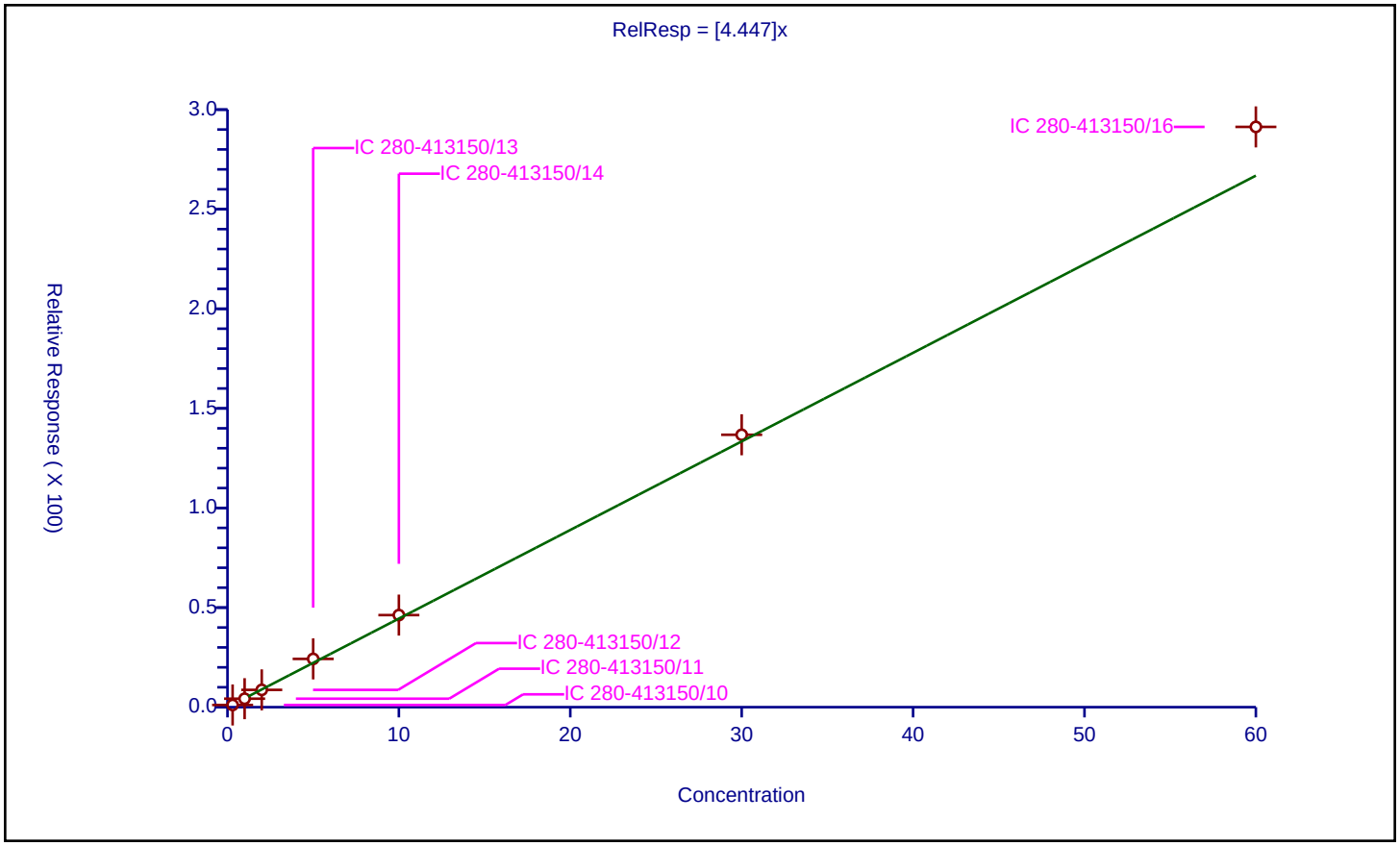
Curve Coefficients

Intercept:	0
Slope:	4.447

Error Coefficients

Standard Error:	4460000
Relative Standard Error:	9.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	1.097326	12.5	354202.0	3.657753	Y
2	IC 280-413150/11	1.0	4.25093	12.5	375412.0	4.25093	Y
3	IC 280-413150/12	2.0	8.681654	12.5	386545.0	4.340827	Y
4	IC 280-413150/13	5.0	24.22987	12.5	395177.0	4.845974	Y
5	IC 280-413150/14	10.0	46.22775	12.5	415276.0	4.622775	Y
6	IC 280-413150/15	30.0	136.760536	12.5	414574.0	4.558685	Y
7	IC 280-413150/16	60.0	291.319774	12.5	419835.0	4.85533	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

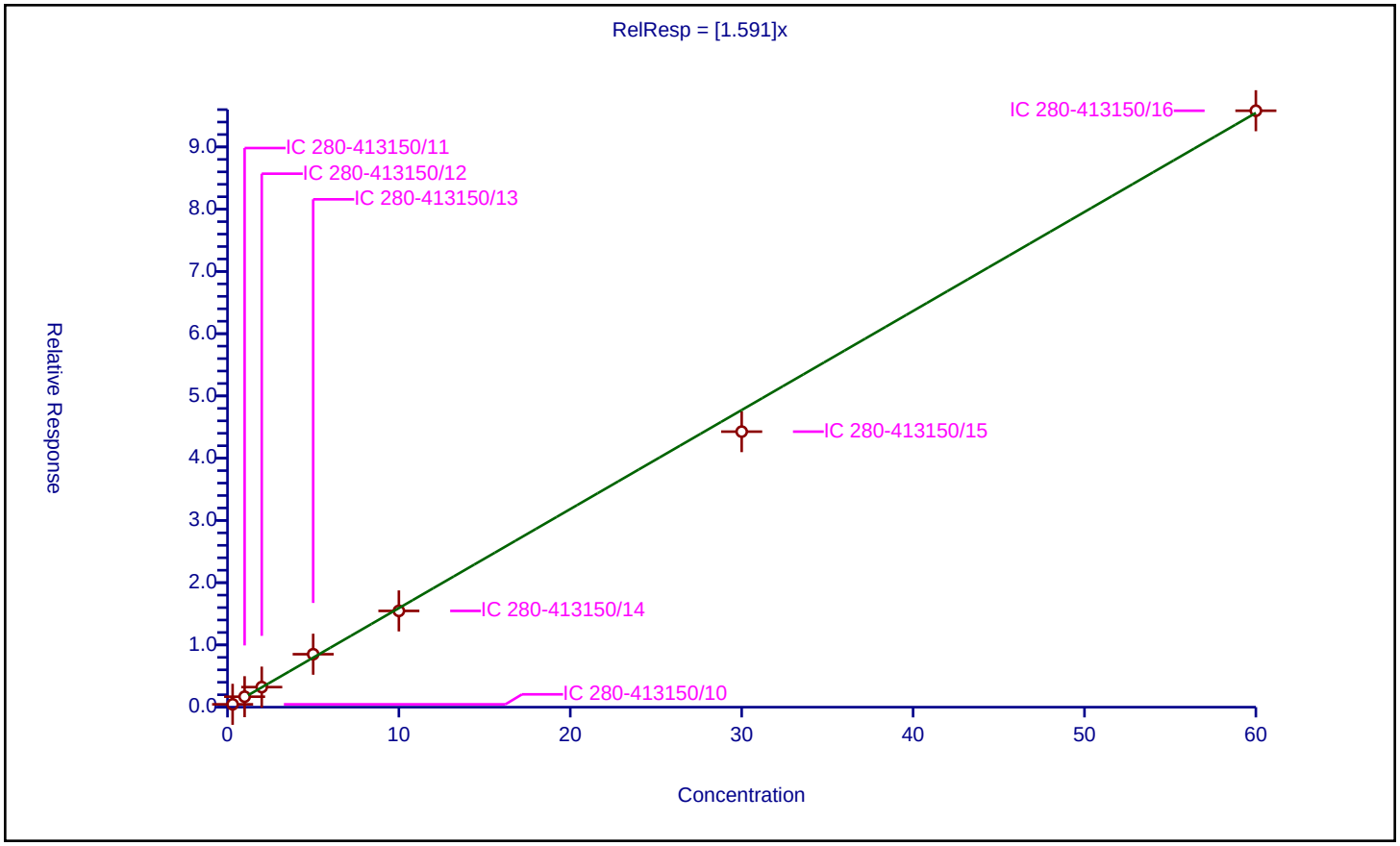
Curve Coefficients

Intercept:	0
Slope:	1.591

Error Coefficients

Standard Error:	1460000
Relative Standard Error:	5.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.457331	12.5	354202.0	1.524436	Y
2	IC 280-413150/11	1.0	1.680887	12.5	375412.0	1.680887	Y
3	IC 280-413150/12	2.0	3.224269	12.5	386545.0	1.612134	Y
4	IC 280-413150/13	5.0	8.508086	12.5	395177.0	1.701617	Y
5	IC 280-413150/14	10.0	15.464835	12.5	415276.0	1.546484	Y
6	IC 280-413150/15	30.0	44.265258	12.5	414574.0	1.475509	Y
7	IC 280-413150/16	60.0	95.819697	12.5	419835.0	1.596995	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

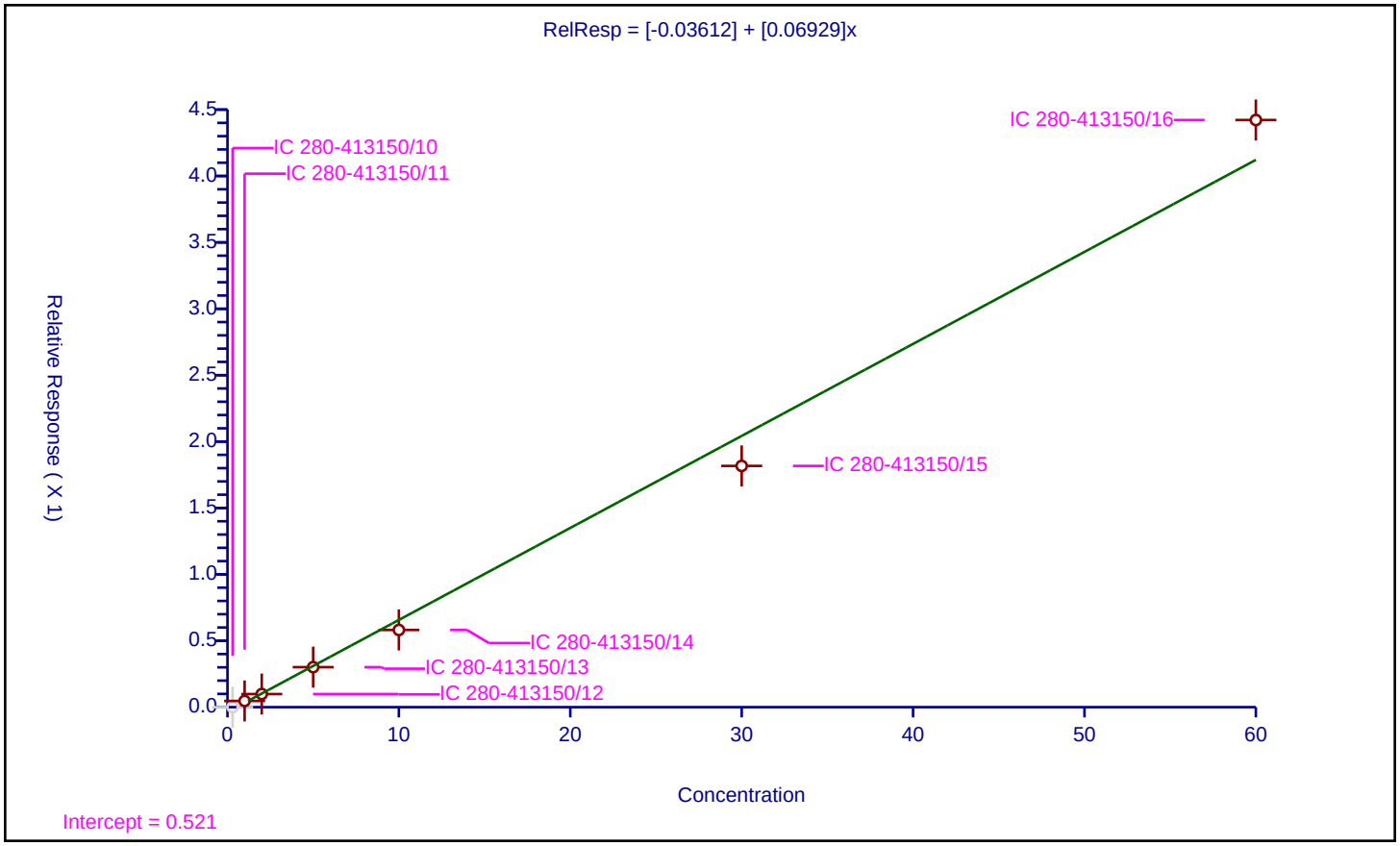
Curve Coefficients

Intercept:	-0.03612
Slope:	0.06929

Error Coefficients

Standard Error:	80900
Relative Standard Error:	13.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	354202.0	0.0	N
2	IC 280-413150/11	1.0	0.046882	12.5	375412.0	0.046882	Y
3	IC 280-413150/12	2.0	0.098792	12.5	386545.0	0.049396	Y
4	IC 280-413150/13	5.0	0.301321	12.5	395177.0	0.060264	Y
5	IC 280-413150/14	10.0	0.581421	12.5	415276.0	0.058142	Y
6	IC 280-413150/15	30.0	1.816835	12.5	414574.0	0.060561	Y
7	IC 280-413150/16	60.0	4.421648	12.5	419835.0	0.073694	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

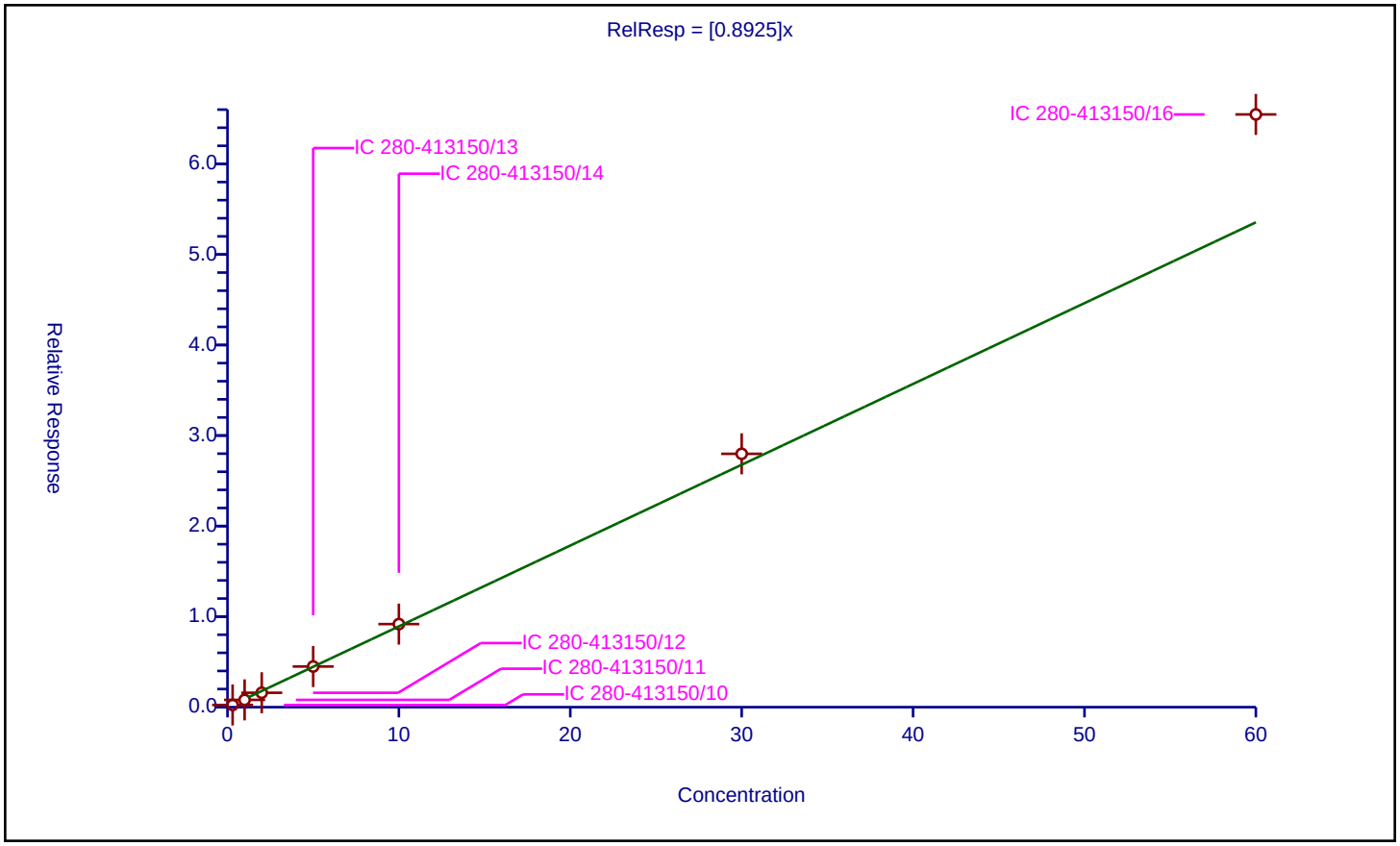
Curve Coefficients

Intercept:	0
Slope:	0.8925

Error Coefficients

Standard Error:	984000
Relative Standard Error:	11.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.242482	12.5	354202.0	0.808272	Y
2	IC 280-413150/11	1.0	0.804616	12.5	375412.0	0.804616	Y
3	IC 280-413150/12	2.0	1.590533	12.5	386545.0	0.795266	Y
4	IC 280-413150/13	5.0	4.488147	12.5	395177.0	0.897629	Y
5	IC 280-413150/14	10.0	9.175645	12.5	415276.0	0.917564	Y
6	IC 280-413150/15	30.0	27.983876	12.5	414574.0	0.932796	Y
7	IC 280-413150/16	60.0	65.465302	12.5	419835.0	1.091088	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

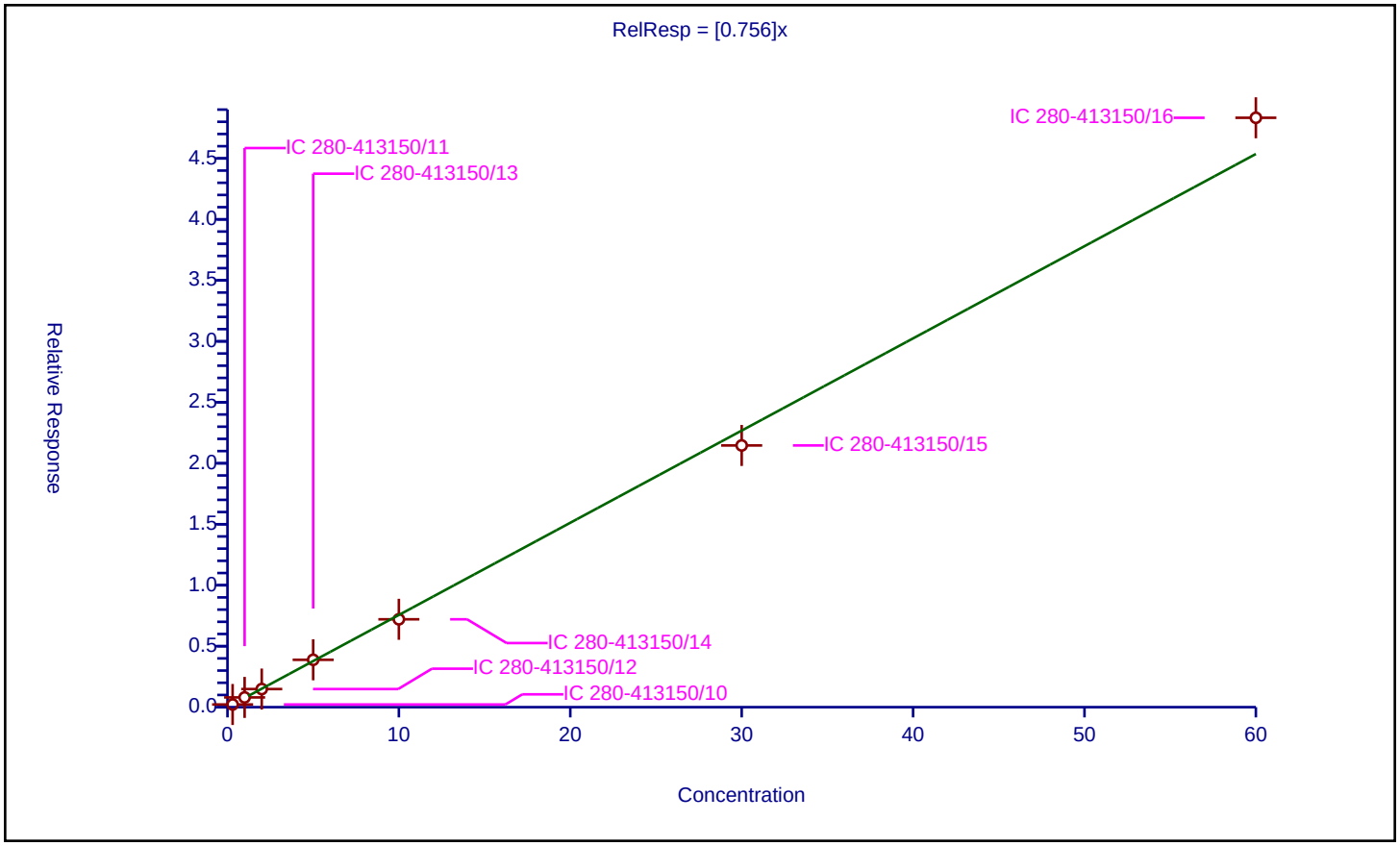
Curve Coefficients

Intercept:	0
Slope:	0.756

Error Coefficients

Standard Error:	732000
Relative Standard Error:	5.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.219225	12.5	354202.0	0.730751	Y
2	IC 280-413150/11	1.0	0.800421	12.5	375412.0	0.800421	Y
3	IC 280-413150/12	2.0	1.485855	12.5	386545.0	0.742928	Y
4	IC 280-413150/13	5.0	3.883292	12.5	395177.0	0.776658	Y
5	IC 280-413150/14	10.0	7.204486	12.5	415276.0	0.720449	Y
6	IC 280-413150/15	30.0	21.459287	12.5	414574.0	0.71531	Y
7	IC 280-413150/16	60.0	48.3311	12.5	419835.0	0.805518	Y



Calibration / Naphthalene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

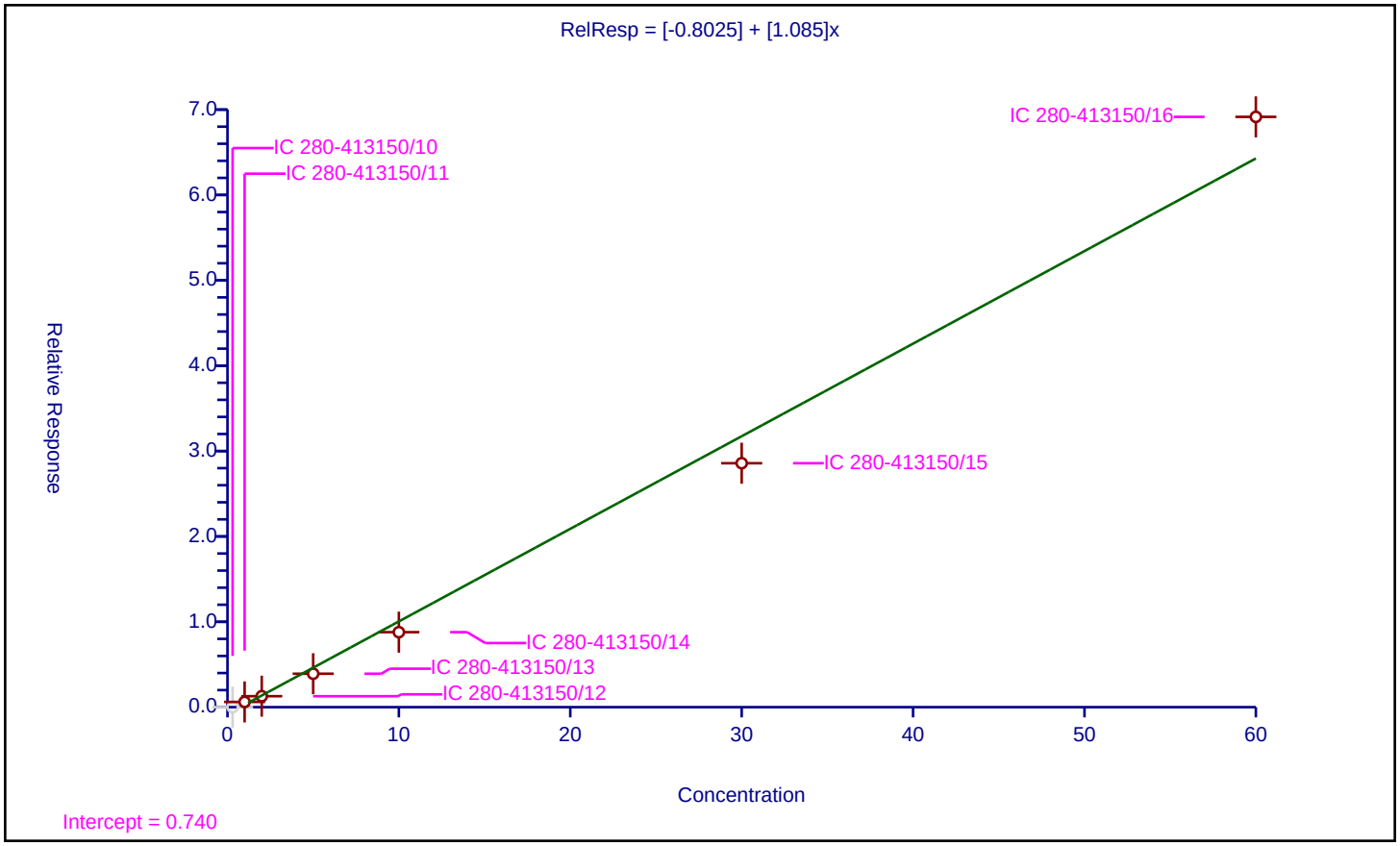
Curve Coefficients

Intercept:	-0.8025
Slope:	1.085

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	18.8
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.0	12.5	354202.0	0.0	N
2	IC 280-413150/11	1.0	0.614591	12.5	375412.0	0.614591	Y
3	IC 280-413150/12	2.0	1.283195	12.5	386545.0	0.641597	Y
4	IC 280-413150/13	5.0	3.917359	12.5	395177.0	0.783472	Y
5	IC 280-413150/14	10.0	8.785543	12.5	415276.0	0.878554	Y
6	IC 280-413150/15	30.0	28.576352	12.5	414574.0	0.952545	Y
7	IC 280-413150/16	60.0	69.149547	12.5	419835.0	1.152492	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

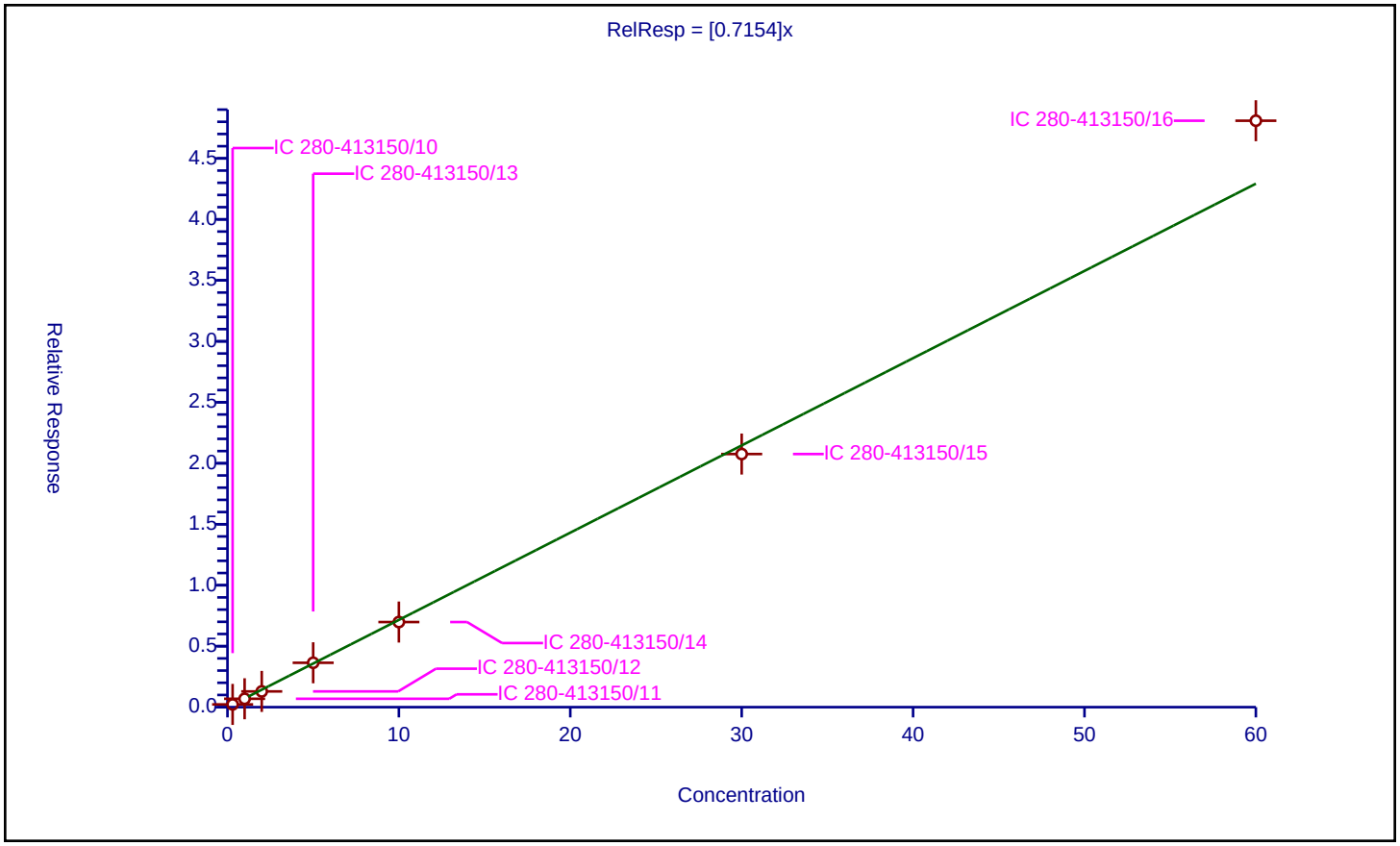
Curve Coefficients

Intercept:	0
Slope:	0.7154

Error Coefficients

Standard Error:	725000
Relative Standard Error:	7.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-413150/10	0.3	0.22646	12.5	354202.0	0.754866	Y
2	IC 280-413150/11	1.0	0.688177	12.5	375412.0	0.688177	Y
3	IC 280-413150/12	2.0	1.291764	12.5	386545.0	0.645882	Y
4	IC 280-413150/13	5.0	3.639445	12.5	395177.0	0.727889	Y
5	IC 280-413150/14	10.0	6.979816	12.5	415276.0	0.697982	Y
6	IC 280-413150/15	30.0	20.755221	12.5	414574.0	0.691841	Y
7	IC 280-413150/16	60.0	48.088088	12.5	419835.0	0.801468	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413243

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 23:12 Calibration End Date: 05/01/2018 00:53 Calibration ID: 32255

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 280-413243/10	G7346.D
Level 2	STD02 280-413243/11	G7347.D
Level 3	STD05 280-413243/12	G7348.D
Level 4	STD10 280-413243/13	G7349.D
Level 5	STD30 280-413243/14	G7350.D
Level 6	STD60 280-413243/15	G7351.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.3502 0.3611	0.3382	0.3346	0.3638	0.3528	Ave		0.3501				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2186 0.2235	0.2147	0.2135	0.2274	0.2186	Ave		0.2194				2.4		15.0			
Toluene-d8 (Surr)	5.4606 6.0187	5.4673	5.6485	5.9373	6.1146	Ave		5.7745				5.0		15.0			
4-Bromofluorobenzene (Surr)	1.2997 1.4755	1.3146	1.3353	1.4406	1.4221	Ave		1.3813				5.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413243

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2018 23:12 Calibration End Date: 05/01/2018 00:53 Calibration ID: 32255

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 280-413243/10	G7346.D
Level 2	STD02 280-413243/11	G7347.D
Level 3	STD05 280-413243/12	G7348.D
Level 4	STD10 280-413243/13	G7349.D
Level 5	STD30 280-413243/14	G7350.D
Level 6	STD60 280-413243/15	G7351.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromofluoromethane (Surr)	FB	Ave	51599 2942916	91975	227496	512579	1478867	1.00 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	32213 1821658	58398	145157	320367	916120	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	157694 9597276	294843	740694	1653797	4948191	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	42823 2665340	81279	204829	450580	1313988	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7346.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Apr-2018 23:12:30 ALS Bottle#: 19 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub95

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:32 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:44:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.868	4.876	-0.008	0	187609	250.0	250.0	
* 1 Fluorobenzene	96	6.885	6.893	-0.008	98	1841711	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.581	9.579	0.002	86	360982	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.647	11.645	0.002	96	411852	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.304	6.312	-0.008	92	51599	1.00	1.00	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.609	6.607	0.002	0	32213	1.00	1.00	
$ 7 Toluene-d8 (Surr)	98	8.243	8.241	0.002	94	157694	1.00	0.9456	
$ 8 4-Bromofluorobenzene (Surr	95	10.644	10.642	0.002	90	42823	1.00	0.9409	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 0.08 Units: uL

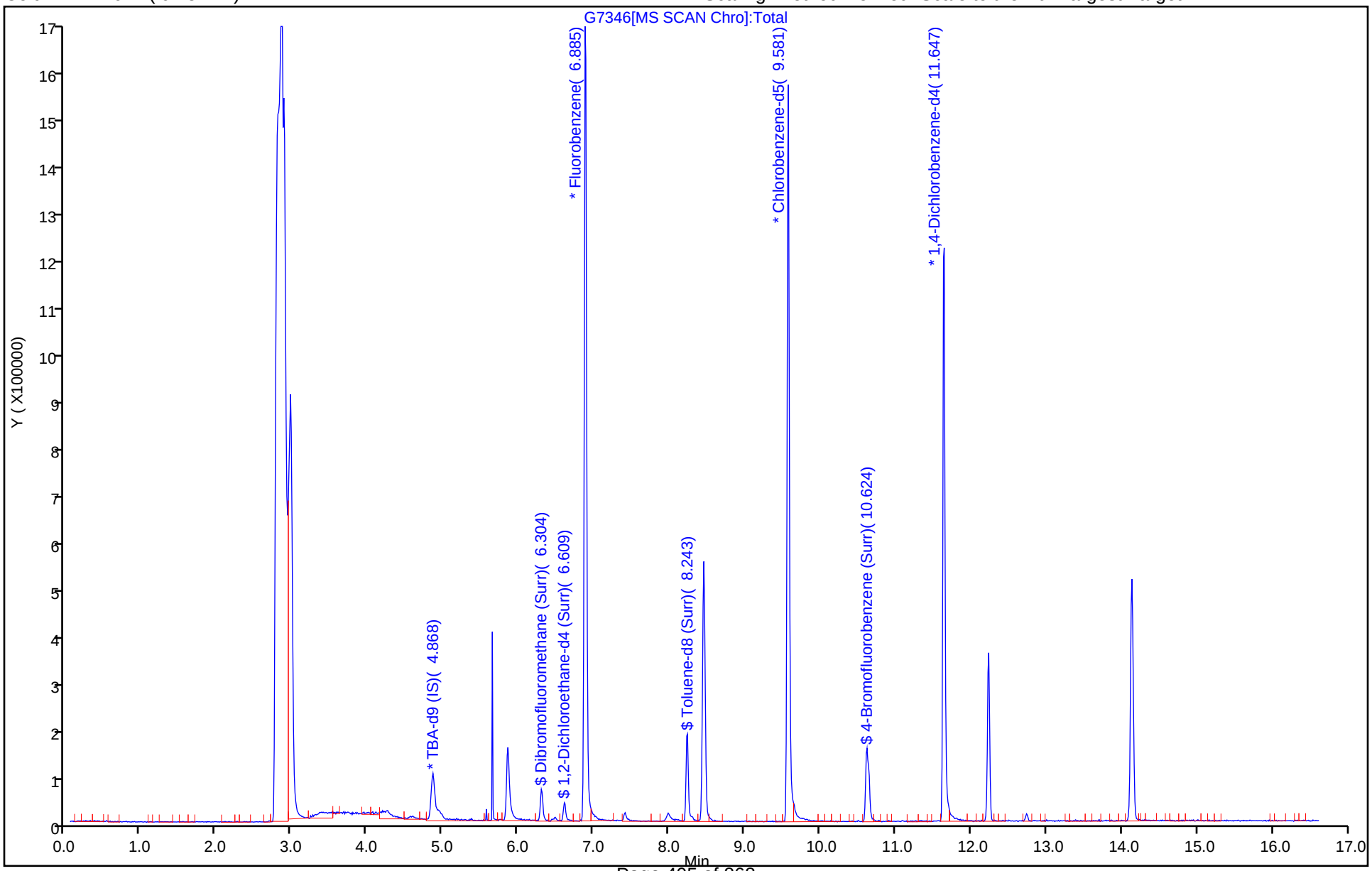
Report Date: 01-May-2018 08:56:32 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7346.D

Injection Date:	30-Apr-2018 23:12:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7347.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Apr-2018 23:32:30 ALS Bottle#: 20 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub95

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:33 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:53:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.866	4.876	-0.010	0	169260	250.0	250.0	
* 1 Fluorobenzene	96	6.893	6.893	0.000	98	1699783	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.579	9.579	0.000	87	337050	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.645	11.645	0.000	97	386414	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.312	6.312	0.000	91	91975	2.00	1.93	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.617	6.607	0.010	0	58398	2.00	1.96	
$ 7 Toluene-d8 (Surr)	98	8.241	8.241	0.000	94	294843	2.00	1.89	
$ 8 4-Bromofluorobenzene (Surr	95	10.642	10.642	0.000	91	81279	2.00	1.90	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 0.16 Units: uL

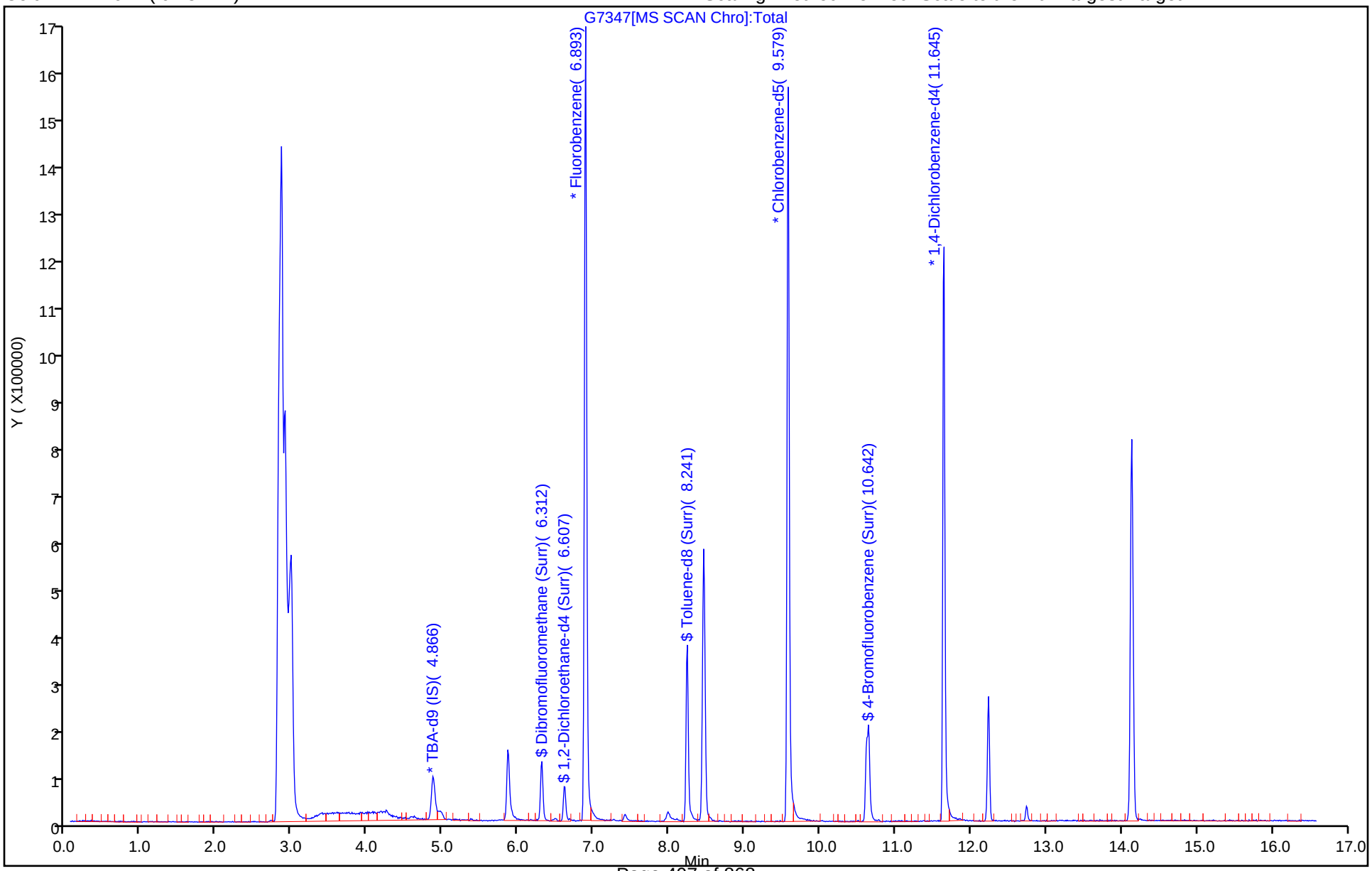
Report Date: 01-May-2018 08:56:33 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7347.D

Injection Date:	30-Apr-2018 23:32:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7348.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Apr-2018 23:52:30 ALS Bottle#: 21 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub95

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:34 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:53:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.866	4.876	-0.010	0	169673	250.0	250.0	
* 1 Fluorobenzene	96	6.893	6.893	0.000	98	1699832	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.580	9.579	0.001	87	327830	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.646	11.645	0.001	96	383501	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.303	6.312	-0.009	93	227496	5.00	4.78	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.608	6.607	0.001	0	145157	5.00	4.87	
$ 7 Toluene-d8 (Surr)	98	8.241	8.241	0.000	94	740694	5.00	4.89	
$ 8 4-Bromofluorobenzene (Surr	95	10.642	10.642	0.000	90	204829	5.00	4.83	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 0.40 Units: uL

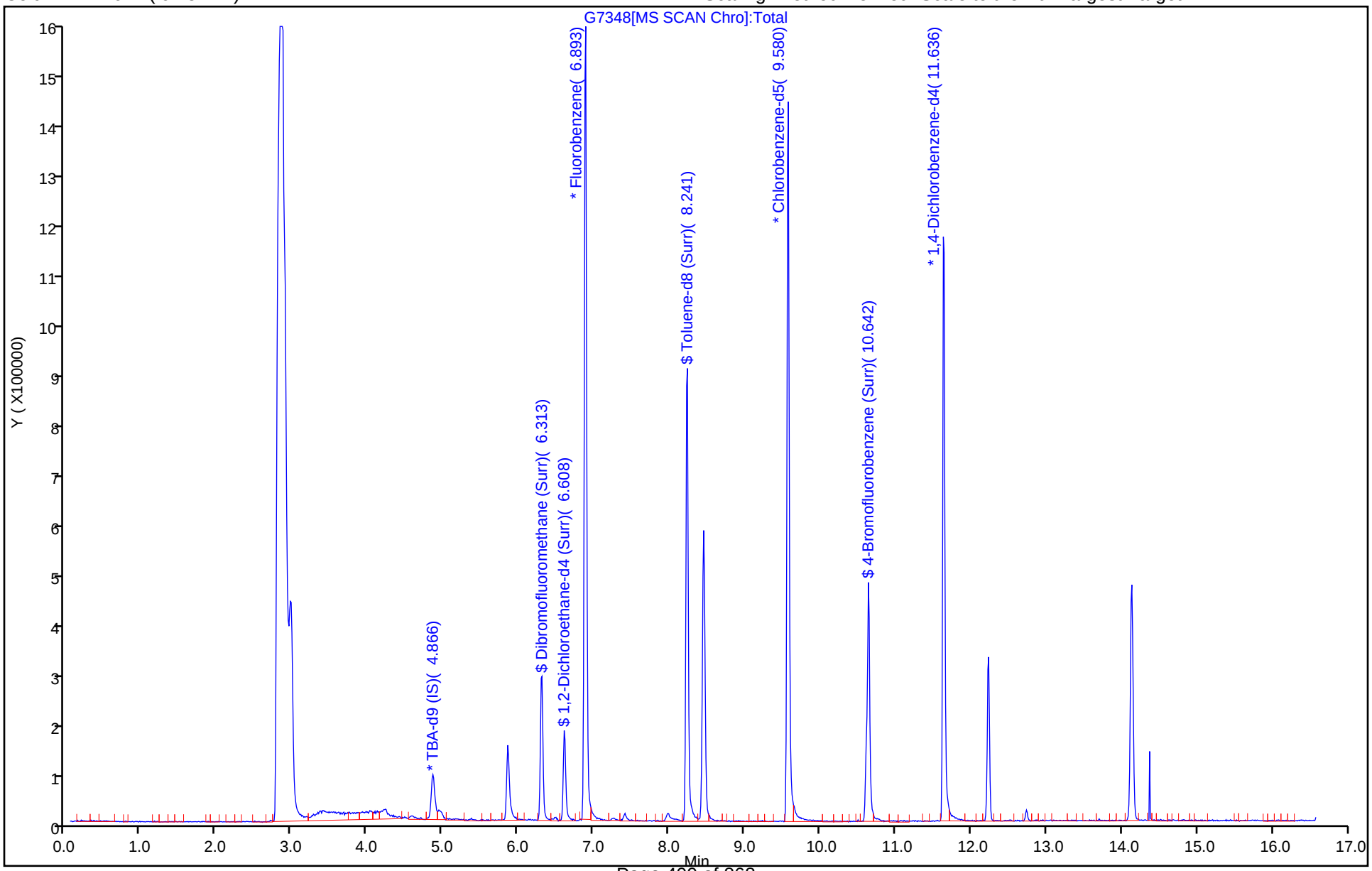
Report Date: 01-May-2018 08:56:34 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7348.D

Injection Date:	30-Apr-2018 23:52:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7349.D				
Lims ID:	STD10				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	01-May-2018 00:12:30	ALS Bottle#:	22	Worklist Smp#:	13
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	STD10				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Sublist:	chrom-AQ_VMSG_8260*sub95				
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	01-May-2018 08:56:35	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

First Level Reviewer: newcomer Date: 01-May-2018 01:54:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.876	4.876	0.000	0	179196	250.0	250.0	
* 1 Fluorobenzene	96	6.893	6.893	0.000	98	1761348	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.579	9.579	0.000	87	348181	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.645	11.645	0.000	97	390966	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.312	6.312	0.000	92	512579	10.0	10.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.607	6.607	0.000	0	320367	10.0	10.4	
$ 7 Toluene-d8 (Surr)	98	8.241	8.241	0.000	93	1653797	10.0	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.642	10.642	0.000	89	450580	10.0	10.4	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL

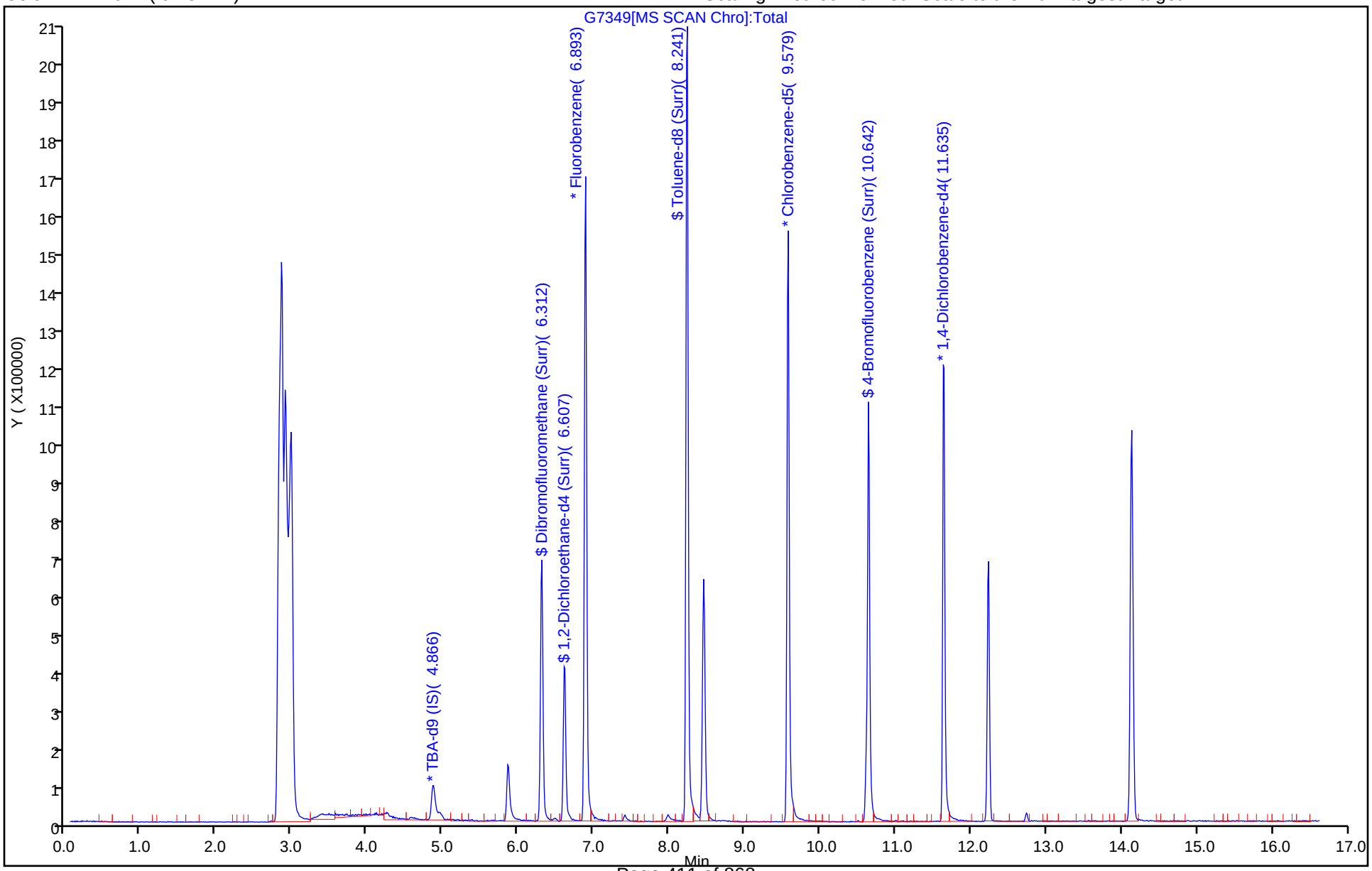
Report Date: 01-May-2018 08:56:35 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7349.D

Injection Date:	01-May-2018 00:12:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD10			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7350.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 01-May-2018 00:33:30 ALS Bottle#: 23 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD30
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub95

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:36 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:54:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.868	4.876	-0.008	0	156438	250.0	250.0	
* 1 Fluorobenzene	96	6.885	6.893	-0.008	98	1746575	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.581	9.579	0.002	87	337186	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.638	11.645	-0.007	97	384997	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.305	6.312	-0.007	92	1478867	30.0	30.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.610	6.607	0.003	0	916120	30.0	29.9	
$ 7 Toluene-d8 (Surr)	98	8.233	8.241	-0.008	94	4948191	30.0	31.8	
$ 8 4-Bromofluorobenzene (Surr	95	10.644	10.642	0.002	89	1313988	30.0	30.9	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 2.40 Units: uL

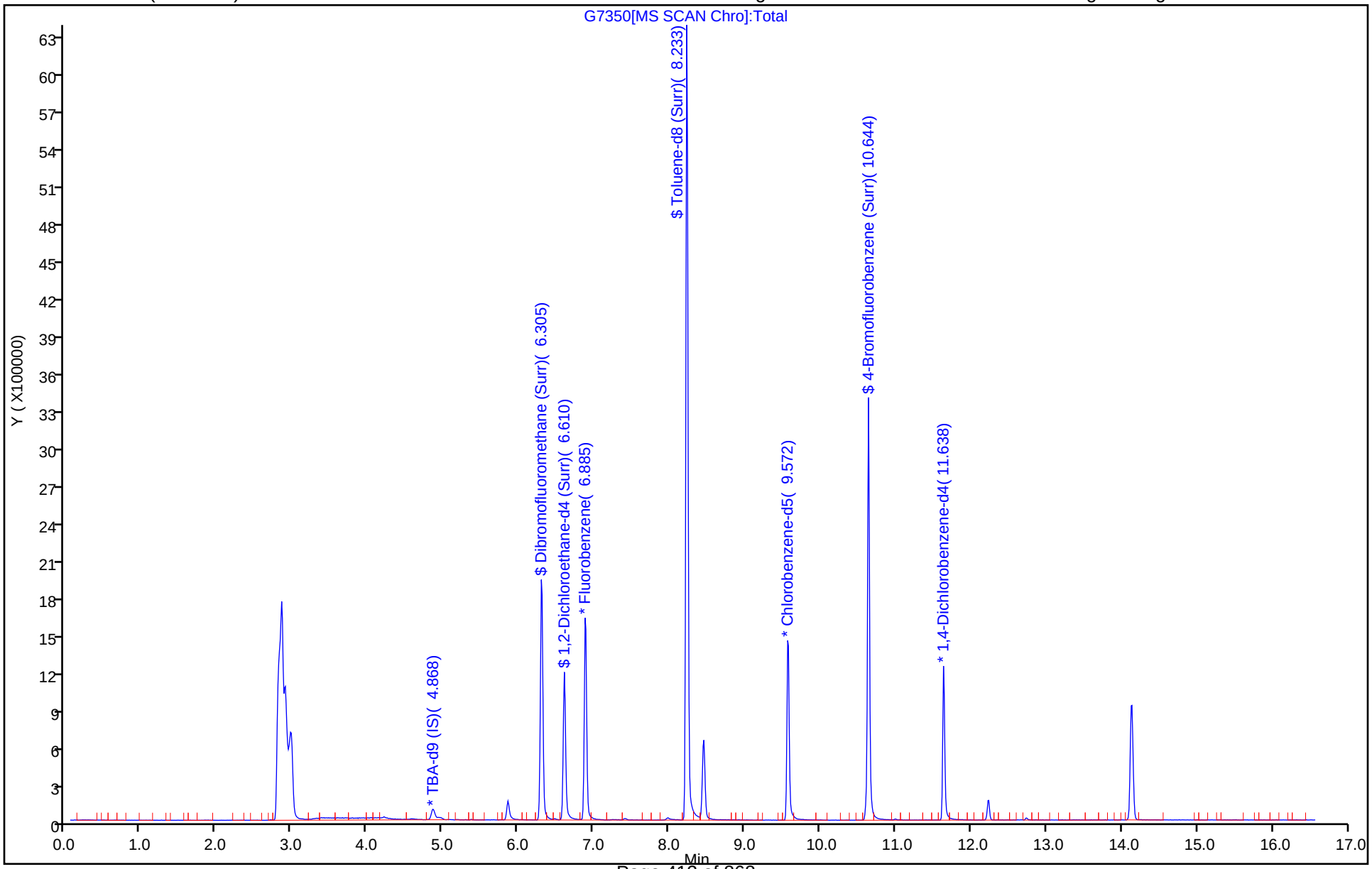
Report Date: 01-May-2018 08:56:37 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7350.D

Injection Date:	01-May-2018 00:33:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD30			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 01-May-2018 00:53:30 ALS Bottle#: 24 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub95

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:37 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:54:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.871	4.876	-0.005	0	163431	250.0	250.0	
* 1 Fluorobenzene	96	6.888	6.893	-0.005	98	1697852	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.575	9.579	-0.004	87	332204	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.641	11.645	-0.004	97	376327	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.308	6.312	-0.004	92	2942916	60.0	61.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.613	6.607	0.006	0	1821658	60.0	61.1	
$ 7 Toluene-d8 (Surr)	98	8.236	8.241	-0.005	94	9597276	60.0	62.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.647	10.642	0.005	92	2665340	60.0	64.1	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 4.80 Units: uL

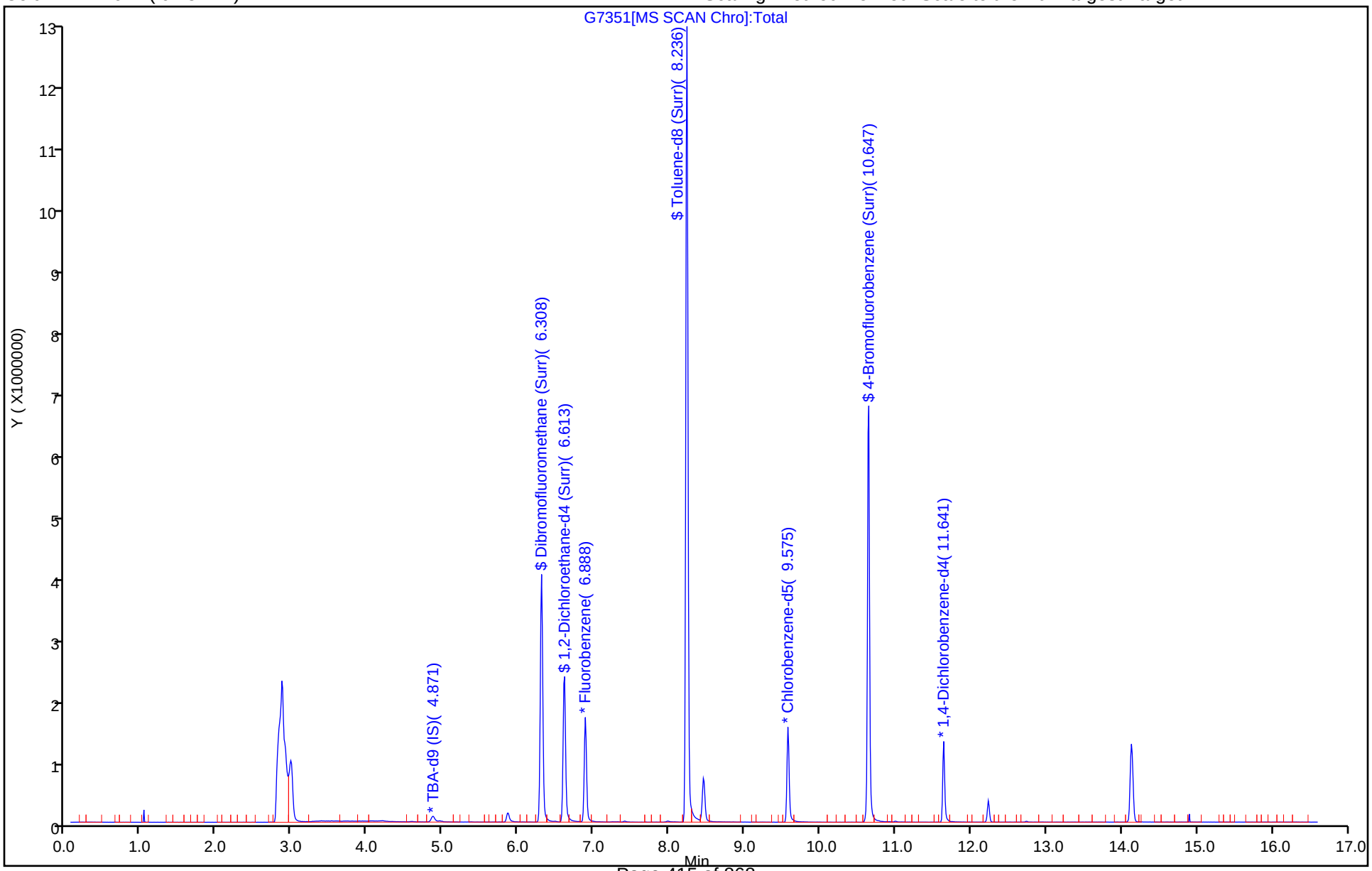
Report Date: 01-May-2018 08:56:38 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Injection Date:	01-May-2018 00:53:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

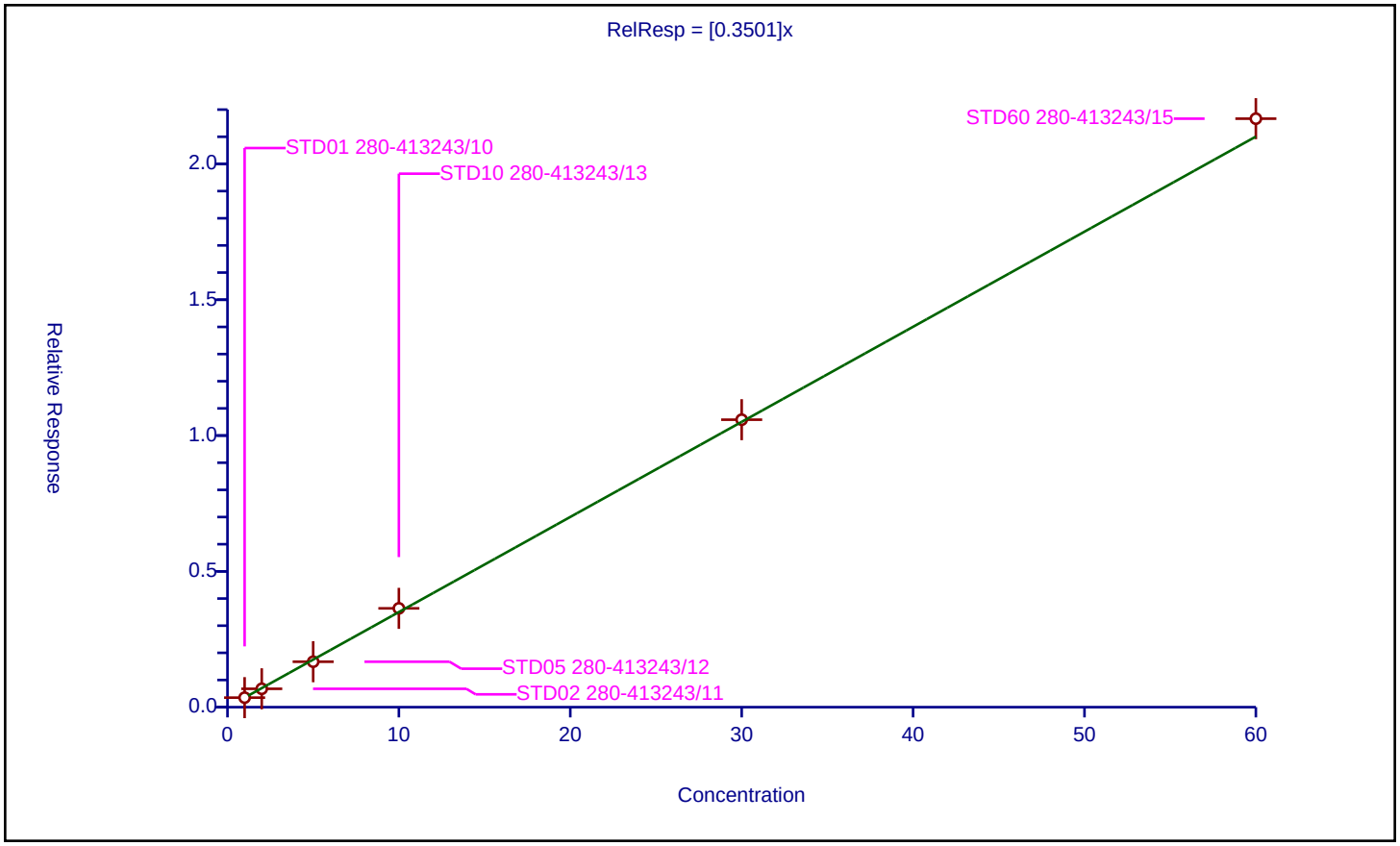
Curve Coefficients

Intercept:	0
Slope:	0.3501

Error Coefficients

Standard Error:	1490000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-413243/10	1.0	0.350211	12.5	1841711.0	0.350211	Y
2	STD02 280-413243/11	2.0	0.676373	12.5	1699783.0	0.338187	Y
3	STD05 280-413243/12	5.0	1.67293	12.5	1699832.0	0.334586	Y
4	STD10 280-413243/13	10.0	3.63769	12.5	1761348.0	0.363769	Y
5	STD30 280-413243/14	30.0	10.58405	12.5	1746575.0	0.352802	Y
6	STD60 280-413243/15	60.0	21.666464	12.5	1697852.0	0.361108	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

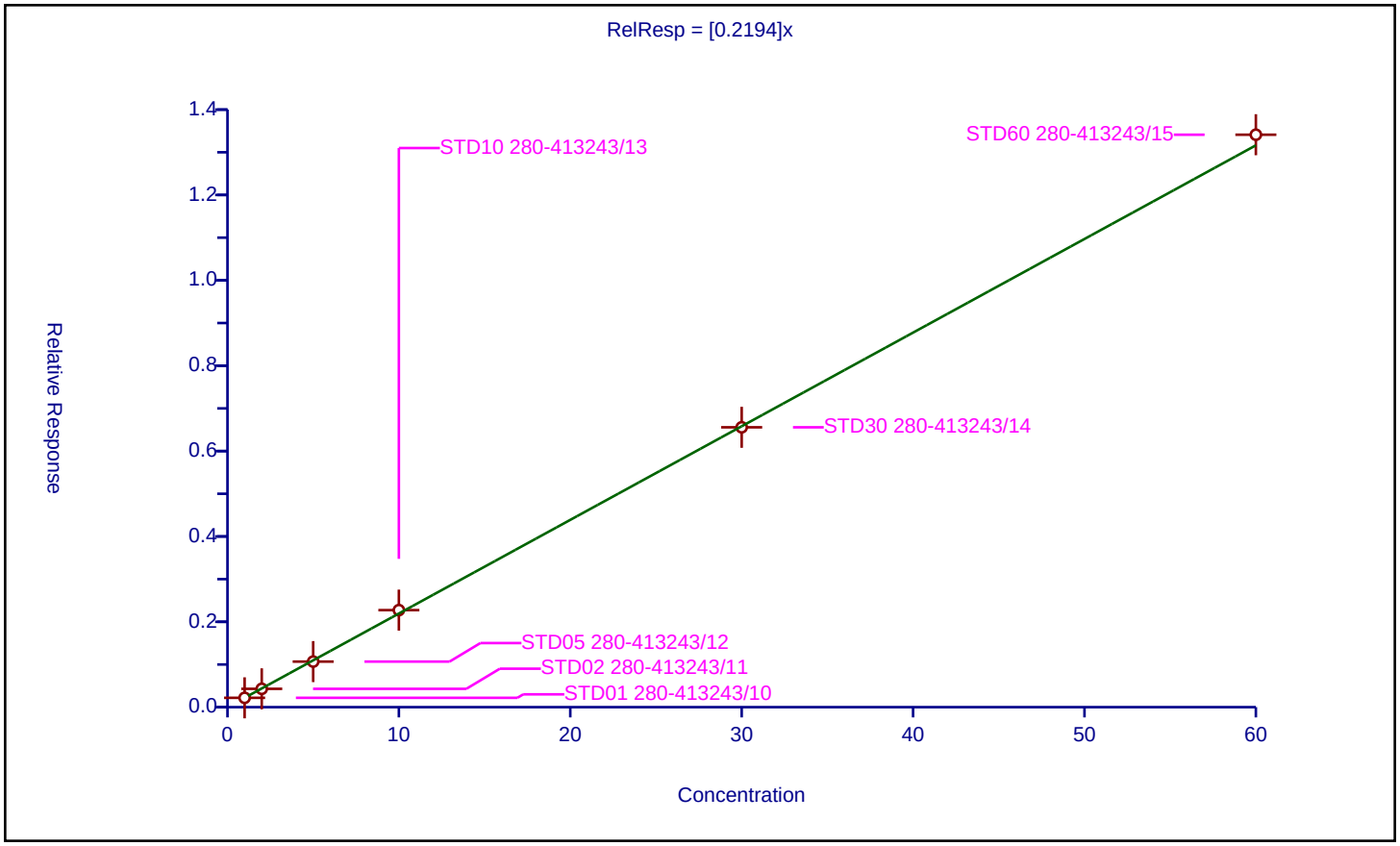
Curve Coefficients

Intercept:	0
Slope:	0.2194

Error Coefficients

Standard Error:	926000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-413243/10	1.0	0.218635	12.5	1841711.0	0.218635	Y
2	STD02 280-413243/11	2.0	0.429452	12.5	1699783.0	0.214726	Y
3	STD05 280-413243/12	5.0	1.067436	12.5	1699832.0	0.213487	Y
4	STD10 280-413243/13	10.0	2.273592	12.5	1761348.0	0.227359	Y
5	STD30 280-413243/14	30.0	6.556546	12.5	1746575.0	0.218552	Y
6	STD60 280-413243/15	60.0	13.41149	12.5	1697852.0	0.223525	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

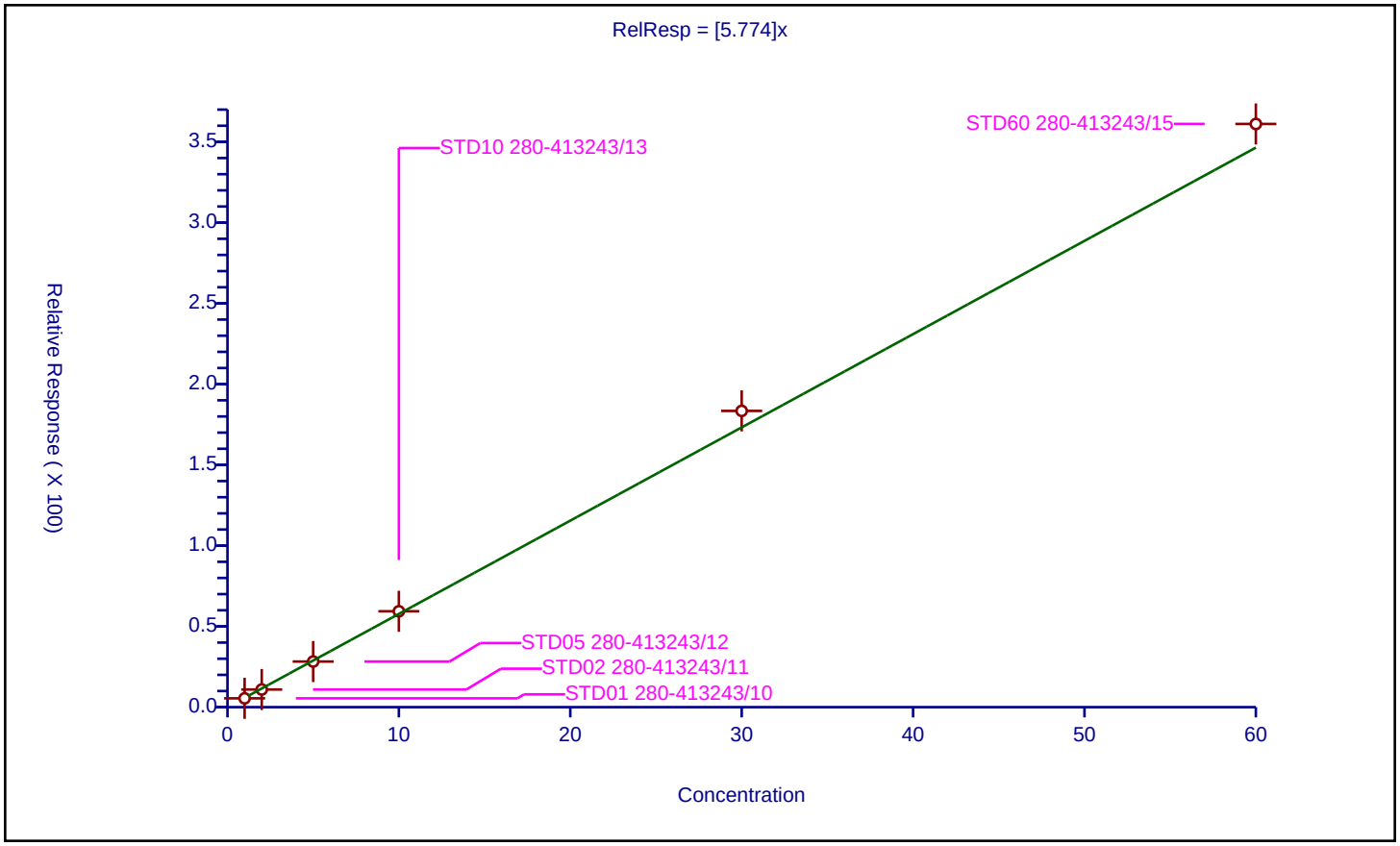
Curve Coefficients

Intercept:	0
Slope:	5.774

Error Coefficients

Standard Error:	4900000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-413243/10	1.0	5.460591	12.5	360982.0	5.460591	Y
2	STD02 280-413243/11	2.0	10.934691	12.5	337050.0	5.467345	Y
3	STD05 280-413243/12	5.0	28.242305	12.5	327830.0	5.648461	Y
4	STD10 280-413243/13	10.0	59.372747	12.5	348181.0	5.937275	Y
5	STD30 280-413243/14	30.0	183.436998	12.5	337186.0	6.114567	Y
6	STD60 280-413243/15	60.0	361.121329	12.5	332204.0	6.018689	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

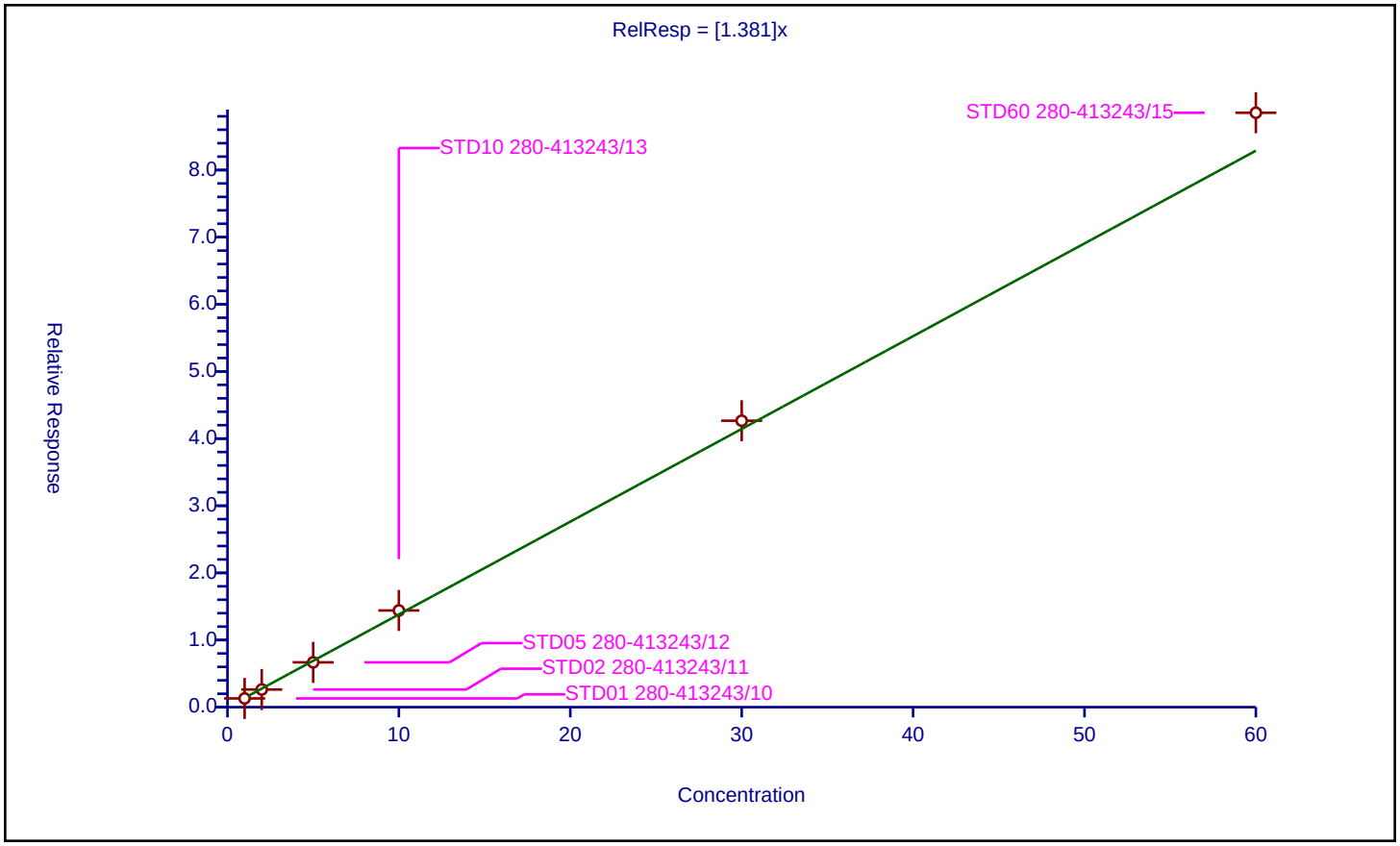
Curve Coefficients

Intercept:	0
Slope:	1.381

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 280-413243/10	1.0	1.299708	12.5	411852.0	1.299708	Y
2	STD02 280-413243/11	2.0	2.629272	12.5	386414.0	1.314636	Y
3	STD05 280-413243/12	5.0	6.676286	12.5	383501.0	1.335257	Y
4	STD10 280-413243/13	10.0	14.405984	12.5	390966.0	1.440598	Y
5	STD30 280-413243/14	30.0	42.66228	12.5	384997.0	1.422076	Y
6	STD60 280-413243/15	60.0	88.531384	12.5	376327.0	1.475523	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412973

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 16:58 Calibration End Date: 04/27/2018 18:42 Calibration ID: 32248

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-412973/17	G2_2320.D
Level 2	IC 280-412973/18	G2_2321.D
Level 3	IC 280-412973/19	G2_2322.D
Level 4	ICIS 280-412973/20	G2_2323.D
Level 5	IC 280-412973/21	G2_2324.D
Level 6	IC 280-412973/22	G2_2325.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0034 0.0102	0.0027	0.0072	0.0096	0.0102	Lin1	-0.102	0.0104							0.9970		0.9900
Isopropyl ether	0.2219 0.2417	0.2117	0.2273	0.2330	0.2531	Ave		0.2315				6.3		15.0			
2-Chloro-1,3-butadiene	0.3976 0.4790	0.3950	0.4354	0.4543	0.4944	Ave		0.4426				9.3		15.0			
Tert-butyl ethyl ether	0.6170 0.6883	0.6006	0.6284	0.6575	0.7151	Ave		0.6512				6.8		15.0			
Ethyl acetate	0.0401 0.0677	0.0457	0.0560	0.0579	0.0672	Lin2	-0.054	0.0641							0.9940		0.9900
Propionitrile	0.0056 0.0118	0.0070	0.0088	0.0099	0.0116	Lin2	-0.061	0.0110							0.9900		0.9900
Methacrylonitrile	0.0440 0.0557	0.0492	0.0540	0.0572	0.0609	Ave		0.0535				11.3		15.0			
Tert-amyl methyl ether	0.5340 0.5709	0.5228	0.5395	0.5543	0.5889	Ave		0.5517				4.5		15.0			
n-Butanol	+++++ 0.0021	0.0004	0.0009	0.0012	0.0018	Lin	-0.181	0.0022							0.9960		0.9900
Methyl methacrylate	0.0234 0.0361	0.0259	0.0271	0.0308	0.0365	Lin1	-0.040	0.0361							0.9970		0.9900
2-Nitropropane	0.0106 0.0160	0.0102	0.0123	0.0127	0.0151	Lin1	-0.018	0.0157							0.9960		0.9900
cis-1,4-Dichloro-2-butene	0.0878 0.1151	0.0783	0.0885	0.0929	0.1114	Lin1	-0.112	0.1129							0.9960		0.9900
1,2,3-Trimethylbenzene	3.0084 3.0280	2.8896	3.0671	3.1334	3.0276	Ave		3.0256				2.6		15.0			
Dibromofluoromethane (Surr)	0.2721 0.2731	0.2698	0.2692	0.2766	0.2855	Ave		0.2744				2.2		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2457 0.2427	0.2512	0.2444	0.2538	0.2529	Ave		0.2484				1.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412973

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 16:58 Calibration End Date: 04/27/2018 18:42 Calibration ID: 32248

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toluene-d8 (Surr)	5.0281 4.4923	4.8026	4.7479	4.8136	4.6885	Ave		4.7622				3.7		15.0			
4-Bromofluorobenzene (Surr)	0.9914 1.0346	1.0016	1.0153	1.0413	1.0270	Ave		1.0185				1.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412973

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 16:58 Calibration End Date: 04/27/2018 18:42 Calibration ID: 32248

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-412973/17	G2_2320.D
Level 2	IC 280-412973/18	G2_2321.D
Level 3	IC 280-412973/19	G2_2322.D
Level 4	ICIS 280-412973/20	G2_2323.D
Level 5	IC 280-412973/21	G2_2324.D
Level 6	IC 280-412973/22	G2_2325.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Lin1	3866 689525	6001	40523	105199	336259	10.0 600	20.0	50.0	100	300
Isopropyl ether	FB	Ave	25477 1634879	46916	127275	256316	832333	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	45649 3240454	87525	243803	499725	1626094	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	70832 4656065	133073	351905	723246	2352011	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Lin2	9218 915482	20246	62764	127310	442214	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Lin2	6394 800320	15413	49095	108557	382640	10.0 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	50497 3770652	109029	302527	629060	2003403	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	61303 3861620	115824	302089	609696	1937070	1.00 60.0	2.00	5.00	10.0	30.0
n-Butanol	FB	Lin	+++++ 350850	1994	12210	31677	147051	+++++ 1500	50.0	125	250	750
Methyl methacrylate	FB	Lin1	5374 488052	11484	30393	67720	239911	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Lin1	2438 217044	4517	13768	27837	99490	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Lin1	7421 595356	12939	36764	77523	280740	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	127183 7832265	238660	636783	1307729	3816510	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	31244 1847294	59778	150763	304282	938966	1.00 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	28205 1641952	55651	136830	279125	831890	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	136681 7297167	254079	633375	1270115	3725345	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 412973

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2018 16:58 Calibration End Date: 04/27/2018 18:42 Calibration ID: 32248

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	41915 2676009	82729	210790	434607	1294669	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2320.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Apr-2018 16:58:30 ALS Bottle#: 26 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:18 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:52:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.785	3.772	0.013	0	210830	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	99	1435116	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.546	10.540	0.006	85	339792	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	528458	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.550	6.542	0.008	92	31244	1.00	0.99	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.979	6.971	0.008	97	28205	1.00	0.9889	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	92	136681	1.00	1.06	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	93	41915	1.00	0.9734	
16 Ethylene oxide	43	2.123	2.110	0.013	100	59462	100.0	118.5	
21 Ethanol	45		2.724				ND	ND	
23 Propene oxide	58	2.850	2.850	0.000	96	306603	100.0	111.8	
29 Isopropyl alcohol	45		3.339				ND	ND	
31 Acetonitrile	41	3.534	3.520	0.014	18	3866	10.0	13.1	
47 Isopropyl ether	87	4.945	4.931	0.014	91	25477	1.00	0.9588	
48 2-Chloro-1,3-butadiene	53	4.959	4.945	0.014	91	45649	1.00	0.8983	
49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	95	70832	1.00	0.9475	
53 Ethyl acetate	43	5.936	5.908	0.028	91	9218	2.00	2.10	
54 Propionitrile	54	5.950	5.922	0.028	52	6394	10.0	10.6	
58 Methacrylonitrile	41	6.142	6.128	0.014	91	50497	10.0	8.22	
68 Tert-amyl methyl ether	73	7.193	7.193	0.000	96	61303	1.00	0.9678	
73 n-Butanol	56		7.794				ND	ND	
77 Methyl methacrylate	100	8.201	8.194	0.007	90	5374	2.00	2.40	
80 2-Nitropropane	41	8.630	8.630	0.000	93	2438	2.00	2.53	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	86	3544	2.00	2.66	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	96	7421	2.00	2.55	
116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	98	127183	1.00	0.99	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	70196	1.00	1.09	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	0.50	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.08	Units: uL

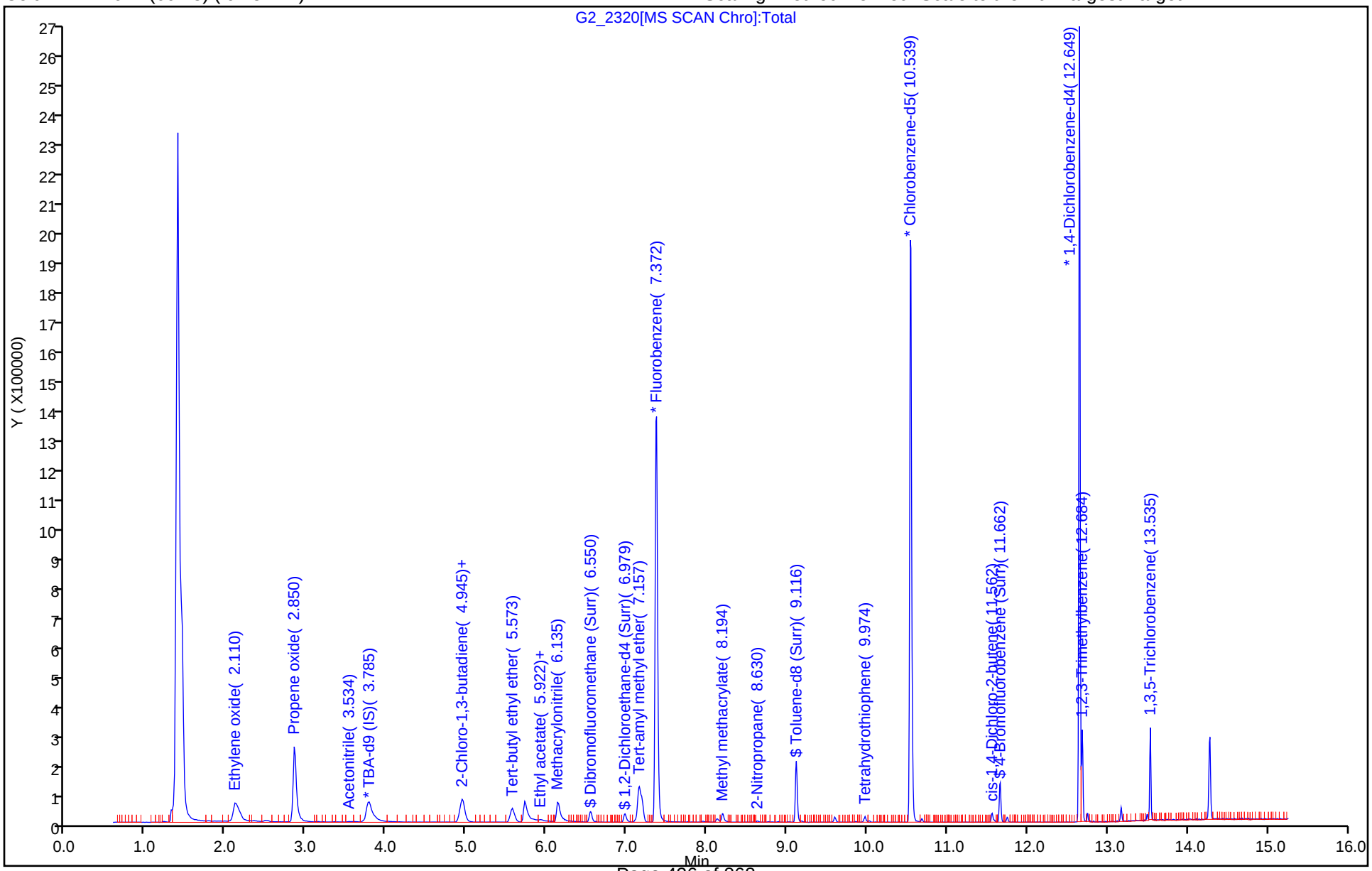
Report Date: 28-Apr-2018 07:57:19 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2320.D

Injection Date:	27-Apr-2018 16:58:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2321.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Apr-2018 17:19:30 ALS Bottle#: 27 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:20 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:53:25

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	198792	250.0	250.0	
*	2 Fluorobenzene	96	7.372	7.372	0.000	99	1384776	12.5	12.5	
*	3 Chlorobenzene-d5	119	10.547	10.540	0.007	85	330653	12.5	12.5	
*	4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	516209	12.5	12.5	
$	6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	92	59778	2.00	1.97	
$	7 1,2-Dichloroethane-d4 (Sur	65	6.979	6.971	0.008	97	55651	2.00	2.02	
$	8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	254079	2.00	2.02	
$	9 4-Bromofluorobenzene (Surr	95	11.662	11.655	0.007	89	82729	2.00	1.97	
	16 Ethylene oxide	43	2.124	2.110	0.014	100	102989	200.0	212.6	
	21 Ethanol	45		2.724				ND	ND	
	23 Propene oxide	58	2.850	2.850	0.000	96	563860	200.0	213.1	
	29 Isopropyl alcohol	45		3.339				ND	ND	
	31 Acetonitrile	41	3.548	3.520	0.028	54	6001	20.0	15.1	
	47 Isopropyl ether	87	4.931	4.931	0.000	91	46916	2.00	1.83	
	48 2-Chloro-1,3-butadiene	53	4.959	4.945	0.014	91	87525	2.00	1.78	
	49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	96	133073	2.00	1.84	
	53 Ethyl acetate	43	5.922	5.908	0.014	98	20246	4.00	3.70	
	54 Propionitrile	54	5.936	5.922	0.014	71	15413	20.0	18.2	
	58 Methacrylonitrile	41	6.135	6.128	0.007	89	109029	20.0	18.4	
	68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	98	115824	2.00	1.90	
	73 n-Butanol	56	7.822	7.794	0.028	21	1994	50.0	92.3	
	77 Methyl methacrylate	100	8.194	8.194	0.000	86	11484	4.00	3.97	
	80 2-Nitropropane	41	8.637	8.630	0.007	97	4517	4.00	3.78	
	13 Tetrahydrothiophene	60	9.960	9.960	0.000	90	6743	4.00	3.73	
	101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	95	12939	4.00	3.77	
	116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	97	238660	2.00	1.91	
	120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	96	118676	2.00	1.89	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.16	Units: uL

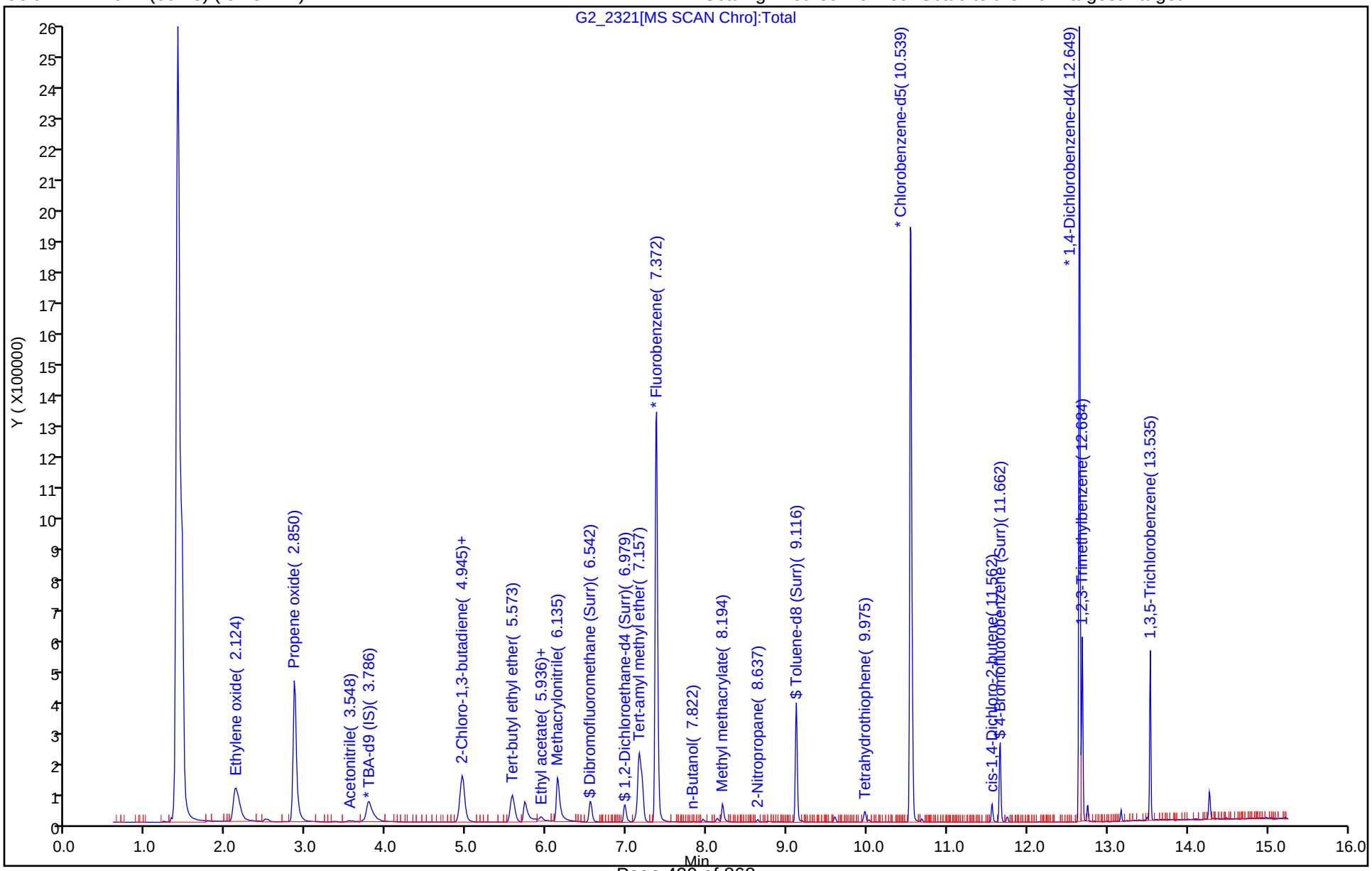
Report Date: 28-Apr-2018 07:57:20 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2321.D

Injection Date:	27-Apr-2018 17:19:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2322.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Apr-2018 17:40:30 ALS Bottle#: 28 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:21 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:53:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.786	3.772	0.014	0	203802	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	99	1399938	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	85	333505	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	519044	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.543	6.542	0.000	93	150763	5.00	4.91	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.972	6.971	0.001	98	136830	5.00	4.92	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	0.000	93	633375	5.00	4.98	
$ 9 4-Bromofluorobenzene (Surr	95	11.662	11.655	0.007	91	210790	5.00	4.98	
16 Ethylene oxide	43	2.124	2.110	0.014	100	244419	500.0	499.2	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	1411237	500.0	527.7	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.534	3.520	0.014	97	40523	50.0	44.8	
47 Isopropyl ether	87	4.931	4.931	0.000	92	127275	5.00	4.91	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	243803	5.00	4.92	
49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	97	351905	5.00	4.83	
53 Ethyl acetate	43	5.922	5.908	0.014	99	62764	10.0	9.58	
54 Propionitrile	54	5.922	5.922	0.000	78	49095	50.0	45.5	
58 Methacrylonitrile	41	6.135	6.128	0.007	90	302527	50.0	50.5	
68 Tert-amyl methyl ether	73	7.193	7.193	0.000	97	302089	5.00	4.89	
73 n-Butanol	56	7.801	7.794	0.007	89	12210	125.0	134.5	
77 Methyl methacrylate	100	8.194	8.194	0.000	87	30393	10.0	8.62	
80 2-Nitropropane	41	8.638	8.630	0.008	99	13768	10.0	9.03	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	89	21428	10.0	8.46	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	98	36764	10.0	8.83	
116 1,2,3-Trimethylbenzene	105	12.685	12.685	0.001	98	636783	5.00	5.07	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	309939	5.00	4.91	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	2.50	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.40	Units: uL

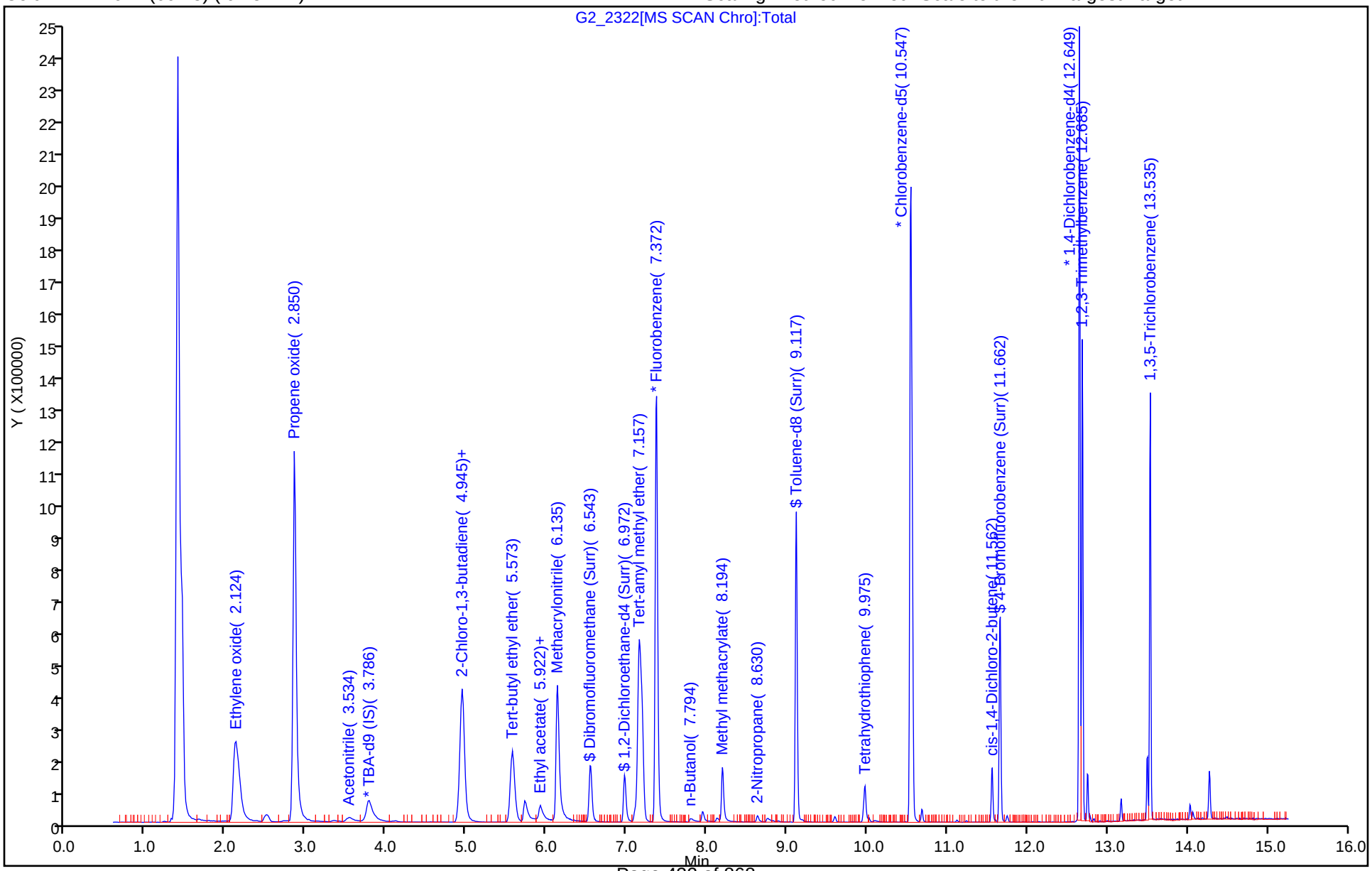
Report Date: 28-Apr-2018 07:57:22 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2322.D

Injection Date:	27-Apr-2018 17:40:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2323.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 27-Apr-2018 18:01:30 ALS Bottle#: 29 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:23 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:54:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	194445	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	99	1374936	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	85	329823	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	521697	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	304282	10.0	10.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	98	279125	10.0	10.2	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	0.000	92	1270115	10.0	10.1	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	91	434607	10.0	10.2	
16 Ethylene oxide	43	2.110	2.110	0.000	100	453139	1000.0	942.3	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	2680150	1000.0	1020.3	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.520	3.520	0.000	99	105199	100.0	102.1	
47 Isopropyl ether	87	4.931	4.931	0.000	92	256316	10.0	10.1	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	499725	10.0	10.3	
49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	97	723246	10.0	10.1	
53 Ethyl acetate	43	5.908	5.908	0.000	99	127310	20.0	18.9	
54 Propionitrile	54	5.922	5.922	0.000	99	108557	100.0	95.4	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	629060	100.0	106.9	
68 Tert-amyl methyl ether	73	7.193	7.193	0.000	98	609696	10.0	10.0	
73 n-Butanol	56	7.794	7.794	0.000	91	31677	250.0	217.4	
77 Methyl methacrylate	100	8.194	8.194	0.000	89	67720	20.0	18.2	
80 2-Nitropropane	41	8.630	8.630	0.000	98	27837	20.0	17.3	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	89	48187	20.0	17.3	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	97	77523	20.0	17.4	
116 1,2,3-Trimethylbenzene	105	12.685	12.685	0.000	98	1307729	10.0	10.4	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	639524	10.0	10.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp A_00029	Amount Added:	5.00	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL

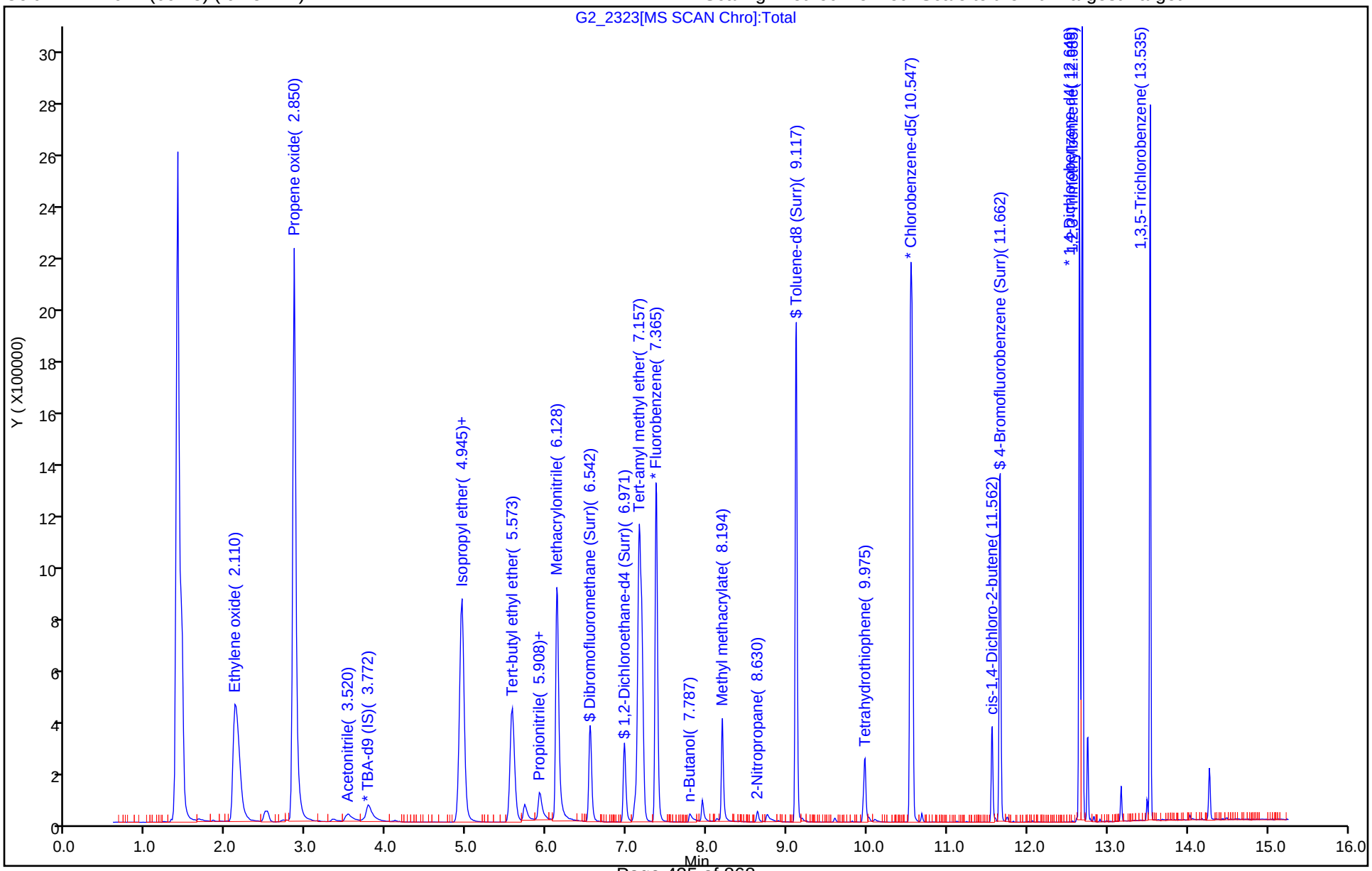
Report Date: 28-Apr-2018 07:57:24 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2323.D

Injection Date:	27-Apr-2018 18:01:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icis			Worklist Smp#:	20
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2324.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Apr-2018 18:21:30 ALS Bottle#: 30 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:25 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:54:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	194988	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	99	1370498	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.539	0.008	87	331072	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	525247	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	938966	30.0	31.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	98	831890	30.0	30.5	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	3725345	30.0	29.5	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	90	1294669	30.0	30.2	
16 Ethylene oxide	43	2.110	2.110	0.000	99	1167039	3000.0	2434.6	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	7505756	3000.0	2866.7	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.492	3.520	-0.028	100	336259	300.0	305.5	
47 Isopropyl ether	87	4.931	4.931	0.000	93	832333	30.0	32.8	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	1626094	30.0	33.5	
49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	97	2352011	30.0	32.9	
53 Ethyl acetate	43	5.908	5.908	0.000	99	442214	60.0	63.7	
54 Propionitrile	54	5.908	5.922	-0.014	99	382640	300.0	323.1	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	2003403	300.0	341.5	
68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	99	1937070	30.0	32.0	
73 n-Butanol	56	7.779	7.794	-0.015	88	147051	750.0	705.3	
77 Methyl methacrylate	100	8.187	8.194	-0.007	88	239911	60.0	61.8	
80 2-Nitropropane	41	8.630	8.630	0.000	98	99490	60.0	59.1	
13 Tetrahydrothiophene	60	9.953	9.960	-0.007	90	179076	60.0	59.8	
101 cis-1,4-Dichloro-2-butene	53	11.555	11.562	-0.007	90	280740	60.0	60.1	
116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	98	3816510	30.0	30.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	1837923	30.0	28.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added: 1.00	Units: uL
MV-Supp A_00029	Amount Added: 15.00	Units: uL
MV-ARCH SS A_00093	Amount Added: 2.40	Units: uL

Report Date: 28-Apr-2018 07:57:25 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2324.D

Injection Date:	27-Apr-2018 18:21:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	21
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Apr-2018 18:42:30 ALS Bottle#: 31 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 07:57:26 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:54:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.786	3.772	0.014	0	202158	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	99	1409243	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.539	0.001	87	338412	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	538883	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.543	6.542	0.001	94	1847294	60.0	59.7	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.972	6.971	0.001	98	1641952	60.0	58.6	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	0.000	93	7297167	60.0	56.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	91	2676009	60.0	60.9	
16 Ethylene oxide	43	2.110	2.110	0.000	99	2073316	6000.0	4206.4	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	12678263	6000.0	4709.1	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.478	3.520	-0.042	99	689525	600.0	599.4	
47 Isopropyl ether	87	4.931	4.931	0.000	92	1634879	60.0	62.7	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	3240454	60.0	64.9	
49 Tert-butyl ethyl ether	59	5.573	5.573	0.000	97	4656065	60.0	63.4	
53 Ethyl acetate	43	5.909	5.908	0.001	99	915482	120.0	127.5	
54 Propionitrile	54	5.909	5.922	-0.013	99	800320	600.0	651.5	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	3770652	600.0	625.0	
68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	99	3861620	60.0	62.1	
73 n-Butanol	56	7.780	7.794	-0.014	87	350850	1500.0	1525.6	
77 Methyl methacrylate	100	8.194	8.194	0.000	87	488052	120.0	121.1	
80 2-Nitropropane	41	8.630	8.630	0.000	97	217044	120.0	124.2	
13 Tetrahydrothiophene	60	9.953	9.960	-0.007	90	384777	120.0	124.1	
101 cis-1,4-Dichloro-2-butene	53	11.555	11.562	-0.007	88	595356	120.0	123.3	
116 1,2,3-Trimethylbenzene	105	12.685	12.685	0.001	98	7832265	60.0	60.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	98	3981437	60.0	60.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added: 1.00	Units: uL
MV-Supp A_00029	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00093	Amount Added: 4.80	Units: uL

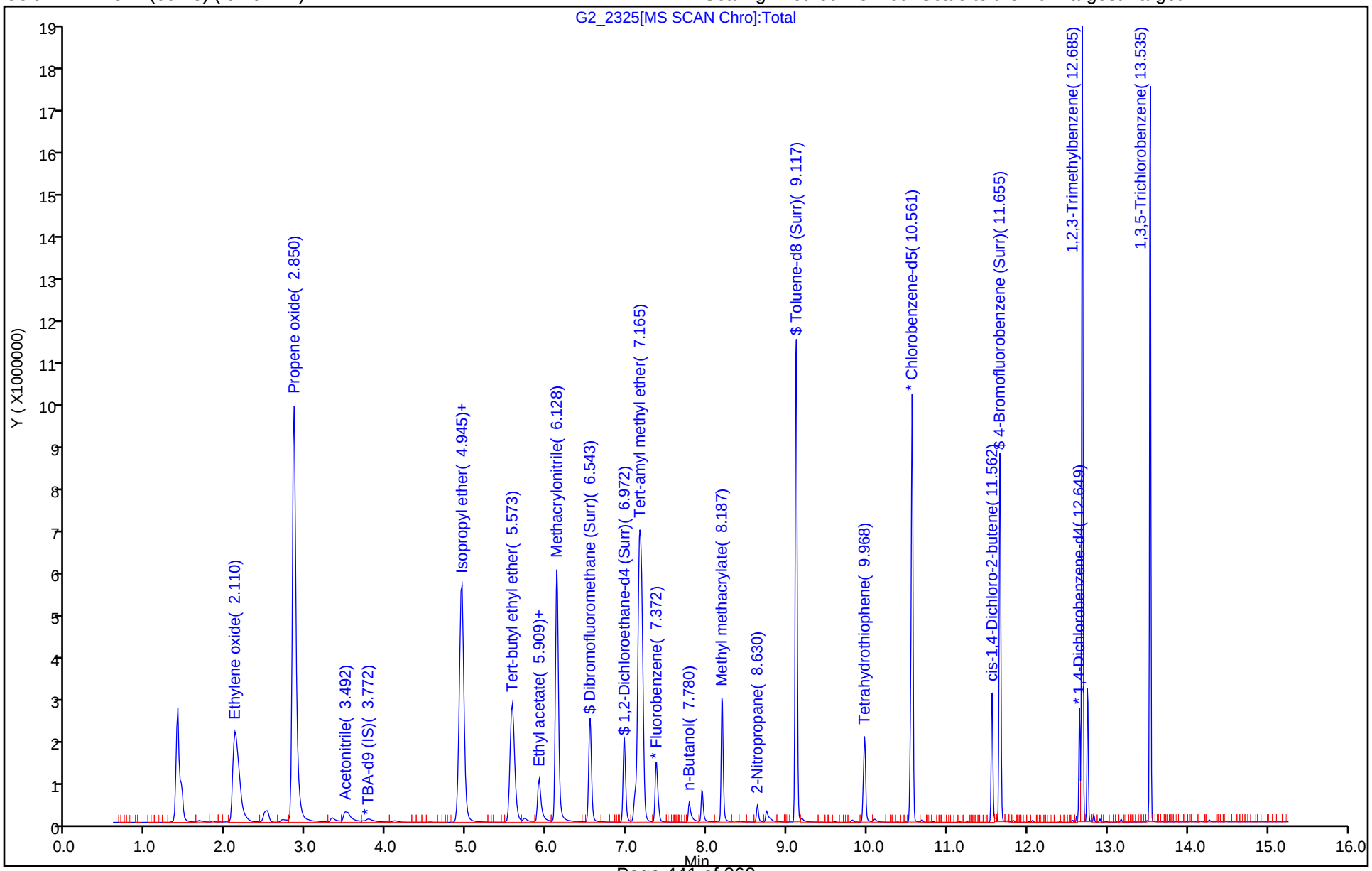
Report Date: 28-Apr-2018 07:57:27 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Injection Date:	27-Apr-2018 18:42:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	22
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Acetonitrile

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

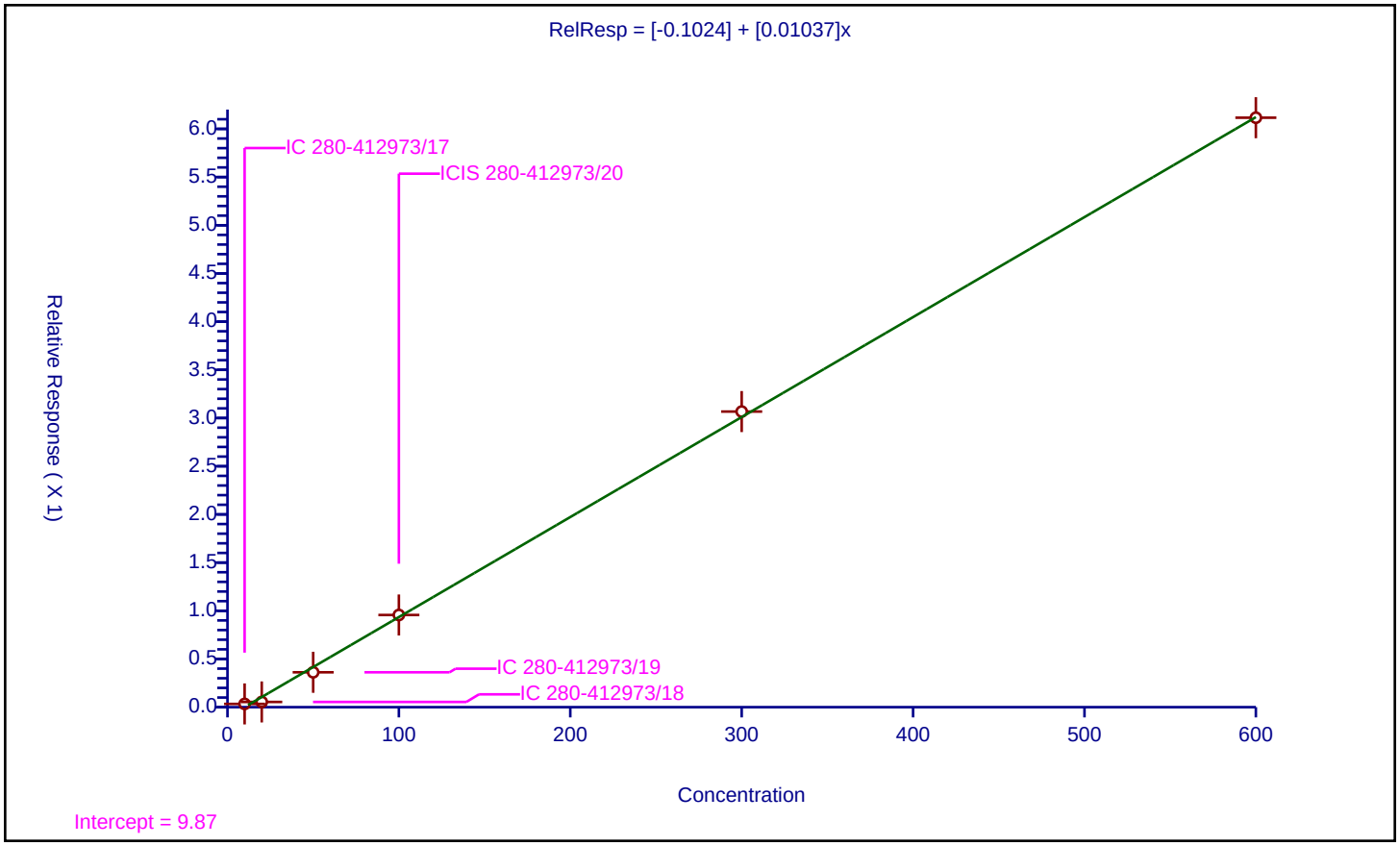
Curve Coefficients

Intercept:	-0.1024
Slope:	0.01037

Error Coefficients

Standard Error:	388000
Relative Standard Error:	20.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	10.0	0.033673	12.5	1435116.0	0.003367	Y
2	IC 280-412973/18	20.0	0.054169	12.5	1384776.0	0.002708	Y
3	IC 280-412973/19	50.0	0.361829	12.5	1399938.0	0.007237	Y
4	ICIS 280-412973/20	100.0	0.956399	12.5	1374936.0	0.009564	Y
5	IC 280-412973/21	300.0	3.066942	12.5	1370498.0	0.010223	Y
6	IC 280-412973/22	600.0	6.116094	12.5	1409243.0	0.010193	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

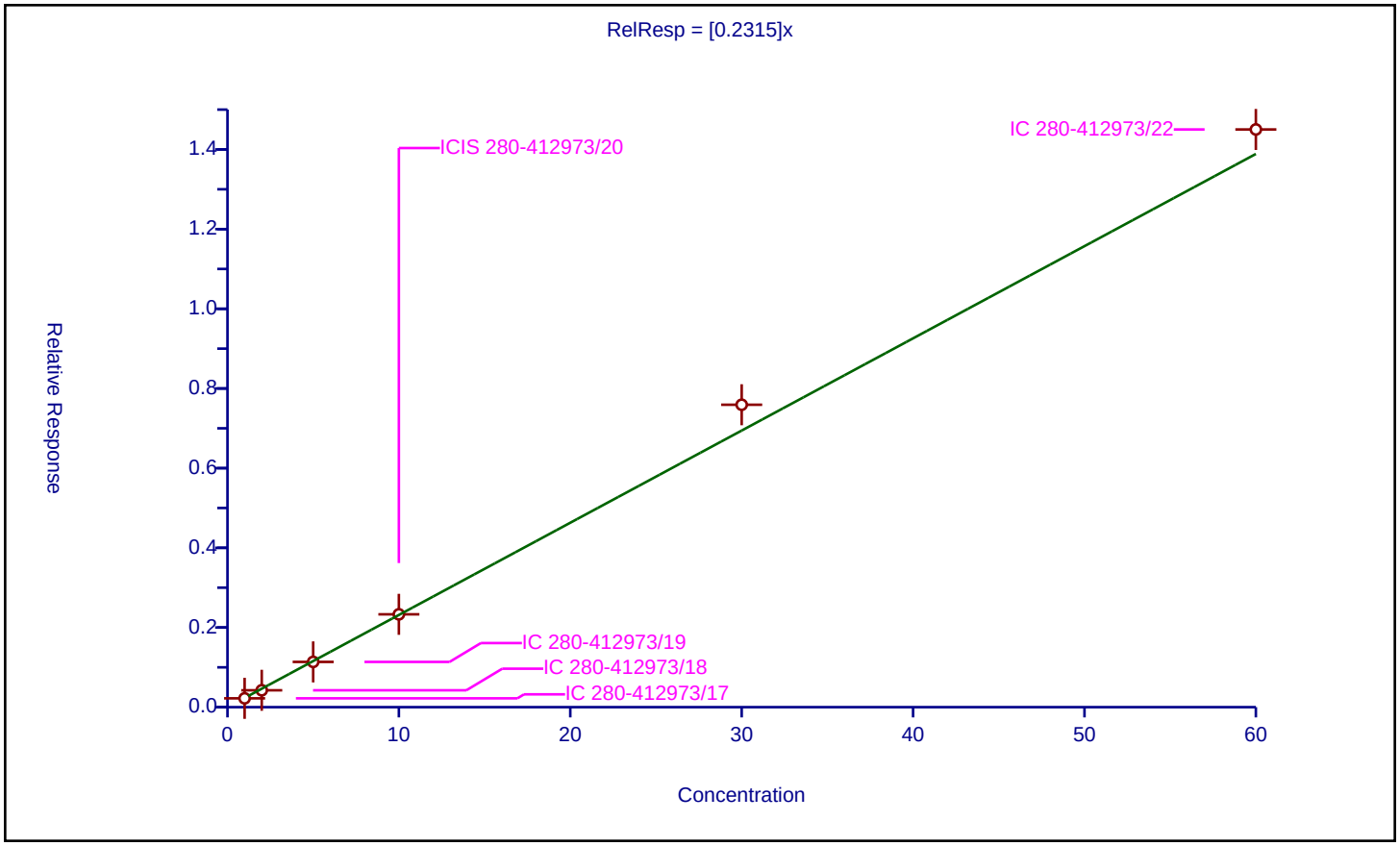
Curve Coefficients

Intercept:	0
Slope:	0.2315

Error Coefficients

Standard Error:	831000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.221907	12.5	1435116.0	0.221907	Y
2	IC 280-412973/18	2.0	0.423498	12.5	1384776.0	0.211749	Y
3	IC 280-412973/19	5.0	1.136434	12.5	1399938.0	0.227287	Y
4	ICIS 280-412973/20	10.0	2.330254	12.5	1374936.0	0.233025	Y
5	IC 280-412973/21	30.0	7.59152	12.5	1370498.0	0.253051	Y
6	IC 280-412973/22	60.0	14.501394	12.5	1409243.0	0.24169	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

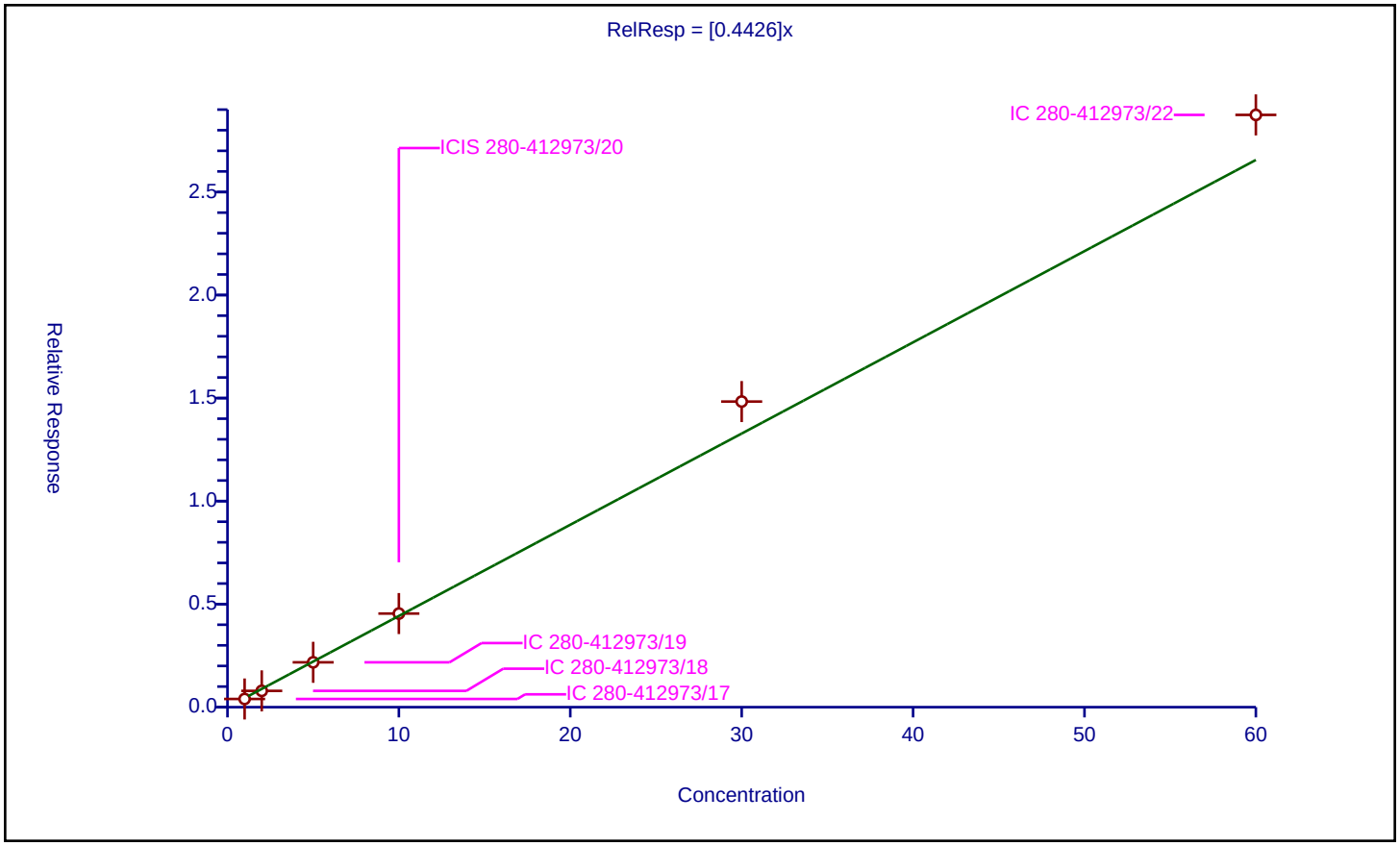
Curve Coefficients

Intercept:	0
Slope:	0.4426

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.397607	12.5	1435116.0	0.397607	Y
2	IC 280-412973/18	2.0	0.790065	12.5	1384776.0	0.395032	Y
3	IC 280-412973/19	5.0	2.176909	12.5	1399938.0	0.435382	Y
4	ICIS 280-412973/20	10.0	4.543166	12.5	1374936.0	0.454317	Y
5	IC 280-412973/21	30.0	14.831233	12.5	1370498.0	0.494374	Y
6	IC 280-412973/22	60.0	28.742861	12.5	1409243.0	0.479048	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

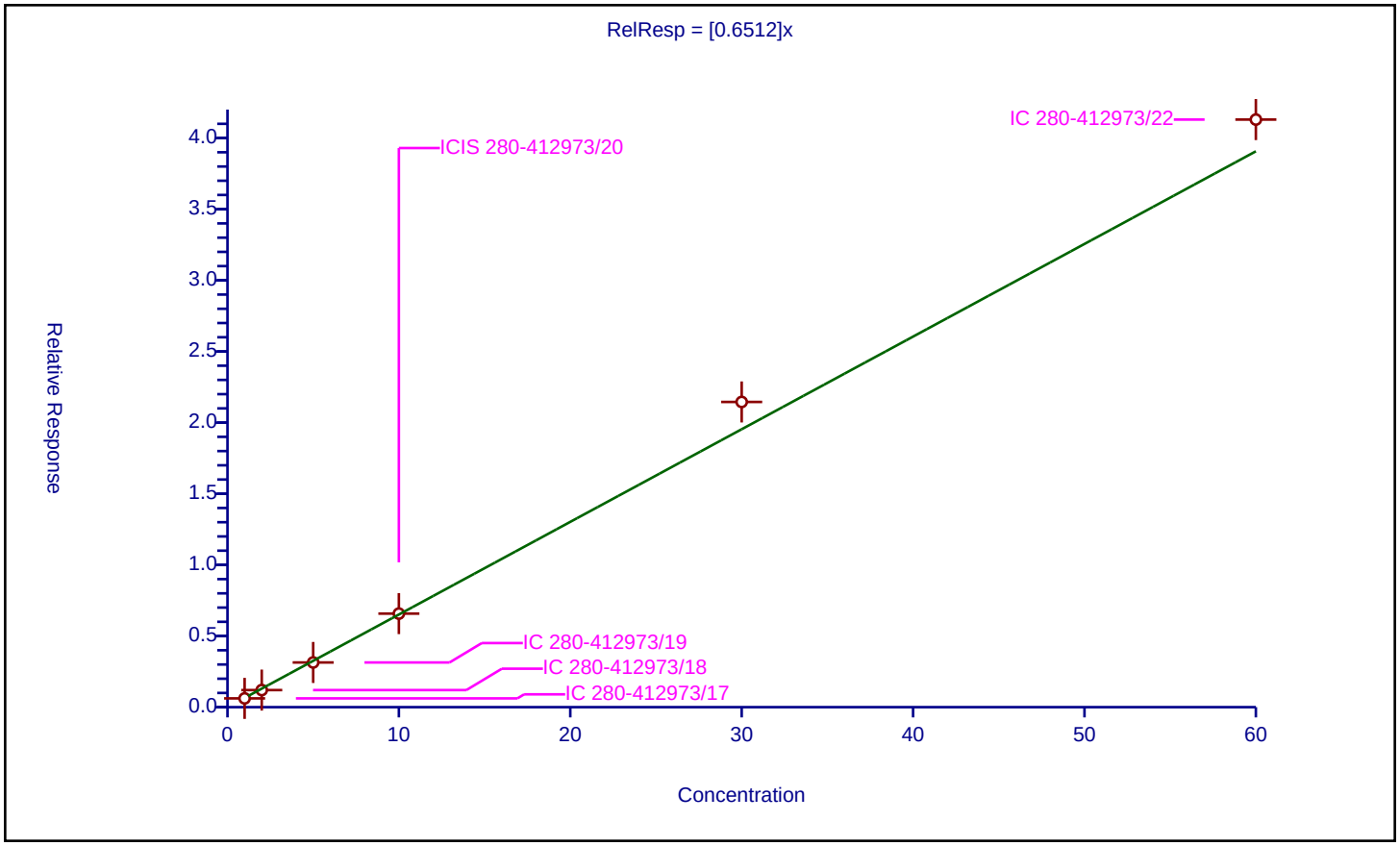
Curve Coefficients

Intercept:	0
Slope:	0.6512

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.616954	12.5	1435116.0	0.616954	Y
2	IC 280-412973/18	2.0	1.201214	12.5	1384776.0	0.600607	Y
3	IC 280-412973/19	5.0	3.142148	12.5	1399938.0	0.62843	Y
4	ICIS 280-412973/20	10.0	6.57527	12.5	1374936.0	0.657527	Y
5	IC 280-412973/21	30.0	21.452156	12.5	1370498.0	0.715072	Y
6	IC 280-412973/22	60.0	41.299345	12.5	1409243.0	0.688322	Y



Calibration / Propionitrile

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

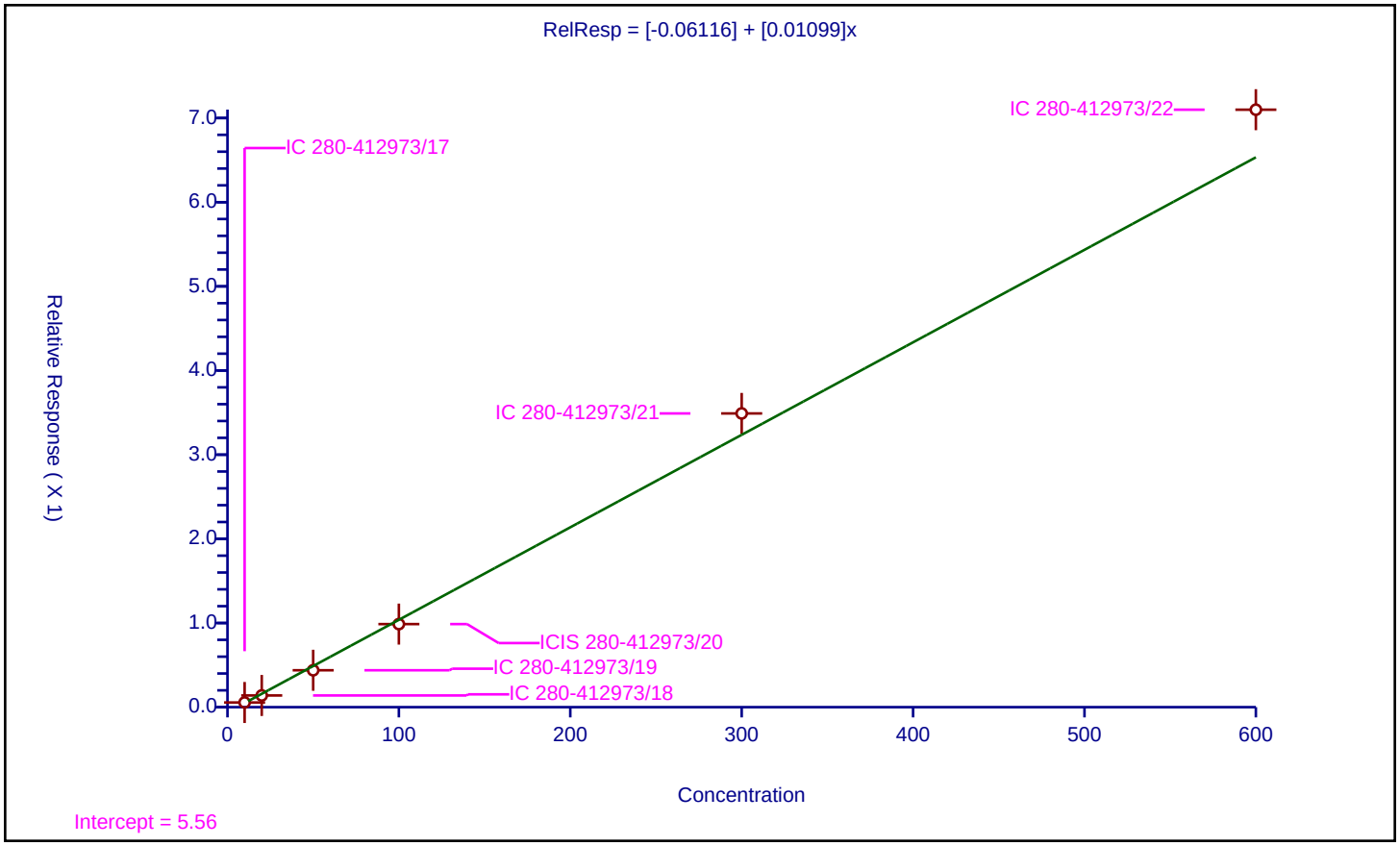
Curve Coefficients

Intercept:	-0.06116
Slope:	0.01099

Error Coefficients

Standard Error:	448000
Relative Standard Error:	9.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	10.0	0.055692	12.5	1435116.0	0.005569	Y
2	IC 280-412973/18	20.0	0.139129	12.5	1384776.0	0.006956	Y
3	IC 280-412973/19	50.0	0.438368	12.5	1399938.0	0.008767	Y
4	ICIS 280-412973/20	100.0	0.986928	12.5	1374936.0	0.009869	Y
5	IC 280-412973/21	300.0	3.489972	12.5	1370498.0	0.011633	Y
6	IC 280-412973/22	600.0	7.098847	12.5	1409243.0	0.011831	Y



Calibration / Ethyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

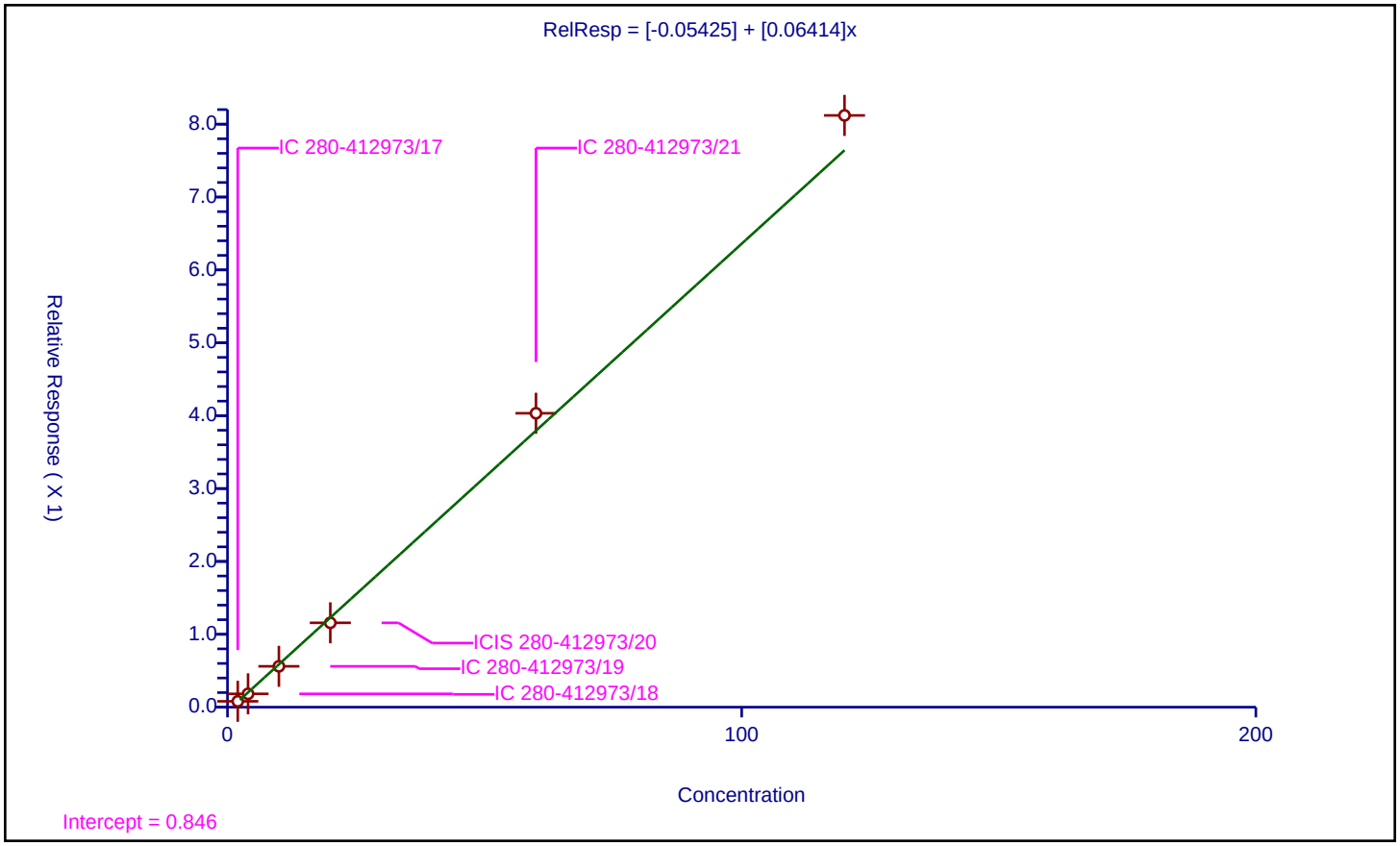
Curve Coefficients

Intercept:	-0.05425
Slope:	0.06414

Error Coefficients

Standard Error:	513000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	2.0	0.08029	12.5	1435116.0	0.040145	Y
2	IC 280-412973/18	4.0	0.182755	12.5	1384776.0	0.045689	Y
3	IC 280-412973/19	10.0	0.560418	12.5	1399938.0	0.056042	Y
4	ICIS 280-412973/20	20.0	1.157418	12.5	1374936.0	0.057871	Y
5	IC 280-412973/21	60.0	4.033333	12.5	1370498.0	0.067222	Y
6	IC 280-412973/22	120.0	8.120335	12.5	1409243.0	0.067669	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

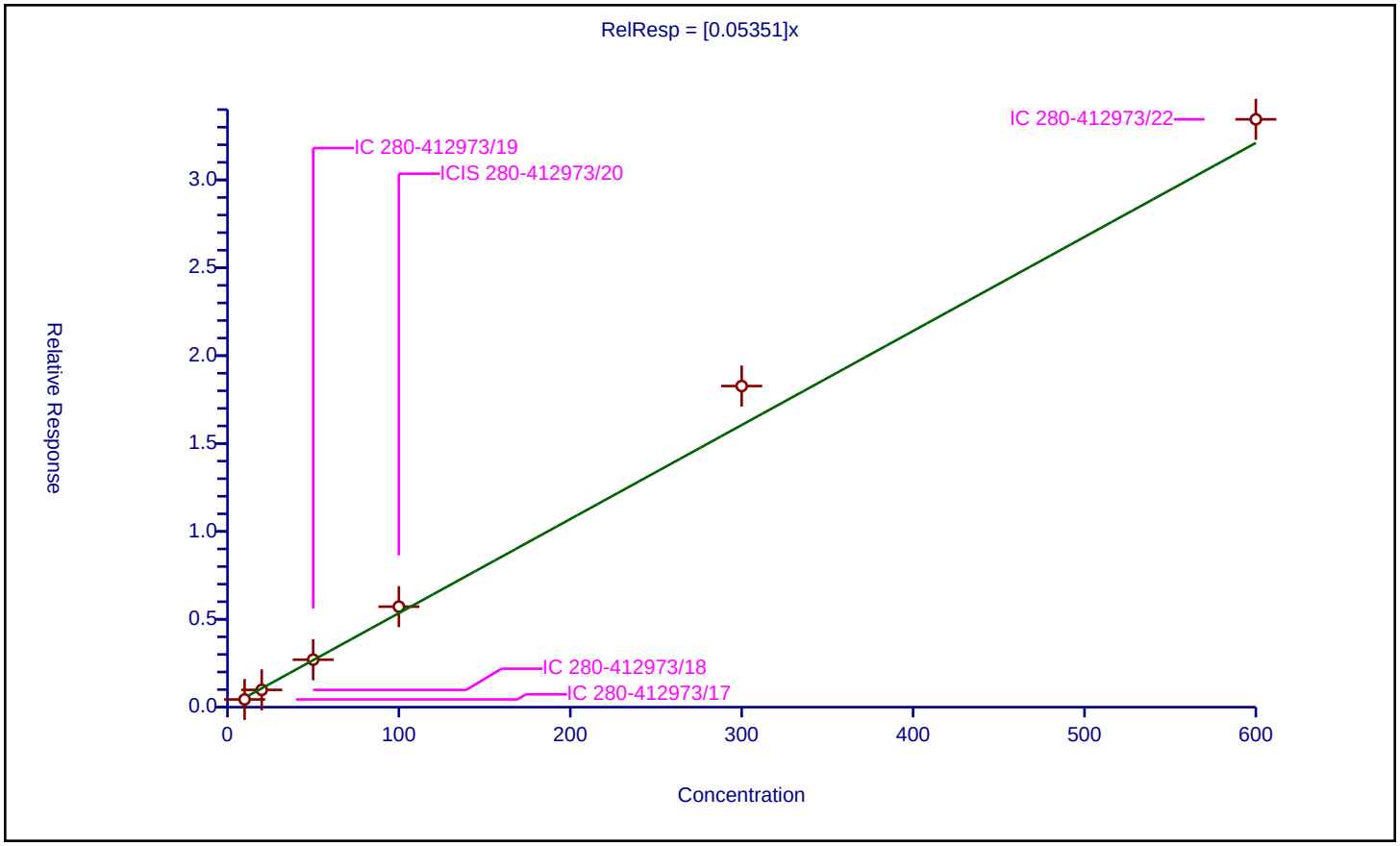
Curve Coefficients

Intercept:	0
Slope:	0.05351

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	11.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	10.0	0.439834	12.5	1435116.0	0.043983	Y
2	IC 280-412973/18	20.0	0.984175	12.5	1384776.0	0.049209	Y
3	IC 280-412973/19	50.0	2.701254	12.5	1399938.0	0.054025	Y
4	ICIS 280-412973/20	100.0	5.718993	12.5	1374936.0	0.05719	Y
5	IC 280-412973/21	300.0	18.272582	12.5	1370498.0	0.060909	Y
6	IC 280-412973/22	600.0	33.445722	12.5	1409243.0	0.055743	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

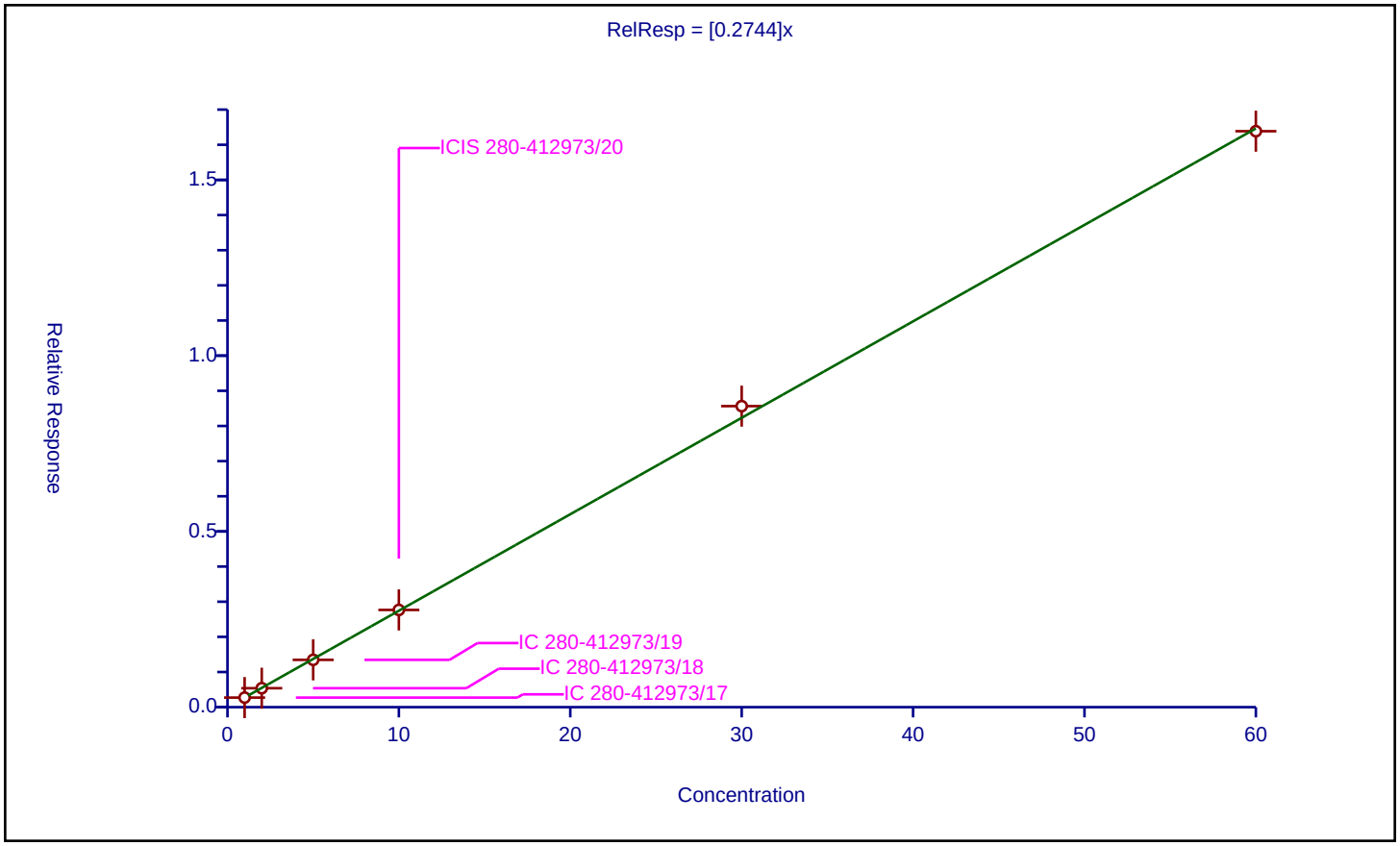
Curve Coefficients

Intercept:	0
Slope:	0.2744

Error Coefficients

Standard Error:	940000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.272138	12.5	1435116.0	0.272138	Y
2	IC 280-412973/18	2.0	0.5396	12.5	1384776.0	0.2698	Y
3	IC 280-412973/19	5.0	1.346158	12.5	1399938.0	0.269232	Y
4	ICIS 280-412973/20	10.0	2.766329	12.5	1374936.0	0.276633	Y
5	IC 280-412973/21	30.0	8.564095	12.5	1370498.0	0.28547	Y
6	IC 280-412973/22	60.0	16.385517	12.5	1409243.0	0.273092	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

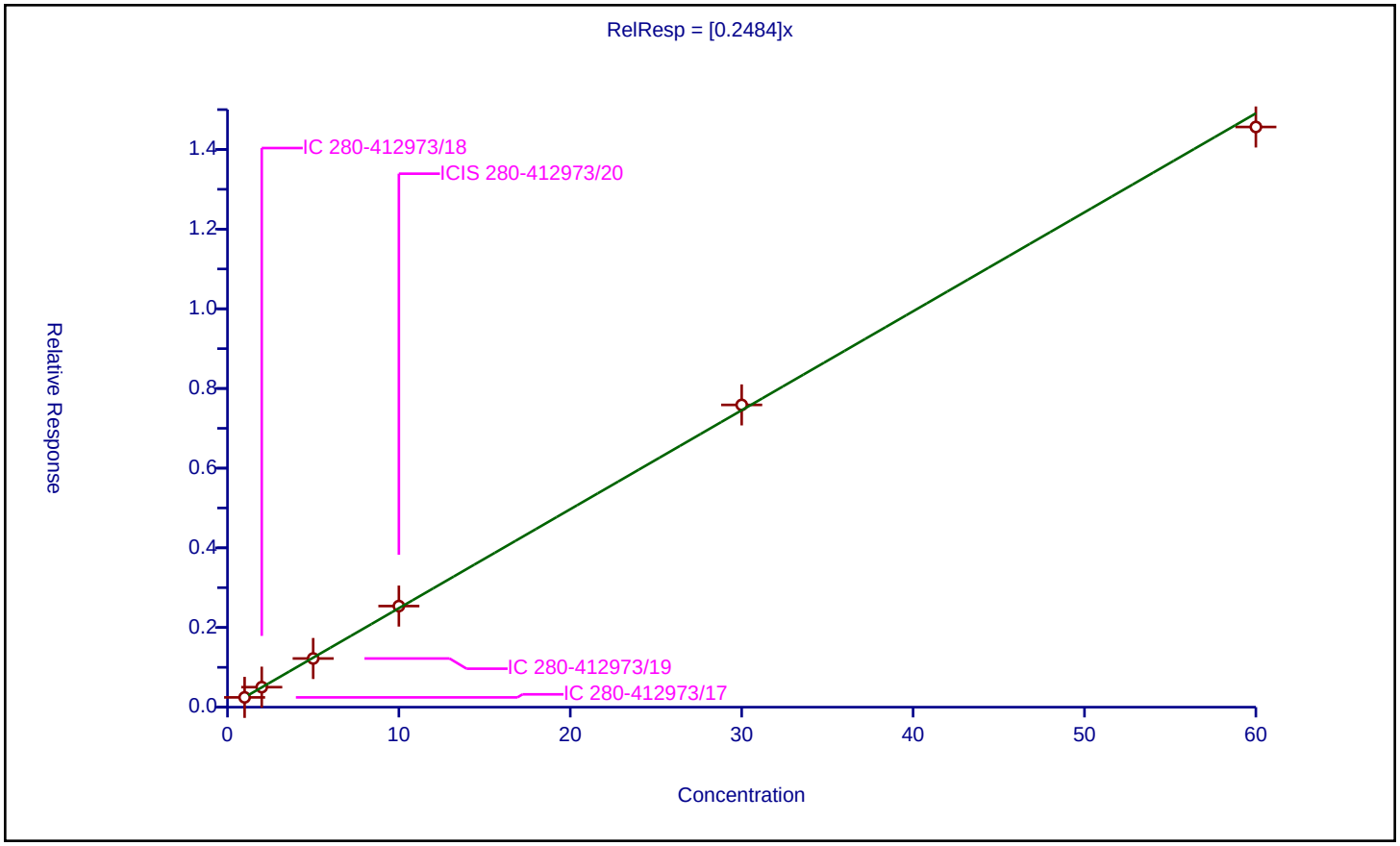
Curve Coefficients

Intercept:	0
Slope:	0.2484

Error Coefficients

Standard Error:	835000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.245668	12.5	1435116.0	0.245668	Y
2	IC 280-412973/18	2.0	0.502347	12.5	1384776.0	0.251173	Y
3	IC 280-412973/19	5.0	1.221751	12.5	1399938.0	0.24435	Y
4	ICIS 280-412973/20	10.0	2.537618	12.5	1374936.0	0.253762	Y
5	IC 280-412973/21	30.0	7.587479	12.5	1370498.0	0.252916	Y
6	IC 280-412973/22	60.0	14.564131	12.5	1409243.0	0.242736	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

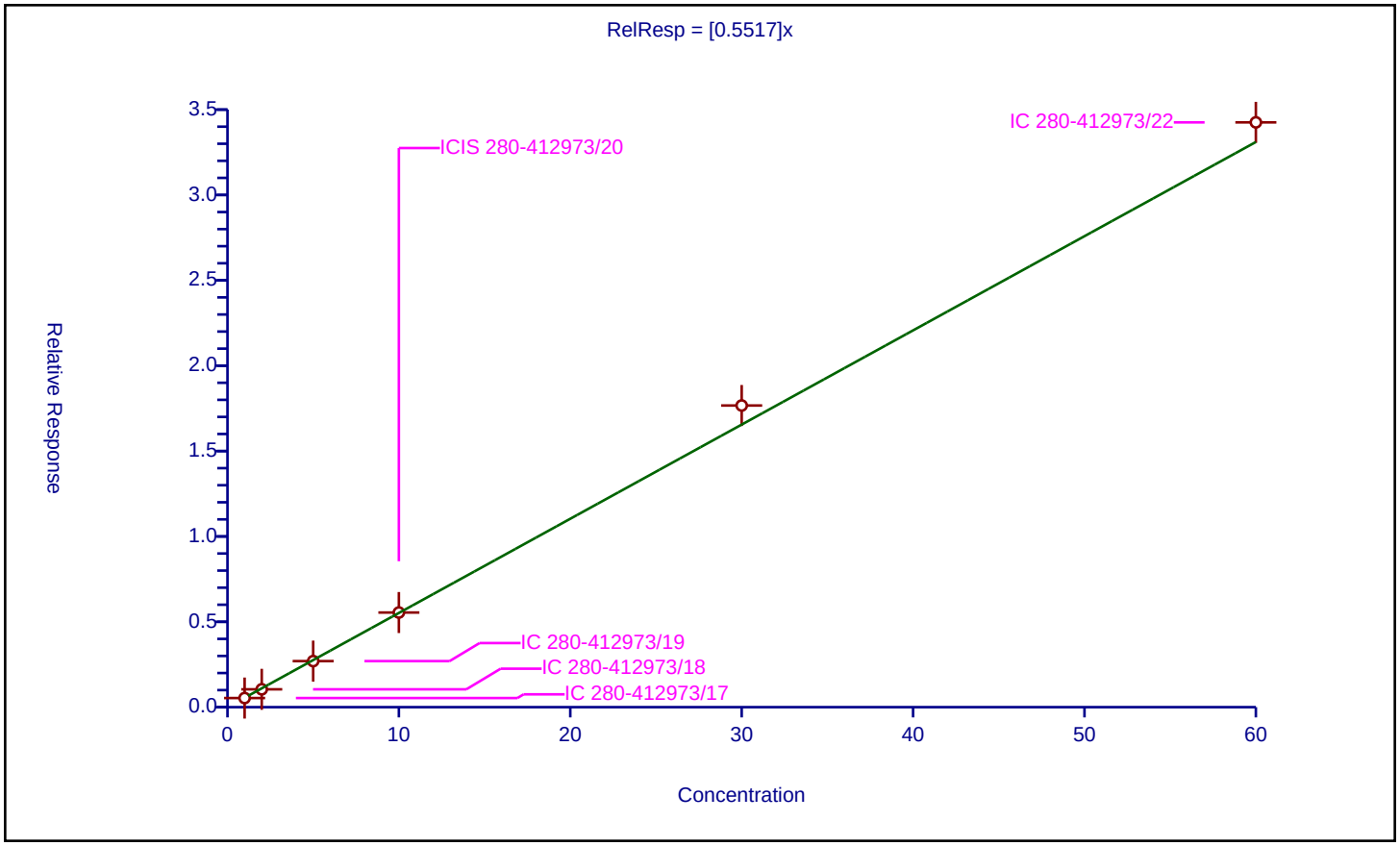
Curve Coefficients

Intercept:	0
Slope:	0.5517

Error Coefficients

Standard Error:	1960000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.533955	12.5	1435116.0	0.533955	Y
2	IC 280-412973/18	2.0	1.045512	12.5	1384776.0	0.522756	Y
3	IC 280-412973/19	5.0	2.697343	12.5	1399938.0	0.539469	Y
4	ICIS 280-412973/20	10.0	5.542949	12.5	1374936.0	0.554295	Y
5	IC 280-412973/21	30.0	17.667574	12.5	1370498.0	0.588919	Y
6	IC 280-412973/22	60.0	34.252609	12.5	1409243.0	0.570877	Y



Calibration / n-Butanol

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

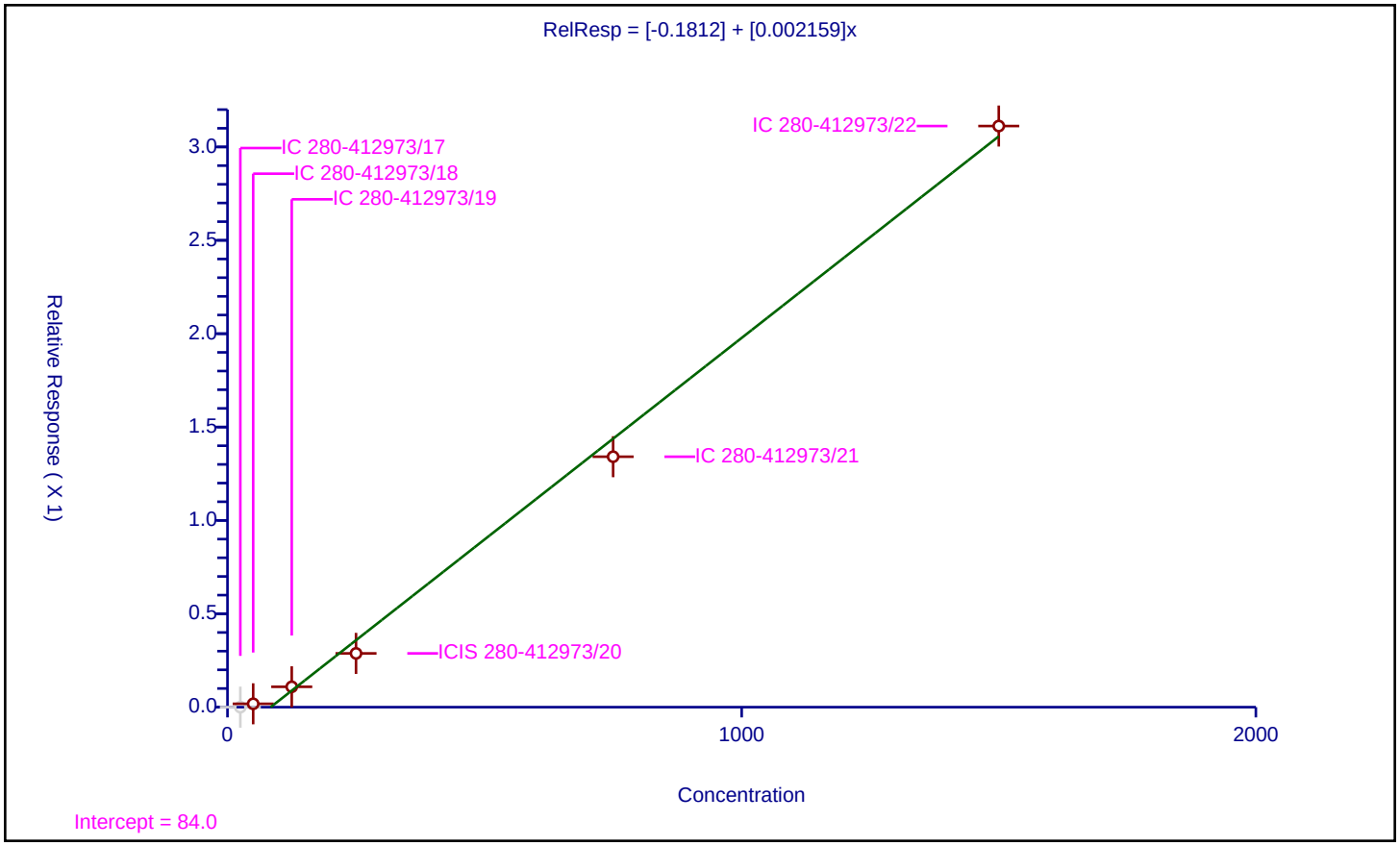
Curve Coefficients

Intercept:	-0.1812
Slope:	0.002159

Error Coefficients

Standard Error:	221000
Relative Standard Error:	49.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	25.0	0.0	12.5	1435116.0	0.0	N
2	IC 280-412973/18	50.0	0.017999	12.5	1384776.0	0.00036	Y
3	IC 280-412973/19	125.0	0.109023	12.5	1399938.0	0.000872	Y
4	ICIS 280-412973/20	250.0	0.287986	12.5	1374936.0	0.001152	Y
5	IC 280-412973/21	750.0	1.341219	12.5	1370498.0	0.001788	Y
6	IC 280-412973/22	1500.0	3.112043	12.5	1409243.0	0.002075	Y



Calibration / Methyl methacrylate

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

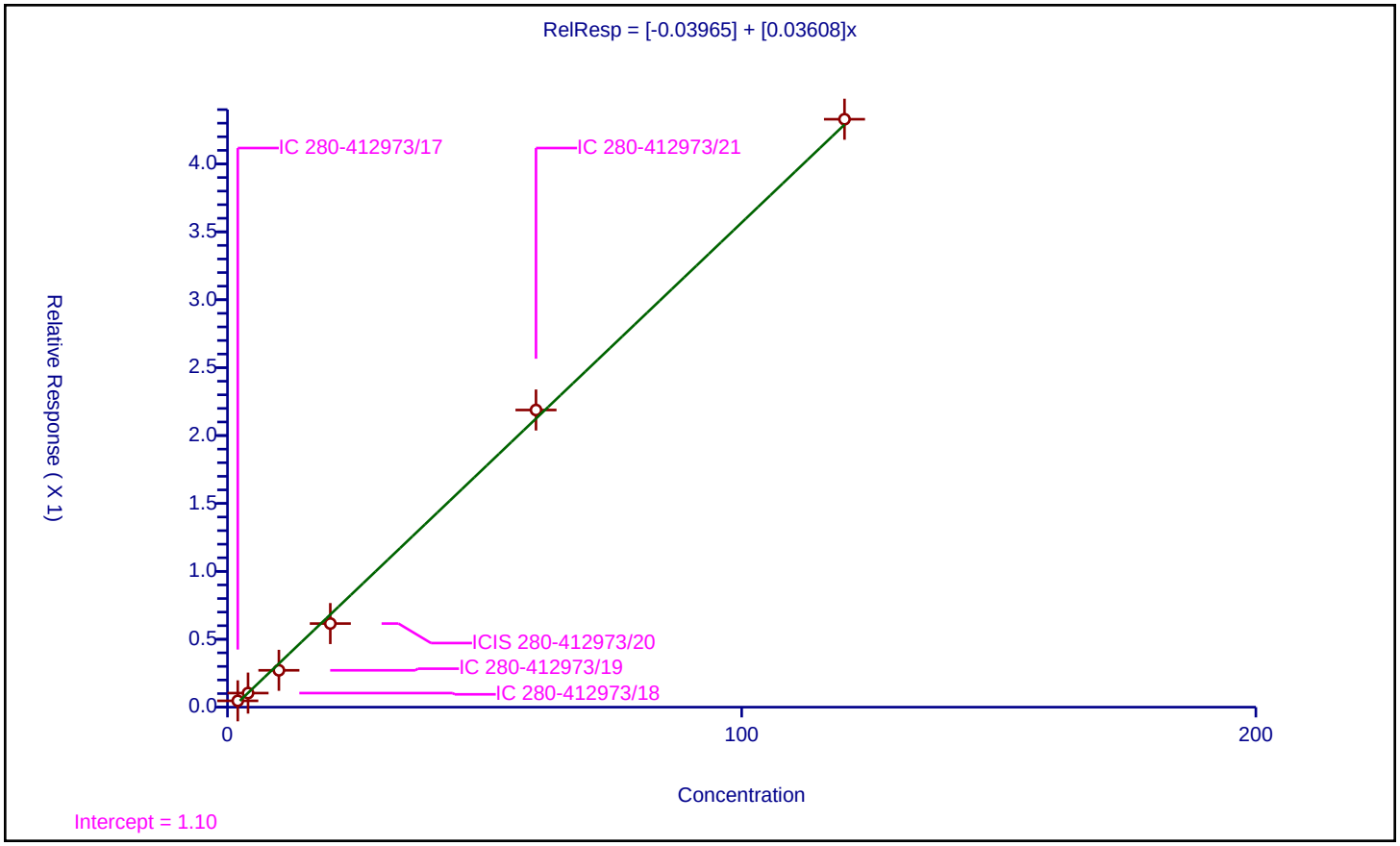
Curve Coefficients

Intercept:	-0.03965
Slope:	0.03608

Error Coefficients

Standard Error:	275000
Relative Standard Error:	13.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	2.0	0.046808	12.5	1435116.0	0.023404	Y
2	IC 280-412973/18	4.0	0.103663	12.5	1384776.0	0.025916	Y
3	IC 280-412973/19	10.0	0.271378	12.5	1399938.0	0.027138	Y
4	ICIS 280-412973/20	20.0	0.615665	12.5	1374936.0	0.030783	Y
5	IC 280-412973/21	60.0	2.188174	12.5	1370498.0	0.03647	Y
6	IC 280-412973/22	120.0	4.329026	12.5	1409243.0	0.036075	Y



Calibration / 2-Nitropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

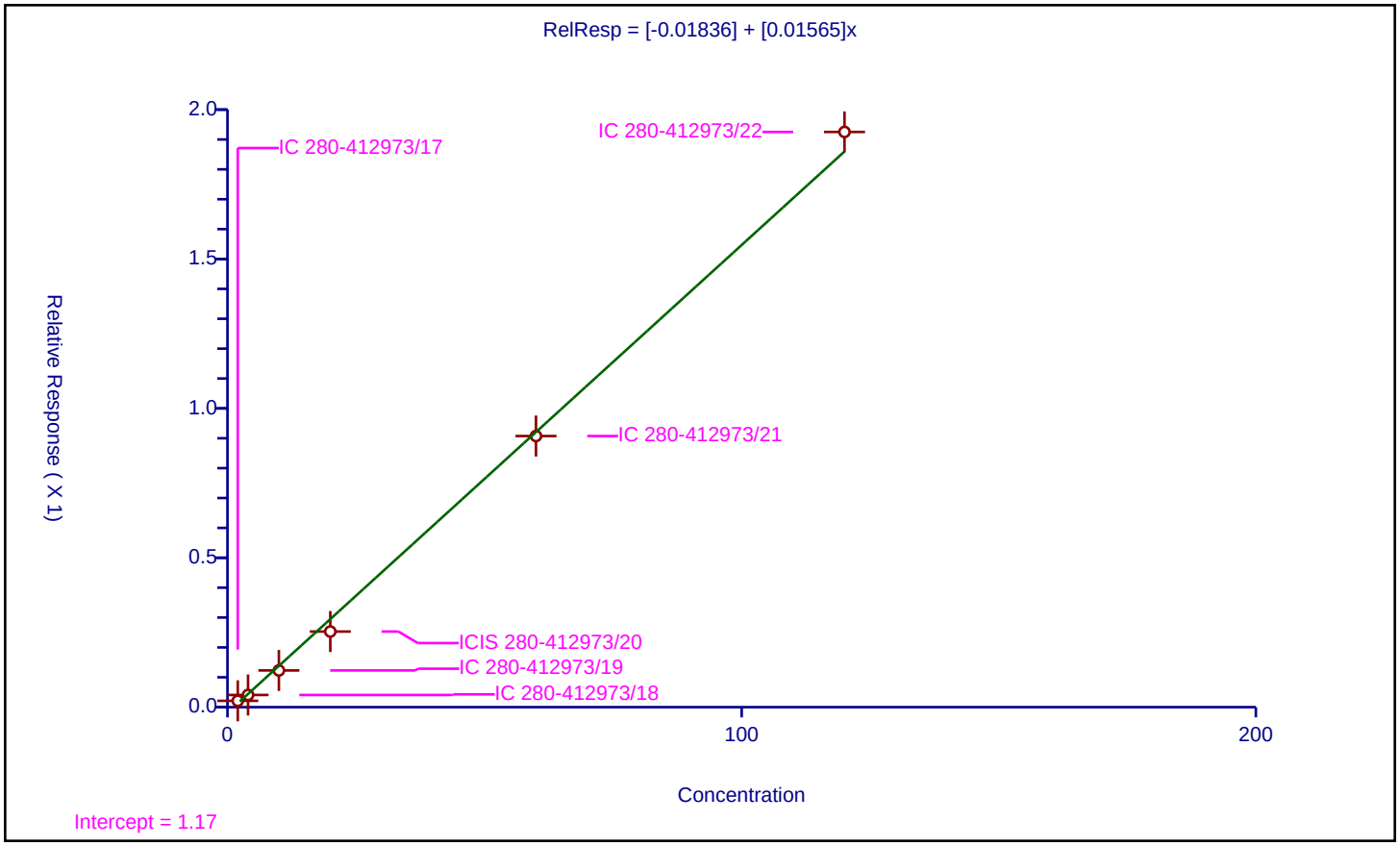
Curve Coefficients

Intercept:	-0.01836
Slope:	0.01565

Error Coefficients

Standard Error:	120000
Relative Standard Error:	16.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	2.0	0.021235	12.5	1435116.0	0.010618	Y
2	IC 280-412973/18	4.0	0.040774	12.5	1384776.0	0.010193	Y
3	IC 280-412973/19	10.0	0.122934	12.5	1399938.0	0.012293	Y
4	ICIS 280-412973/20	20.0	0.253075	12.5	1374936.0	0.012654	Y
5	IC 280-412973/21	60.0	0.907426	12.5	1370498.0	0.015124	Y
6	IC 280-412973/22	120.0	1.925183	12.5	1409243.0	0.016043	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

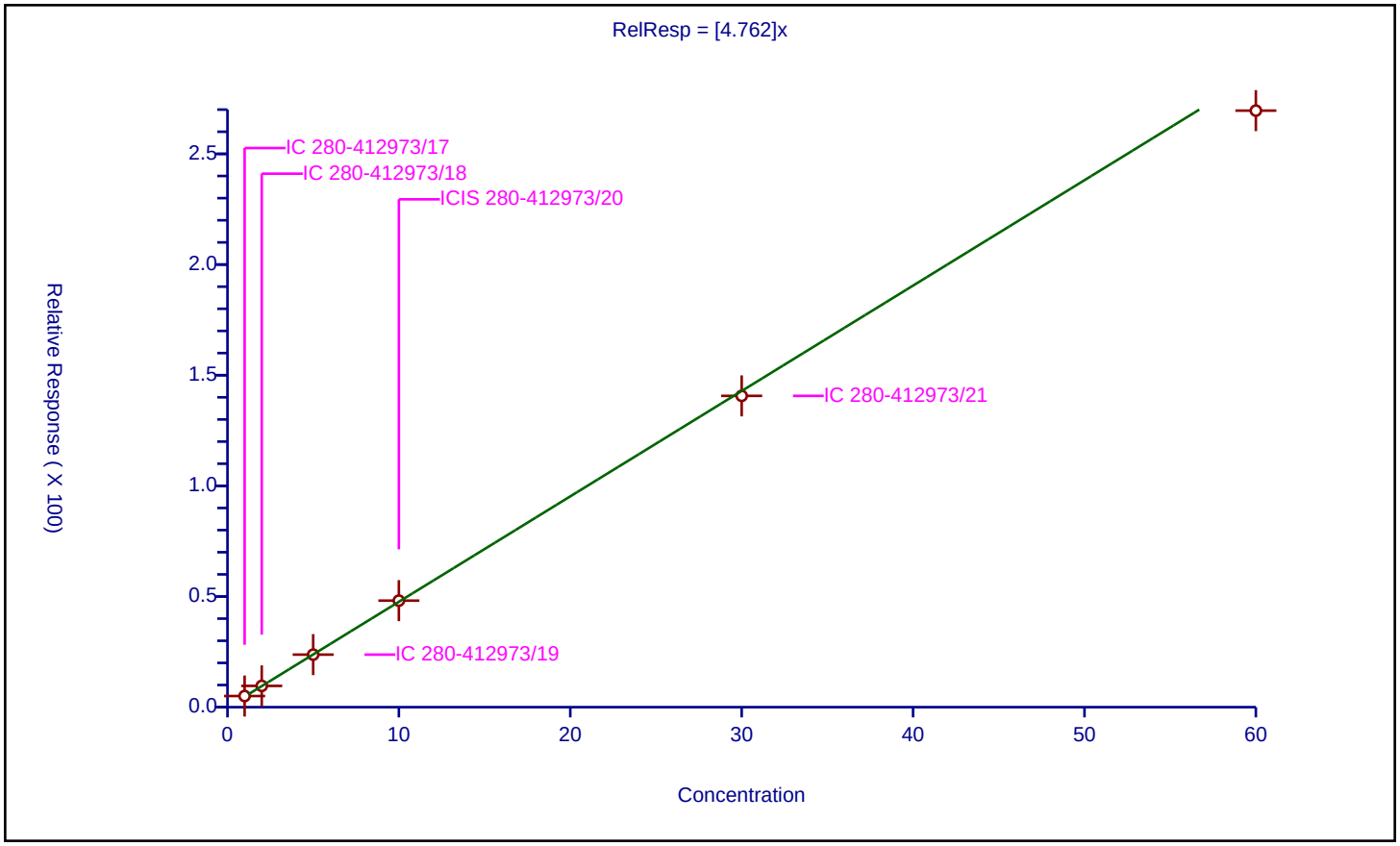
Curve Coefficients

Intercept:	0
Slope:	4.762

Error Coefficients

Standard Error:	3720000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	5.028113	12.5	339792.0	5.028113	Y
2	IC 280-412973/18	2.0	9.605198	12.5	330653.0	4.802599	Y
3	IC 280-412973/19	5.0	23.739337	12.5	333505.0	4.747867	Y
4	ICIS 280-412973/20	10.0	48.136235	12.5	329823.0	4.813624	Y
5	IC 280-412973/21	30.0	140.654639	12.5	331072.0	4.688488	Y
6	IC 280-412973/22	60.0	269.537095	12.5	338412.0	4.492285	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

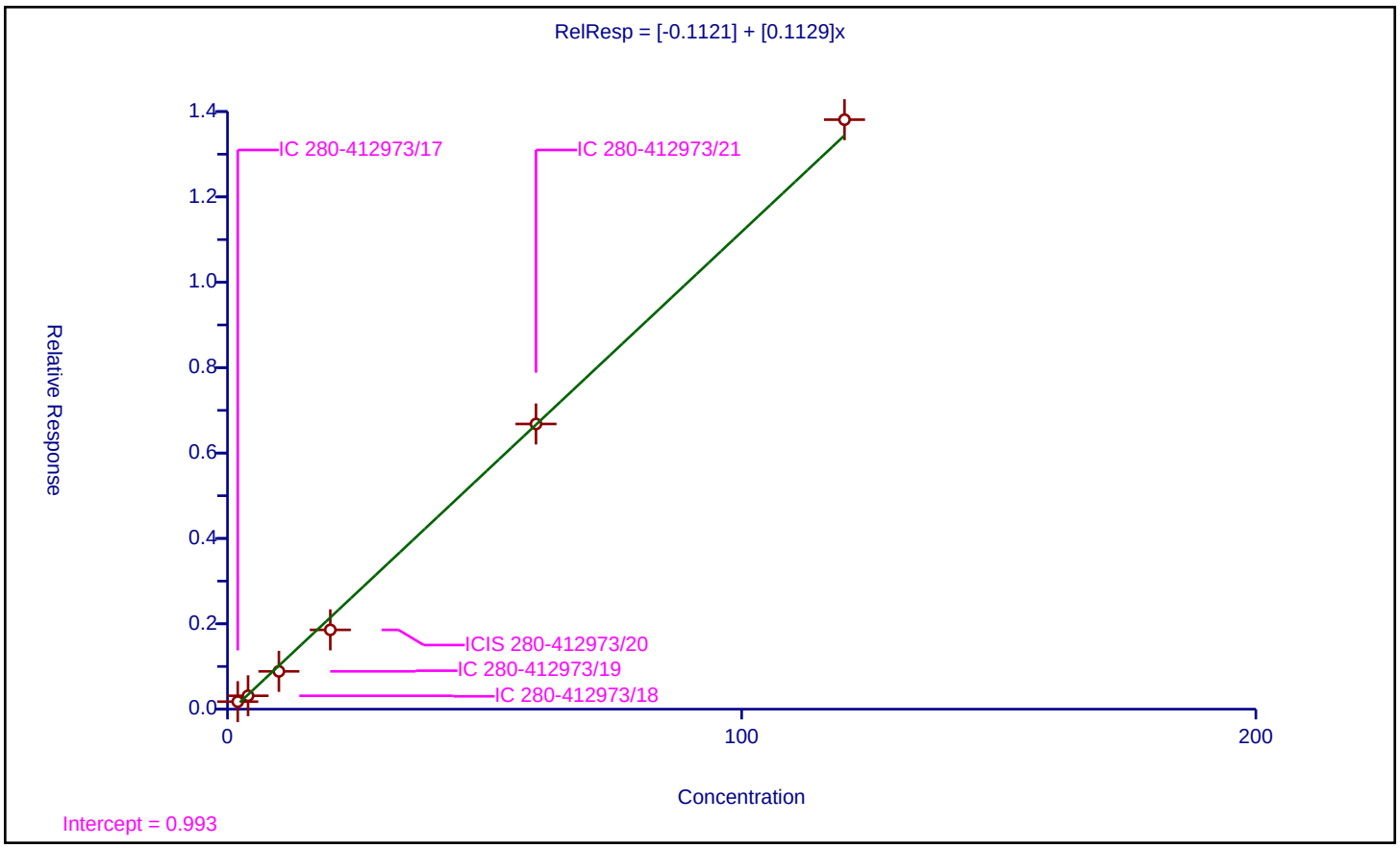
Curve Coefficients

Intercept:	-0.1121
Slope:	0.1129

Error Coefficients

Standard Error:	332000
Relative Standard Error:	16.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	2.0	0.175534	12.5	528458.0	0.087767	Y
2	IC 280-412973/18	4.0	0.313318	12.5	516209.0	0.078329	Y
3	IC 280-412973/19	10.0	0.885378	12.5	519044.0	0.088538	Y
4	ICIS 280-412973/20	20.0	1.857472	12.5	521697.0	0.092874	Y
5	IC 280-412973/21	60.0	6.681142	12.5	525247.0	0.111352	Y
6	IC 280-412973/22	120.0	13.809955	12.5	538883.0	0.115083	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

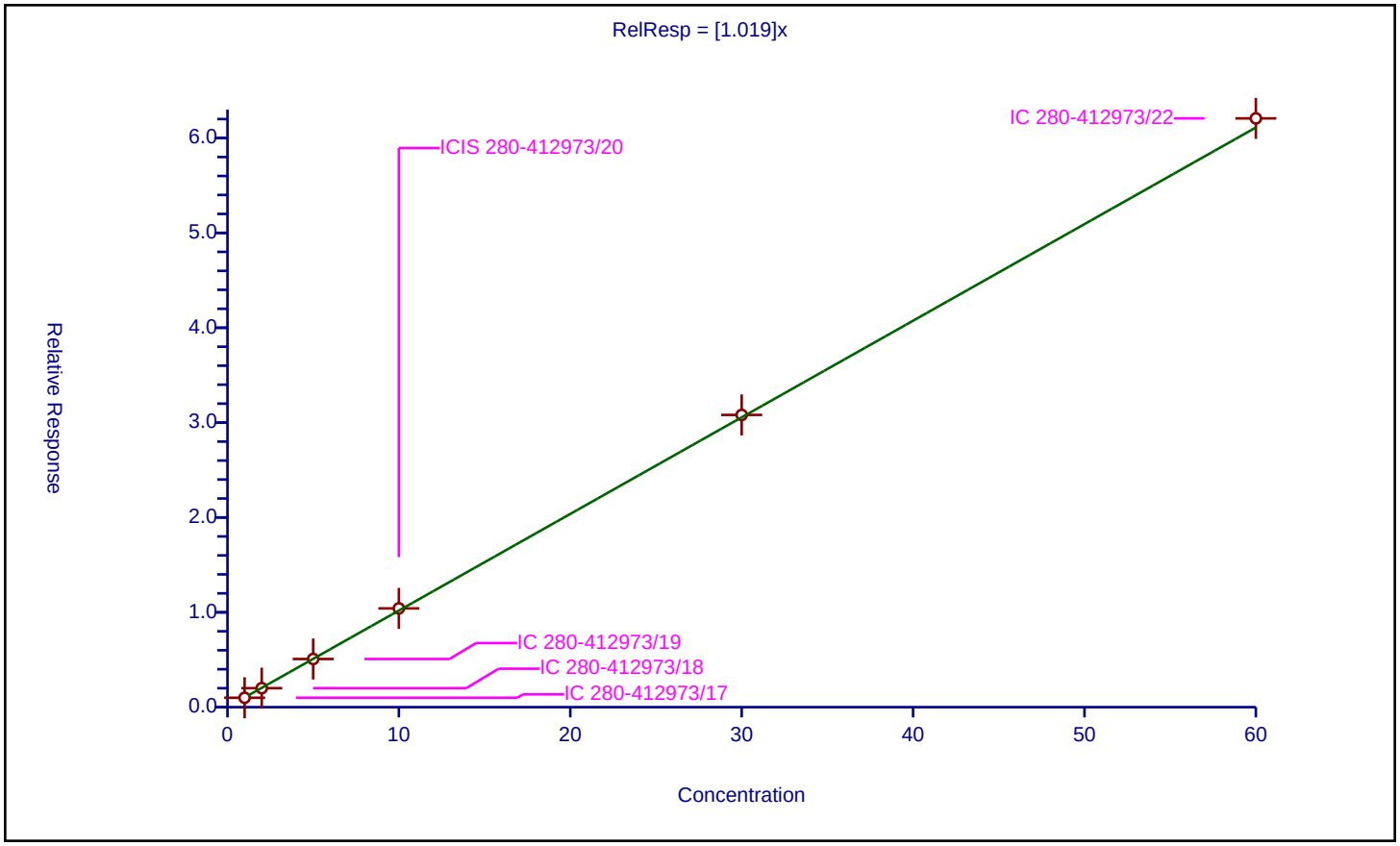
Curve Coefficients

Intercept:	0
Slope:	1.019

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	0.991446	12.5	528458.0	0.991446	Y
2	IC 280-412973/18	2.0	2.003283	12.5	516209.0	1.001641	Y
3	IC 280-412973/19	5.0	5.0764	12.5	519044.0	1.01528	Y
4	ICIS 280-412973/20	10.0	10.4133	12.5	521697.0	1.04133	Y
5	IC 280-412973/21	30.0	30.810957	12.5	525247.0	1.027032	Y
6	IC 280-412973/22	60.0	62.073052	12.5	538883.0	1.034551	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

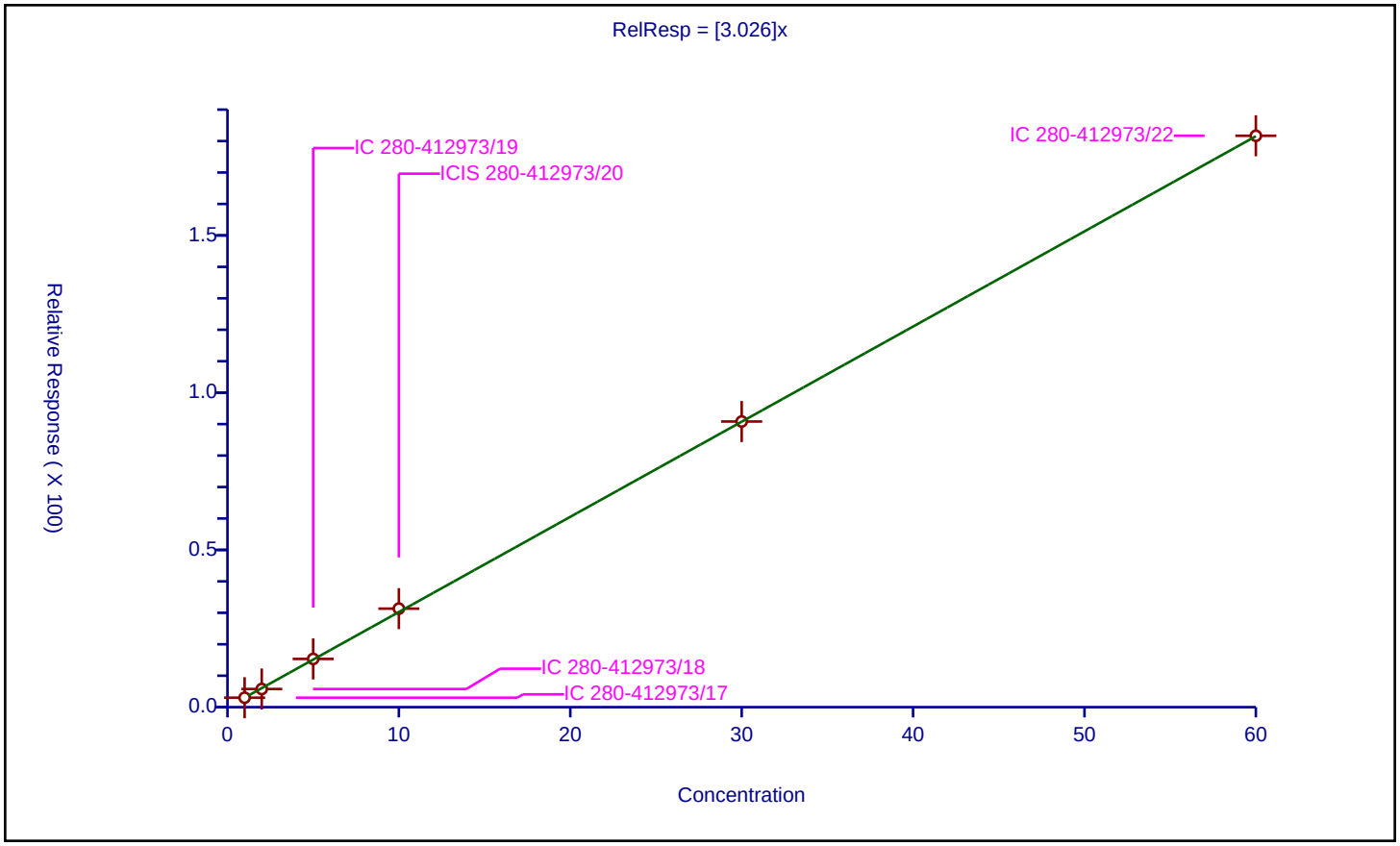
Curve Coefficients

Intercept:	0
Slope:	3.026

Error Coefficients

Standard Error:	3950000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 280-412973/17	1.0	3.008352	12.5	528458.0	3.008352	Y
2	IC 280-412973/18	2.0	5.779151	12.5	516209.0	2.889576	Y
3	IC 280-412973/19	5.0	15.335477	12.5	519044.0	3.067095	Y
4	ICIS 280-412973/20	10.0	31.333537	12.5	521697.0	3.133354	Y
5	IC 280-412973/21	30.0	90.826554	12.5	525247.0	3.027552	Y
6	IC 280-412973/22	60.0	181.678235	12.5	538883.0	3.027971	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-413564/11	G2_2537.D
Level 2	STD01 280-413564/12	G2_2538.D
Level 3	STD02 280-413564/13	G2_2539.D
Level 4	STD05 280-413564/14	G2_2540.D
Level 5	ICIS 280-413564/15	G2_2541.D
Level 6	STD30 280-413564/16	G2_2542.D
Level 7	STD60 280-413564/17	G2_2543.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethyl ether	0.1472 0.1776	0.1543 0.1698	0.1579	0.1633	0.1788	Ave		0.1641				7.3		15.0			
Acrolein	+++++ 0.0176	0.0105 0.0175	0.0122	0.0144	0.0164	Lin2	-0.073	0.0170							0.9960		0.9900
1,1-Dichloroethene	0.3138 0.3193	0.2935 0.2984	0.3032	0.2939	0.3139	Ave		0.3052				3.4		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3097 0.2826	0.2749 0.2685	0.2749	0.2726	0.2828	Ave		0.2809				4.9		15.0			
Iodomethane	0.4886 0.4936	0.4471 0.4744	0.4518	0.4591	0.4834	Ave		0.4712				3.9		15.0			
Carbon disulfide	1.3030 1.2018	1.1798 1.1184	1.1372	1.1600	1.2011	Ave		1.1859				5.1		15.0			
3-Chloro-1-propene	0.5104 0.5497	0.4880 0.5026	0.5134	0.5140	0.5481	Ave		0.5180				4.4		15.0			
Methyl acetate	+++++ 0.0800	0.0587 0.0778	0.0646	0.0671	0.0768	Lin2	-0.041	0.0772							0.9970		0.9900
Methylene Chloride	0.8956 0.2895	0.4738 0.2751	0.3731	0.3198	0.3079	Lin2	0.1844	0.2827							0.9990		0.9900
t-Butyl alcohol	+++++ 0.0097	0.0088 0.0103	0.0087	0.0092	0.0102	Lin2	-0.014	0.0099							0.9970		0.9900
Acrylonitrile	+++++ 0.0396	0.0242 0.0397	0.0278	0.0329	0.0390	Lin2	-0.165	0.0390							0.9950		0.9900
trans-1,2-Dichloroethene	0.3216 0.3369	0.3089 0.3210	0.3095	0.3247	0.3333	Ave		0.3223				3.3		15.0			
Methyl tert-butyl ether	0.5488 0.5966	0.5416 0.5802	0.5495	0.5451	0.6076	Ave		0.5671				4.8		15.0			
Hexane	2.4770 2.6776	2.3956 2.4810	2.5339	2.4614	2.6550	Ave		2.5259				4.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloroethane	0.6032 0.6230	0.5952 0.5815	0.6026	0.6098	0.6192	Ave		0.6049			0.1000	2.3		15.0			
Vinyl acetate	+++++ 0.2932	0.1230 0.2936	0.1674	0.2128	0.2589	Lin2	-0.345	0.2780							0.9900		0.9900
2,2-Dichloropropane	1.0252 0.5909	0.6923 0.5449	0.6364	0.6018	0.6051	Lin2	0.1353	0.5708							0.9990		0.9900
cis-1,2-Dichloroethene	0.3000 0.3474	0.3054 0.3343	0.3111	0.3212	0.3374	Ave		0.3224				5.5		15.0			
Bromochloromethane	0.0749 0.1123	0.0999 0.1124	0.1015	0.1034	0.1104	Lin2	-0.011	0.1100							0.9990		0.9900
Tetrahydrofuran	+++++ 0.0329	+++++ 0.0336	0.0259	0.0279	0.0334	Ave		0.0307				11.6		15.0			
sec-Butyl Alcohol	+++++ 0.0062	0.0021 0.0073	0.0032	0.0043	0.0052	Lin1	-0.216	0.0070							0.9900		0.9900
Chloroform	0.5681 0.5595	0.5498 0.5211	0.5530	0.5450	0.5594	Ave		0.5508				2.7		30.0			
1,1,1-Trichloroethane	0.5631 0.5786	0.5402 0.5345	0.5364	0.5423	0.5634	Ave		0.5512				3.1		15.0			
Cyclohexane	0.6967 0.6932	0.6537 0.6512	0.6293	0.6566	0.6778	Ave		0.6655				3.7		15.0			
Carbon tetrachloride	0.5245 0.5232	0.4451 0.4908	0.4625	0.4771	0.5005	Ave		0.4891				6.1		15.0			
1,1-Dichloropropene	0.4455 0.5166	0.4560 0.4909	0.4740	0.4851	0.5012	Ave		0.4813				5.2		15.0			
Benzene	1.3931 1.3173	1.2867 1.2327	1.2659	1.2522	1.3077	Ave		1.2937				4.1		15.0			
1,2-Dichloroethane	0.3357 0.3085	0.3018 0.2891	0.3024	0.2965	0.3149	Ave		0.3070				4.9		15.0			
Isobutyl alcohol	0.0174 0.0156	0.0163 0.0140	0.0162	0.0157	0.0161	Ave		0.0159				6.5		15.0			
Trichloroethene	0.3405 0.3531	0.3285 0.3388	0.3228	0.3270	0.3421	Ave		0.3361				3.1		15.0			
2-Pentanone	+++++ 0.0891	0.0595 0.0881	0.0648	0.0752	0.0866	Lin2	-0.125	0.0868							0.9960		0.9900
Methylcyclohexane	0.5473 0.5718	0.5067 0.5245	0.5286	0.5409	0.5656	Ave		0.5408				4.3		15.0			
1,2-Dichloropropane	0.3058 0.3046	0.2785 0.2909	0.2865	0.2903	0.3001	Ave		0.2938				3.4		30.0			
Dibromomethane	0.1264 0.1182	0.1103 0.1177	0.1089	0.1094	0.1159	Ave		0.1153				5.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	+++++ 0.0008	+++++ 0.0010	0.0003	0.0006	0.0009	Lin2	-0.025	0.0009							0.9940		0.9900
Bromodichloromethane	0.3032 0.3656	0.3016 0.3537	0.3107	0.3251	0.3513	Ave		0.3302				8.0		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0806	0.0437 0.0856	0.0506	0.0571	0.0685	Lin1	-0.063	0.0838							0.9950		0.9900
cis-1,3-Dichloropropene	1.2923 1.8392	1.3070 1.7646	1.4464	1.4958	1.7050	Lin1	-0.305	1.7756							0.9980		0.9900
Toluene	+++++ 1.3693	1.3613 1.2607	1.3191	1.3292	1.3796	Ave		1.3365				3.3		30.0			
trans-1,3-Dichloropropene	+++++ 0.3266	0.2241 0.3227	0.2542	0.2660	0.3071	Lin1	-0.135	0.3250							0.9990		0.9900
Ethyl methacrylate	0.4584 0.8913	0.5030 0.9226	0.5604	0.6632	0.8035	Lin1	-0.286	0.8976							0.9950		0.9900
1,1,2-Trichloroethane	0.1603 0.1615	0.1521 0.1602	0.1579	0.1555	0.1620	Ave		0.1585				2.3		15.0			
Tetrachloroethene	1.2437 1.2917	1.2461 1.2604	1.2213	1.1835	1.2467	Ave		1.2419				2.7		15.0			
1,3-Dichloropropane	1.2759 1.3581	1.2918 1.3127	1.2764	1.2716	1.3612	Ave		1.3068				3.0		15.0			
Dibromochloromethane	+++++ 0.8880	0.6384 0.8961	0.7029	0.7136	0.7998	Lin2	-0.237	0.8462							0.9940		0.9900
1,2-Dibromoethane (EDB)	0.5652 0.6605	0.5506 0.6643	0.5750	0.5811	0.6345	Ave		0.6045				7.8		15.0			
1-Chlorohexane	2.5476 2.2557	2.2145 2.1156	2.0992	2.1634	2.2441	Ave		2.2343				6.8		15.0			
Chlorobenzene	3.9930 3.7606	3.6558 3.5645	3.7367	3.6041	3.7461	Ave		3.7230			0.3000	3.8		15.0			
1,1,1,2-Tetrachloroethane	1.3357 1.3104	1.0967 1.2724	1.1411	1.1358	1.2342	Ave		1.2181				7.7		15.0			
Ethylbenzene	2.3929 2.3266	2.1540 2.2161	2.1521	2.1648	2.2215	Ave		2.2326				4.2		30.0			
m-Xylene & p-Xylene	2.8681 2.7898	2.5124 2.6589	2.5908	2.5848	2.6949	Ave		2.6714				4.7		15.0			
o-Xylene	2.2415 2.6005	2.1523 2.4562	2.3136	2.3524	2.4840	Ave		2.3715				6.5		15.0			
Styrene	3.0012 3.9805	2.9240 3.7750	3.2845	3.4368	3.8346	Lin2	-0.246	3.6446							0.9920		0.9900
Bromoform	+++++ 0.4371	0.3191 0.4600	0.3163	0.3313	0.3936	Lin1	-0.243	0.4511			0.1000				0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isopropylbenzene	4.4847 4.5812	4.0303 4.1576	4.3304	4.5209	4.5780	Ave		4.3833				5.0		15.0			
Bromobenzene	0.9555 0.9070	0.8522 0.9003	0.8589	0.8703	0.9194	Ave		0.8948				4.1		15.0			
1,1,2,2-Tetrachloroethane	0.5164 0.4890	0.4442 0.4894	0.4538	0.4688	0.5013	Ave		0.4804			0.3000	5.4		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1302	0.0990 0.1308	0.1017	0.1128	0.1284	Ave		0.1171				12.5		15.0			
1,2,3-Trichloropropane	0.1238 0.1383	0.1370 0.1389	0.1361	0.1288	0.1438	Ave		0.1352				5.0		15.0			
N-Propylbenzene	1.2478 1.3241	1.1693 1.2894	1.2167	1.2556	1.2941	Ave		1.2567				4.2		15.0			
2-Chlorotoluene	1.0773 1.0555	0.9662 1.0235	0.9769	1.0004	1.0227	Ave		1.0175				3.9		15.0			
1,3,5-Trimethylbenzene	3.5384 3.8610	3.3398 3.5588	3.5763	3.7280	3.8032	Ave		3.6294				4.9		15.0			
4-Chlorotoluene	1.0335 1.0654	0.9876 1.0464	1.0075	1.0392	1.0496	Ave		1.0328				2.6		15.0			
tert-Butylbenzene	3.2295 3.4761	2.8981 3.2131	3.1332	3.2429	3.3738	Ave		3.2238				5.7		15.0			
1,2,4-Trimethylbenzene	3.4843 3.8178	3.3641 3.4666	3.5947	3.7888	3.8273	Ave		3.6205				5.3		15.0			
sec-Butylbenzene	0.9556 1.1116	0.9351 1.0787	0.9805	1.0429	1.0492	Ave		1.0219				6.5		15.0			
1,3-Dichlorobenzene	1.9935 1.9451	1.8342 1.8913	1.8734	1.8719	1.9184	Ave		1.9040				2.8		15.0			
4-Isopropyltoluene	3.9614 4.5857	4.0557 3.8913	4.2144	4.3817	4.5265	Ave		4.2309				6.5		15.0			
1,4-Dichlorobenzene	1.9997 1.8989	1.9141 1.8410	1.8526	1.8607	1.8993	Ave		1.8952				2.8		15.0			
n-Butylbenzene	4.1595 4.3591	3.9844 3.5539	4.1520	4.4047	4.4610	Ave		4.1535				7.5		15.0			
1,2-Dichlorobenzene	1.6989 1.6576	1.5937 1.6141	1.5818	1.5924	1.6295	Ave		1.6240				2.6		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0790	0.0542 0.0863	0.0546	0.0595	0.0706	Lin1	-0.053	0.0836							0.9950		0.9900
1,2,4-Trichlorobenzene	1.3520 1.3825	1.1993 1.3623	1.2013	1.2122	1.3011	Ave		1.2872				6.3		15.0			
Hexachlorobutadiene	1.0138 1.0516	0.9031 1.0308	0.9340	0.9461	0.9647	Ave		0.9777				5.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Naphthalene	1.6655 1.8476	1.4292 1.8390	1.4417	1.5162	1.7310	Ave		1.6386				10.9		15.0			
1,2,3-Trichlorobenzene	2.1716 1.1796	1.2631 1.2124	1.1869	1.2045	1.3099	Lin2	0.2882	1.1477							0.9900		0.9900
Dibromofluoromethane (Surr)	+++++ 0.2681	+++++ 0.2566	0.2466	0.2442	0.2589	Ave		0.2549				3.8		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2576	+++++ 0.2367	0.2567	0.2519	0.2614	Ave		0.2529				3.8		15.0			
Toluene-d8 (Surr)	+++++ 5.0058	+++++ 4.5495	4.9949	4.7675	4.8643	Ave		4.8364				3.9		15.0			
4-Bromofluorobenzene (Surr)	+++++ 1.1143	+++++ 1.0652	1.1086	1.0896	1.1085	Ave		1.0973				1.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-413564/11	G2_2537.D
Level 2	STD01 280-413564/12	G2_2538.D
Level 3	STD02 280-413564/13	G2_2539.D
Level 4	STD05 280-413564/14	G2_2540.D
Level 5	ICIS 280-413564/15	G2_2541.D
Level 6	STD30 280-413564/16	G2_2542.D
Level 7	STD60 280-413564/17	G2_2543.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethyl ether	FB	Ave	4751 608009	16833 1350658	34376	88899	202627	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Lin2	+++++ 602920	11418 1388280	26510	78492	186018	+++++ 300	10.00 600	20.0	50.0	100.0
1,1-Dichloroethene	FB	Ave	10132 1093081	32022 2373041	66011	160032	355873	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	9997 967287	29993 2135124	59861	148453	320540	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	15775 1689914	48779 3772690	98361	250010	547956	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	42066 4114108	128720 8894136	247597	631625	1361473	0.300 30.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Ave	16477 1881948	53242 3996678	111779	279885	621347	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Lin2	+++++ 548074	12799 1237682	28151	73066	174053	+++++ 60.0	2.00 120	4.00	10.0	20.0
Methylene Chloride	FB	Lin2	28914 991081	51689 2187967	81239	174149	349029	0.300 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	FB	Lin2	+++++ 330448	9571 820265	18935	50130	115847	+++++ 300	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Lin2	+++++ 1354992	26430 3155133	60424	179338	441898	+++++ 300	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	10384 1153353	33704 2552583	67382	176820	377767	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	17719 2042264	59087 4613962	119647	296807	688725	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	18188 2084107	59618 4555302	121736	308870	687597	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	19473 2132785	64939 4624584	131204	332029	701955	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Vinyl acetate	FB	Lin2	+++++ 2007195	26844 4669796	72914	231734	586886	+++++ 60.0	2.00 120	4.00	10.0	20.0
2,2-Dichloropropane	FB	Lin2	33098 2022815	75529 4333542	138551	327687	685864	0.300 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,2-Dichloroethene	FB	Ave	9684 1189115	33316 2658142	67741	174908	382489	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Lin2	2417 384297	10900 894245	22089	56320	125138	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 225349	+++++ 533658	11295	30427	75699	+++++ 60.0	+++++ 120	4.00	10.0	20.0
sec-Butyl Alcohol	FB	Lin1	+++++ 639437	6975 1751067	20966	70920	178368	+++++ 900	30.0 1800	60.0	150	300
Chloroform	FB	Ave	18339 1915306	59987 4143684	120410	296767	634153	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	18180 1980722	58931 4250520	116796	295302	638598	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	22492 2372969	71316 5178642	137018	357542	768295	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	16932 1791005	48562 3903191	100709	259773	567319	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	14381 1768608	49746 3904136	103193	264161	568175	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	44976 4509710	140377 9803439	275622	681815	1482393	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	10838 1055975	32924 2299183	65844	161425	356902	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	FB	Ave	14061 1336269	44468 2777511	88043	213428	457175	7.50 750	25.0 1500	50.0	125	250
Trichloroethene	FB	Ave	10993 1208919	35841 2694445	70290	178037	387802	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Lin2	+++++ 1219986	25980 2802715	56395	163810	392794	+++++ 120	4.00 240	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	17670 1957629	55281 4171142	115098	294536	641089	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	9871 1042680	30389 2313024	62380	158074	340221	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	4082 404571	12031 936079	23707	59572	131379	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 56130	+++++ 155173	1352	6901	19317	+++++ 600	+++++ 1200	40.0	100	200
Bromodichloromethane	FB	Ave	9789 1251446	32906 2812484	67640	177023	398257	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 275764	4770 680930	11027	31109	77640	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Lin1	9489 1431548	32525 3239919	69489	187709	441562	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Toluene	FB	Ave	+++++ 4687630	148519 10025377	287192	723757	1563871	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin1	+++++ 1117942	24448 2566173	55336	144867	348075	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin1	3366 693786	12518 1693910	26921	83229	208083	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	5175 552816	16597 1274085	34372	84655	183675	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	9132 1005385	31011 2314074	58674	148519	322869	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	9369 1057060	32147 2410154	61320	159576	352538	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Lin2	+++++ 691207	15887 1645278	33767	89542	207128	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	4150 514088	13702 1219730	27625	72919	164327	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	18707 1755748	55111 3884336	100851	271476	581179	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	29320 2927079	90978 6544590	179520	452270	970182	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	9808 1019932	27293 2336190	54821	142535	319652	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	17571 1810917	53604 4068912	103393	271661	575346	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	21060 2171455	62523 4881814	124466	324367	697929	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	16459 2024127	53561 4509783	111152	295199	643319	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Lin2	22037 3098294	72767 6930993	157797	431273	993111	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin1	+++++ 340229	7941 844598	15198	41580	101929	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	48796 5751582	152976 12068430	322518	869142	1872375	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	10396 1138728	32348 2613228	63972	167323	376046	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	5619 613929	16859 1420534	33797	90120	205026	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 163469	3758 379741	7571	21680	52502	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	1347 173646	5199 403089	10138	24760	58830	0.300 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	13577 1662390	44384 3742932	90619	241379	529259	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	11722 1325134	36672 2970824	72759	192331	418293	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	38500 4847453	126766 10330270	266353	716694	1555489	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	11245 1337579	37486 3037563	75036	199790	429276	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	35139 4364193	110002 9326755	233351	623438	1379858	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	37911 4793208	127690 10062581	267724	728399	1565352	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	10397 1395579	35492 3131302	73029	200494	429094	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	21690 2442013	69621 5489889	139524	359873	784591	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	43102 5757268	153939 11295280	313877	842369	1851312	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	21758 2383991	72652 5343978	137978	357717	776797	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	45257 5472721	151234 10316036	309232	846789	1824529	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	18485 2081034	60492 4685267	117811	306134	666438	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++ 99141	2057 250503	4063	11448	28877	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	14711 1735687	45521 3954302	89468	233041	532134	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	11031 1320271	34278 2992065	69566	181885	394556	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	18121 2319575	54248 5337996	107376	291486	707945	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Lin2	23628 1480977	47942 3519389	88395	231571	535734	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 917688	+++++ 2040494	53691	132975	293424	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 881906	+++++ 1882222	55881	137185	296291	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2018 22:54 Calibration End Date: 05/03/2018 00:55 Calibration ID: 32286

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 3896362	+++++ 8353115	239968	598262	1259779	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 1399044	+++++ 3092090	82566	209480	453348	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D
Lims ID: STD003
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-May-2018 22:54:30 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD003
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:30:41 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:48:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	189142	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1345163	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.540	0.000	87	305952	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	453355	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111		6.542				ND	ND	U
$ 7 1,2-Dichloroethane-d4 (Sur	65		6.971				ND	ND	U
$ 8 Toluene-d8 (Surr)	98		9.117				ND	ND	U
$ 9 4-Bromofluorobenzene (Surr	95		11.655				ND	ND	U
22 Ethyl ether	59	2.794	2.794	0.000	91	4751	0.3000	0.2690	
24 Acrolein	56	2.976	2.962	0.014	35	2080	3.00	5.43	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	93	10132	0.3000	0.3085	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	87	9997	0.3000	0.3308	
28 Iodomethane	142	3.227	3.241	-0.014	96	15775	0.3000	0.3111	
30 Carbon disulfide	76	3.311	3.311	0.000	99	42066	0.3000	0.3296	
32 Methyl acetate	43		3.520				ND	ND	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	85	16477	0.3000	0.2956	
35 Methylene Chloride	84	3.702	3.702	0.000	95	28914	0.3000	0.2980	
37 2-Methyl-2-propanol	59		3.897				3.00	ND	
39 Acrylonitrile	53		4.051				ND	ND	U
40 trans-1,2-Dichloroethene	96	4.107	4.093	0.014	97	10384	0.3000	0.2994	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	84	17719	0.3000	0.2904	
42 Hexane	57	4.540	4.540	0.000	94	18188	0.3000	0.2942	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	91	19473	0.3000	0.2991	
46 Vinyl acetate	43	4.917	4.875	0.042	30	3027	0.6000	1.34	
50 2,2-Dichloropropane	77	5.783	5.797	-0.014	64	33098	0.3000	0.3019	M
51 cis-1,2-Dichloroethene	96	5.811	5.797	0.014	84	9684	0.3000	0.2791	
56 Chlorobromomethane	128	6.156	6.156	0.000	79	2417	0.3000	0.3014	
57 Tetrahydrofuran	42		6.178				ND	ND	
55 sec-Butyl Alcohol	45		6.178				ND	ND	
59 Chloroform	83	6.328	6.328	0.000	93	18339	0.3000	0.3094	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	35	18180	0.3000	0.3065	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.593	6.592	0.001	93	22492	0.3000	0.3141	
62 Carbon tetrachloride	117	6.714	6.714	0.000	96	16932	0.3000	0.3217	
63 1,1-Dichloropropene	75	6.736	6.736	0.000	91	14381	0.3000	0.2776	
64 Benzene	78	6.979	6.979	0.000	48	44976	0.3000	0.3231	
65 1,2-Dichloroethane	62	7.072	7.072	0.000	48	10838	0.3000	0.3281	a
67 n-Heptane	43	7.393	7.393	0.000	90	22190	0.3000	0.3302	
66 Isobutyl alcohol	41	7.393	7.393	0.000	83	14061	7.50	8.22	
69 Trichloroethene	95	7.801	7.794	0.007	94	10993	0.3000	0.3039	
70 2-Pentanone	43		8.030				ND	ND	
71 Methylcyclohexane	55	8.044	8.044	0.000	92	17670	0.3000	0.3036	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	89	9871	0.3000	0.3122	
75 Dibromomethane	93	8.180	8.180	0.000	88	4082	0.3000	0.3291	
74 1,4-Dioxane	88		8.187				ND	ND	
76 Dichlorobromomethane	83	8.380	8.387	-0.007	95	9789	0.3000	0.2755	
78 2-Chloroethyl vinyl ether	63		8.716				ND	ND	
79 cis-1,3-Dichloropropene	75	8.859	8.852	0.007	92	9489	0.3000	0.3899	
82 Toluene	91	9.181	9.181	0.000	97	50691	0.3000	0.3524	
83 trans-1,3-Dichloropropene	75	9.446	9.438	0.008	94	6649	0.3000	0.6049	
84 Ethyl methacrylate	69	9.510	9.510	0.000	85	3366	0.3000	0.4715	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	84	5175	0.3000	0.3034	
86 Tetrachloroethene	164	9.689	9.696	-0.007	92	9132	0.3000	0.3004	
87 1,3-Dichloropropane	76	9.782	9.782	0.000	89	9369	0.3000	0.2929	
89 Chlorodibromomethane	129	9.989	9.989	0.000	82	4775	0.3000	0.5106	
90 Ethylene Dibromide	107	10.096	10.096	0.000	96	4150	0.3000	0.2805	
91 1-Chlorohexane	91	10.561	10.561	0.000	94	18707	0.3000	0.3421	
92 Chlorobenzene	112	10.568	10.568	0.000	96	29320	0.3000	0.3218	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	85	9808	0.3000	0.3290	
94 Ethylbenzene	106	10.668	10.668	0.000	99	17571	0.3000	0.3215	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	21060	0.3000	0.3221	
96 o-Xylene	106	11.154	11.154	0.000	98	16459	0.3000	0.2836	
97 Styrene	104	11.176	11.169	0.007	96	22037	0.3000	0.3146	
98 Bromoform	173		11.340				ND	ND	
99 Isopropylbenzene	105	11.491	11.498	-0.007	96	48796	0.3000	0.3069	
103 Bromobenzene	156	11.784	11.784	0.000	96	10396	0.3000	0.3203	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	59	5619	0.3000	0.3225	
105 trans-1,4-Dichloro-2-buten	53		11.826				ND	ND	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	83	1347	0.3000	0.2746	
106 N-Propylbenzene	120	11.877	11.884	-0.007	99	13577	0.3000	0.2979	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	11722	0.3000	0.3176	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	38500	0.3000	0.2925	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	11245	0.3000	0.3002	
110 tert-Butylbenzene	119	12.320	12.320	0.000	94	35139	0.3000	0.3005	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	37911	0.3000	0.2887	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	10397	0.3000	0.2805	
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	96	21690	0.3000	0.3141	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	96	43102	0.3000	0.2809	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	91	21758	0.3000	0.3165	
117 n-Butylbenzene	91	12.906	12.906	0.000	97	45257	0.3000	0.3004	
118 1,2-Dichlorobenzene	146	12.921	12.920	0.001	94	18485	0.3000	0.3138	
119 1,2-Dibromo-3-Chloropropan	157		13.421				ND	ND	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	14711	0.3000	0.3151	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	95	11031	0.3000	0.3111	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	0.000	96	18121	0.3000	0.3049	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	40	23628	0.3000	0.3165	
S 137 1,2-Dichloroethene, Total	96				0		0.6000	0.5785	
S 143 Xylenes, Total	106				0		0.6000	0.6056	
S 138 Xylenes, Total (URS)	1				0		0.6000	0.6056	
S 142 Trihalomethanes, Total	1				0		1.20	1.10	
S 140 1,3-Dichloropropene, Total	1				0		0.6000	0.99	
S 139 Total BTEX	1				0			1.60	
S 144 1,2-Dichloroethene, Total	1				0		0.6000	0.5785	

QC Flag Legend

Processing Flags
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.02	Units: uL
MV-Main A_00036	Amount Added:	0.15	Units: uL
MV-2cleve+AVA_00034	Amount Added:	0.15	Units: uL

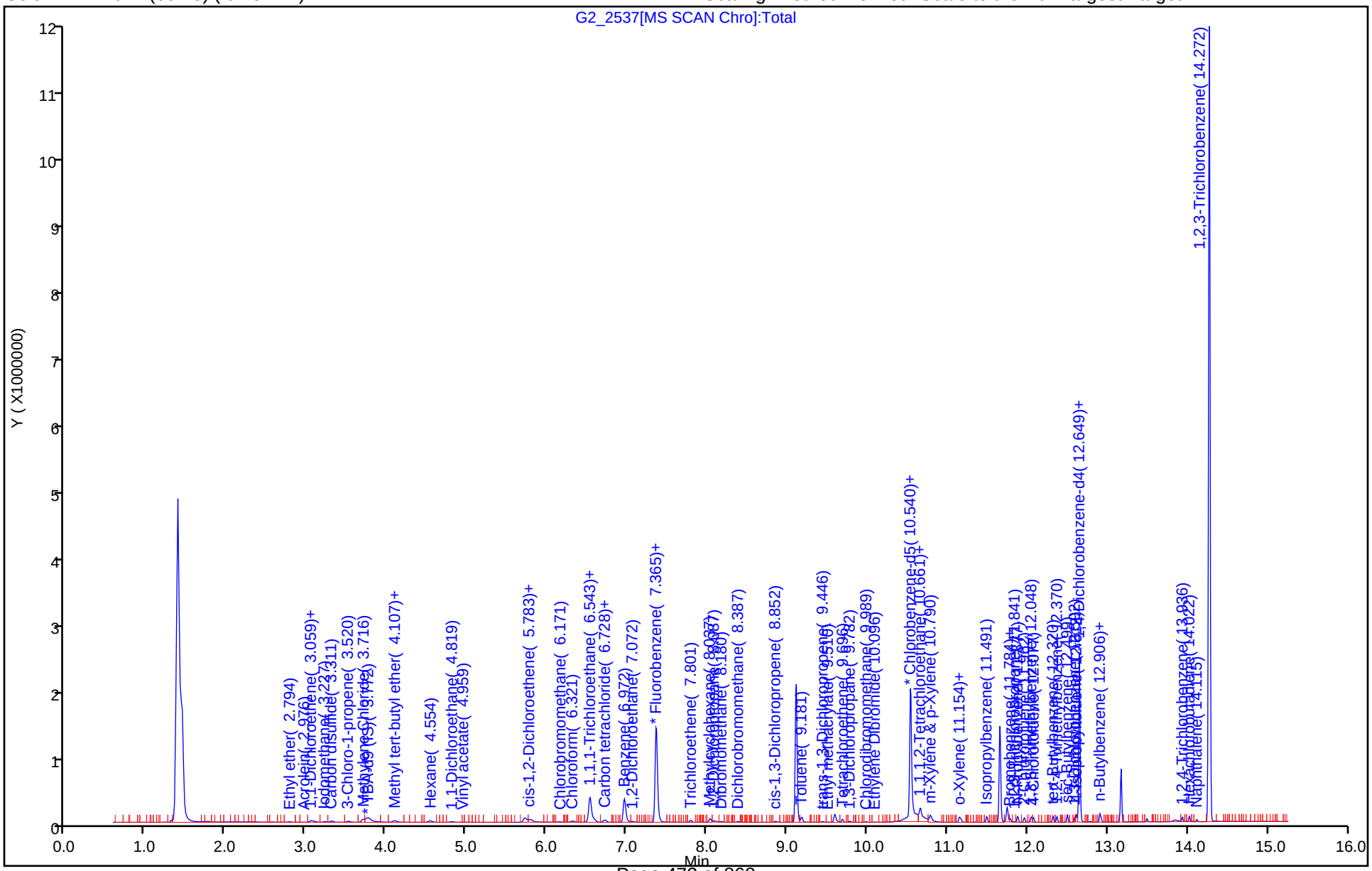
Report Date: 03-May-2018 07:30:42 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D

Injection Date:	02-May-2018 22:54:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD003			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

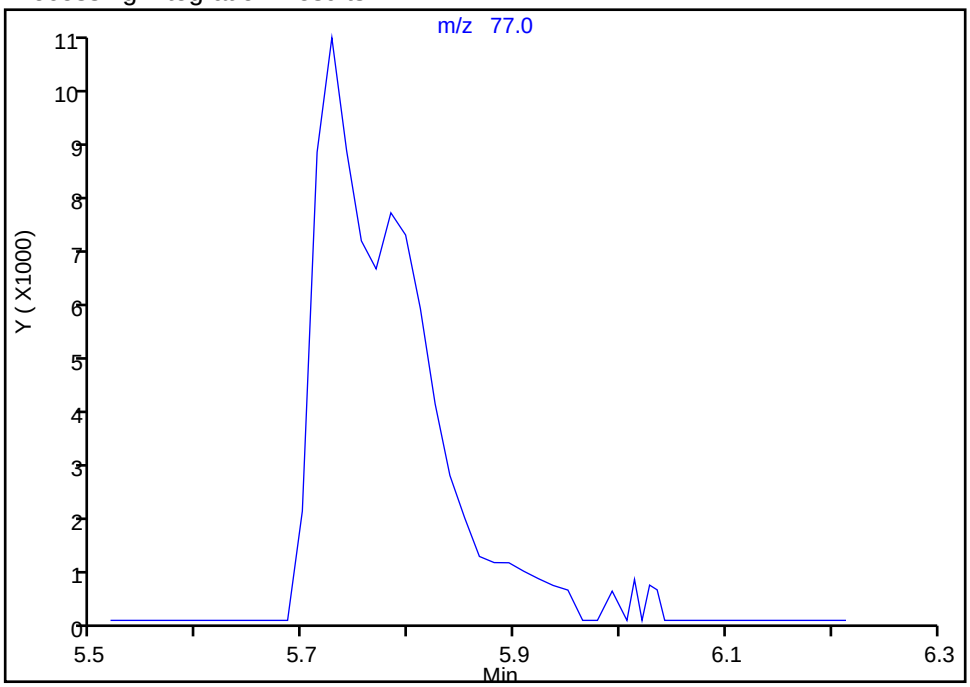
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Injection Date: 02-May-2018 22:54:30 Instrument ID: VMS_G2
Lims ID: STD003
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

50 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

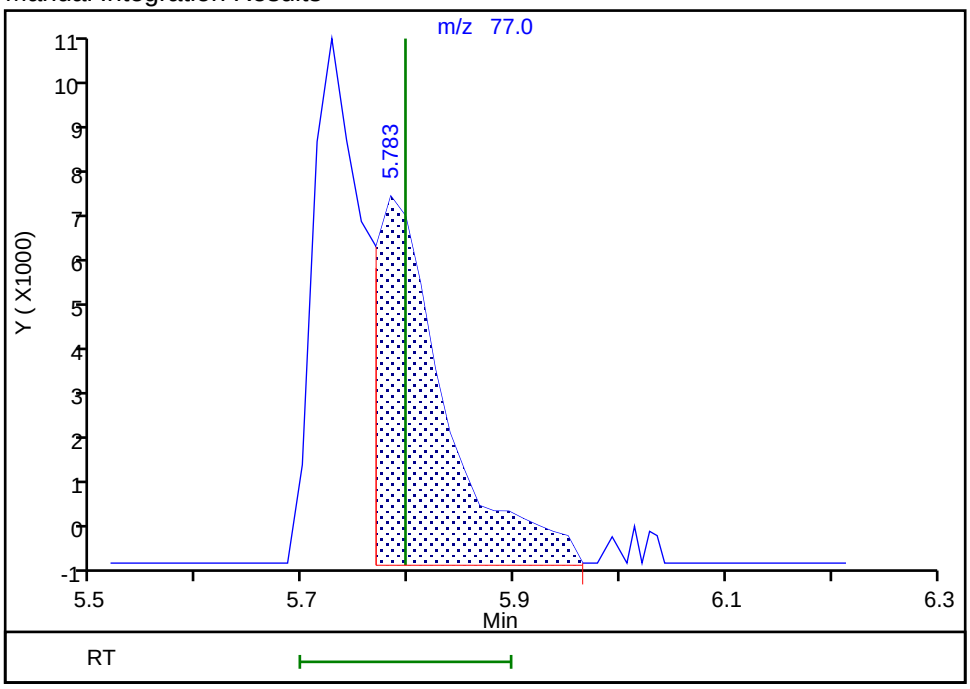
Not Detected
Expected RT: 5.80

Processing Integration Results



Manual Integration Results

RT: 5.78
Area: 33098
Amount: 0.301869
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 01:47:06
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

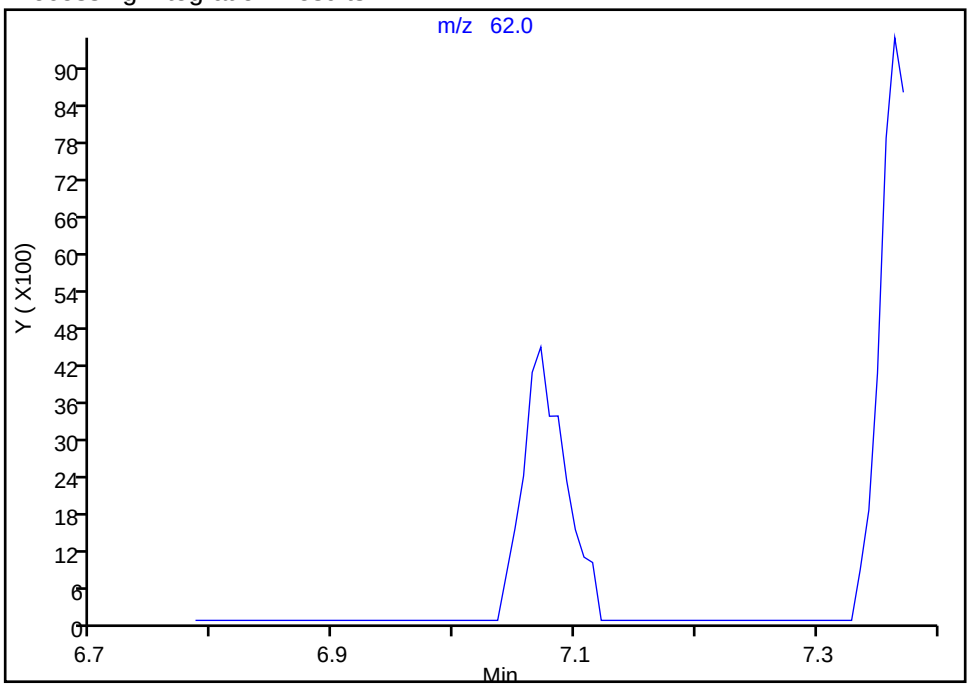
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Injection Date: 02-May-2018 22:54:30 Instrument ID: VMS_G2
Lims ID: STD003
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

65 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

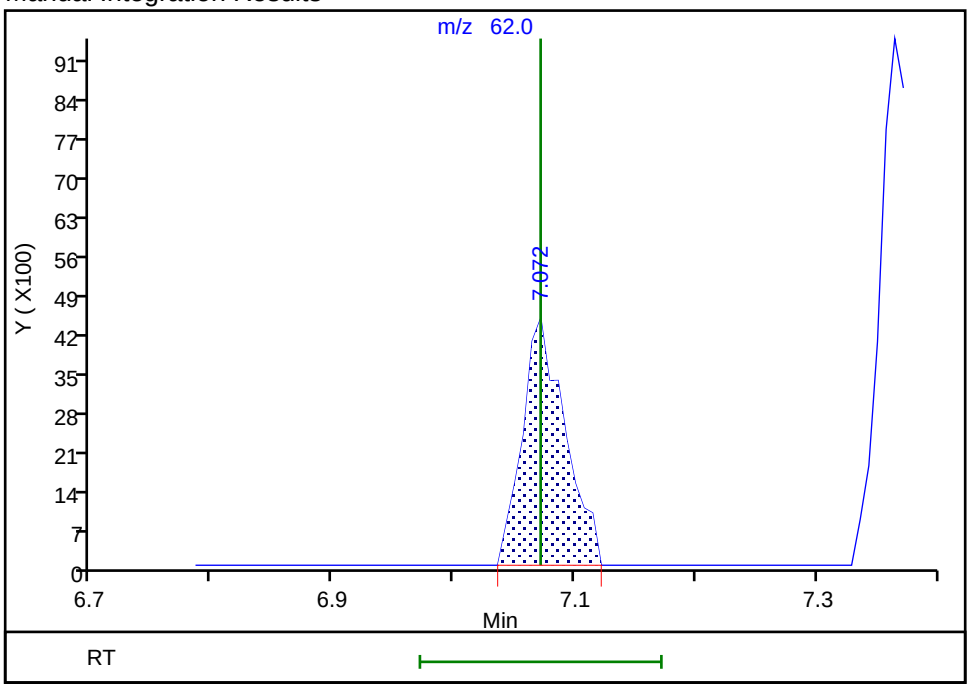
Not Detected
Expected RT: 7.07

Processing Integration Results



Manual Integration Results

RT: 7.07
Area: 10838
Amount: 0.328087
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 01:47:23
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

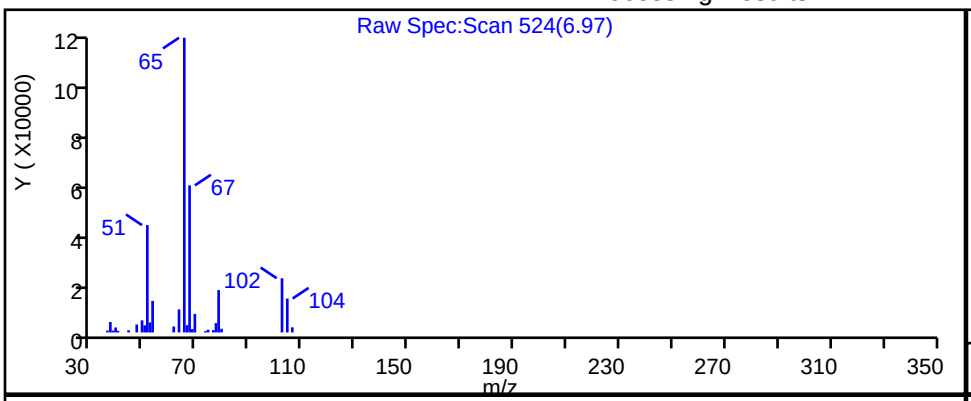
User Disabled Compound Report

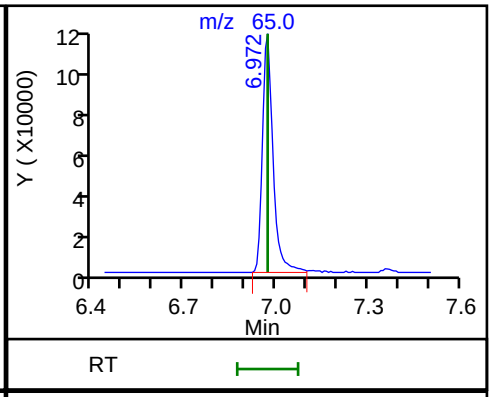
TestAmerica Denver

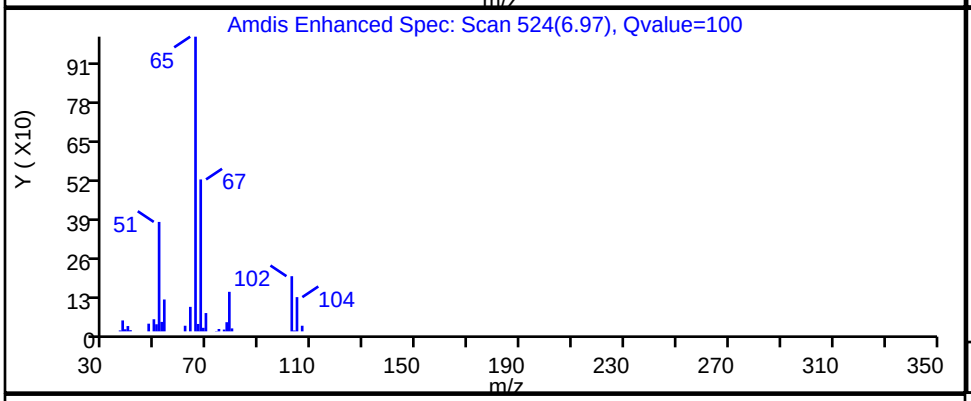
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Injection Date:	02-May-2018 22:54:30	Instrument ID:	VMS_G2		
Lims ID:	STD003				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

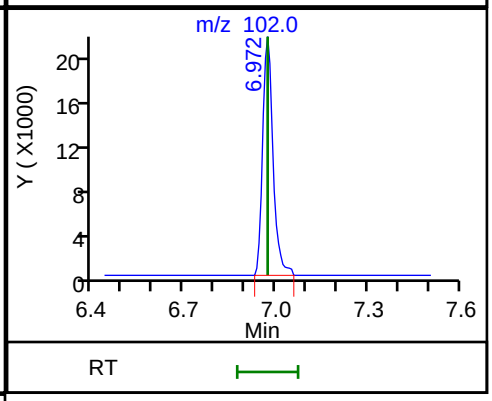
$ 7 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

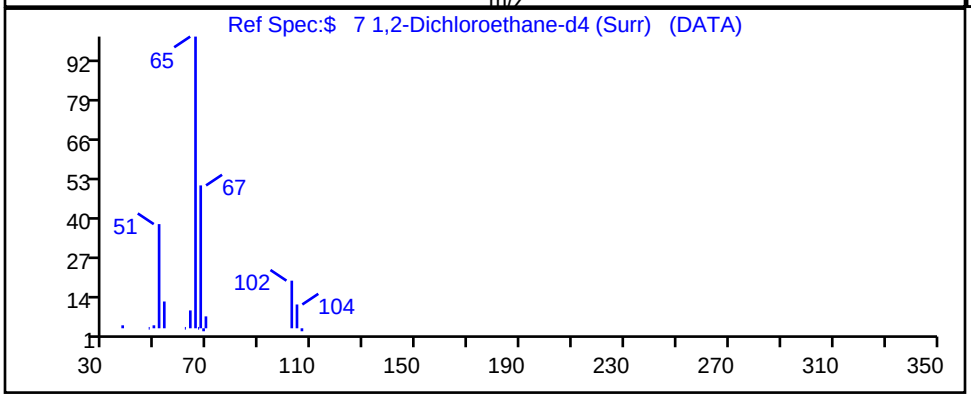
Processing Results











RT	Mass	Response	Amount
6.97	65.00	280673	1.430405
6.97	102.00	50608	

Reviewer: newcomer, 03-May-2018 01:48:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

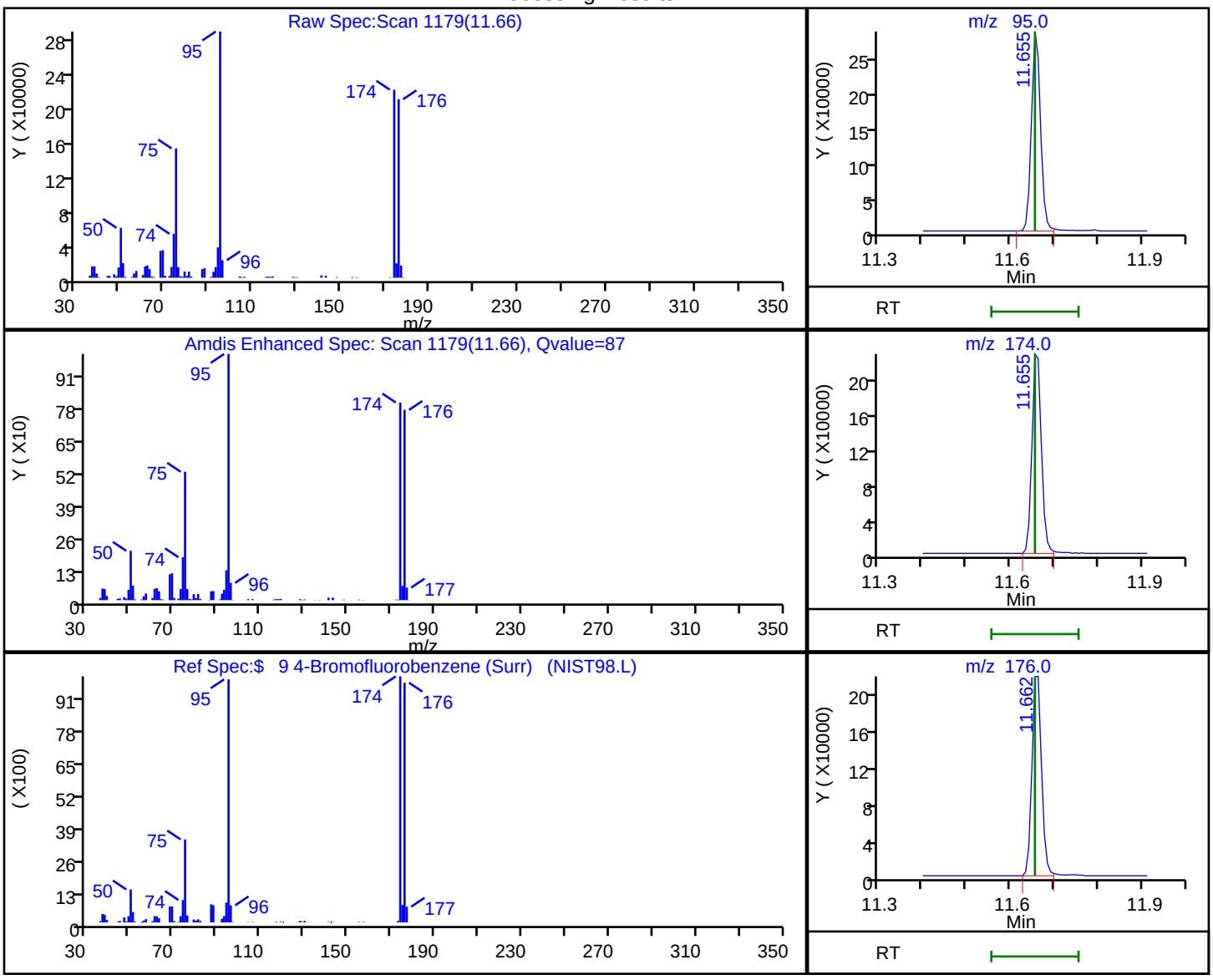
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D
Injection Date: 02-May-2018 22:54:30 Instrument ID: VMS_G2
Lims ID: STD003
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

$ 9 4-Bromofluorobenzene (Surr), CAS: 460-00-4

Processing Results



RT	Mass	Response	Amount
11.66	95.00	419869	1.449373
11.66	174.00	334043	
11.66	176.00	323860	

Reviewer: newcomer, 03-May-2018 01:48:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

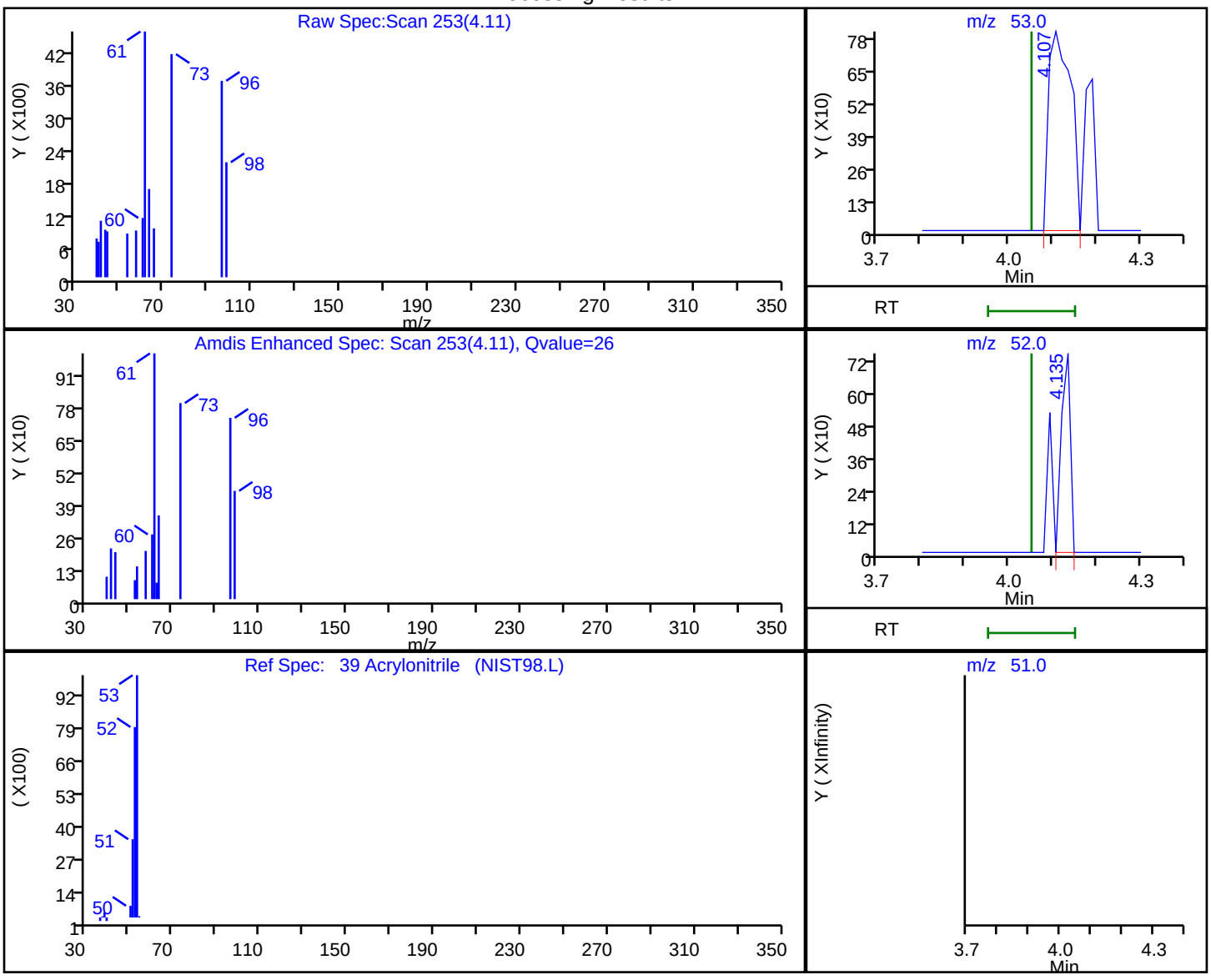
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D				
Injection Date:	02-May-2018 22:54:30	Instrument ID:	VMS_G2		
Lims ID:	STD003				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

39 Acrylonitrile, CAS: 107-13-1

Processing Results



RT	Mass	Response	Amount
4.11	53.00	2853	3.148000
4.13	52.00	1066	
4.05	51.00	0	

Reviewer: newcomer, 03-May-2018 01:48:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

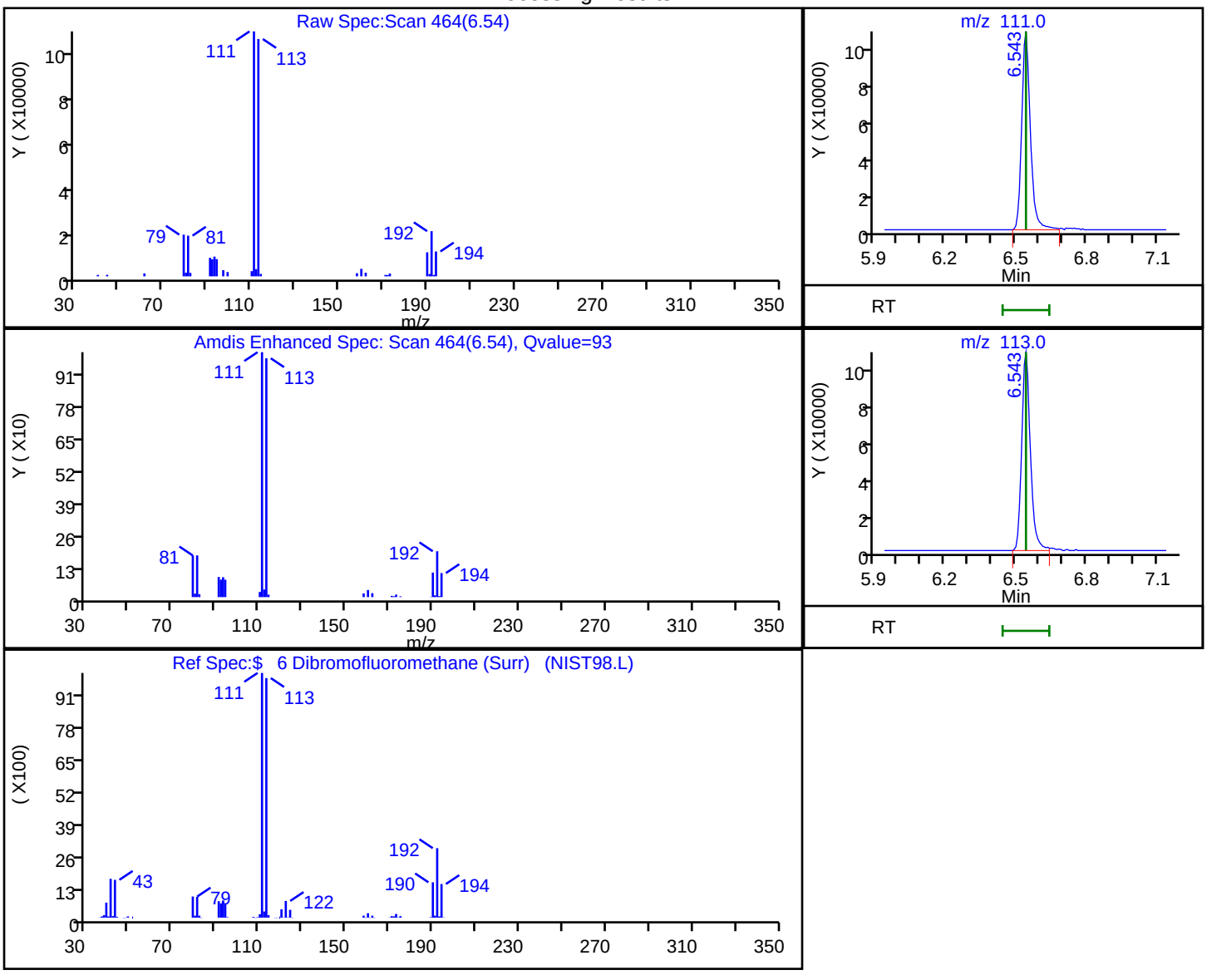
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D				
Injection Date:	02-May-2018 22:54:30	Instrument ID:	VMS_G2		
Lims ID:	STD003				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 6 Dibromofluoromethane (Surr), CAS: 1868-53-7

Processing Results



RT	Mass	Response	Amount
6.54	111.00	283689	1.442365
6.54	113.00	274805	

Reviewer: newcomer, 03-May-2018 01:48:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

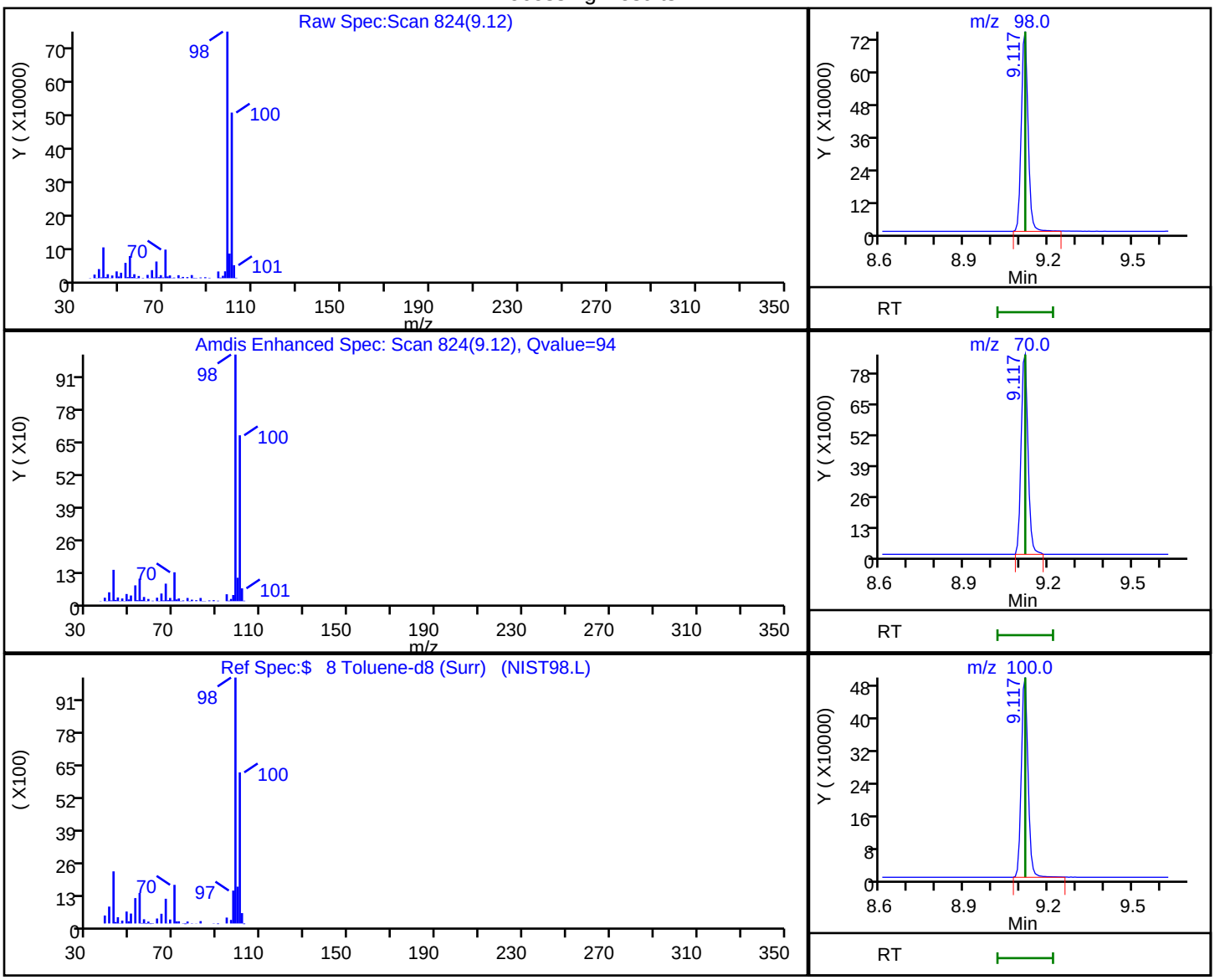
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2537.D
Injection Date: 02-May-2018 22:54:30 Instrument ID: VMS_G2
Lims ID: STD003
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

$ 8 Toluene-d8 (Surr), CAS: 2037-26-5

Processing Results



RT	Mass	Response	Amount
9.12	98.00	1251868	1.446273
9.12	70.00	147147	
9.12	100.00	836126	

Reviewer: newcomer, 03-May-2018 01:48:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2538.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-May-2018 23:14:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:30:45 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:49:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	191135	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1363756	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.540	0.000	88	311075	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	474456	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111		6.542				ND	ND	U
$ 7 1,2-Dichloroethane-d4 (Sur	65		6.971				ND	ND	U
$ 8 Toluene-d8 (Surr)	98		9.117				ND	ND	U
$ 9 4-Bromofluorobenzene (Surr	95		11.655				ND	ND	U
22 Ethyl ether	59	2.780	2.794	-0.014	94	16833	1.00	0.9401	
24 Acrolein	56	2.962	2.962	0.000	96	11418	10.0	10.4	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	94	32022	1.00	0.9618	
26 1,1,2-Trichloro-1,2,2-trif	151	3.087	3.101	-0.014	93	29993	1.00	0.9789	
28 Iodomethane	142	3.227	3.241	-0.014	99	48779	1.00	0.9489	
30 Carbon disulfide	76	3.311	3.311	0.000	99	128720	1.00	0.99	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	89	53242	1.00	0.9420	
32 Methyl acetate	43	3.534	3.520	0.014	25	12799	2.00	2.05	
35 Methylene Chloride	84	3.702	3.702	0.000	95	51689	1.00	1.02	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	95	9571	10.0	10.3	
39 Acrylonitrile	53	4.079	4.051	0.028	38	26430	10.0	10.5	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	33704	1.00	0.9586	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	78	59087	1.00	0.9551	
42 Hexane	57	4.540	4.540	0.000	94	59618	1.00	0.9484	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	64939	1.00	0.9839	
46 Vinyl acetate	43	4.889	4.875	0.014	95	26844	2.00	2.13	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	86	33316	1.00	0.9472	
50 2,2-Dichloropropane	77	5.783	5.797	-0.014	74	75529	1.00	0.9759	
56 Chlorobromomethane	128	6.164	6.156	0.008	96	10900	1.00	1.01	
55 sec-Butyl Alcohol	45	6.199	6.178	0.021	39	6975	30.0	40.2	M
57 Tetrahydrofuran	42		6.178				ND	ND	
59 Chloroform	83	6.328	6.328	0.000	94	59987	1.00	1.00	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	58931	1.00	0.9799	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.585	6.592	-0.007	93	71316	1.00	0.9822	
62 Carbon tetrachloride	117	6.714	6.714	0.000	96	48562	1.00	0.9101	
63 1,1-Dichloropropene	75	6.736	6.736	0.000	94	49746	1.00	0.9473	
64 Benzene	78	6.979	6.979	0.000	95	140377	1.00	0.99	
65 1,2-Dichloroethane	62	7.072	7.072	0.000	97	32924	1.00	0.9831	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	44468	25.0	25.6	
67 n-Heptane	43	7.393	7.393	0.000	94	67111	1.00	0.9850	
69 Trichloroethene	95	7.794	7.794	0.000	96	35841	1.00	0.9773	
70 2-Pentanone	43	8.037	8.030	0.007	44	25980	4.00	4.18	
71 Methylcyclohexane	55	8.037	8.044	-0.007	91	55281	1.00	0.9370	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	91	30389	1.00	0.9480	
75 Dibromomethane	93	8.180	8.180	0.000	93	12031	1.00	0.9568	
74 1,4-Dioxane	88		8.187				ND	ND	
76 Dichlorobromomethane	83	8.387	8.387	0.000	97	32906	1.00	0.9135	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	86	4770	1.00	1.27	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	32525	1.00	0.9076	
82 Toluene	91	9.181	9.181	0.000	98	148519	1.00	1.02	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	96	24448	1.00	1.10	
84 Ethyl methacrylate	69	9.510	9.510	0.000	89	12518	1.00	0.8787	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	16597	1.00	0.9598	
86 Tetrachloroethene	164	9.689	9.696	-0.007	96	31011	1.00	1.00	
87 1,3-Dichloropropane	76	9.782	9.782	0.000	93	32147	1.00	0.9885	
89 Chlorodibromomethane	129	9.989	9.989	0.000	88	15887	1.00	1.03	
90 Ethylene Dibromide	107	10.096	10.096	0.000	97	13702	1.00	0.9109	
91 1-Chlorohexane	91	10.561	10.561	0.000	95	55111	1.00	0.99	
92 Chlorobenzene	112	10.568	10.568	0.000	94	90978	1.00	0.9820	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	90	27293	1.00	0.9004	
94 Ethylbenzene	106	10.668	10.668	0.000	99	53604	1.00	0.9648	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	98	62523	1.00	0.9405	
96 o-Xylene	106	11.154	11.154	0.000	97	53561	1.00	0.9075	
97 Styrene	104	11.176	11.169	0.007	94	72767	1.00	0.8698	
98 Bromoform	173	11.340	11.340	0.000	95	7941	1.00	1.25	
99 Isopropylbenzene	105	11.498	11.498	0.000	97	152976	1.00	0.9195	
103 Bromobenzene	156	11.784	11.784	0.000	96	32348	1.00	0.9524	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	61	16859	1.00	0.9246	
105 trans-1,4-Dichloro-2-buten	53	11.827	11.826	0.001	63	3758	1.00	0.8452	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	86	5199	1.00	1.01	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	44384	1.00	0.9305	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	36672	1.00	0.9495	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	126766	1.00	0.9202	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	37486	1.00	0.9563	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	110002	1.00	0.8990	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	127690	1.00	0.9292	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	35492	1.00	0.9150	
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	97	69621	1.00	0.9634	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	153939	1.00	0.9586	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	94	72652	1.00	1.01	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	151234	1.00	0.9593	
118 1,2-Dichlorobenzene	146	12.921	12.920	0.001	96	60492	1.00	0.9814	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	74	2057	1.00	1.28	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	93	45521	1.00	0.9317	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	98	34278	1.00	0.9237	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	0.000	98	54248	1.00	0.8722	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	45	47942	1.00	0.8494	
S 137 1,2-Dichloroethene, Total	96				0		2.00	1.91	
S 140 1,3-Dichloropropene, Total	1				0		2.00	2.01	
S 139 Total BTEX	1				0			4.83	
S 144 1,2-Dichloroethene, Total	1				0		2.00	1.91	
S 142 Trihalomethanes, Total	1				0		4.00	4.19	
S 143 Xylenes, Total	106				0		2.00	1.85	
S 138 Xylenes, Total (URS)	1				0		2.00	1.85	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.08	Units: uL
MV-Main A_00036	Amount Added:	0.50	Units: uL
MV-2cleve+AVA_00034	Amount Added:	0.50	Units: uL

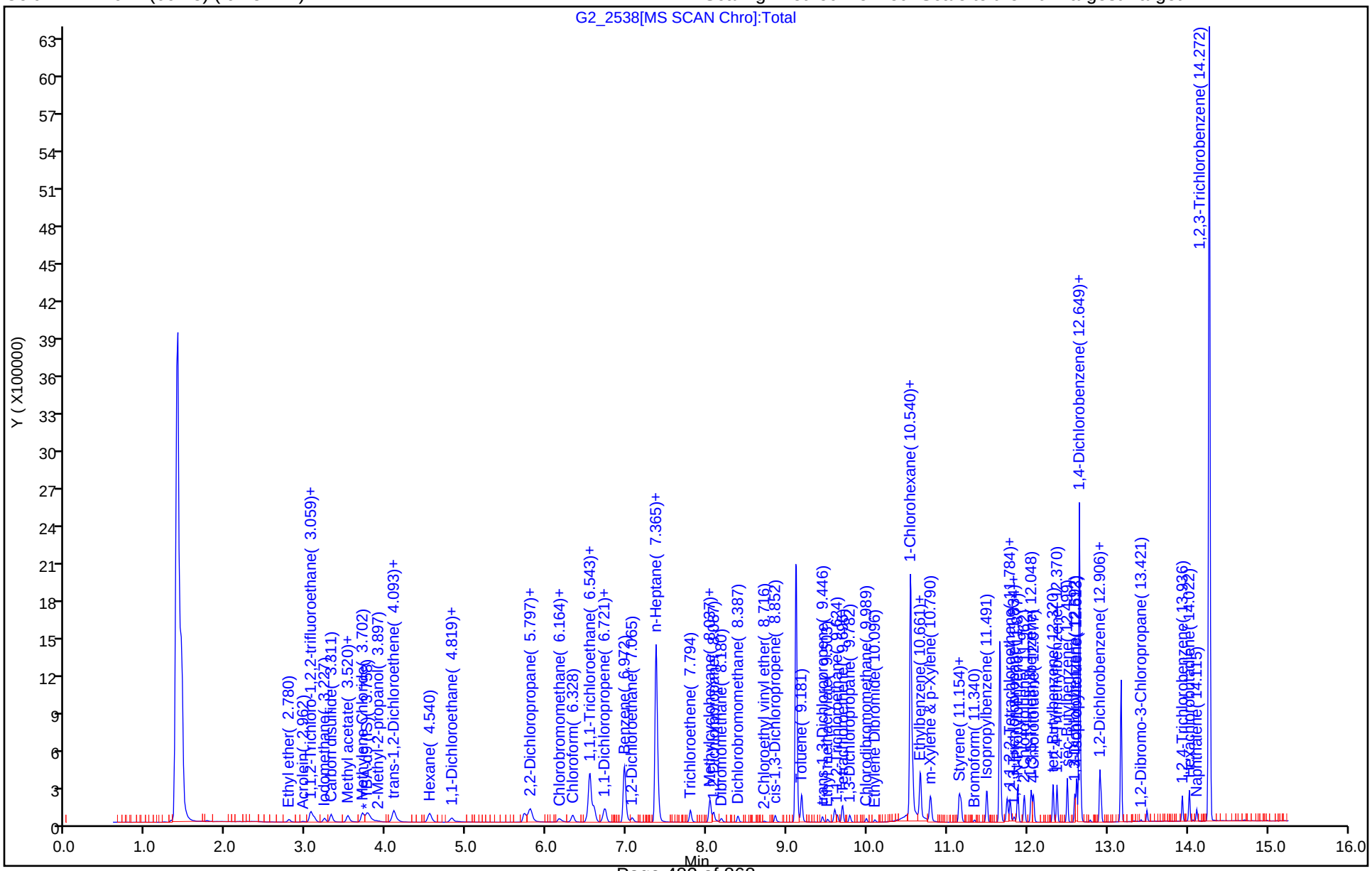
Report Date: 03-May-2018 07:30:46 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2538.D

Injection Date:	02-May-2018 23:14:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

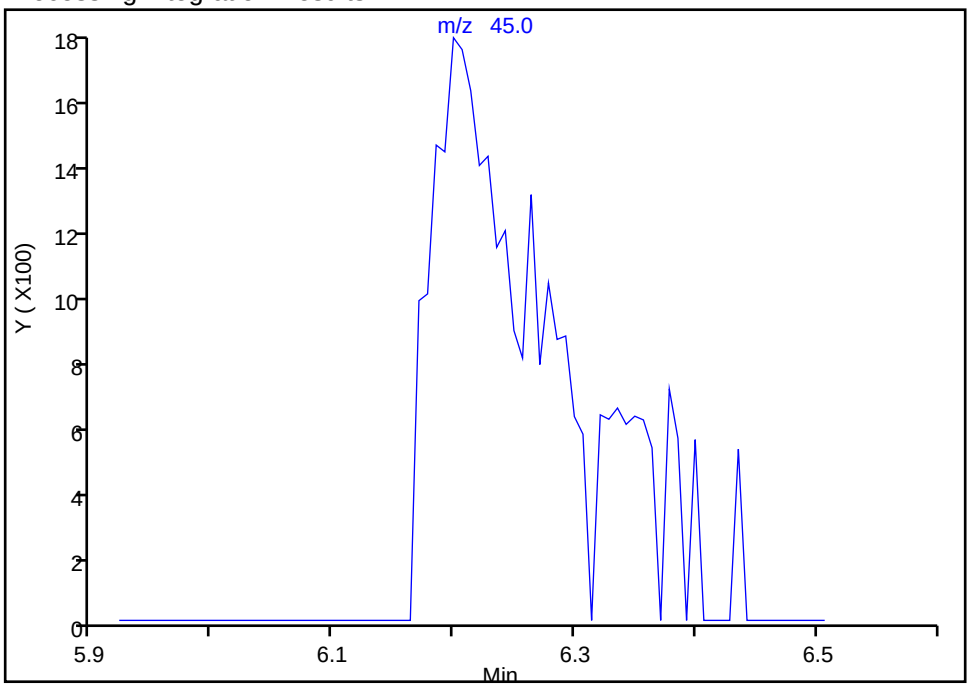
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Injection Date: 02-May-2018 23:14:30 Instrument ID: VMS_G2
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

55 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

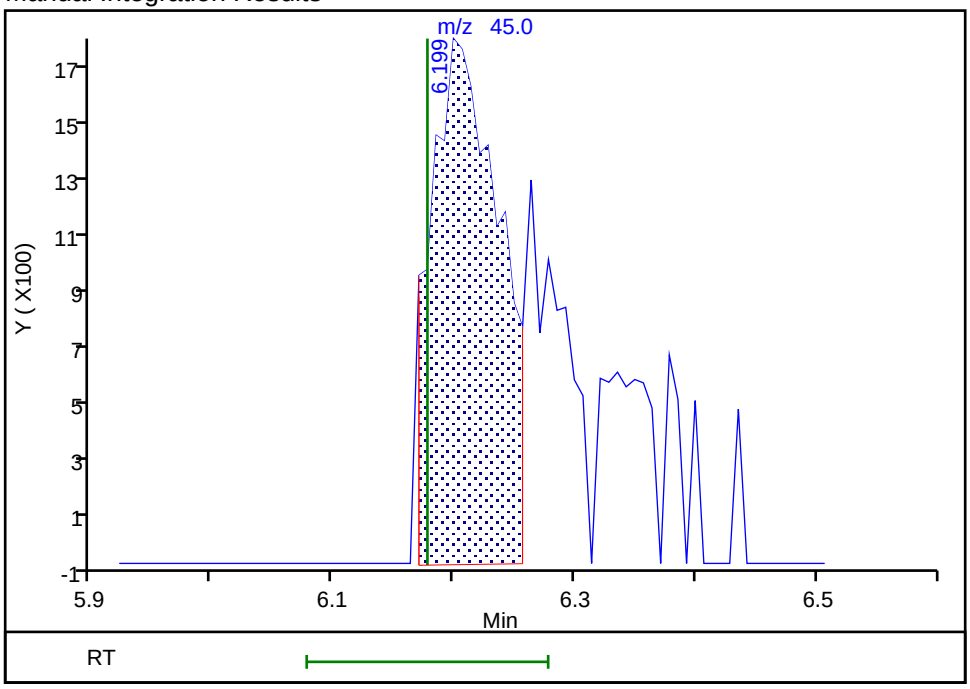
Not Detected
Expected RT: 6.18

Processing Integration Results



Manual Integration Results

RT: 6.20
Area: 6975
Amount: 40.208983
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 02:10:32
Audit Action: Manually Integrated Audit Reason: Assign Peak

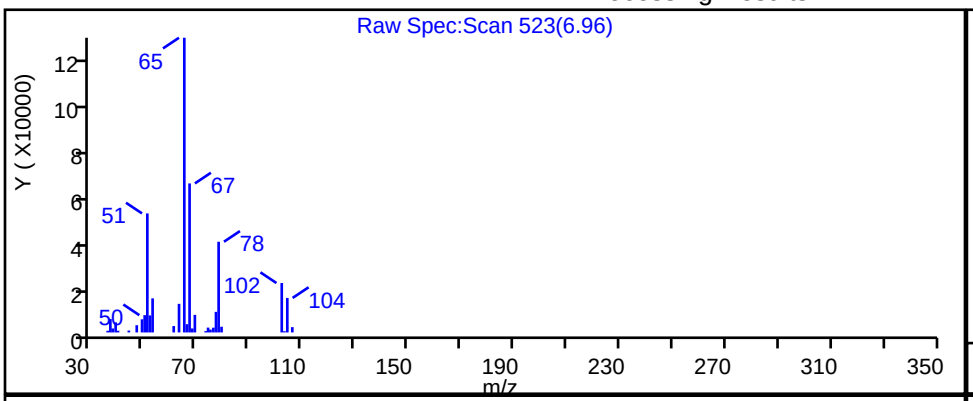
User Disabled Compound Report

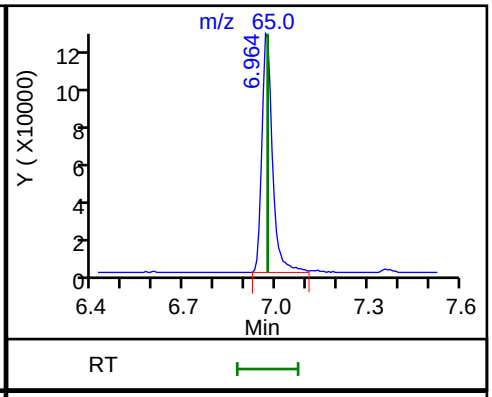
TestAmerica Denver

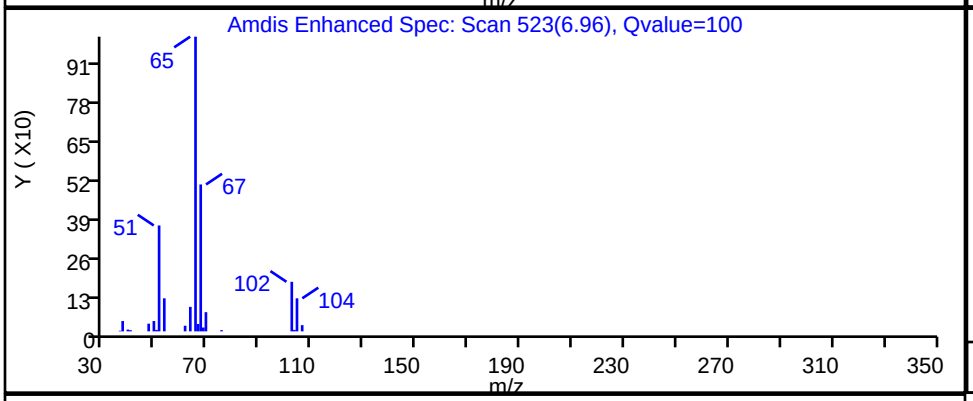
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Injection Date:	02-May-2018 23:14:30	Instrument ID:	VMS_G2		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

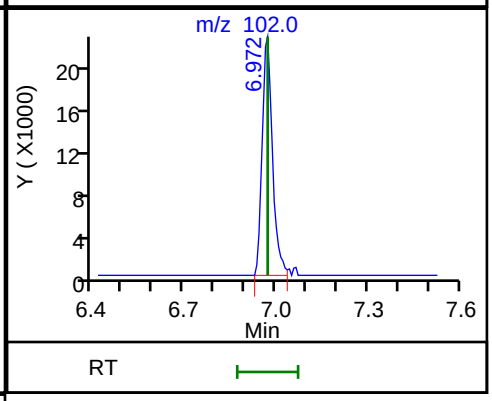
$ 7 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

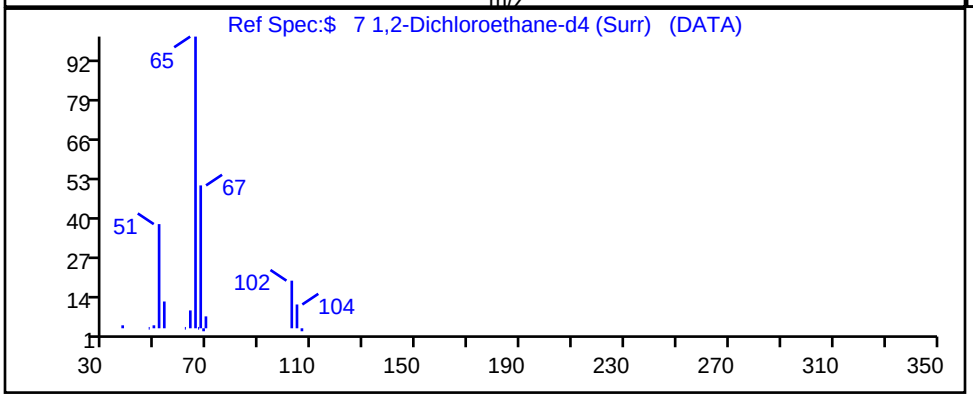
Processing Results











RT	Mass	Response	Amount
6.96	65.00	306078	4.136085
6.97	102.00	51867	

Reviewer: newcomer, 03-May-2018 01:49:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

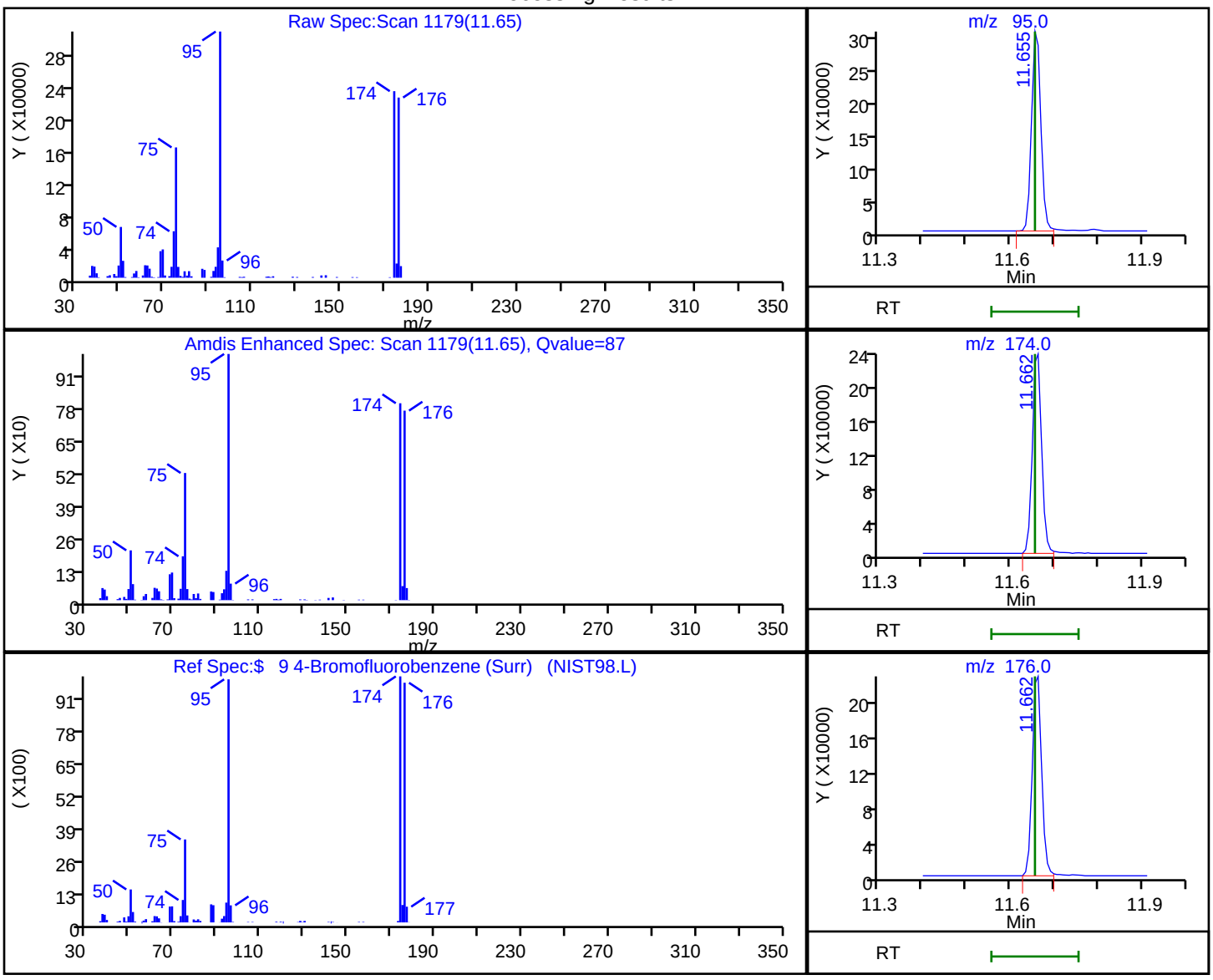
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2538.D				
Injection Date:	02-May-2018 23:14:30	Instrument ID:	VMS_G2		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 9 4-Bromofluorobenzene (Surr), CAS: 460-00-4

Processing Results



RT	Mass	Response	Amount
11.65	95.00	449271	4.099749
11.66	174.00	353513	
11.66	176.00	342461	

Reviewer: newcomer, 03-May-2018 01:49:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

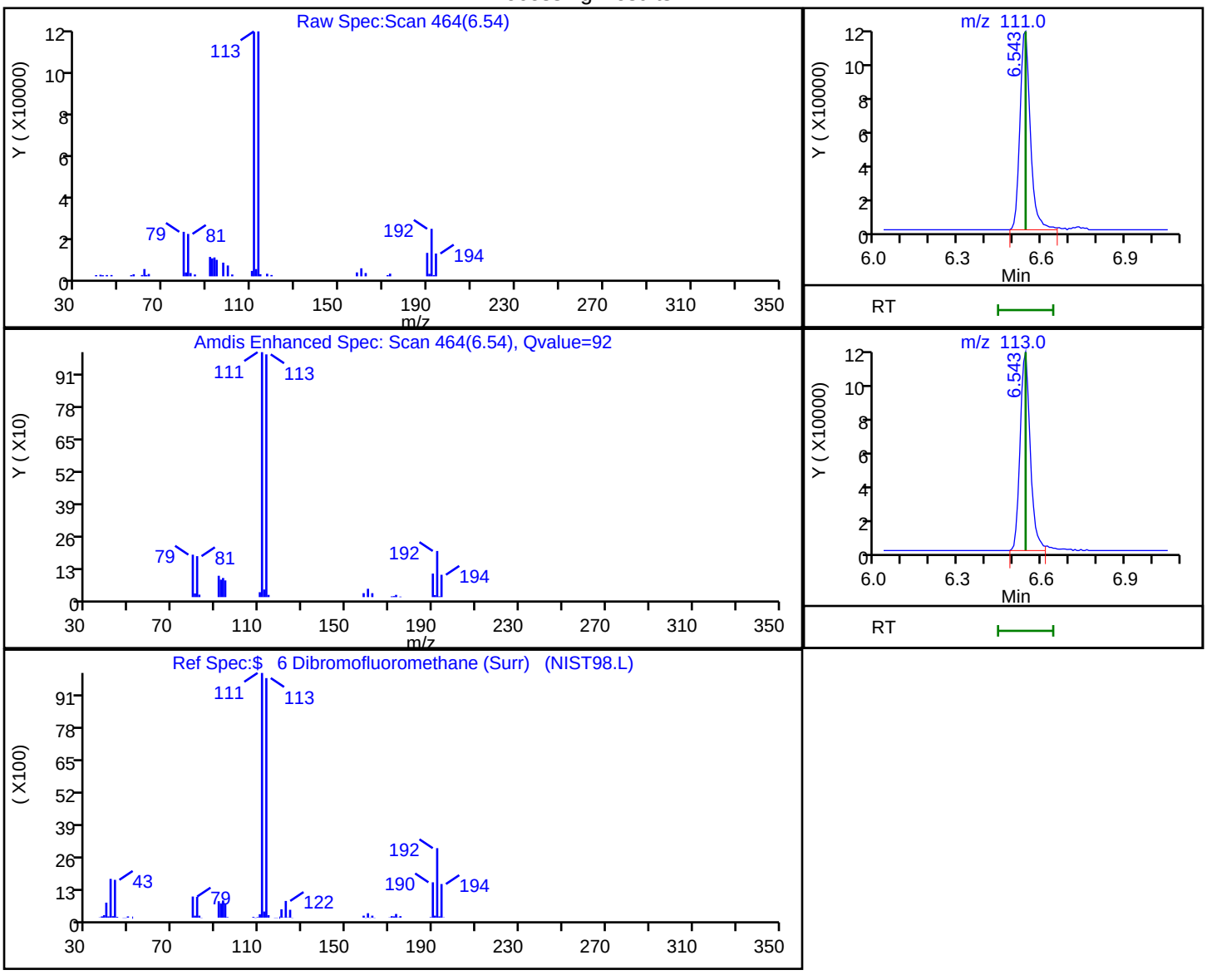
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2538.D				
Injection Date:	02-May-2018 23:14:30	Instrument ID:	VMS_G2		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 6 Dibromofluoromethane (Surr), CAS: 1868-53-7

Processing Results



RT	Mass	Response	Amount
6.54	111.00	298084	4.091637
6.54	113.00	290639	

Reviewer: newcomer, 03-May-2018 01:49:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

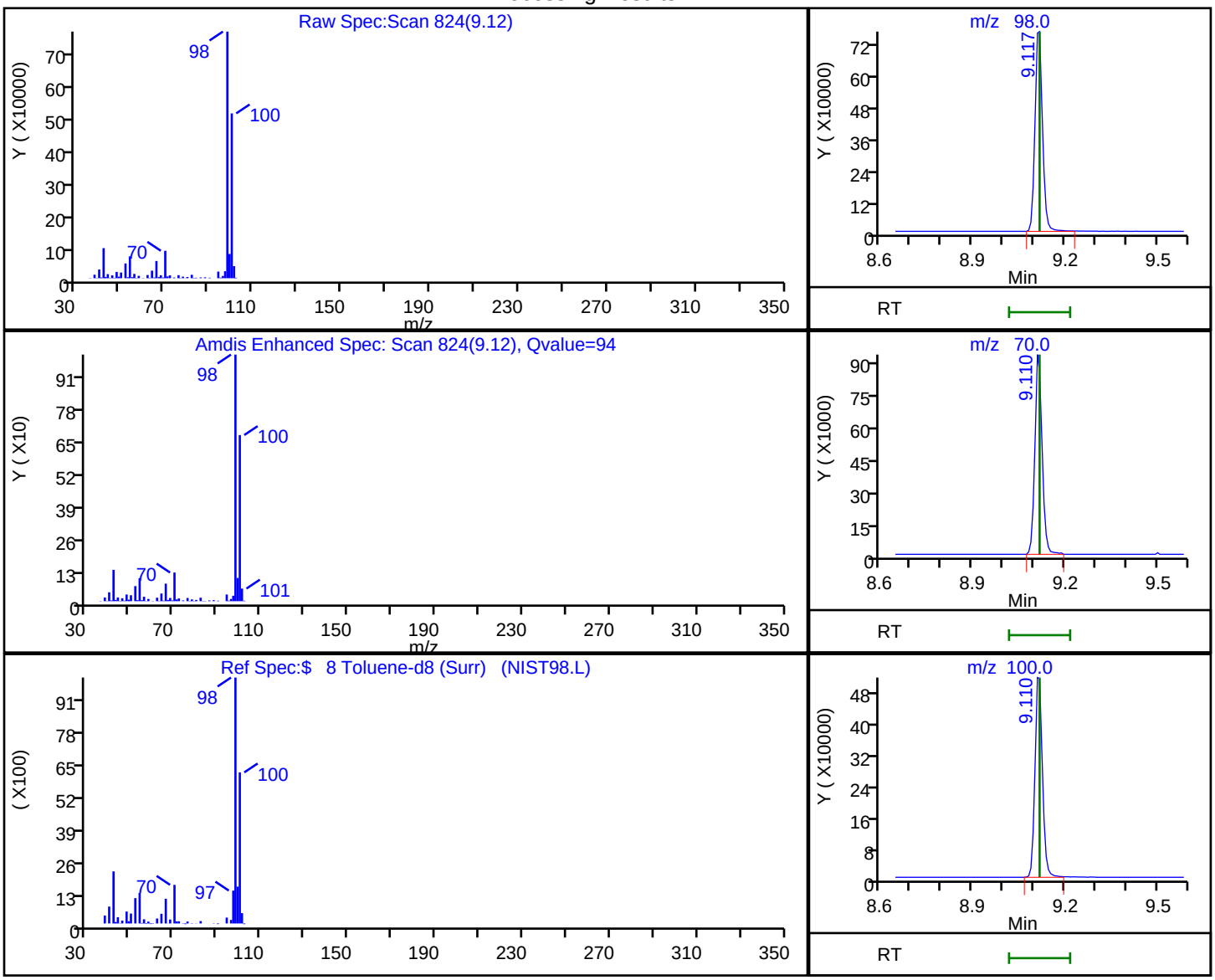
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2538.D				
Injection Date:	02-May-2018 23:14:30	Instrument ID:	VMS_G2		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 8 Toluene-d8 (Surr), CAS: 2037-26-5

Processing Results



RT	Mass	Response	Amount
9.12	98.00	1315970	4.117201
9.11	70.00	154597	
9.11	100.00	882169	

Reviewer: newcomer, 03-May-2018 01:49:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2539.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 02-May-2018 23:34:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:30:50 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:50:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	192773	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.365	0.007	98	1360789	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.540	0.007	88	300265	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	465488	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.543	6.542	0.000	92	53691	2.00	1.94	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.972	6.971	0.001	72	55881	2.00	2.03	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	0.000	94	239968	2.00	2.07	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	87	82566	2.00	2.02	
22 Ethyl ether	59	2.794	2.794	0.000	93	34376	2.00	1.92	
24 Acrolein	56	2.962	2.962	0.000	96	26510	20.0	18.6	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	94	66011	2.00	1.99	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	94	59861	2.00	1.96	
28 Iodomethane	142	3.241	3.241	0.000	99	98361	2.00	1.92	
30 Carbon disulfide	76	3.325	3.311	0.014	99	247597	2.00	1.92	
32 Methyl acetate	43	3.534	3.520	0.014	31	28151	4.00	3.88	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	90	111779	2.00	1.98	
35 Methylene Chloride	84	3.702	3.702	0.000	97	81239	2.00	1.99	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	91	18935	20.0	19.0	
39 Acrylonitrile	53	4.079	4.051	0.028	99	60424	20.0	18.5	
40 trans-1,2-Dichloroethene	96	4.107	4.093	0.014	94	67382	2.00	1.92	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	89	119647	2.00	1.94	
42 Hexane	57	4.554	4.540	0.014	94	121736	2.00	2.01	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	131204	2.00	1.99	
46 Vinyl acetate	43	4.889	4.875	0.014	98	72914	4.00	3.65	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	90	138551	2.00	1.99	
51 cis-1,2-Dichloroethene	96	5.811	5.797	0.014	86	67741	2.00	1.93	
56 Chlorobromomethane	128	6.156	6.156	0.000	97	22089	2.00	1.94	
57 Tetrahydrofuran	42	6.185	6.178	0.007	68	11295	4.00	3.37	
55 sec-Butyl Alcohol	45	6.192	6.178	0.014	53	20966	60.0	58.7	
59 Chloroform	83	6.328	6.328	0.000	93	120410	2.00	2.01	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	98	116796	2.00	1.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.593	6.592	0.001	93	137018	2.00	1.89	
62 Carbon tetrachloride	117	6.714	6.714	0.000	96	100709	2.00	1.89	
63 1,1-Dichloropropene	75	6.736	6.736	0.000	95	103193	2.00	1.97	
64 Benzene	78	6.979	6.979	0.000	97	275622	2.00	1.96	
65 1,2-Dichloroethane	62	7.072	7.072	0.000	98	65844	2.00	1.97	
67 n-Heptane	43	7.393	7.393	0.000	92	135210	2.00	1.99	
66 Isobutyl alcohol	41	7.393	7.393	0.000	83	88043	50.0	50.9	
69 Trichloroethene	95	7.794	7.794	0.000	97	70290	2.00	1.92	
70 2-Pentanone	43	8.030	8.030	0.000	49	56395	8.00	7.40	
71 Methylcyclohexane	55	8.044	8.044	0.000	91	115098	2.00	1.96	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	93	62380	2.00	1.95	
75 Dibromomethane	93	8.180	8.180	0.000	96	23707	2.00	1.89	
74 1,4-Dioxane	88	8.194	8.187	0.007	33	1352	40.0	40.5	
76 Dichlorobromomethane	83	8.394	8.387	0.007	99	67640	2.00	1.88	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	90	11027	2.00	1.96	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	93	69489	2.00	1.80	
82 Toluene	91	9.181	9.181	0.000	98	287192	2.00	1.97	
83 trans-1,3-Dichloropropene	75	9.446	9.438	0.008	95	55336	2.00	1.98	
84 Ethyl methacrylate	69	9.510	9.510	0.000	91	26921	2.00	1.57	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	91	34372	2.00	1.99	
86 Tetrachloroethene	164	9.696	9.696	0.000	95	58674	2.00	1.97	
87 1,3-Dichloropropane	76	9.789	9.782	0.007	94	61320	2.00	1.95	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	33767	2.00	1.94	
90 Ethylene Dibromide	107	10.096	10.096	0.000	96	27625	2.00	1.90	
91 1-Chlorohexane	91	10.561	10.561	0.000	96	100851	2.00	1.88	
92 Chlorobenzene	112	10.575	10.568	0.007	93	179520	2.00	2.01	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	89	54821	2.00	1.87	
94 Ethylbenzene	106	10.668	10.668	0.000	99	103393	2.00	1.93	
95 m-Xylene & p-Xylene	106	10.797	10.790	0.007	99	124466	2.00	1.94	
96 o-Xylene	106	11.154	11.154	0.000	97	111152	2.00	1.95	
97 Styrene	104	11.176	11.169	0.007	95	157797	2.00	1.87	
98 Bromoform	173	11.340	11.340	0.000	94	15198	2.00	1.94	
99 Isopropylbenzene	105	11.498	11.498	0.000	97	322518	2.00	1.98	
103 Bromobenzene	156	11.784	11.784	0.000	96	63972	2.00	1.92	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	33797	2.00	1.89	
105 trans-1,4-Dichloro-2-buten	53	11.827	11.826	0.001	67	7571	2.00	1.74	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	10138	2.00	2.01	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	90619	2.00	1.94	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	72759	2.00	1.92	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	93	266353	2.00	1.97	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	75036	2.00	1.95	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	233351	2.00	1.94	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	267724	2.00	1.99	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	73029	2.00	1.92	
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	97	139524	2.00	1.97	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	313877	2.00	1.99	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	95	137978	2.00	1.96	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	309232	2.00	2.00	
118 1,2-Dichlorobenzene	146	12.921	12.920	0.001	95	117811	2.00	1.95	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	74	4063	2.00	1.94	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	89468	2.00	1.87	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	98	69566	2.00	1.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	0.000	97	107376	2.00	1.76	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	50	88395	2.00	1.82	
S 137 1,2-Dichloroethene, Total	96				0		4.00	3.85	
S 143 Xylenes, Total	106				0		4.00	3.89	
S 138 Xylenes, Total (URS)	1				0		4.00	3.89	
S 142 Trihalomethanes, Total	1				0		8.00	7.77	
S 140 1,3-Dichloropropene, Total	1				0		4.00	3.78	
S 139 Total BTEX	1				0			9.75	
S 144 1,2-Dichloroethene, Total	1				0		4.00	3.85	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.16	Units: uL
MV-Main A_00036	Amount Added:	1.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	1.00	Units: uL

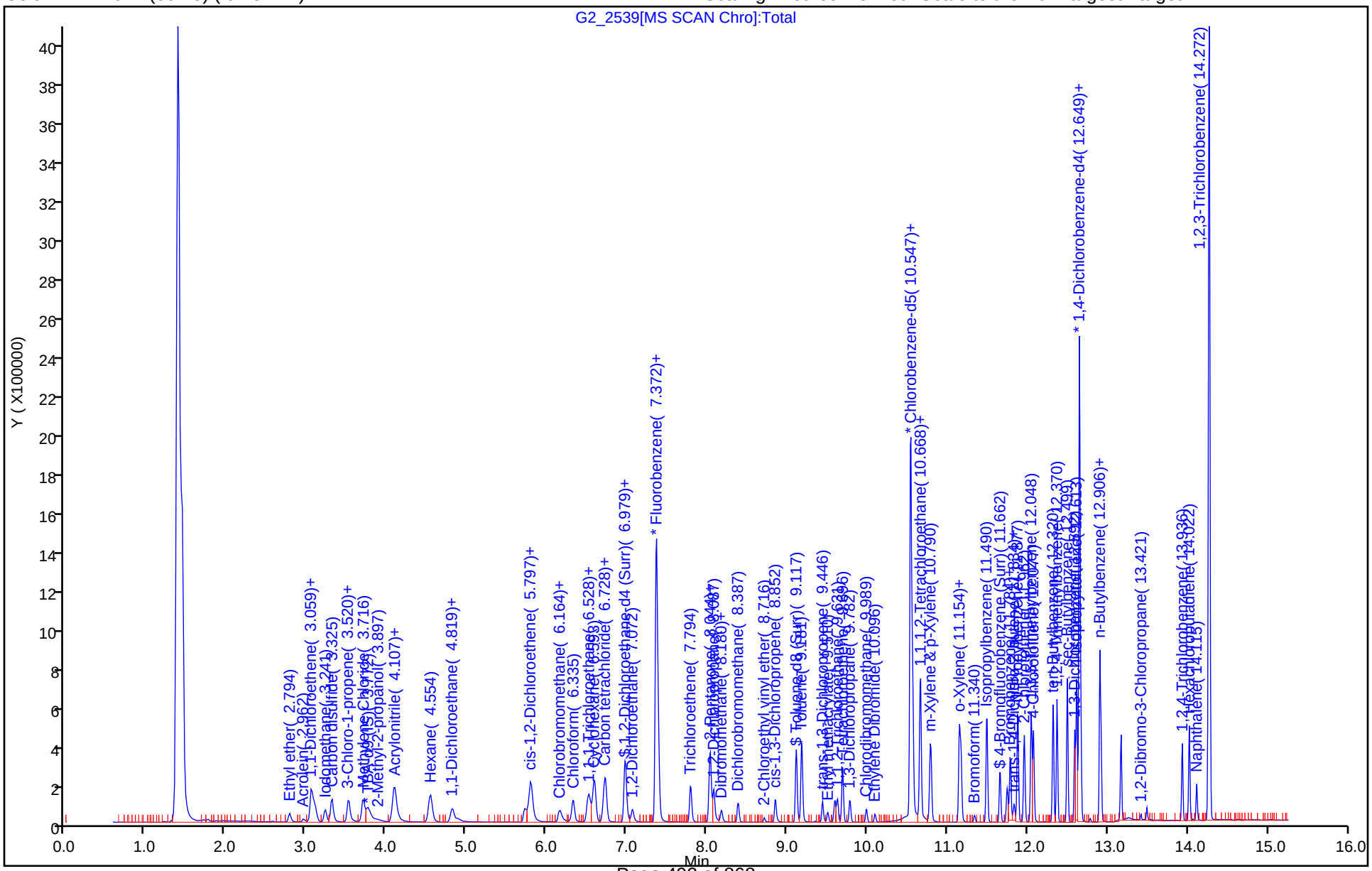
Report Date: 03-May-2018 07:30:51 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2539.D

Injection Date:	02-May-2018 23:34:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2540.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-May-2018 23:55:30 ALS Bottle#: 14 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:30:55 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:52:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	185857	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.365	0.007	98	1361284	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.540	0.007	88	313720	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	480622	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	92	132975	5.00	4.79	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.979	6.971	0.008	98	137185	5.00	4.98	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	94	598262	5.00	4.93	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	87	209480	5.00	4.97	
22 Ethyl ether	59	2.794	2.794	0.000	93	88899	5.00	4.97	
24 Acrolein	56	2.961	2.962	-0.001	99	78492	50.0	46.7	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	94	160032	5.00	4.82	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	95	148453	5.00	4.85	
28 Iodomethane	142	3.241	3.241	0.000	99	250010	5.00	4.87	
30 Carbon disulfide	76	3.325	3.311	0.014	99	631625	5.00	4.89	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	89	279885	5.00	4.96	
32 Methyl acetate	43	3.534	3.520	0.014	33	73066	10.0	9.23	
35 Methylene Chloride	84	3.702	3.702	0.000	96	174149	5.00	5.00	
37 2-Methyl-2-propanol	59	3.883	3.897	-0.014	97	50130	50.0	47.8	
39 Acrylonitrile	53	4.065	4.051	0.014	99	179338	50.0	46.5	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	176820	5.00	5.04	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	83	296807	5.00	4.81	
42 Hexane	57	4.554	4.540	0.014	94	308870	5.00	4.87	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	332029	5.00	5.04	
46 Vinyl acetate	43	4.889	4.875	0.014	97	231734	10.0	8.90	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	86	174908	5.00	4.98	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	88	327687	5.00	5.03	
56 Chlorobromomethane	128	6.156	6.156	0.000	98	56320	5.00	4.80	
55 sec-Butyl Alcohol	45	6.185	6.178	0.007	84	70920	150.0	124.4	
57 Tetrahydrofuran	42	6.178	6.178	0.000	76	30427	10.0	9.09	
59 Chloroform	83	6.328	6.328	0.000	94	296767	5.00	4.95	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	98	295302	5.00	4.92	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.592	6.592	0.000	93	357542	5.00	4.93	
62 Carbon tetrachloride	117	6.721	6.714	0.007	97	259773	5.00	4.88	
63 1,1-Dichloropropene	75	6.735	6.736	-0.001	95	264161	5.00	5.04	
64 Benzene	78	6.979	6.979	0.000	98	681815	5.00	4.84	
65 1,2-Dichloroethane	62	7.072	7.072	0.000	98	161425	5.00	4.83	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	213428	125.0	123.3	
67 n-Heptane	43	7.393	7.393	0.000	92	335498	5.00	4.93	
69 Trichloroethene	95	7.794	7.794	0.000	97	178037	5.00	4.86	
70 2-Pentanone	43	8.030	8.030	0.000	95	163810	20.0	18.8	
71 Methylcyclohexane	55	8.044	8.044	0.000	92	294536	5.00	5.00	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	94	158074	5.00	4.94	
75 Dibromomethane	93	8.180	8.180	0.000	93	59572	5.00	4.75	
74 1,4-Dioxane	88	8.187	8.187	0.000	32	6901	100.0	95.0	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	177023	5.00	4.92	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	91	31109	5.00	4.16	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	187709	5.00	4.38	
82 Toluene	91	9.188	9.181	0.007	98	723757	5.00	4.97	
83 trans-1,3-Dichloropropene	75	9.445	9.438	0.007	96	144867	5.00	4.51	
84 Ethyl methacrylate	69	9.510	9.510	0.000	89	83229	5.00	4.01	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	84655	5.00	4.90	
86 Tetrachloroethene	164	9.696	9.696	0.000	94	148519	5.00	4.77	
87 1,3-Dichloropropane	76	9.789	9.782	0.007	93	159576	5.00	4.87	
89 Chlorodibromomethane	129	9.989	9.989	0.000	91	89542	5.00	4.50	
90 Ethylene Dibromide	107	10.096	10.096	0.000	98	72919	5.00	4.81	
91 1-Chlorohexane	91	10.561	10.561	0.000	95	271476	5.00	4.84	
92 Chlorobenzene	112	10.568	10.568	0.000	93	452270	5.00	4.84	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	91	142535	5.00	4.66	
94 Ethylbenzene	106	10.668	10.668	0.000	99	271661	5.00	4.85	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	324367	5.00	4.84	
96 o-Xylene	106	11.154	11.154	0.000	97	295199	5.00	4.96	
97 Styrene	104	11.176	11.169	0.007	95	431273	5.00	4.78	
98 Bromoform	173	11.347	11.340	0.007	94	41580	5.00	4.21	
99 Isopropylbenzene	105	11.498	11.498	0.000	97	869142	5.00	5.16	
103 Bromobenzene	156	11.784	11.784	0.000	97	167323	5.00	4.86	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	90120	5.00	4.88	
105 trans-1,4-Dichloro-2-buten	53	11.826	11.826	0.000	82	21680	5.00	4.81	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	86	24760	5.00	4.76	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	241379	5.00	5.00	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	192331	5.00	4.92	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	716694	5.00	5.14	
109 4-Chlorotoluene	126	12.077	12.077	0.000	98	199790	5.00	5.03	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	623438	5.00	5.03	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	728399	5.00	5.23	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	200494	5.00	5.10	
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	97	359873	5.00	4.92	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	842369	5.00	5.18	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	357717	5.00	4.91	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	846789	5.00	5.30	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	96	306134	5.00	4.90	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	75	11448	5.00	4.19	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	233041	5.00	4.71	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	98	181885	5.00	4.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	-0.001	97	291486	5.00	4.63	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	91	231571	5.00	5.00	
S 137 1,2-Dichloroethene, Total	96				0		10.0	10.0	
S 140 1,3-Dichloropropene, Total	1				0		10.0	8.89	
S 139 Total BTEX	1				0			24.5	
S 144 1,2-Dichloroethene, Total	1				0		10.0	10.0	
S 142 Trihalomethanes, Total	1				0		20.0	18.6	
S 143 Xylenes, Total	106				0		10.0	9.80	
S 138 Xylenes, Total (URS)	1				0		10.0	9.80	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.40	Units: uL
MV-Main A_00036	Amount Added:	2.50	Units: uL
MV-2cleve+AVA_00034	Amount Added:	2.50	Units: uL

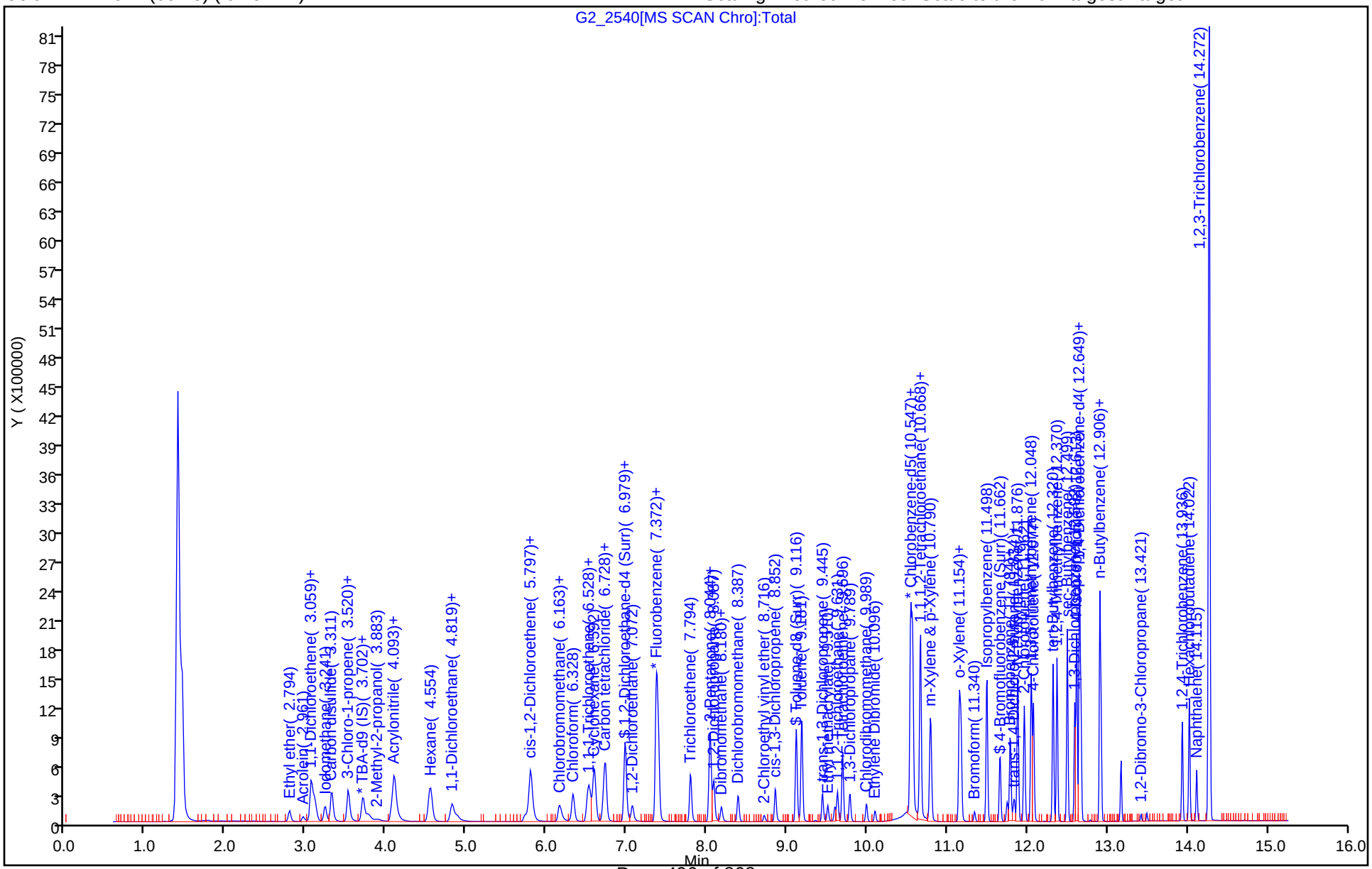
Report Date: 03-May-2018 07:30:56 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2540.D

Injection Date:	02-May-2018 23:55:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2541.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 03-May-2018 00:15:30 ALS Bottle#: 15 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:31:00 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:53:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	214579	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	98	1416946	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.547	0.000	88	323732	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	511240	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	293424	10.0	10.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	296291	10.0	10.3	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	0.000	94	1259779	10.0	10.1	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	86	453348	10.0	10.1	
22 Ethyl ether	59	2.794	2.794	0.000	94	202627	10.0	10.9	
24 Acrolein	56	2.962	2.962	0.000	98	186018	100.0	100.8	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	94	355873	10.0	10.3	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	94	320540	10.0	10.1	
28 Iodomethane	142	3.241	3.241	0.000	99	547956	10.0	10.3	
30 Carbon disulfide	76	3.311	3.311	0.000	100	1361473	10.0	10.1	
32 Methyl acetate	43	3.520	3.520	0.000	97	174053	20.0	20.4	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	89	621347	10.0	10.6	
35 Methylene Chloride	84	3.702	3.702	0.000	96	349029	10.0	10.2	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	96	115847	100.0	104.5	
39 Acrylonitrile	53	4.051	4.051	0.000	98	441898	100.0	104.3	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	377767	10.0	10.3	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	96	688725	10.0	10.7	
42 Hexane	57	4.540	4.540	0.000	94	687597	10.0	10.5	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	701955	10.0	10.2	
46 Vinyl acetate	43	4.875	4.875	0.000	98	586886	20.0	19.9	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	71	685864	10.0	10.4	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	86	382489	10.0	10.5	
56 Chlorobromomethane	128	6.156	6.156	0.000	98	125138	10.0	10.1	
57 Tetrahydrofuran	42	6.178	6.178	0.000	72	75699	20.0	21.7	
55 sec-Butyl Alcohol	45	6.178	6.178	0.000	86	178368	300.0	256.7	
59 Chloroform	83	6.328	6.328	0.000	94	634153	10.0	10.2	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	99	638598	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.592	6.592	0.000	92	768295	10.0	10.2	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	567319	10.0	10.2	
63 1,1-Dichloropropene	75	6.736	6.736	0.000	95	568175	10.0	10.4	
64 Benzene	78	6.979	6.979	0.000	97	1482393	10.0	10.1	
65 1,2-Dichloroethane	62	7.072	7.072	0.000	98	356902	10.0	10.3	
67 n-Heptane	43	7.393	7.393	0.000	93	714477	10.0	10.1	
66 Isobutyl alcohol	41	7.393	7.393	0.000	84	457175	250.0	253.7	
69 Trichloroethene	95	7.794	7.794	0.000	97	387802	10.0	10.2	
70 2-Pentanone	43	8.030	8.030	0.000	97	392794	40.0	41.3	
71 Methylcyclohexane	55	8.044	8.044	0.000	92	641089	10.0	10.5	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	94	340221	10.0	10.2	
75 Dibromomethane	93	8.180	8.180	0.000	96	131379	10.0	10.1	
74 1,4-Dioxane	88	8.187	8.187	0.000	32	19317	200.0	209.5	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	398257	10.0	10.6	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	93	77640	10.0	8.93	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	441562	10.0	9.77	
82 Toluene	91	9.181	9.181	0.000	98	1563871	10.0	10.3	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	348075	10.0	9.86	
84 Ethyl methacrylate	69	9.510	9.510	0.000	90	208083	10.0	9.27	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	183675	10.0	10.2	
86 Tetrachloroethene	164	9.696	9.696	0.000	95	322869	10.0	10.0	
87 1,3-Dichloropropane	76	9.782	9.782	0.000	93	352538	10.0	10.4	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	207128	10.0	9.73	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	164327	10.0	10.5	
91 1-Chlorohexane	91	10.561	10.561	0.000	97	581179	10.0	10.0	
92 Chlorobenzene	112	10.568	10.568	0.000	93	970182	10.0	10.1	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	92	319652	10.0	10.1	
94 Ethylbenzene	106	10.668	10.668	0.000	99	575346	10.0	9.95	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	697929	10.0	10.1	
96 o-Xylene	106	11.154	11.154	0.000	97	643319	10.0	10.5	
97 Styrene	104	11.169	11.169	0.000	95	993111	10.0	10.6	
98 Bromoform	173	11.340	11.340	0.000	95	101929	10.0	9.26	
99 Isopropylbenzene	105	11.498	11.498	0.000	97	1872375	10.0	10.4	
103 Bromobenzene	156	11.784	11.784	0.000	97	376046	10.0	10.3	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	94	205026	10.0	10.4	
105 trans-1,4-Dichloro-2-buten	53	11.826	11.826	0.000	84	52502	10.0	11.0	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	58830	10.0	10.6	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	529259	10.0	10.3	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	418293	10.0	10.1	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1555489	10.0	10.5	
109 4-Chlorotoluene	126	12.077	12.077	0.000	98	429276	10.0	10.2	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1379858	10.0	10.5	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	1565352	10.0	10.6	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	429094	10.0	10.3	
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	97	784591	10.0	10.1	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	1851312	10.0	10.7	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	776797	10.0	10.0	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1824529	10.0	10.7	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	96	666438	10.0	10.0	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	78	28877	10.0	9.07	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	532134	10.0	10.1	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	98	394556	10.0	9.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	0.000	98	707945	10.0	10.6	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	71	535734	10.0	11.2	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.8	
S 143 Xylenes, Total	106				0		20.0	20.6	
S 138 Xylenes, Total (URS)	1				0		20.0	20.6	
S 142 Trihalomethanes, Total	1				0		40.0	39.8	
S 140 1,3-Dichloropropene, Total	1				0		20.0	19.6	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.8	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL
MV-Main A_00036	Amount Added:	5.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL

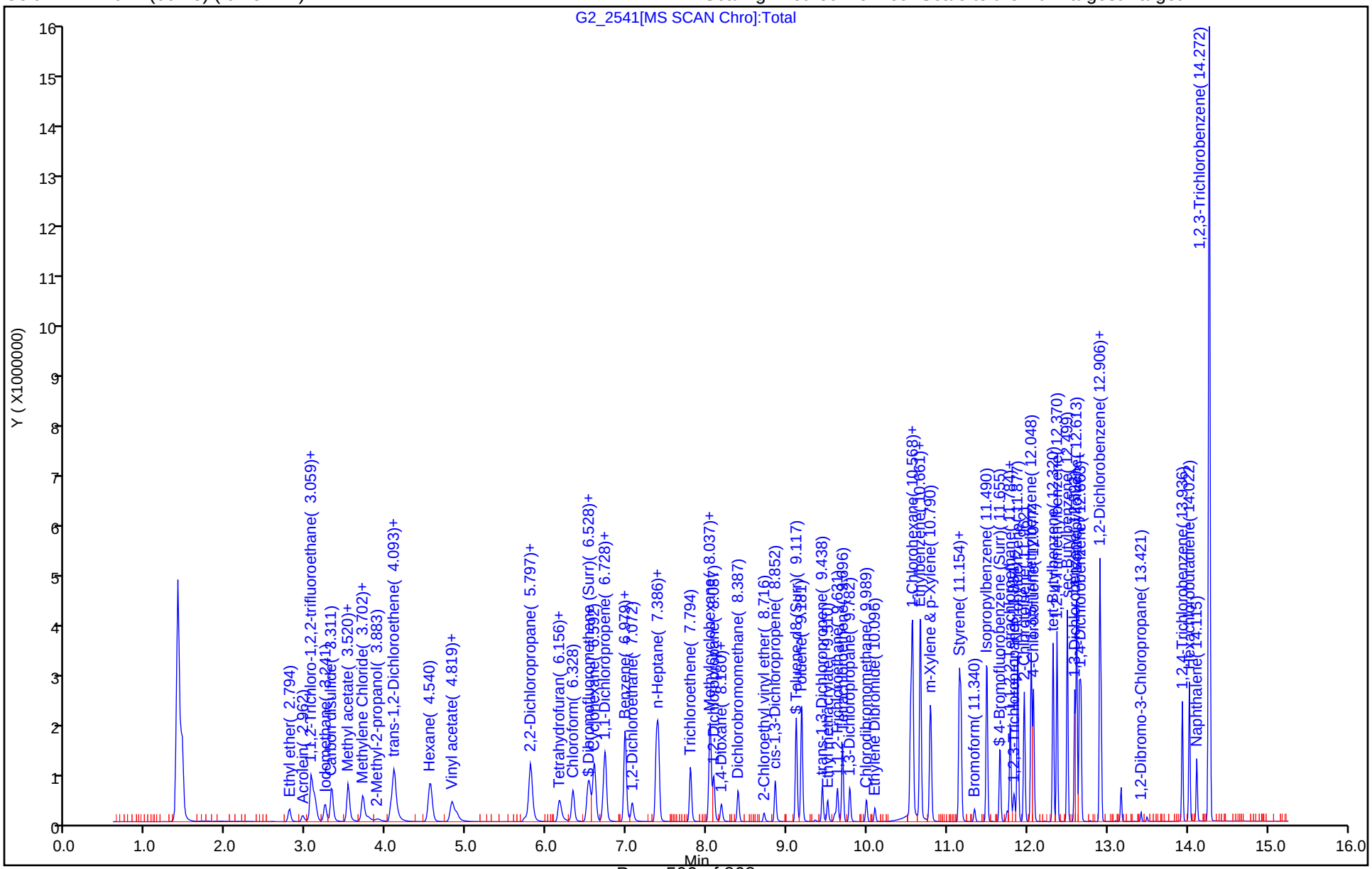
Report Date: 03-May-2018 07:31:02 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2541.D

Injection Date:	03-May-2018 00:15:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	ICIS			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2542.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-May-2018 00:35:30 ALS Bottle#: 16 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD30
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:31:07 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:54:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.772	-0.001	0	190456	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1426390	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.546	10.547	-0.001	87	324318	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	523117	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	917688	30.0	31.6	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.964	6.971	-0.007	99	881906	30.0	30.6	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	94	3896362	30.0	31.1	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	87	1399044	30.0	30.5	
22 Ethyl ether	59	2.780	2.794	-0.014	94	608009	30.0	32.5	
24 Acrolein	56	2.947	2.962	-0.015	99	602920	300.0	314.9	
25 1,1-Dichloroethene	96	3.045	3.059	-0.014	95	1093081	30.0	31.4	
26 1,1,2-Trichloro-1,2,2-trif	151	3.087	3.101	-0.014	95	967287	30.0	30.2	
28 Iodomethane	142	3.227	3.241	-0.014	99	1689914	30.0	31.4	
30 Carbon disulfide	76	3.311	3.311	0.000	99	4114108	30.0	30.4	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	90	1881948	30.0	31.8	
32 Methyl acetate	43	3.520	3.520	0.000	38	548074	60.0	62.8	
35 Methylene Chloride	84	3.702	3.702	0.000	96	991081	30.0	30.1	
37 2-Methyl-2-propanol	59	3.883	3.897	-0.014	97	330448	300.0	293.3	
39 Acrylonitrile	53	4.051	4.051	0.000	98	1354992	300.0	309.1	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	1153353	30.0	31.4	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	96	2042264	30.0	31.6	
42 Hexane	57	4.540	4.540	0.000	94	2084107	30.0	31.8	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	2132785	30.0	30.9	
46 Vinyl acetate	43	4.861	4.875	-0.014	97	2007195	60.0	64.5	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	86	1189115	30.0	32.3	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	70	2022815	30.0	30.8	
56 Chlorobromomethane	128	6.149	6.156	-0.007	98	384297	30.0	30.7	
55 sec-Butyl Alcohol	45	6.171	6.178	-0.007	90	639437	900.0	834.6	M
57 Tetrahydrofuran	42	6.171	6.178	-0.007	69	225349	60.0	64.2	
59 Chloroform	83	6.321	6.328	-0.007	94	1915306	30.0	30.5	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	1980722	30.0	31.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.592	6.592	0.000	92	2372969	30.0	31.2	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	1791005	30.0	32.1	
63 1,1-Dichloropropene	75	6.728	6.736	-0.008	95	1768608	30.0	32.2	
64 Benzene	78	6.979	6.979	-0.001	98	4509710	30.0	30.5	
65 1,2-Dichloroethane	62	7.064	7.072	-0.008	98	1055975	30.0	30.1	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	1336269	750.0	736.5	
67 n-Heptane	43	7.393	7.393	0.000	92	2155619	30.0	30.2	
69 Trichloroethene	95	7.794	7.794	0.000	98	1208919	30.0	31.5	
70 2-Pentanone	43	8.022	8.030	-0.008	99	1219986	120.0	124.5	
71 Methylcyclohexane	55	8.037	8.044	-0.007	92	1957629	30.0	31.7	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	95	1042680	30.0	31.1	
75 Dibromomethane	93	8.180	8.180	0.000	96	404571	30.0	30.8	
74 1,4-Dioxane	88	8.187	8.187	0.000	91	56130	600.0	553.4	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	1251446	30.0	33.2	
78 2-Chloroethyl vinyl ether	63	8.709	8.716	-0.007	92	275764	30.0	29.6	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	1431548	30.0	31.2	
82 Toluene	91	9.181	9.181	0.000	98	4687630	30.0	30.7	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	1117942	30.0	30.6	
84 Ethyl methacrylate	69	9.503	9.510	-0.007	89	693786	30.0	30.1	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	552816	30.0	30.6	
86 Tetrachloroethene	164	9.696	9.696	0.000	95	1005385	30.0	31.2	
87 1,3-Dichloropropane	76	9.781	9.782	-0.001	92	1057060	30.0	31.2	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	691207	30.0	31.8	
90 Ethylene Dibromide	107	10.096	10.096	0.000	98	514088	30.0	32.8	
91 1-Chlorohexane	91	10.561	10.561	0.000	98	1755748	30.0	30.3	
92 Chlorobenzene	112	10.568	10.568	0.000	95	2927079	30.0	30.3	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	94	1019932	30.0	32.3	
94 Ethylbenzene	106	10.668	10.668	0.000	99	1810917	30.0	31.3	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	2171455	30.0	31.3	
96 o-Xylene	106	11.154	11.154	0.000	97	2024127	30.0	32.9	
97 Styrene	104	11.169	11.169	0.000	94	3098294	30.0	32.8	
98 Bromoform	173	11.340	11.340	0.000	96	340229	30.0	29.6	
99 Isopropylbenzene	105	11.490	11.498	-0.008	97	5751582	30.0	31.4	
103 Bromobenzene	156	11.783	11.784	-0.001	97	1138728	30.0	30.4	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	613929	30.0	30.5	
105 trans-1,4-Dichloro-2-buten	53	11.826	11.826	0.000	88	163469	30.0	33.3	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	173646	30.0	30.7	
106 N-Propylbenzene	120	11.884	11.884	0.000	98	1662390	30.0	31.6	
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	1325134	30.0	31.1	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	4847453	30.0	31.9	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	1337579	30.0	30.9	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	4364193	30.0	32.3	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	4793208	30.0	31.6	
112 sec-Butylbenzene	134	12.498	12.499	-0.001	95	1395579	30.0	32.6	
113 1,3-Dichlorobenzene	146	12.591	12.592	-0.001	97	2442013	30.0	30.6	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	96	5757268	30.0	32.5	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	2383991	30.0	30.1	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	5472721	30.0	31.5	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	2081034	30.0	30.6	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	82	99141	30.0	29.0	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	1735687	30.0	32.2	
122 Hexachlorobutadiene	225	14.021	14.022	-0.001	98	1320271	30.0	32.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.114	14.115	-0.001	97	2319575	30.0	33.8	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	96	1480977	30.0	30.6	
S 137 1,2-Dichloroethene, Total	96				0		60.0	63.7	
S 140 1,3-Dichloropropene, Total	1				0		60.0	61.8	
S 139 Total BTEX	1				0			156.8	
S 144 1,2-Dichloroethene, Total	1				0		60.0	63.7	
S 142 Trihalomethanes, Total	1				0		120.0	125.1	
S 143 Xylenes, Total	106				0		60.0	64.2	
S 138 Xylenes, Total (URS)	1				0		60.0	64.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	2.40	Units: uL
MV-Main A_00036	Amount Added:	15.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	15.00	Units: uL

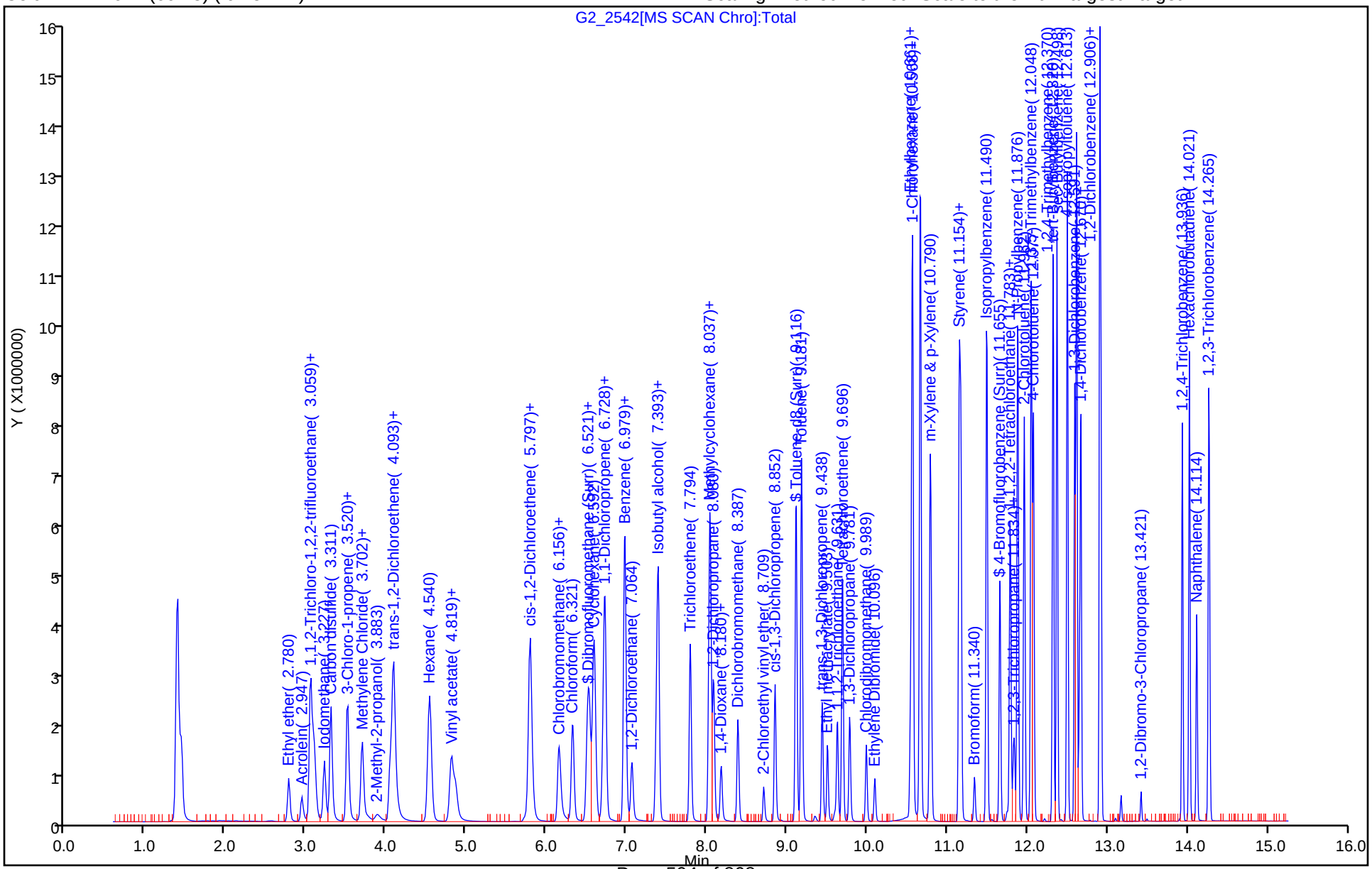
Report Date: 03-May-2018 07:31:08 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2542.D

Injection Date:	03-May-2018 00:35:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD30			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

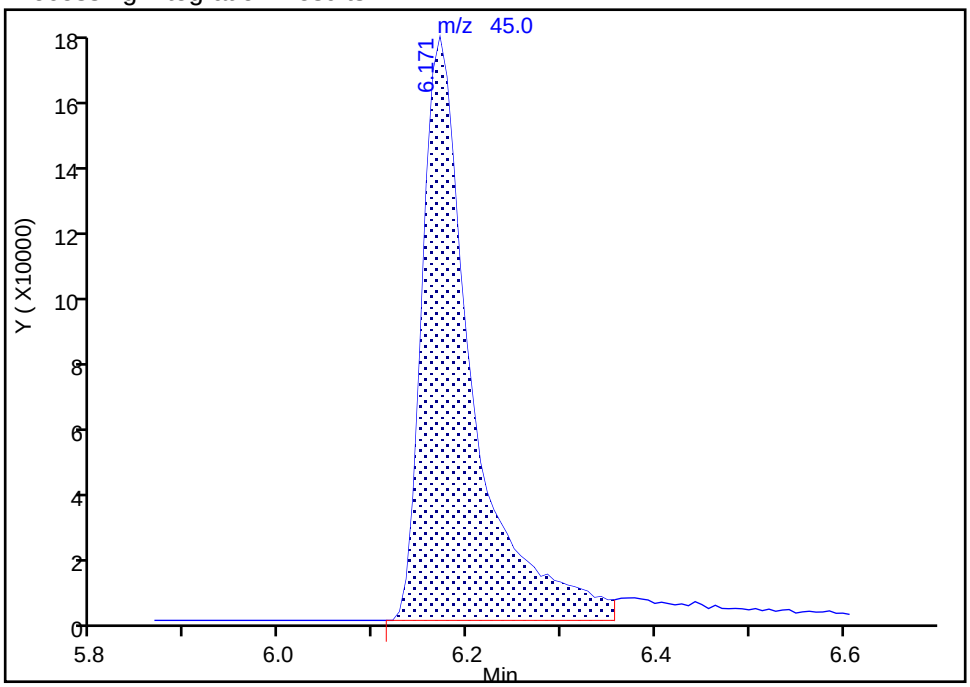
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Injection Date:	03-May-2018 00:35:30	Instrument ID:	VMS_G2		
Lims ID:	STD30				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	16	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

55 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

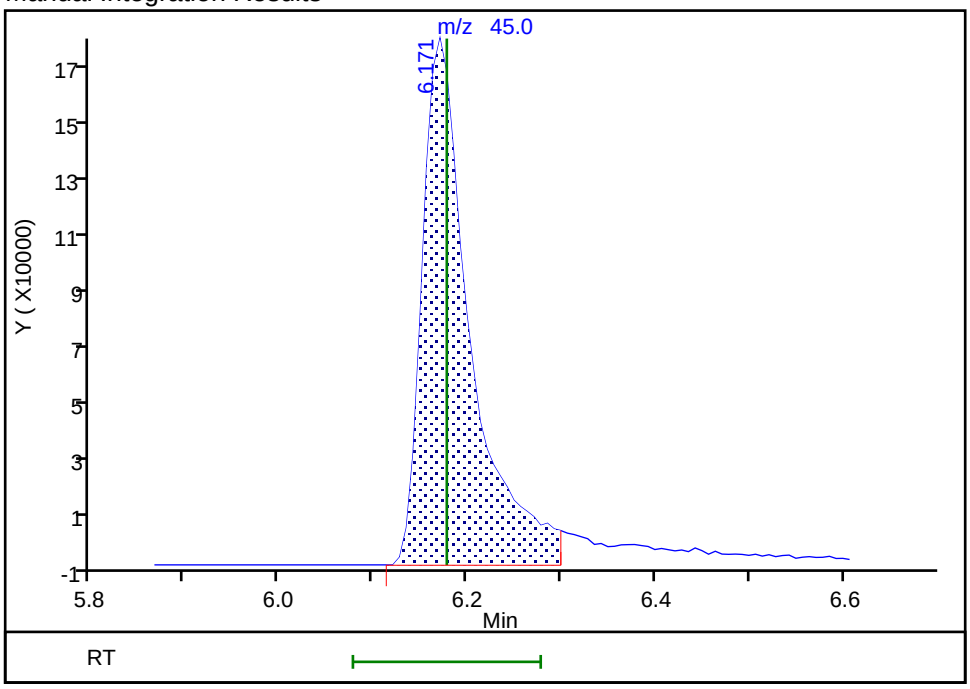
Processing Integration Results

RT: 6.17
Area: 666394
Amount: 832.0005
Amount Units: ug/l



Manual Integration Results

RT: 6.17
Area: 639437
Amount: 834.5667
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 02:07:19

Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2543.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-May-2018 00:55:30 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub119

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:31:11 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:56:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	248955	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1656780	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.547	-0.008	88	382510	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	94	604737	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.535	6.542	-0.007	93	2040494	60.0	60.4	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.964	6.971	-0.007	98	1882222	60.0	56.2	
$ 8 Toluene-d8 (Surr)	98	9.117	9.117	-0.001	93	8353115	60.0	56.4	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	89	3092090	60.0	58.2	
22 Ethyl ether	59	2.780	2.794	-0.014	92	1350658	60.0	62.1	
24 Acrolein	56	2.948	2.962	-0.014	100	1388280	599.9	620.0	
25 1,1-Dichloroethene	96	3.045	3.059	-0.014	96	2373041	60.0	58.7	
26 1,1,2-Trichloro-1,2,2-trif	151	3.087	3.101	-0.014	93	2135124	60.0	57.4	
28 Iodomethane	142	3.227	3.241	-0.014	100	3772690	60.0	60.4	
30 Carbon disulfide	76	3.311	3.311	0.000	99	8894136	60.0	56.6	
32 Methyl acetate	43	3.506	3.520	-0.014	40	1237682	120.0	121.5	
33 3-Chloro-1-propene	41	3.506	3.520	-0.014	91	3996678	60.0	58.2	
35 Methylene Chloride	84	3.702	3.702	0.000	94	2187967	60.0	57.7	
37 2-Methyl-2-propanol	59	3.883	3.897	-0.014	98	820265	600.0	625.2	
39 Acrylonitrile	53	4.037	4.051	-0.014	98	3155133	600.0	615.4	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	97	2552583	60.0	59.8	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	95	4613962	60.0	61.4	
42 Hexane	57	4.540	4.540	0.000	92	4555302	60.0	58.9	
45 1,1-Dichloroethane	63	4.805	4.819	-0.014	96	4624584	60.0	57.7	
46 Vinyl acetate	43	4.861	4.875	-0.014	97	4669796	120.0	128.0	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	67	4333542	60.0	57.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	84	2658142	60.0	62.2	
56 Chlorobromomethane	128	6.149	6.156	-0.007	98	894245	60.0	61.4	
57 Tetrahydrofuran	42	6.163	6.178	-0.015	85	533658	120.0	131.0	
55 sec-Butyl Alcohol	45	6.171	6.178	-0.007	98	1751067	1800.0	1925.5	M
59 Chloroform	83	6.328	6.328	0.000	94	4143684	60.0	56.8	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	4250520	60.0	58.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.592	6.592	0.000	90	5178642	60.0	58.7	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	3903191	60.0	60.2	
63 1,1-Dichloropropene	75	6.728	6.736	-0.008	96	3904136	60.0	61.2	
64 Benzene	78	6.979	6.979	0.000	98	9803439	60.0	57.2	
65 1,2-Dichloroethane	62	7.064	7.072	-0.008	98	2299183	60.0	56.5	
67 n-Heptane	43	7.393	7.393	0.000	91	4548906	60.0	55.0	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	2777511	1500.0	1318.0	
69 Trichloroethene	95	7.794	7.794	0.000	98	2694445	60.0	60.5	
70 2-Pentanone	43	8.023	8.030	-0.007	99	2802715	240.0	244.9	
71 Methylcyclohexane	55	8.037	8.044	-0.007	90	4171142	60.0	58.2	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	94	2313024	60.0	59.4	
75 Dibromomethane	93	8.180	8.180	0.000	97	936079	60.0	61.3	
74 1,4-Dioxane	88	8.180	8.187	-0.007	90	155173	1200.0	1279.6	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	2812484	60.0	64.3	
78 2-Chloroethyl vinyl ether	63	8.709	8.716	-0.007	92	680930	60.0	62.1	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	95	3239919	60.0	59.8	
82 Toluene	91	9.181	9.181	0.000	99	10025377	60.0	56.6	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	94	2566173	60.0	60.0	
84 Ethyl methacrylate	69	9.503	9.510	-0.007	89	1693910	60.0	62.0	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	92	1274085	60.0	60.6	
86 Tetrachloroethene	164	9.696	9.696	0.000	97	2314074	60.0	60.9	
87 1,3-Dichloropropane	76	9.781	9.782	-0.001	91	2410154	60.0	60.3	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	1645278	60.0	63.8	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	1219730	60.0	65.9	
91 1-Chlorohexane	91	10.561	10.561	0.000	97	3884336	60.0	56.8	
92 Chlorobenzene	112	10.568	10.568	0.000	94	6544590	60.0	57.4	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	95	2336190	60.0	62.7	
94 Ethylbenzene	106	10.668	10.668	0.000	98	4068912	60.0	59.6	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	4881814	60.0	59.7	
96 o-Xylene	106	11.154	11.154	0.000	96	4509783	60.0	62.1	
97 Styrene	104	11.169	11.169	0.000	94	6930993	60.0	62.2	
98 Bromoform	173	11.340	11.340	0.000	96	844598	60.0	61.7	
99 Isopropylbenzene	105	11.498	11.498	0.000	96	12068430	60.0	56.9	
103 Bromobenzene	156	11.784	11.784	0.000	96	2613228	60.0	60.4	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	1420534	60.0	61.1	
105 trans-1,4-Dichloro-2-buten	53	11.826	11.826	0.000	87	379741	60.0	67.0	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	403089	60.0	61.6	
106 N-Propylbenzene	120	11.877	11.884	-0.008	97	3742932	60.0	61.6	e
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	2970824	60.0	60.4	a
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	95	10330270	60.0	58.8	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	3037563	60.0	60.8	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	9326755	60.0	59.8	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	97	10062581	60.0	57.4	
112 sec-Butylbenzene	134	12.499	12.499	0.000	95	3131302	60.0	63.3	e
113 1,3-Dichlorobenzene	146	12.592	12.592	0.000	97	5489889	60.0	59.6	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	94	11295280	60.0	55.2	e
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	5343978	60.0	58.3	
117 n-Butylbenzene	91	12.906	12.906	0.000	94	10316036	60.0	51.3	e
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	4685267	60.0	59.6	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	85	250503	60.0	62.6	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	3954302	60.0	63.5	
122 Hexachlorobutadiene	225	14.022	14.022	0.000	97	2992065	60.0	63.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.115	14.115	0.000	97	5337996	60.0	67.3	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	95	3519389	60.0	63.1	
S 137 1,2-Dichloroethene, Total	96				0		120.0	122.0	
S 143 Xylenes, Total	106				0		120.0	121.9	
S 138 Xylenes, Total (URS)	1				0		120.0	121.9	
S 142 Trihalomethanes, Total	1				0		240.0	246.6	
S 140 1,3-Dichloropropene, Total	1				0		120.0	119.8	
S 139 Total BTEX	1				0			295.2	
S 144 1,2-Dichloroethene, Total	1				0		120.0	122.0	

QC Flag Legend

Processing Flags
e - Potential Peak Saturated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	4.80	Units: uL
MV-Main A_00036	Amount Added:	30.00	Units: uL
MV-2cleve+AVA_00034	Amount Added:	30.00	Units: uL

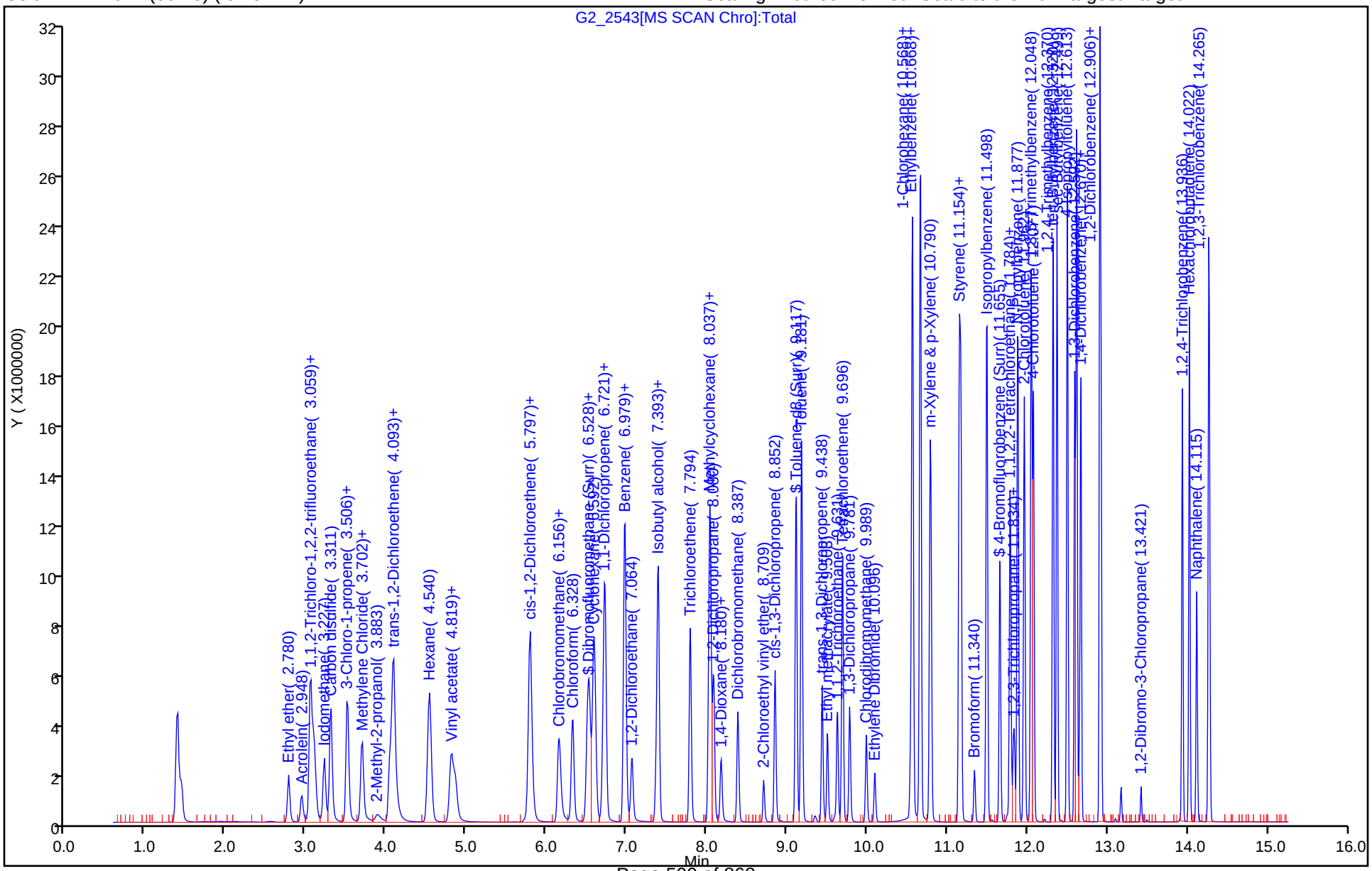
Report Date: 03-May-2018 07:31:12 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2543.D

Injection Date:	03-May-2018 00:55:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

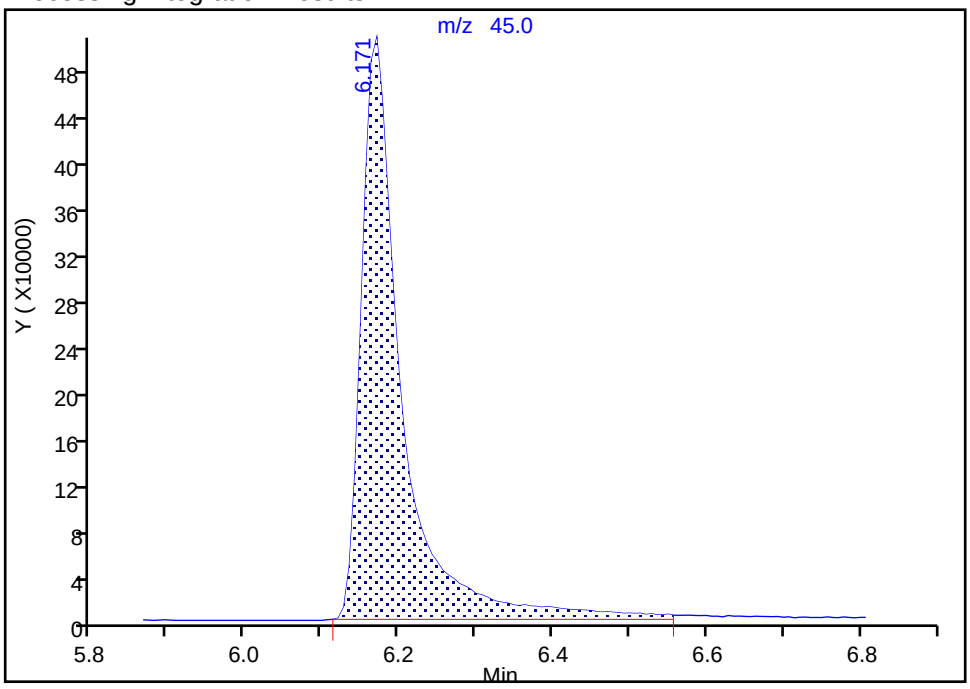
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Injection Date: 03-May-2018 00:55:30 Instrument ID: VMS_G2
Lims ID: STD60
Client ID:
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

55 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

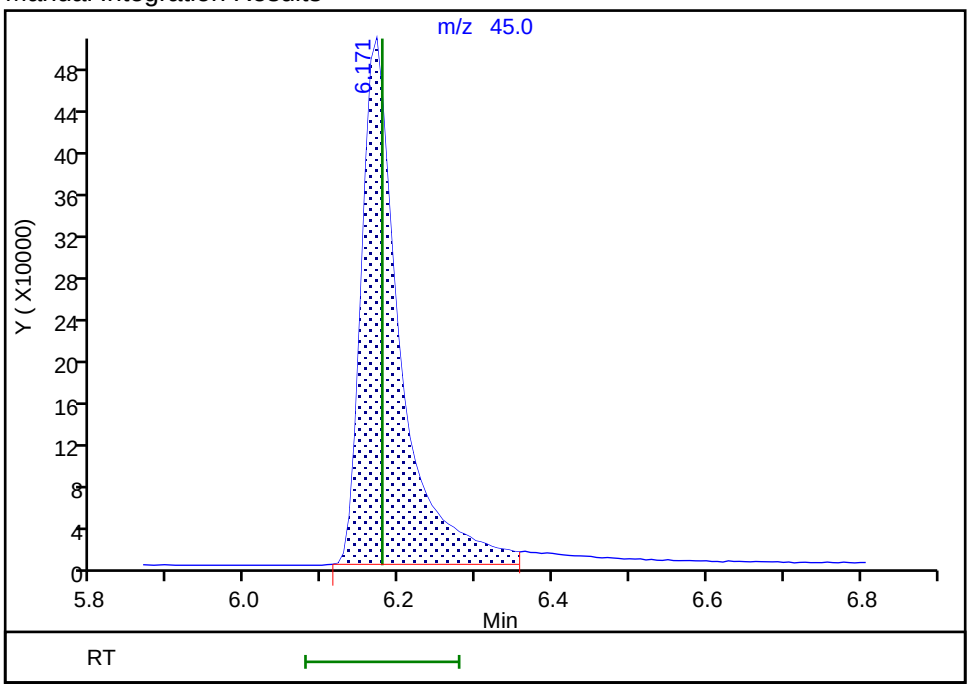
Processing Integration Results

RT: 6.17
Area: 1836924
Amount: 1850.2206
Amount Units: ug/l



Manual Integration Results

RT: 6.17
Area: 1751067
Amount: 1925.4686
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 02:07:54
Audit Action: Manually Integrated Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

TestAmerica Denver

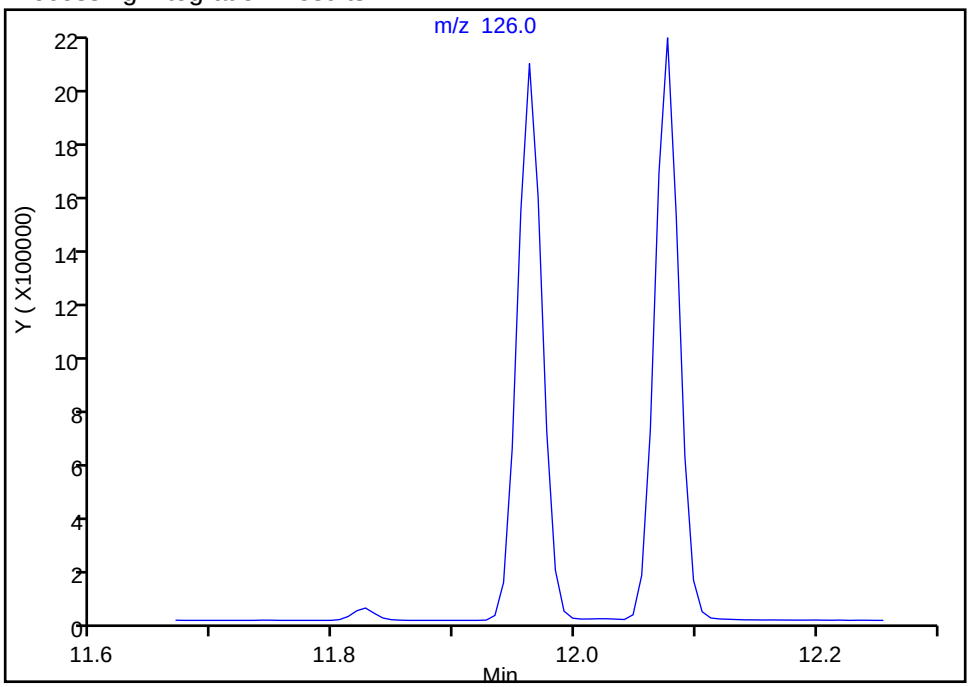
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Injection Date:	03-May-2018 00:55:30	Instrument ID:	VMS_G2		
Lims ID:	STD60				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	17	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

107 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

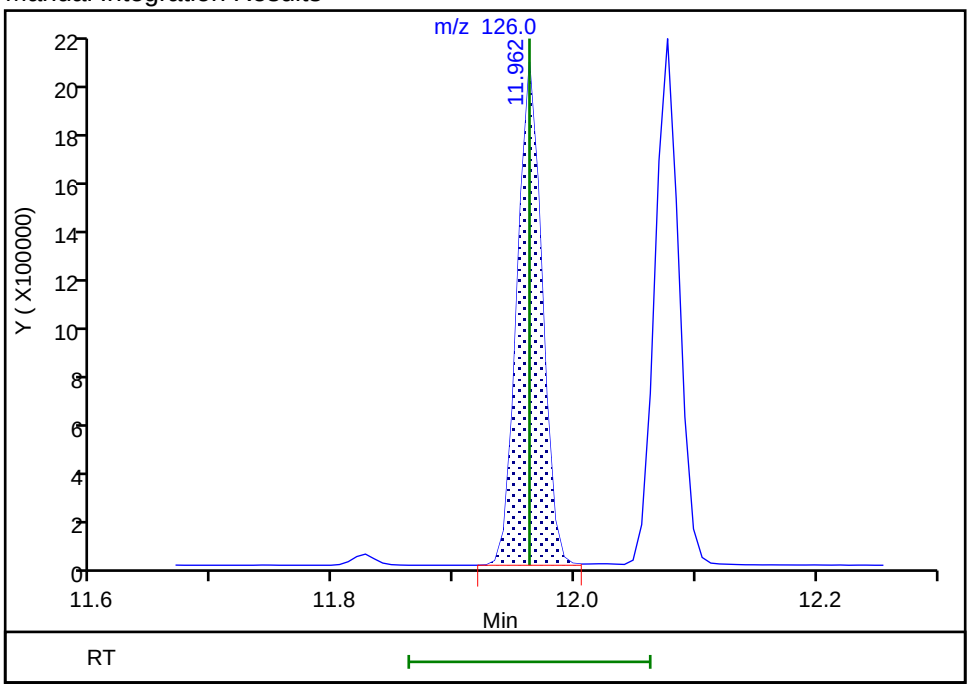
Not Detected
Expected RT: 11.96

Processing Integration Results



Manual Integration Results

RT: 11.96
Area: 2970824
Amount: 60.351042
Amount Units: ug/l



Reviewer: newcomer, 03-May-2018 01:55:56
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

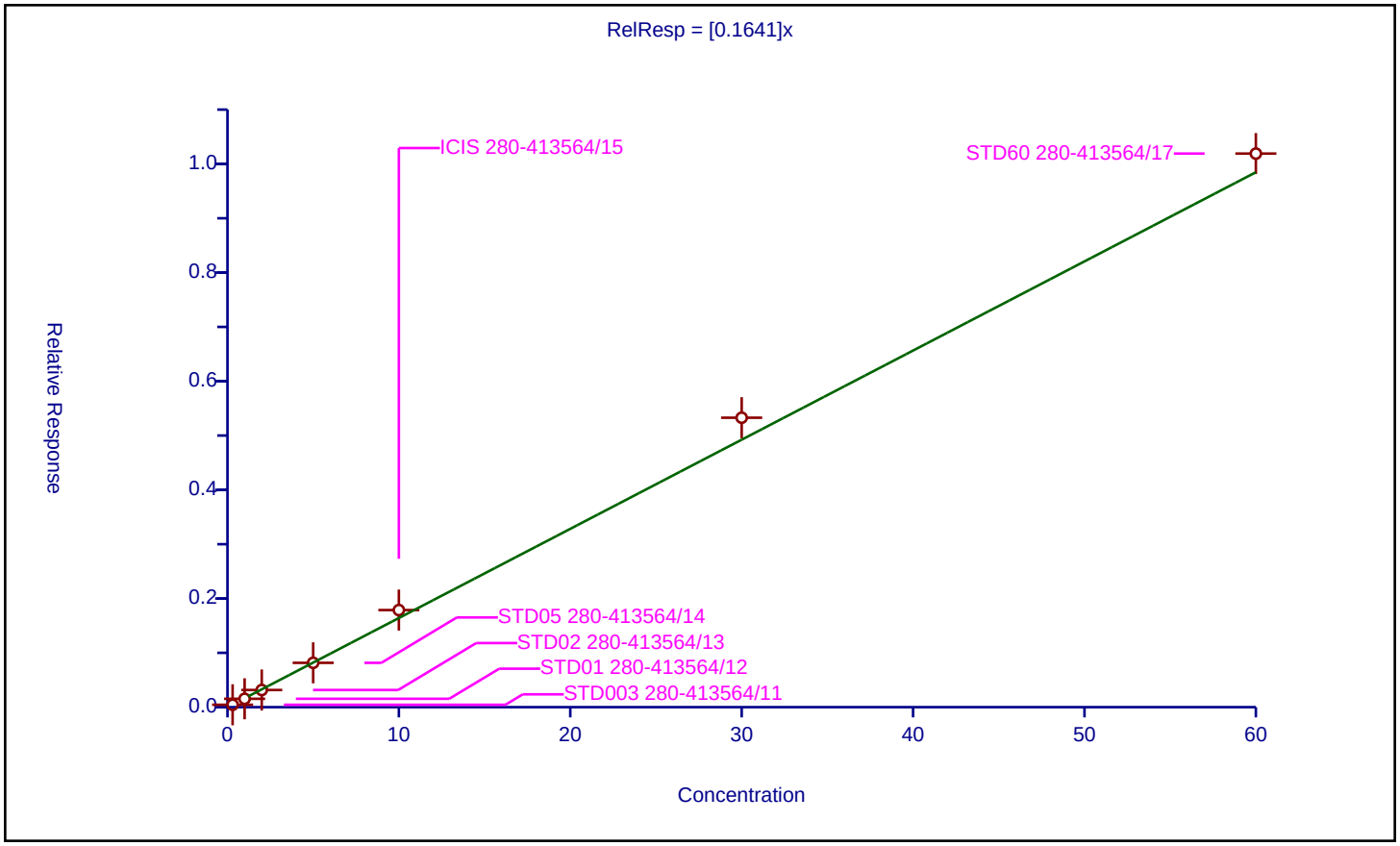
Curve Coefficients

Intercept:	0
Slope:	0.1641

Error Coefficients

Standard Error:	612000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.044149	12.5	1345163.0	0.147163	Y
2	STD01 280-413564/12	1.0	0.154289	12.5	1363756.0	0.154289	Y
3	STD02 280-413564/13	2.0	0.315773	12.5	1360789.0	0.157886	Y
4	STD05 280-413564/14	5.0	0.816316	12.5	1361284.0	0.163263	Y
5	ICIS 280-413564/15	10.0	1.787533	12.5	1416946.0	0.178753	Y
6	STD30 280-413564/16	30.0	5.328215	12.5	1426390.0	0.177607	Y
7	STD60 280-413564/17	60.0	10.190384	12.5	1656780.0	0.16984	Y



Calibration / Acrolein

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

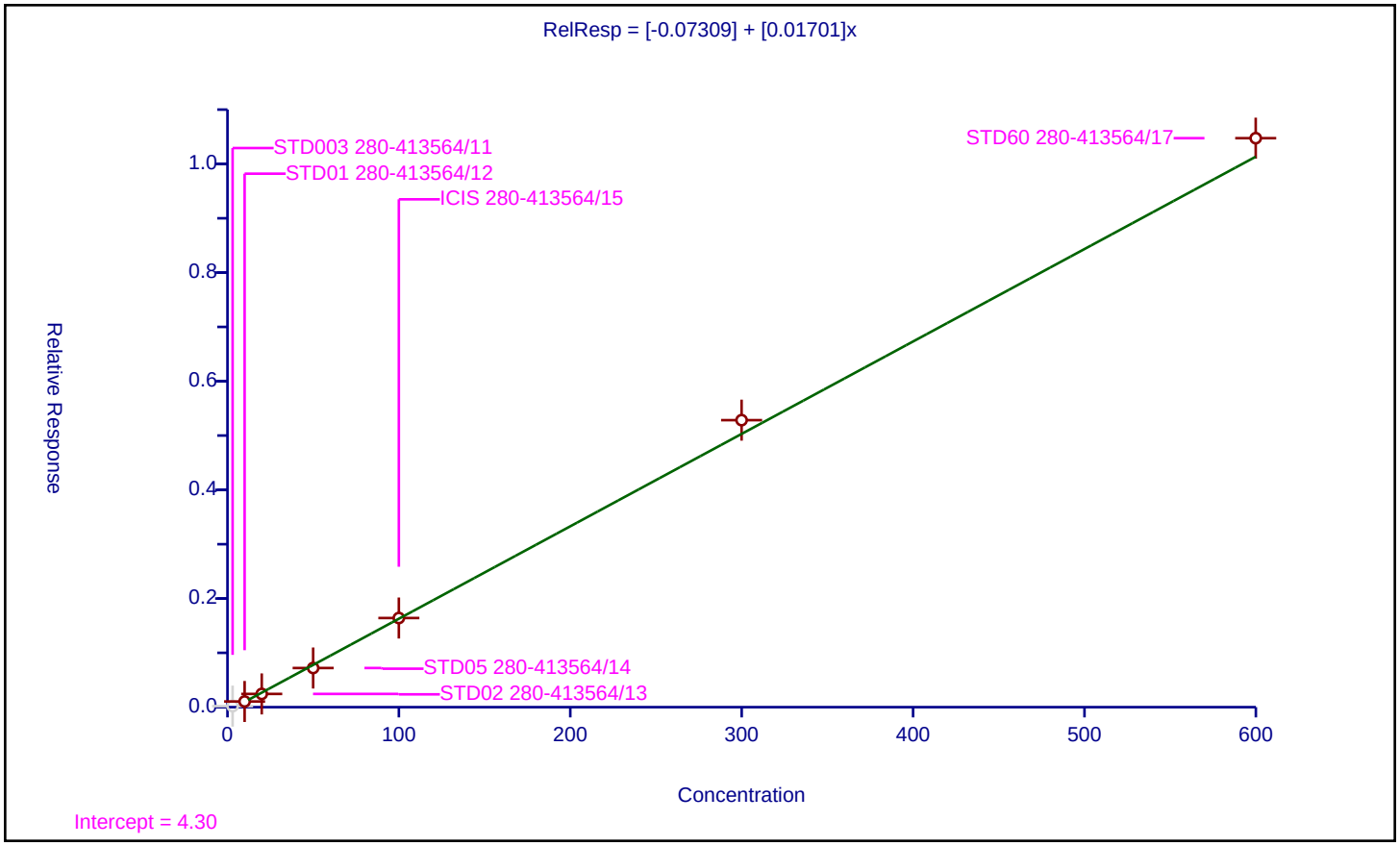
Curve Coefficients

Intercept:	-0.07309
Slope:	0.01701

Error Coefficients

Standard Error:	764000
Relative Standard Error:	6.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	2.999531	0.019329	12.5	1345163.0	0.006444	N
2	STD01 280-413564/12	9.998438	0.104656	12.5	1363756.0	0.010467	Y
3	STD02 280-413564/13	19.996875	0.243517	12.5	1360789.0	0.012178	Y
4	STD05 280-413564/14	49.992188	0.720753	12.5	1361284.0	0.014417	Y
5	ICIS 280-413564/15	99.984375	1.641012	12.5	1416946.0	0.016413	Y
6	STD30 280-413564/16	299.953125	5.283618	12.5	1426390.0	0.017615	Y
7	STD60 280-413564/17	599.90625	10.474233	12.5	1656780.0	0.01746	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

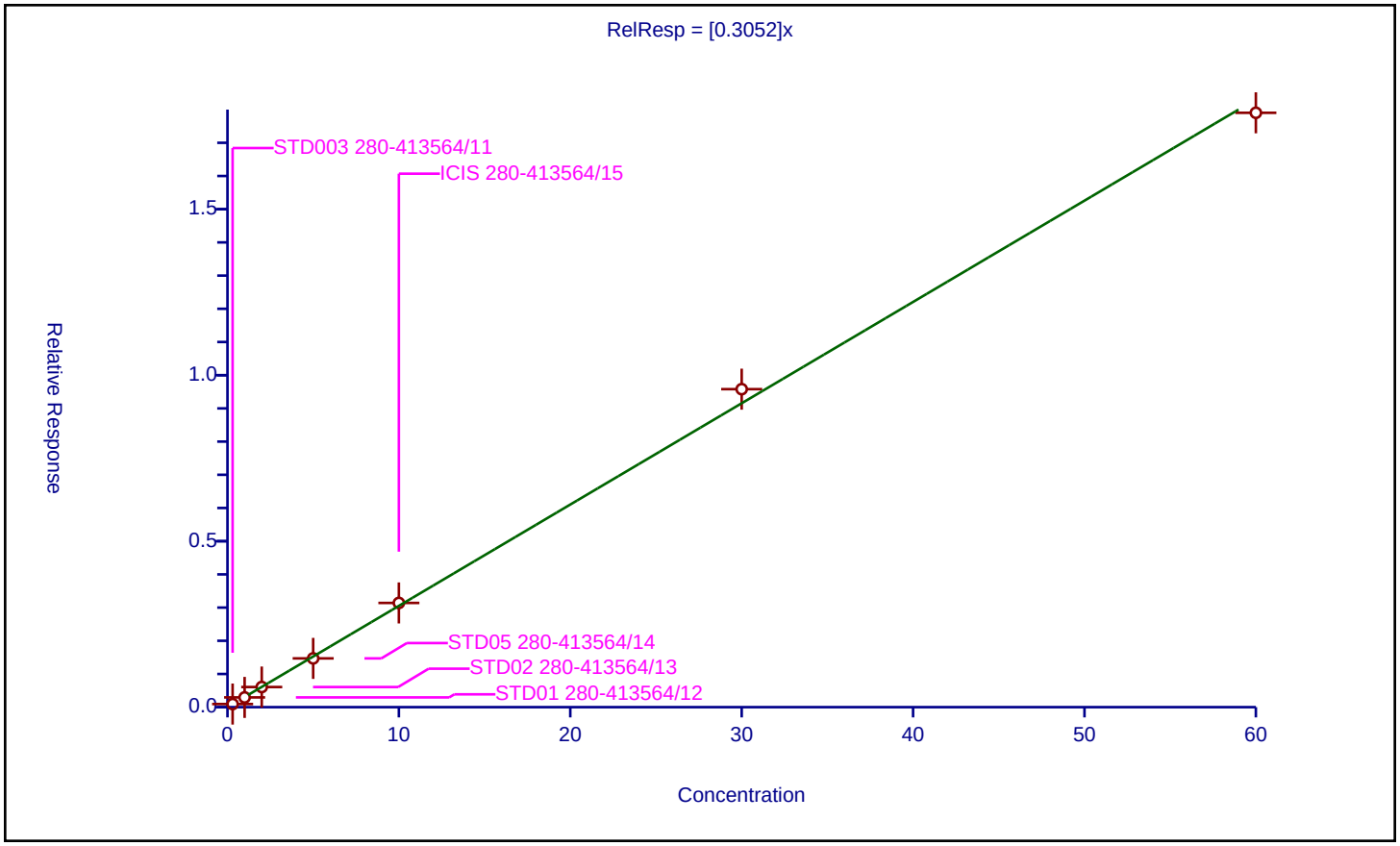
Curve Coefficients

Intercept:	0
Slope:	0.3052

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.094152	12.5	1345163.0	0.313841	Y
2	STD01 280-413564/12	1.0	0.293509	12.5	1363756.0	0.293509	Y
3	STD02 280-413564/13	2.0	0.606367	12.5	1360789.0	0.303183	Y
4	STD05 280-413564/14	5.0	1.469495	12.5	1361284.0	0.293899	Y
5	ICIS 280-413564/15	10.0	3.139437	12.5	1416946.0	0.313944	Y
6	STD30 280-413564/16	30.0	9.579086	12.5	1426390.0	0.319303	Y
7	STD60 280-413564/17	60.0	17.904014	12.5	1656780.0	0.2984	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

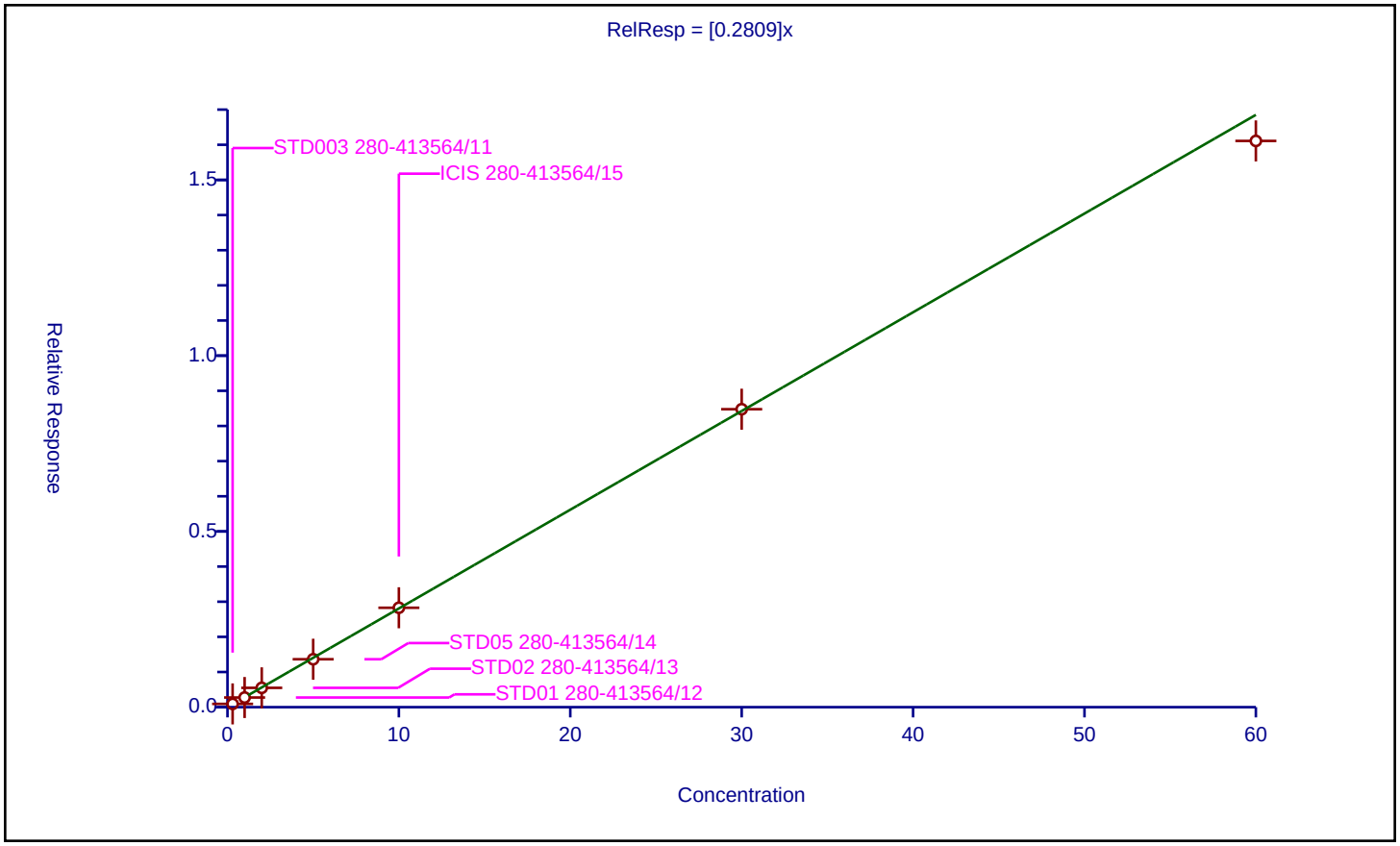
Curve Coefficients

Intercept:	0
Slope:	0.2809

Error Coefficients

Standard Error:	968000
Relative Standard Error:	4.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.092898	12.5	1345163.0	0.309659	Y
2	STD01 280-413564/12	1.0	0.274912	12.5	1363756.0	0.274912	Y
3	STD02 280-413564/13	2.0	0.549874	12.5	1360789.0	0.274937	Y
4	STD05 280-413564/14	5.0	1.363171	12.5	1361284.0	0.272634	Y
5	ICIS 280-413564/15	10.0	2.827737	12.5	1416946.0	0.282774	Y
6	STD30 280-413564/16	30.0	8.476705	12.5	1426390.0	0.282557	Y
7	STD60 280-413564/17	60.0	16.108989	12.5	1656780.0	0.268483	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

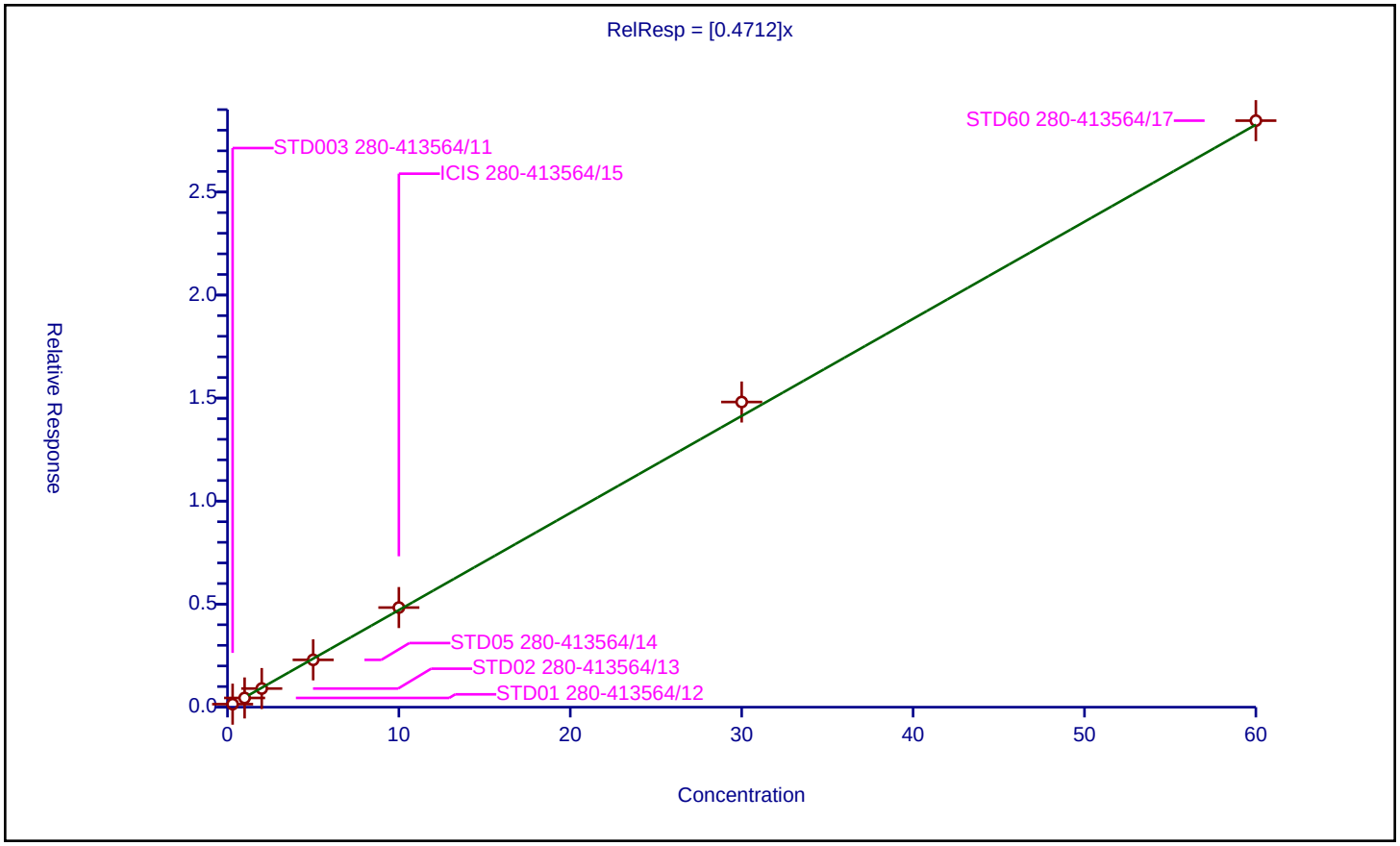
Curve Coefficients

Intercept:	0
Slope:	0.4712

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	3.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.14659	12.5	1345163.0	0.488633	Y
2	STD01 280-413564/12	1.0	0.447102	12.5	1363756.0	0.447102	Y
3	STD02 280-413564/13	2.0	0.903529	12.5	1360789.0	0.451765	Y
4	STD05 280-413564/14	5.0	2.295719	12.5	1361284.0	0.459144	Y
5	ICIS 280-413564/15	10.0	4.833953	12.5	1416946.0	0.483395	Y
6	STD30 280-413564/16	30.0	14.809361	12.5	1426390.0	0.493645	Y
7	STD60 280-413564/17	60.0	28.464024	12.5	1656780.0	0.4744	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

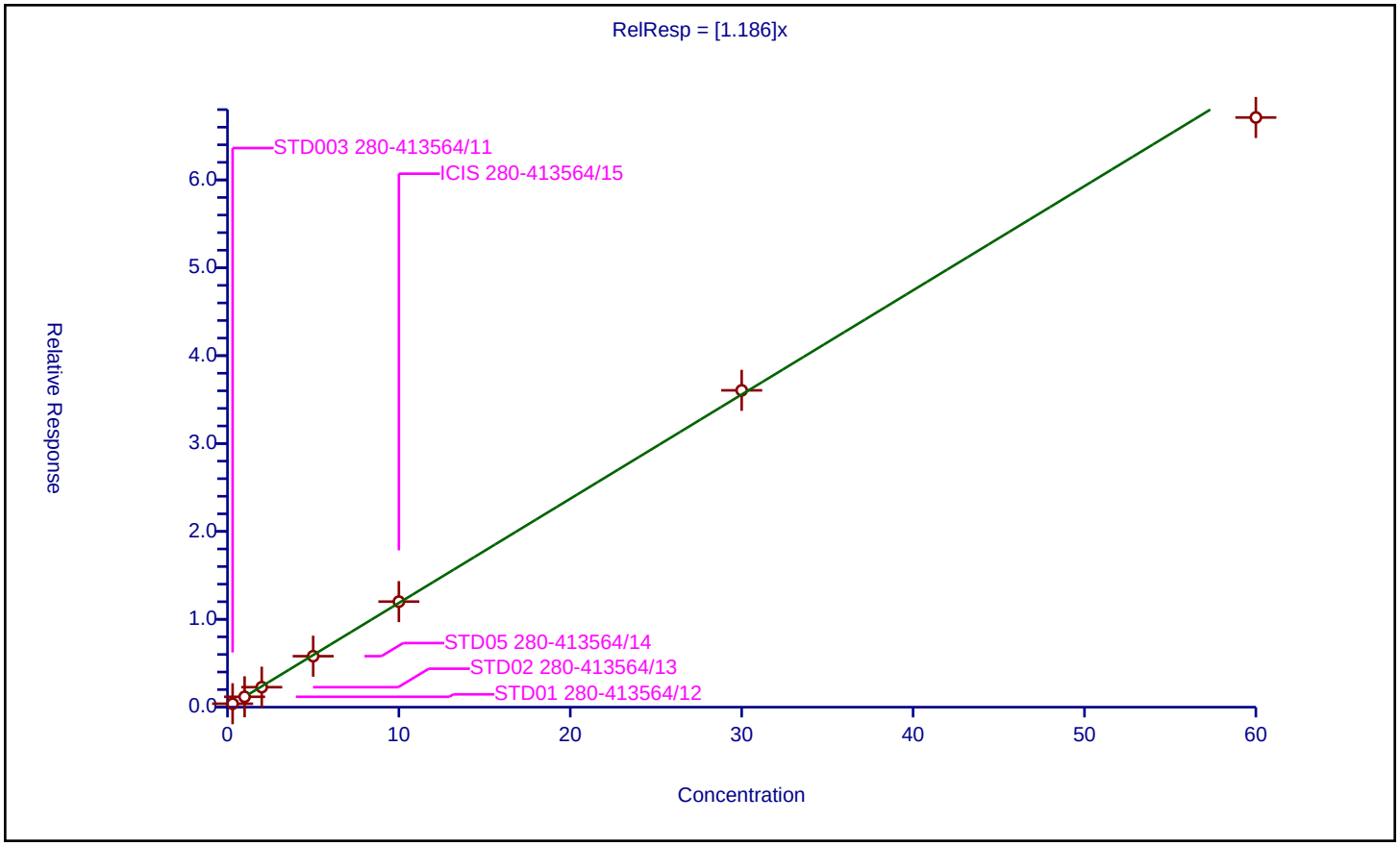
Curve Coefficients

Intercept:	0
Slope:	1.186

Error Coefficients

Standard Error:	4050000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.390901	12.5	1345163.0	1.303002	Y
2	STD01 280-413564/12	1.0	1.17983	12.5	1363756.0	1.17983	Y
3	STD02 280-413564/13	2.0	2.274388	12.5	1360789.0	1.137194	Y
4	STD05 280-413564/14	5.0	5.799901	12.5	1361284.0	1.15998	Y
5	ICIS 280-413564/15	10.0	12.010629	12.5	1416946.0	1.201063	Y
6	STD30 280-413564/16	30.0	36.053499	12.5	1426390.0	1.201783	Y
7	STD60 280-413564/17	60.0	67.104081	12.5	1656780.0	1.118401	Y



Calibration / Methyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

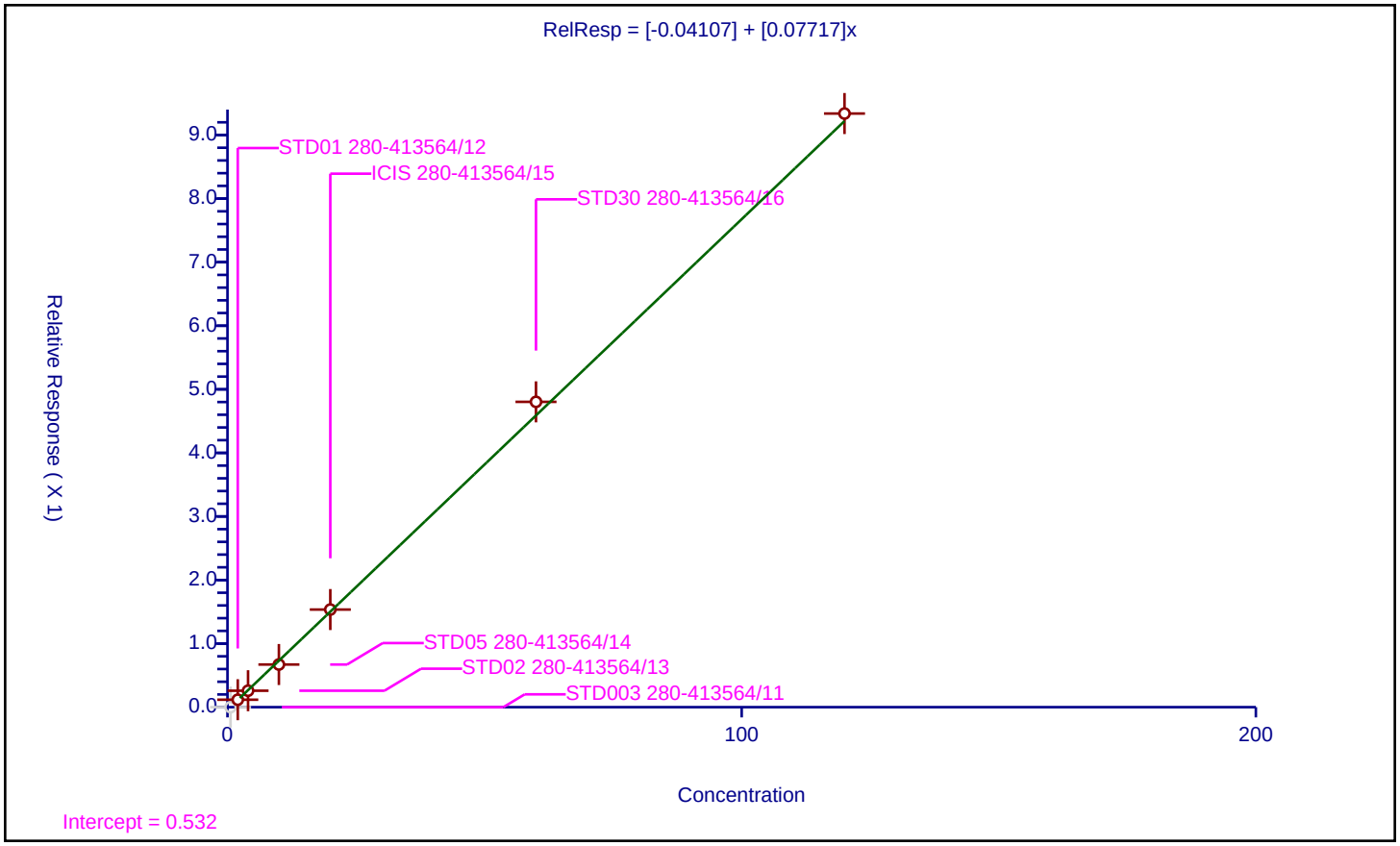
Curve Coefficients

Intercept:	-0.04107
Slope:	0.07717

Error Coefficients

Standard Error:	684000
Relative Standard Error:	5.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.6	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	2.0	0.117314	12.5	1363756.0	0.058657	Y
3	STD02 280-413564/13	4.0	0.258591	12.5	1360789.0	0.064648	Y
4	STD05 280-413564/14	10.0	0.670929	12.5	1361284.0	0.067093	Y
5	ICIS 280-413564/15	20.0	1.535459	12.5	1416946.0	0.076773	Y
6	STD30 280-413564/16	60.0	4.802982	12.5	1426390.0	0.08005	Y
7	STD60 280-413564/17	120.0	9.338008	12.5	1656780.0	0.077817	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

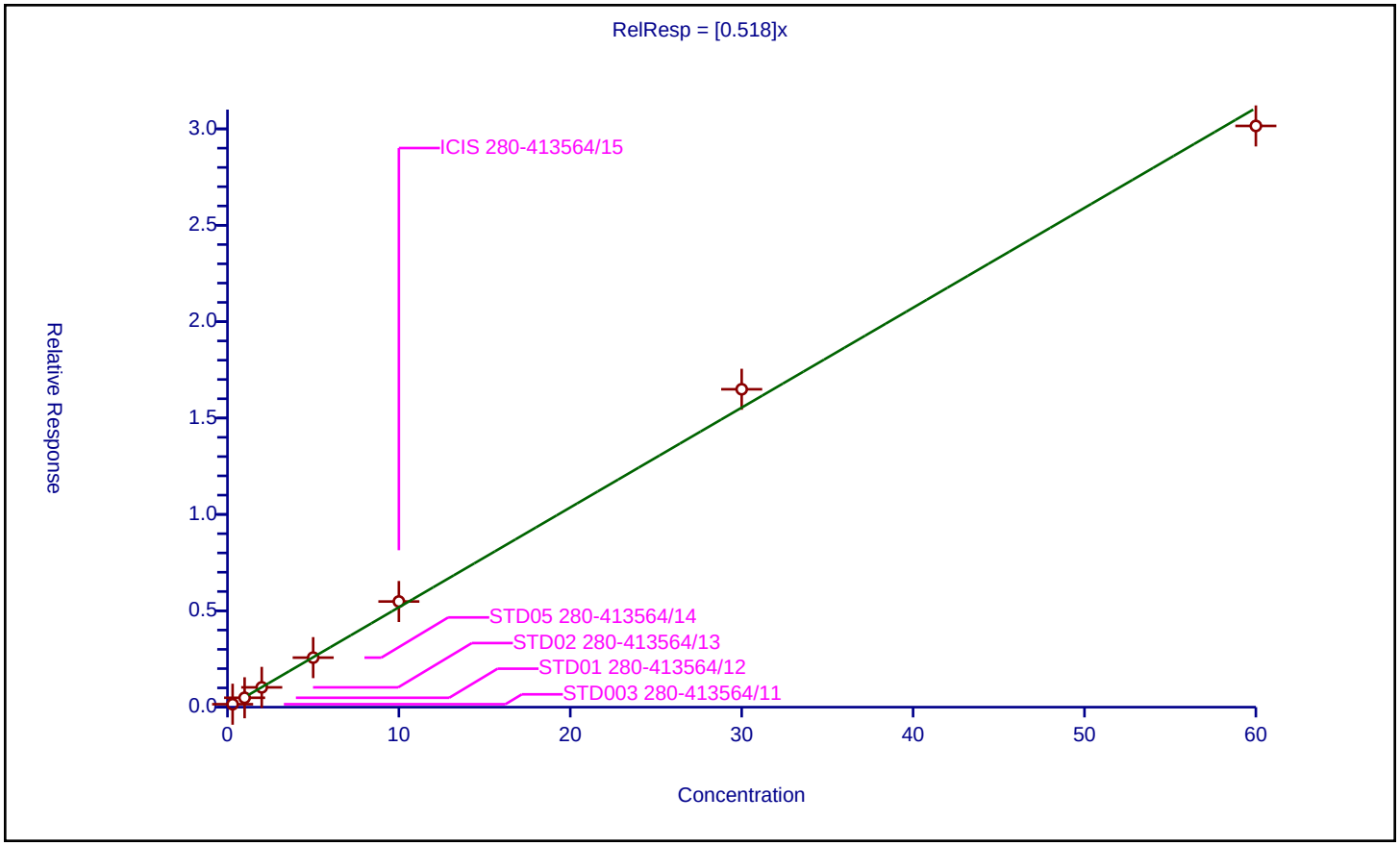
Curve Coefficients

Intercept:	0
Slope:	0.518

Error Coefficients

Standard Error:	1830000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.153113	12.5	1345163.0	0.510378	Y
2	STD01 280-413564/12	1.0	0.488009	12.5	1363756.0	0.488009	Y
3	STD02 280-413564/13	2.0	1.026785	12.5	1360789.0	0.513392	Y
4	STD05 280-413564/14	5.0	2.570046	12.5	1361284.0	0.514009	Y
5	ICIS 280-413564/15	10.0	5.481393	12.5	1416946.0	0.548139	Y
6	STD30 280-413564/16	30.0	16.492229	12.5	1426390.0	0.549741	Y
7	STD60 280-413564/17	60.0	30.153958	12.5	1656780.0	0.502566	Y



Calibration / Methylene Chloride

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

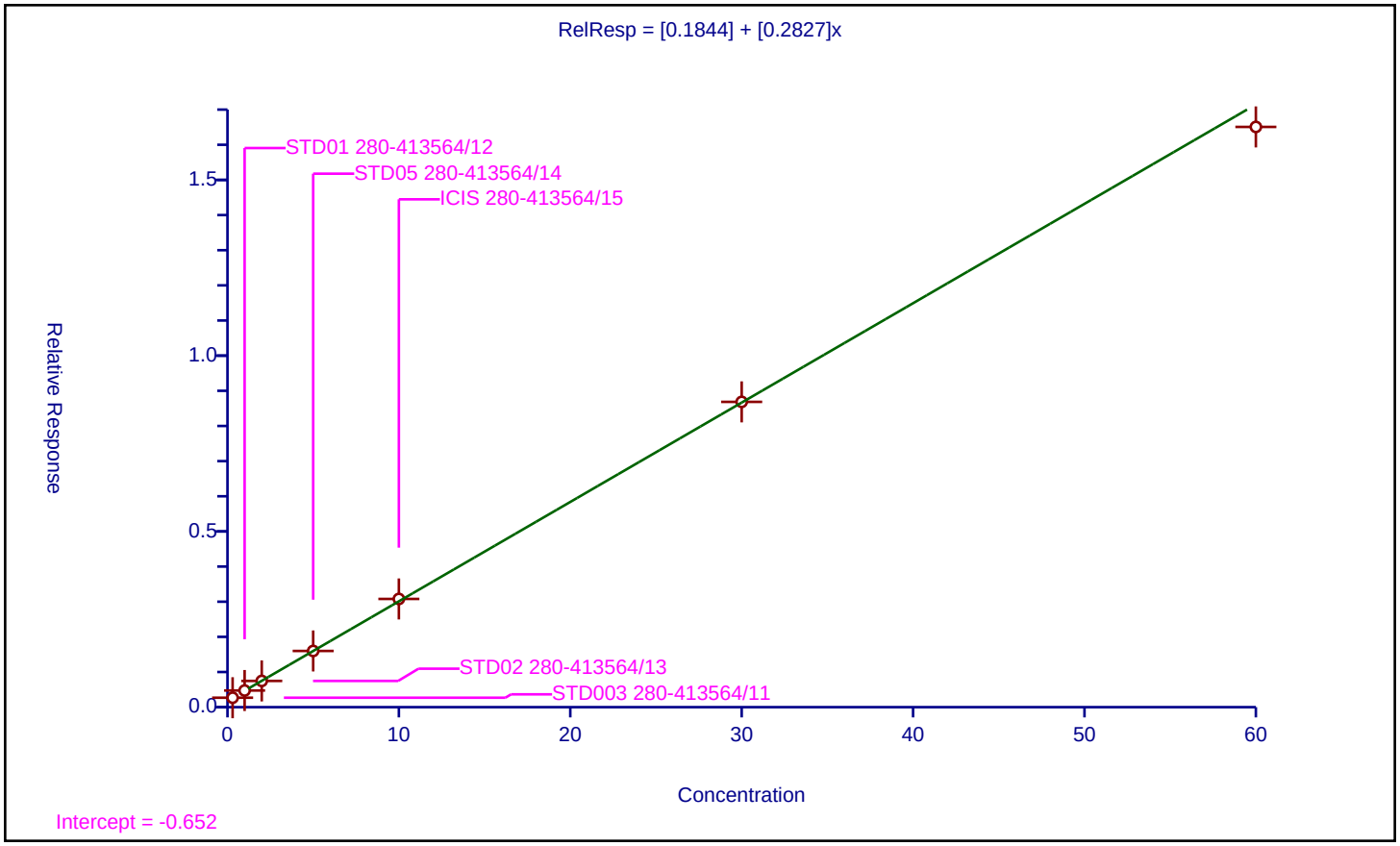
Curve Coefficients

Intercept:	0.1844
Slope:	0.2827

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	2.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.268685	12.5	1345163.0	0.895616	Y
2	STD01 280-413564/12	1.0	0.473774	12.5	1363756.0	0.473774	Y
3	STD02 280-413564/13	2.0	0.746249	12.5	1360789.0	0.373125	Y
4	STD05 280-413564/14	5.0	1.599124	12.5	1361284.0	0.319825	Y
5	ICIS 280-413564/15	10.0	3.079061	12.5	1416946.0	0.307906	Y
6	STD30 280-413564/16	30.0	8.685221	12.5	1426390.0	0.289507	Y
7	STD60 280-413564/17	60.0	16.507676	12.5	1656780.0	0.275128	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

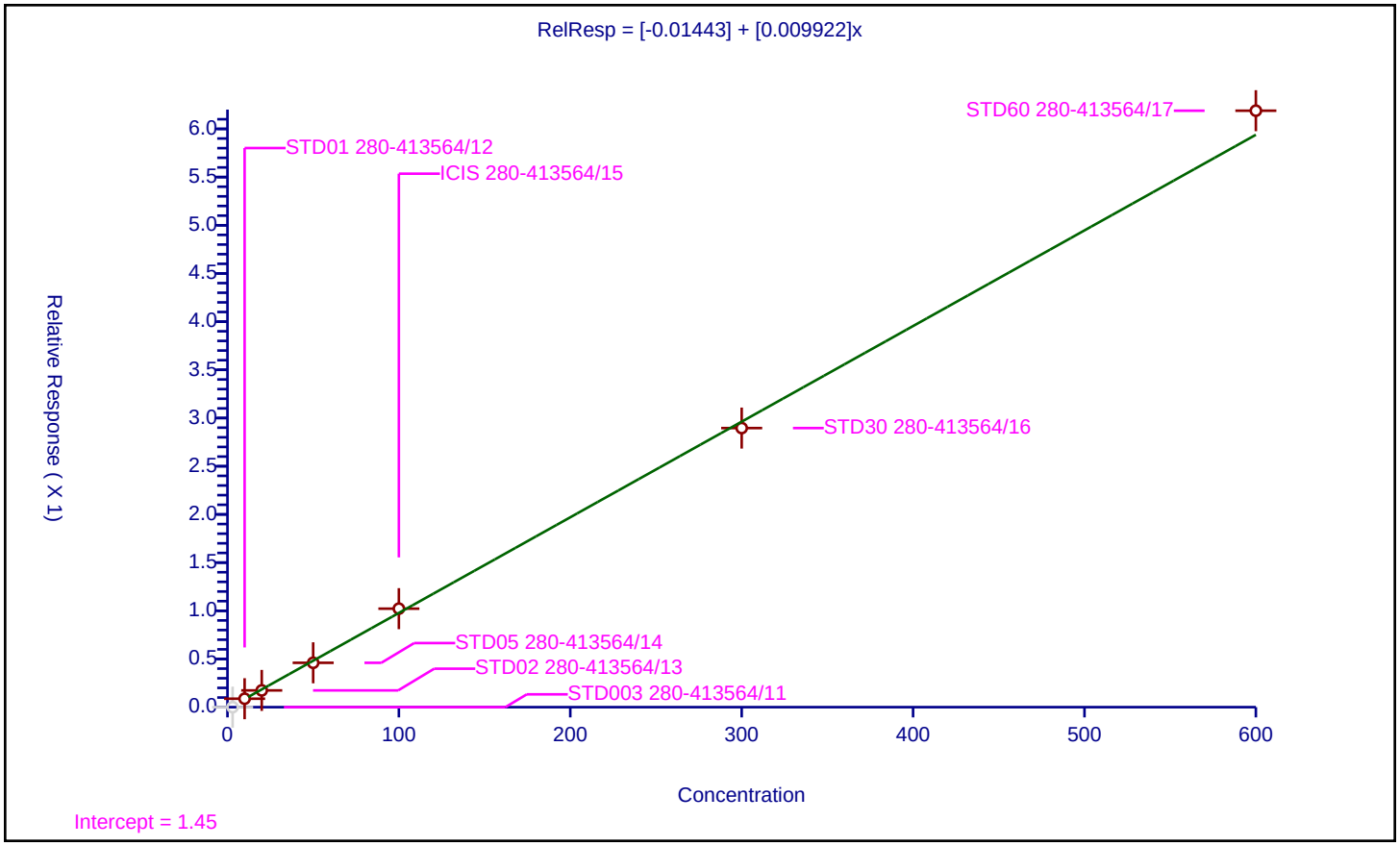
Curve Coefficients

Intercept:	-0.01443
Slope:	0.009922

Error Coefficients

Standard Error:	447000
Relative Standard Error:	4.9
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	3.0	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	10.0	0.087726	12.5	1363756.0	0.008773	Y
3	STD02 280-413564/13	20.0	0.173934	12.5	1360789.0	0.008697	Y
4	STD05 280-413564/14	50.0	0.460319	12.5	1361284.0	0.009206	Y
5	ICIS 280-413564/15	100.0	1.021978	12.5	1416946.0	0.01022	Y
6	STD30 280-413564/16	300.0	2.895842	12.5	1426390.0	0.009653	Y
7	STD60 280-413564/17	600.0	6.188699	12.5	1656780.0	0.010314	Y



Calibration / Acrylonitrile

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

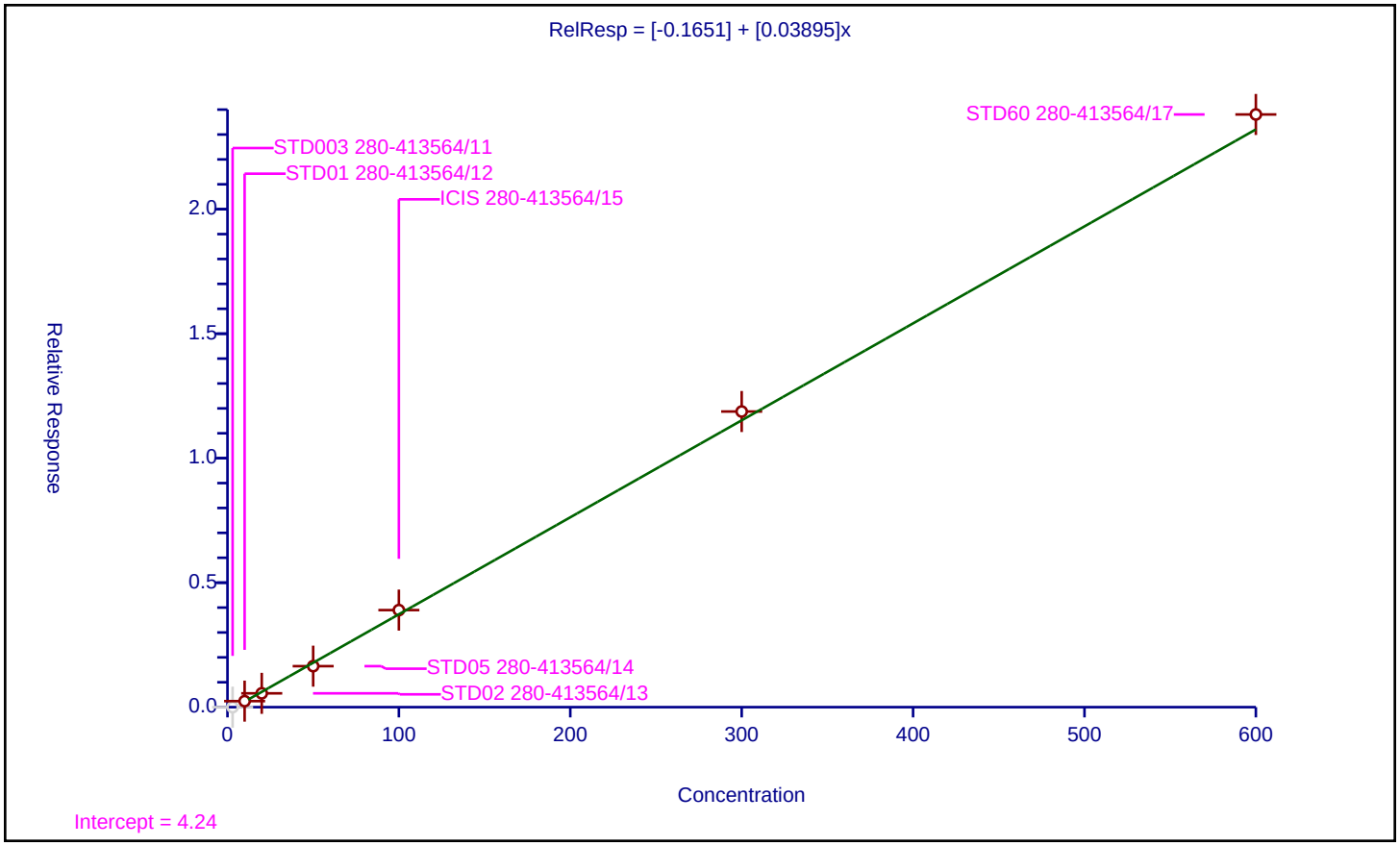
Curve Coefficients

Intercept:	-0.1651
Slope:	0.03895

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	6.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	3.0	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	10.0	0.242254	12.5	1363756.0	0.024225	Y
3	STD02 280-413564/13	20.0	0.555046	12.5	1360789.0	0.027752	Y
4	STD05 280-413564/14	50.0	1.646772	12.5	1361284.0	0.032935	Y
5	ICIS 280-413564/15	100.0	3.898331	12.5	1416946.0	0.038983	Y
6	STD30 280-413564/16	300.0	11.874312	12.5	1426390.0	0.039581	Y
7	STD60 280-413564/17	600.0	23.804707	12.5	1656780.0	0.039675	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

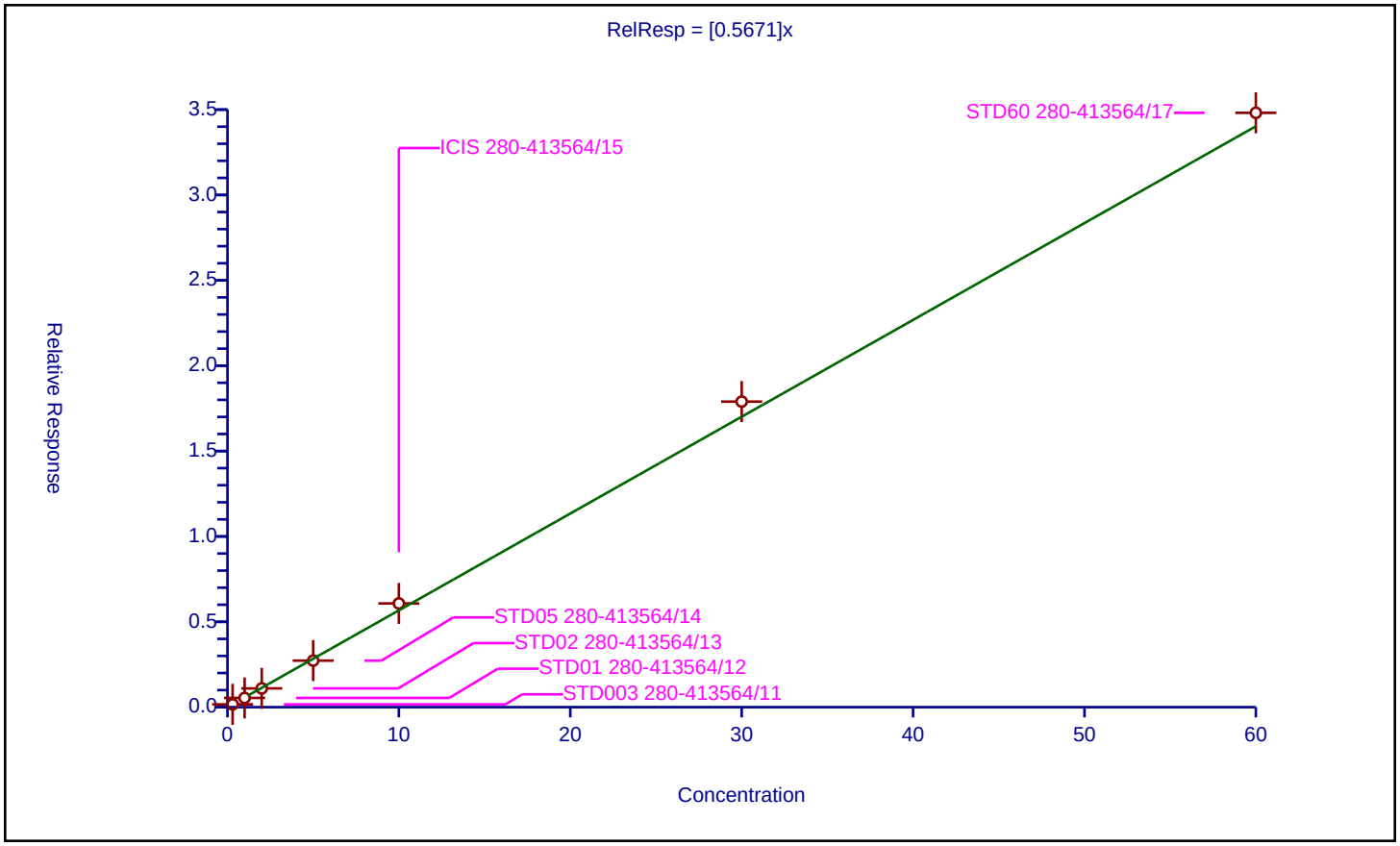
Curve Coefficients

Intercept:	0
Slope:	0.5671

Error Coefficients

Standard Error:	2080000
Relative Standard Error:	4.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.164655	12.5	1345163.0	0.548849	Y
2	STD01 280-413564/12	1.0	0.541583	12.5	1363756.0	0.541583	Y
3	STD02 280-413564/13	2.0	1.099059	12.5	1360789.0	0.54953	Y
4	STD05 280-413564/14	5.0	2.725432	12.5	1361284.0	0.545086	Y
5	ICIS 280-413564/15	10.0	6.075787	12.5	1416946.0	0.607579	Y
6	STD30 280-413564/16	30.0	17.897139	12.5	1426390.0	0.596571	Y
7	STD60 280-413564/17	60.0	34.811215	12.5	1656780.0	0.580187	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

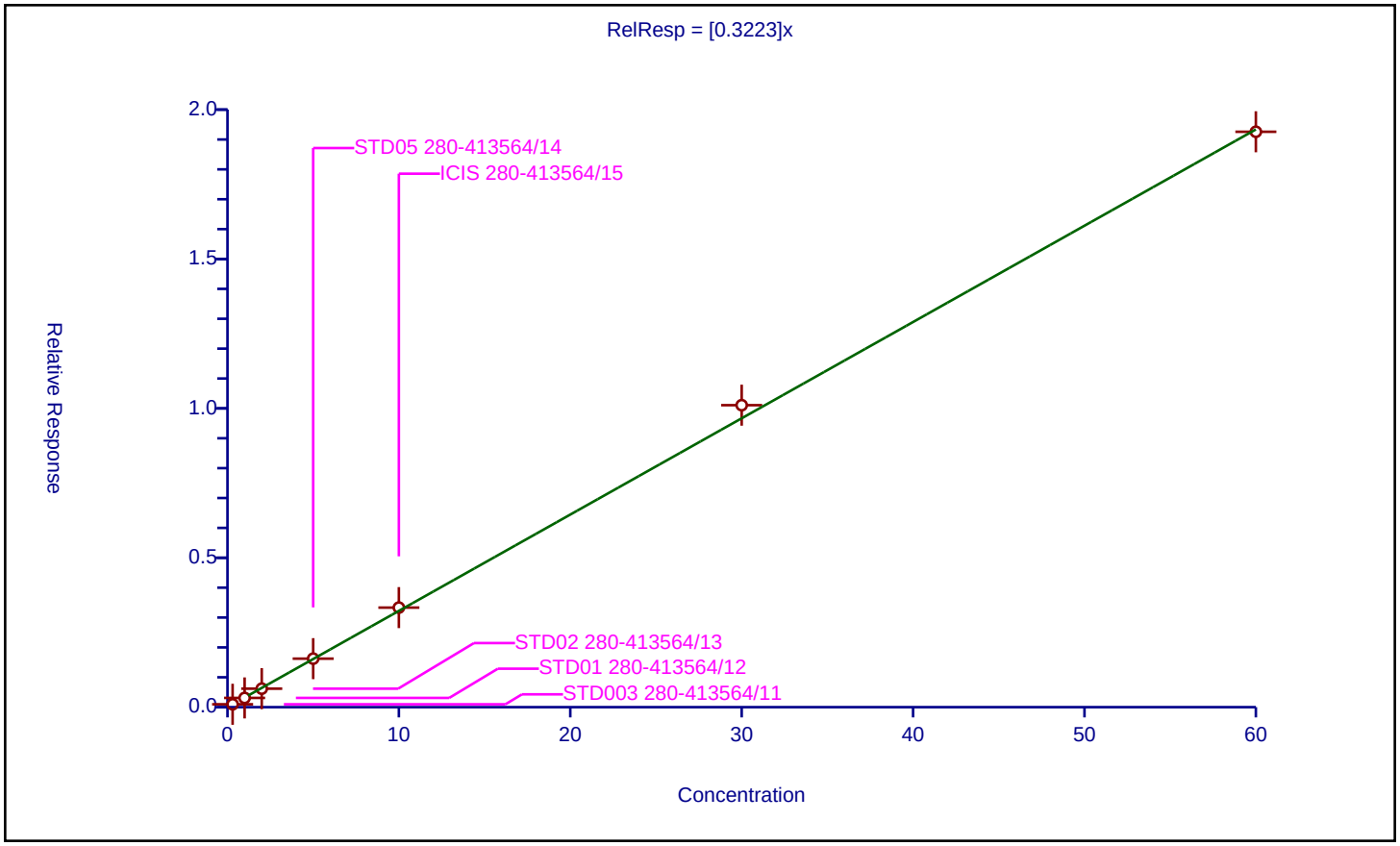
Curve Coefficients

Intercept:	0
Slope:	0.3223

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	3.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.096494	12.5	1345163.0	0.321646	Y
2	STD01 280-413564/12	1.0	0.308926	12.5	1363756.0	0.308926	Y
3	STD02 280-413564/13	2.0	0.618961	12.5	1360789.0	0.30948	Y
4	STD05 280-413564/14	5.0	1.623651	12.5	1361284.0	0.32473	Y
5	ICIS 280-413564/15	10.0	3.332581	12.5	1416946.0	0.333258	Y
6	STD30 280-413564/16	30.0	10.107273	12.5	1426390.0	0.336909	Y
7	STD60 280-413564/17	60.0	19.258615	12.5	1656780.0	0.320977	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

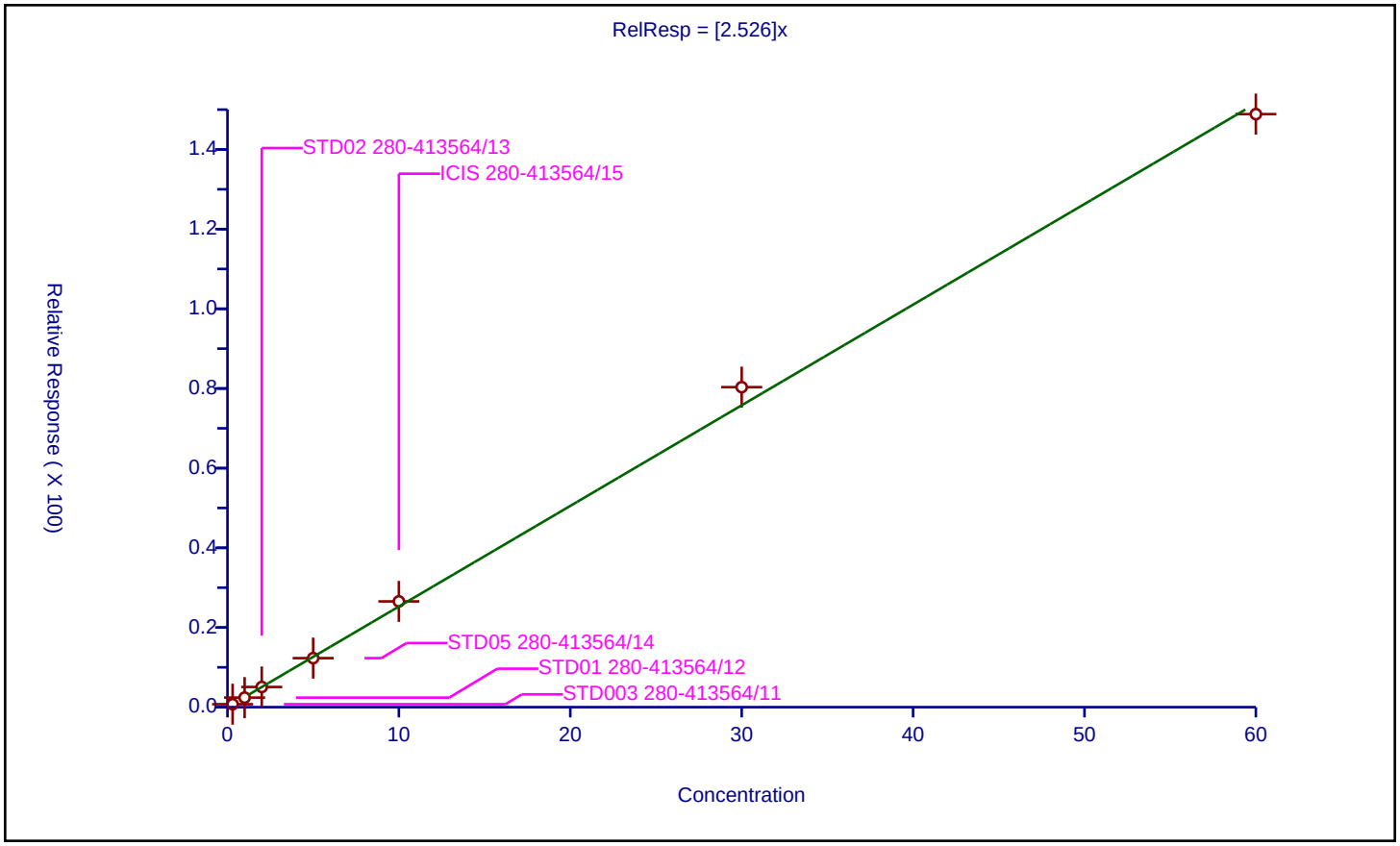
Curve Coefficients

Intercept:	0
Slope:	2.526

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	4.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.74309	12.5	305952.0	2.476968	Y
2	STD01 280-413564/12	1.0	2.395644	12.5	311075.0	2.395644	Y
3	STD02 280-413564/13	2.0	5.067857	12.5	300265.0	2.533928	Y
4	STD05 280-413564/14	5.0	12.306754	12.5	313720.0	2.461351	Y
5	ICIS 280-413564/15	10.0	26.549623	12.5	323732.0	2.654962	Y
6	STD30 280-413564/16	30.0	80.326524	12.5	324318.0	2.677551	Y
7	STD60 280-413564/17	60.0	148.862187	12.5	382510.0	2.481036	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

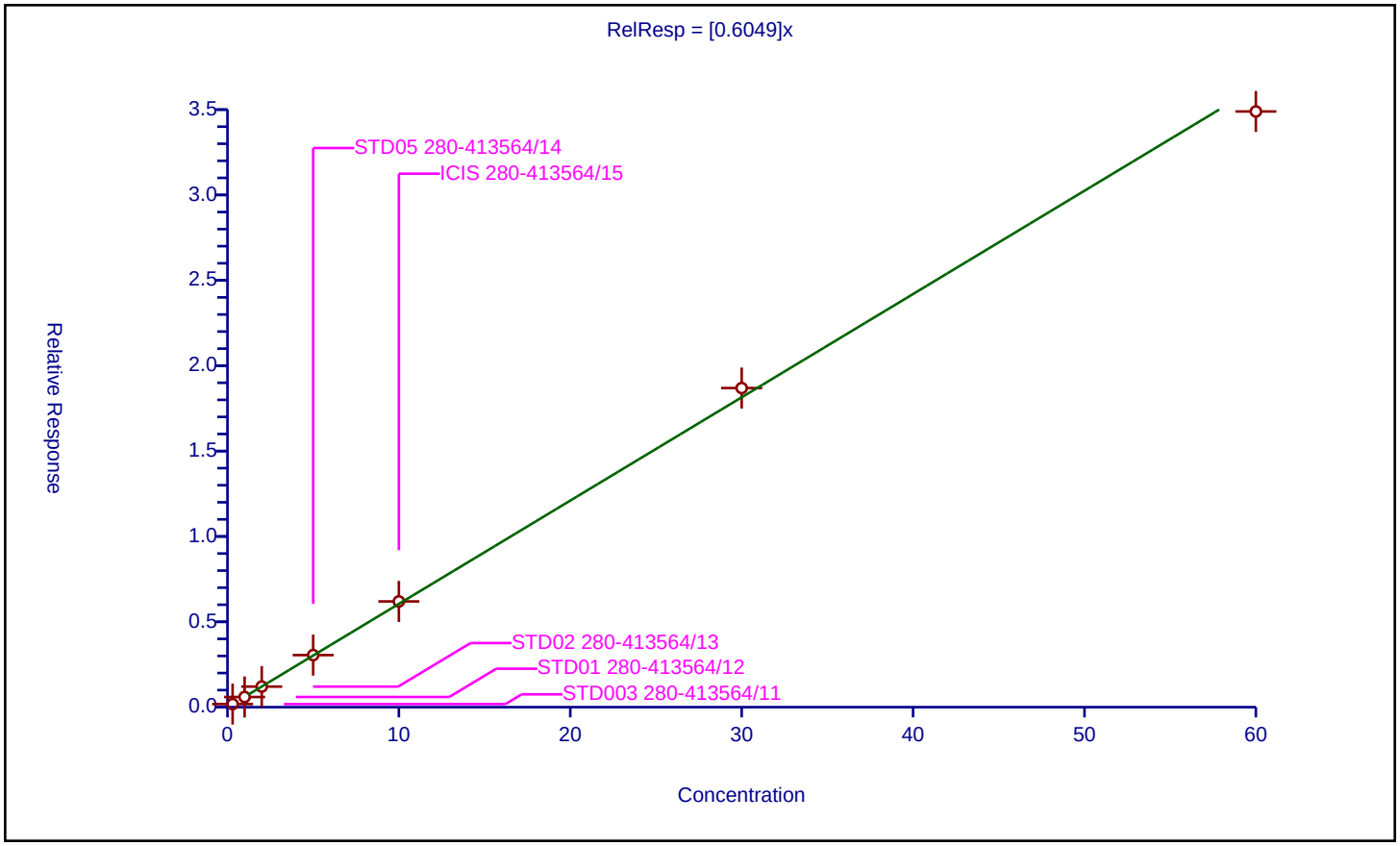
Curve Coefficients

Intercept:	0
Slope:	0.6049

Error Coefficients

Standard Error:	2100000
Relative Standard Error:	2.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.180954	12.5	1345163.0	0.60318	Y
2	STD01 280-413564/12	1.0	0.595222	12.5	1363756.0	0.595222	Y
3	STD02 280-413564/13	2.0	1.20522	12.5	1360789.0	0.60261	Y
4	STD05 280-413564/14	5.0	3.048859	12.5	1361284.0	0.609772	Y
5	ICIS 280-413564/15	10.0	6.1925	12.5	1416946.0	0.61925	Y
6	STD30 280-413564/16	30.0	18.690409	12.5	1426390.0	0.623014	Y
7	STD60 280-413564/17	60.0	34.891356	12.5	1656780.0	0.581523	Y



Calibration / Vinyl acetate

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

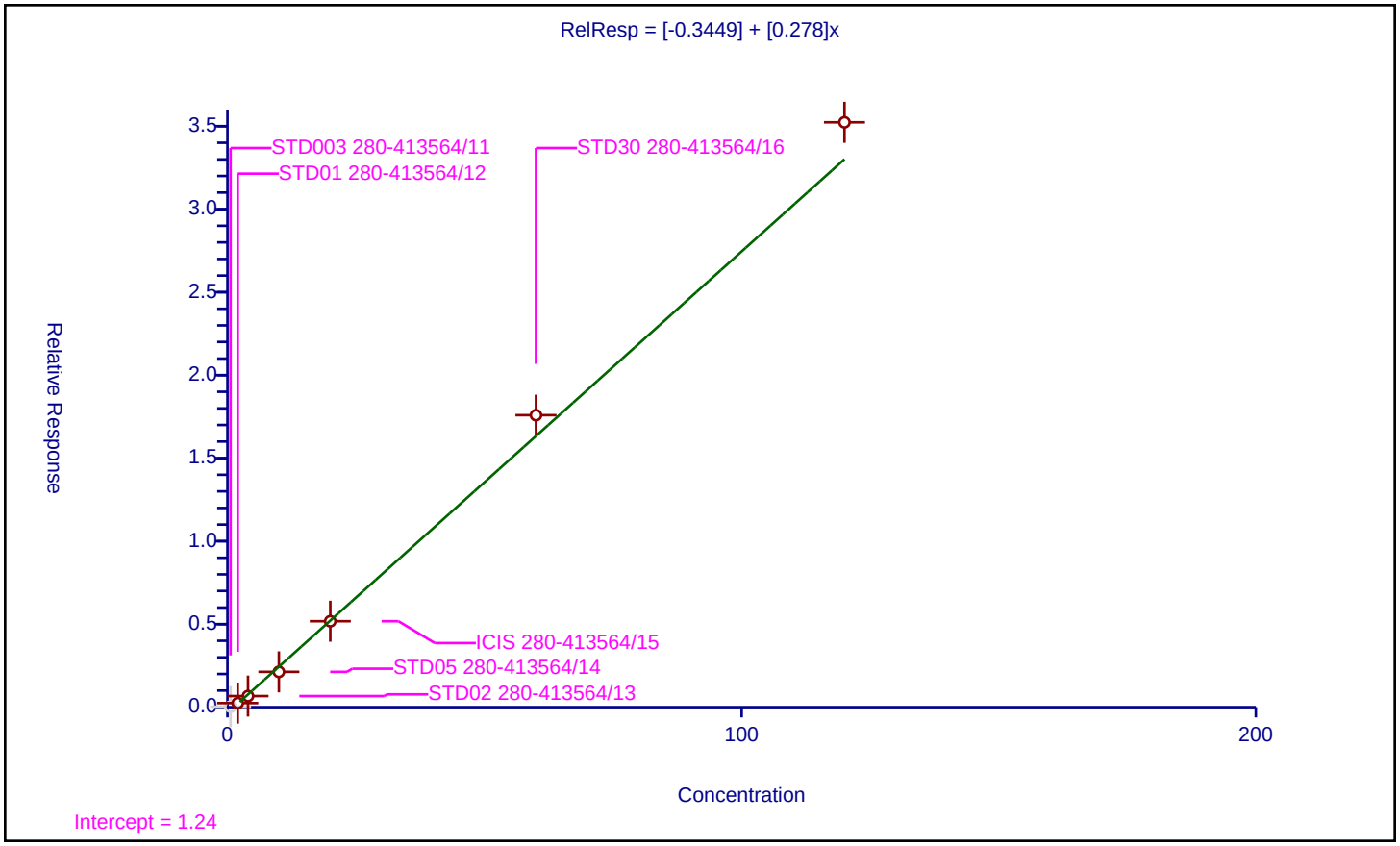
Curve Coefficients

Intercept:	-0.3449
Slope:	0.278

Error Coefficients

Standard Error:	2560000
Relative Standard Error:	9.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.6	0.028129	12.5	1345163.0	0.046881	N
2	STD01 280-413564/12	2.0	0.246048	12.5	1363756.0	0.123024	Y
3	STD02 280-413564/13	4.0	0.669777	12.5	1360789.0	0.167444	Y
4	STD05 280-413564/14	10.0	2.127899	12.5	1361284.0	0.21279	Y
5	ICIS 280-413564/15	20.0	5.177385	12.5	1416946.0	0.258869	Y
6	STD30 280-413564/16	60.0	17.589816	12.5	1426390.0	0.293164	Y
7	STD60 280-413564/17	120.0	35.232469	12.5	1656780.0	0.293604	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

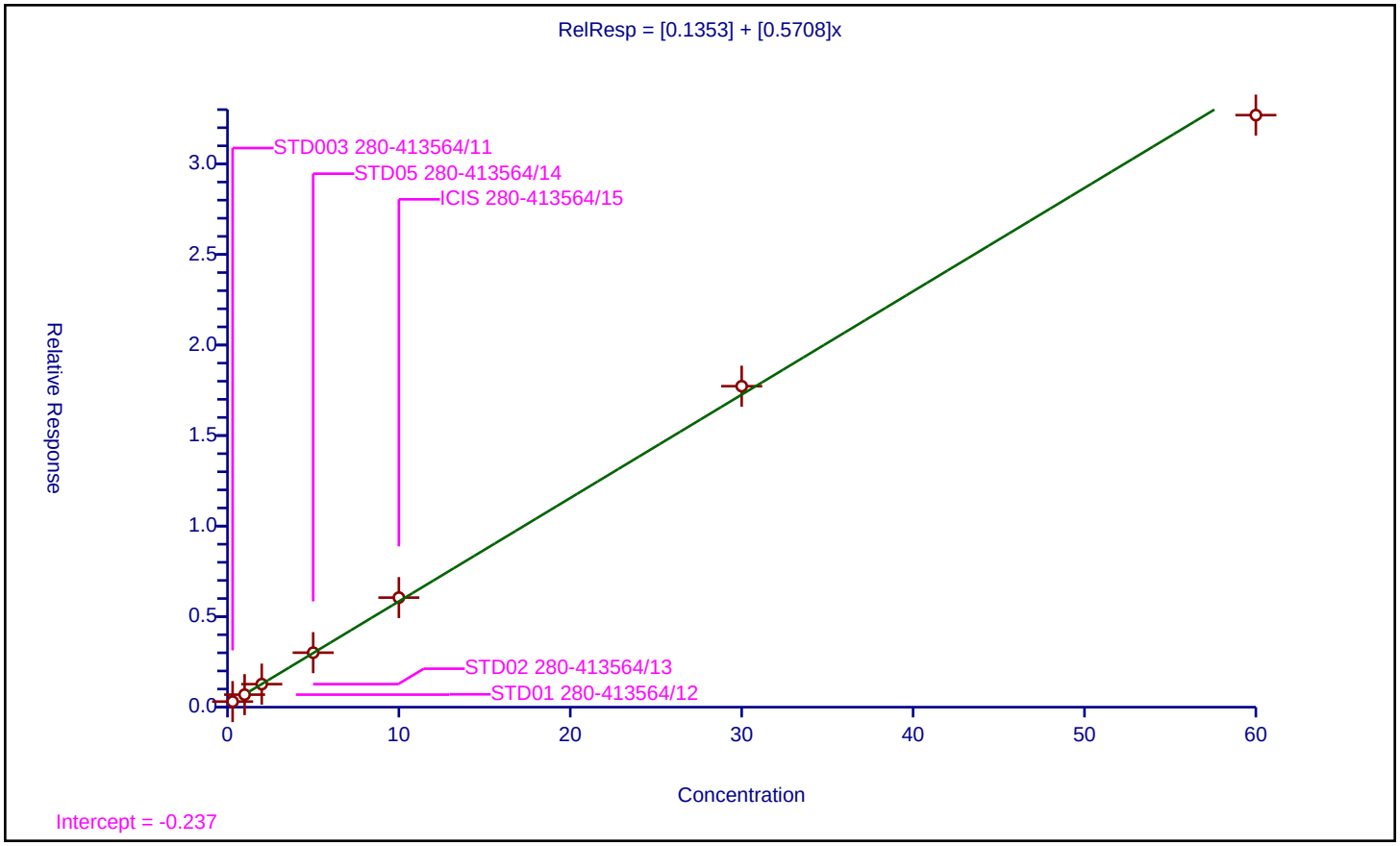
Curve Coefficients

Intercept:	0.1353
Slope:	0.5708

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.307565	12.5	1345163.0	1.025217	Y
2	STD01 280-413564/12	1.0	0.692288	12.5	1363756.0	0.692288	Y
3	STD02 280-413564/13	2.0	1.272708	12.5	1360789.0	0.636354	Y
4	STD05 280-413564/14	5.0	3.008988	12.5	1361284.0	0.601798	Y
5	ICIS 280-413564/15	10.0	6.050548	12.5	1416946.0	0.605055	Y
6	STD30 280-413564/16	30.0	17.7267	12.5	1426390.0	0.59089	Y
7	STD60 280-413564/17	60.0	32.695515	12.5	1656780.0	0.544925	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

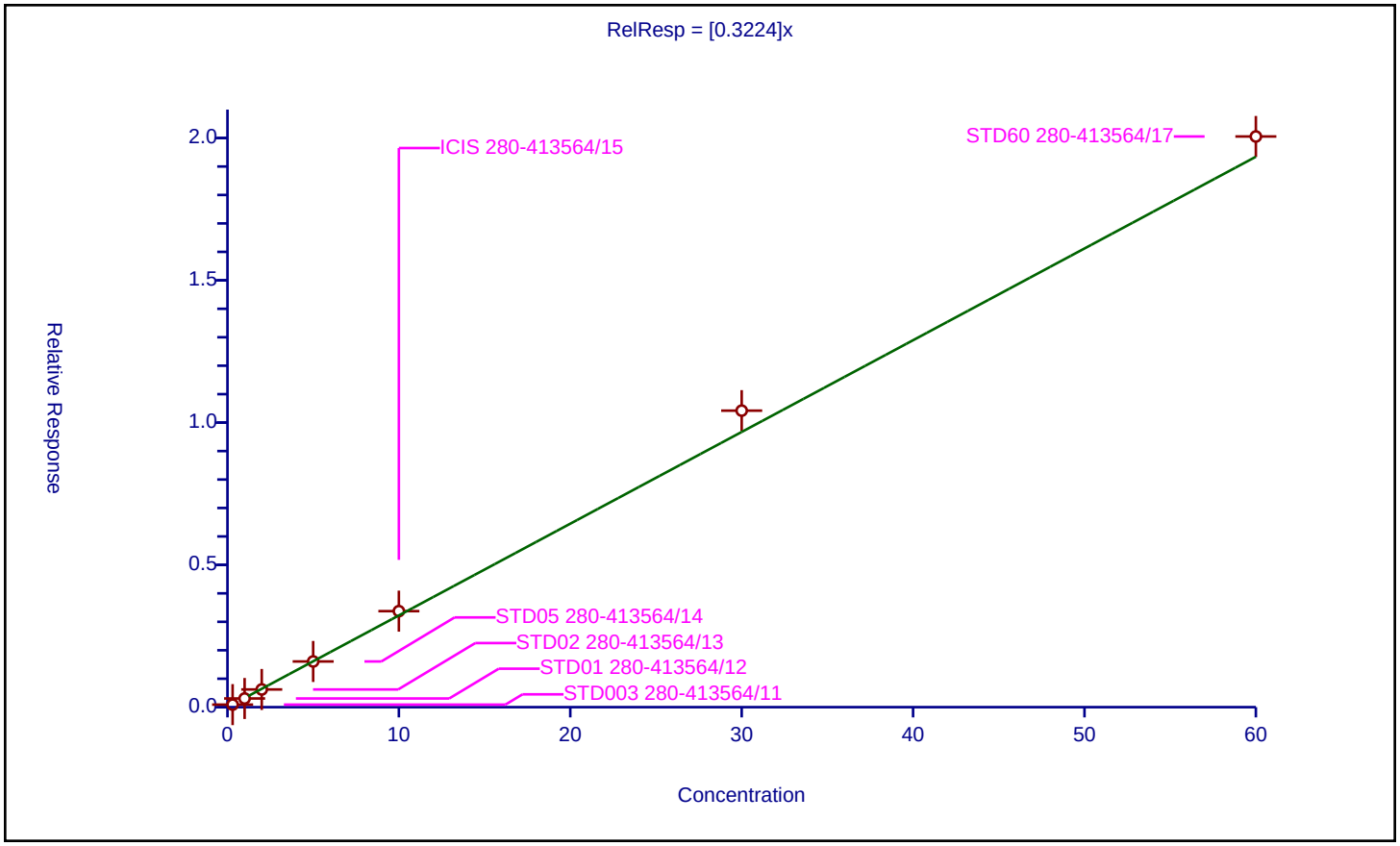
Curve Coefficients

Intercept:	0
Slope:	0.3224

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	5.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.089989	12.5	1345163.0	0.299964	Y
2	STD01 280-413564/12	1.0	0.30537	12.5	1363756.0	0.30537	Y
3	STD02 280-413564/13	2.0	0.622258	12.5	1360789.0	0.311129	Y
4	STD05 280-413564/14	5.0	1.606094	12.5	1361284.0	0.321219	Y
5	ICIS 280-413564/15	10.0	3.374238	12.5	1416946.0	0.337424	Y
6	STD30 280-413564/16	30.0	10.420669	12.5	1426390.0	0.347356	Y
7	STD60 280-413564/17	60.0	20.055031	12.5	1656780.0	0.334251	Y



Calibration / Chlorobromomethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

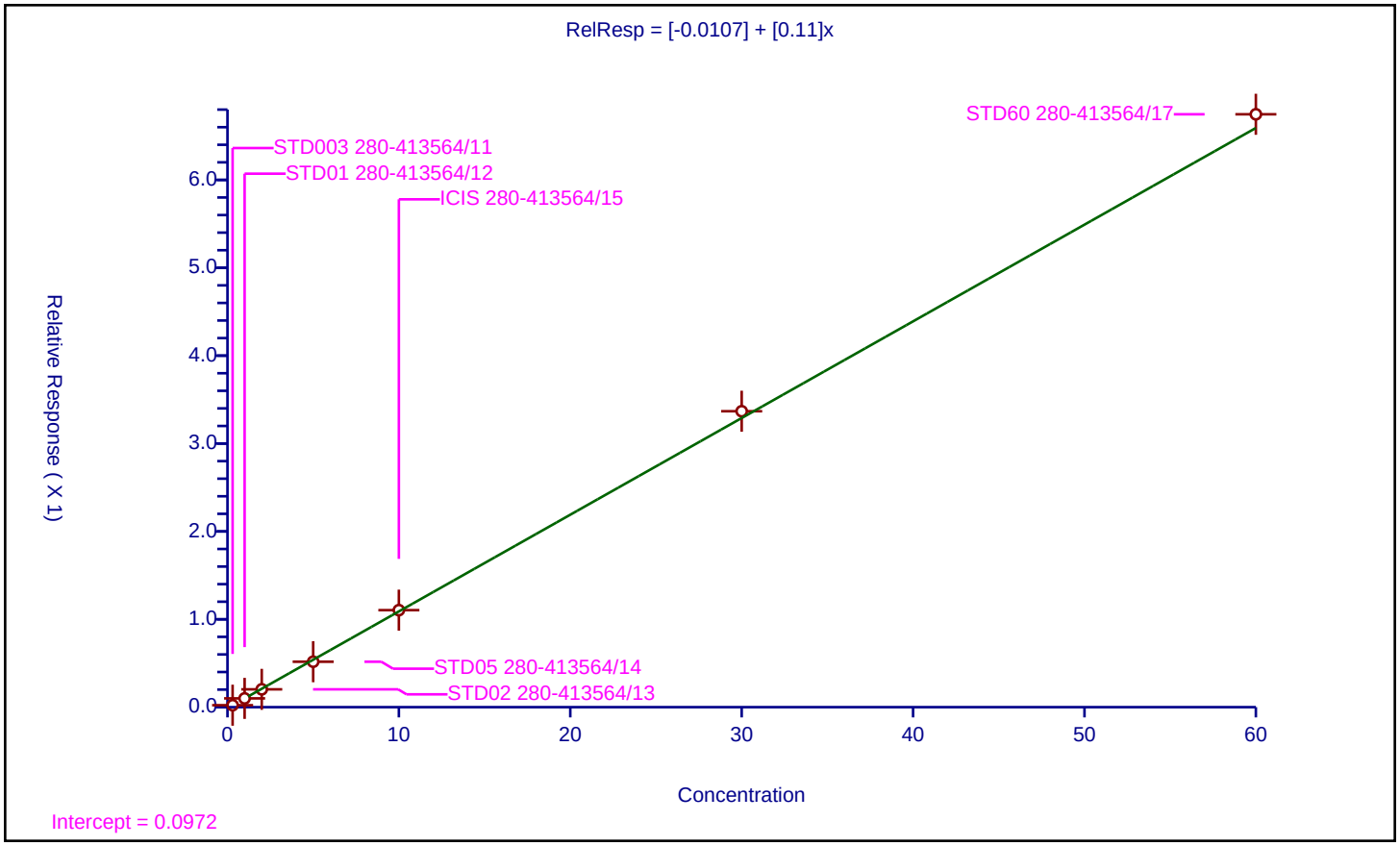
Curve Coefficients

Intercept:	-0.0107
Slope:	0.11

Error Coefficients

Standard Error:	440000
Relative Standard Error:	2.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.02246	12.5	1345163.0	0.074867	Y
2	STD01 280-413564/12	1.0	0.099908	12.5	1363756.0	0.099908	Y
3	STD02 280-413564/13	2.0	0.202906	12.5	1360789.0	0.101453	Y
4	STD05 280-413564/14	5.0	0.517159	12.5	1361284.0	0.103432	Y
5	ICIS 280-413564/15	10.0	1.103941	12.5	1416946.0	0.110394	Y
6	STD30 280-413564/16	30.0	3.367741	12.5	1426390.0	0.112258	Y
7	STD60 280-413564/17	60.0	6.74686	12.5	1656780.0	0.112448	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

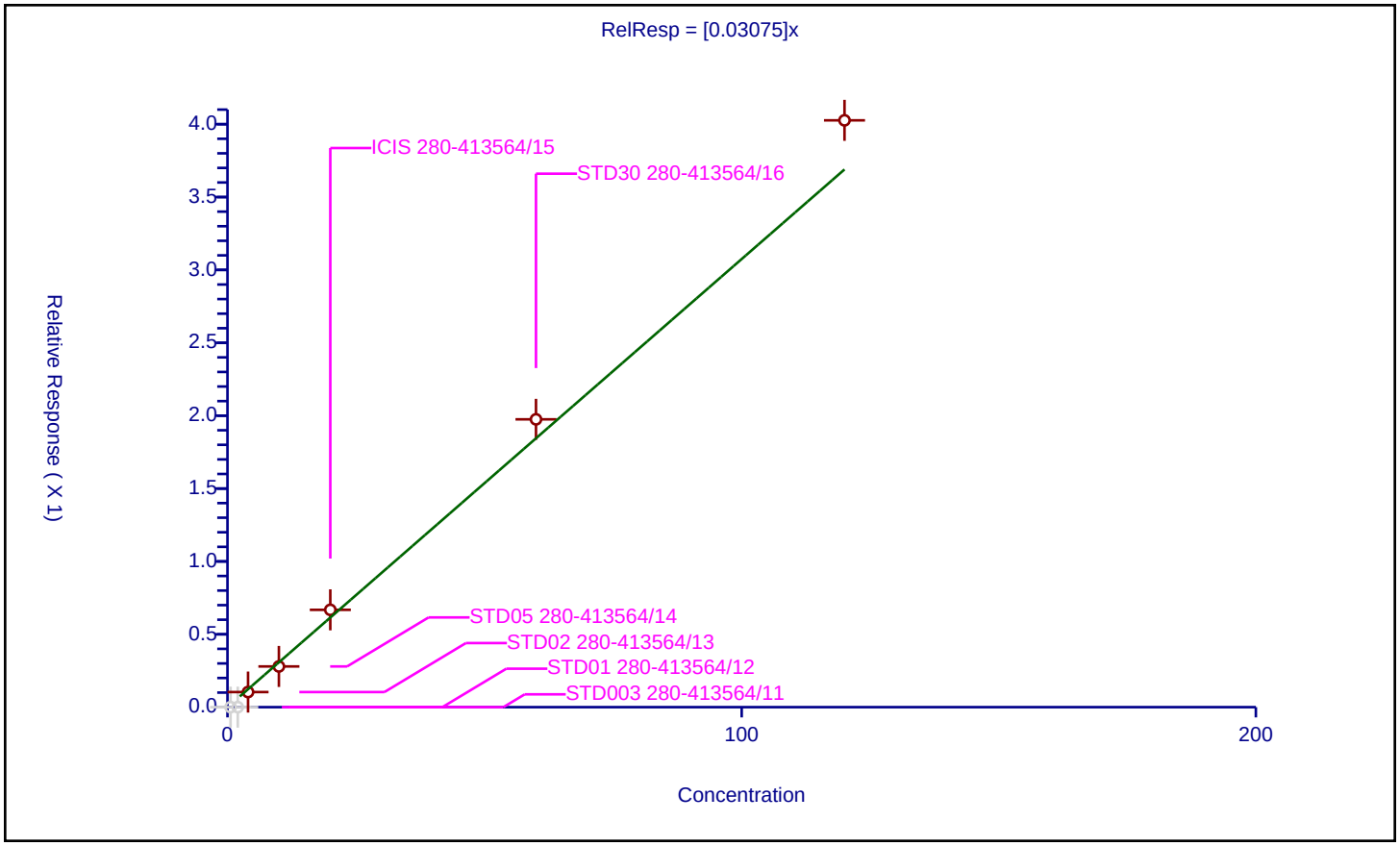
Curve Coefficients

Intercept:	0
Slope:	0.03075

Error Coefficients

Standard Error:	293000
Relative Standard Error:	11.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.6	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	2.0	0.0	12.5	1363756.0	0.0	N
3	STD02 280-413564/13	4.0	0.103754	12.5	1360789.0	0.025939	Y
4	STD05 280-413564/14	10.0	0.279396	12.5	1361284.0	0.02794	Y
5	ICIS 280-413564/15	20.0	0.667801	12.5	1416946.0	0.03339	Y
6	STD30 280-413564/16	60.0	1.974819	12.5	1426390.0	0.032914	Y
7	STD60 280-413564/17	120.0	4.026319	12.5	1656780.0	0.033553	Y



Calibration / sec-Butyl Alcohol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

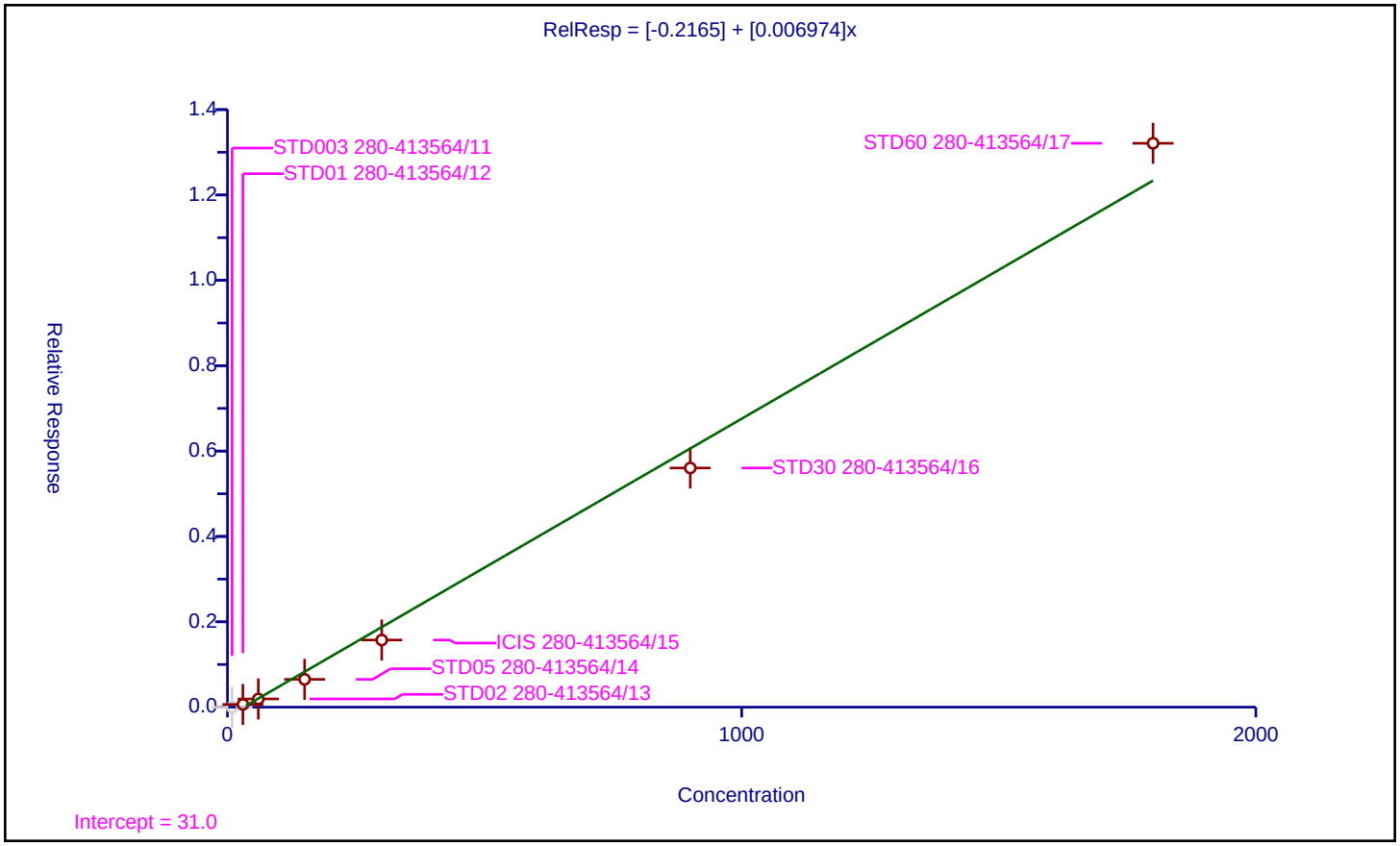
Curve Coefficients

Intercept:	-0.2165
Slope:	0.006974

Error Coefficients

Standard Error:	937000
Relative Standard Error:	21.0
Correlation Coefficient:	0.984
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	9.0	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	30.0	0.063932	12.5	1363756.0	0.002131	Y
3	STD02 280-413564/13	60.0	0.19259	12.5	1360789.0	0.00321	Y
4	STD05 280-413564/14	150.0	0.651223	12.5	1361284.0	0.004341	Y
5	ICIS 280-413564/15	300.0	1.573525	12.5	1416946.0	0.005245	Y
6	STD30 280-413564/16	900.0	5.60363	12.5	1426390.0	0.006226	Y
7	STD60 280-413564/17	1800.0	13.211372	12.5	1656780.0	0.00734	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

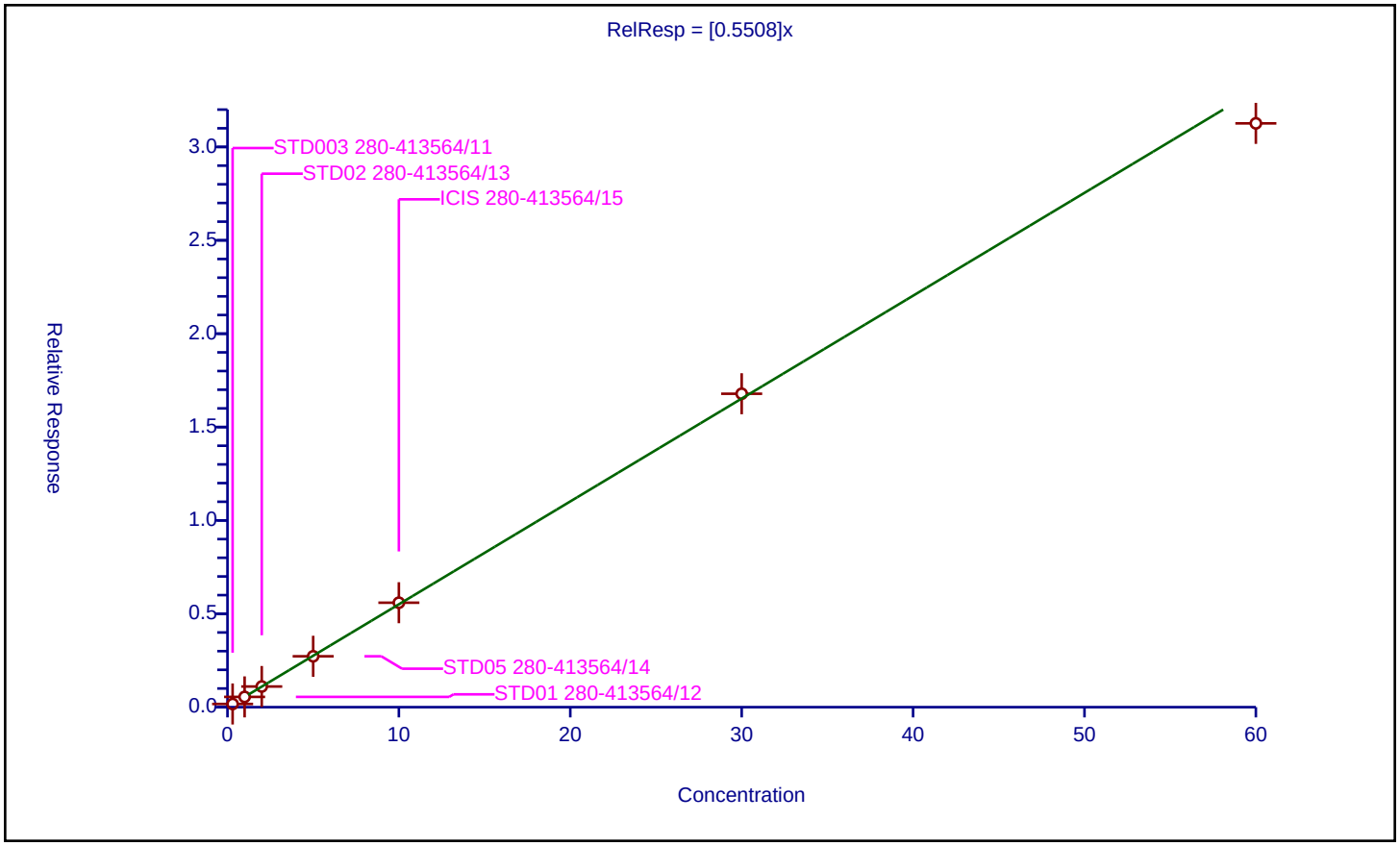
Curve Coefficients

Intercept:	0
Slope:	0.5508

Error Coefficients

Standard Error:	1890000
Relative Standard Error:	2.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.170416	12.5	1345163.0	0.568054	Y
2	STD01 280-413564/12	1.0	0.549833	12.5	1363756.0	0.549833	Y
3	STD02 280-413564/13	2.0	1.106068	12.5	1360789.0	0.553034	Y
4	STD05 280-413564/14	5.0	2.725065	12.5	1361284.0	0.545013	Y
5	ICIS 280-413564/15	10.0	5.594365	12.5	1416946.0	0.559436	Y
6	STD30 280-413564/16	30.0	16.784558	12.5	1426390.0	0.559485	Y
7	STD60 280-413564/17	60.0	31.263083	12.5	1656780.0	0.521051	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

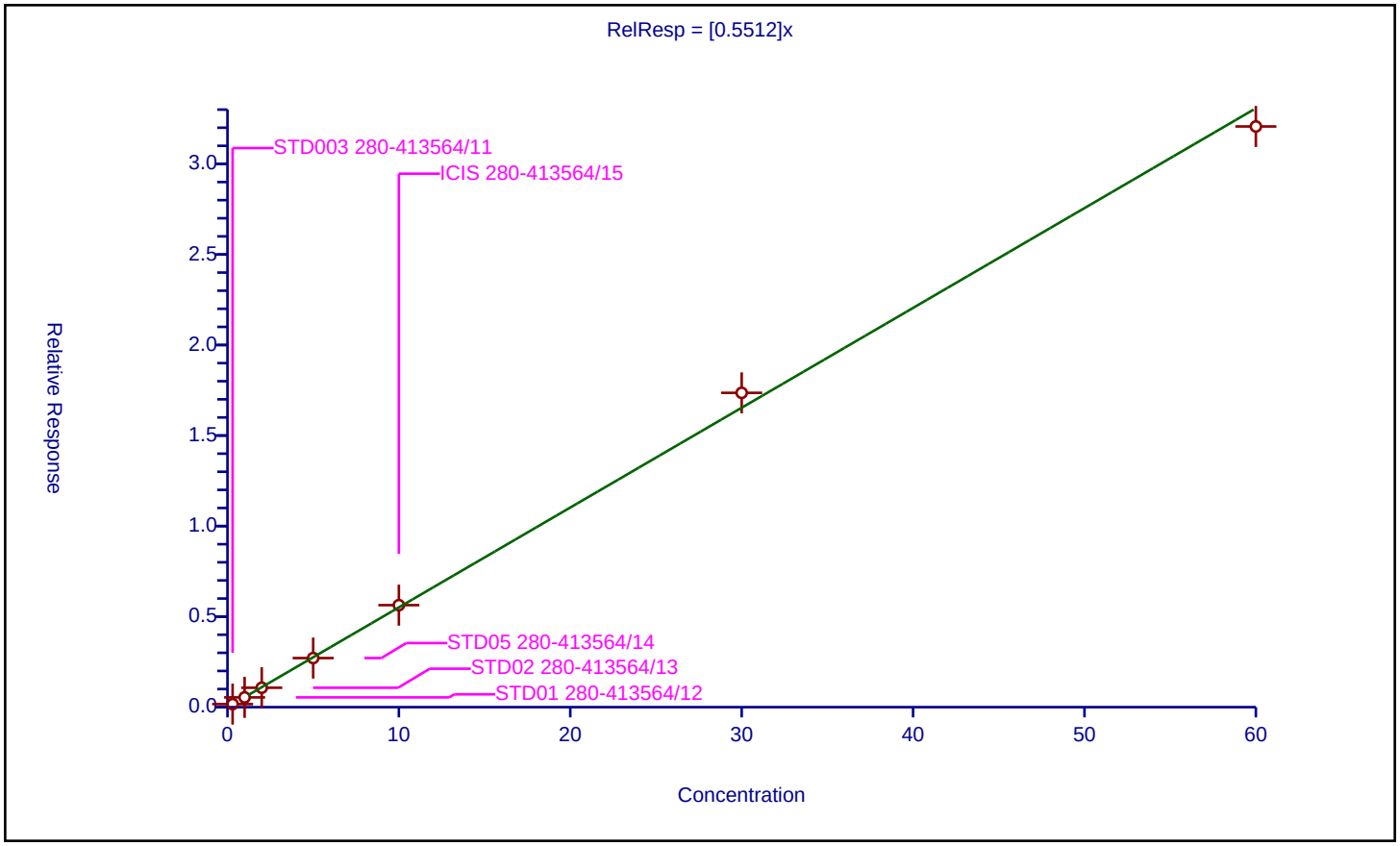
Curve Coefficients

Intercept:	0
Slope:	0.5512

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.168939	12.5	1345163.0	0.563129	Y
2	STD01 280-413564/12	1.0	0.540153	12.5	1363756.0	0.540153	Y
3	STD02 280-413564/13	2.0	1.07287	12.5	1360789.0	0.536435	Y
4	STD05 280-413564/14	5.0	2.711613	12.5	1361284.0	0.542323	Y
5	ICIS 280-413564/15	10.0	5.633577	12.5	1416946.0	0.563358	Y
6	STD30 280-413564/16	30.0	17.357823	12.5	1426390.0	0.578594	Y
7	STD60 280-413564/17	60.0	32.069134	12.5	1656780.0	0.534486	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

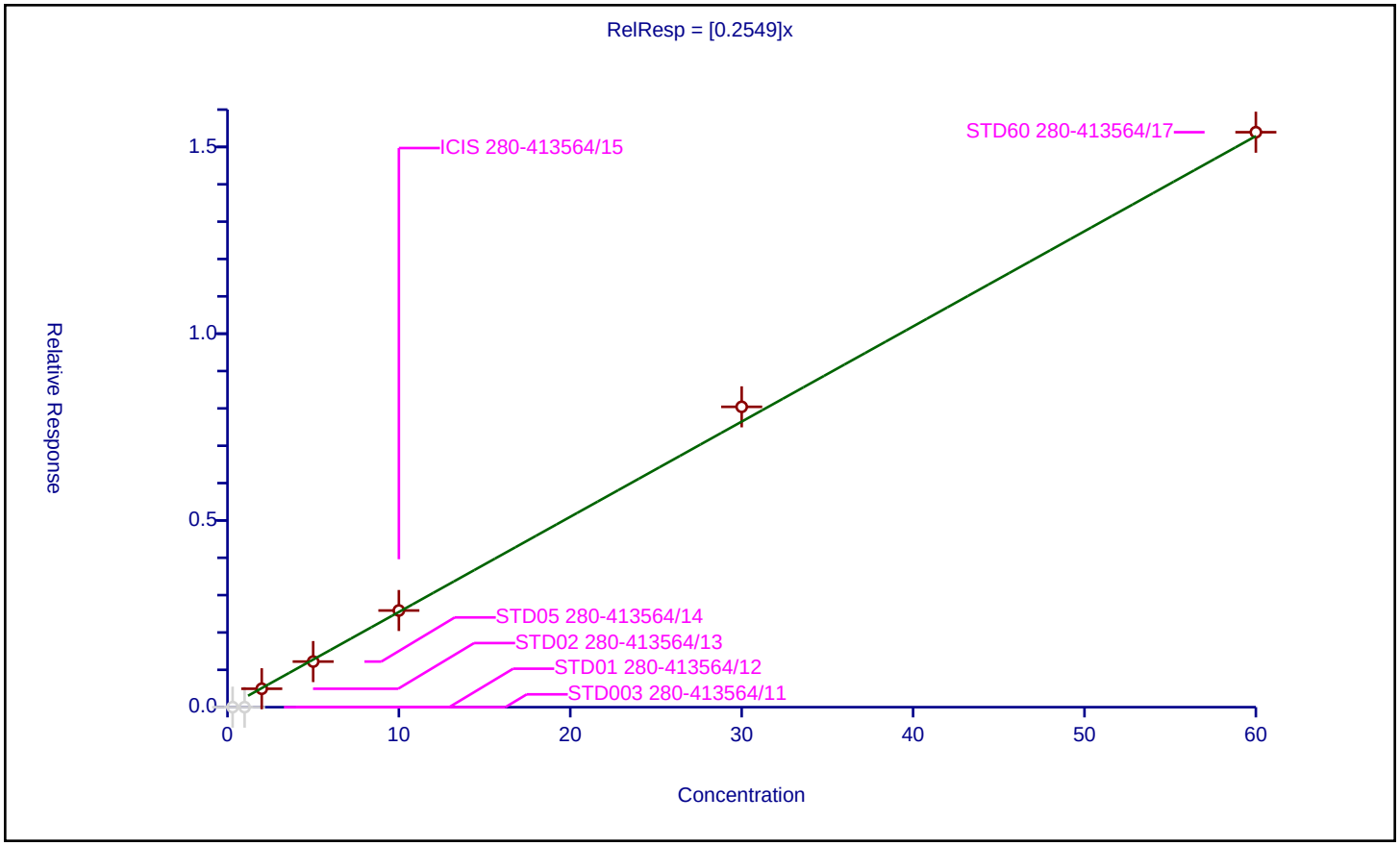
Curve Coefficients

Intercept:	0
Slope:	0.2549

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	3.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	1.0	0.0	12.5	1363756.0	0.0	N
3	STD02 280-413564/13	2.0	0.493197	12.5	1360789.0	0.246599	Y
4	STD05 280-413564/14	5.0	1.221044	12.5	1361284.0	0.244209	Y
5	ICIS 280-413564/15	10.0	2.588525	12.5	1416946.0	0.258852	Y
6	STD30 280-413564/16	30.0	8.04205	12.5	1426390.0	0.268068	Y
7	STD60 280-413564/17	60.0	15.395028	12.5	1656780.0	0.256584	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

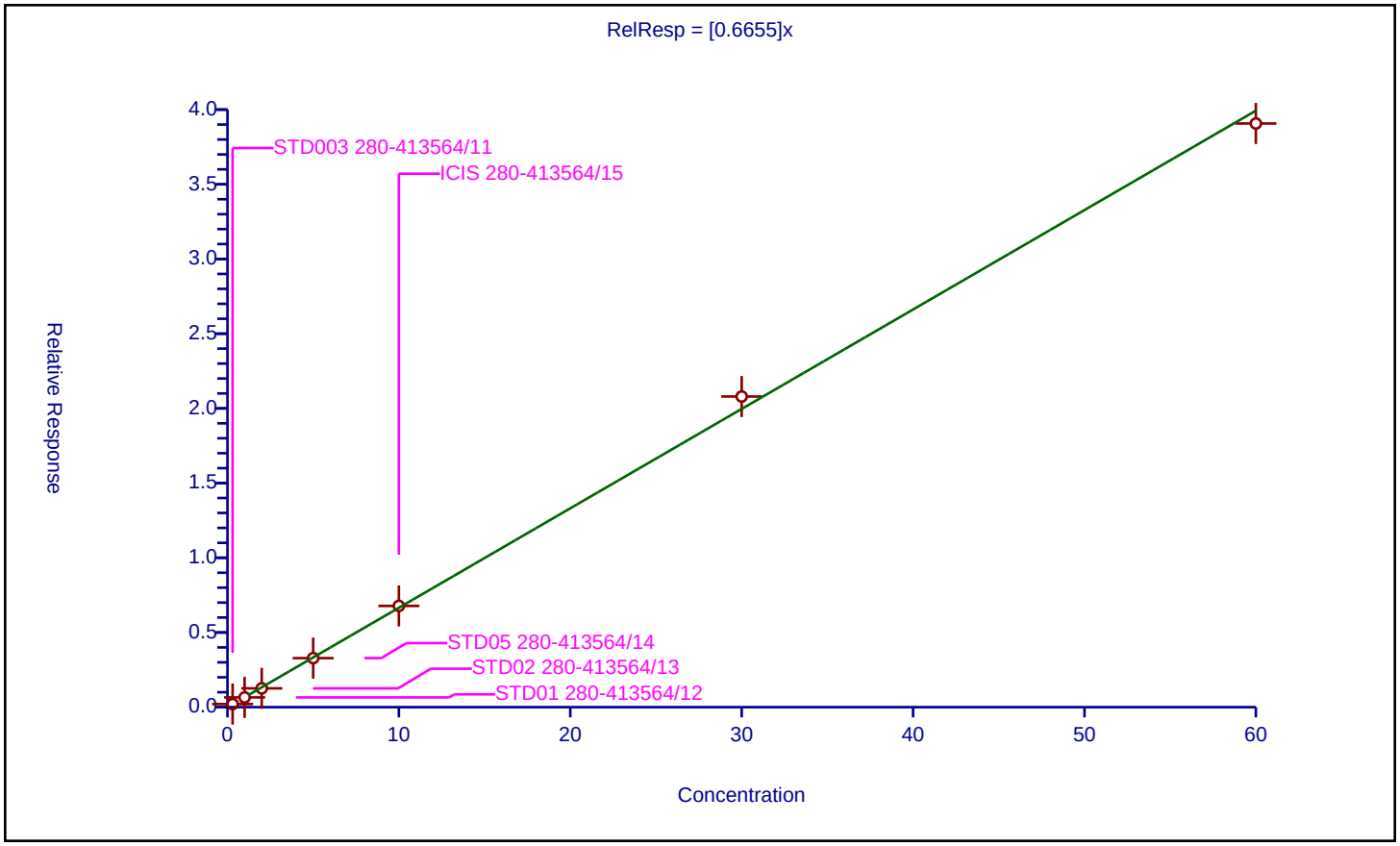
Curve Coefficients

Intercept:	0
Slope:	0.6655

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	3.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.209008	12.5	1345163.0	0.696694	Y
2	STD01 280-413564/12	1.0	0.653673	12.5	1363756.0	0.653673	Y
3	STD02 280-413564/13	2.0	1.258626	12.5	1360789.0	0.629313	Y
4	STD05 280-413564/14	5.0	3.283132	12.5	1361284.0	0.656626	Y
5	ICIS 280-413564/15	10.0	6.777737	12.5	1416946.0	0.677774	Y
6	STD30 280-413564/16	30.0	20.795233	12.5	1426390.0	0.693174	Y
7	STD60 280-413564/17	60.0	39.071588	12.5	1656780.0	0.651193	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

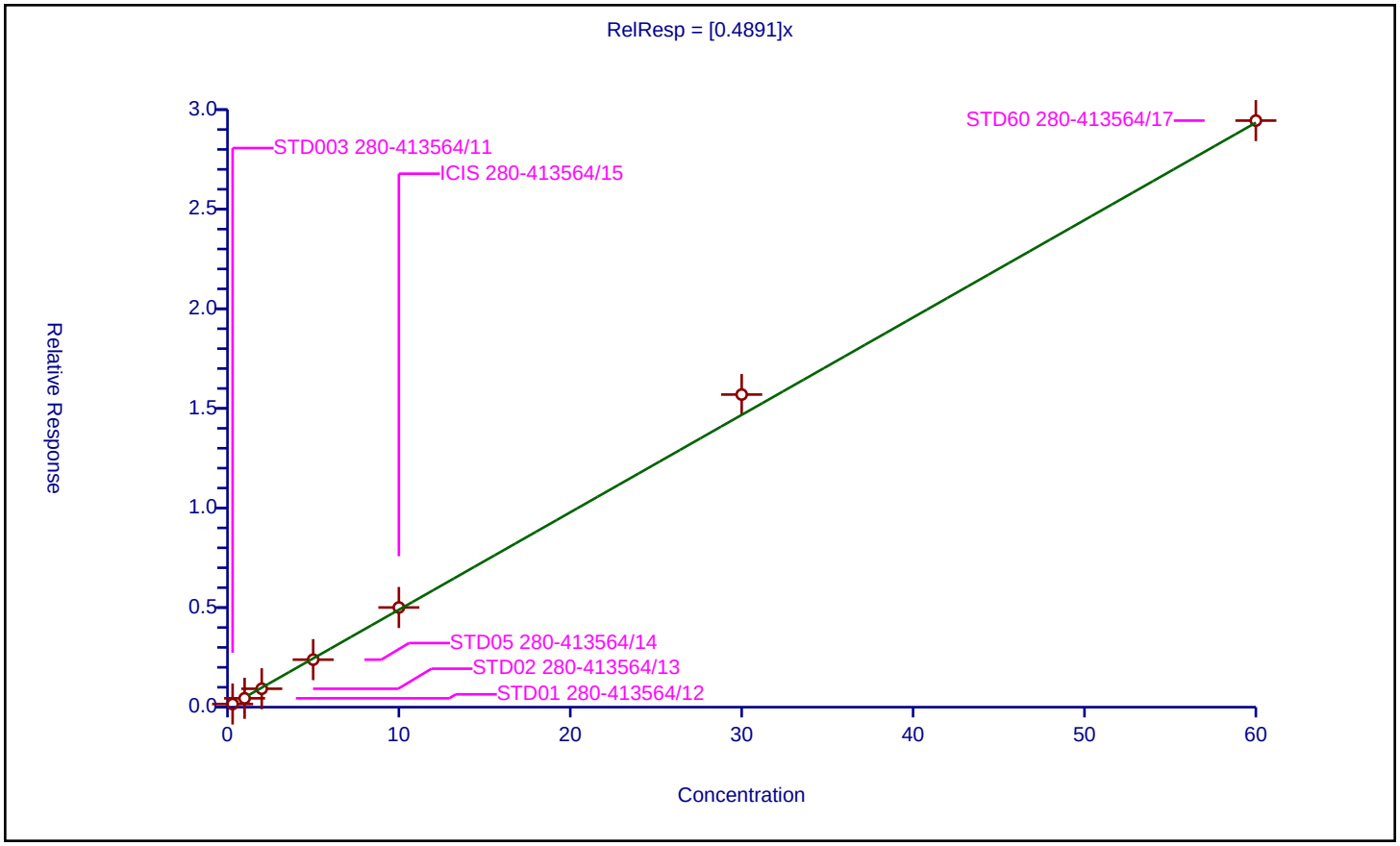
Curve Coefficients

Intercept:	0
Slope:	0.4891

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	6.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.157342	12.5	1345163.0	0.524472	Y
2	STD01 280-413564/12	1.0	0.445113	12.5	1363756.0	0.445113	Y
3	STD02 280-413564/13	2.0	0.925097	12.5	1360789.0	0.462549	Y
4	STD05 280-413564/14	5.0	2.385367	12.5	1361284.0	0.477073	Y
5	ICIS 280-413564/15	10.0	5.004769	12.5	1416946.0	0.500477	Y
6	STD30 280-413564/16	30.0	15.69526	12.5	1426390.0	0.523175	Y
7	STD60 280-413564/17	60.0	29.448622	12.5	1656780.0	0.49081	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

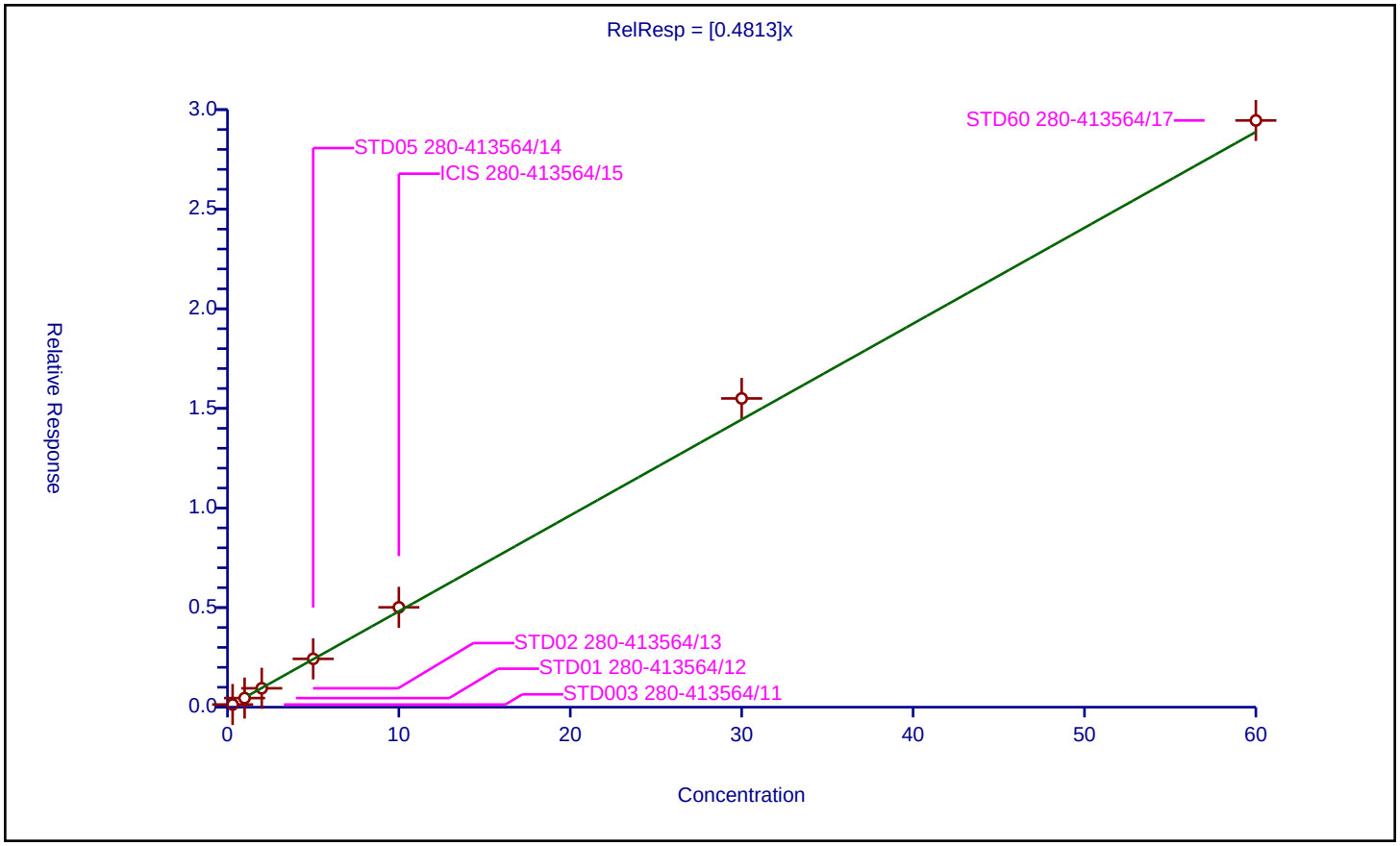
Curve Coefficients

Intercept:	0
Slope:	0.4813

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	5.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.133636	12.5	1345163.0	0.445454	Y
2	STD01 280-413564/12	1.0	0.455965	12.5	1363756.0	0.455965	Y
3	STD02 280-413564/13	2.0	0.947915	12.5	1360789.0	0.473958	Y
4	STD05 280-413564/14	5.0	2.42566	12.5	1361284.0	0.485132	Y
5	ICIS 280-413564/15	10.0	5.012321	12.5	1416946.0	0.501232	Y
6	STD30 280-413564/16	30.0	15.498987	12.5	1426390.0	0.516633	Y
7	STD60 280-413564/17	60.0	29.455752	12.5	1656780.0	0.490929	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

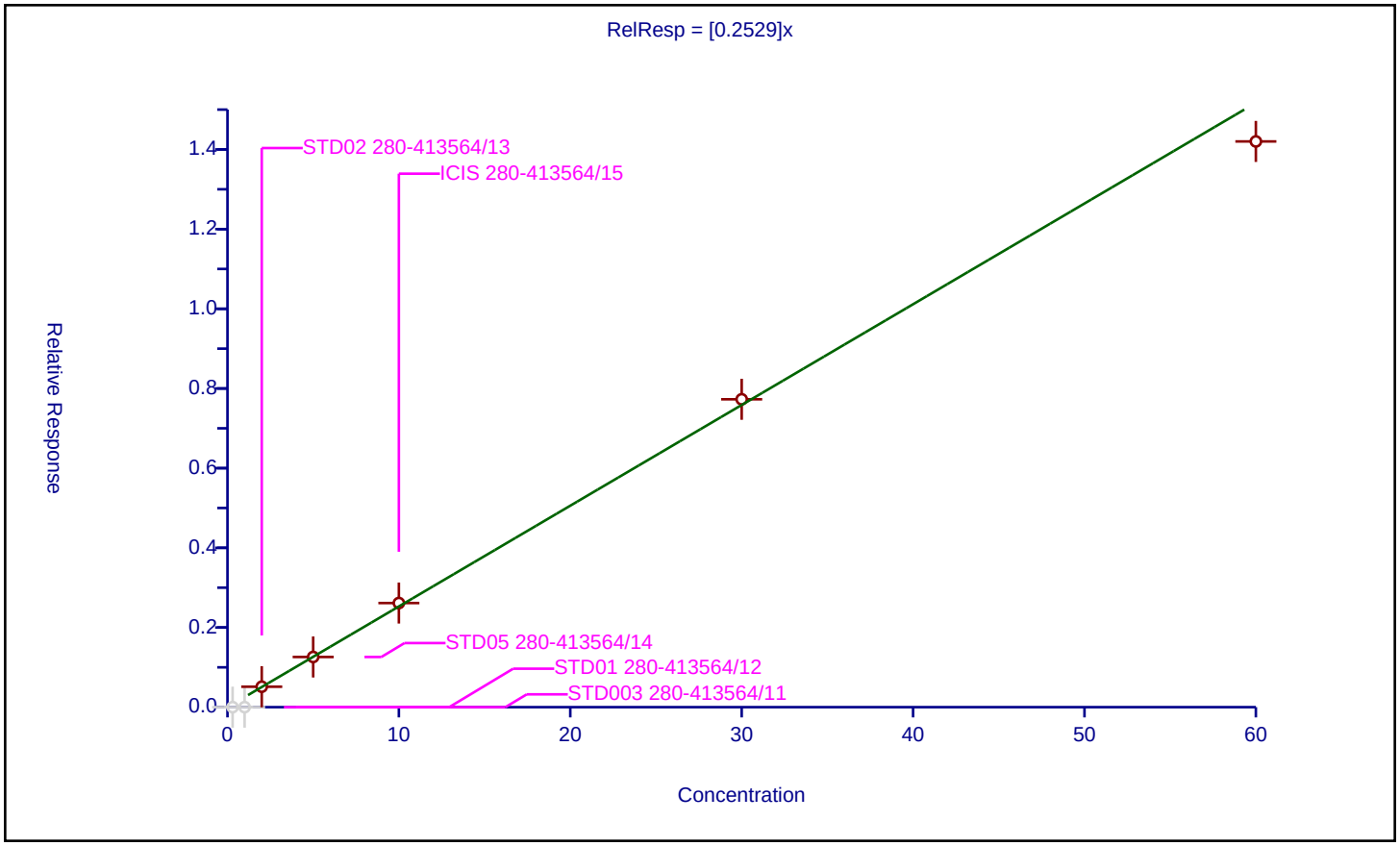
Curve Coefficients

Intercept:	0
Slope:	0.2529

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	3.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	1.0	0.0	12.5	1363756.0	0.0	N
3	STD02 280-413564/13	2.0	0.513314	12.5	1360789.0	0.256657	Y
4	STD05 280-413564/14	5.0	1.259702	12.5	1361284.0	0.25194	Y
5	ICIS 280-413564/15	10.0	2.613817	12.5	1416946.0	0.261382	Y
6	STD30 280-413564/16	30.0	7.728479	12.5	1426390.0	0.257616	Y
7	STD60 280-413564/17	60.0	14.200905	12.5	1656780.0	0.236682	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

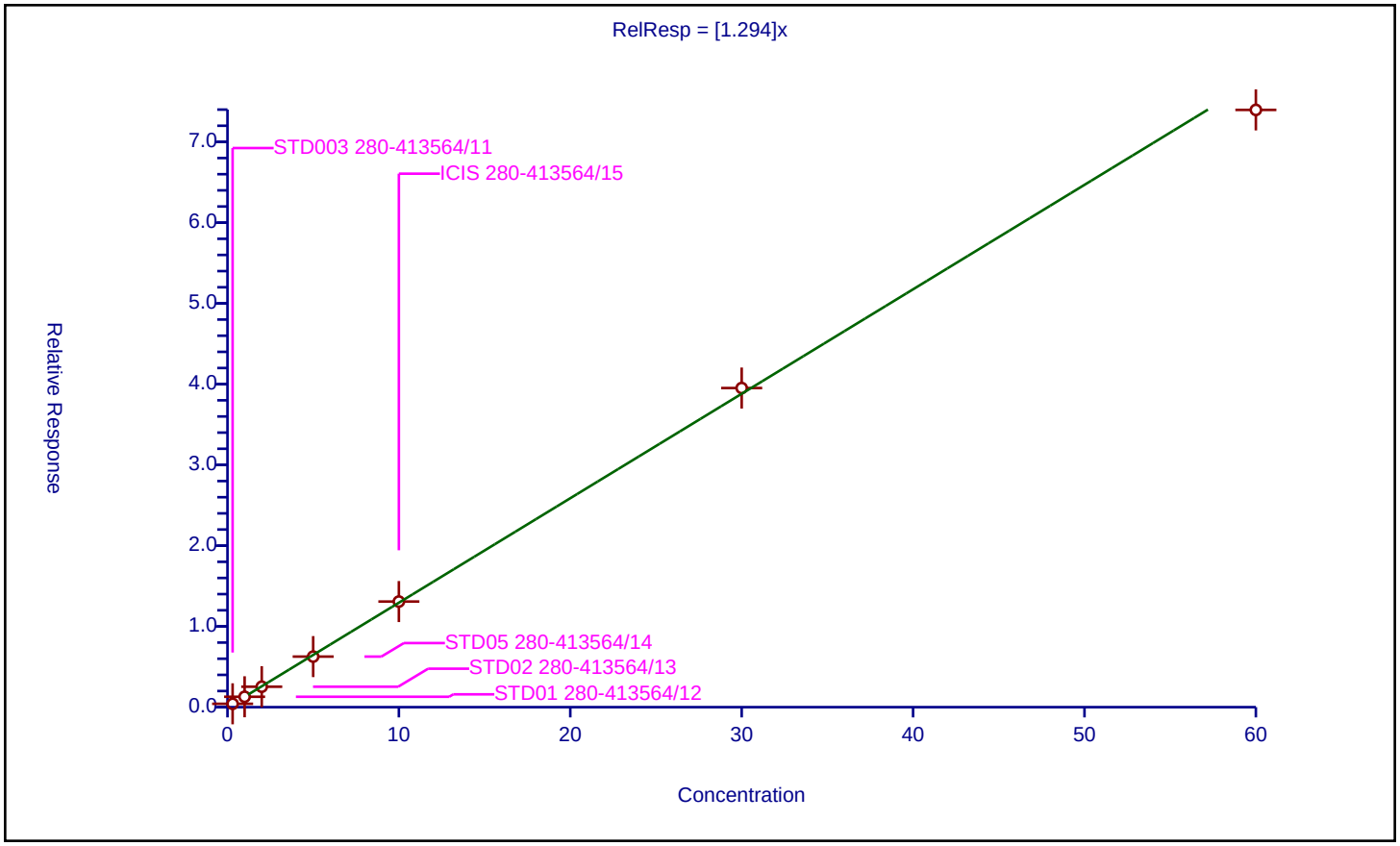
Curve Coefficients

Intercept:	0
Slope:	1.294

Error Coefficients

Standard Error:	4460000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.417942	12.5	1345163.0	1.39314	Y
2	STD01 280-413564/12	1.0	1.286676	12.5	1363756.0	1.286676	Y
3	STD02 280-413564/13	2.0	2.531822	12.5	1360789.0	1.265911	Y
4	STD05 280-413564/14	5.0	6.260771	12.5	1361284.0	1.252154	Y
5	ICIS 280-413564/15	10.0	13.07736	12.5	1416946.0	1.307736	Y
6	STD30 280-413564/16	30.0	39.52031	12.5	1426390.0	1.317344	Y
7	STD60 280-413564/17	60.0	73.96455	12.5	1656780.0	1.232743	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

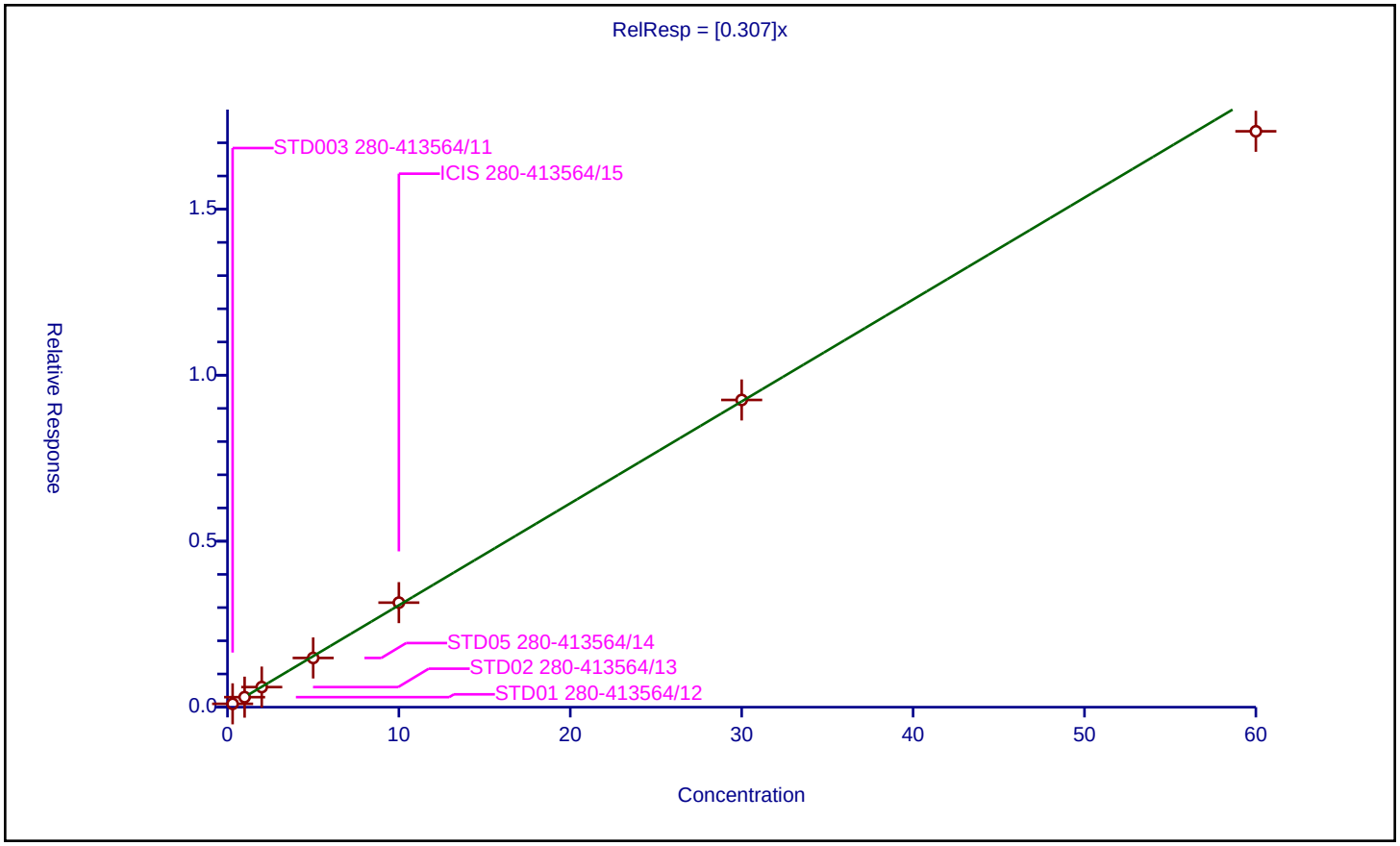
Curve Coefficients

Intercept:	0
Slope:	0.307

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.100713	12.5	1345163.0	0.335709	Y
2	STD01 280-413564/12	1.0	0.301777	12.5	1363756.0	0.301777	Y
3	STD02 280-413564/13	2.0	0.604833	12.5	1360789.0	0.302416	Y
4	STD05 280-413564/14	5.0	1.482286	12.5	1361284.0	0.296457	Y
5	ICIS 280-413564/15	10.0	3.148514	12.5	1416946.0	0.314851	Y
6	STD30 280-413564/16	30.0	9.253912	12.5	1426390.0	0.308464	Y
7	STD60 280-413564/17	60.0	17.346774	12.5	1656780.0	0.289113	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

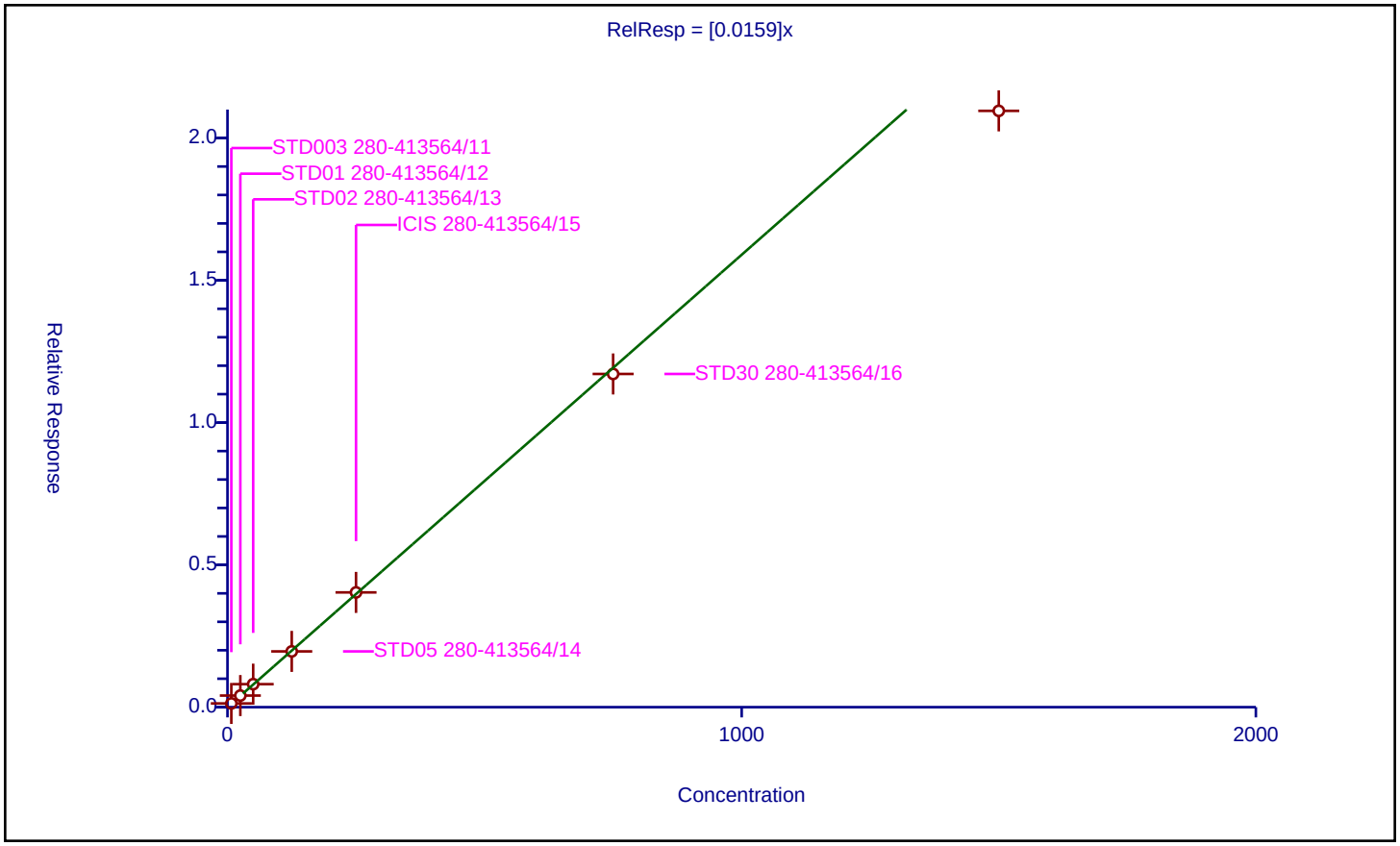
Curve Coefficients

Intercept:	0
Slope:	0.0159

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	7.5	0.130663	12.5	1345163.0	0.017422	Y
2	STD01 280-413564/12	25.0	0.407588	12.5	1363756.0	0.016304	Y
3	STD02 280-413564/13	50.0	0.80875	12.5	1360789.0	0.016175	Y
4	STD05 280-413564/14	125.0	1.959804	12.5	1361284.0	0.015678	Y
5	ICIS 280-413564/15	250.0	4.033102	12.5	1416946.0	0.016132	Y
6	STD30 280-413564/16	750.0	11.710235	12.5	1426390.0	0.015614	Y
7	STD60 280-413564/17	1500.0	20.955641	12.5	1656780.0	0.01397	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

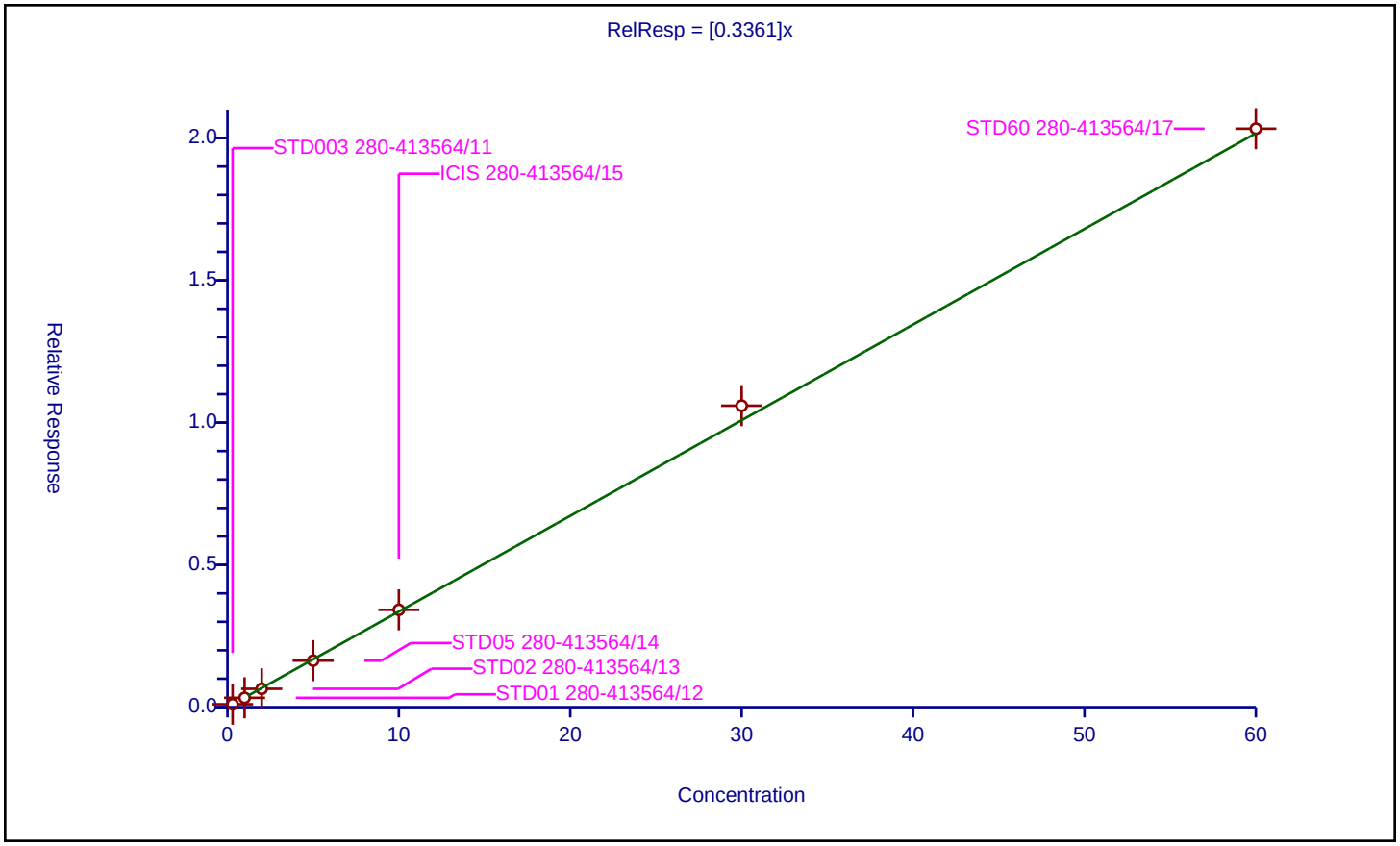
Curve Coefficients

Intercept:	0
Slope:	0.3361

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	3.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.102153	12.5	1345163.0	0.34051	Y
2	STD01 280-413564/12	1.0	0.328514	12.5	1363756.0	0.328514	Y
3	STD02 280-413564/13	2.0	0.645673	12.5	1360789.0	0.322837	Y
4	STD05 280-413564/14	5.0	1.634826	12.5	1361284.0	0.326965	Y
5	ICIS 280-413564/15	10.0	3.421108	12.5	1416946.0	0.342111	Y
6	STD30 280-413564/16	30.0	10.594219	12.5	1426390.0	0.353141	Y
7	STD60 280-413564/17	60.0	20.328929	12.5	1656780.0	0.338815	Y



Calibration / 2-Pentanone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

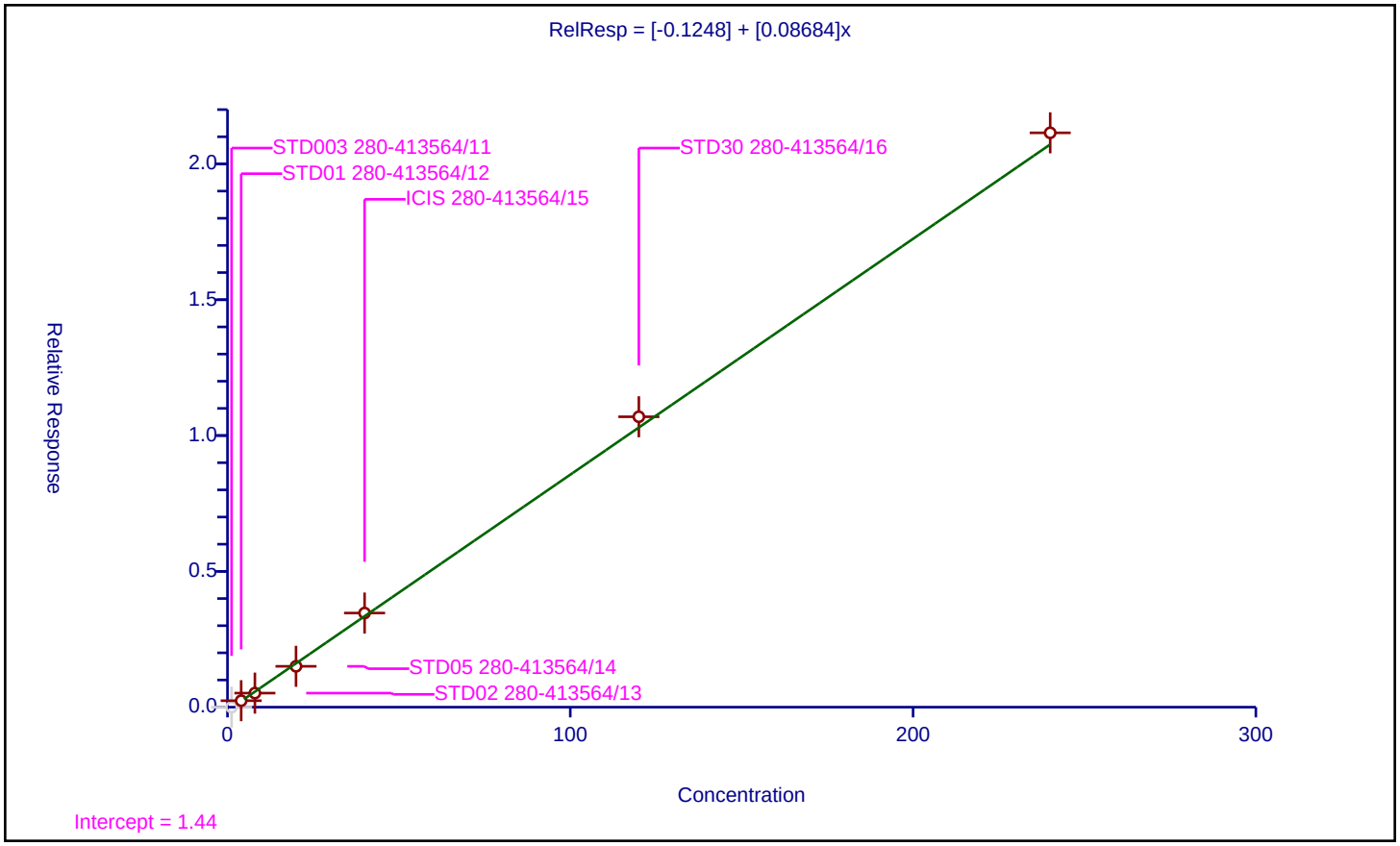
Curve Coefficients

Intercept:	-0.1248
Slope:	0.08684

Error Coefficients

Standard Error:	1540000
Relative Standard Error:	6.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	1.2	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	4.0	0.238129	12.5	1363756.0	0.059532	Y
3	STD02 280-413564/13	8.0	0.518036	12.5	1360789.0	0.064754	Y
4	STD05 280-413564/14	20.0	1.504186	12.5	1361284.0	0.075209	Y
5	ICIS 280-413564/15	40.0	3.465146	12.5	1416946.0	0.086629	Y
6	STD30 280-413564/16	120.0	10.691203	12.5	1426390.0	0.089093	Y
7	STD60 280-413564/17	240.0	21.145799	12.5	1656780.0	0.088107	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

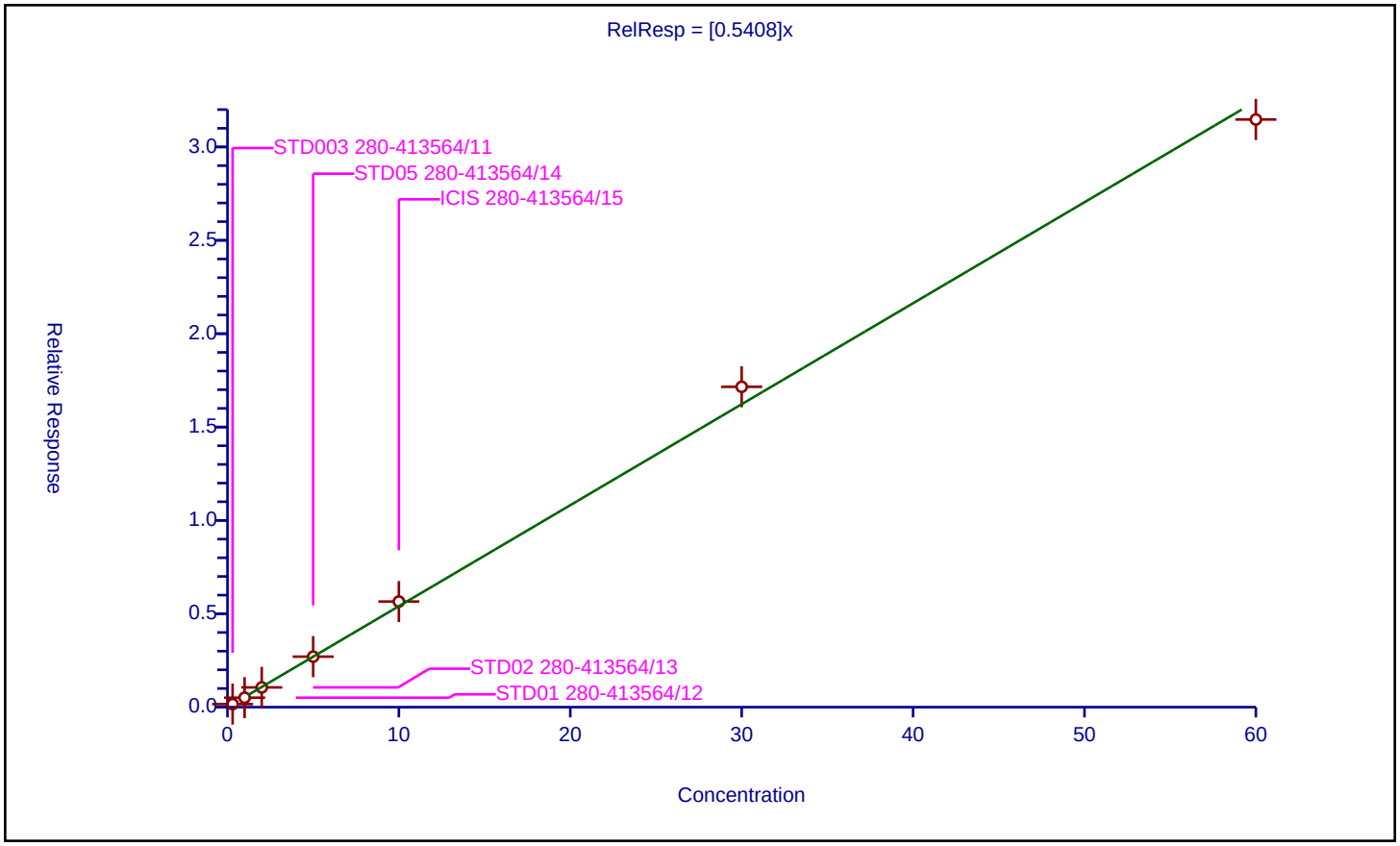
Curve Coefficients

Intercept:	0
Slope:	0.5408

Error Coefficients

Standard Error:	1900000
Relative Standard Error:	4.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.164199	12.5	1345163.0	0.547331	Y
2	STD01 280-413564/12	1.0	0.506698	12.5	1363756.0	0.506698	Y
3	STD02 280-413564/13	2.0	1.057273	12.5	1360789.0	0.528636	Y
4	STD05 280-413564/14	5.0	2.704579	12.5	1361284.0	0.540916	Y
5	ICIS 280-413564/15	10.0	5.655553	12.5	1416946.0	0.565555	Y
6	STD30 280-413564/16	30.0	17.15545	12.5	1426390.0	0.571848	Y
7	STD60 280-413564/17	60.0	31.470247	12.5	1656780.0	0.524504	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

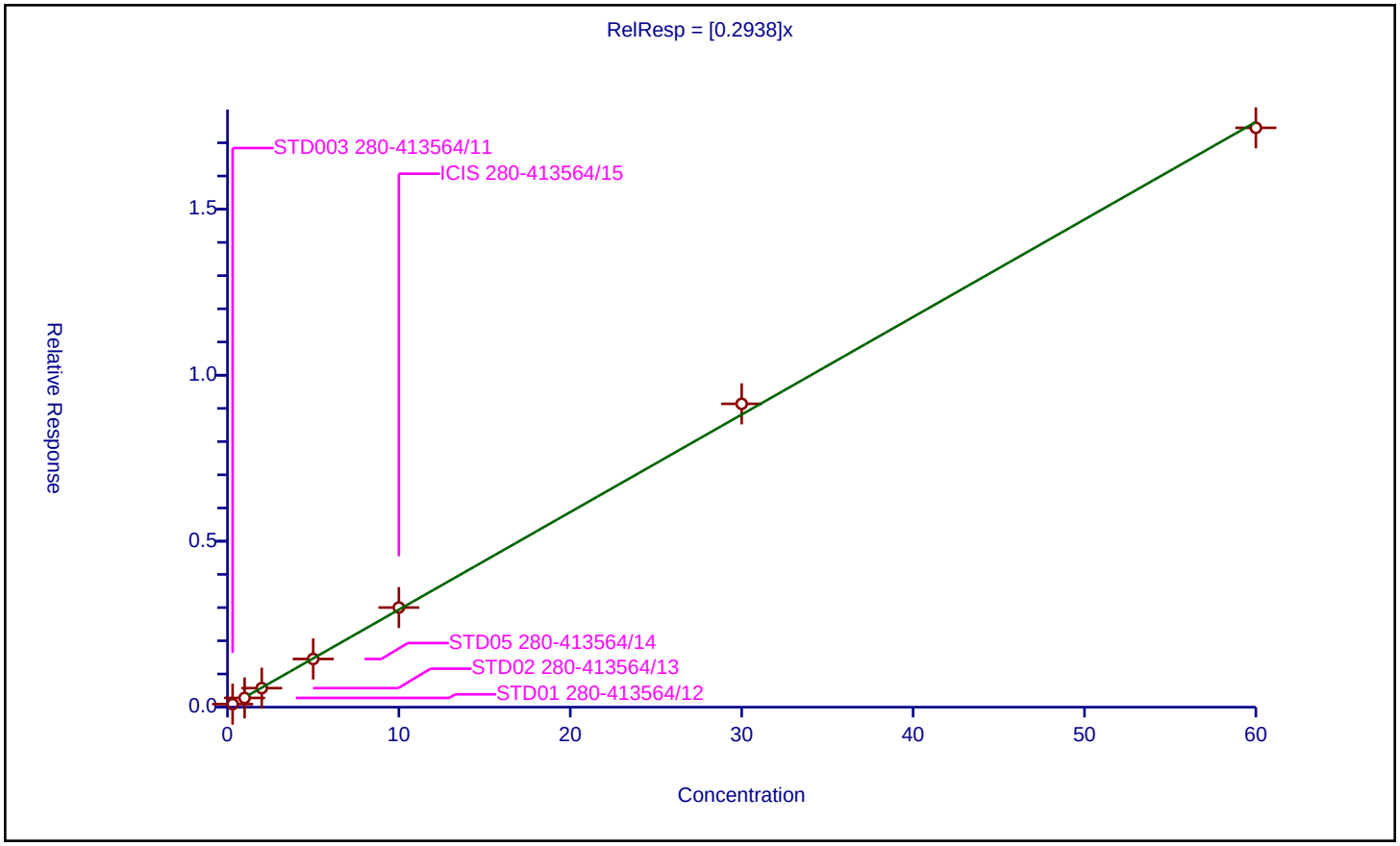
Curve Coefficients

Intercept:	0
Slope:	0.2938

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	3.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.091727	12.5	1345163.0	0.305756	Y
2	STD01 280-413564/12	1.0	0.278541	12.5	1363756.0	0.278541	Y
3	STD02 280-413564/13	2.0	0.573013	12.5	1360789.0	0.286507	Y
4	STD05 280-413564/14	5.0	1.451516	12.5	1361284.0	0.290303	Y
5	ICIS 280-413564/15	10.0	3.001358	12.5	1416946.0	0.300136	Y
6	STD30 280-413564/16	30.0	9.137403	12.5	1426390.0	0.30458	Y
7	STD60 280-413564/17	60.0	17.451201	12.5	1656780.0	0.290853	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

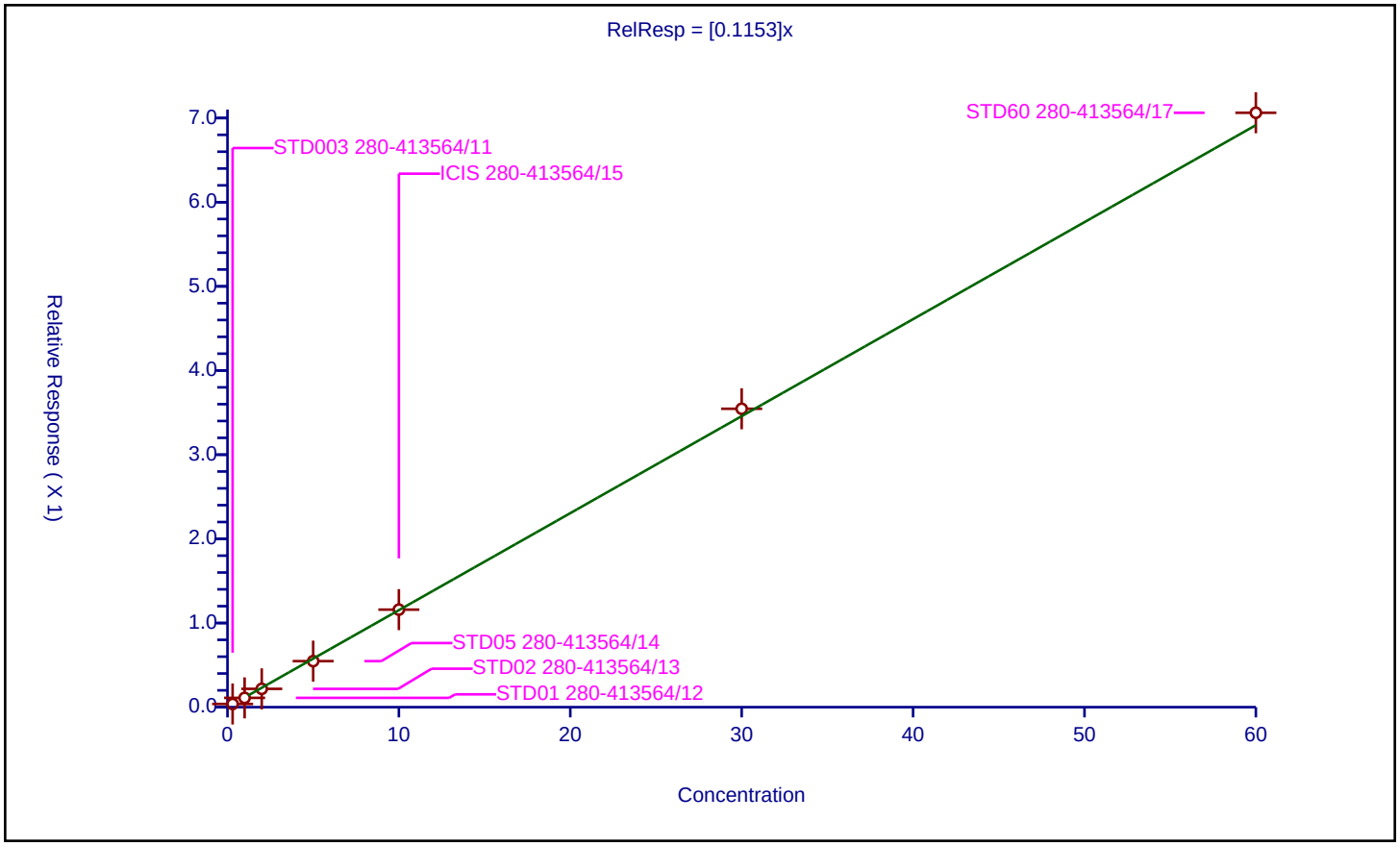
Curve Coefficients

Intercept:	0
Slope:	0.1153

Error Coefficients

Standard Error:	421000
Relative Standard Error:	5.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.037932	12.5	1345163.0	0.126441	Y
2	STD01 280-413564/12	1.0	0.110274	12.5	1363756.0	0.110274	Y
3	STD02 280-413564/13	2.0	0.217769	12.5	1360789.0	0.108884	Y
4	STD05 280-413564/14	5.0	0.54702	12.5	1361284.0	0.109404	Y
5	ICIS 280-413564/15	10.0	1.158998	12.5	1416946.0	0.1159	Y
6	STD30 280-413564/16	30.0	3.54541	12.5	1426390.0	0.11818	Y
7	STD60 280-413564/17	60.0	7.062487	12.5	1656780.0	0.117708	Y



Calibration / 1,4-Dioxane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

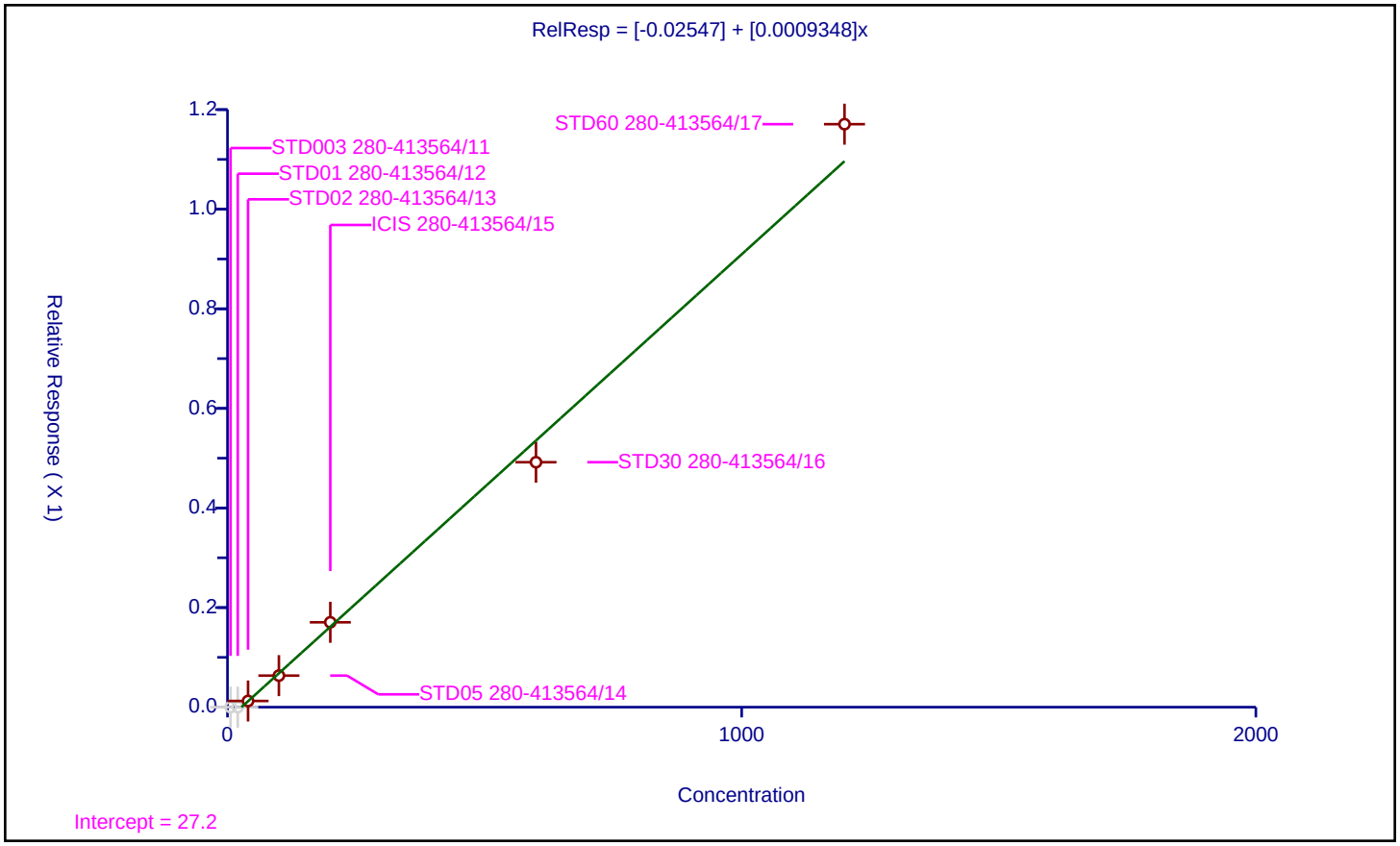
Curve Coefficients

Intercept:	-0.02547
Slope:	0.0009348

Error Coefficients

Standard Error:	96000
Relative Standard Error:	7.2
Correlation Coefficient:	0.984
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	6.0	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	20.0	0.0	12.5	1363756.0	0.0	N
3	STD02 280-413564/13	40.0	0.012419	12.5	1360789.0	0.00031	Y
4	STD05 280-413564/14	100.0	0.063368	12.5	1361284.0	0.000634	Y
5	ICIS 280-413564/15	200.0	0.170411	12.5	1416946.0	0.000852	Y
6	STD30 280-413564/16	600.0	0.491889	12.5	1426390.0	0.00082	Y
7	STD60 280-413564/17	1200.0	1.170742	12.5	1656780.0	0.000976	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

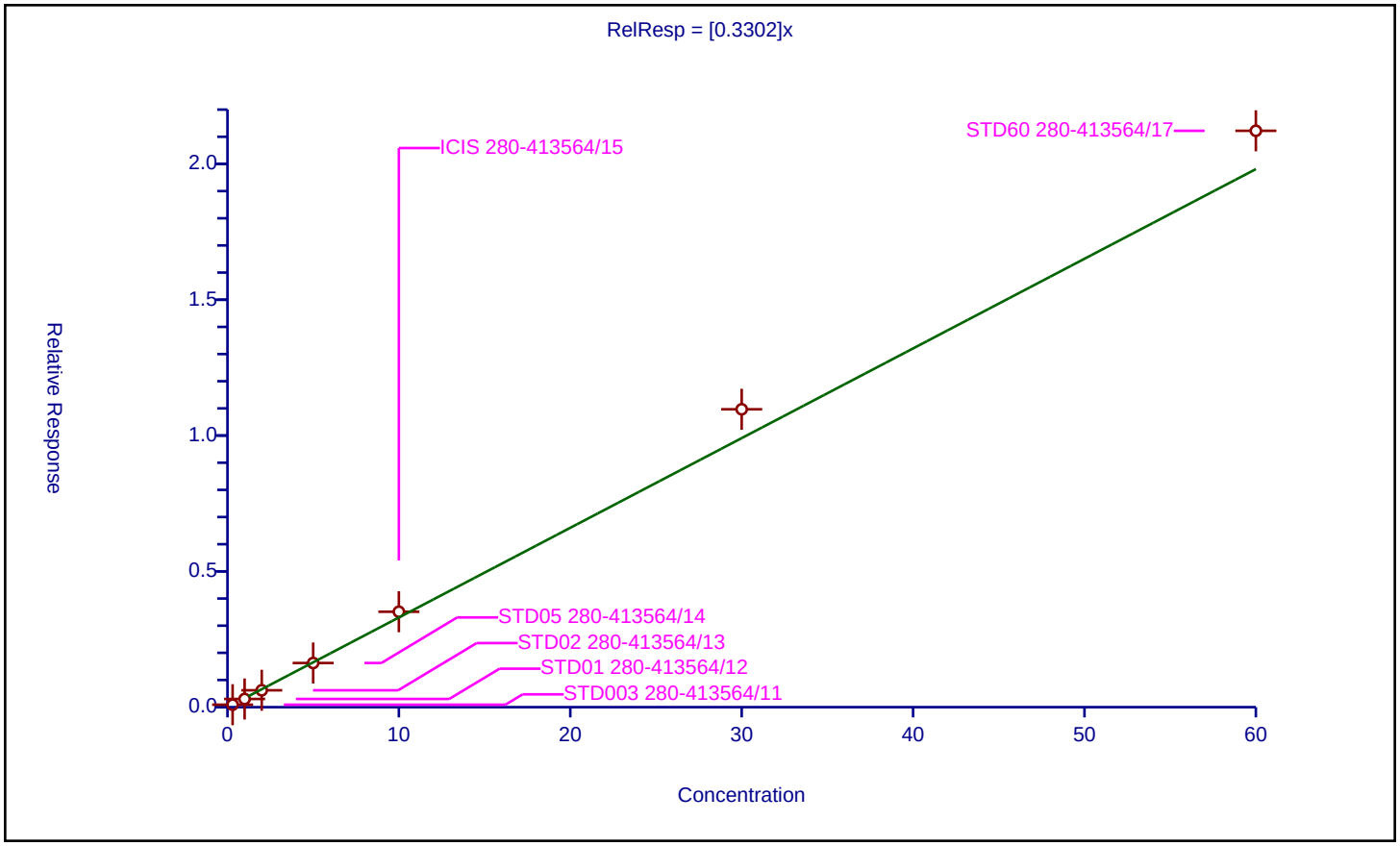
Curve Coefficients

Intercept:	0
Slope:	0.3302

Error Coefficients

Standard Error:	1270000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.090965	12.5	1345163.0	0.303216	Y
2	STD01 280-413564/12	1.0	0.301612	12.5	1363756.0	0.301612	Y
3	STD02 280-413564/13	2.0	0.621331	12.5	1360789.0	0.310665	Y
4	STD05 280-413564/14	5.0	1.625515	12.5	1361284.0	0.325103	Y
5	ICIS 280-413564/15	10.0	3.51334	12.5	1416946.0	0.351334	Y
6	STD30 280-413564/16	30.0	10.966899	12.5	1426390.0	0.365563	Y
7	STD60 280-413564/17	60.0	21.219504	12.5	1656780.0	0.353658	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

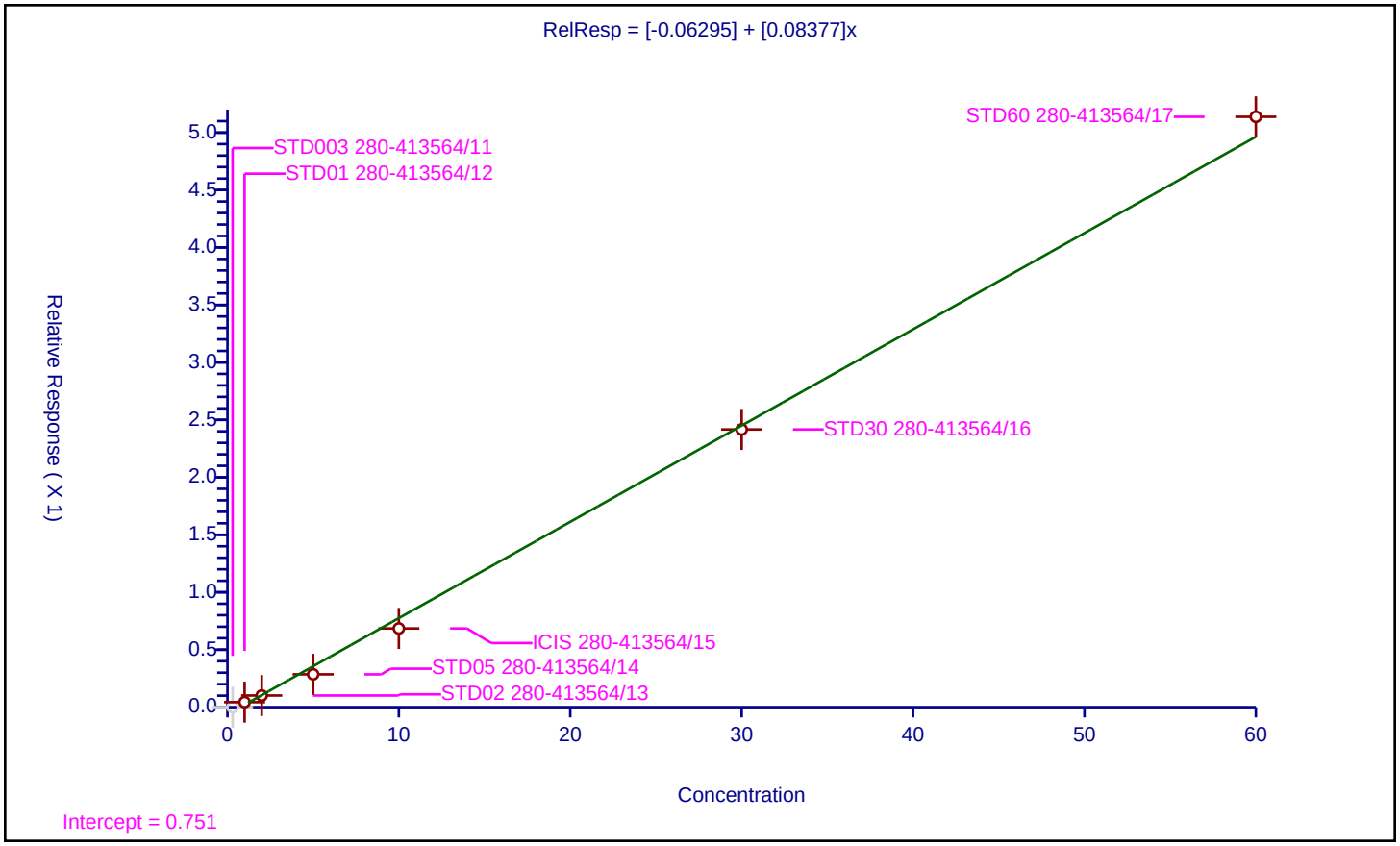
Curve Coefficients

Intercept:	-0.06295
Slope:	0.08377

Error Coefficients

Standard Error:	370000
Relative Standard Error:	17.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	1345163.0	0.0	N
2	STD01 280-413564/12	1.0	0.043721	12.5	1363756.0	0.043721	Y
3	STD02 280-413564/13	2.0	0.101292	12.5	1360789.0	0.050646	Y
4	STD05 280-413564/14	5.0	0.285659	12.5	1361284.0	0.057132	Y
5	ICIS 280-413564/15	10.0	0.684924	12.5	1416946.0	0.068492	Y
6	STD30 280-413564/16	30.0	2.416625	12.5	1426390.0	0.080554	Y
7	STD60 280-413564/17	60.0	5.13745	12.5	1656780.0	0.085624	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

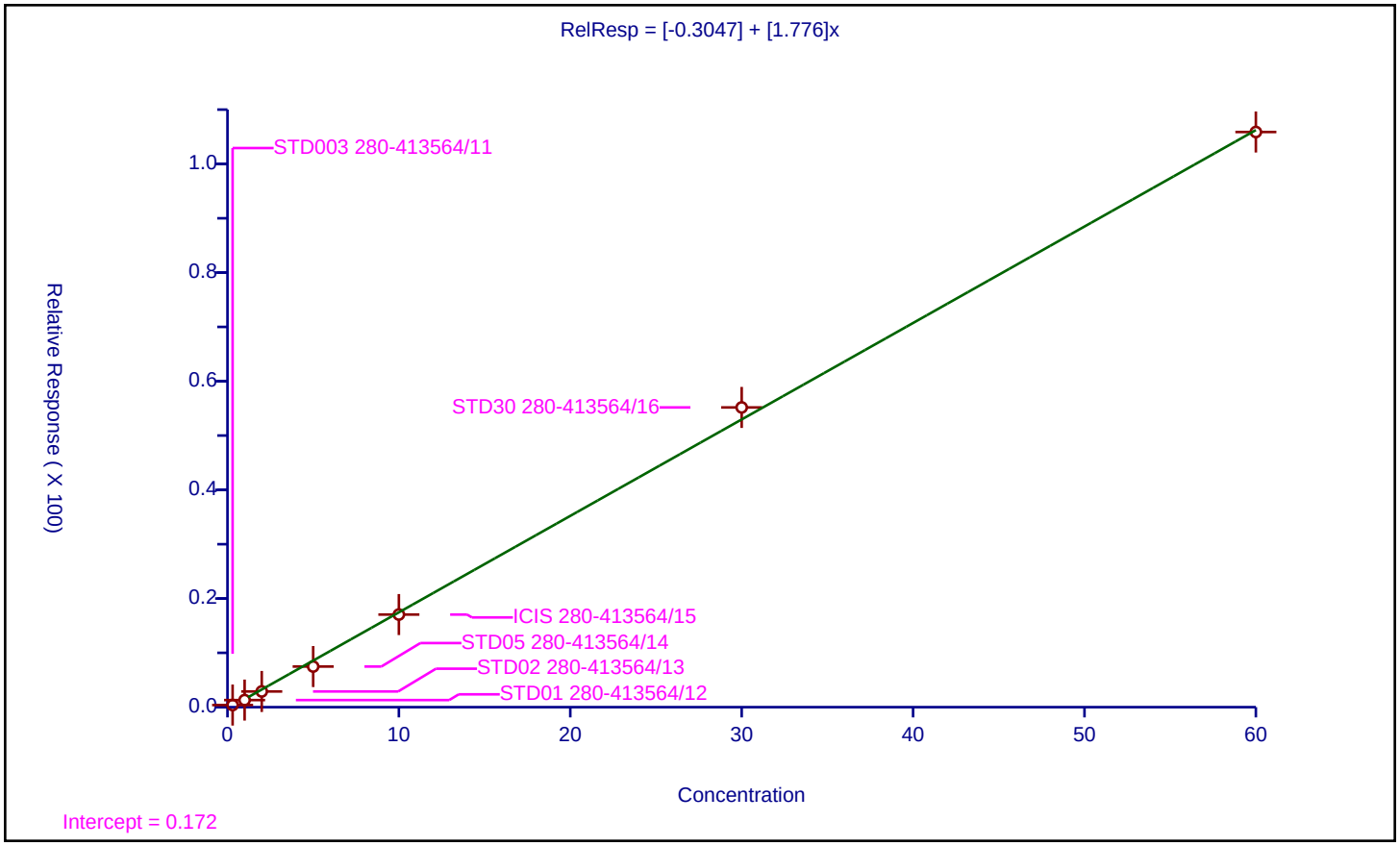
Curve Coefficients

Intercept:	-0.3047
Slope:	1.776

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	15.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.387683	12.5	305952.0	1.292278	Y
2	STD01 280-413564/12	1.0	1.30696	12.5	311075.0	1.30696	Y
3	STD02 280-413564/13	2.0	2.89282	12.5	300265.0	1.44641	Y
4	STD05 280-413564/14	5.0	7.479161	12.5	313720.0	1.495832	Y
5	ICIS 280-413564/15	10.0	17.049674	12.5	323732.0	1.704967	Y
6	STD30 280-413564/16	30.0	55.175322	12.5	324318.0	1.839177	Y
7	STD60 280-413564/17	60.0	105.876938	12.5	382510.0	1.764616	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

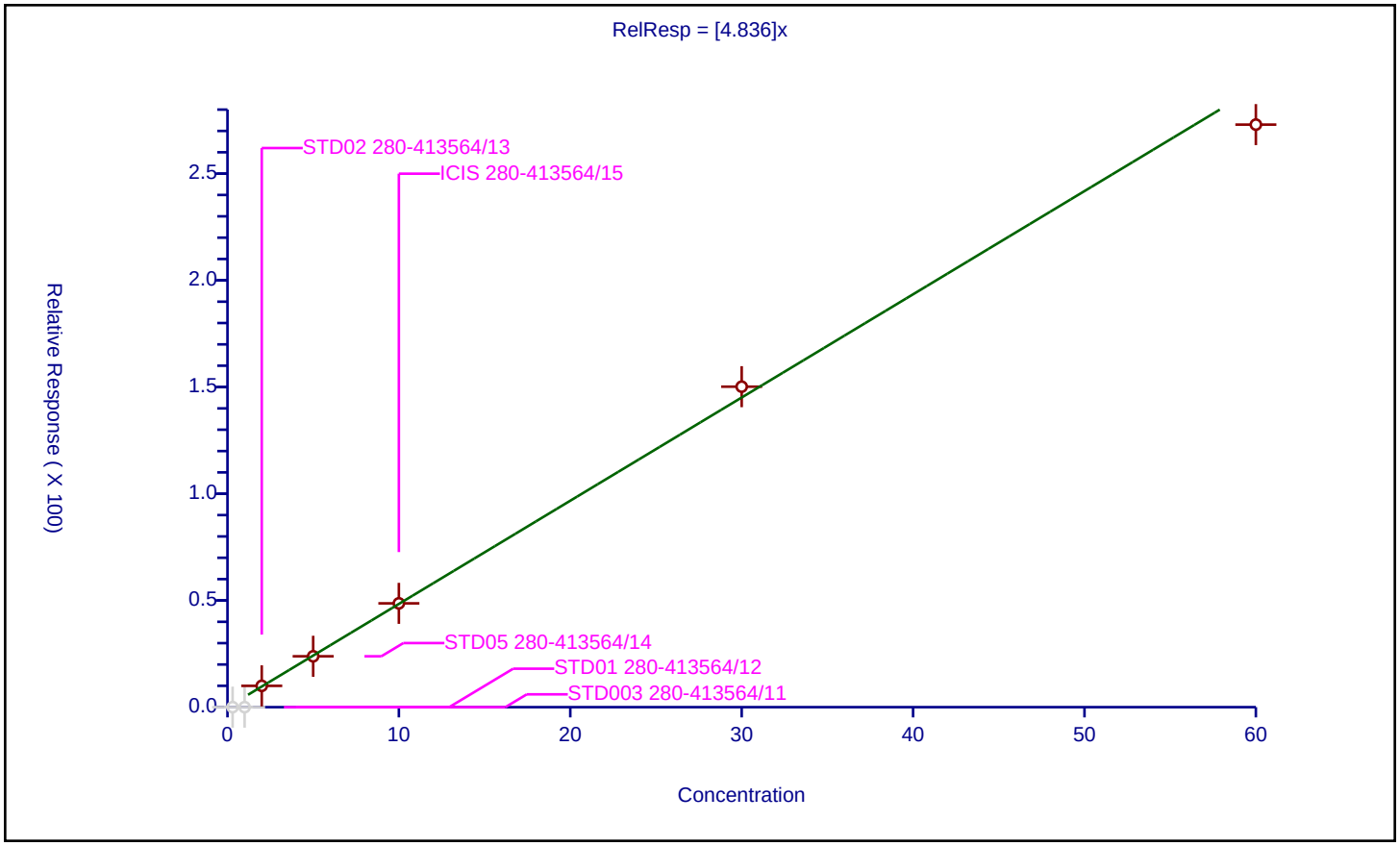
Curve Coefficients

Intercept:	0
Slope:	4.836

Error Coefficients

Standard Error:	4660000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	305952.0	0.0	N
2	STD01 280-413564/12	1.0	0.0	12.5	311075.0	0.0	N
3	STD02 280-413564/13	2.0	9.989842	12.5	300265.0	4.994921	Y
4	STD05 280-413564/14	5.0	23.837419	12.5	313720.0	4.767484	Y
5	ICIS 280-413564/15	10.0	48.64282	12.5	323732.0	4.864282	Y
6	STD30 280-413564/16	30.0	150.175214	12.5	324318.0	5.00584	Y
7	STD60 280-413564/17	60.0	272.970478	12.5	382510.0	4.549508	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

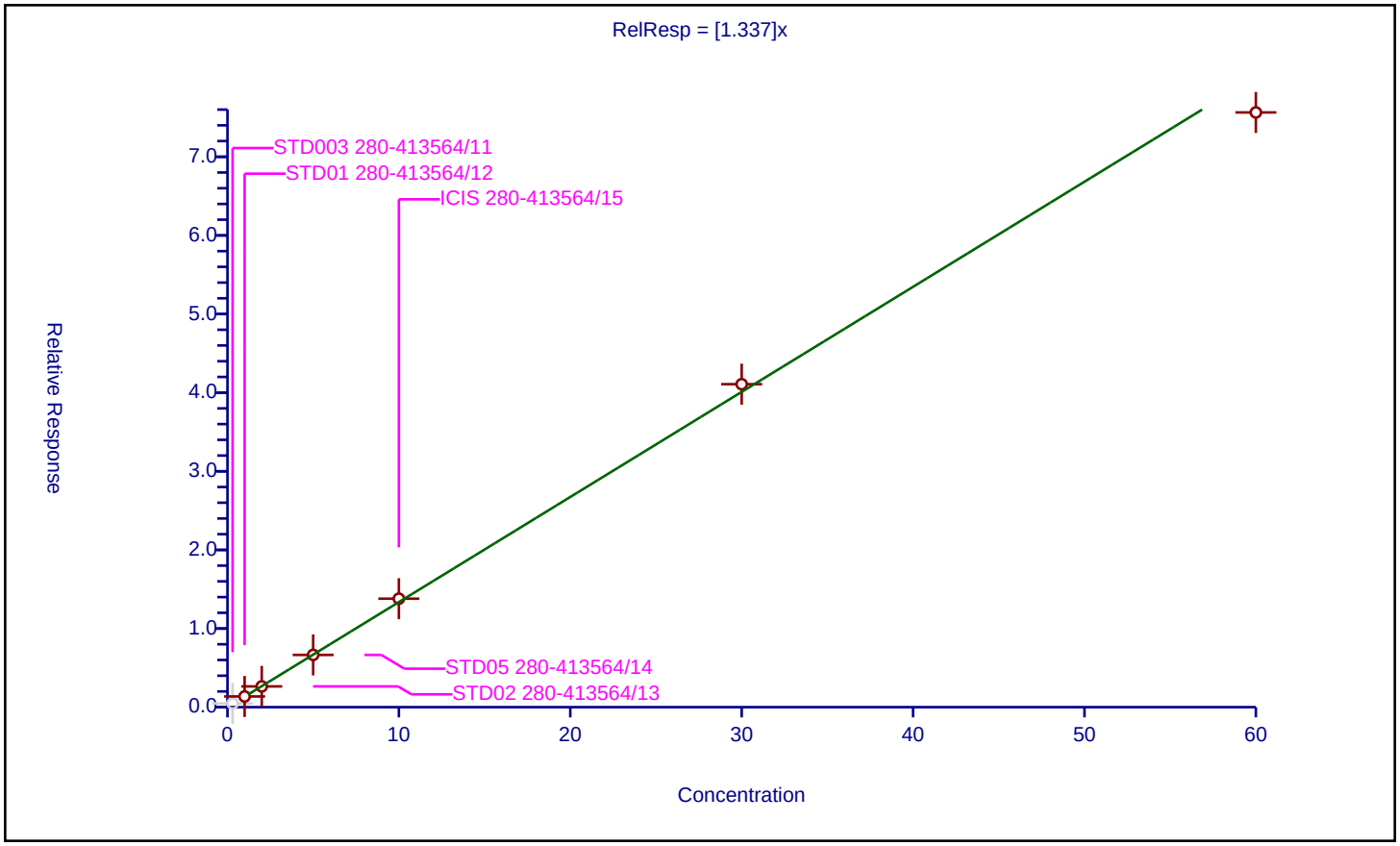
Curve Coefficients

Intercept:	0
Slope:	1.337

Error Coefficients

Standard Error:	5010000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.471049	12.5	1345163.0	1.570163	N
2	STD01 280-413564/12	1.0	1.361305	12.5	1363756.0	1.361305	Y
3	STD02 280-413564/13	2.0	2.638102	12.5	1360789.0	1.319051	Y
4	STD05 280-413564/14	5.0	6.645904	12.5	1361284.0	1.329181	Y
5	ICIS 280-413564/15	10.0	13.796141	12.5	1416946.0	1.379614	Y
6	STD30 280-413564/16	30.0	41.079491	12.5	1426390.0	1.369316	Y
7	STD60 280-413564/17	60.0	75.639018	12.5	1656780.0	1.26065	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

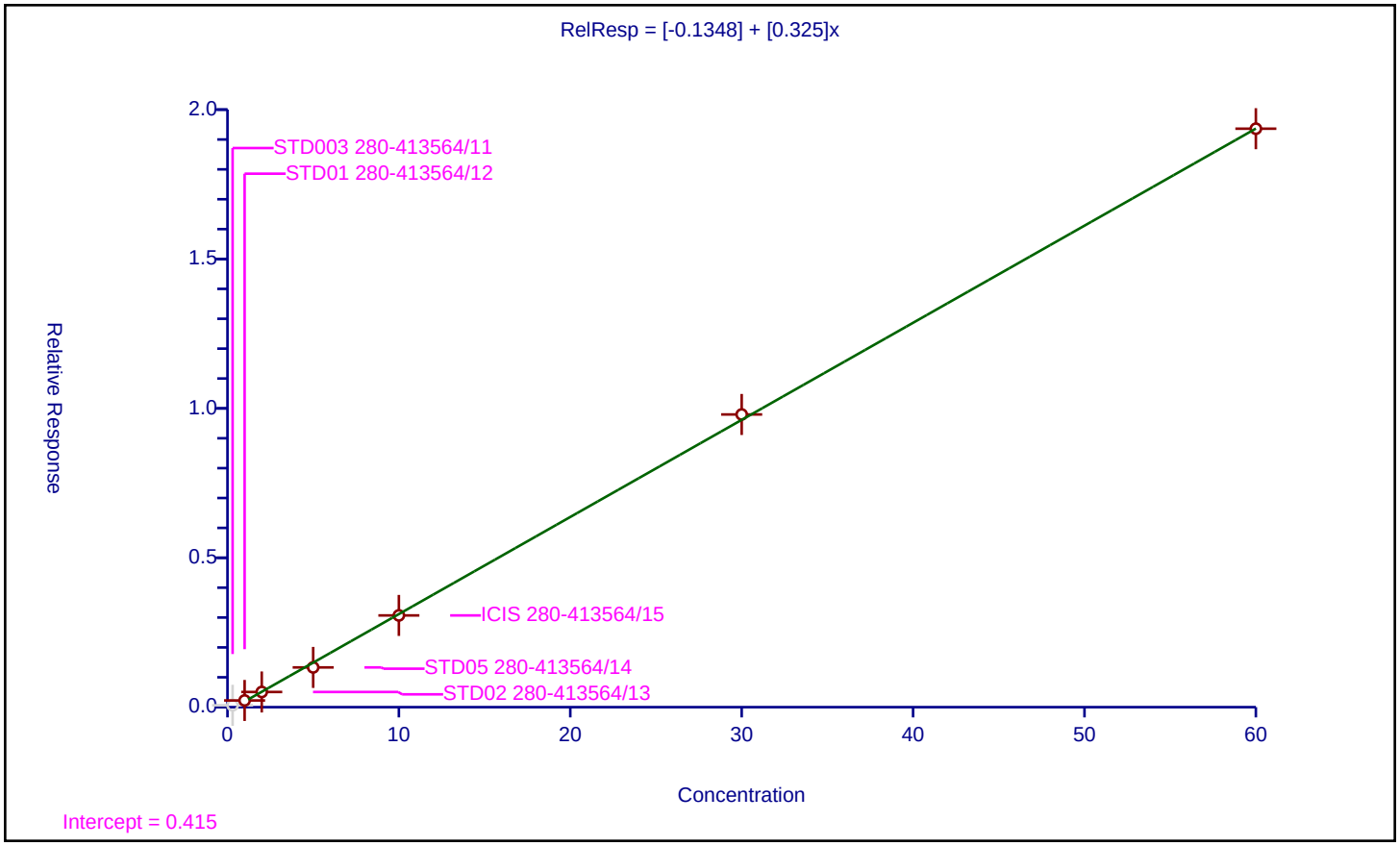
Curve Coefficients

Intercept:	-0.1348
Slope:	0.325

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	7.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.061786	12.5	1345163.0	0.205954	N
2	STD01 280-413564/12	1.0	0.224087	12.5	1363756.0	0.224087	Y
3	STD02 280-413564/13	2.0	0.508308	12.5	1360789.0	0.254154	Y
4	STD05 280-413564/14	5.0	1.330242	12.5	1361284.0	0.266048	Y
5	ICIS 280-413564/15	10.0	3.070645	12.5	1416946.0	0.307064	Y
6	STD30 280-413564/16	30.0	9.796952	12.5	1426390.0	0.326565	Y
7	STD60 280-413564/17	60.0	19.361148	12.5	1656780.0	0.322686	Y



Calibration / Ethyl methacrylate

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

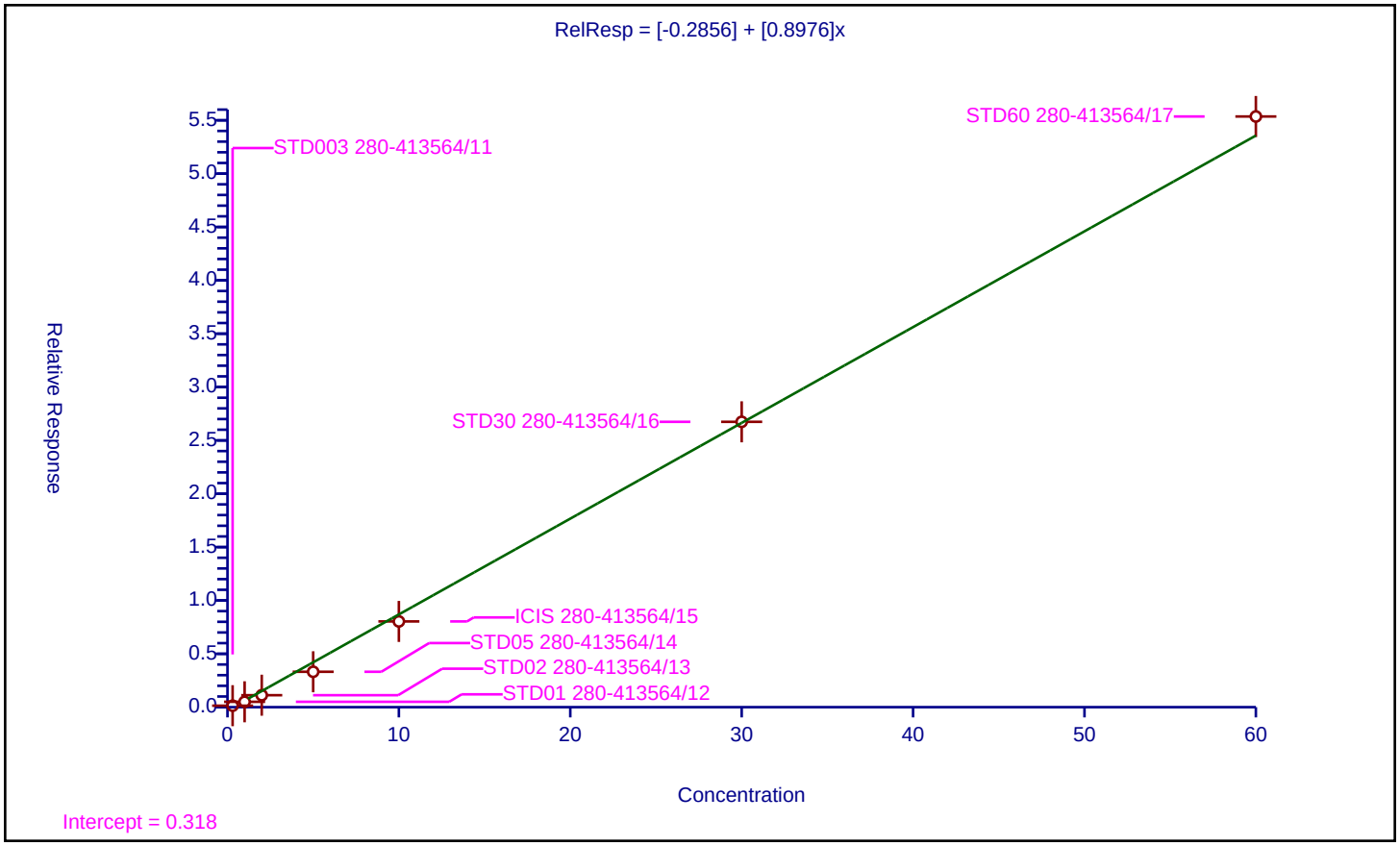
Curve Coefficients

Intercept:	-0.2856
Slope:	0.8976

Error Coefficients

Standard Error:	825000
Relative Standard Error:	29.5
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.137522	12.5	305952.0	0.458405	Y
2	STD01 280-413564/12	1.0	0.503014	12.5	311075.0	0.503014	Y
3	STD02 280-413564/13	2.0	1.120718	12.5	300265.0	0.560359	Y
4	STD05 280-413564/14	5.0	3.316214	12.5	313720.0	0.663243	Y
5	ICIS 280-413564/15	10.0	8.034539	12.5	323732.0	0.803454	Y
6	STD30 280-413564/16	30.0	26.74019	12.5	324318.0	0.89134	Y
7	STD60 280-413564/17	60.0	55.355089	12.5	382510.0	0.922585	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

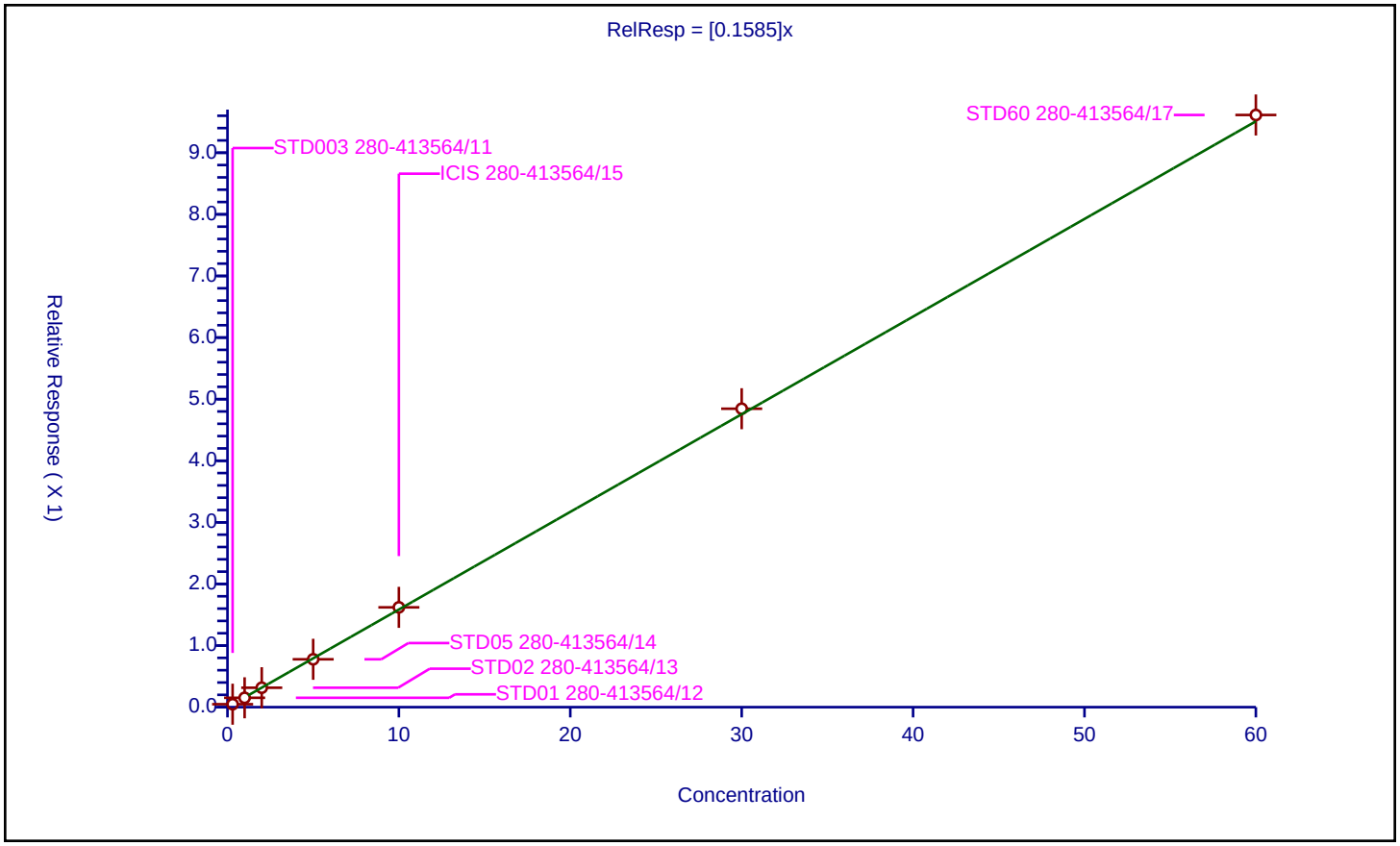
Curve Coefficients

Intercept:	0
Slope:	0.1585

Error Coefficients

Standard Error:	573000
Relative Standard Error:	2.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.048089	12.5	1345163.0	0.160297	Y
2	STD01 280-413564/12	1.0	0.152126	12.5	1363756.0	0.152126	Y
3	STD02 280-413564/13	2.0	0.315736	12.5	1360789.0	0.157868	Y
4	STD05 280-413564/14	5.0	0.777345	12.5	1361284.0	0.155469	Y
5	ICIS 280-413564/15	10.0	1.620342	12.5	1416946.0	0.162034	Y
6	STD30 280-413564/16	30.0	4.844538	12.5	1426390.0	0.161485	Y
7	STD60 280-413564/17	60.0	9.61266	12.5	1656780.0	0.160211	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

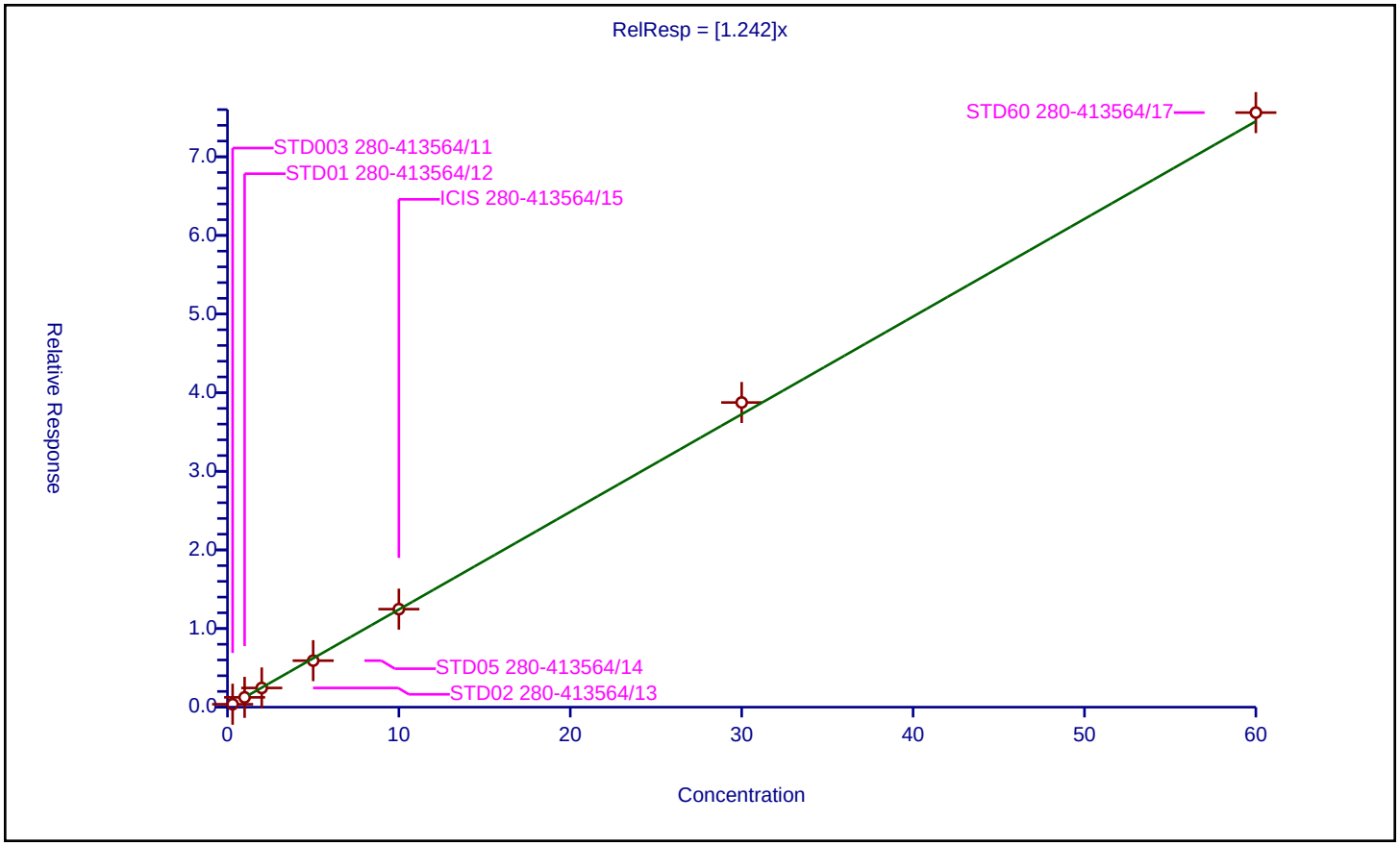
Curve Coefficients

Intercept:	0
Slope:	1.242

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	2.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.373098	12.5	305952.0	1.243659	Y
2	STD01 280-413564/12	1.0	1.246122	12.5	311075.0	1.246122	Y
3	STD02 280-413564/13	2.0	2.442592	12.5	300265.0	1.221296	Y
4	STD05 280-413564/14	5.0	5.917657	12.5	313720.0	1.183531	Y
5	ICIS 280-413564/15	10.0	12.466678	12.5	323732.0	1.246668	Y
6	STD30 280-413564/16	30.0	38.749969	12.5	324318.0	1.291666	Y
7	STD60 280-413564/17	60.0	75.621356	12.5	382510.0	1.260356	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

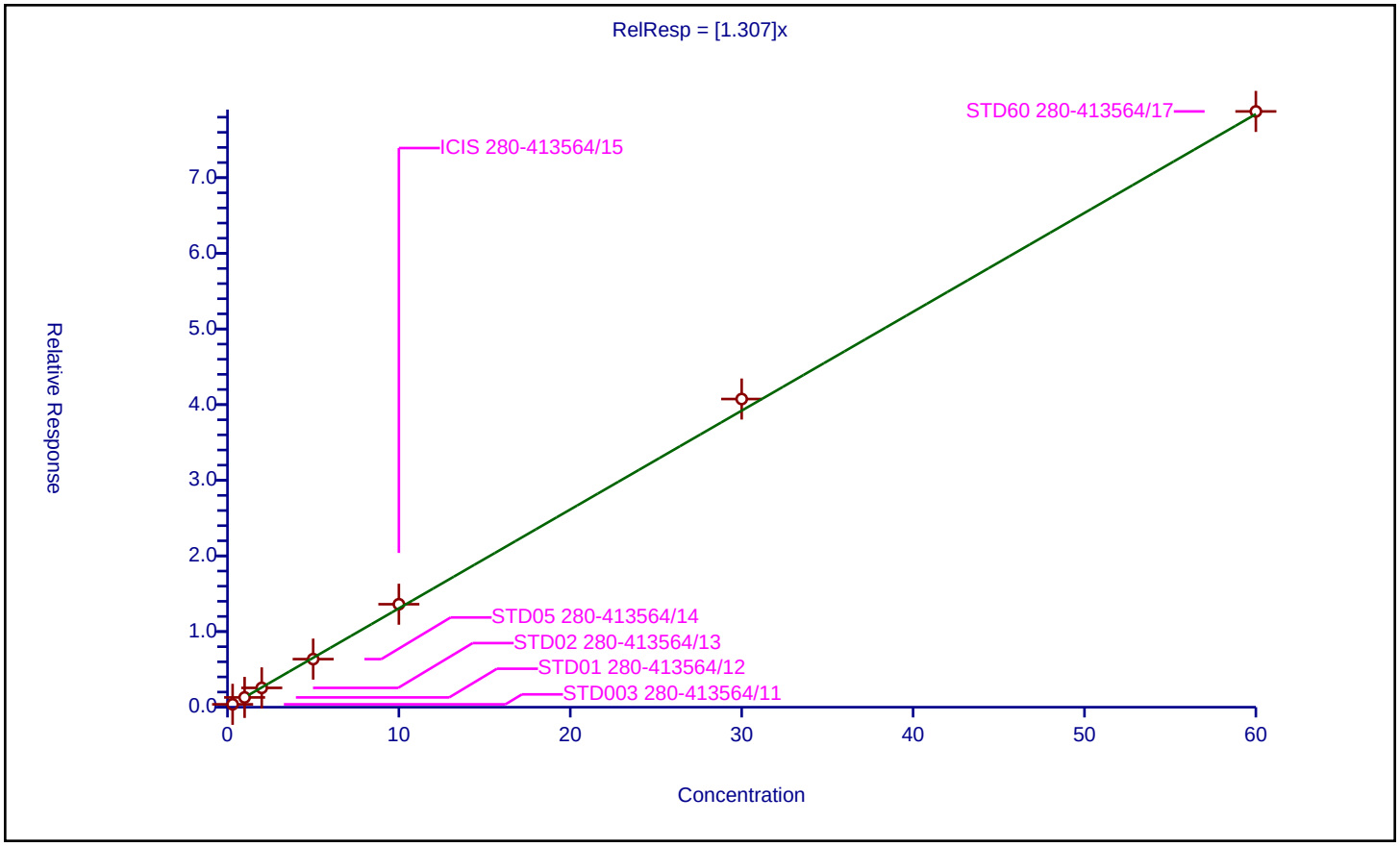
Curve Coefficients

Intercept:	0
Slope:	1.307

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	3.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.382781	12.5	305952.0	1.275935	Y
2	STD01 280-413564/12	1.0	1.29177	12.5	311075.0	1.29177	Y
3	STD02 280-413564/13	2.0	2.552745	12.5	300265.0	1.276373	Y
4	STD05 280-413564/14	5.0	6.358218	12.5	313720.0	1.271644	Y
5	ICIS 280-413564/15	10.0	13.612263	12.5	323732.0	1.361226	Y
6	STD30 280-413564/16	30.0	40.741649	12.5	324318.0	1.358055	Y
7	STD60 280-413564/17	60.0	78.761143	12.5	382510.0	1.312686	Y



Calibration / Chlorodibromomethane

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

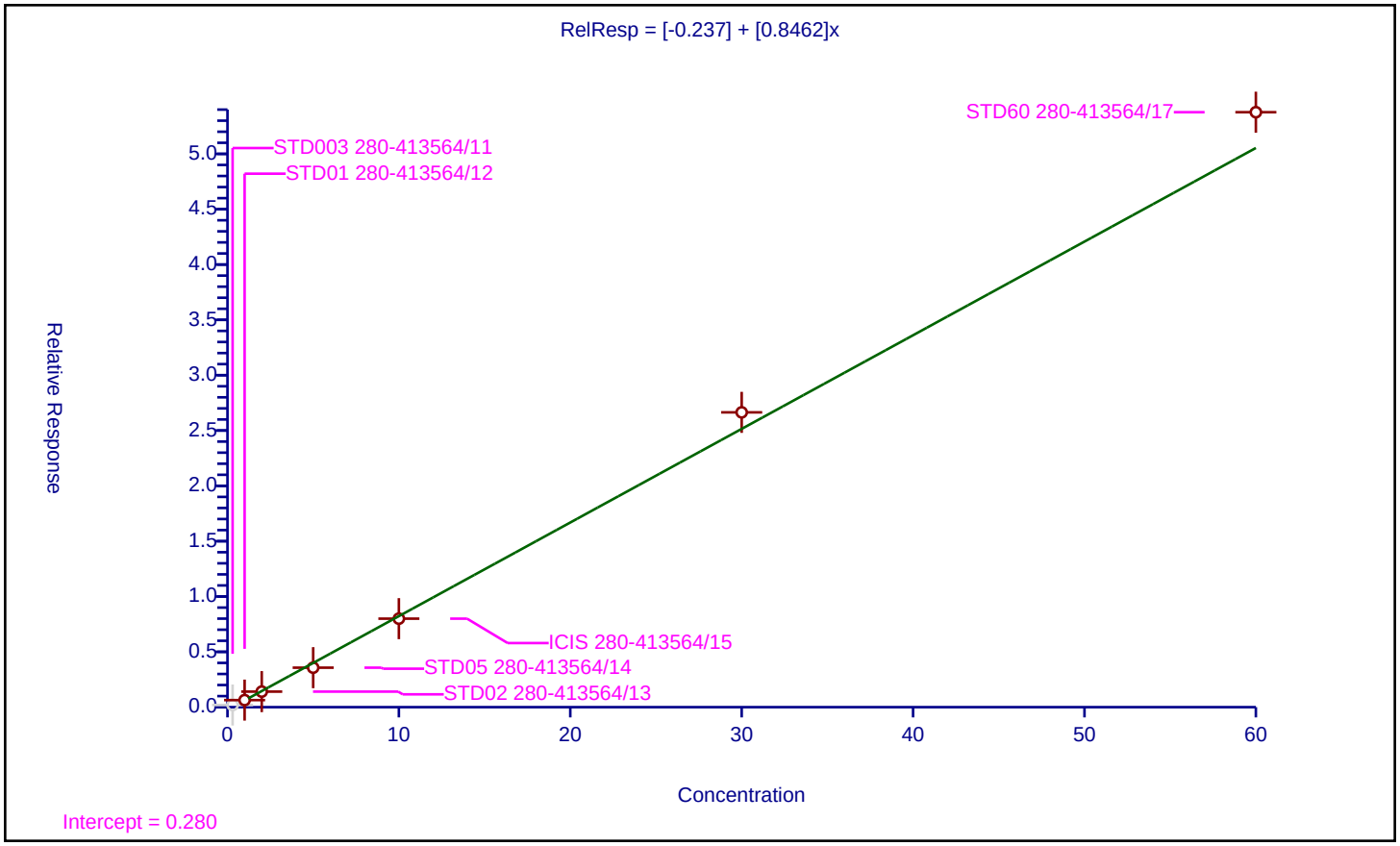
Curve Coefficients

Intercept:	-0.237
Slope:	0.8462

Error Coefficients

Standard Error:	900000
Relative Standard Error:	7.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.195088	12.5	305952.0	0.650293	N
2	STD01 280-413564/12	1.0	0.638391	12.5	311075.0	0.638391	Y
3	STD02 280-413564/13	2.0	1.405717	12.5	300265.0	0.702858	Y
4	STD05 280-413564/14	5.0	3.567751	12.5	313720.0	0.71355	Y
5	ICIS 280-413564/15	10.0	7.997665	12.5	323732.0	0.799766	Y
6	STD30 280-413564/16	30.0	26.640789	12.5	324318.0	0.888026	Y
7	STD60 280-413564/17	60.0	53.765849	12.5	382510.0	0.896097	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

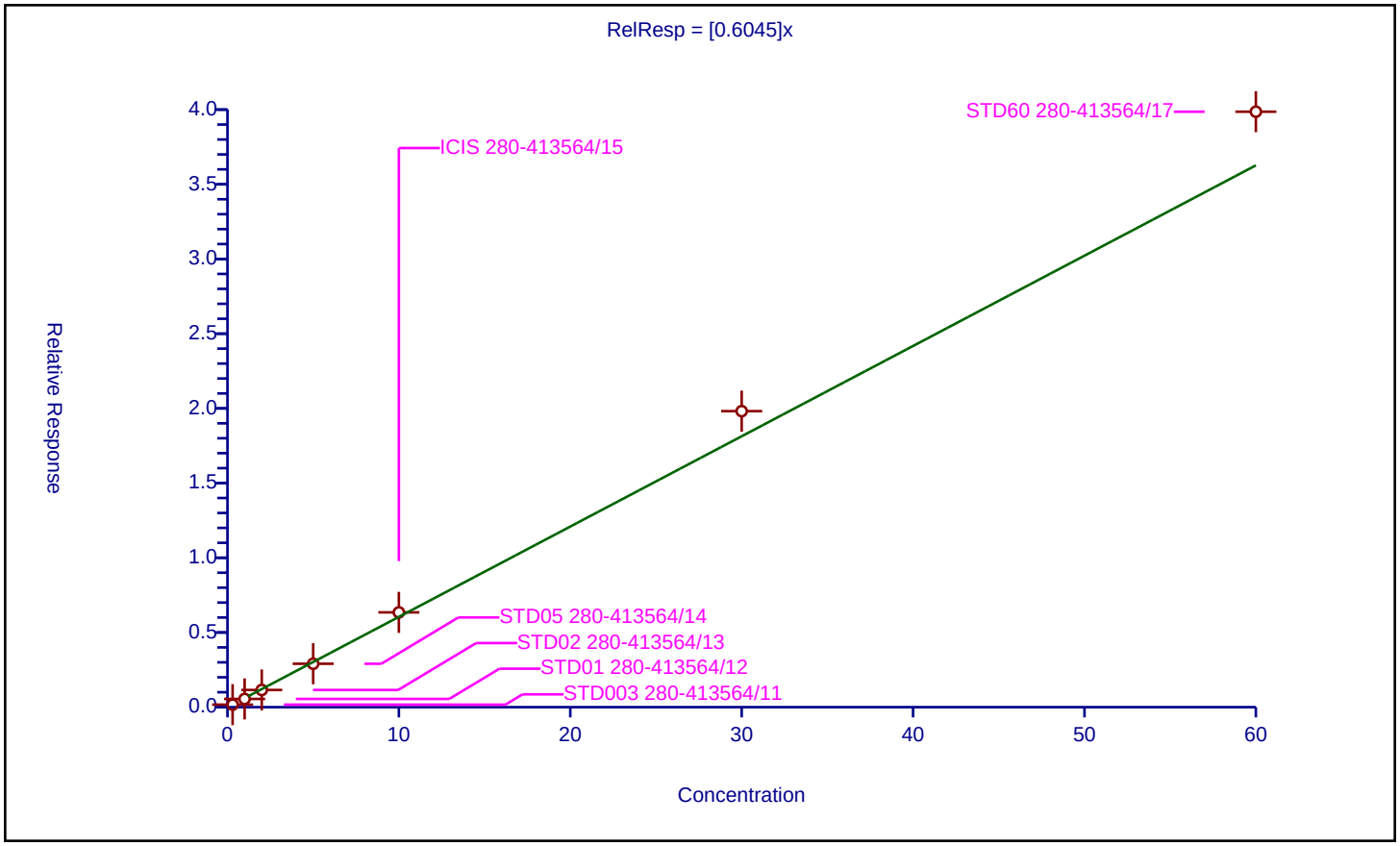
Curve Coefficients

Intercept:	0
Slope:	0.6045

Error Coefficients

Standard Error:	545000
Relative Standard Error:	7.8
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.169553	12.5	305952.0	0.565176	Y
2	STD01 280-413564/12	1.0	0.550591	12.5	311075.0	0.550591	Y
3	STD02 280-413564/13	2.0	1.150026	12.5	300265.0	0.575013	Y
4	STD05 280-413564/14	5.0	2.905417	12.5	313720.0	0.581083	Y
5	ICIS 280-413564/15	10.0	6.345025	12.5	323732.0	0.634502	Y
6	STD30 280-413564/16	30.0	19.814195	12.5	324318.0	0.660473	Y
7	STD60 280-413564/17	60.0	39.859415	12.5	382510.0	0.664324	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

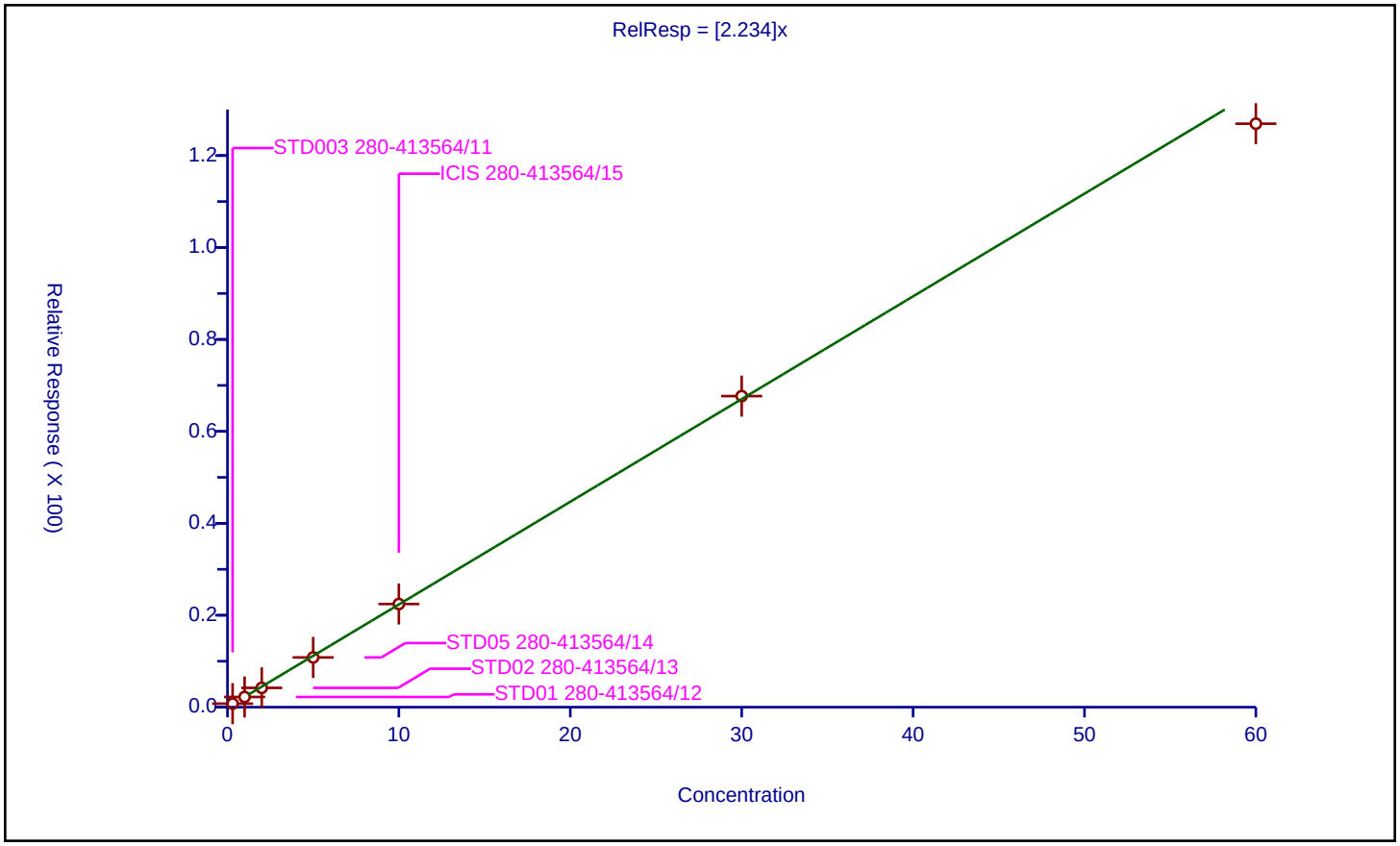
Curve Coefficients

Intercept:	0
Slope:	2.234

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	6.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.764295	12.5	305952.0	2.547649	Y
2	STD01 280-413564/12	1.0	2.214538	12.5	311075.0	2.214538	Y
3	STD02 280-413564/13	2.0	4.198416	12.5	300265.0	2.099208	Y
4	STD05 280-413564/14	5.0	10.816811	12.5	313720.0	2.163362	Y
5	ICIS 280-413564/15	10.0	22.440591	12.5	323732.0	2.244059	Y
6	STD30 280-413564/16	30.0	67.670774	12.5	324318.0	2.255692	Y
7	STD60 280-413564/17	60.0	126.935766	12.5	382510.0	2.115596	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

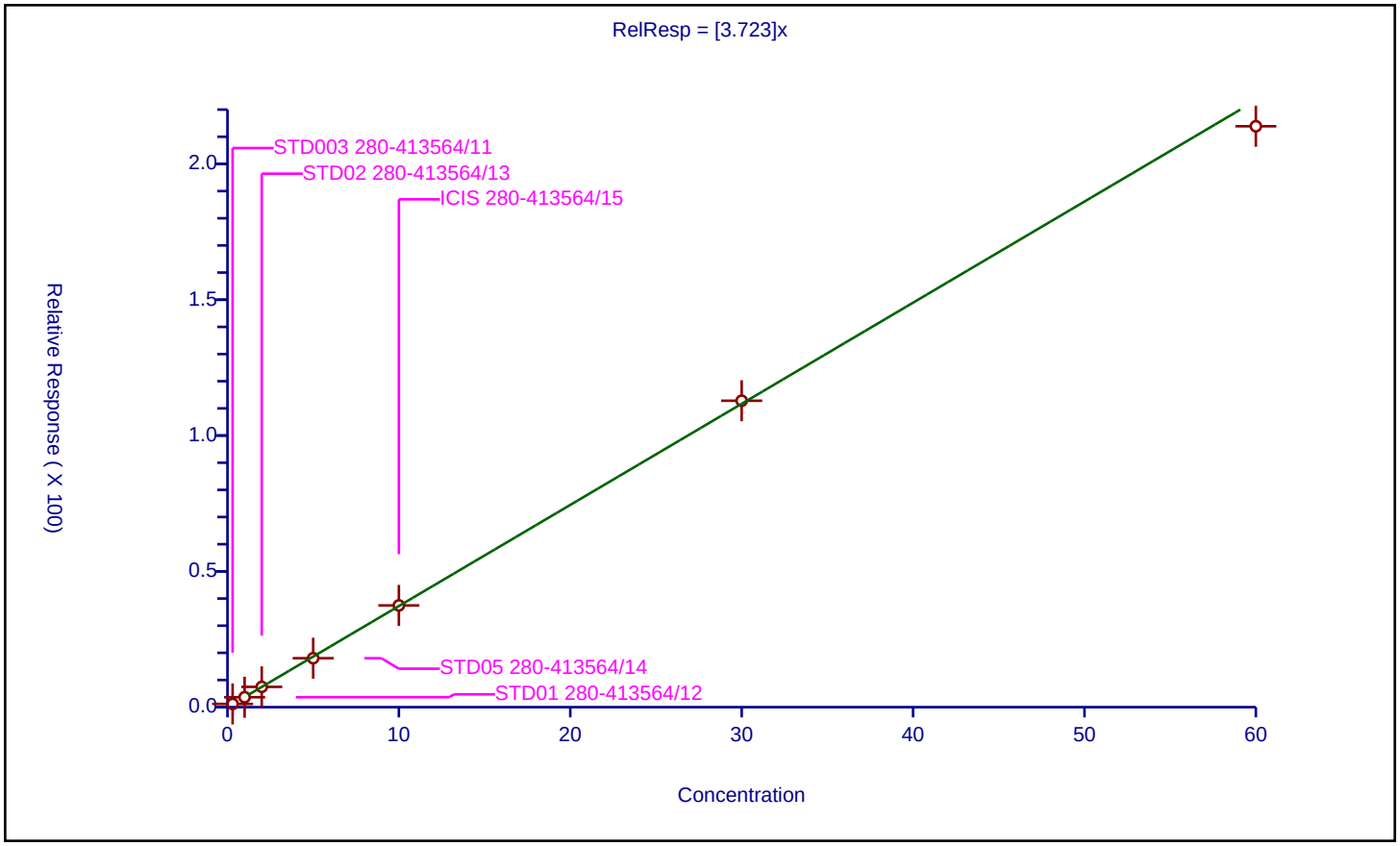
Curve Coefficients

Intercept:	0
Slope:	3.723

Error Coefficients

Standard Error:	2960000
Relative Standard Error:	3.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.1979	12.5	305952.0	3.993001	Y
2	STD01 280-413564/12	1.0	3.65579	12.5	311075.0	3.65579	Y
3	STD02 280-413564/13	2.0	7.473398	12.5	300265.0	3.736699	Y
4	STD05 280-413564/14	5.0	18.020448	12.5	313720.0	3.60409	Y
5	ICIS 280-413564/15	10.0	37.460847	12.5	323732.0	3.746085	Y
6	STD30 280-413564/16	30.0	112.816703	12.5	324318.0	3.760557	Y
7	STD60 280-413564/17	60.0	213.869899	12.5	382510.0	3.564498	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

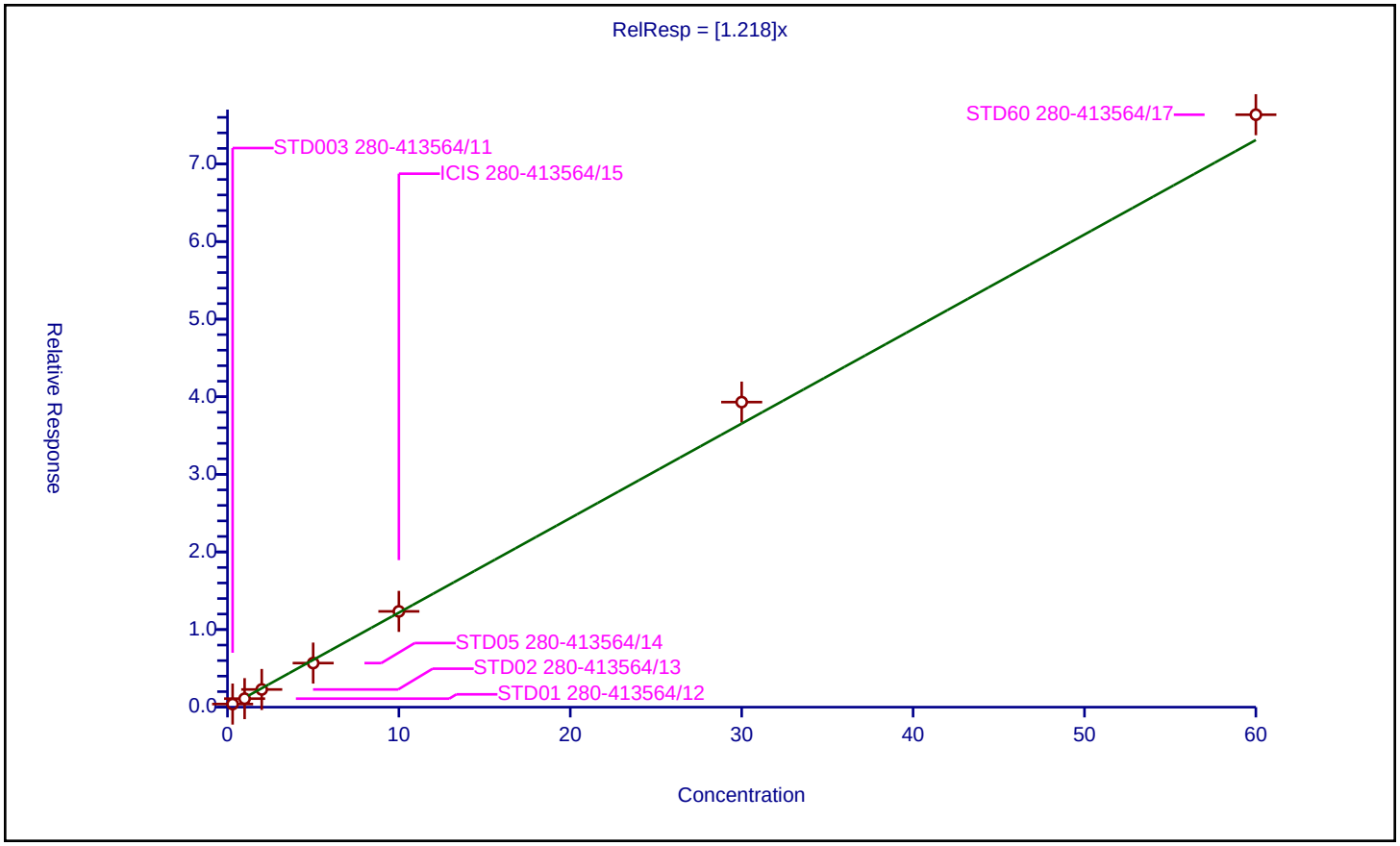
Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	7.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.400716	12.5	305952.0	1.335722	Y
2	STD01 280-413564/12	1.0	1.096721	12.5	311075.0	1.096721	Y
3	STD02 280-413564/13	2.0	2.282192	12.5	300265.0	1.141096	Y
4	STD05 280-413564/14	5.0	5.679228	12.5	313720.0	1.135846	Y
5	ICIS 280-413564/15	10.0	12.342462	12.5	323732.0	1.234246	Y
6	STD30 280-413564/16	30.0	39.310646	12.5	324318.0	1.310355	Y
7	STD60 280-413564/17	60.0	76.344083	12.5	382510.0	1.272401	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

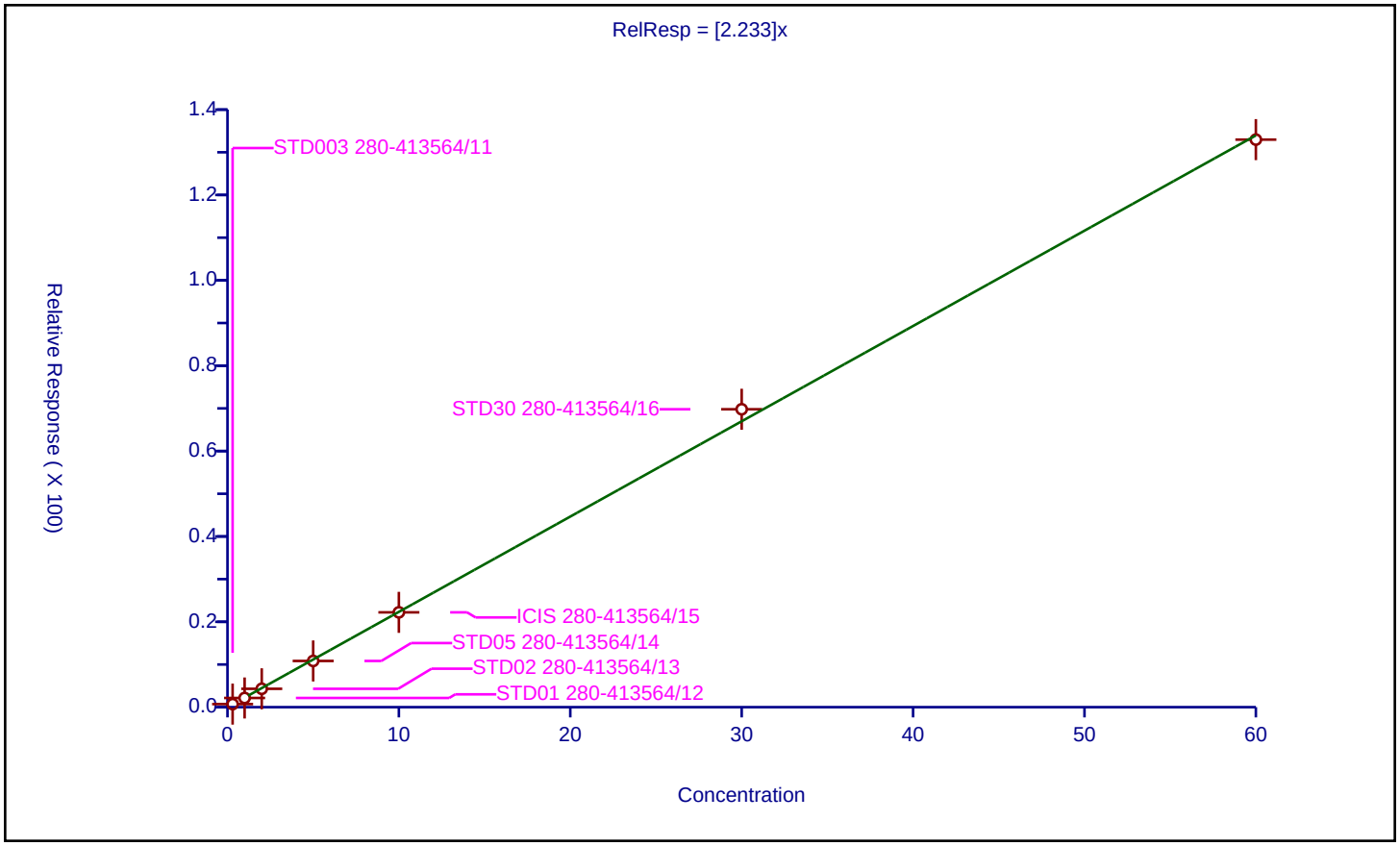
Curve Coefficients

Intercept:	0
Slope:	2.233

Error Coefficients

Standard Error:	1840000
Relative Standard Error:	4.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.717882	12.5	305952.0	2.392941	Y
2	STD01 280-413564/12	1.0	2.153982	12.5	311075.0	2.153982	Y
3	STD02 280-413564/13	2.0	4.30424	12.5	300265.0	2.15212	Y
4	STD05 280-413564/14	5.0	10.824182	12.5	313720.0	2.164836	Y
5	ICIS 280-413564/15	10.0	22.215366	12.5	323732.0	2.221537	Y
6	STD30 280-413564/16	30.0	69.79712	12.5	324318.0	2.326571	Y
7	STD60 280-413564/17	60.0	132.967504	12.5	382510.0	2.216125	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

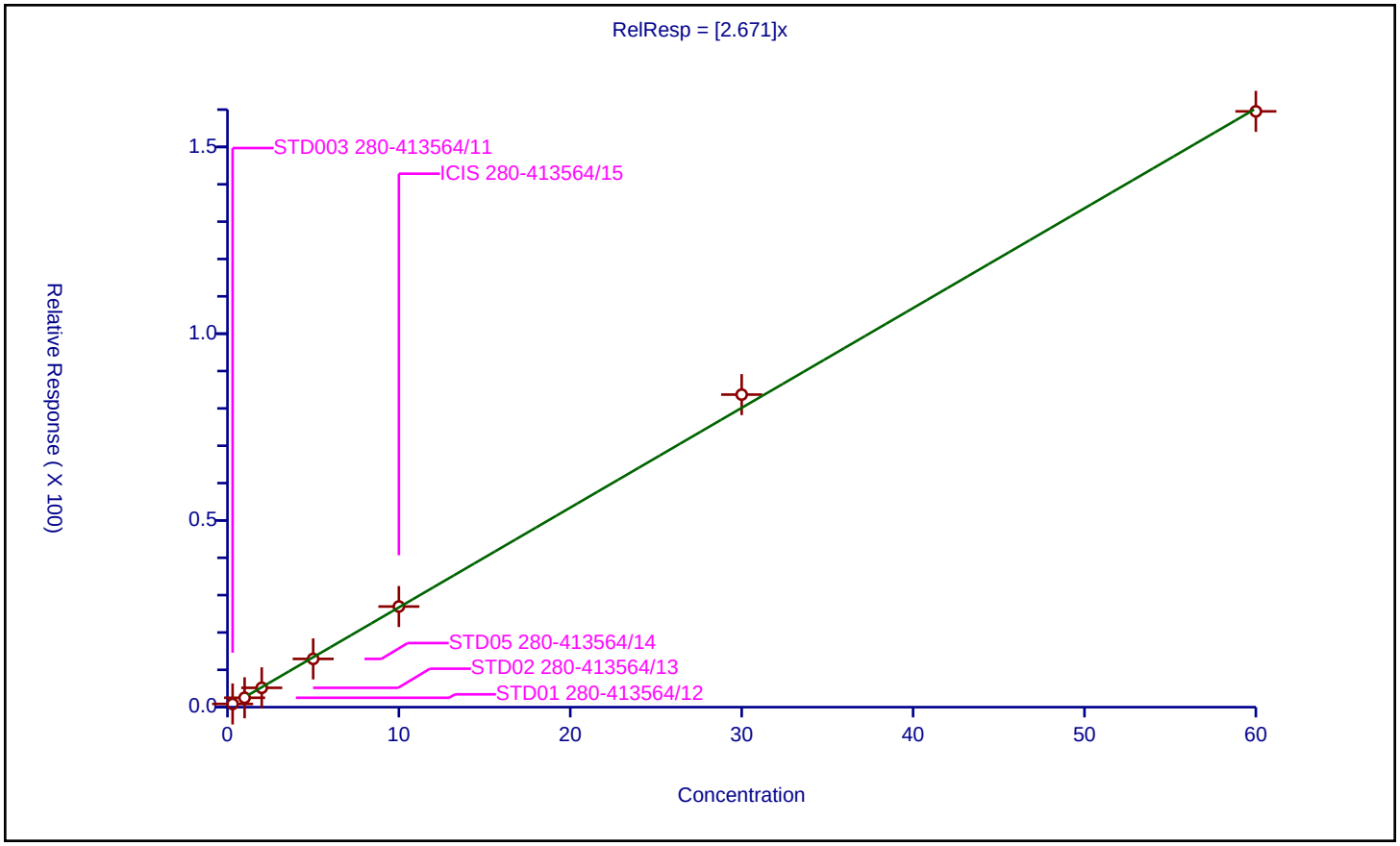
Curve Coefficients

Intercept:	0
Slope:	2.671

Error Coefficients

Standard Error:	2200000
Relative Standard Error:	4.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.860429	12.5	305952.0	2.868097	Y
2	STD01 280-413564/12	1.0	2.512376	12.5	311075.0	2.512376	Y
3	STD02 280-413564/13	2.0	5.181506	12.5	300265.0	2.590753	Y
4	STD05 280-413564/14	5.0	12.924224	12.5	313720.0	2.584845	Y
5	ICIS 280-413564/15	10.0	26.948564	12.5	323732.0	2.694856	Y
6	STD30 280-413564/16	30.0	83.693127	12.5	324318.0	2.789771	Y
7	STD60 280-413564/17	60.0	159.532234	12.5	382510.0	2.658871	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

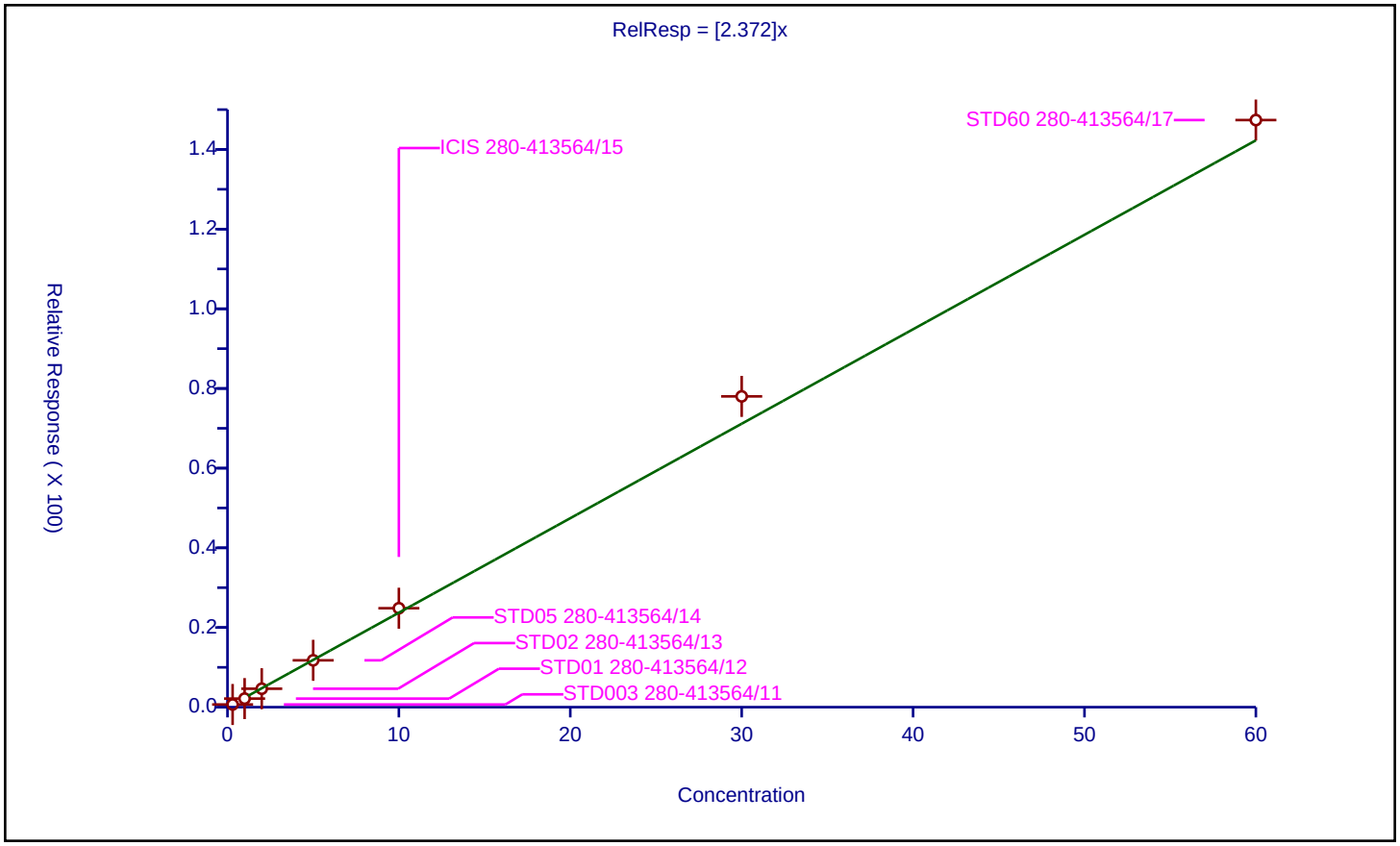
Curve Coefficients

Intercept:	0
Slope:	2.372

Error Coefficients

Standard Error:	2040000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.67245	12.5	305952.0	2.241501	Y
2	STD01 280-413564/12	1.0	2.152254	12.5	311075.0	2.152254	Y
3	STD02 280-413564/13	2.0	4.627246	12.5	300265.0	2.313623	Y
4	STD05 280-413564/14	5.0	11.762041	12.5	313720.0	2.352408	Y
5	ICIS 280-413564/15	10.0	24.839952	12.5	323732.0	2.483995	Y
6	STD30 280-413564/16	30.0	78.014749	12.5	324318.0	2.600492	Y
7	STD60 280-413564/17	60.0	147.374676	12.5	382510.0	2.456245	Y



Calibration / Styrene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

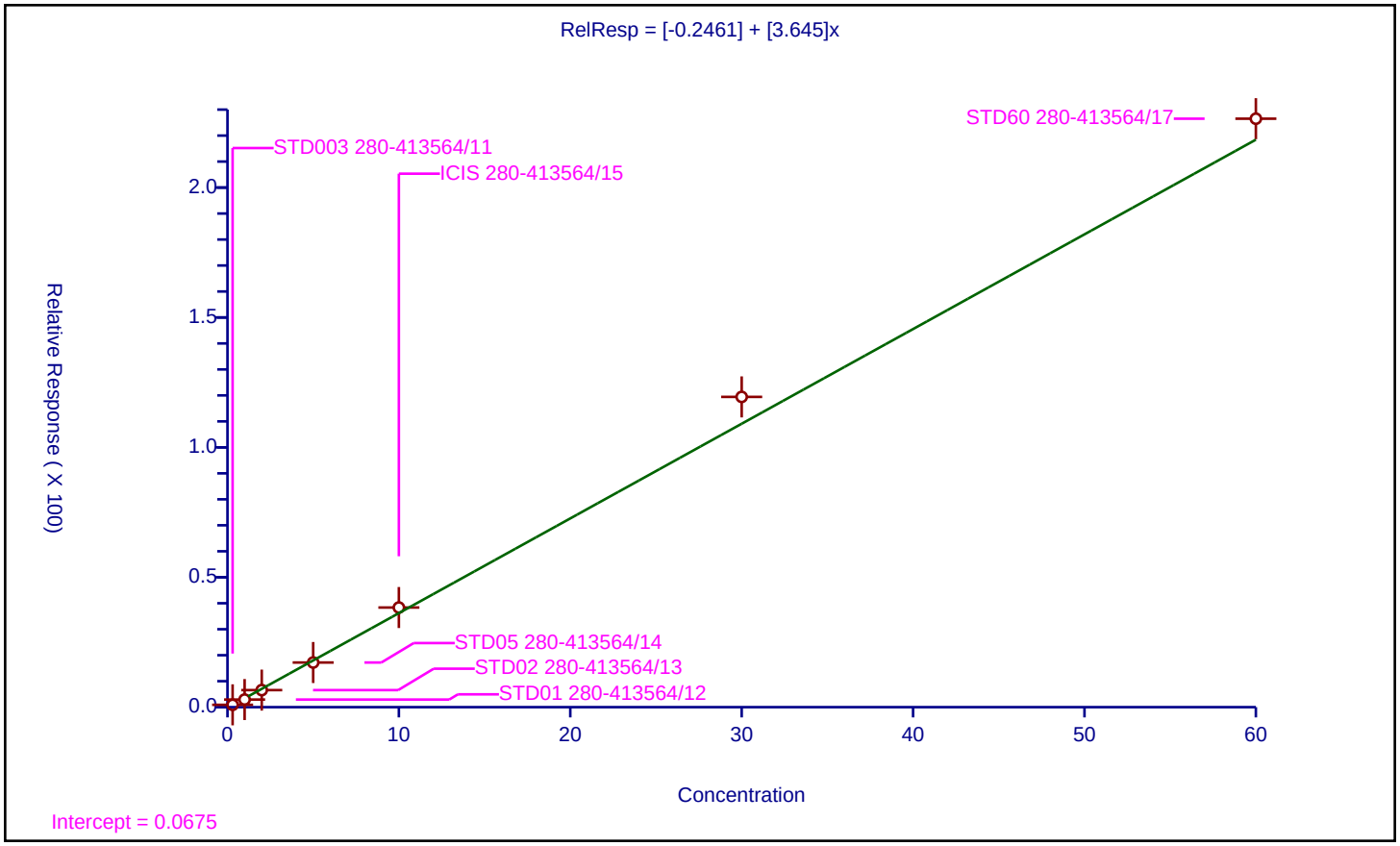
Curve Coefficients

Intercept:	-0.2461
Slope:	3.645

Error Coefficients

Standard Error:	3430000
Relative Standard Error:	8.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.900345	12.5	305952.0	3.001152	Y
2	STD01 280-413564/12	1.0	2.924014	12.5	311075.0	2.924014	Y
3	STD02 280-413564/13	2.0	6.569072	12.5	300265.0	3.284536	Y
4	STD05 280-413564/14	5.0	17.183834	12.5	313720.0	3.436767	Y
5	ICIS 280-413564/15	10.0	38.346186	12.5	323732.0	3.834619	Y
6	STD30 280-413564/16	30.0	119.415743	12.5	324318.0	3.980525	Y
7	STD60 280-413564/17	60.0	226.497118	12.5	382510.0	3.774952	Y



Calibration / Bromoform

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

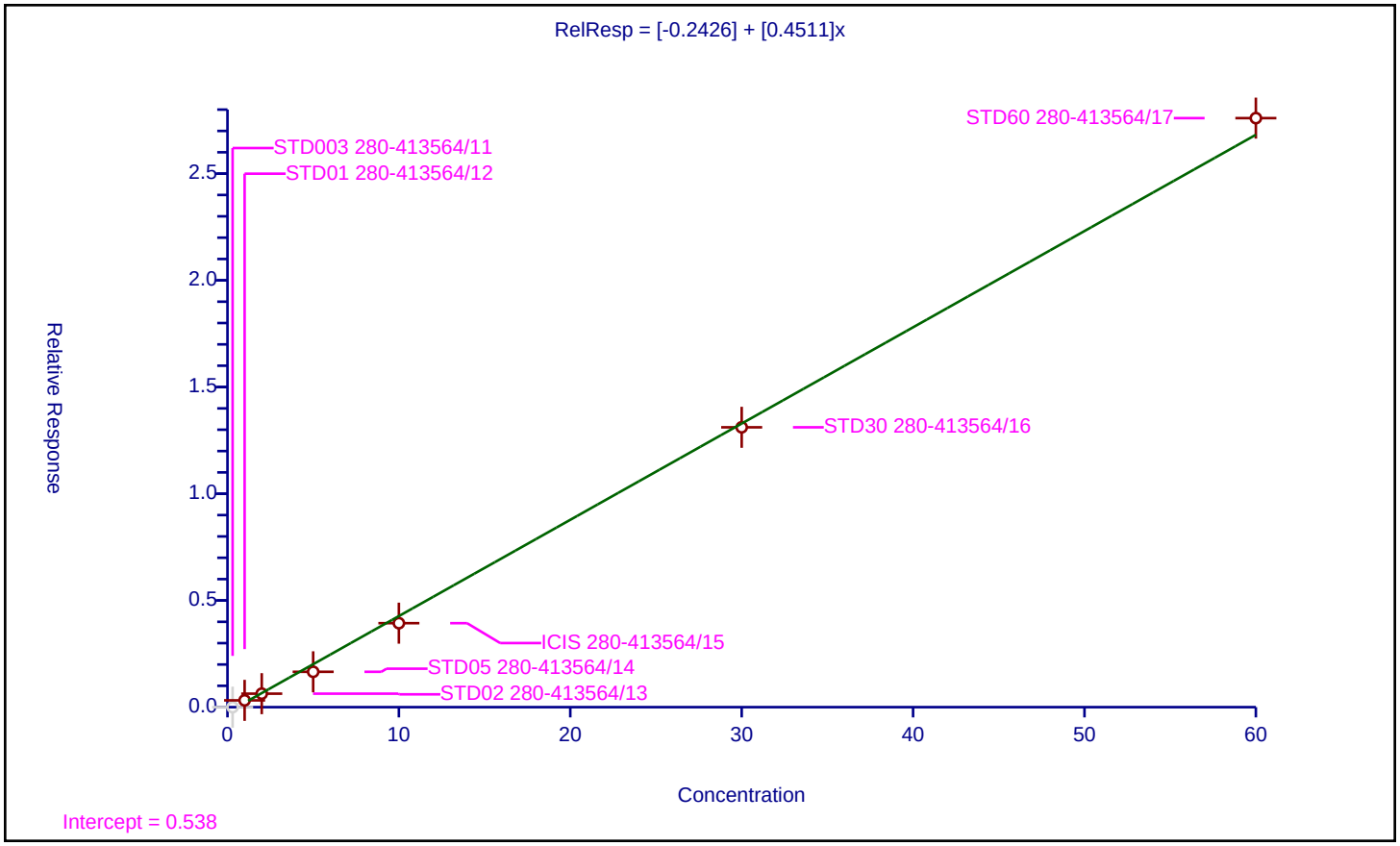
Curve Coefficients

Intercept:	-0.2426
Slope:	0.4511

Error Coefficients

Standard Error:	459000
Relative Standard Error:	15.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	305952.0	0.0	N
2	STD01 280-413564/12	1.0	0.319095	12.5	311075.0	0.319095	Y
3	STD02 280-413564/13	2.0	0.632691	12.5	300265.0	0.316346	Y
4	STD05 280-413564/14	5.0	1.656732	12.5	313720.0	0.331346	Y
5	ICIS 280-413564/15	10.0	3.935701	12.5	323732.0	0.39357	Y
6	STD30 280-413564/16	30.0	13.113248	12.5	324318.0	0.437108	Y
7	STD60 280-413564/17	60.0	27.60052	12.5	382510.0	0.460009	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

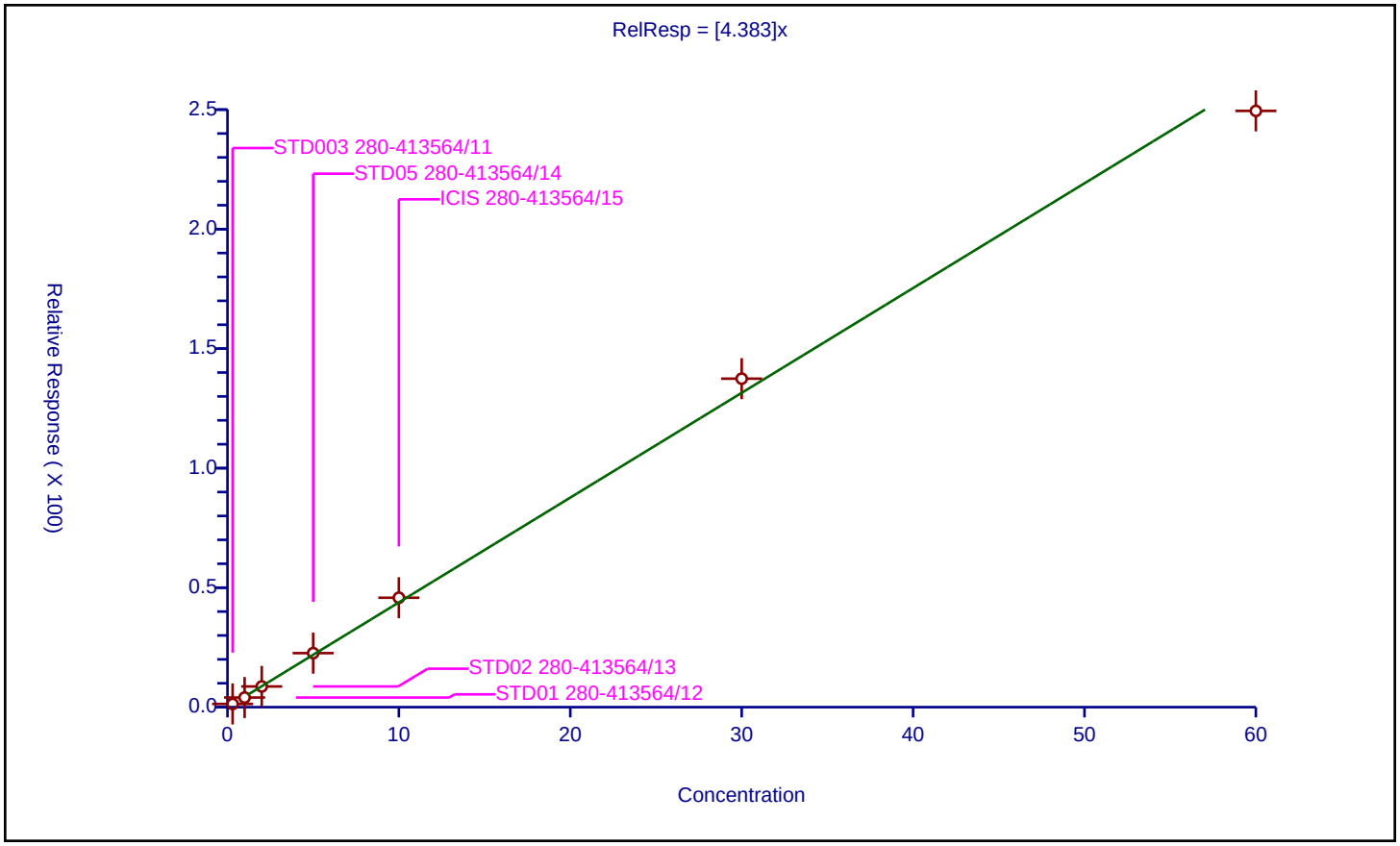
Curve Coefficients

Intercept:	0
Slope:	4.383

Error Coefficients

Standard Error:	5520000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.345414	12.5	453355.0	4.484712	Y
2	STD01 280-413564/12	1.0	4.0303	12.5	474456.0	4.0303	Y
3	STD02 280-413564/13	2.0	8.66075	12.5	465488.0	4.330375	Y
4	STD05 280-413564/14	5.0	22.604614	12.5	480622.0	4.520923	Y
5	ICIS 280-413564/15	10.0	45.780235	12.5	511240.0	4.578024	Y
6	STD30 280-413564/16	30.0	137.435363	12.5	523117.0	4.581179	Y
7	STD60 280-413564/17	60.0	249.456169	12.5	604737.0	4.157603	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

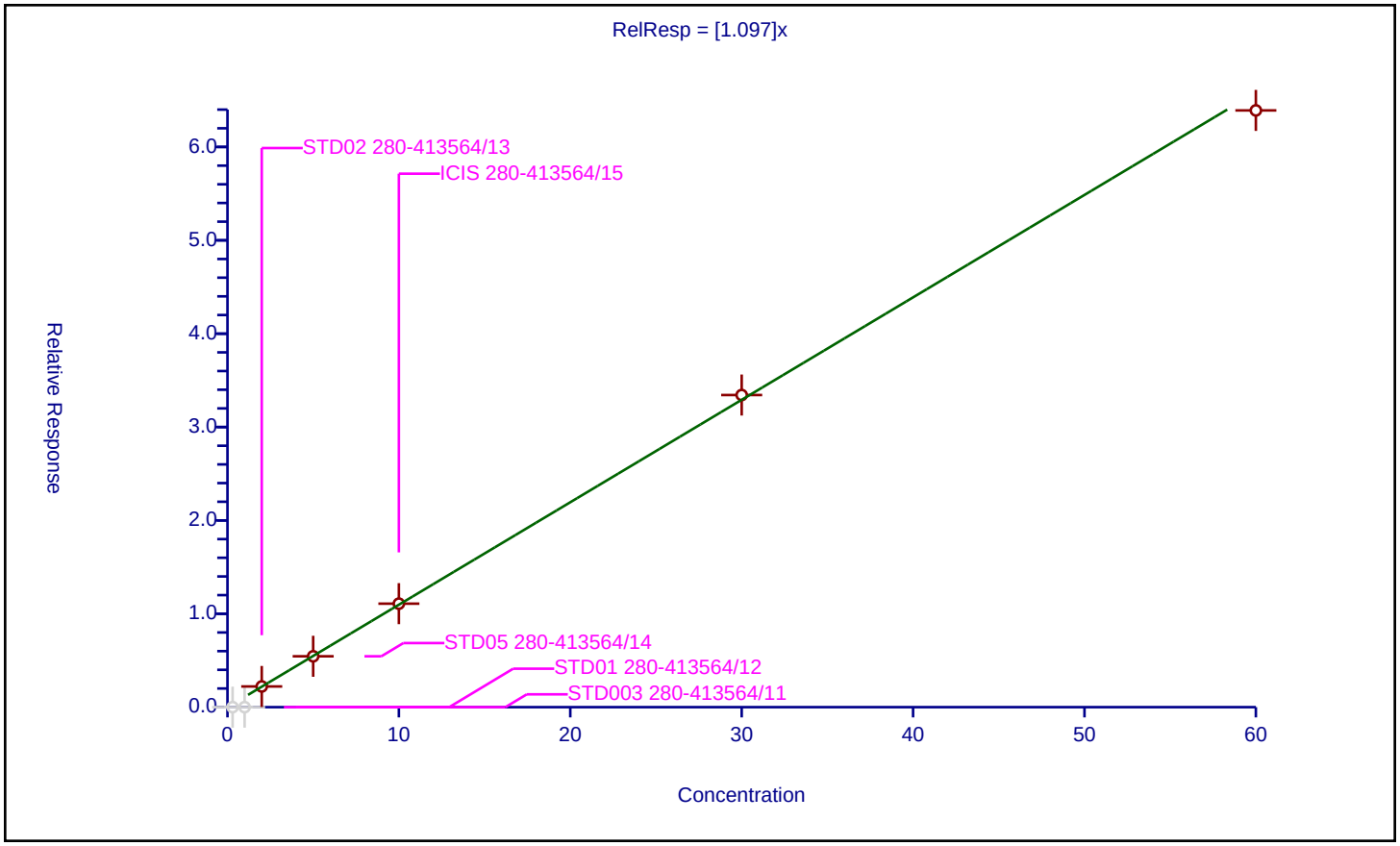
Curve Coefficients

Intercept:	0
Slope:	1.097

Error Coefficients

Standard Error:	1720000
Relative Standard Error:	1.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	453355.0	0.0	N
2	STD01 280-413564/12	1.0	0.0	12.5	474456.0	0.0	N
3	STD02 280-413564/13	2.0	2.217189	12.5	465488.0	1.108595	Y
4	STD05 280-413564/14	5.0	5.448148	12.5	480622.0	1.08963	Y
5	ICIS 280-413564/15	10.0	11.08452	12.5	511240.0	1.108452	Y
6	STD30 280-413564/16	30.0	33.430475	12.5	523117.0	1.114349	Y
7	STD60 280-413564/17	60.0	63.913941	12.5	604737.0	1.065232	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

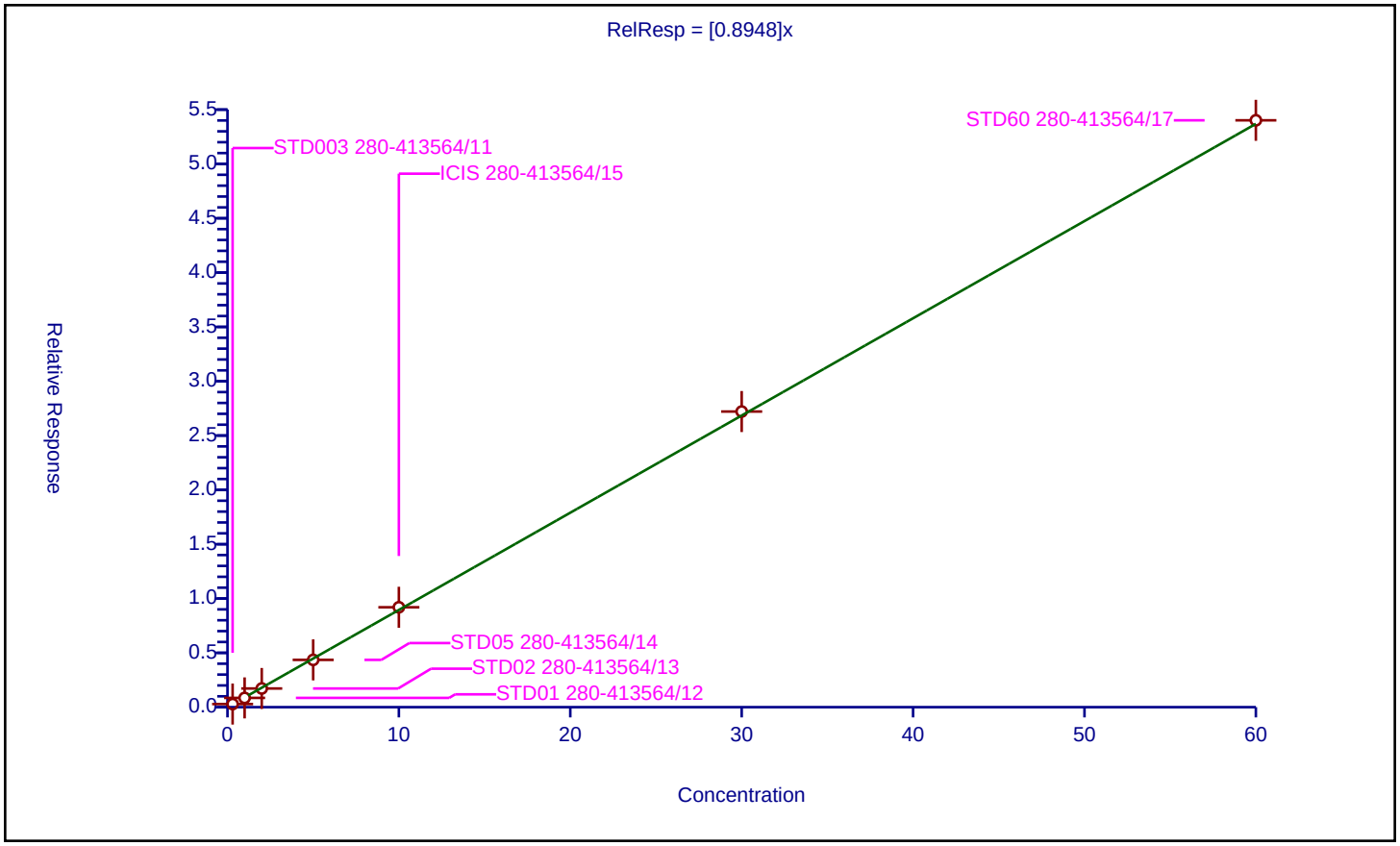
Curve Coefficients

Intercept:	0
Slope:	0.8948

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	4.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.286641	12.5	453355.0	0.955469	Y
2	STD01 280-413564/12	1.0	0.852239	12.5	474456.0	0.852239	Y
3	STD02 280-413564/13	2.0	1.717875	12.5	465488.0	0.858937	Y
4	STD05 280-413564/14	5.0	4.351731	12.5	480622.0	0.870346	Y
5	ICIS 280-413564/15	10.0	9.194459	12.5	511240.0	0.919446	Y
6	STD30 280-413564/16	30.0	27.210165	12.5	523117.0	0.907006	Y
7	STD60 280-413564/17	60.0	54.015795	12.5	604737.0	0.900263	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

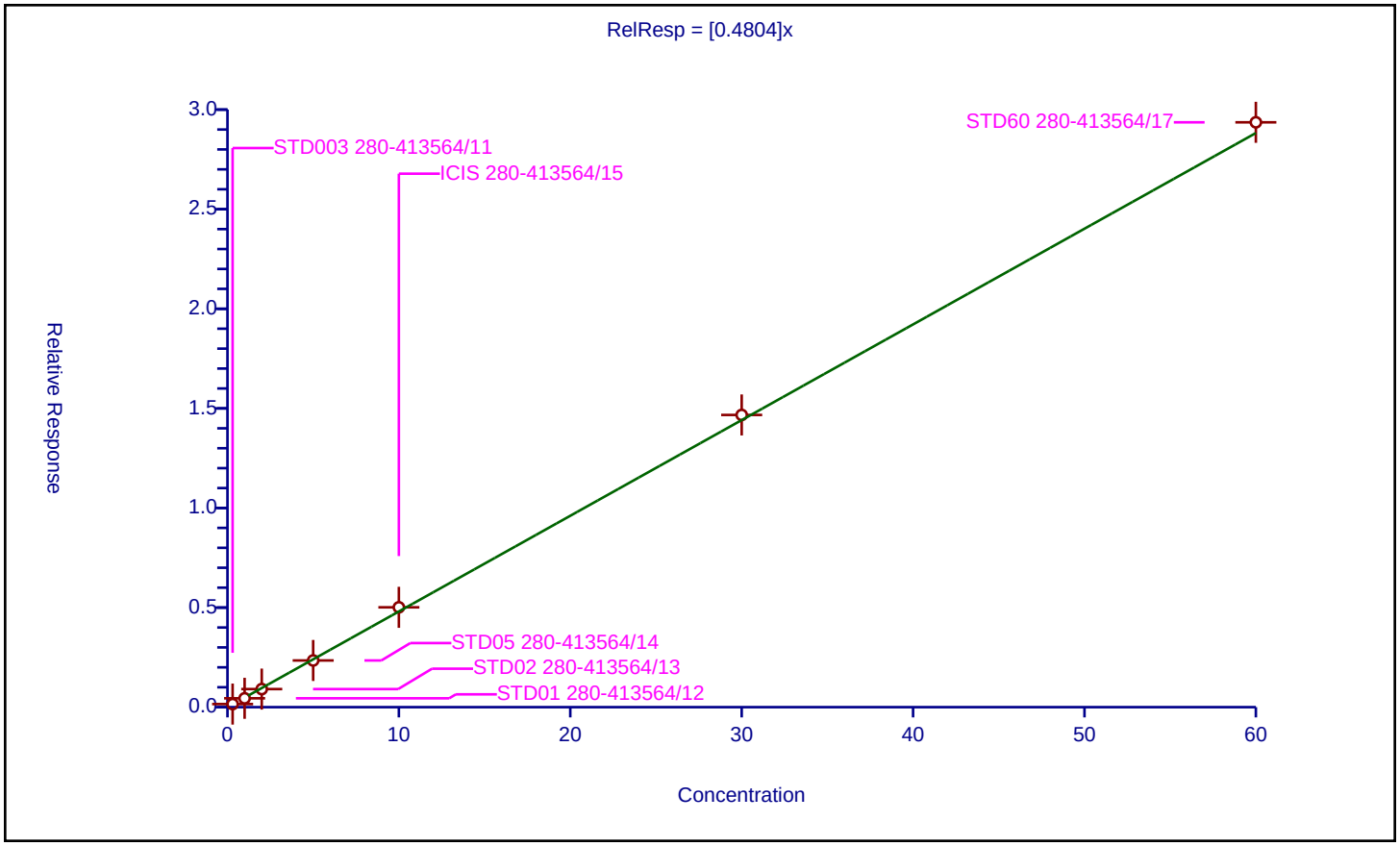
Curve Coefficients

Intercept:	0
Slope:	0.4804

Error Coefficients

Standard Error:	639000
Relative Standard Error:	5.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.154928	12.5	453355.0	0.516428	Y
2	STD01 280-413564/12	1.0	0.444167	12.5	474456.0	0.444167	Y
3	STD02 280-413564/13	2.0	0.907569	12.5	465488.0	0.453785	Y
4	STD05 280-413564/14	5.0	2.343838	12.5	480622.0	0.468768	Y
5	ICIS 280-413564/15	10.0	5.012959	12.5	511240.0	0.501296	Y
6	STD30 280-413564/16	30.0	14.669973	12.5	523117.0	0.488999	Y
7	STD60 280-413564/17	60.0	29.36264	12.5	604737.0	0.489377	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

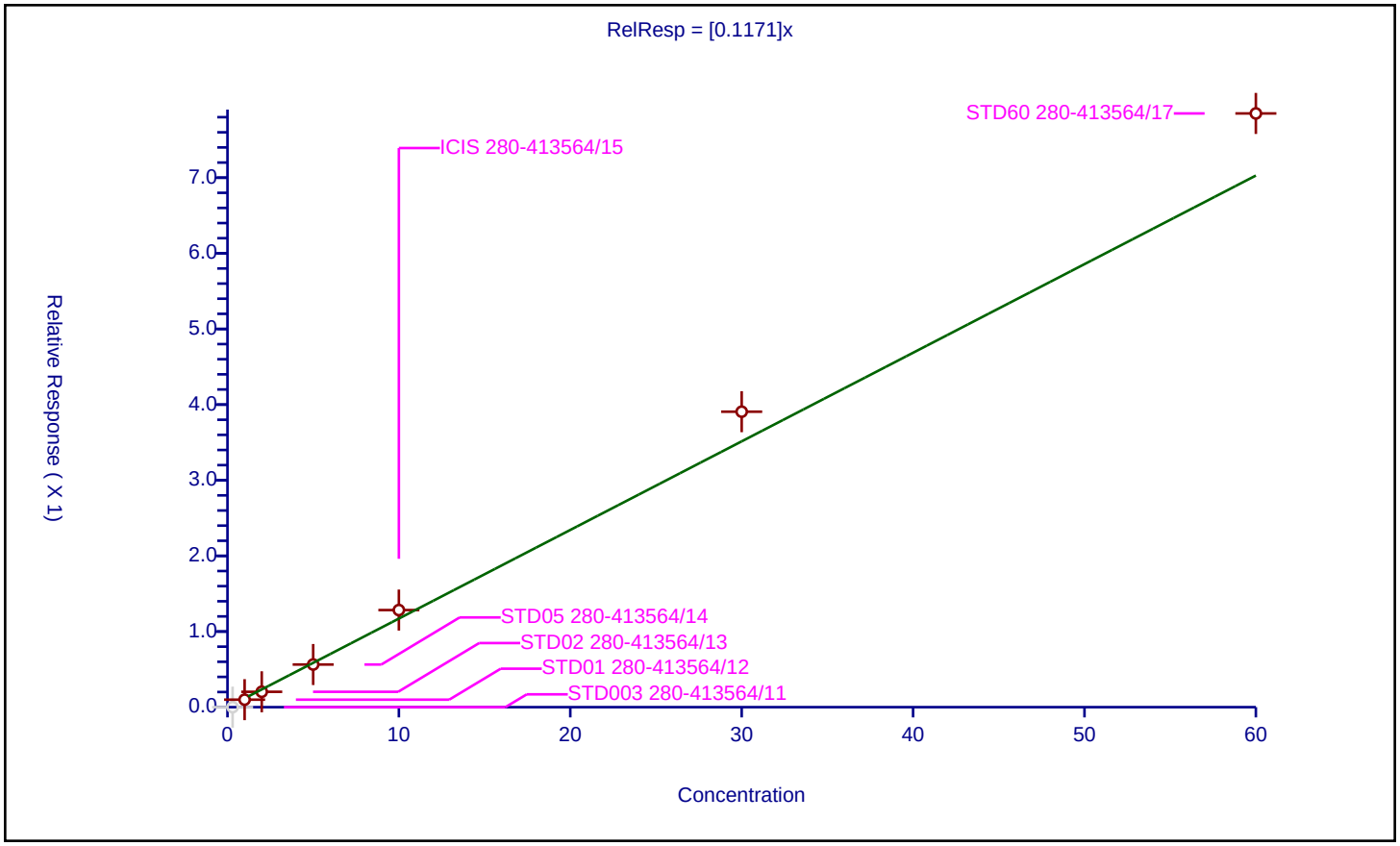
Curve Coefficients

Intercept:	0
Slope:	0.1171

Error Coefficients

Standard Error:	187000
Relative Standard Error:	12.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	453355.0	0.0	N
2	STD01 280-413564/12	1.0	0.099008	12.5	474456.0	0.099008	Y
3	STD02 280-413564/13	2.0	0.203308	12.5	465488.0	0.101654	Y
4	STD05 280-413564/14	5.0	0.563853	12.5	480622.0	0.112771	Y
5	ICIS 280-413564/15	10.0	1.283693	12.5	511240.0	0.128369	Y
6	STD30 280-413564/16	30.0	3.906129	12.5	523117.0	0.130204	Y
7	STD60 280-413564/17	60.0	7.849301	12.5	604737.0	0.130822	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

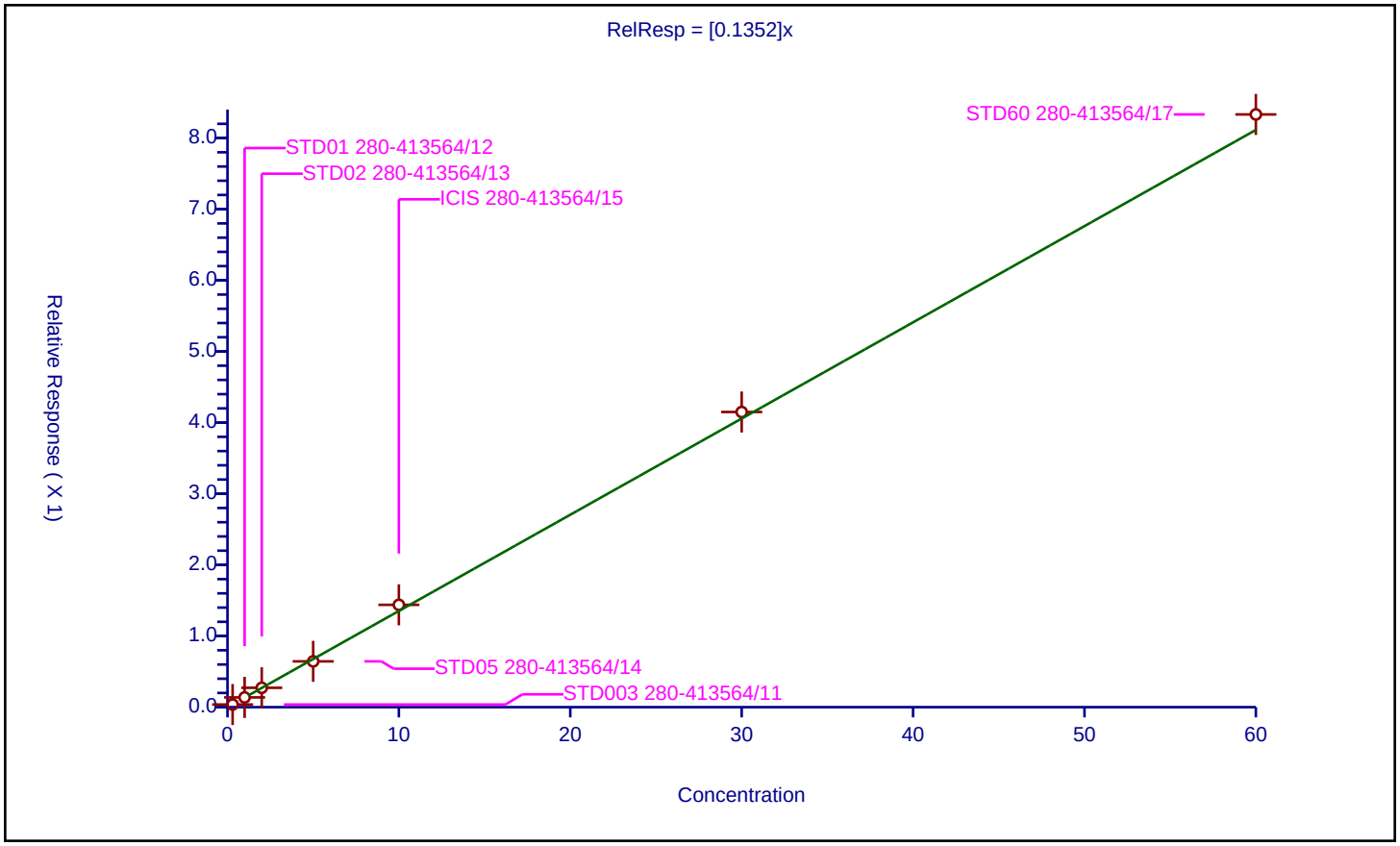
Curve Coefficients

Intercept:	0
Slope:	0.1352

Error Coefficients

Standard Error:	181000
Relative Standard Error:	5.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.03714	12.5	453355.0	0.123799	Y
2	STD01 280-413564/12	1.0	0.136973	12.5	474456.0	0.136973	Y
3	STD02 280-413564/13	2.0	0.272241	12.5	465488.0	0.136121	Y
4	STD05 280-413564/14	5.0	0.643957	12.5	480622.0	0.128791	Y
5	ICIS 280-413564/15	10.0	1.438414	12.5	511240.0	0.143841	Y
6	STD30 280-413564/16	30.0	4.149311	12.5	523117.0	0.13831	Y
7	STD60 280-413564/17	60.0	8.331907	12.5	604737.0	0.138865	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

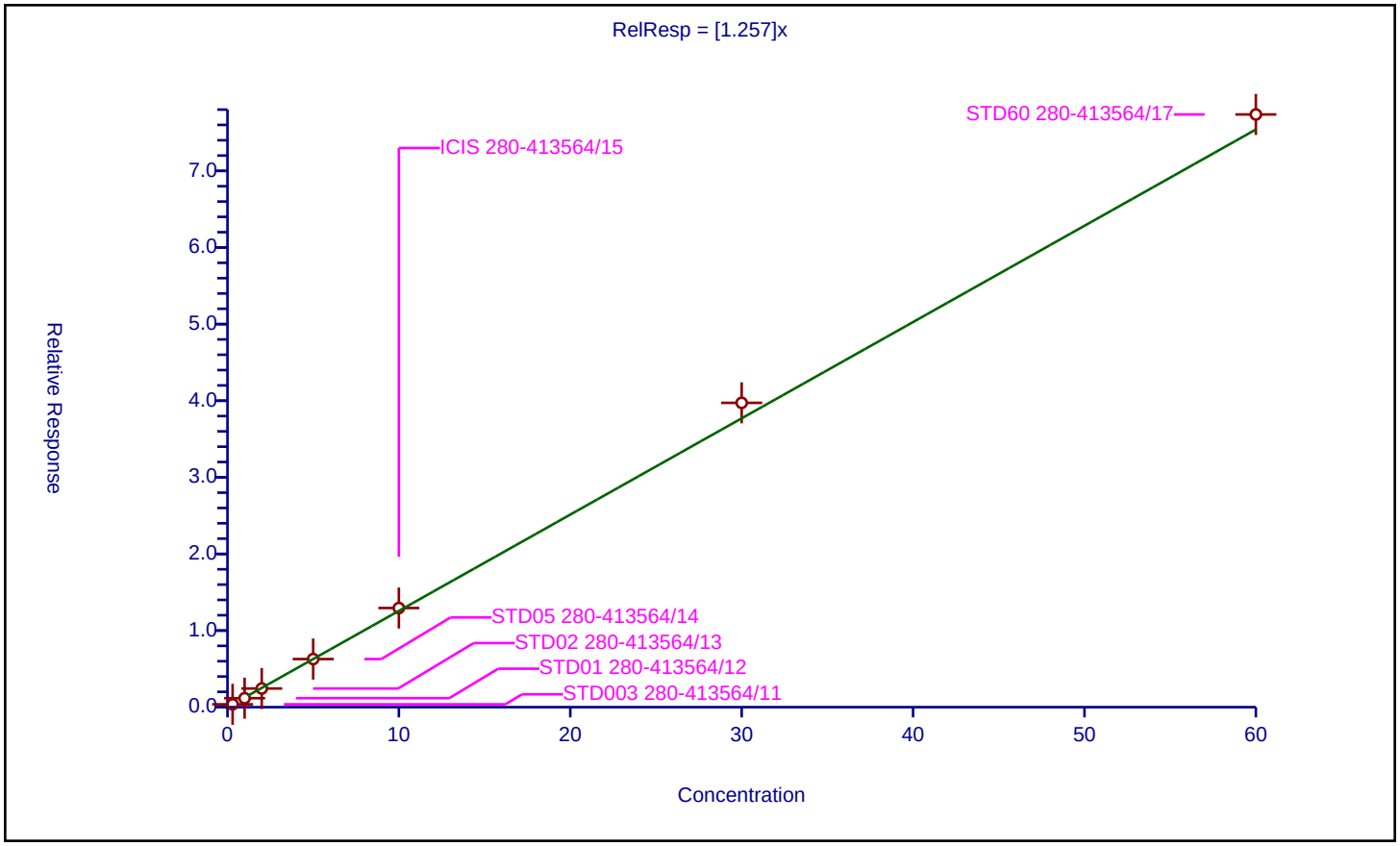
Curve Coefficients

Intercept:	0
Slope:	1.257

Error Coefficients

Standard Error:	1690000
Relative Standard Error:	4.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.374348	12.5	453355.0	1.247826	Y
2	STD01 280-413564/12	1.0	1.169339	12.5	474456.0	1.169339	Y
3	STD02 280-413564/13	2.0	2.433441	12.5	465488.0	1.21672	Y
4	STD05 280-413564/14	5.0	6.277777	12.5	480622.0	1.255555	Y
5	ICIS 280-413564/15	10.0	12.940571	12.5	511240.0	1.294057	Y
6	STD30 280-413564/16	30.0	39.723188	12.5	523117.0	1.324106	Y
7	STD60 280-413564/17	60.0	77.366938	12.5	604737.0	1.289449	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

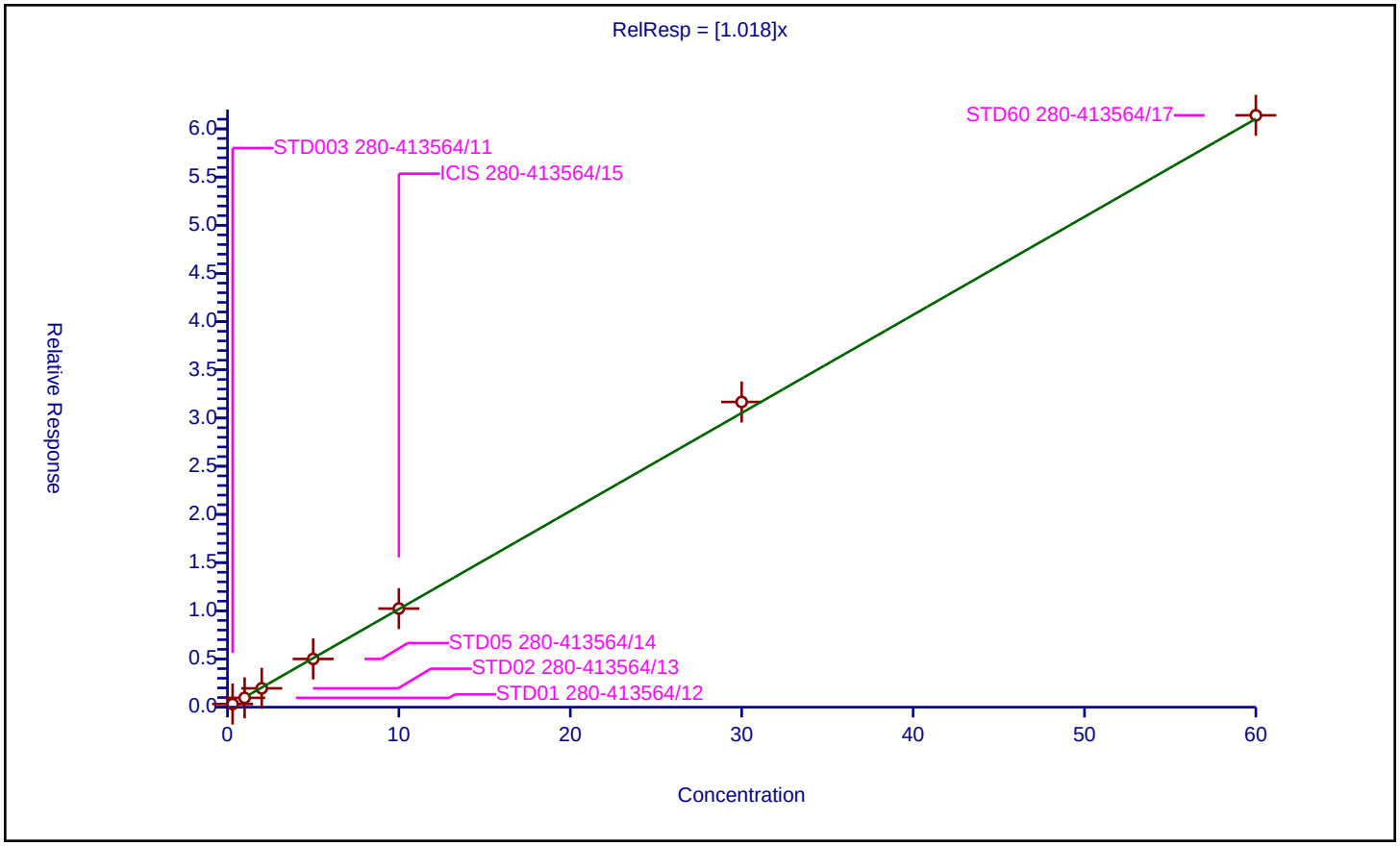
Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	3.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.323201	12.5	453355.0	1.077338	Y
2	STD01 280-413564/12	1.0	0.966159	12.5	474456.0	0.966159	Y
3	STD02 280-413564/13	2.0	1.953837	12.5	465488.0	0.976918	Y
4	STD05 280-413564/14	5.0	5.002138	12.5	480622.0	1.000428	Y
5	ICIS 280-413564/15	10.0	10.227413	12.5	511240.0	1.022741	Y
6	STD30 280-413564/16	30.0	31.664379	12.5	523117.0	1.055479	Y
7	STD60 280-413564/17	60.0	61.407356	12.5	604737.0	1.023456	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

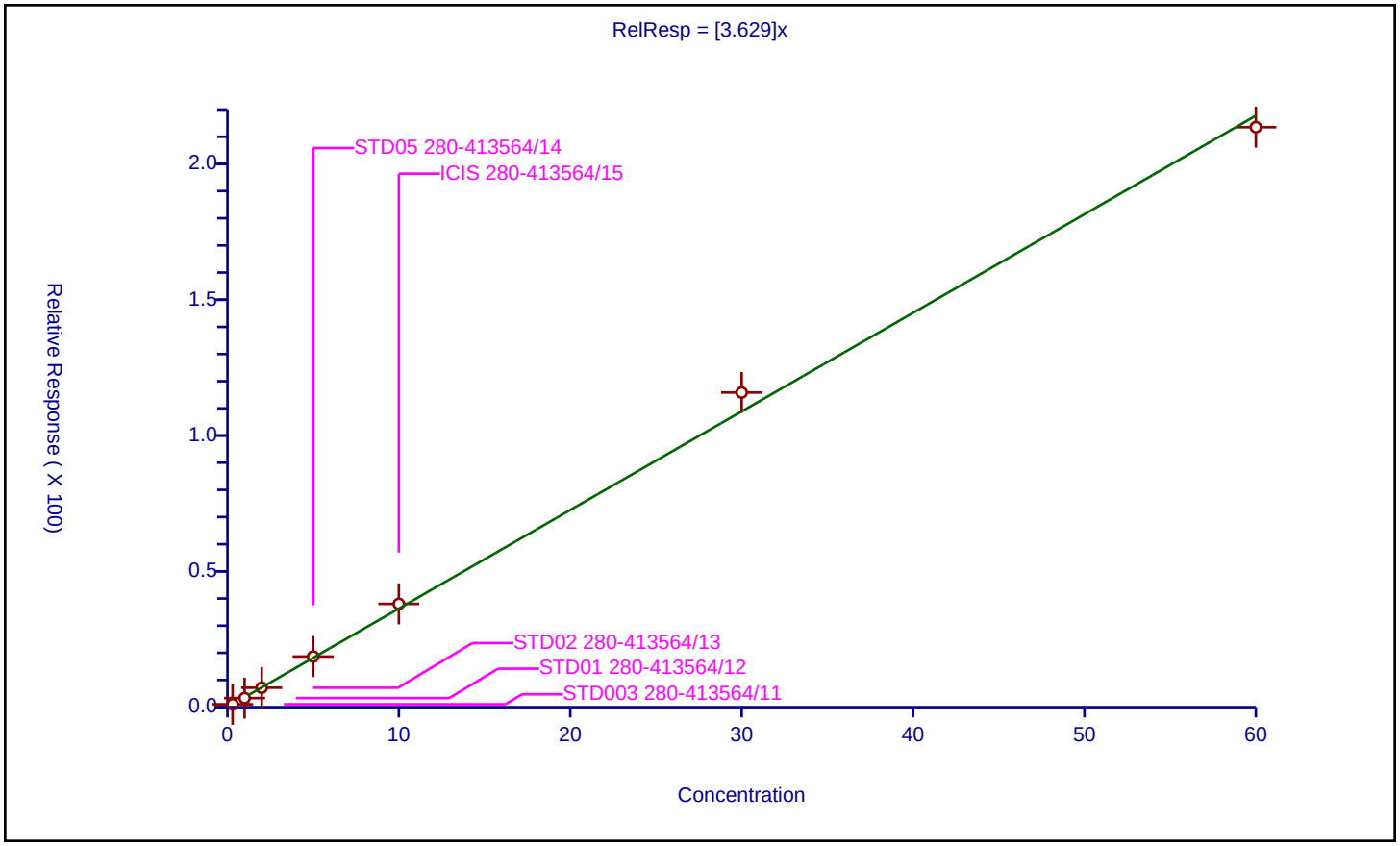
Curve Coefficients

Intercept:	0
Slope:	3.629

Error Coefficients

Standard Error:	4710000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.06153	12.5	453355.0	3.538434	Y
2	STD01 280-413564/12	1.0	3.339772	12.5	474456.0	3.339772	Y
3	STD02 280-413564/13	2.0	7.152521	12.5	465488.0	3.57626	Y
4	STD05 280-413564/14	5.0	18.639752	12.5	480622.0	3.72795	Y
5	ICIS 280-413564/15	10.0	38.03226	12.5	511240.0	3.803226	Y
6	STD30 280-413564/16	30.0	115.830995	12.5	523117.0	3.861033	Y
7	STD60 280-413564/17	60.0	213.528154	12.5	604737.0	3.558803	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

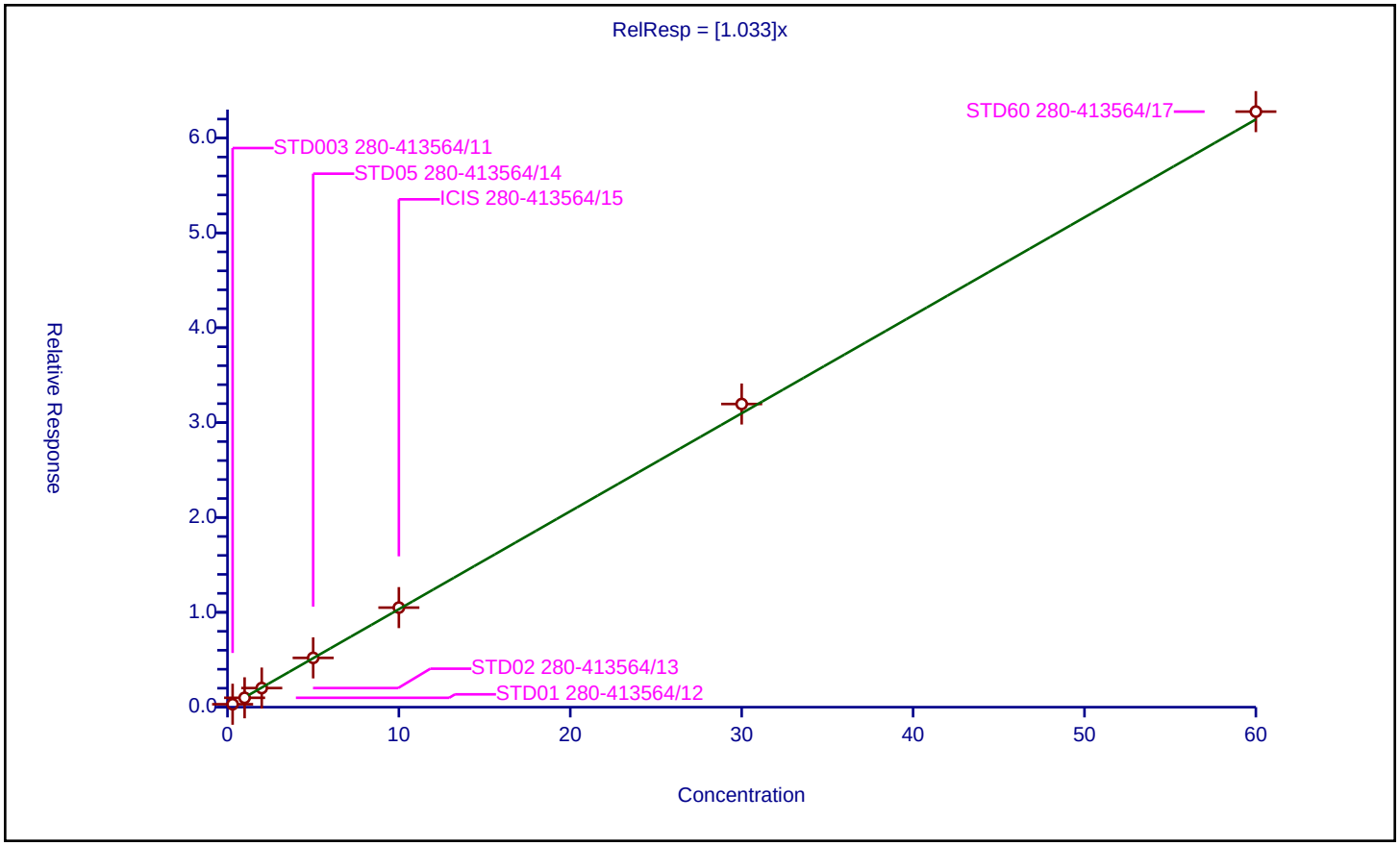
Curve Coefficients

Intercept:	0
Slope:	1.033

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	2.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.31005	12.5	453355.0	1.033498	Y
2	STD01 280-413564/12	1.0	0.987605	12.5	474456.0	0.987605	Y
3	STD02 280-413564/13	2.0	2.014982	12.5	465488.0	1.007491	Y
4	STD05 280-413564/14	5.0	5.196131	12.5	480622.0	1.039226	Y
5	ICIS 280-413564/15	10.0	10.495951	12.5	511240.0	1.049595	Y
6	STD30 280-413564/16	30.0	31.961755	12.5	523117.0	1.065392	Y
7	STD60 280-413564/17	60.0	62.78686	12.5	604737.0	1.046448	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

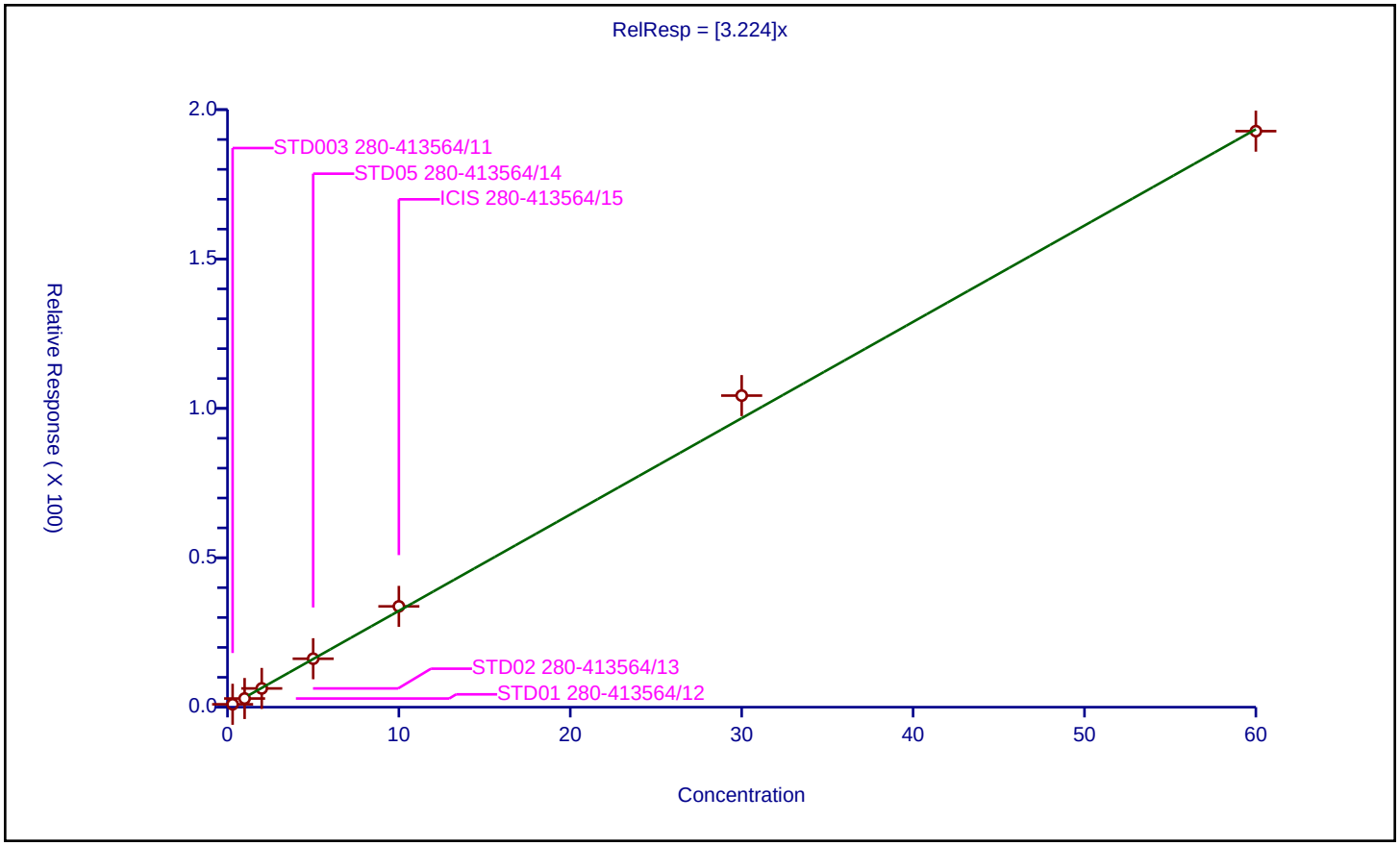
Curve Coefficients

Intercept:	0
Slope:	3.224

Error Coefficients

Standard Error:	4250000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.96886	12.5	453355.0	3.229533	Y
2	STD01 280-413564/12	1.0	2.898109	12.5	474456.0	2.898109	Y
3	STD02 280-413564/13	2.0	6.2663	12.5	465488.0	3.13315	Y
4	STD05 280-413564/14	5.0	16.214353	12.5	480622.0	3.242871	Y
5	ICIS 280-413564/15	10.0	33.738019	12.5	511240.0	3.373802	Y
6	STD30 280-413564/16	30.0	104.283387	12.5	523117.0	3.476113	Y
7	STD60 280-413564/17	60.0	192.785355	12.5	604737.0	3.213089	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

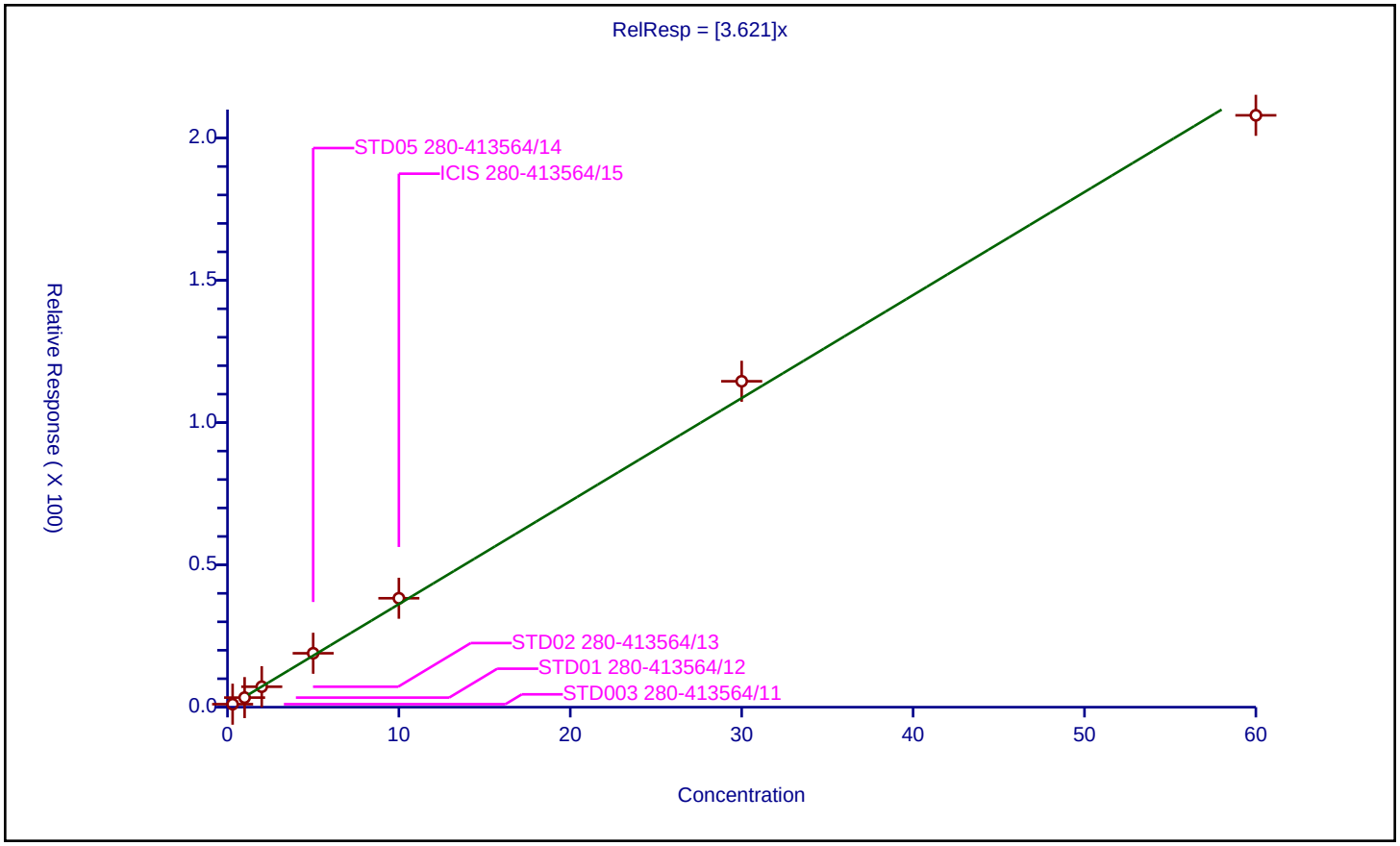
Curve Coefficients

Intercept:	0
Slope:	3.621

Error Coefficients

Standard Error:	4610000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.04529	12.5	453355.0	3.4843	Y
2	STD01 280-413564/12	1.0	3.364116	12.5	474456.0	3.364116	Y
3	STD02 280-413564/13	2.0	7.189337	12.5	465488.0	3.594668	Y
4	STD05 280-413564/14	5.0	18.944175	12.5	480622.0	3.788835	Y
5	ICIS 280-413564/15	10.0	38.273414	12.5	511240.0	3.827341	Y
6	STD30 280-413564/16	30.0	114.534798	12.5	523117.0	3.817827	Y
7	STD60 280-413564/17	60.0	207.994984	12.5	604737.0	3.466583	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

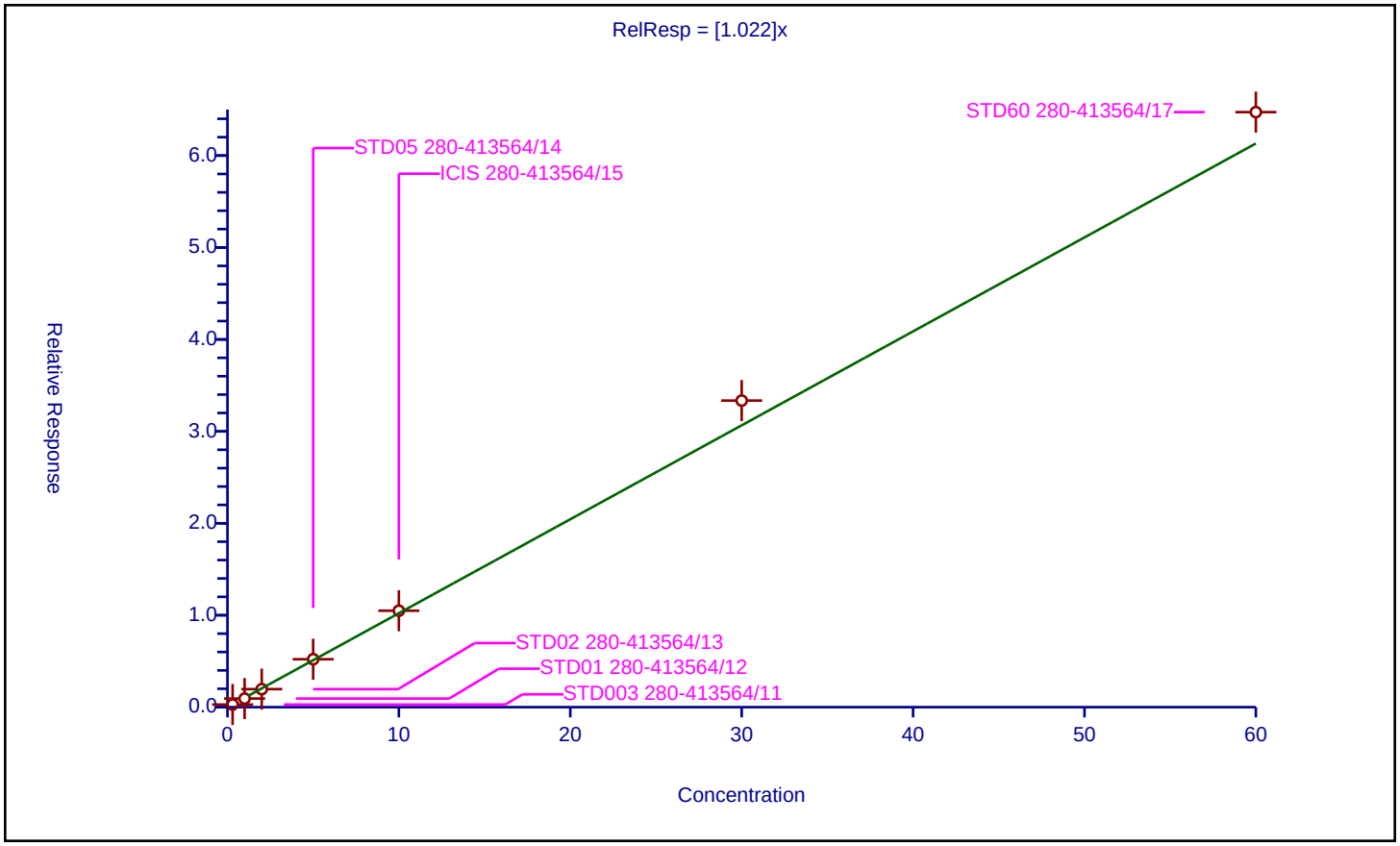
Curve Coefficients

Intercept:	0
Slope:	1.022

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	6.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.286668	12.5	453355.0	0.955561	Y
2	STD01 280-413564/12	1.0	0.935071	12.5	474456.0	0.935071	Y
3	STD02 280-413564/13	2.0	1.961087	12.5	465488.0	0.980544	Y
4	STD05 280-413564/14	5.0	5.214441	12.5	480622.0	1.042888	Y
5	ICIS 280-413564/15	10.0	10.491501	12.5	511240.0	1.04915	Y
6	STD30 280-413564/16	30.0	33.347678	12.5	523117.0	1.111589	Y
7	STD60 280-413564/17	60.0	64.724459	12.5	604737.0	1.078741	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

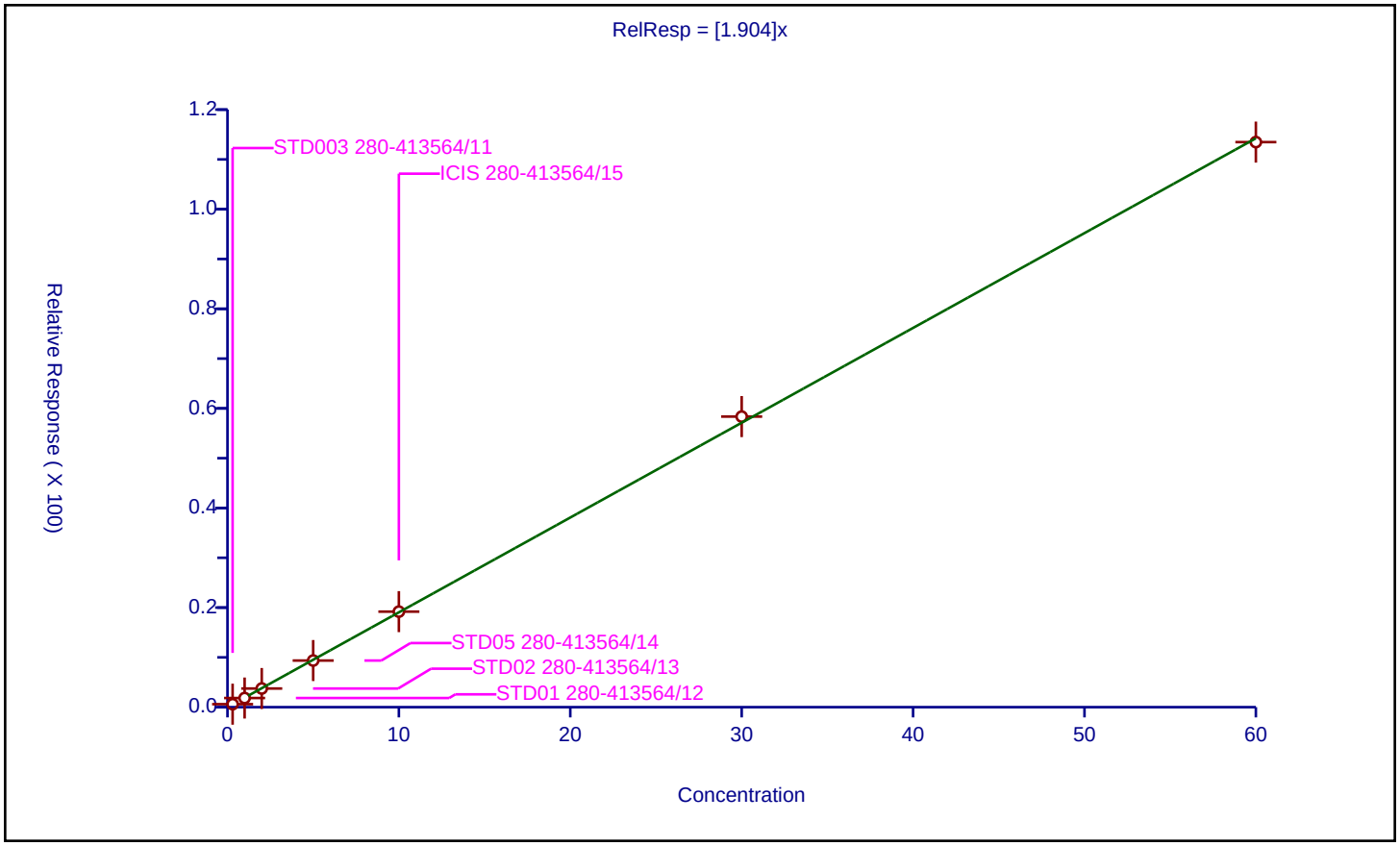
Curve Coefficients

Intercept:	0
Slope:	1.904

Error Coefficients

Standard Error:	2480000
Relative Standard Error:	2.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.598041	12.5	453355.0	1.993471	Y
2	STD01 280-413564/12	1.0	1.834232	12.5	474456.0	1.834232	Y
3	STD02 280-413564/13	2.0	3.746713	12.5	465488.0	1.873357	Y
4	STD05 280-413564/14	5.0	9.359564	12.5	480622.0	1.871913	Y
5	ICIS 280-413564/15	10.0	19.183529	12.5	511240.0	1.918353	Y
6	STD30 280-413564/16	30.0	58.352457	12.5	523117.0	1.945082	Y
7	STD60 280-413564/17	60.0	113.476788	12.5	604737.0	1.89128	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

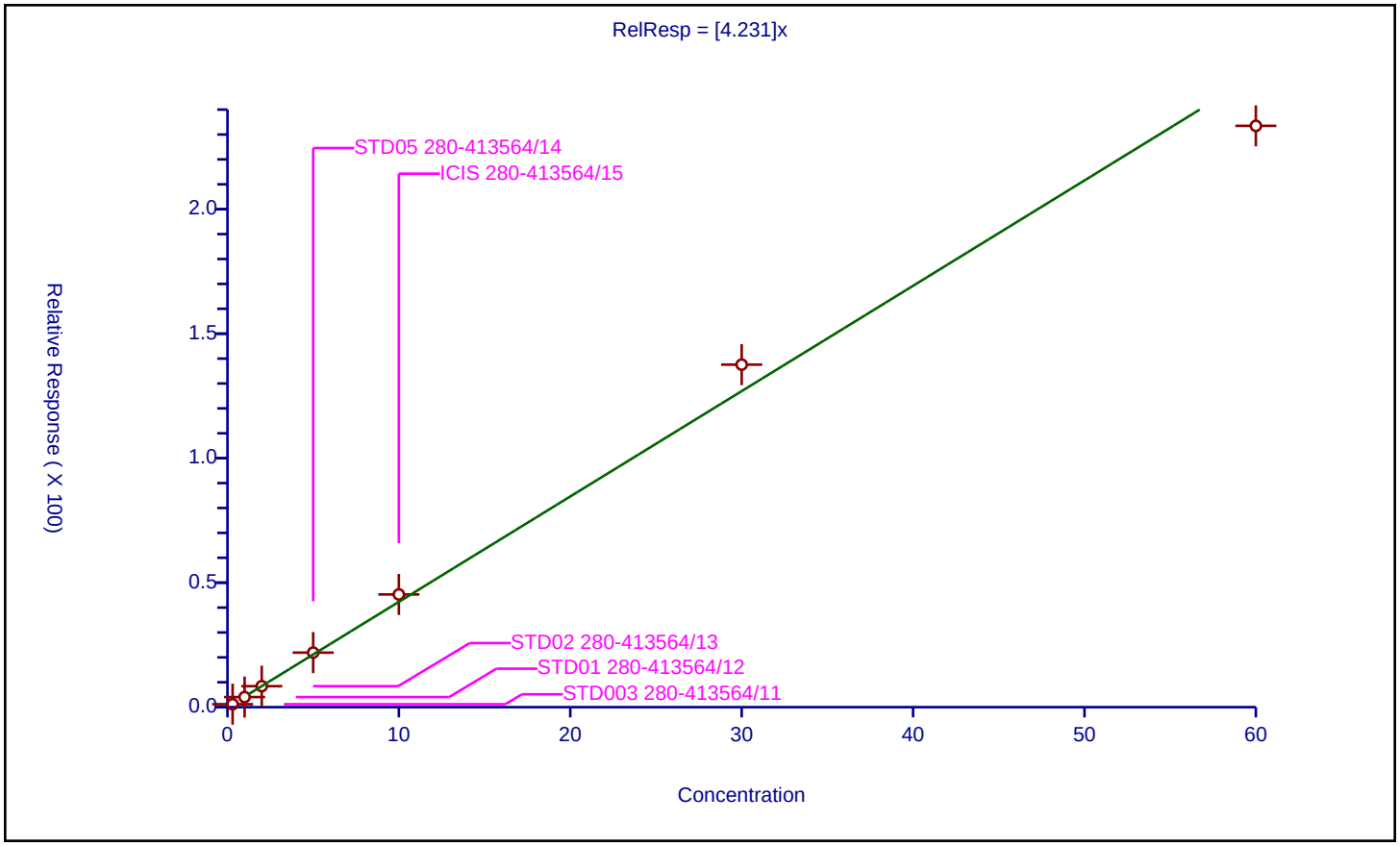
Curve Coefficients

Intercept:	0
Slope:	4.231

Error Coefficients

Standard Error:	5240000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.188417	12.5	453355.0	3.961392	Y
2	STD01 280-413564/12	1.0	4.055671	12.5	474456.0	4.055671	Y
3	STD02 280-413564/13	2.0	8.428708	12.5	465488.0	4.214354	Y
4	STD05 280-413564/14	5.0	21.908303	12.5	480622.0	4.381661	Y
5	ICIS 280-413564/15	10.0	45.265237	12.5	511240.0	4.526524	Y
6	STD30 280-413564/16	30.0	137.571232	12.5	523117.0	4.585708	Y
7	STD60 280-413564/17	60.0	233.475048	12.5	604737.0	3.891251	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

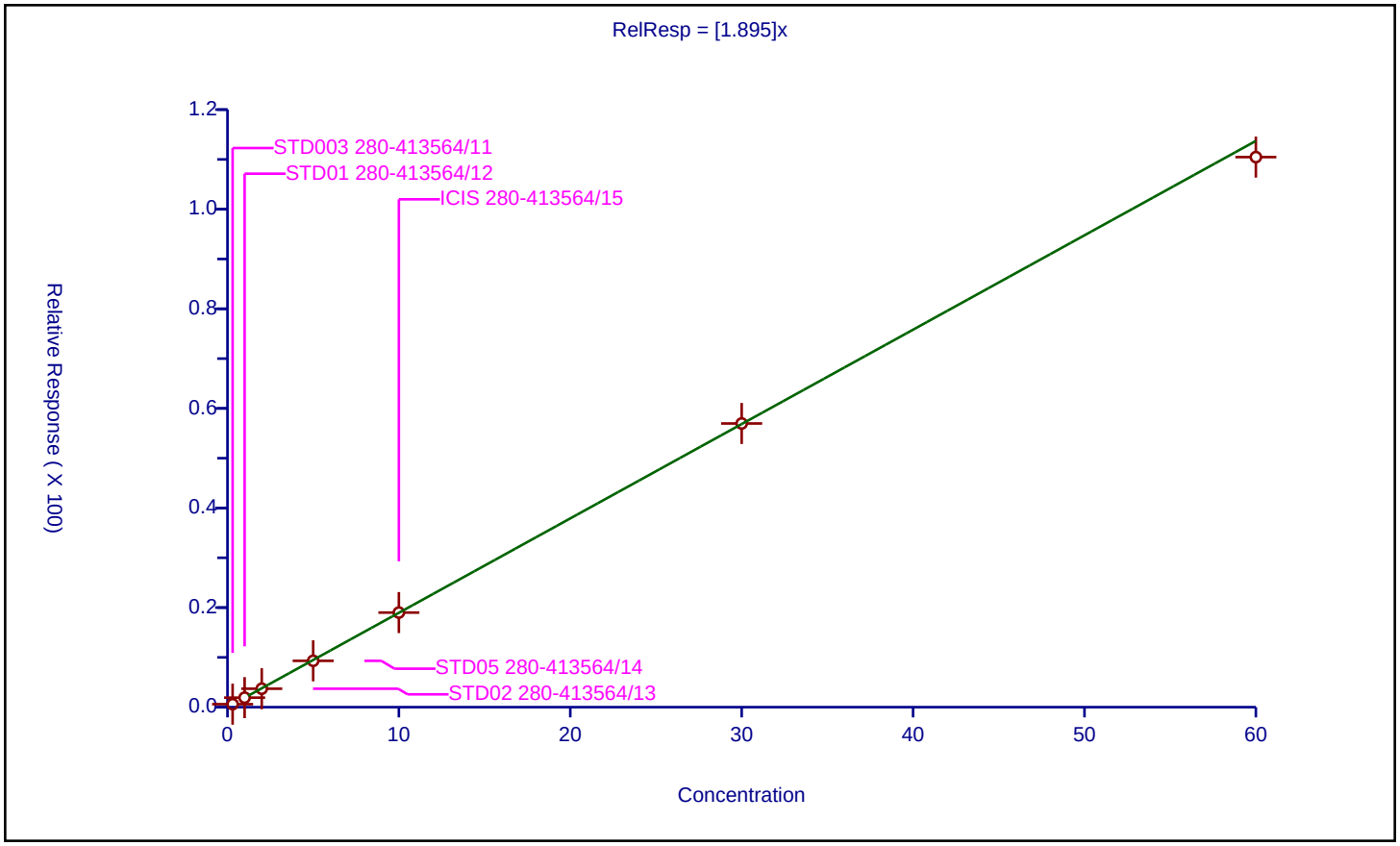
Curve Coefficients

Intercept:	0
Slope:	1.895

Error Coefficients

Standard Error:	2420000
Relative Standard Error:	2.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.599916	12.5	453355.0	1.999721	Y
2	STD01 280-413564/12	1.0	1.914087	12.5	474456.0	1.914087	Y
3	STD02 280-413564/13	2.0	3.705198	12.5	465488.0	1.852599	Y
4	STD05 280-413564/14	5.0	9.303491	12.5	480622.0	1.860698	Y
5	ICIS 280-413564/15	10.0	18.992963	12.5	511240.0	1.899296	Y
6	STD30 280-413564/16	30.0	56.966009	12.5	523117.0	1.898867	Y
7	STD60 280-413564/17	60.0	110.460787	12.5	604737.0	1.841013	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

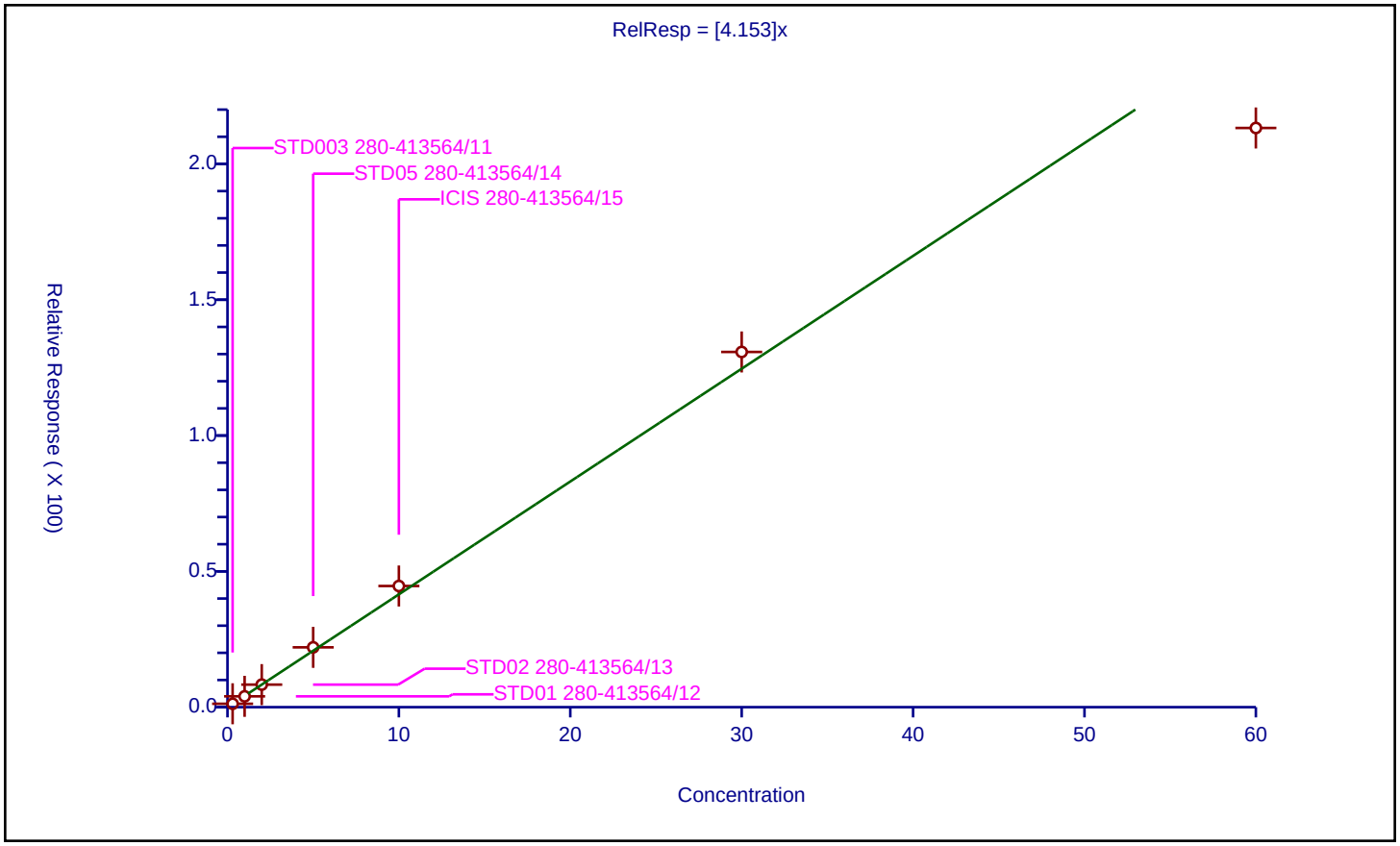
Curve Coefficients

Intercept:	0
Slope:	4.153

Error Coefficients

Standard Error:	4840000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	1.247836	12.5	453355.0	4.159452	Y
2	STD01 280-413564/12	1.0	3.984405	12.5	474456.0	3.984405	Y
3	STD02 280-413564/13	2.0	8.303973	12.5	465488.0	4.151987	Y
4	STD05 280-413564/14	5.0	22.023258	12.5	480622.0	4.404652	Y
5	ICIS 280-413564/15	10.0	44.610384	12.5	511240.0	4.461038	Y
6	STD30 280-413564/16	30.0	130.771916	12.5	523117.0	4.359064	Y
7	STD60 280-413564/17	60.0	213.233935	12.5	604737.0	3.553899	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

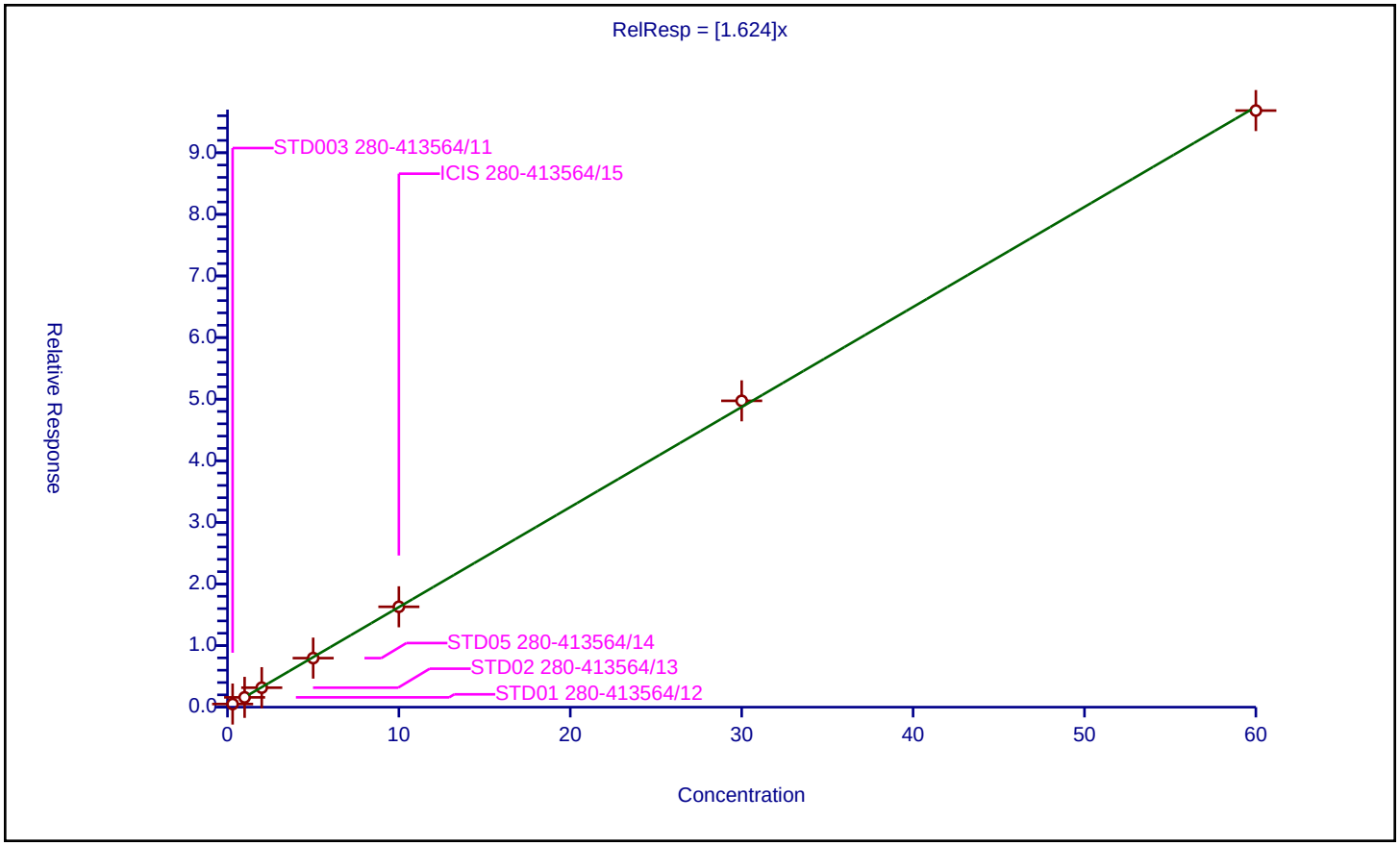
Curve Coefficients

Intercept:	0
Slope:	1.624

Error Coefficients

Standard Error:	2110000
Relative Standard Error:	2.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.509672	12.5	453355.0	1.698908	Y
2	STD01 280-413564/12	1.0	1.59372	12.5	474456.0	1.59372	Y
3	STD02 280-413564/13	2.0	3.163642	12.5	465488.0	1.581821	Y
4	STD05 280-413564/14	5.0	7.961922	12.5	480622.0	1.592384	Y
5	ICIS 280-413564/15	10.0	16.294646	12.5	511240.0	1.629465	Y
6	STD30 280-413564/16	30.0	49.726782	12.5	523117.0	1.657559	Y
7	STD60 280-413564/17	60.0	96.845137	12.5	604737.0	1.614086	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

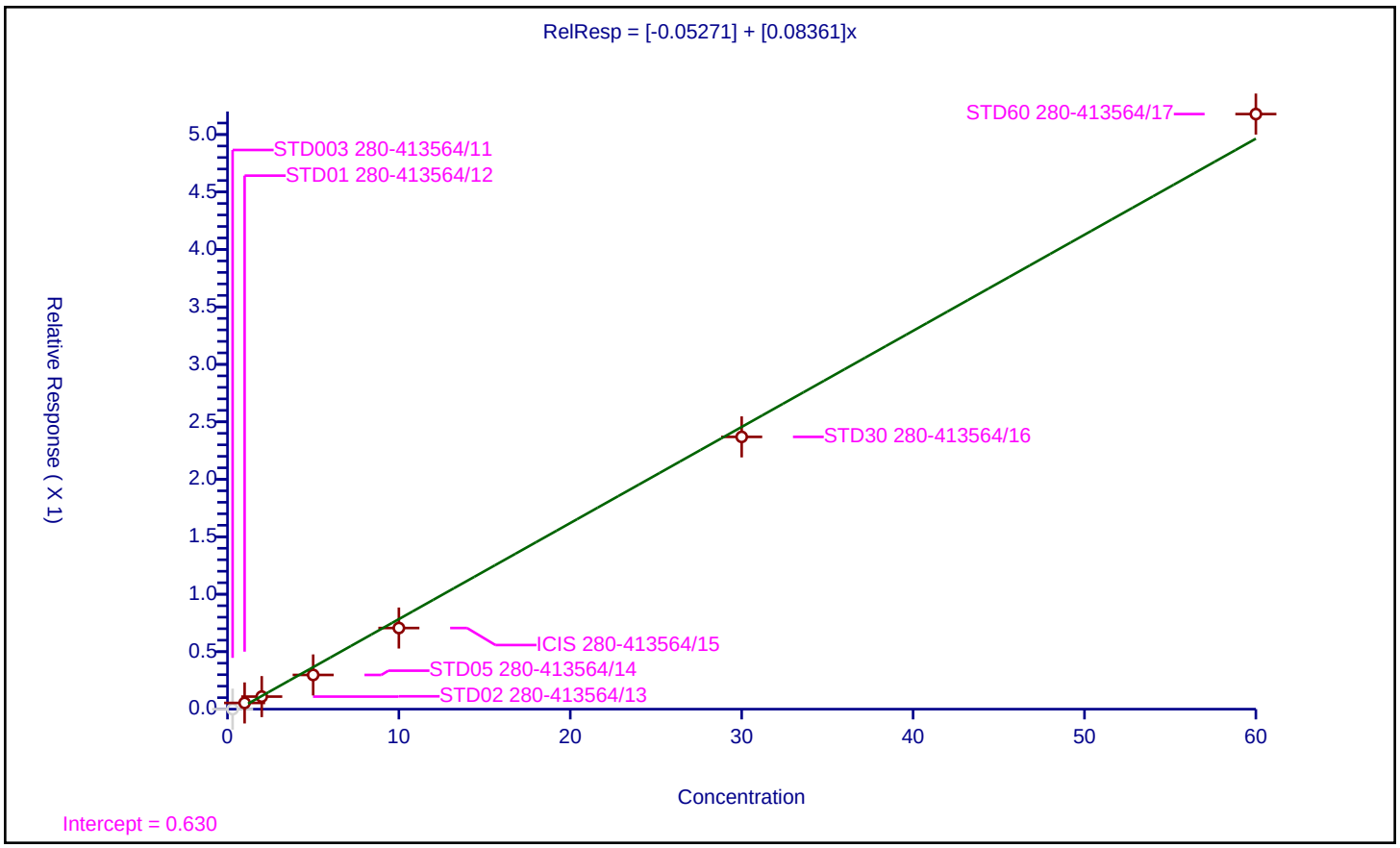
Curve Coefficients

Intercept:	-0.05271
Slope:	0.08361

Error Coefficients

Standard Error:	136000
Relative Standard Error:	17.1
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.0	12.5	453355.0	0.0	N
2	STD01 280-413564/12	1.0	0.054194	12.5	474456.0	0.054194	Y
3	STD02 280-413564/13	2.0	0.109106	12.5	465488.0	0.054553	Y
4	STD05 280-413564/14	5.0	0.297739	12.5	480622.0	0.059548	Y
5	ICIS 280-413564/15	10.0	0.706053	12.5	511240.0	0.070605	Y
6	STD30 280-413564/16	30.0	2.368997	12.5	523117.0	0.078967	Y
7	STD60 280-413564/17	60.0	5.177933	12.5	604737.0	0.086299	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

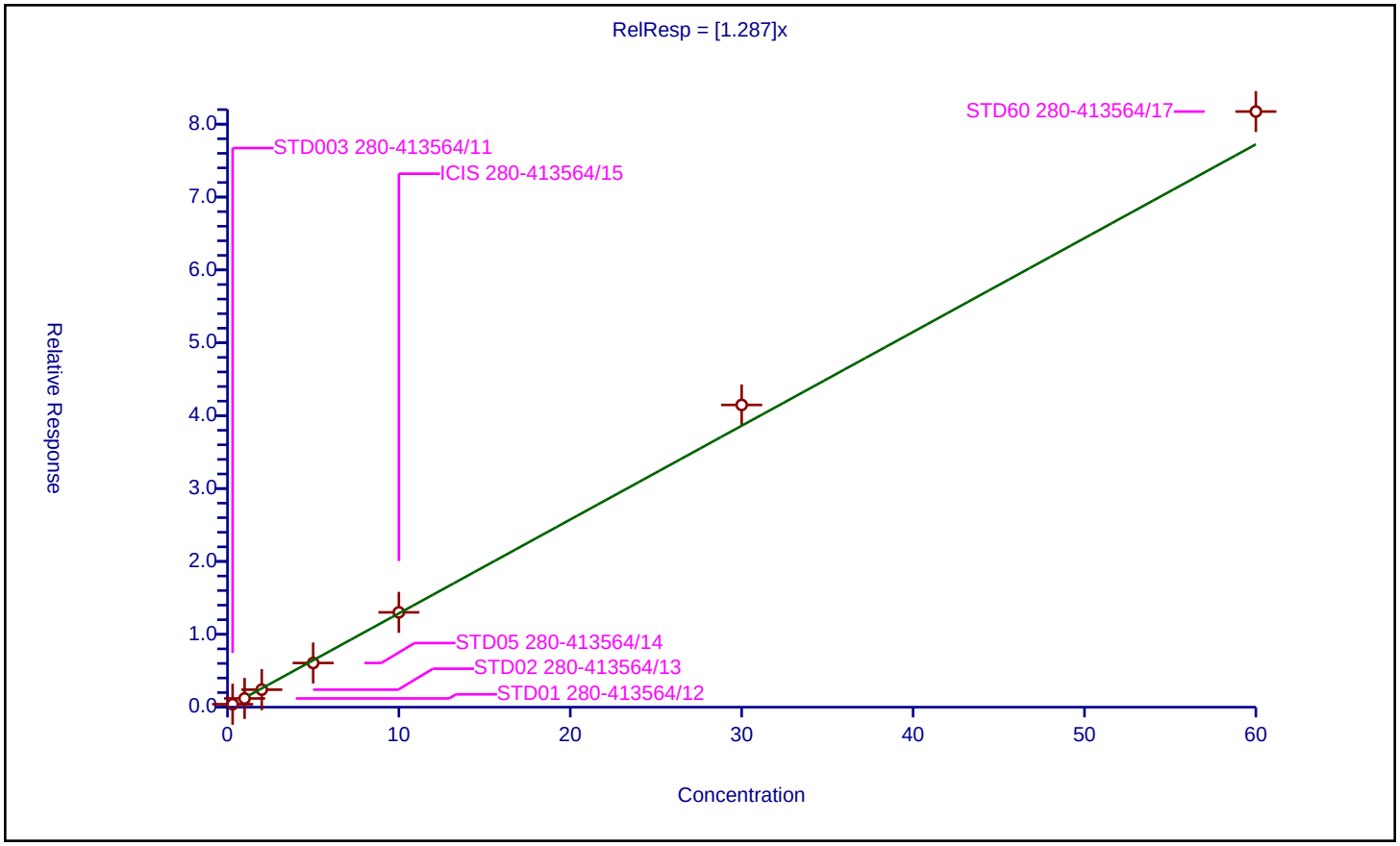
Curve Coefficients

Intercept:	0
Slope:	1.287

Error Coefficients

Standard Error:	1780000
Relative Standard Error:	6.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.405615	12.5	453355.0	1.352049	Y
2	STD01 280-413564/12	1.0	1.199295	12.5	474456.0	1.199295	Y
3	STD02 280-413564/13	2.0	2.402532	12.5	465488.0	1.201266	Y
4	STD05 280-413564/14	5.0	6.060922	12.5	480622.0	1.212184	Y
5	ICIS 280-413564/15	10.0	13.010866	12.5	511240.0	1.301087	Y
6	STD30 280-413564/16	30.0	41.474637	12.5	523117.0	1.382488	Y
7	STD60 280-413564/17	60.0	81.735986	12.5	604737.0	1.362266	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

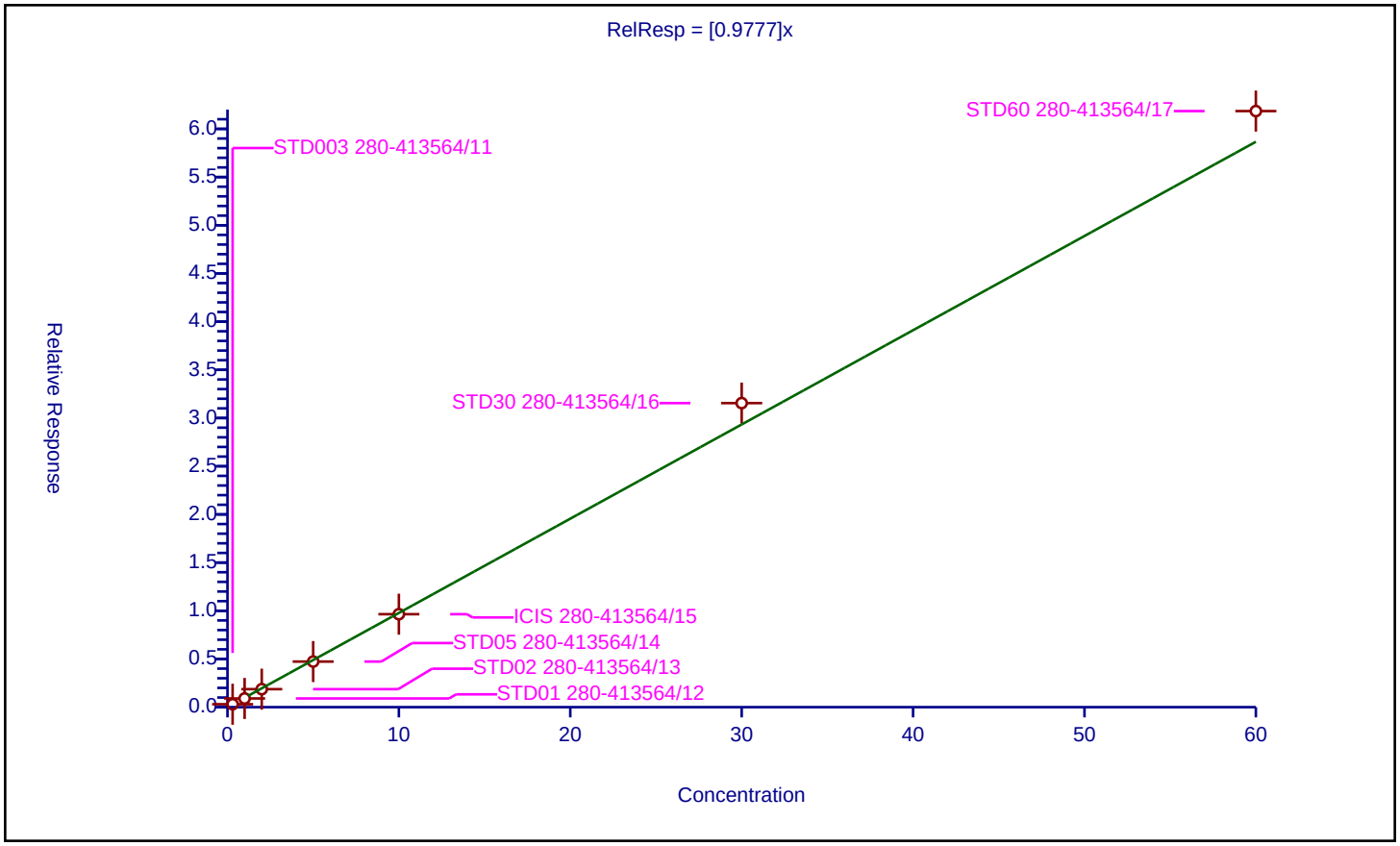
Curve Coefficients

Intercept:	0
Slope:	0.9777

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	5.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.304149	12.5	453355.0	1.01383	Y
2	STD01 280-413564/12	1.0	0.903087	12.5	474456.0	0.903087	Y
3	STD02 280-413564/13	2.0	1.868093	12.5	465488.0	0.934047	Y
4	STD05 280-413564/14	5.0	4.730459	12.5	480622.0	0.946092	Y
5	ICIS 280-413564/15	10.0	9.647035	12.5	511240.0	0.964703	Y
6	STD30 280-413564/16	30.0	31.548177	12.5	523117.0	1.051606	Y
7	STD60 280-413564/17	60.0	61.84641	12.5	604737.0	1.030774	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

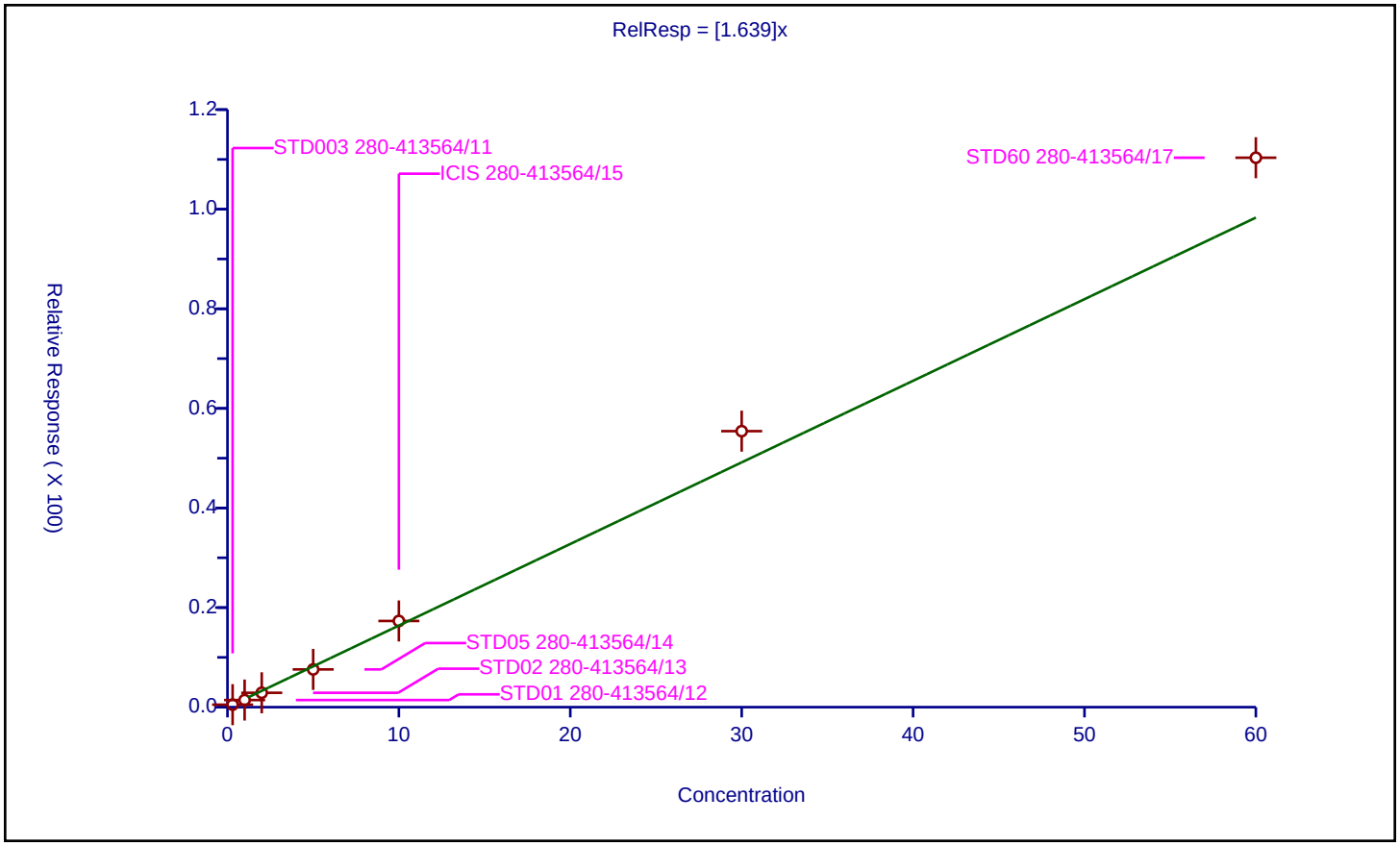
Curve Coefficients

Intercept:	0
Slope:	1.639

Error Coefficients

Standard Error:	2400000
Relative Standard Error:	10.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.499636	12.5	453355.0	1.665453	Y
2	STD01 280-413564/12	1.0	1.429216	12.5	474456.0	1.429216	Y
3	STD02 280-413564/13	2.0	2.883426	12.5	465488.0	1.441713	Y
4	STD05 280-413564/14	5.0	7.580958	12.5	480622.0	1.516192	Y
5	ICIS 280-413564/15	10.0	17.309507	12.5	511240.0	1.730951	Y
6	STD30 280-413564/16	30.0	55.426774	12.5	523117.0	1.847559	Y
7	STD60 280-413564/17	60.0	110.337138	12.5	604737.0	1.838952	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

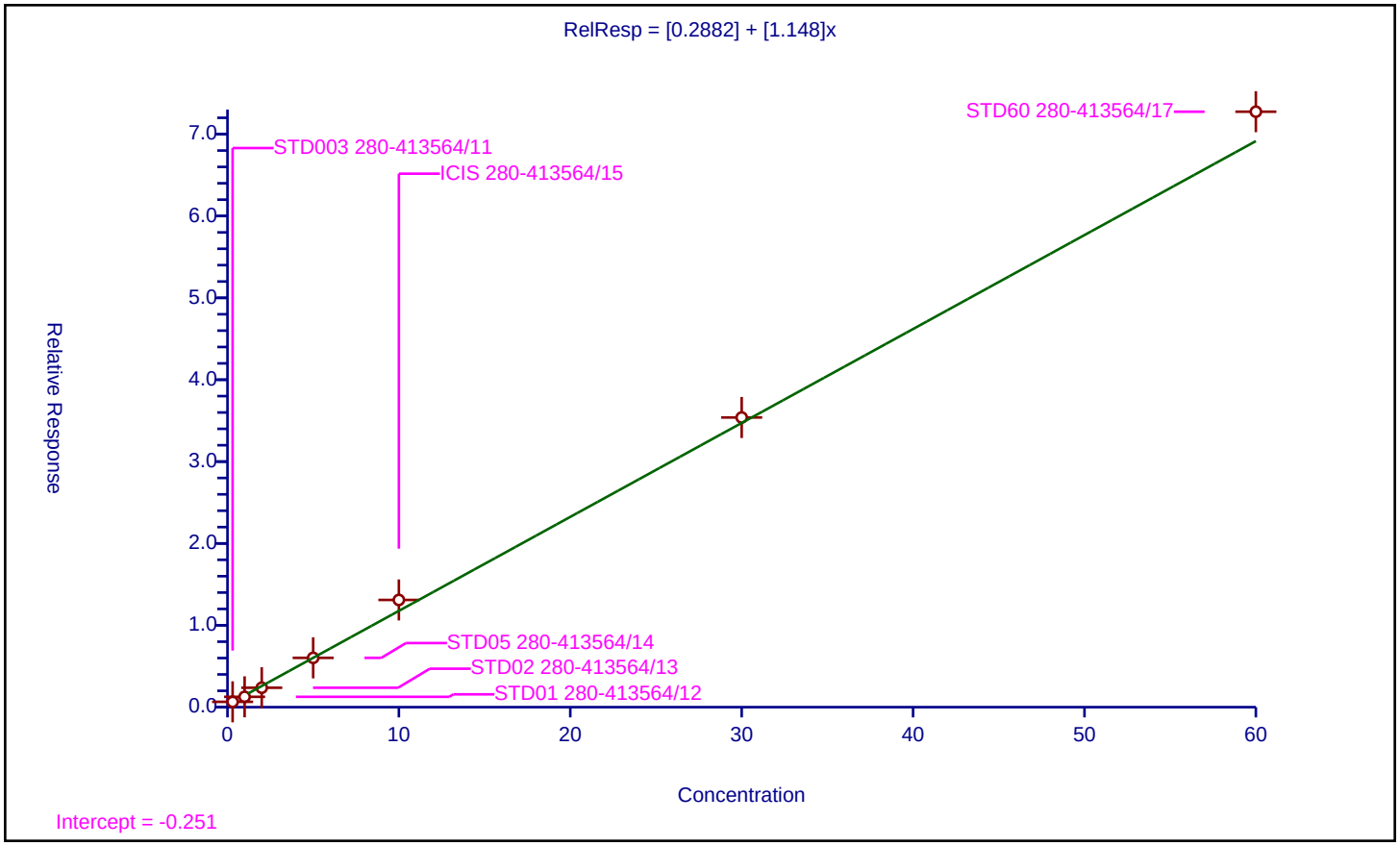
Curve Coefficients

Intercept:	0.2882
Slope:	1.148

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	10.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/11	0.3	0.651476	12.5	453355.0	2.171587	Y
2	STD01 280-413564/12	1.0	1.263078	12.5	474456.0	1.263078	Y
3	STD02 280-413564/13	2.0	2.373719	12.5	465488.0	1.186859	Y
4	STD05 280-413564/14	5.0	6.02269	12.5	480622.0	1.204538	Y
5	ICIS 280-413564/15	10.0	13.098887	12.5	511240.0	1.309889	Y
6	STD30 280-413564/16	30.0	35.388283	12.5	523117.0	1.179609	Y
7	STD60 280-413564/17	60.0	72.746272	12.5	604737.0	1.212438	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/03/2018 01:55 Calibration End Date: 05/03/2018 03:55 Calibration ID: 32287

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-413564/19	G2_2546.D
Level 2	STD01 280-413564/20	G2_2547.D
Level 3	STD02 280-413564/21	G2_2548.D
Level 4	STD05 280-413564/22	G2_2549.D
Level 5	STD10 280-413564/23	G2_2550.D
Level 6	STD30 280-413564/24	G2_2551.D
Level 7	STD60 280-413564/25	G2_2552.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.4334	0.3959 0.4601	0.3890	0.3948	0.4878	Lin	-0.148	0.4586							0.9990		0.9900
Chloromethane	0.4322 0.4018	0.3926 0.4265	0.4098	0.4075	0.4455	Ave		0.4166			0.1000	4.5		15.0			
Vinyl chloride	0.4418 0.4257	0.4224 0.4517	0.4265	0.4390	0.4727	Ave		0.4400				4.1		30.0			
Bromomethane	0.2873 0.2742	0.2661 0.2908	0.2713	0.2797	0.2970	Ave		0.2809				4.0		15.0			
Chloroethane	+++++ 0.2331	0.2513 0.2464	0.2480	0.2412	0.2571	Ave		0.2462				3.4		15.0			
Dichlorofluoromethane	0.7261 0.6651	0.6885 0.7061	0.6954	0.7133	0.7254	Ave		0.7029				3.1		15.0			
Trichlorofluoromethane	0.6049 0.6108	0.5971 0.6514	0.6078	0.6346	0.6639	Ave		0.6244				4.1		15.0			
Acetone	+++++ 0.0273	0.0277 0.0310	0.0226	0.0291	0.0289	Ave		0.0278				10.3		15.0			
2-Butanone (MEK)	+++++ 0.0384	0.0291 0.0458	0.0330	0.0338	0.0375	Lin2	-0.049	0.0400							0.9900		0.9900
4-Methyl-2-pentanone (MIBK)	+++++ 0.0967	0.0688 0.1120	0.0719	0.0925	0.0930	Lin2	-0.149	0.1007							0.9910		0.9900
2-Hexanone	+++++ 0.2870	0.1905 0.3312	0.1940	0.2454	0.2666	Lin1	-0.833	0.3167							0.9940		0.9900
Cyclohexanone	+++++ 0.0112	0.0075 +++++	0.0075	0.0088	0.0097	Lin	-0.390	0.0114							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-108840-1 Analy Batch No.: 413564

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/03/2018 01:55 Calibration End Date: 05/03/2018 03:55 Calibration ID: 32287

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-413564/19	G2_2546.D
Level 2	STD01 280-413564/20	G2_2547.D
Level 3	STD02 280-413564/21	G2_2548.D
Level 4	STD05 280-413564/22	G2_2549.D
Level 5	STD10 280-413564/23	G2_2550.D
Level 6	STD30 280-413564/24	G2_2551.D
Level 7	STD60 280-413564/25	G2_2552.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Lin	+++++ 1418510	49893 2991804	93385	221260	534667	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	17404 1315239	49482 2773260	98368	228394	488295	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	17790 1393235	53231 2937058	102391	246023	518055	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	11569 897584	33542 1890607	65135	156774	325552	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	+++++ 763098	31672 1601957	59530	135169	281773	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	29242 2176974	86769 4591234	166954	399722	795058	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	24361 1999367	75256 4235076	145920	355618	727634	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	+++++ 358025	13980 807157	21672	65182	126515	+++++ 120	4.00 240	8.00	20.0	40.0
2-Butanone (MEK)	FB	Lin2	+++++ 503143	14692 1190335	31684	75756	164488	+++++ 120	4.00 240	8.00	20.0	40.0
4-Methyl-2-pentanone (MIBK)	FB	Lin2	+++++ 1266159	34685 2911824	69070	207342	407722	+++++ 120	4.00 240	8.00	20.0	40.0
2-Hexanone	CBNZ d5	Lin1	+++++ 852468	21156 1937000	41676	126604	264609	+++++ 120	4.00 240	8.00	20.0	40.0
Cyclohexanone	CBNZ d5	Lin	+++++ 332269	8323 +++++	16132	45506	96710	+++++ 1200	40.0 +++++	80.0	200	400

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2546.D
Lims ID: STD003
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 03-May-2018 01:55:30 ALS Bottle#: 20 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD003
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:19:14 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	220441	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	99	1677942	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	86	382250	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	566028	12.5	12.5	
12 Dichlorodifluoromethane	85	1.593	1.579	0.014	96	14556	0.3000	0.5595	
14 Chloromethane	50	1.691	1.705	-0.014	97	17404	0.3000	0.3112	
15 Vinyl chloride	62	1.816	1.816	0.000	97	17790	0.3000	0.3012	
17 Bromomethane	94	2.124	2.138	-0.014	89	11569	0.3000	0.3068	
18 Chloroethane	64		2.235				ND	ND	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	97	29242	0.3000	0.3099	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	97	24361	0.3000	0.2907	
27 Acetone	43		3.115				ND	ND	
52 2-Butanone (MEK)	43		5.811				ND	ND	
81 4-Methyl-2-pentanone (MIBK	43		9.017				ND	ND	U
88 2-Hexanone	43		9.853				ND	ND	U
100 Cyclohexanone	55		11.583				ND	ND	U

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
U - Marked Undetected

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 0.15 Units: uL

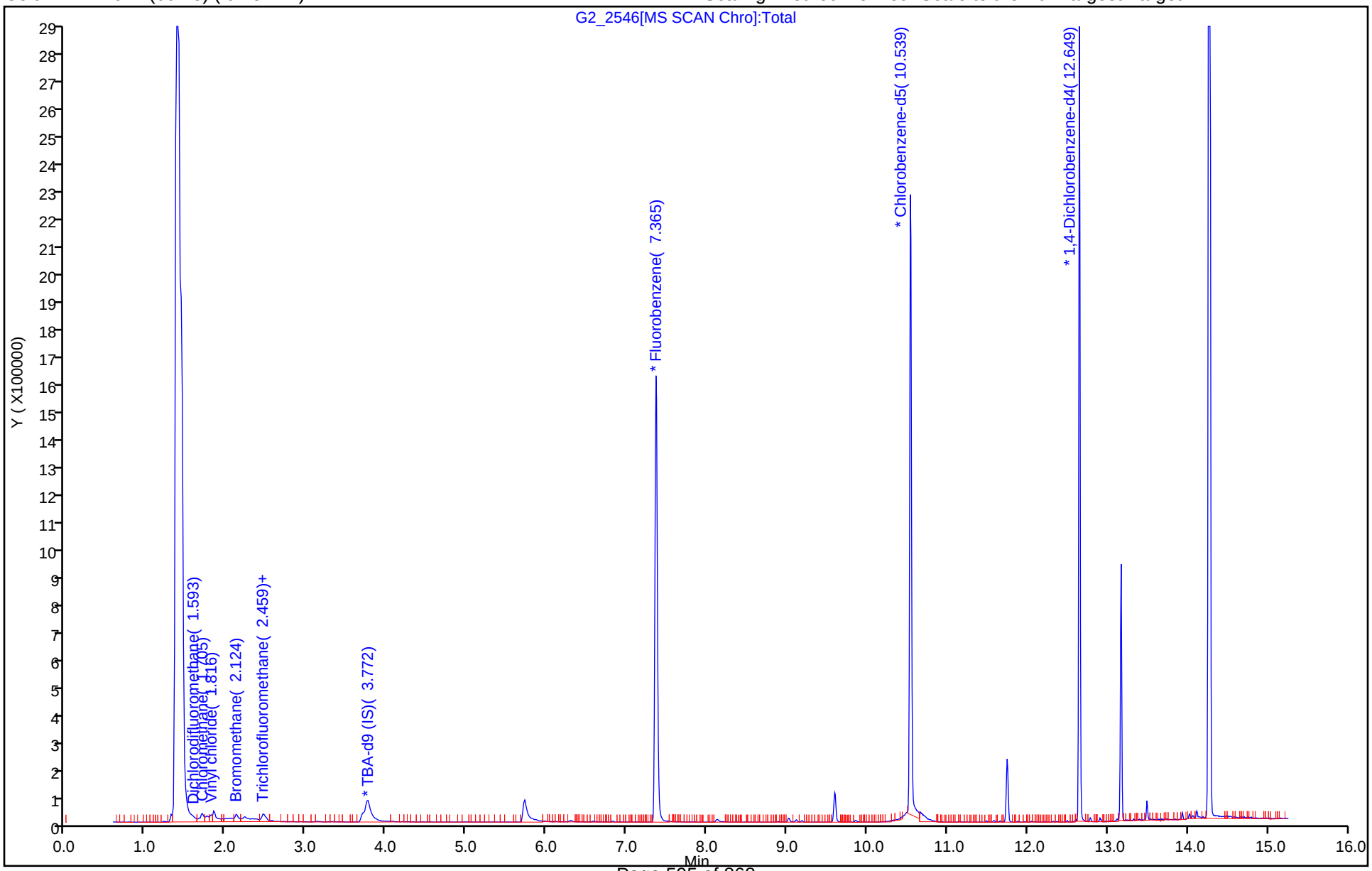
Report Date: 03-May-2018 20:19:17 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2546.D

Injection Date:	03-May-2018 01:55:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD003			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



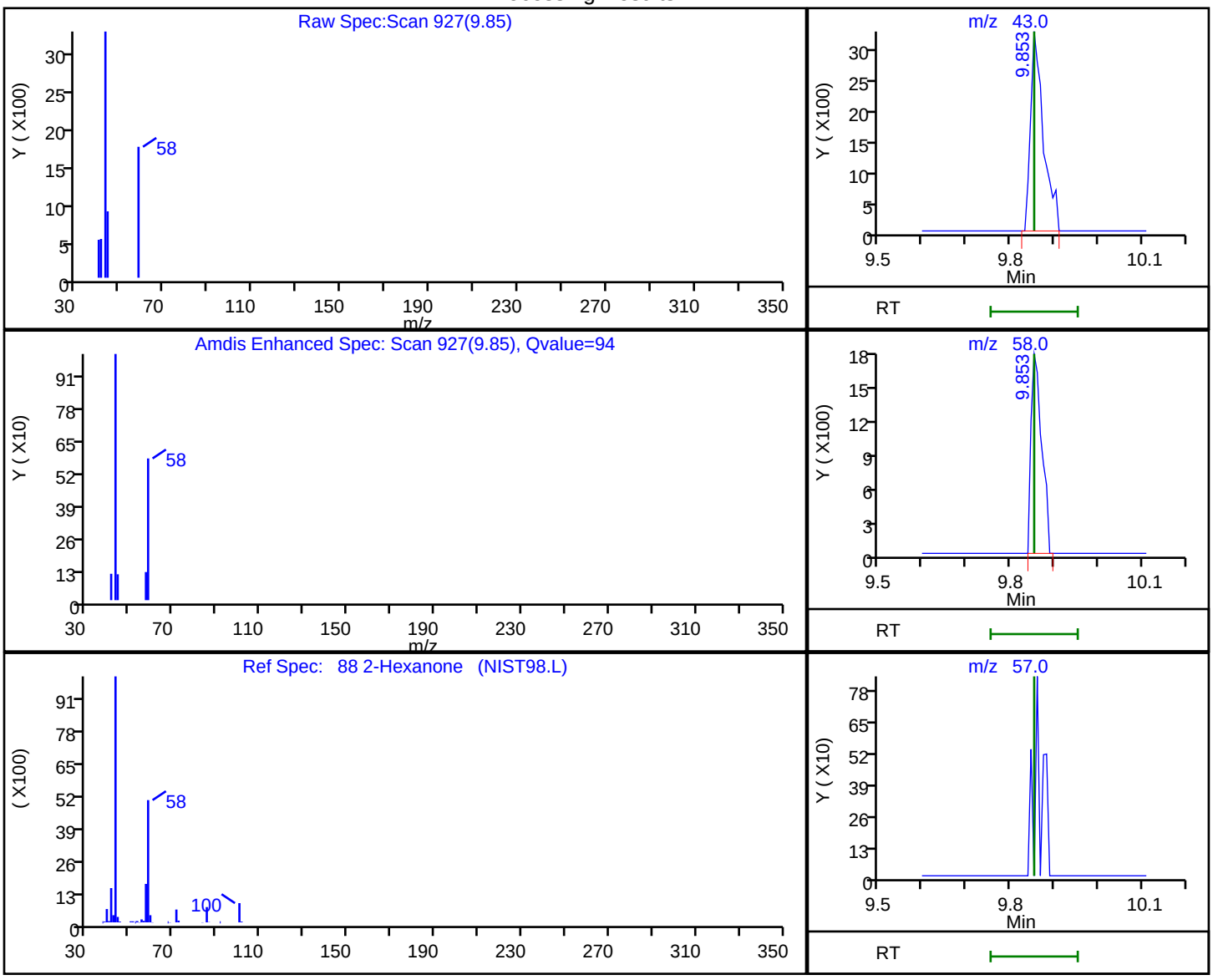
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2546.D		
Injection Date:	03-May-2018 01:55:30	Instrument ID:	VMS_G2
Lims ID:	STD003		
Client ID:			
Operator ID:	newcomer	ALS Bottle#:	20 Worklist Smp#: 19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

88 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.85	43.00	6658	1.890351
9.85	58.00	2936	
9.85	57.00	0	

Reviewer: ilczyszynd, 03-May-2018 07:28:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

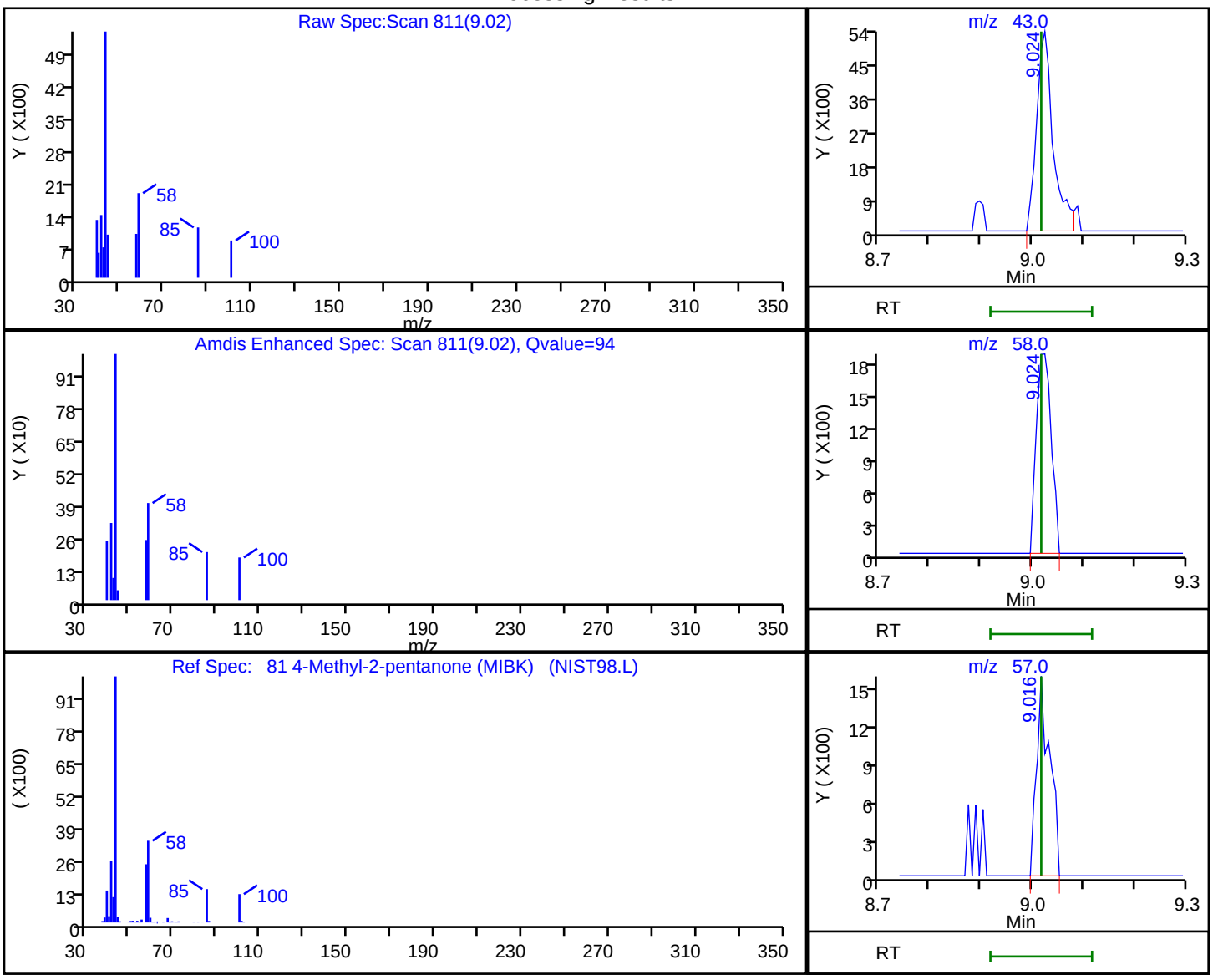
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2546.D				
Injection Date:	03-May-2018 01:55:30	Instrument ID:	VMS_G2		
Lims ID:	STD003				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	20	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

81 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.02	43.00	12112	1.792621
9.02	58.00	3757	
9.02	57.00	2797	

Reviewer: ilczyszynd, 03-May-2018 07:28:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

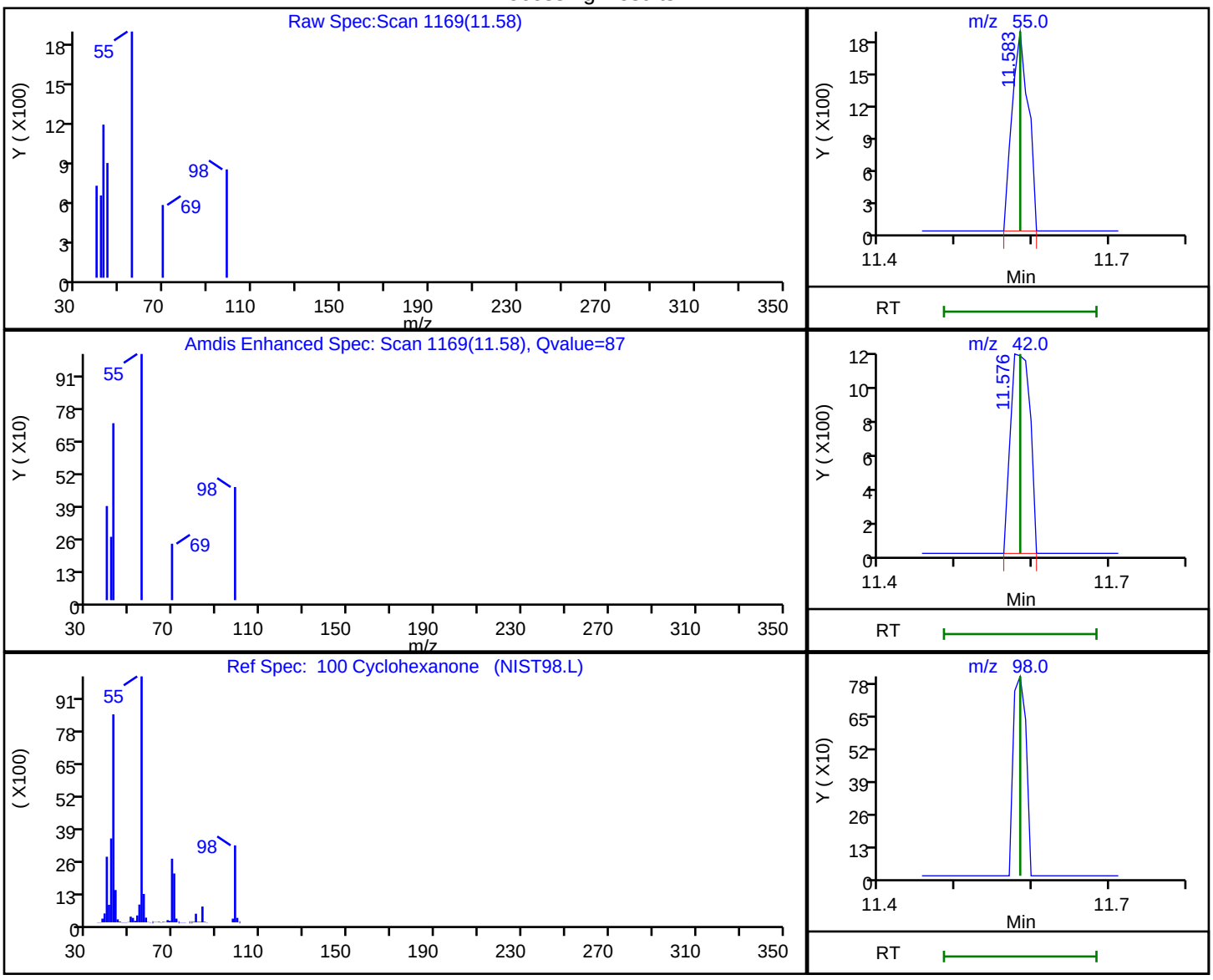
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2546.D				
Injection Date:	03-May-2018 01:55:30	Instrument ID:	VMS_G2		
Lims ID:	STD003				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	20	Worklist Smp#:	19
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

100 Cyclohexanone, CAS: 108-94-1

Processing Results



RT	Mass	Response	Amount
11.58	55.00	2723	8.033450
11.58	42.00	2051	
11.58	98.00	0	

Reviewer: ilczyszynd, 03-May-2018 07:28:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2547.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-May-2018 02:15:30 ALS Bottle#: 21 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:19:27 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.772	-0.001	0	192549	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1575408	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	87	346988	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	515347	12.5	12.5	
12 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	49893	1.00	1.19	
14 Chloromethane	50	1.704	1.705	-0.001	98	49482	1.00	0.9425	
15 Vinyl chloride	62	1.816	1.816	0.000	98	53231	1.00	0.9600	
17 Bromomethane	94	2.123	2.138	-0.015	93	33542	1.00	0.9473	
18 Chloroethane	64	2.235	2.235	0.000	99	31672	1.00	1.02	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	98	86769	1.00	0.9795	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	75256	1.00	0.9564	
27 Acetone	43	3.143	3.115	0.028	99	13980	4.00	3.99	
52 2-Butanone (MEK)	43	5.825	5.811	0.013	29	14692	4.00	4.13	
81 4-Methyl-2-pentanone (MIBK	43	9.023	9.017	0.006	97	34685	4.00	4.22	
88 2-Hexanone	43	9.853	9.853	0.000	97	21156	4.00	5.04	
100 Cyclohexanone	55	11.583	11.583	0.000	92	8323	40.0	60.4	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 0.50 Units: uL

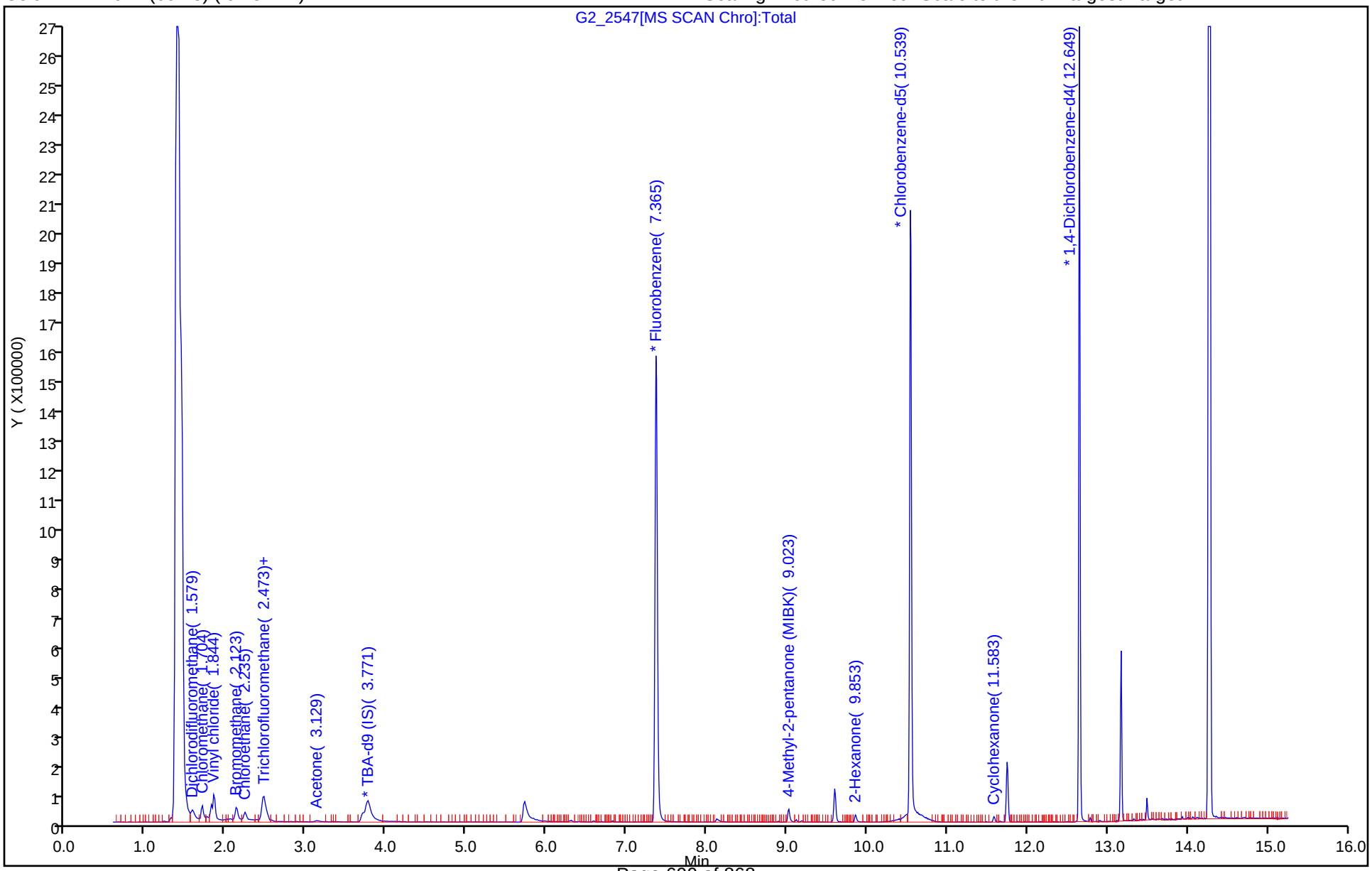
Report Date: 03-May-2018 20:19:29 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2547.D

Injection Date:	03-May-2018 02:15:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	20
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2548.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-May-2018 02:35:30 ALS Bottle#: 22 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:19:34 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	184997	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.365	0.007	98	1500424	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	87	335743	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	490320	12.5	12.5	
12 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	93385	2.00	2.02	
14 Chloromethane	50	1.705	1.705	0.000	99	98368	2.00	1.97	
15 Vinyl chloride	62	1.816	1.816	0.000	98	102391	2.00	1.94	
17 Bromomethane	94	2.138	2.138	0.000	90	65135	2.00	1.93	
18 Chloroethane	64	2.235	2.235	0.000	99	59530	2.00	2.01	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	97	166954	2.00	1.98	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	145920	2.00	1.95	
27 Acetone	43	3.129	3.115	0.014	99	21672	8.00	6.50	
52 2-Butanone (MEK)	43	5.839	5.811	0.028	99	31684	8.00	7.81	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.017	-0.001	98	69070	8.00	7.20	
88 2-Hexanone	43	9.853	9.853	0.000	96	41676	8.00	7.53	
100 Cyclohexanone	55	11.583	11.583	0.000	94	16132	80.0	86.7	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 1.00 Units: uL

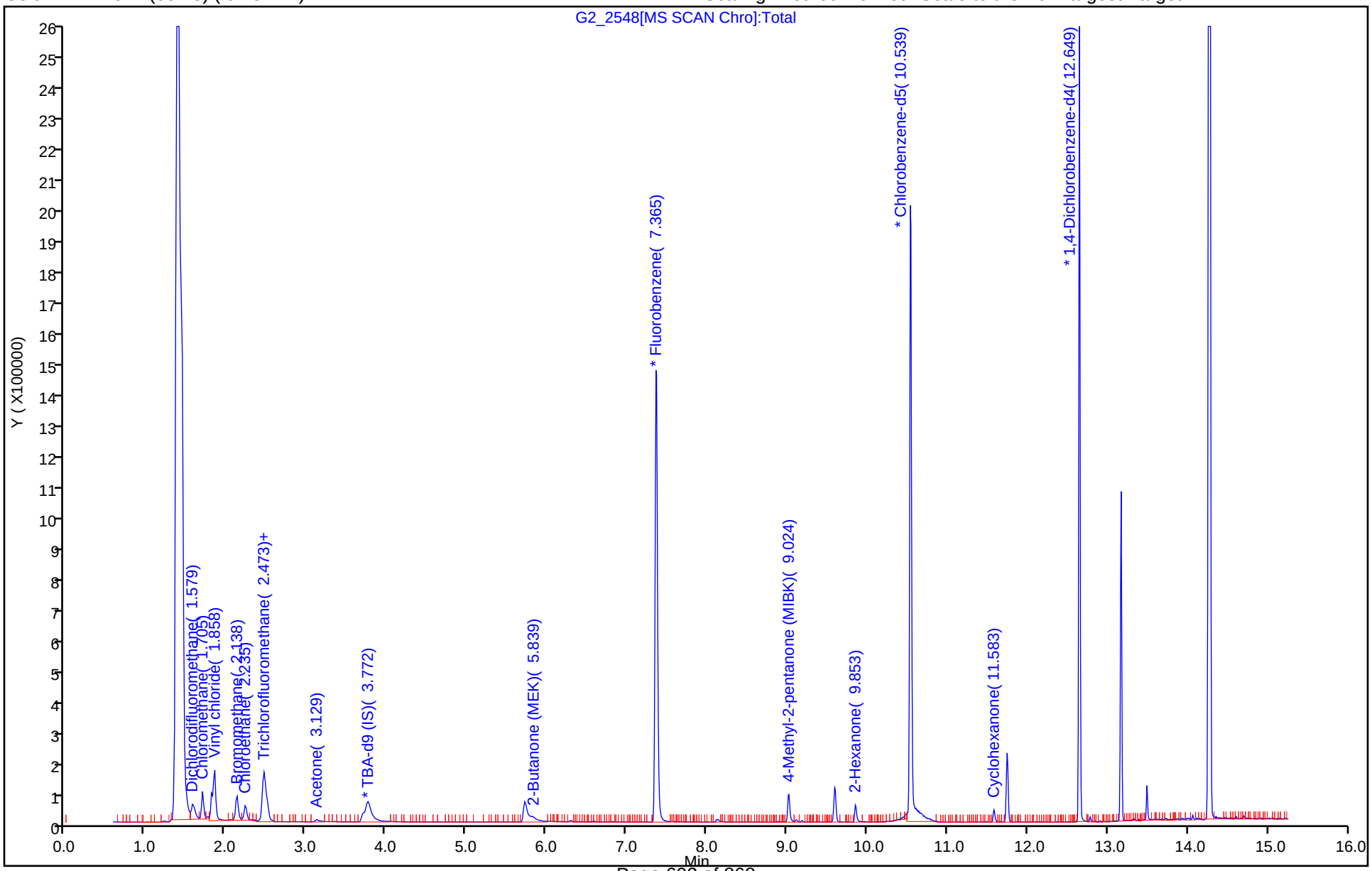
Report Date: 03-May-2018 20:19:37 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2548.D

Injection Date:	03-May-2018 02:35:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	21
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2549.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-May-2018 02:55:30 ALS Bottle#: 23 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:19:46 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.772	-0.001	0	176952	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1401020	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	87	322403	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	471965	12.5	12.5	
12 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	221260	5.00	4.63	
14 Chloromethane	50	1.704	1.705	-0.001	99	228394	5.00	4.89	
15 Vinyl chloride	62	1.816	1.816	0.000	98	246023	5.00	4.99	
17 Bromomethane	94	2.123	2.138	-0.015	91	156774	5.00	4.98	
18 Chloroethane	64	2.235	2.235	0.000	99	135169	5.00	4.90	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	98	399722	5.00	5.07	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	355618	5.00	5.08	
27 Acetone	43	3.115	3.115	0.000	98	65182	20.0	20.9	
52 2-Butanone (MEK)	43	5.825	5.811	0.014	99	75756	20.0	18.1	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.017	-0.001	98	207342	20.0	19.9	
88 2-Hexanone	43	9.853	9.853	0.000	96	126604	20.0	18.1	
100 Cyclohexanone	55	11.583	11.583	0.000	93	45506	200.0	188.6	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 2.50 Units: uL

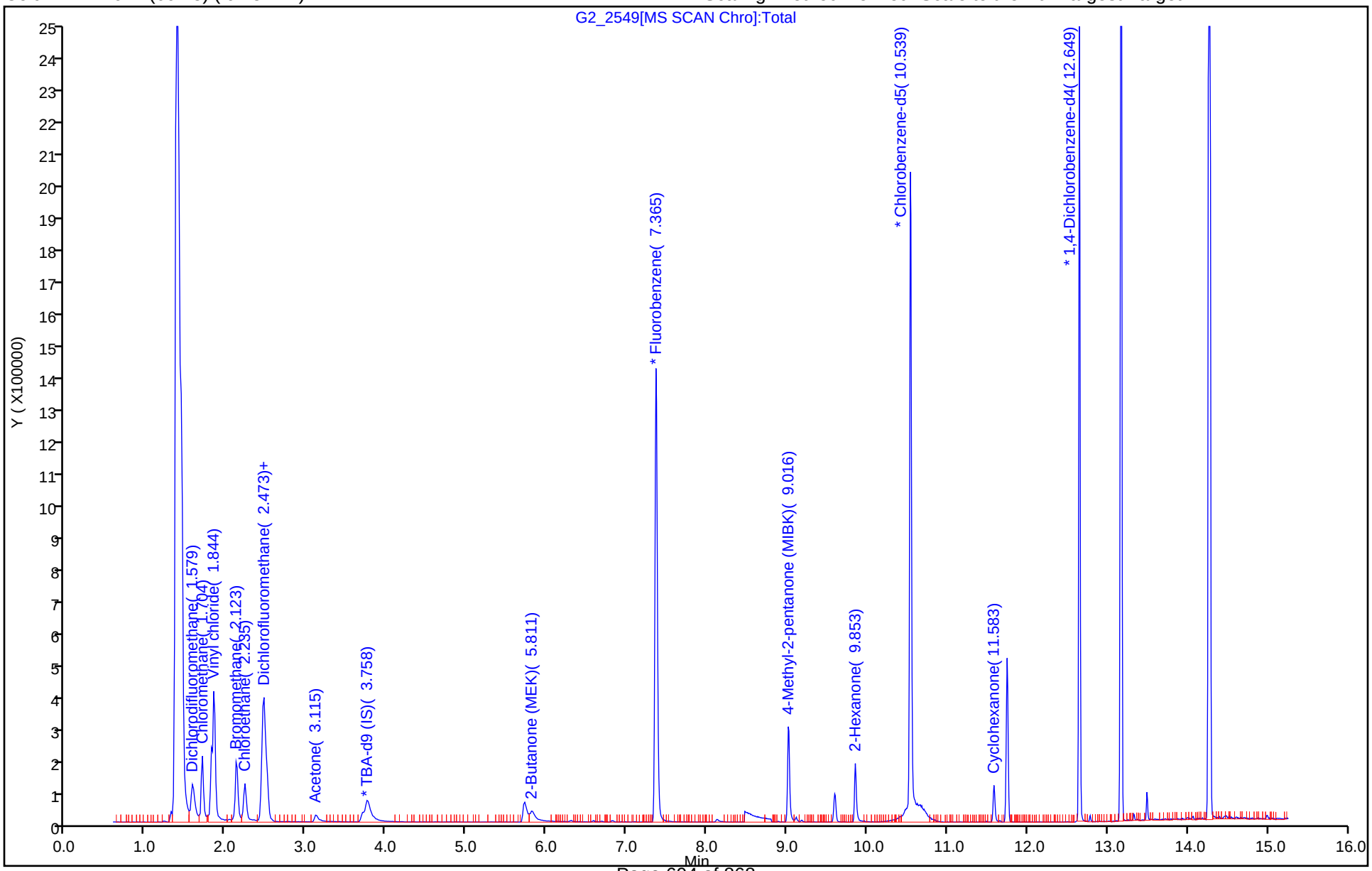
Report Date: 03-May-2018 20:19:49 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2549.D

Injection Date:	03-May-2018 02:55:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	22
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2550.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-May-2018 03:15:30 ALS Bottle#: 24 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:19:59 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	170366	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1369972	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.540	0.000	88	310139	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	453222	12.5	12.5	
12 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	534667	10.0	11.0	
14 Chloromethane	50	1.705	1.705	0.000	99	488295	10.0	10.7	
15 Vinyl chloride	62	1.816	1.816	0.000	98	518055	10.0	10.7	
17 Bromomethane	94	2.138	2.138	0.000	91	325552	10.0	10.6	
18 Chloroethane	64	2.235	2.235	0.000	100	281773	10.0	10.4	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	98	795058	10.0	10.3	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	727634	10.0	10.6	
27 Acetone	43	3.115	3.115	0.000	99	126515	40.0	41.6	
52 2-Butanone (MEK)	43	5.811	5.811	0.000	100	164488	40.0	38.7	
81 4-Methyl-2-pentanone (MIBK	43	9.017	9.017	0.000	97	407722	40.0	38.4	
88 2-Hexanone	43	9.853	9.853	0.000	97	264609	40.0	36.3	
100 Cyclohexanone	55	11.583	11.583	0.000	93	96710	400.0	375.3	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 5.00 Units: uL

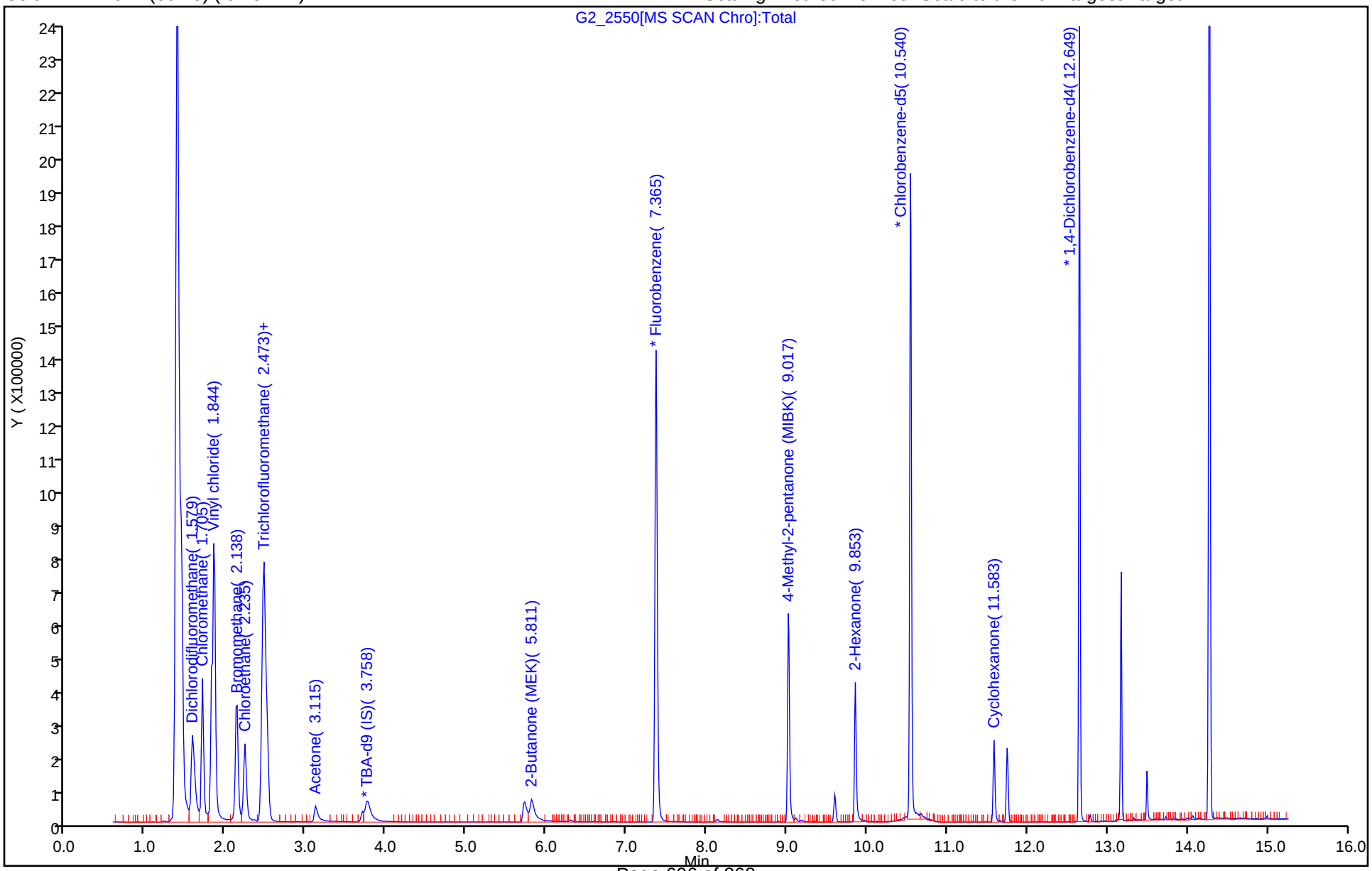
Report Date: 03-May-2018 20:20:02 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2550.D

Injection Date:	03-May-2018 03:15:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD10			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2551.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-May-2018 03:35:30 ALS Bottle#: 25 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD30
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:20:09 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	184986	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.365	0.007	98	1363792	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.540	-0.001	88	309403	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	446709	12.5	12.5	
12 Dichlorodifluoromethane	85	1.593	1.579	0.014	99	1418510	30.0	28.7	
14 Chloromethane	50	1.719	1.705	0.014	99	1315239	30.0	28.9	
15 Vinyl chloride	62	1.830	1.816	0.014	98	1393235	30.0	29.0	
17 Bromomethane	94	2.138	2.138	0.000	91	897584	30.0	29.3	
18 Chloroethane	64	2.249	2.235	0.014	100	763098	30.0	28.4	
19 Dichlorofluoromethane	67	2.473	2.459	0.014	98	2176974	30.0	28.4	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	1999367	30.0	29.4	
27 Acetone	43	3.115	3.115	0.000	100	358025	120.0	118.2	
52 2-Butanone (MEK)	43	5.811	5.811	0.000	100	503143	120.0	116.4	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.017	-0.001	97	1266159	120.0	116.8	
88 2-Hexanone	43	9.853	9.853	0.000	96	852468	120.0	111.4	
100 Cyclohexanone	55	11.583	11.583	0.000	94	332269	1200.0	1209.0	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 15.00 Units: uL

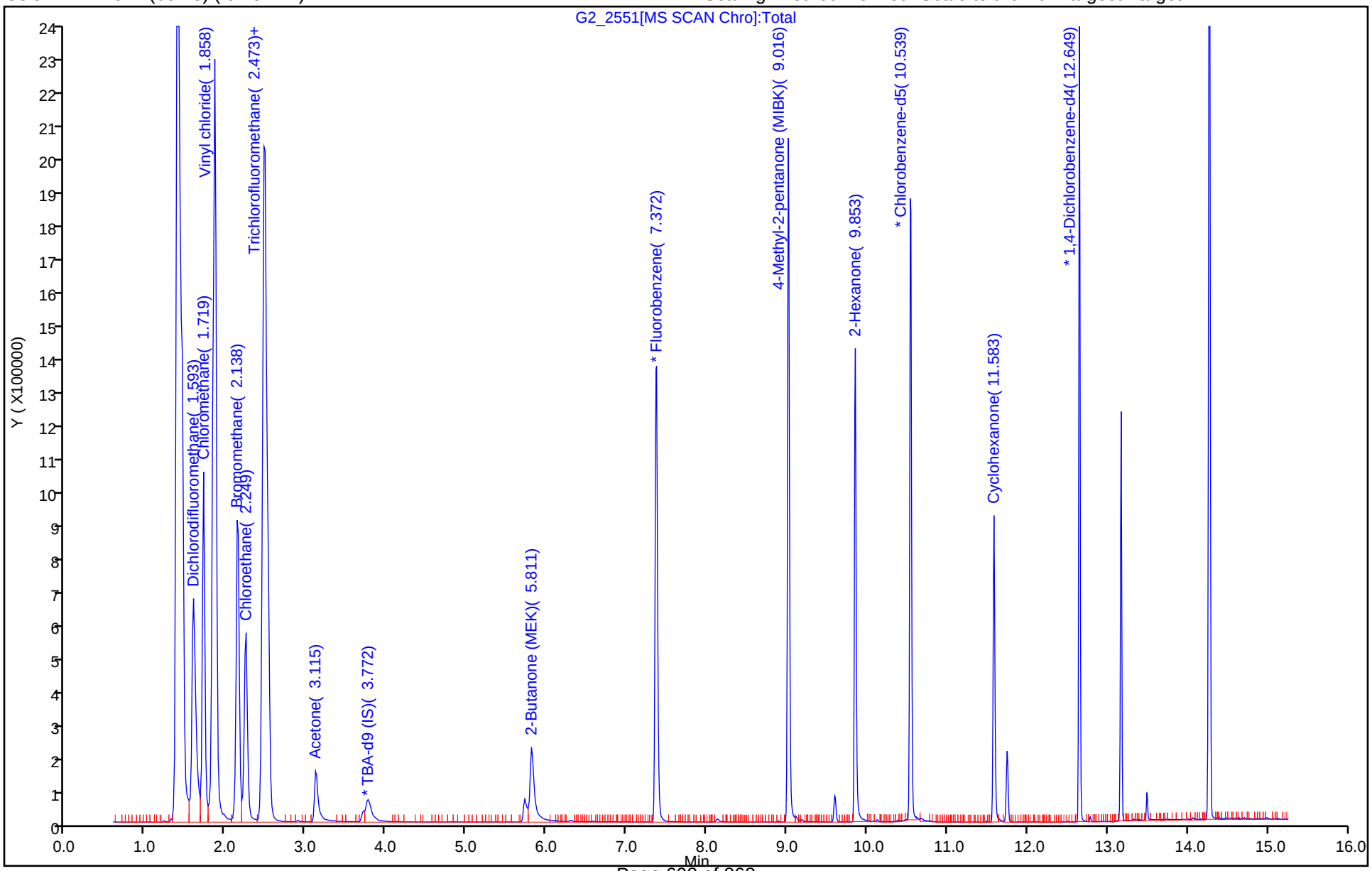
Report Date: 03-May-2018 20:20:11 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2551.D

Injection Date:	03-May-2018 03:35:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD30			Worklist Smp#:	24
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-May-2018 03:55:30 ALS Bottle#: 26 Worklist Smp#: 25
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub113

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 20:20:18 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: ilczyszynd Date: 03-May-2018 07:28:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	193756	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.365	0.007	98	1354546	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.540	0.007	88	304631	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	455670	12.5	12.5	
12 Dichlorodifluoromethane	85	1.593	1.579	0.014	99	2991804	60.0	60.5	
14 Chloromethane	50	1.718	1.705	0.013	99	2773260	60.0	61.4	
15 Vinyl chloride	62	1.844	1.816	0.028	98	2937058	60.0	61.6	
17 Bromomethane	94	2.151	2.138	0.013	91	1890607	60.0	62.1	
18 Chloroethane	64	2.249	2.235	0.014	100	1601957	60.0	60.0	
19 Dichlorofluoromethane	67	2.473	2.459	0.014	98	4591234	60.0	60.3	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	4235076	60.0	62.6	
27 Acetone	43	3.115	3.115	0.000	99	807157	240.0	268.2	
52 2-Butanone (MEK)	43	5.811	5.811	0.000	100	1190335	240.0	275.6	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.017	-0.001	97	2911824	240.0	268.4	
88 2-Hexanone	43	9.853	9.853	0.000	96	1937000	240.0	253.6	
100 Cyclohexanone	55	11.583	11.583	0.000	94	851042	2400.0	3090.5	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket A_00072 Amount Added: 30.00 Units: uL

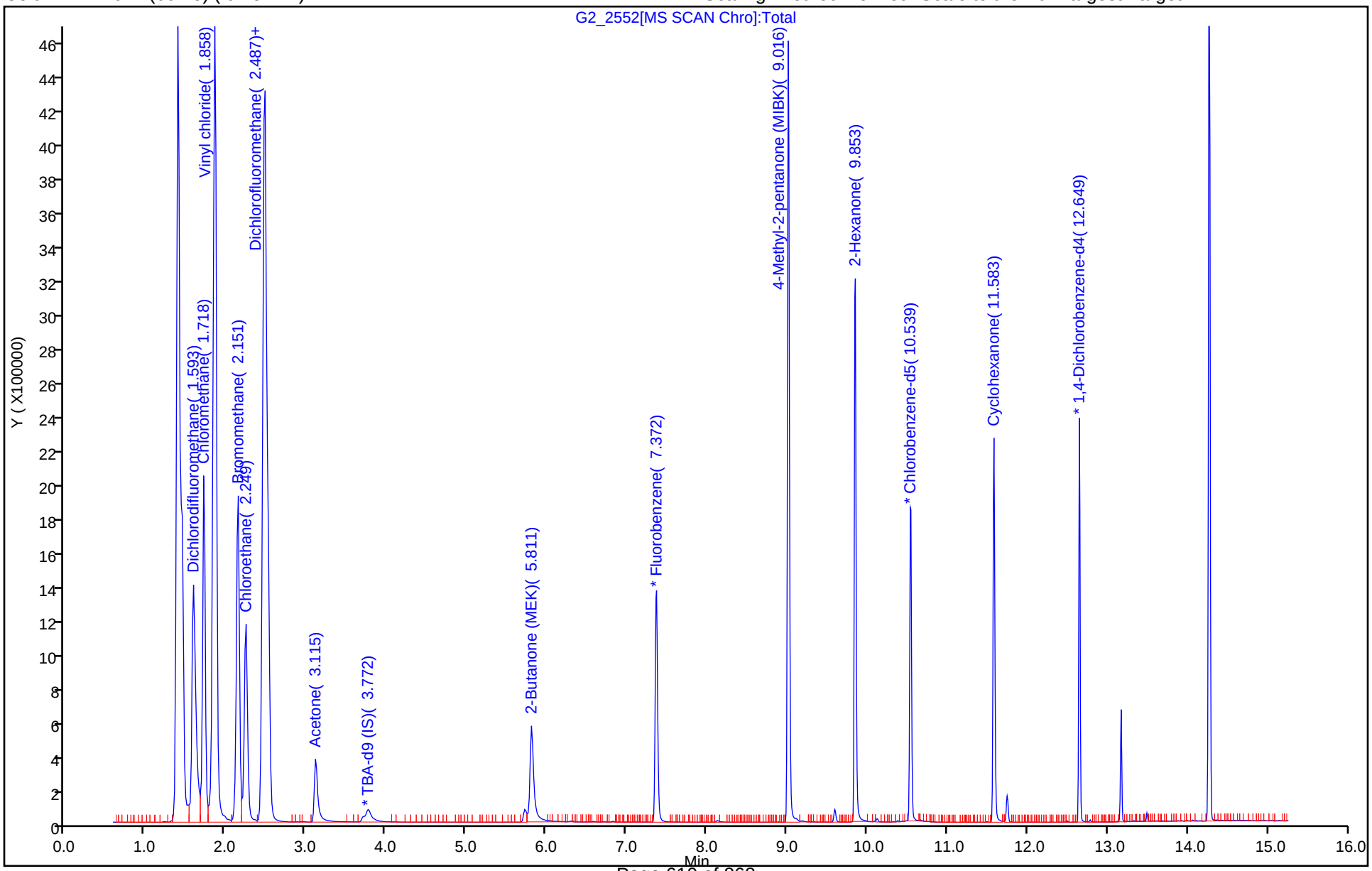
Report Date: 03-May-2018 20:20:19 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Injection Date:	03-May-2018 03:55:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	25
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / Dichlorodifluoromethane

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

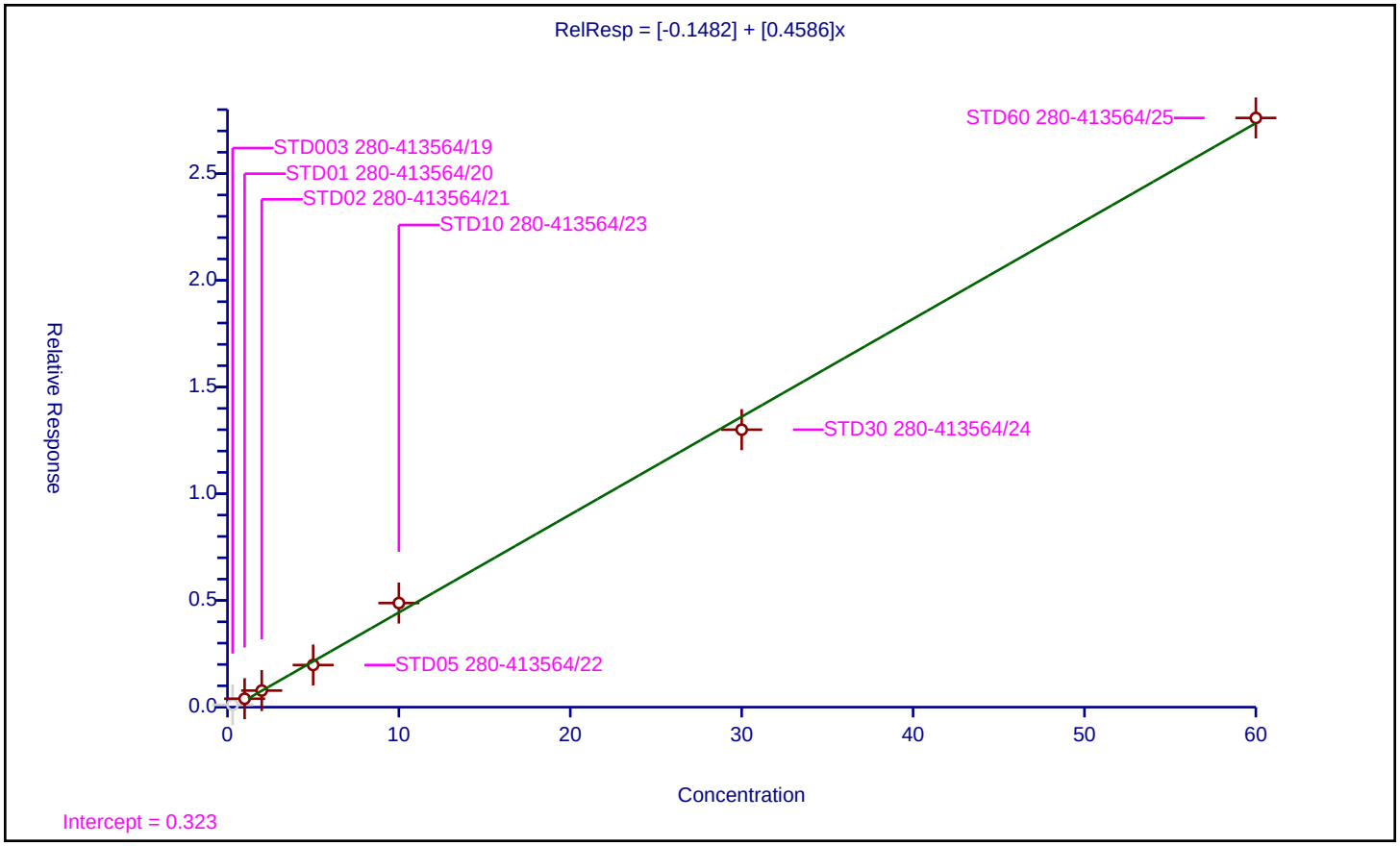
Curve Coefficients

Intercept:	-0.1482
Slope:	0.4586

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.108436	12.5	1677942.0	0.361455	N
2	STD01 280-413564/20	1.0	0.395874	12.5	1575408.0	0.395874	Y
3	STD02 280-413564/21	2.0	0.777988	12.5	1500424.0	0.388994	Y
4	STD05 280-413564/22	5.0	1.974097	12.5	1401020.0	0.394819	Y
5	STD10 280-413564/23	10.0	4.878448	12.5	1369972.0	0.487845	Y
6	STD30 280-413564/24	30.0	13.001524	12.5	1363792.0	0.433384	Y
7	STD60 280-413564/25	60.0	27.608918	12.5	1354546.0	0.460149	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

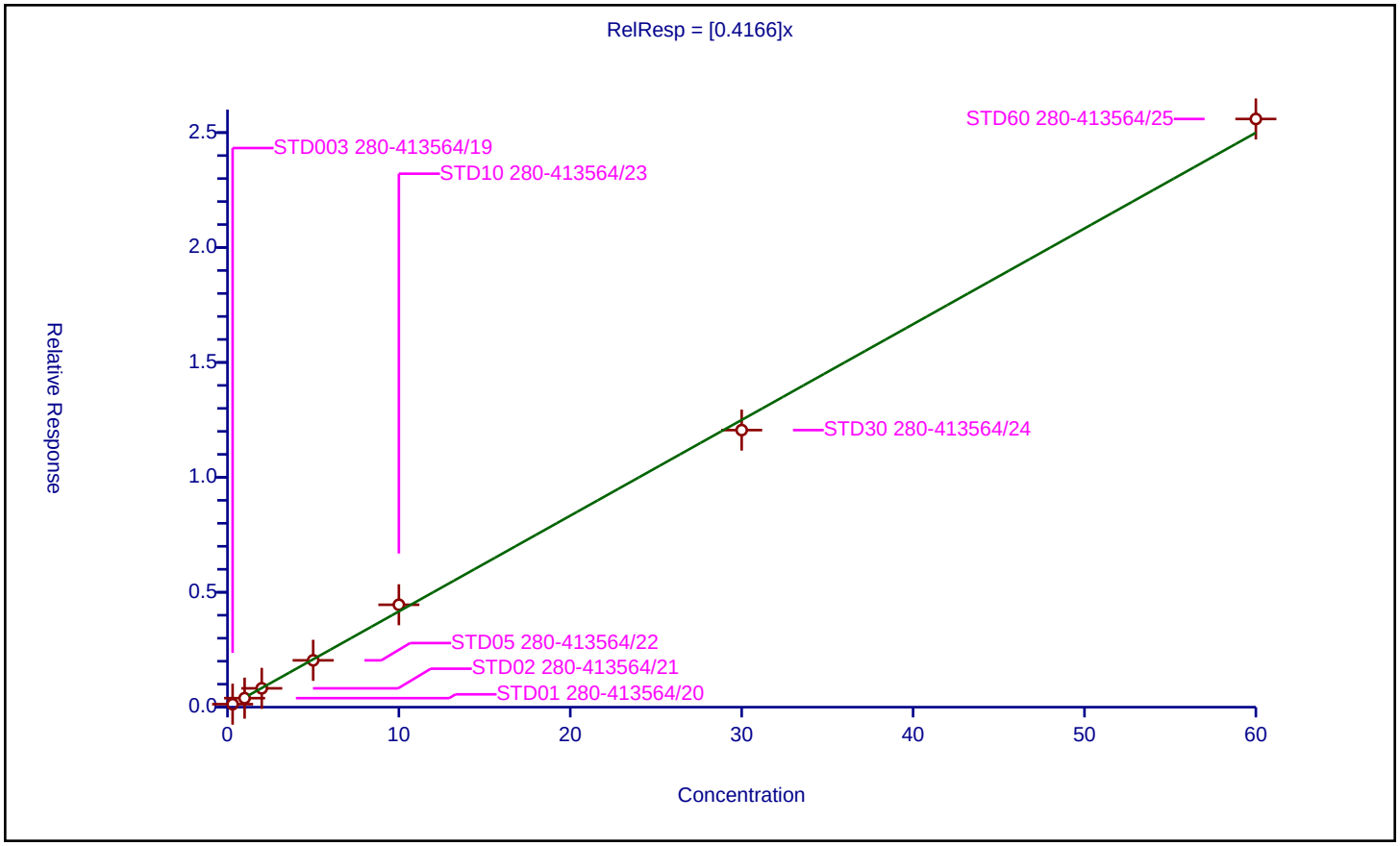
Curve Coefficients

Intercept:	0
Slope:	0.4166

Error Coefficients

Standard Error:	1270000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.129653	12.5	1677942.0	0.432176	Y
2	STD01 280-413564/20	1.0	0.392613	12.5	1575408.0	0.392613	Y
3	STD02 280-413564/21	2.0	0.819502	12.5	1500424.0	0.409751	Y
4	STD05 280-413564/22	5.0	2.037747	12.5	1401020.0	0.407549	Y
5	STD10 280-413564/23	10.0	4.455337	12.5	1369972.0	0.445534	Y
6	STD30 280-413564/24	30.0	12.054982	12.5	1363792.0	0.401833	Y
7	STD60 280-413564/25	60.0	25.592154	12.5	1354546.0	0.426536	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

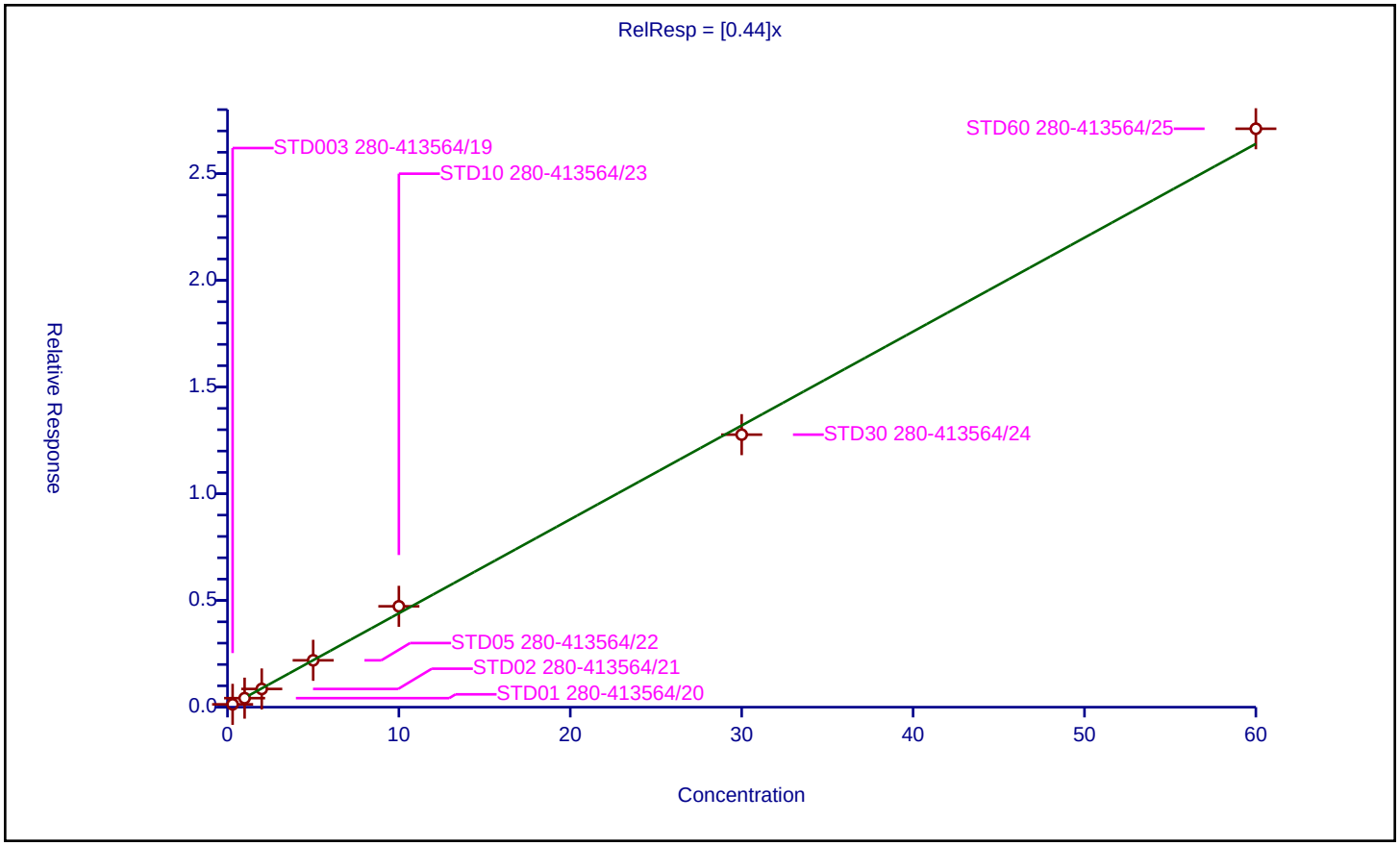
Curve Coefficients

Intercept:	0
Slope:	0.44

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.132528	12.5	1677942.0	0.441761	Y
2	STD01 280-413564/20	1.0	0.422359	12.5	1575408.0	0.422359	Y
3	STD02 280-413564/21	2.0	0.853017	12.5	1500424.0	0.426509	Y
4	STD05 280-413564/22	5.0	2.195035	12.5	1401020.0	0.439007	Y
5	STD10 280-413564/23	10.0	4.726876	12.5	1369972.0	0.472688	Y
6	STD30 280-413564/24	30.0	12.769863	12.5	1363792.0	0.425662	Y
7	STD60 280-413564/25	60.0	27.103712	12.5	1354546.0	0.451729	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

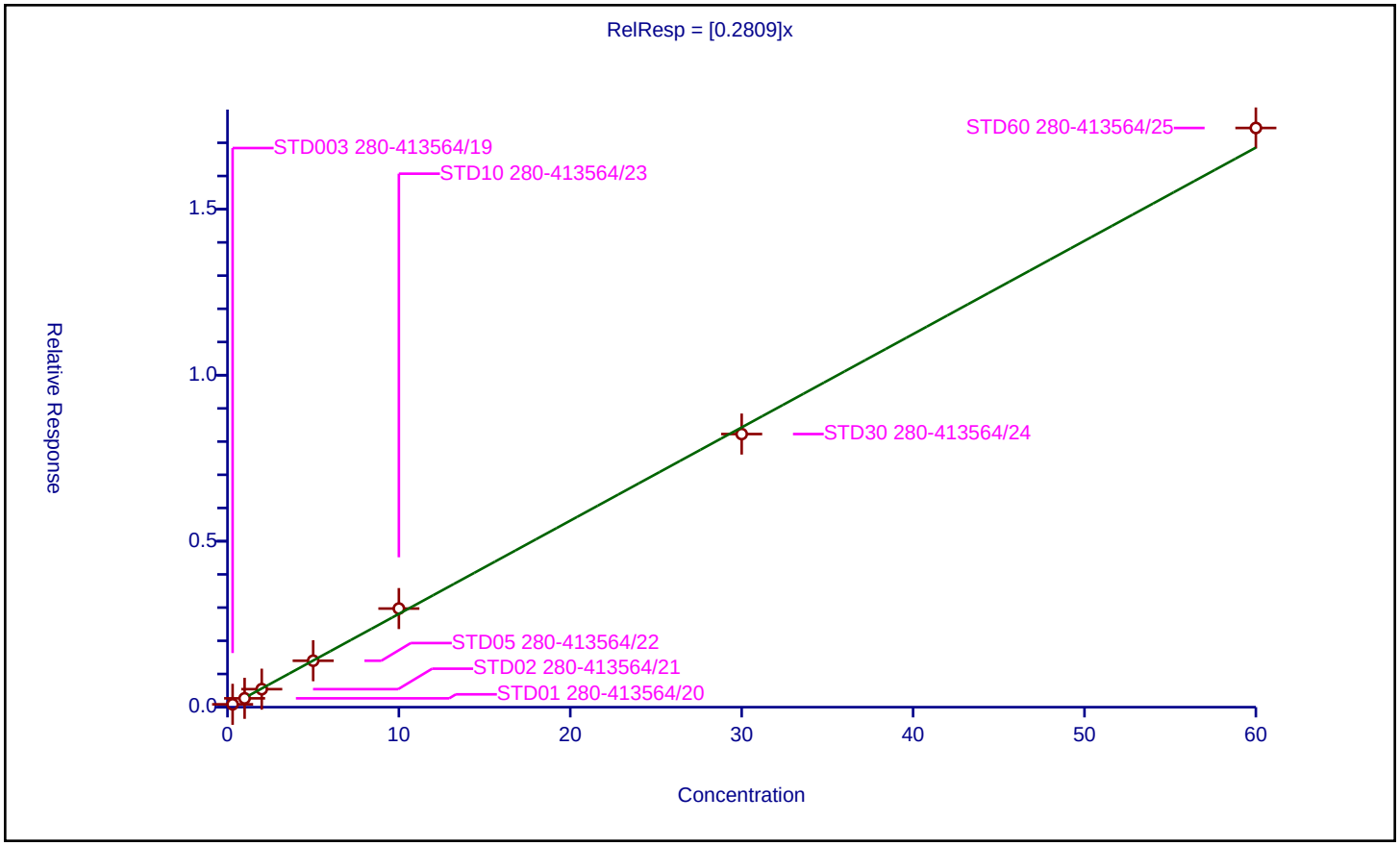
Curve Coefficients

Intercept:	0
Slope:	0.2809

Error Coefficients

Standard Error:	868000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.086184	12.5	1677942.0	0.287281	Y
2	STD01 280-413564/20	1.0	0.266137	12.5	1575408.0	0.266137	Y
3	STD02 280-413564/21	2.0	0.542638	12.5	1500424.0	0.271319	Y
4	STD05 280-413564/22	5.0	1.398749	12.5	1401020.0	0.27975	Y
5	STD10 280-413564/23	10.0	2.970426	12.5	1369972.0	0.297043	Y
6	STD30 280-413564/24	30.0	8.226914	12.5	1363792.0	0.27423	Y
7	STD60 280-413564/25	60.0	17.44687	12.5	1354546.0	0.290781	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

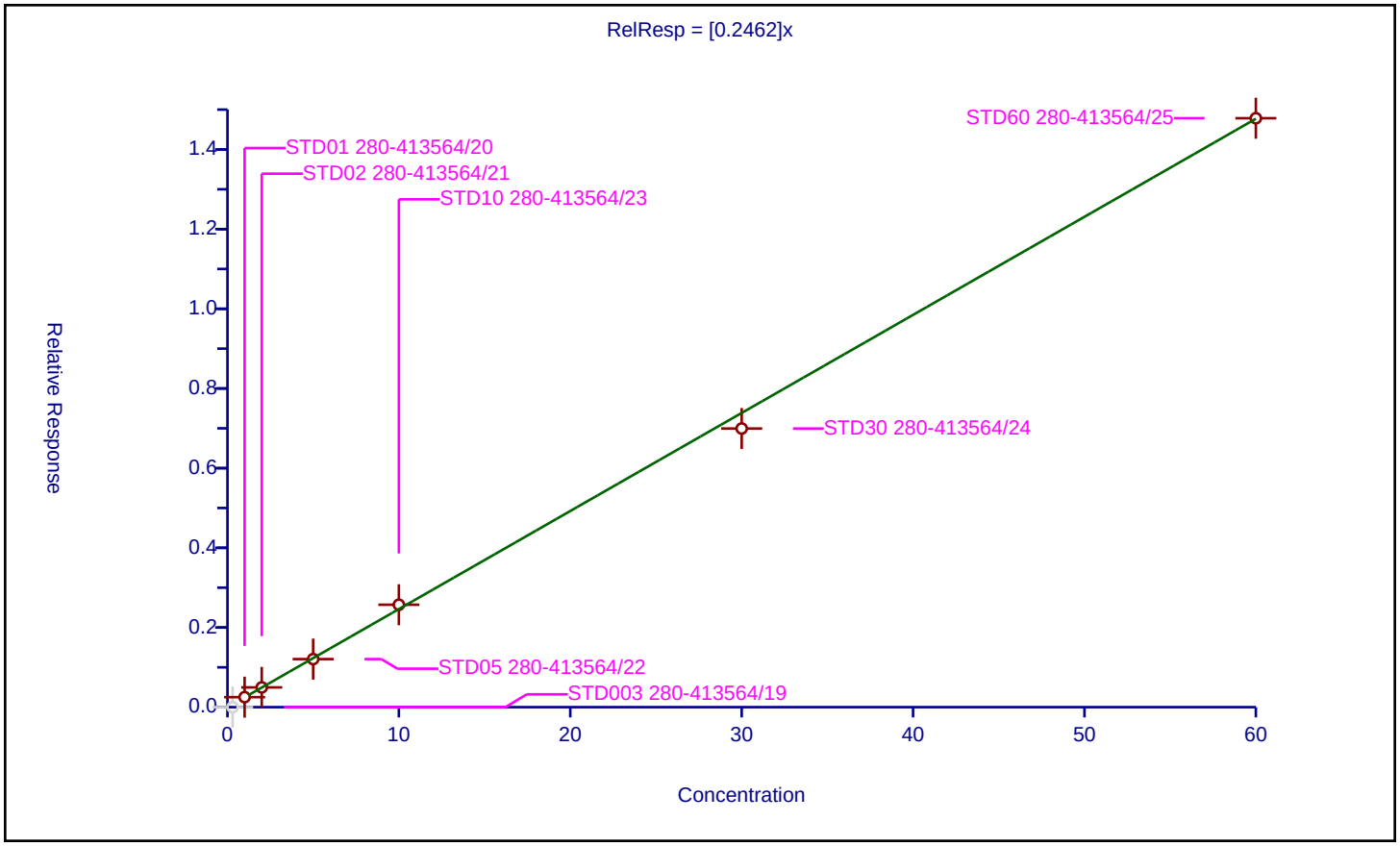
Curve Coefficients

Intercept:	0
Slope:	0.2462

Error Coefficients

Standard Error:	806000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.0	12.5	1677942.0	0.0	N
2	STD01 280-413564/20	1.0	0.2513	12.5	1575408.0	0.2513	Y
3	STD02 280-413564/21	2.0	0.495943	12.5	1500424.0	0.247972	Y
4	STD05 280-413564/22	5.0	1.205987	12.5	1401020.0	0.241197	Y
5	STD10 280-413564/23	10.0	2.570974	12.5	1369972.0	0.257097	Y
6	STD30 280-413564/24	30.0	6.994267	12.5	1363792.0	0.233142	Y
7	STD60 280-413564/25	60.0	14.783154	12.5	1354546.0	0.246386	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

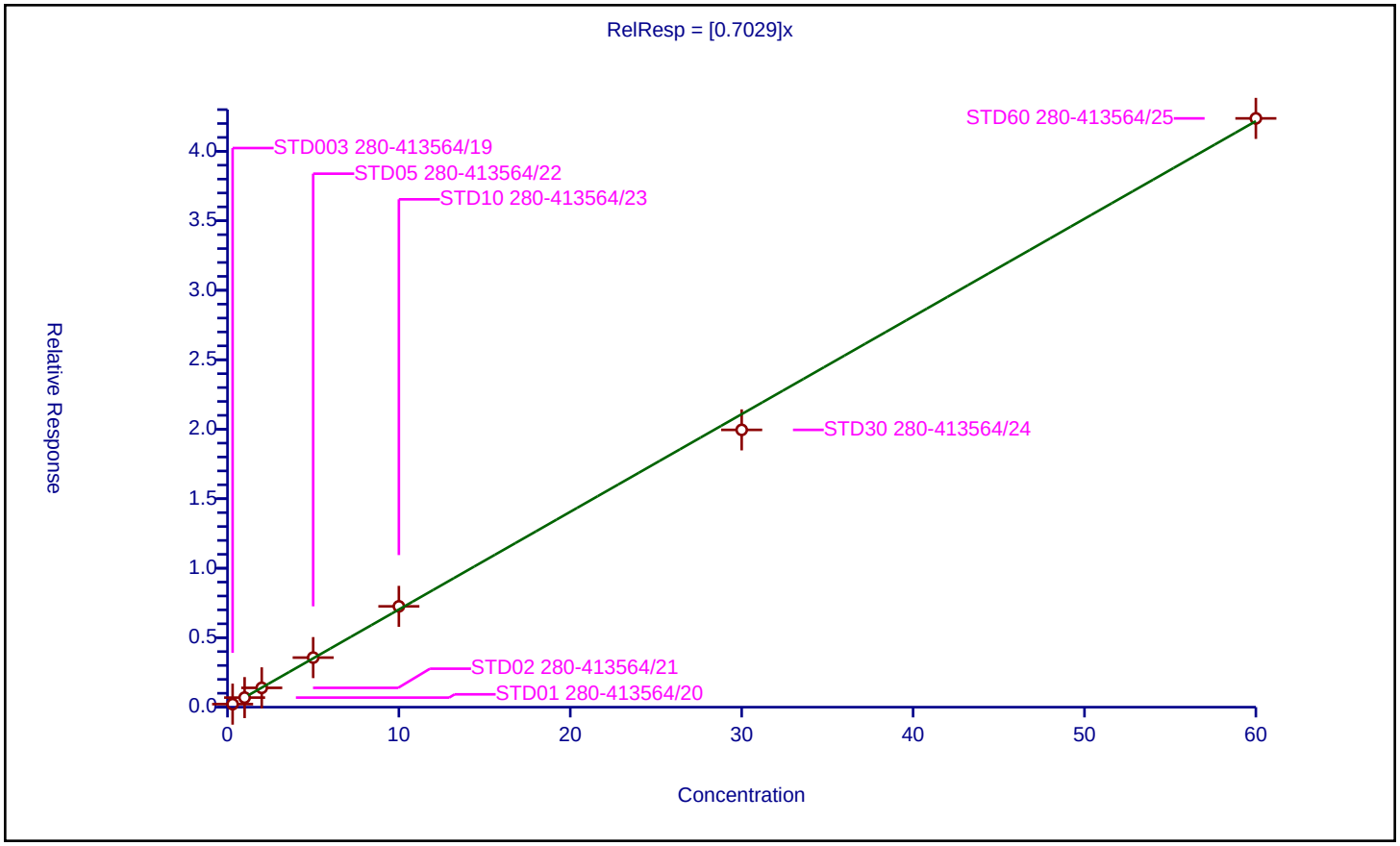
Curve Coefficients

Intercept:	0
Slope:	0.7029

Error Coefficients

Standard Error:	2110000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.217841	12.5	1677942.0	0.726138	Y
2	STD01 280-413564/20	1.0	0.688465	12.5	1575408.0	0.688465	Y
3	STD02 280-413564/21	2.0	1.39089	12.5	1500424.0	0.695445	Y
4	STD05 280-413564/22	5.0	3.566348	12.5	1401020.0	0.71327	Y
5	STD10 280-413564/23	10.0	7.254327	12.5	1369972.0	0.725433	Y
6	STD30 280-413564/24	30.0	19.953318	12.5	1363792.0	0.665111	Y
7	STD60 280-413564/25	60.0	42.368753	12.5	1354546.0	0.706146	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

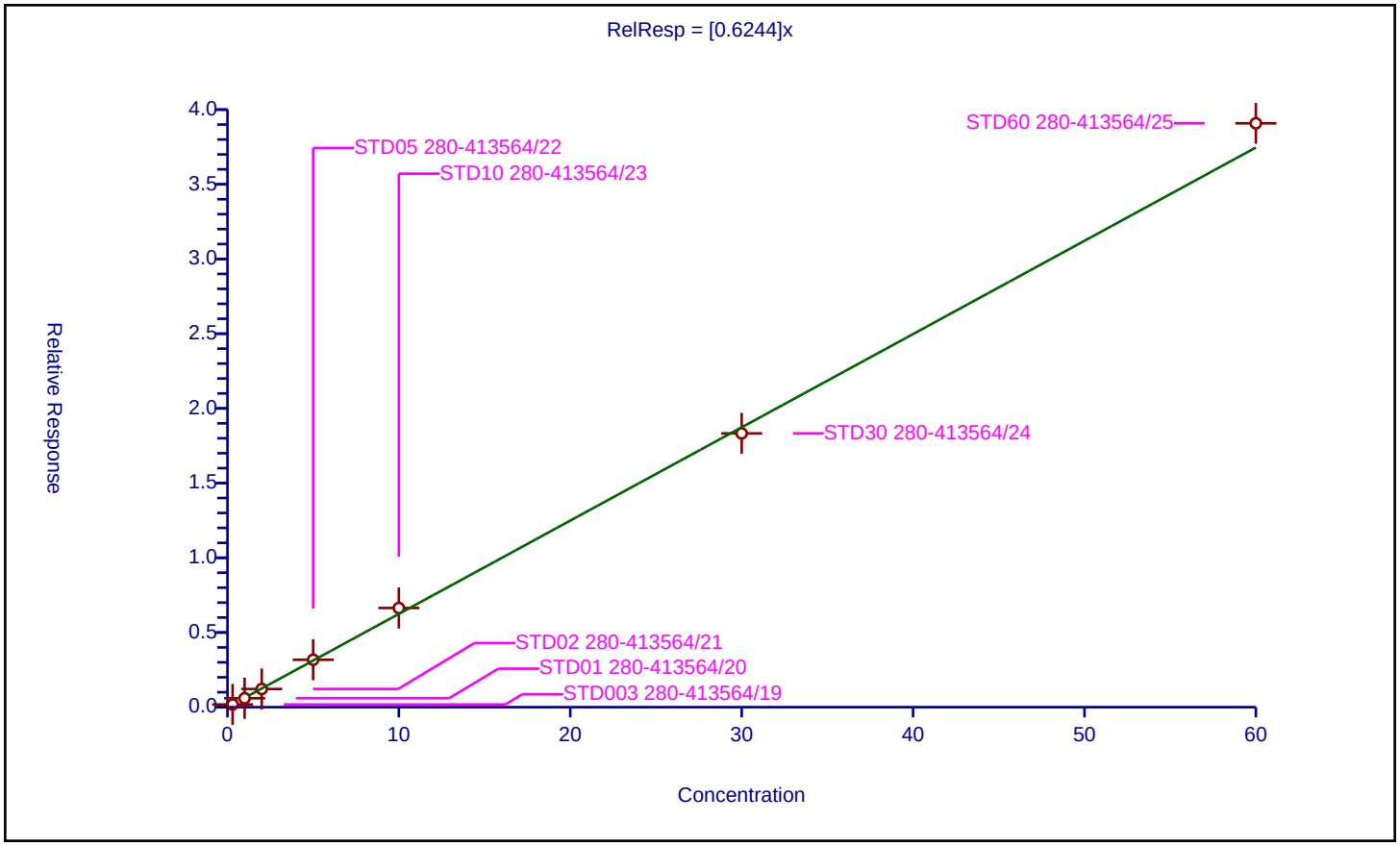
Curve Coefficients

Intercept:	0
Slope:	0.6244

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	0.3	0.18148	12.5	1677942.0	0.604933	Y
2	STD01 280-413564/20	1.0	0.597115	12.5	1575408.0	0.597115	Y
3	STD02 280-413564/21	2.0	1.215656	12.5	1500424.0	0.607828	Y
4	STD05 280-413564/22	5.0	3.172849	12.5	1401020.0	0.63457	Y
5	STD10 280-413564/23	10.0	6.639132	12.5	1369972.0	0.663913	Y
6	STD30 280-413564/24	30.0	18.325439	12.5	1363792.0	0.610848	Y
7	STD60 280-413564/25	60.0	39.082061	12.5	1354546.0	0.651368	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

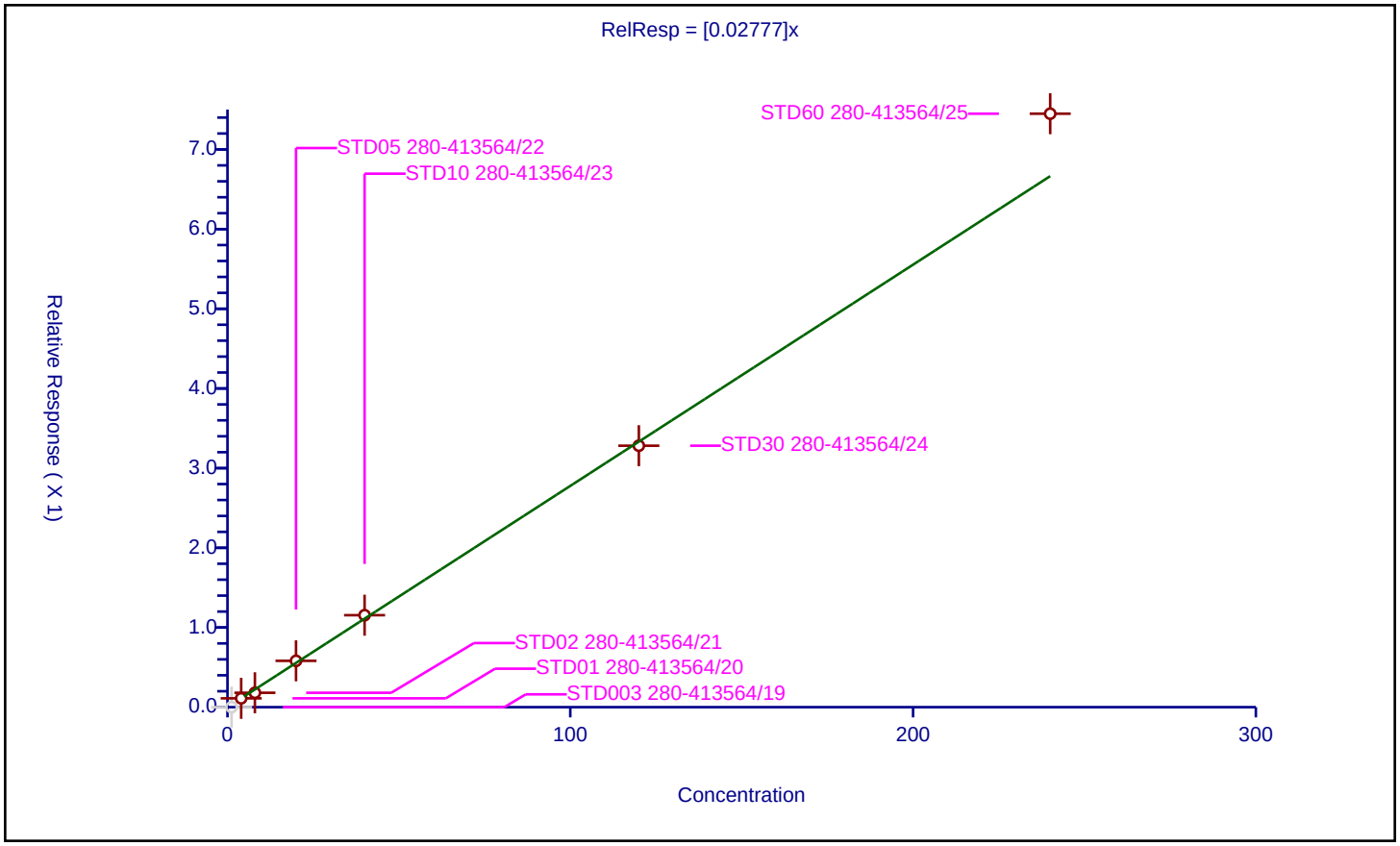
Curve Coefficients

Intercept:	0
Slope:	0.02777

Error Coefficients

Standard Error:	400000
Relative Standard Error:	10.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	1.2	0.0	12.5	1677942.0	0.0	N
2	STD01 280-413564/20	4.0	0.110924	12.5	1575408.0	0.027731	Y
3	STD02 280-413564/21	8.0	0.180549	12.5	1500424.0	0.022569	Y
4	STD05 280-413564/22	20.0	0.581558	12.5	1401020.0	0.029078	Y
5	STD10 280-413564/23	40.0	1.154358	12.5	1369972.0	0.028859	Y
6	STD30 280-413564/24	120.0	3.281521	12.5	1363792.0	0.027346	Y
7	STD60 280-413564/25	240.0	7.448593	12.5	1354546.0	0.031036	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

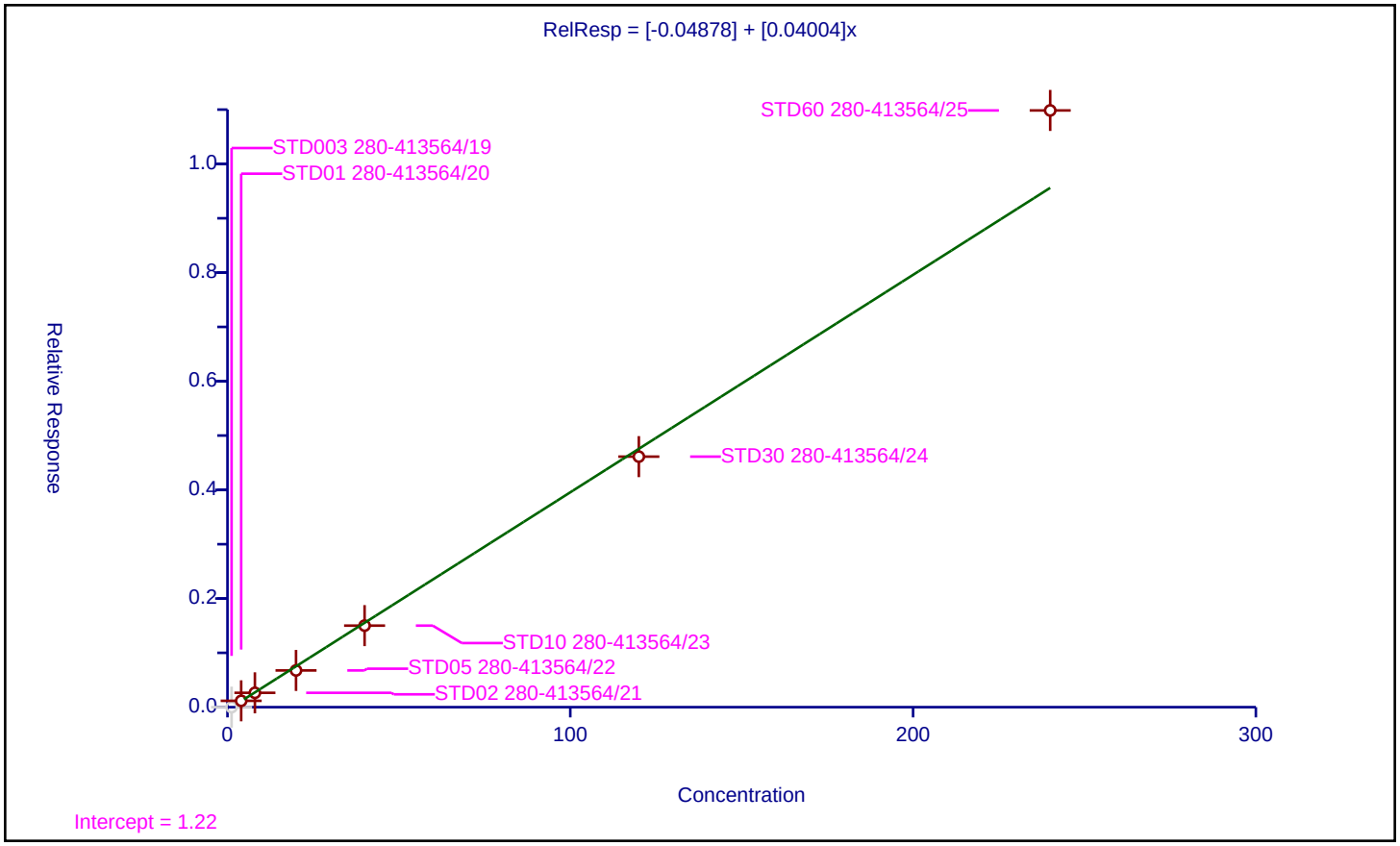
Curve Coefficients

Intercept:	-0.04878
Slope:	0.04004

Error Coefficients

Standard Error:	653000
Relative Standard Error:	9.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	1.2	0.0	12.5	1677942.0	0.0	N
2	STD01 280-413564/20	4.0	0.116573	12.5	1575408.0	0.029143	Y
3	STD02 280-413564/21	8.0	0.263959	12.5	1500424.0	0.032995	Y
4	STD05 280-413564/22	20.0	0.6759	12.5	1401020.0	0.033795	Y
5	STD10 280-413564/23	40.0	1.500834	12.5	1369972.0	0.037521	Y
6	STD30 280-413564/24	120.0	4.611618	12.5	1363792.0	0.03843	Y
7	STD60 280-413564/25	240.0	10.984631	12.5	1354546.0	0.045769	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

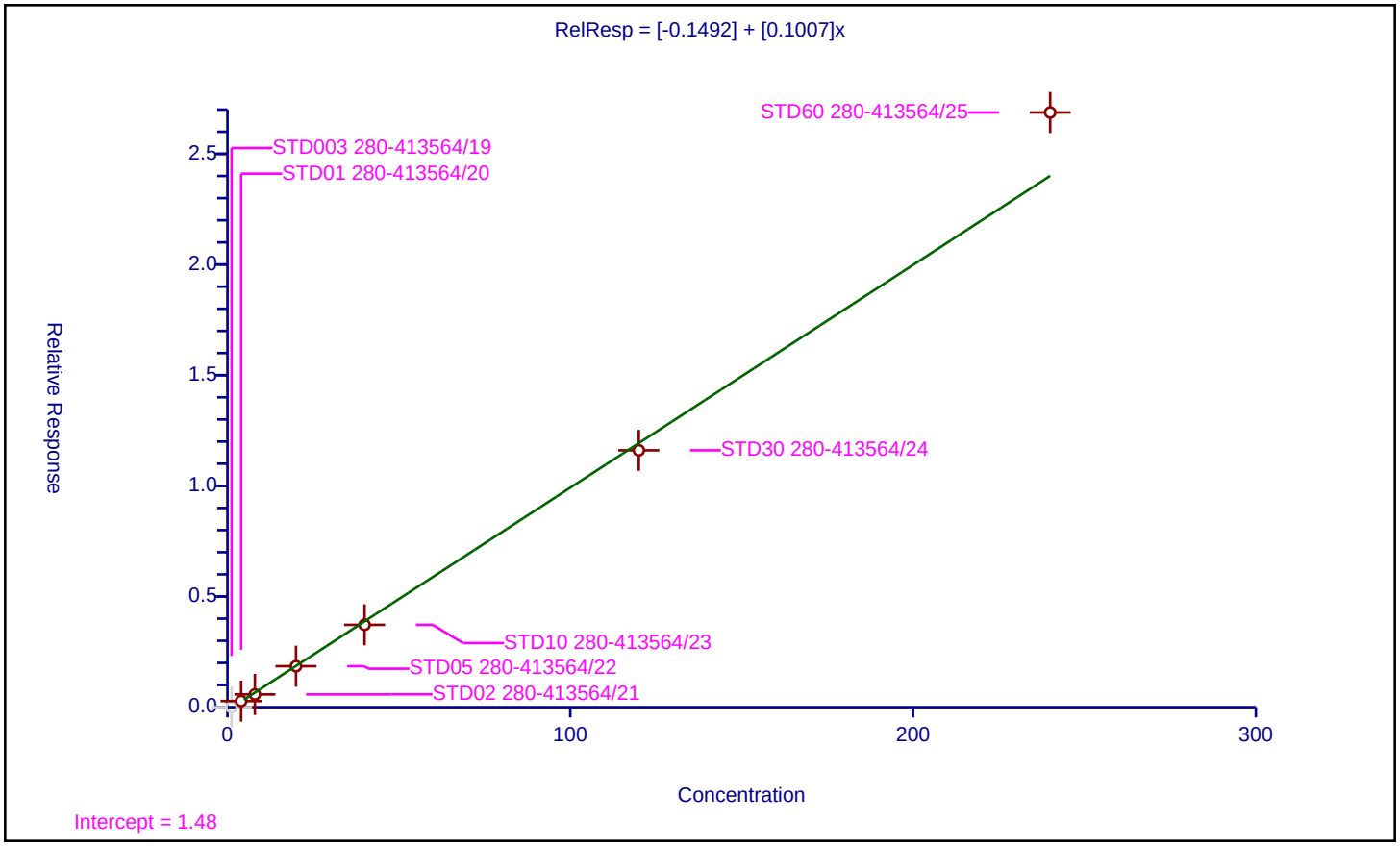
Curve Coefficients

Intercept:	-0.1492
Slope:	0.1007

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	8.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	1.2	0.0	12.5	1677942.0	0.0	N
2	STD01 280-413564/20	4.0	0.275206	12.5	1575408.0	0.068802	Y
3	STD02 280-413564/21	8.0	0.575421	12.5	1500424.0	0.071928	Y
4	STD05 280-413564/22	20.0	1.84992	12.5	1401020.0	0.092496	Y
5	STD10 280-413564/23	40.0	3.720167	12.5	1369972.0	0.093004	Y
6	STD30 280-413564/24	120.0	11.605133	12.5	1363792.0	0.096709	Y
7	STD60 280-413564/25	240.0	26.870848	12.5	1354546.0	0.111962	Y



Calibration / 2-Hexanone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

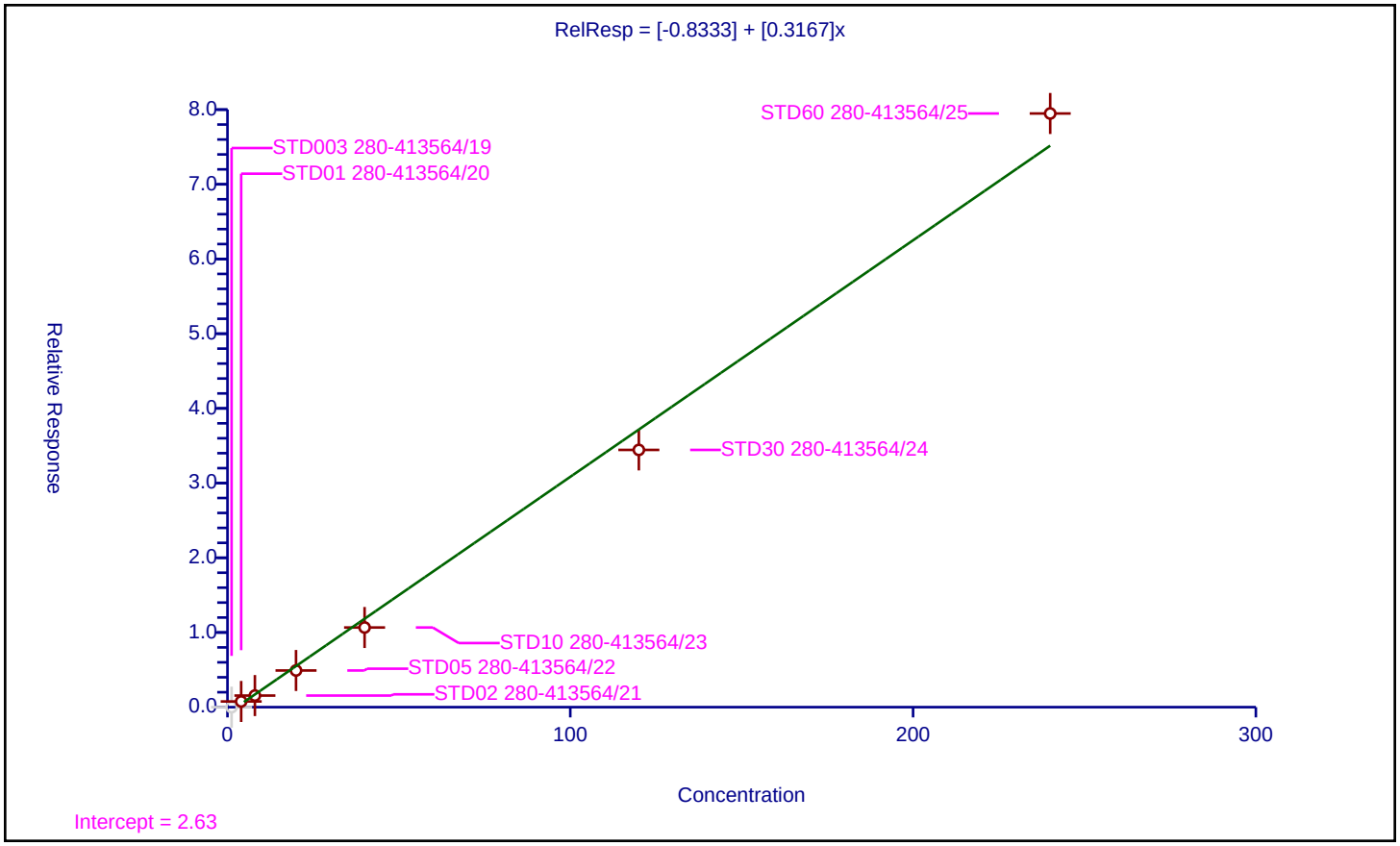
Curve Coefficients

Intercept:	-0.8333
Slope:	0.3167

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	15.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	1.2	0.0	12.5	382250.0	0.0	N
2	STD01 280-413564/20	4.0	0.76213	12.5	346988.0	0.190533	Y
3	STD02 280-413564/21	8.0	1.551633	12.5	335743.0	0.193954	Y
4	STD05 280-413564/22	20.0	4.908608	12.5	322403.0	0.24543	Y
5	STD10 280-413564/23	40.0	10.664936	12.5	310139.0	0.266623	Y
6	STD30 280-413564/24	120.0	34.440035	12.5	309403.0	0.287	Y
7	STD60 280-413564/25	240.0	79.481405	12.5	304631.0	0.331173	Y



Calibration / Cyclohexanone

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

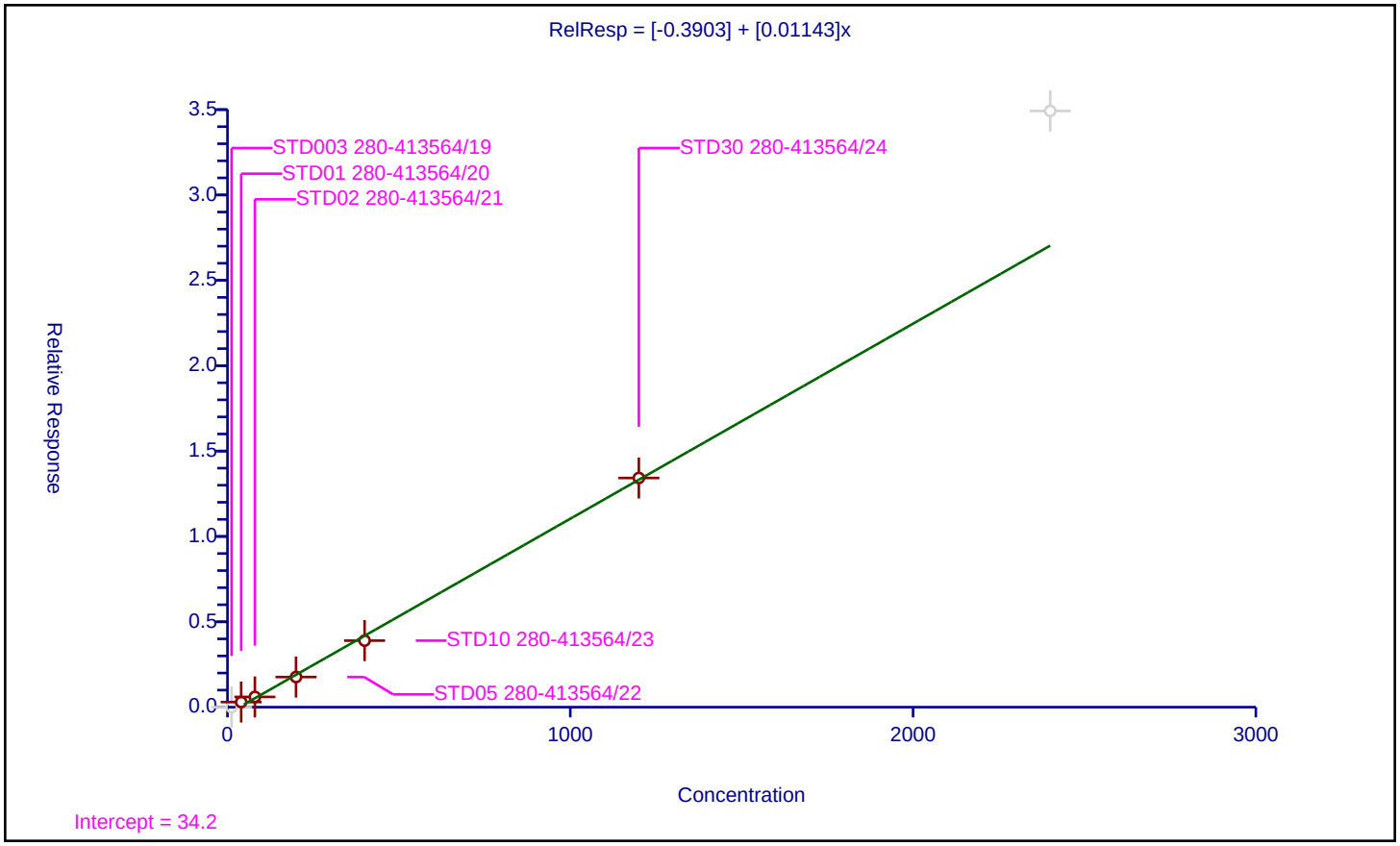
Curve Coefficients

Intercept:	-0.3903
Slope:	0.01143

Error Coefficients

Standard Error:	202000
Relative Standard Error:	30.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD003 280-413564/19	12.0	0.0	12.5	382250.0	0.0	N
2	STD01 280-413564/20	40.0	0.29983	12.5	346988.0	0.007496	Y
3	STD02 280-413564/21	80.0	0.600608	12.5	335743.0	0.007508	Y
4	STD05 280-413564/22	200.0	1.764329	12.5	322403.0	0.008822	Y
5	STD10 280-413564/23	400.0	3.897849	12.5	310139.0	0.009745	Y
6	STD30 280-413564/24	1200.0	13.423795	12.5	309403.0	0.011186	Y
7	STD60 280-413564/25	2400.0	34.921019	12.5	304631.0	0.01455	N



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-412916/24 Calibration Date: 04/27/2018 15:44

Instrument ID: VMS_G Calib Start Date: 04/27/2018 13:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/27/2018 15:24

Lab File ID: G7223.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin2		0.0014		640	600	6.6	20.0
Isopropyl alcohol	Ave	0.0067	0.0061		90.0	100	-10.0	20.0
Acetonitrile	Ave	0.0164	0.0175		107	100	7.0	20.0
Diisopropyl ether	Ave	0.1676	0.1885		11.2	10.0	12.4	20.0
2-Chloro-1,3-butadiene	Ave	0.5759	0.6023		10.5	10.0	4.6	20.0
Tert-butyl ethyl ether	Ave	0.5668	0.6385		11.3	10.0	12.6	20.0
Ethyl acetate	Ave	0.0827	0.0905		21.9	20.0	9.5	20.0
Propionitrile	Ave	0.0117	0.0127		108	100	8.2	20.0
Methacrylonitrile	Ave	0.0762	0.0802		105	100	5.3	20.0
Tert-amyl methyl ether	Ave	0.3757	0.4162		11.1	10.0	10.8	20.0
2-Nitropropane	Ave	0.2701	0.2794		20.7	20.0	3.4	20.0
n-Butanol	Lin		0.0022		294	250	17.8	20.0
Methyl methacrylate	Lin2		0.0231		21.4	20.0	6.9	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1142	0.1118		19.6	20.0	-2.1	20.0
1,2,3-Trimethylbenzene	Ave	3.333	3.474		10.4	10.0	4.2	20.0
Dibromofluoromethane (Surr)	Ave	0.3298	0.3306		10.0	10.0	0.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1964	0.1972		10.0	10.0	0.4	20.0
Toluene-d8 (Surr)	Ave	5.510	5.473		9.93	10.0	-0.7	20.0
4-Bromofluorobenzene (Surr)	Ave	1.258	1.285		10.2	10.0	2.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7223.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 27-Apr-2018 15:44:30 ALS Bottle#: 25 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:16:49 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.855	4.863	-0.008	0	118626	250.0	250.0	
* 1 Fluorobenzene	96	6.872	6.880	-0.008	98	1126003	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.568	9.567	0.001	87	215981	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.634	11.633	0.001	94	262997	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.291	6.290	0.001	93	297788	10.0	10.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.596	6.595	0.001	0	177647	10.0	10.0	
$ 7 Toluene-d8 (Surr)	98	8.220	8.219	0.001	93	945708	10.0	9.93	
$ 8 4-Bromofluorobenzene (Surr	95	10.631	10.629	0.002	91	270270	10.0	10.2	
30 Ethylene oxide	43	3.812	3.810	0.002	99	429983	1000.0	1031.9	
34 Ethanol	45	4.186	4.194	-0.008	98	78025	600.0	639.5	
39 Propene oxide	58	4.412	4.421	-0.008	96	2064321	1000.0	1135.4	
43 Isopropyl alcohol	45	4.589	4.598	-0.009	97	54588	100.0	90.0	
46 Acetonitrile	41	4.776	4.785	-0.009	99	157631	100.0	107.0	
58 Isopropyl ether	87	5.475	5.473	0.002	99	169755	10.0	11.2	
60 2-Chloro-1,3-butadiene	53	5.573	5.572	0.001	91	542543	10.0	10.5	
61 Tert-butyl ethyl ether	59	5.760	5.769	-0.009	98	575125	10.0	11.3	
63 Ethyl acetate	43	5.898	5.906	-0.008	98	163106	20.0	21.9	
64 Propionitrile	54	5.947	5.946	0.001	98	114492	100.0	108.2	
68 Methacrylonitrile	41	6.075	6.074	0.001	95	722697	100.0	105.3	
78 Tert-amyl methyl ether	73	6.705	6.703	0.002	94	374929	10.0	11.1	
89 2-Nitropropane	41	6.715	6.713	0.002	94	503348	20.0	20.7	
80 n-Butanol	56	6.941	6.939	0.002	97	48823	250.0	294.5	
83 Methyl methacrylate	100	7.354	7.353	0.001	96	41695	20.0	21.4	
101 Tetrahydrothiophene	60	9.047	9.045	0.002	95	39487	20.0	21.8	
112 cis-1,4-Dichloro-2-butene	53	10.503	10.501	0.002	0	47057	20.0	19.6	
128 1,2,3-Trimethylbenzene	105	11.674	11.672	0.002	98	730940	10.0	10.4	
11 1,3,5-Trichlorobenzene	180	12.943	12.942	0.001	97	307561	10.0	10.2	

Reagents:

MV-ARCH SS A_00090	Amount Added:	0.80	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Supp B_00020	Amount Added:	5.00	Units: uL

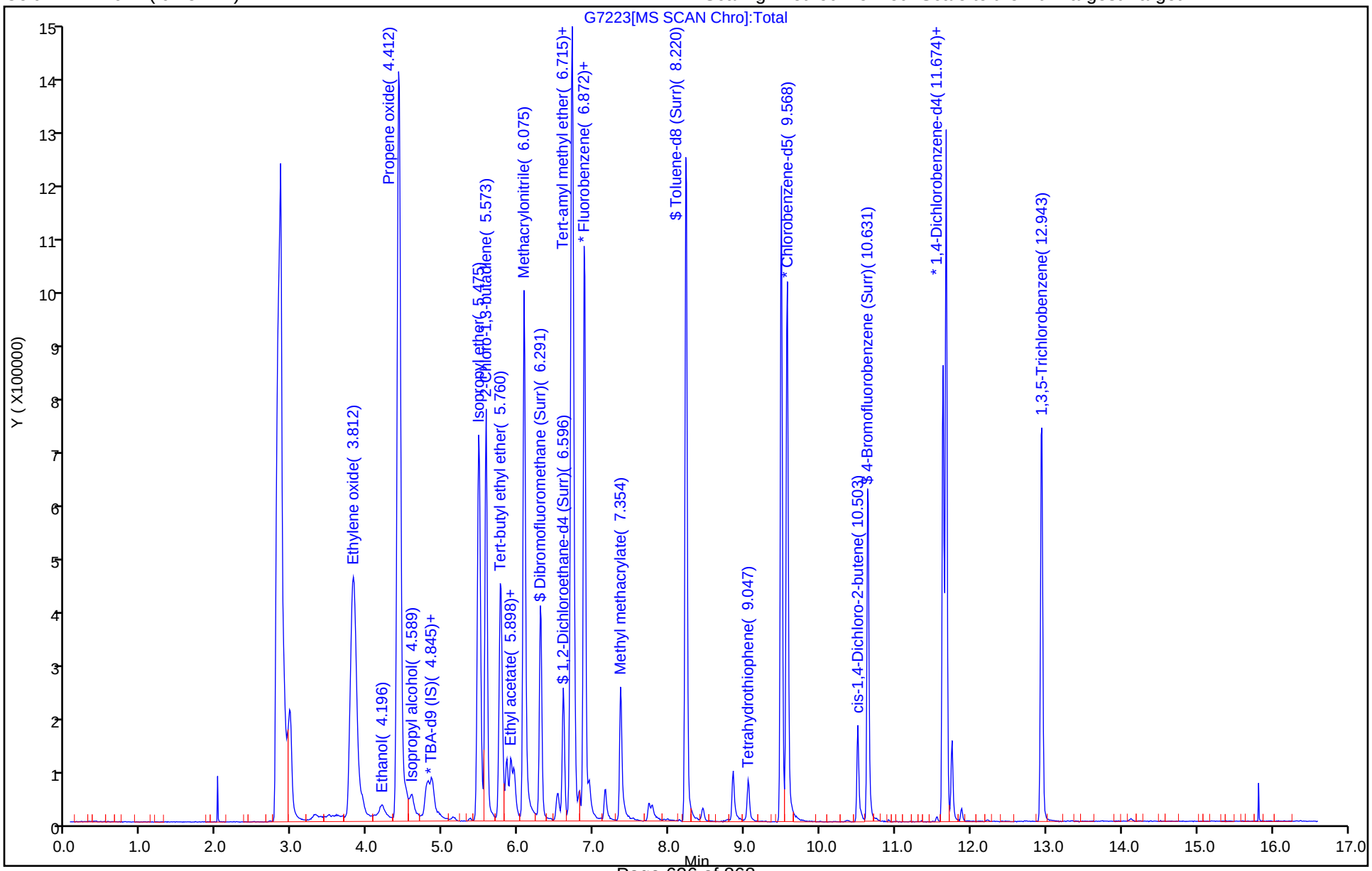
Report Date: 28-Apr-2018 08:16:56 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7223.D

Injection Date:	27-Apr-2018 15:44:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413150/17 Calibration Date: 04/30/2018 14:37

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7324.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4937	0.5371		10.9	10.0	8.8	20.0
Chloromethane	Lin2		0.5163	0.1000	11.1	10.0	11.1	20.0
Vinyl chloride	Lin		0.4318		11.5	10.0	14.5	20.0
Bromomethane	Lin2		0.2996		11.2	10.0	12.2	20.0
Chloroethane	Lin2		0.2062		11.4	10.0	13.6	20.0
Dichlorofluoromethane	Lin2		0.5902		11.3	10.0	12.7	20.0
Trichlorofluoromethane	Ave	0.5974	0.6105		10.2	10.0	2.2	20.0
Ethyl ether	Ave	0.1509	0.1475		9.77	10.0	-2.3	20.0
Acrolein	Ave	0.0163	0.0149		91.4	100	-8.6	20.0
Acetone	Lin1		0.0332		41.5	40.0	3.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3092	0.2766		8.95	10.0	-10.5	20.0
1,1-Dichloroethene	Ave	0.4305	0.3827		8.89	10.0	-11.1	20.0
Methyl iodide	Ave	0.7292	0.6682		9.16	10.0	-8.4	20.0
Methyl acetate	Ave	0.0931	0.0878		47.2	50.0	-5.6	20.0
3-Chloro-1-propene	Ave	0.8804	0.8086		9.18	10.0	-8.2	20.0
Carbon disulfide	Ave	2.014	1.727		8.57	10.0	-14.3	20.0
t-Butyl alcohol	Ave	1.516	1.289		85.1	100	-14.9	20.0
Methylene Chloride	Ave	0.3769	0.3332		8.84	10.0	-11.6	20.0
Acrylonitrile	Ave	0.0416	0.0383		92.1	100	-7.9	20.0
Methyl tert-butyl ether	Ave	0.3684	0.3717		10.1	10.0	0.9	20.0
trans-1,2-Dichloroethene	Ave	0.4504	0.4090		9.08	10.0	-9.2	20.0
Hexane	Ave	3.776	3.400		9.00	10.0	-10.0	20.0
Vinyl acetate	Ave	0.3129	0.2831		18.1	20.0	-9.5	20.0
1,1-Dichloroethane	Ave	0.7713	0.6627	0.1000	8.59	10.0	-14.1	20.0
2-Butanone (MEK)	Ave	0.0459	0.0461		40.2	40.0	0.5	20.0
cis-1,2-Dichloroethene	Ave	0.4228	0.3766		8.91	10.0	-10.9	20.0
sec-Butyl Alcohol	Ave	1.372	1.273		278	300	-7.2	20.0
2,2-Dichloropropane	Ave	0.5621	0.4750		8.45	10.0	-15.5	20.0
Bromochloromethane	Ave	0.1315	0.1209		9.20	10.0	-8.0	20.0
Chloroform	Ave	0.6378	0.5607		8.79	10.0	-12.1	20.0
Tetrahydrofuran	Ave	0.0305	0.0280		18.4	20.0	-8.1	20.0
1,1,1-Trichloroethane	Ave	0.5599	0.4879		8.71	10.0	-12.9	20.0
Isobutyl alcohol	Ave	0.4657	0.5206		279	250	11.8	20.0
Cyclohexane	Ave	0.8236	0.7471		9.07	10.0	-9.3	20.0
1,1-Dichloropropene	Ave	0.5890	0.5362		9.10	10.0	-9.0	20.0
Carbon tetrachloride	Ave	0.4923	0.4349		8.84	10.0	-11.6	20.0
1,2-Dichloroethane	Ave	0.2861	0.2434		8.51	10.0	-14.9	20.0
Benzene	Ave	1.490	1.313		8.82	10.0	-11.8	20.0
Trichloroethene	Ave	0.4134	0.3642		8.81	10.0	-11.9	20.0
2-Pentanone	Ave	0.0642	0.0644		40.2	40.0	0.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413150/17 Calibration Date: 04/30/2018 14:37

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7324.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3547	0.3132		8.83	10.0	-11.7	20.0
Methylcyclohexane	Ave	0.6631	0.5761		8.69	10.0	-13.1	20.0
1,4-Dioxane	Lin2		0.0009		191	200	-4.7	20.0
Dibromomethane	Ave	0.1378	0.1204		8.74	10.0	-12.6	20.0
Bromodichloromethane	Ave	0.3655	0.3225		8.82	10.0	-11.8	20.0
2-Chloroethyl vinyl ether	Lin1		0.0290		8.18	10.0	-18.2	20.0
cis-1,3-Dichloropropene	Ave	1.890	1.841		9.74	10.0	-2.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0980	0.1033		42.2	40.0	5.4	20.0
Toluene	Ave	1.431	1.250		8.74	10.0	-12.6	20.0
trans-1,3-Dichloropropene	Lin2		0.2443		9.41	10.0	-5.9	20.0
Ethyl methacrylate	Lin2		0.6235		9.41	10.0	-5.9	20.0
1,1,2-Trichloroethane	Ave	0.1512	0.1421		9.40	10.0	-6.0	20.0
1,3-Dichloropropane	Ave	1.309	1.211		9.25	10.0	-7.5	20.0
2-Hexanone	Ave	0.2786	0.3030		43.5	40.0	8.7	20.0
Tetrachloroethene	Ave	1.581	1.407		8.90	10.0	-11.0	20.0
Dibromochloromethane	Ave	0.9250	0.8877		9.60	10.0	-4.0	20.0
1,2-Dibromoethane	Ave	0.7169	0.6896		9.62	10.0	-3.8	20.0
1-Chlorohexane	Ave	2.546	2.475		9.72	10.0	-2.8	20.0
Chlorobenzene	Ave	4.012	3.627	0.3000	9.04	10.0	-9.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.144	1.133		9.90	10.0	-1.0	20.0
Ethylbenzene	Ave	2.163	2.023		9.35	10.0	-6.5	20.0
m,p-Xylene	Ave	2.626	2.475		9.43	10.0	-5.7	20.0
o-Xylene	Ave	2.291	2.266		9.89	10.0	-1.1	20.0
Styrene	Lin2		3.309		9.30	10.0	-7.0	20.0
Bromoform	Ave	0.4176	0.4018	0.1000	9.62	10.0	-3.8	20.0
Isopropylbenzene	Ave	5.263	5.051		9.60	10.0	-4.0	20.0
Cyclohexanone	Ave	0.0129	0.0132		409	400	2.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6224	0.5405	0.3000	8.68	10.0	-13.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0996		9.07	10.0	-9.3	20.0
1,2,3-Trichloropropane	Ave	0.1195	0.1138		9.52	10.0	-4.8	20.0
Bromobenzene	Ave	1.048	0.9779		9.33	10.0	-6.7	20.0
N-Propylbenzene	Ave	1.336	1.276		9.55	10.0	-4.5	20.0
2-Chlorotoluene	Ave	1.158	1.061		9.16	10.0	-8.4	20.0
1,3,5-Trimethylbenzene	Ave	4.110	3.851		9.37	10.0	-6.3	20.0
4-Chlorotoluene	Ave	1.138	1.054		9.26	10.0	-7.4	20.0
tert-Butylbenzene	Ave	3.833	3.622		9.45	10.0	-5.5	20.0
1,2,4-Trimethylbenzene	Ave	3.889	3.666		9.43	10.0	-5.7	20.0
sec-Butylbenzene	Ave	0.9648	0.9173		9.51	10.0	-4.9	20.0
4-Isopropyltoluene	Ave	4.177	3.895		9.33	10.0	-6.7	20.0
1,3-Dichlorobenzene	Ave	2.057	1.811		8.81	10.0	-11.9	20.0
1,4-Dichlorobenzene	Ave	2.066	1.813		8.77	10.0	-12.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413150/17 Calibration Date: 04/30/2018 14:37

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7324.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	4.447	4.218		9.48	10.0	-5.2	20.0
1,2-Dichlorobenzene	Ave	1.591	1.445		9.08	10.0	-9.2	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0536		8.25	10.0	-17.5	20.0
1,2,4-Trichlorobenzene	Ave	0.8925	0.8510		9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.7560	0.6690		8.85	10.0	-11.5	20.0
Naphthalene	Lin1		0.8471		8.55	10.0	-14.5	20.0
1,2,3-Trichlorobenzene	Ave	0.7154	0.6707		9.37	10.0	-6.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7324.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 30-Apr-2018 14:37:30 ALS Bottle#: 21 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:51:08 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: newcomer Date: 02-May-2018 01:35:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.881	4.878	0.003	0	176749	250.0	250.0	
* 1 Fluorobenzene	96	6.898	6.895	0.003	99	1672740	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.594	9.591	0.003	86	327319	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.651	11.647	0.004	96	409419	12.5	12.5	
25 Dichlorodifluoromethane	85	3.228	3.234	-0.006	99	718677	10.0	10.9	
27 Chloromethane	50	3.444	3.441	0.003	99	690882	10.0	11.1	
28 Vinyl chloride	62	3.563	3.569	-0.006	98	577774	10.0	11.5	
31 Bromomethane	94	3.907	3.904	0.003	90	400953	10.0	11.2	
32 Chloroethane	64	3.966	3.963	0.003	98	275872	10.0	11.4	
33 Dichlorofluoromethane	67	4.114	4.110	0.004	96	789757	10.0	11.3	
35 Trichlorofluoromethane	101	4.212	4.218	-0.006	98	816962	10.0	10.2	
38 Ethyl ether	59	4.360	4.356	0.004	96	197371	10.0	9.77	
41 Acrolein	56	4.487	4.484	0.003	99	198768	100.0	91.4	
42 Acetone	43	4.586	4.582	0.004	98	177619	40.0	41.5	
44 1,1,2-Trichloro-1,2,2-trif	151	4.615	4.612	0.003	96	370161	10.0	8.95	
45 1,1-Dichloroethene	96	4.635	4.622	0.013	97	512112	10.0	8.89	
47 Iodomethane	142	4.802	4.799	0.003	100	894167	10.0	9.16	
48 Methyl acetate	43	4.832	4.828	0.004	100	587494	50.0	47.2	
50 Carbon disulfide	76	4.881	4.878	0.003	99	2310710	10.0	8.57	
49 3-Chloro-1-propene	41	4.881	4.878	0.003	91	1081993	10.0	9.18	
51 2-Methyl-2-propanol	59	4.940	4.937	0.003	93	91158	100.0	85.1	
52 Methylene Chloride	84	4.970	4.966	0.004	98	445830	10.0	8.84	
53 Acrylonitrile	53	5.117	5.114	0.003	99	512694	100.0	92.1	
54 Methyl tert-butyl ether	73	5.166	5.163	0.003	98	497389	10.0	10.1	
55 trans-1,2-Dichloroethene	96	5.196	5.193	0.003	97	547281	10.0	9.08	
56 Hexane	57	5.393	5.380	0.013	95	890231	10.0	9.00	
57 Vinyl acetate	43	5.481	5.468	0.013	96	757756	20.0	18.1	
59 1,1-Dichloroethane	63	5.521	5.517	0.004	96	886860	10.0	8.59	
62 2-Butanone (MEK)	43	5.924	5.921	0.003	97	246820	40.0	40.2	
66 cis-1,2-Dichloroethene	96	5.973	5.970	0.003	83	503953	10.0	8.91	
65 sec-Butyl Alcohol	45	5.983	5.980	0.003	96	270088	300.0	278.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2,2-Dichloropropane	77	6.003	5.999	0.004	93	635599	10.0	8.45	
69 Chlorobromomethane	128	6.170	6.167	0.003	92	161810	10.0	9.20	
70 Chloroform	83	6.190	6.186	0.004	95	750276	10.0	8.79	
71 Tetrahydrofuran	42	6.209	6.206	0.003	93	75021	20.0	18.4	
73 1,1,1-Trichloroethane	97	6.416	6.413	0.003	98	652907	10.0	8.71	
72 Isobutyl alcohol	41	6.426	6.423	0.004	94	92011	250.0	279.5	
74 Cyclohexane	56	6.495	6.491	0.004	97	999800	10.0	9.07	
75 1,1-Dichloropropene	75	6.534	6.521	0.013	96	717575	10.0	9.10	
76 Carbon tetrachloride	117	6.564	6.560	0.004	95	582036	10.0	8.84	
77 1,2-Dichloroethane	62	6.682	6.678	0.004	96	325747	10.0	8.51	
79 Benzene	78	6.711	6.708	0.003	97	1757193	10.0	8.82	
13 n-Heptane	43	6.839	6.826	0.013	98	1195255	10.0	9.61	
81 Trichloroethene	95	7.213	7.210	0.003	97	487326	10.0	8.81	
82 2-Pentanone	43	7.262	7.259	0.003	97	344845	40.0	40.2	
84 1,2-Dichloropropane	63	7.400	7.397	0.003	95	419140	10.0	8.83	
85 Methylcyclohexane	55	7.430	7.416	0.014	96	770948	10.0	8.69	
86 1,4-Dioxane	88	7.469	7.466	0.003	85	22761	200.0	190.6	
87 Dibromomethane	93	7.508	7.505	0.003	94	161146	10.0	8.74	
88 Dichlorobromomethane	83	7.597	7.593	0.004	98	431537	10.0	8.82	
90 2-Chloroethyl vinyl ether	63	7.784	7.780	0.004	91	38775	10.0	8.18	
91 cis-1,3-Dichloropropene	75	7.981	7.977	0.004	93	482124	10.0	9.74	
92 4-Methyl-2-pentanone (MIBK	43	8.059	8.056	0.003	97	552926	40.0	42.2	
93 Toluene	91	8.315	8.312	0.003	98	1673302	10.0	8.74	
95 trans-1,3-Dichloropropene	75	8.433	8.430	0.003	98	326894	10.0	9.41	
94 Ethyl methacrylate	69	8.453	8.449	0.004	94	163266	10.0	9.41	
96 1,1,2-Trichloroethane	97	8.620	8.617	0.003	90	190197	10.0	9.40	
98 1,3-Dichloropropane	76	8.787	8.784	0.003	99	317045	10.0	9.25	
97 2-Hexanone	43	8.797	8.794	0.003	97	317333	40.0	43.5	
99 Tetrachloroethene	164	8.837	8.823	0.014	98	368501	10.0	8.90	
100 Chlorodibromomethane	129	9.024	9.020	0.004	90	232459	10.0	9.60	
102 Ethylene Dibromide	107	9.171	9.168	0.003	99	180574	10.0	9.62	
103 1-Chlorohexane	91	9.516	9.512	0.004	96	648071	10.0	9.72	
104 Chlorobenzene	112	9.614	9.611	0.003	95	949803	10.0	9.04	
105 1,1,1,2-Tetrachloroethane	131	9.663	9.660	0.003	97	296794	10.0	9.90	
106 Ethylbenzene	106	9.683	9.679	0.004	99	529625	10.0	9.35	
107 m-Xylene & p-Xylene	106	9.791	9.788	0.003	0	648165	10.0	9.43	
109 Styrene	104	10.185	10.181	0.004	85	866489	10.0	9.30	
108 o-Xylene	106	10.185	10.181	0.004	88	593376	10.0	9.89	
110 Bromoform	173	10.391	10.388	0.003	95	105206	10.0	9.62	
111 Isopropylbenzene	105	10.500	10.496	0.004	96	1654423	10.0	9.60	
113 Cyclohexanone	55	10.608	10.604	0.004	96	137964	400.0	409.2	
114 1,1,2,2-Tetrachloroethane	83	10.716	10.713	0.003	91	177034	10.0	8.68	
115 trans-1,4-Dichloro-2-buten	53	10.765	10.762	0.003	77	32626	10.0	9.07	
116 1,2,3-Trichloropropane	110	10.785	10.781	0.004	82	37257	10.0	9.52	
117 Bromobenzene	156	10.824	10.821	0.003	89	320296	10.0	9.33	
118 N-Propylbenzene	120	10.854	10.850	0.004	99	417911	10.0	9.55	
120 2-Chlorotoluene	126	10.962	10.959	0.003	96	347535	10.0	9.16	
119 1,3,5-Trimethylbenzene	105	10.982	10.978	0.004	95	1261414	10.0	9.37	
121 4-Chlorotoluene	126	11.051	11.047	0.004	98	345102	10.0	9.26	
122 tert-Butylbenzene	119	11.277	11.273	0.004	94	1186412	10.0	9.45	
123 1,2,4-Trimethylbenzene	105	11.316	11.313	0.003	98	1200660	10.0	9.43	
124 sec-Butylbenzene	134	11.464	11.460	0.004	95	300439	10.0	9.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.572	11.569	0.003	98	1275858	10.0	9.33	
126 1,3-Dichlorobenzene	146	11.602	11.598	0.004	99	593324	10.0	8.81	
127 1,4-Dichlorobenzene	146	11.670	11.667	0.003	94	593866	10.0	8.77	
129 n-Butylbenzene	91	11.936	11.933	0.003	99	1381644	10.0	9.48	
130 1,2-Dichlorobenzene	146	12.025	12.021	0.004	97	473139	10.0	9.08	
131 1,2-Dibromo-3-Chloropropan	157	12.743	12.730	0.013	78	17541	10.0	8.25	
132 1,2,4-Trichlorobenzene	180	13.629	13.625	0.004	95	278724	10.0	9.54	
133 Hexachlorobutadiene	225	13.796	13.792	0.004	98	219114	10.0	8.85	
134 Naphthalene	128	13.943	13.940	0.003	97	277458	10.0	8.55	
135 1,2,3-Trichlorobenzene	180	14.239	14.225	0.014	95	219670	10.0	9.37	
S 142 1,2-Dichloroethene, Total	96				0		20.0	18.0	
S 141 Xylenes, Total	106				0		20.0	19.3	
S 136 Trihalomethanes, Total	1				0		40.0	36.8	
S 139 1,3-Dichloropropene, Total	1				0		20.0	19.1	
S 137 Xylenes, Total (URS)	1				0		20.0	19.3	
S 140 1,2-Dichloroethene, Total	1				0		10.0	18.0	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main B_00020	Amount Added:	5.00	Units: uL
MV-Gas/Ket B_00041	Amount Added:	5.00	Units: uL
MV-SS 2-Cleve_00042	Amount Added:	5.00	Units: uL

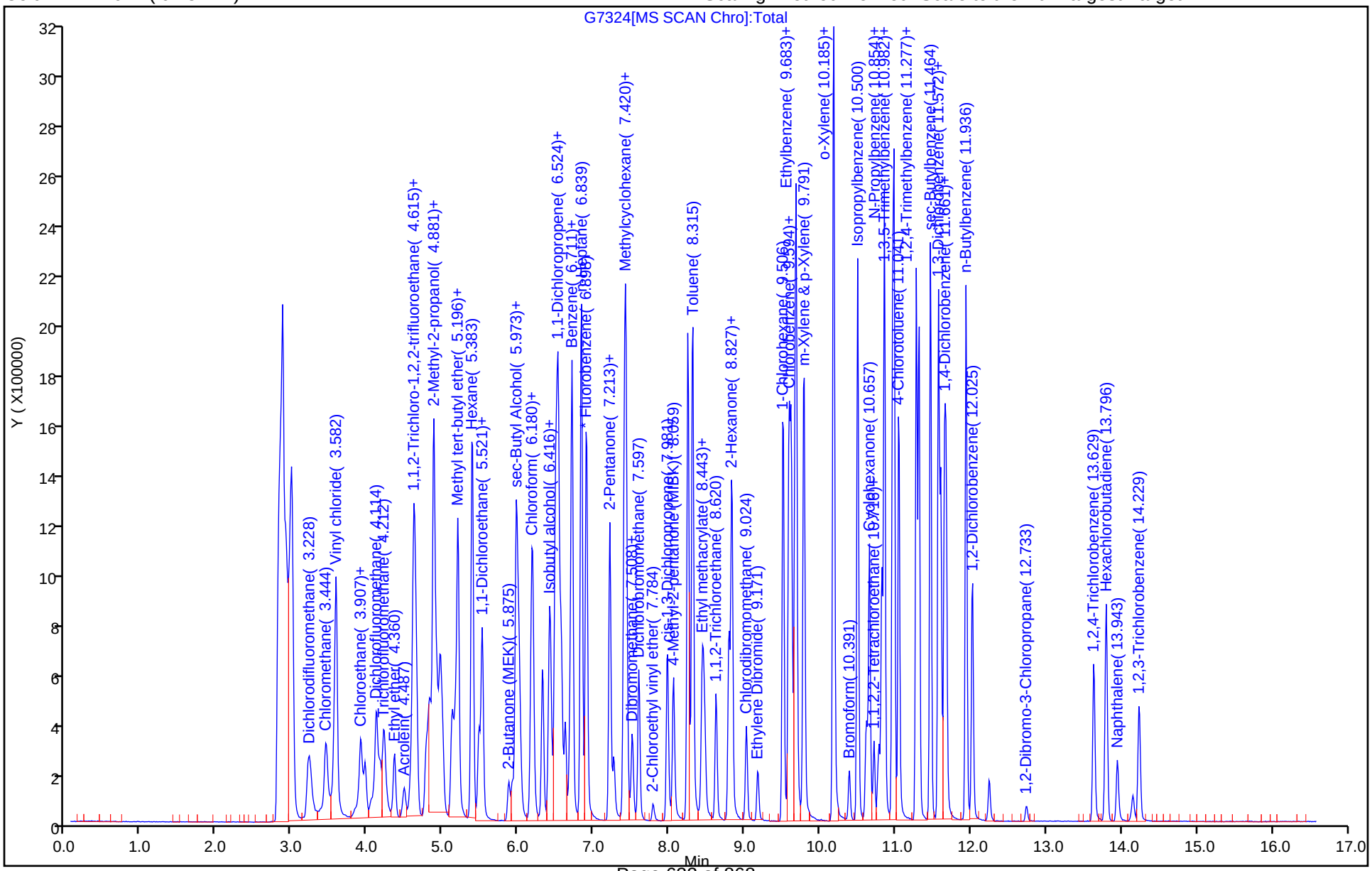
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7324.D

Injection Date:	30-Apr-2018 14:37:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413243/16 Calibration Date: 05/01/2018 01:16

Instrument ID: VMS_G Calib Start Date: 04/30/2018 23:12

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 05/01/2018 00:53

Lab File ID: G7352.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3501	0.3630		10.4	10.0	3.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2194	0.2270		10.3	10.0	3.5	20.0
Toluene-d8 (Surr)	Ave	5.774	5.870		10.2	10.0	1.7	20.0
4-Bromofluorobenzene (Surr)	Ave	1.381	1.423		10.3	10.0	3.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7352.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 01-May-2018 01:16:30 ALS Bottle#: 25 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_G
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:56:37 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: newcomer Date: 01-May-2018 01:54:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.866	4.876	-0.010	0	157514	250.0	250.0	
* 1 Fluorobenzene	96	6.893	6.893	0.000	98	1736808	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.579	9.579	0.000	87	338540	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.645	11.645	0.000	96	378800	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.302	6.312	-0.010	92	504408	10.0	10.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.607	6.607	0.000	0	315365	10.0	10.3	
$ 7 Toluene-d8 (Surr)	98	8.231	8.241	-0.010	94	1589733	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.641	10.642	-0.001	89	431161	10.0	10.3	

Reagents:

MV-568718-D_00014 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00095 Amount Added: 0.80 Units: uL

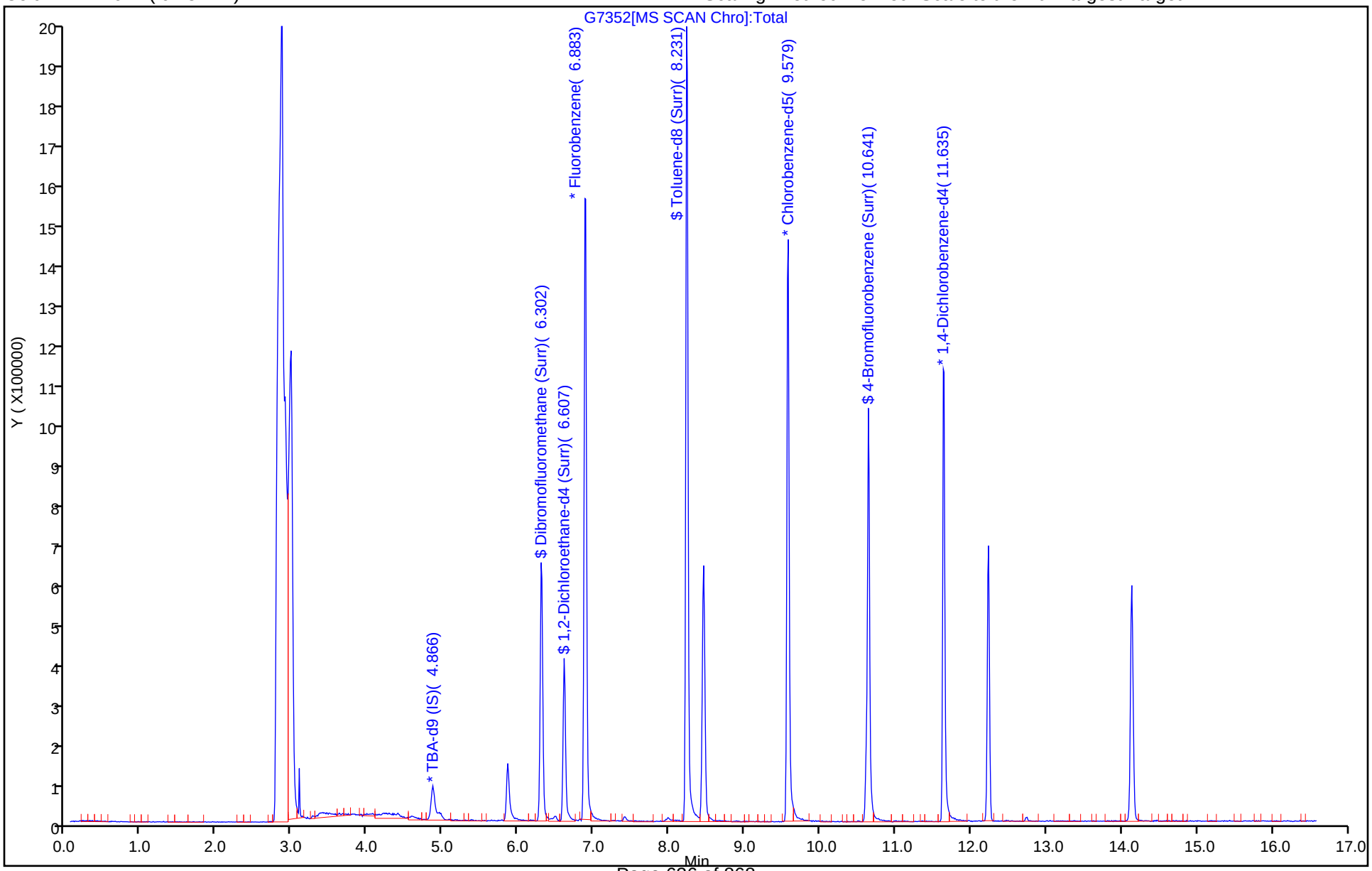
Report Date: 01-May-2018 08:56:39 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7352.D

Injection Date:	01-May-2018 01:16:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/2 Calibration Date: 05/03/2018 19:08

Instrument ID: VMS_G Calib Start Date: 04/30/2018 23:12

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 05/01/2018 00:53

Lab File ID: G7519.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3501	0.3324		9.49	10.0	-5.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2194	0.2466		11.2	10.0	12.4	20.0
Toluene-d8 (Surr)	Ave	5.774	5.840		10.1	10.0	1.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.381	1.432		10.4	10.0	3.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7519.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2018 19:08:30 ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:40 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 17:10:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.844	4.844	0.000	0	115159	250.0	250.0	
* 1 Fluorobenzene	96	6.871	6.871	0.000	98	1123321	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.557	9.557	0.000	95	213120	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.624	11.624	0.000	97	263490	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.281	6.281	0.000	91	298720	10.0	9.49	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.586	6.586	0.000	0	221621	10.0	11.2	
$ 7 Toluene-d8 (Surr)	98	8.209	8.209	0.000	95	995745	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.620	10.620	0.000	86	301774	10.0	10.4	
25 Dichlorodifluoromethane	85	3.191	3.191	0.000	99	455621	10.0	10.3	
27 Chloromethane	50	3.407	3.407	0.000	100	460727	10.0	11.0	
28 Vinyl chloride	62	3.526	3.526	0.000	99	377102	10.0	11.1	
31 Bromomethane	94	3.870	3.870	0.000	90	247180	10.0	10.3	
32 Chloroethane	64	3.929	3.929	0.000	98	165501	10.0	10.1	
33 Dichlorofluoromethane	67	4.077	4.077	0.000	97	466171	10.0	9.88	
35 Trichlorofluoromethane	101	4.175	4.175	0.000	99	536915	10.0	10.0	
38 Ethyl ether	59	4.323	4.323	0.000	92	129674	10.0	9.56	
41 Acrolein	56	4.450	4.450	0.000	98	139117	100.0	95.2	
42 Acetone	43	4.549	4.549	0.000	97	119718	40.0	41.7	
44 1,1,2-Trichloro-1,2,2-trif	151	4.578	4.578	0.000	97	227445	10.0	8.19	
45 1,1-Dichloroethene	96	4.588	4.588	0.000	96	341757	10.0	8.83	
47 Iodomethane	142	4.756	4.756	0.000	98	542932	10.0	8.28	
48 Methyl acetate	43	4.795	4.795	0.000	100	163141	20.0	19.5	
49 3-Chloro-1-propene	41	4.844	4.844	0.000	87	832680	10.0	10.5	
50 Carbon disulfide	76	4.844	4.844	0.000	99	1681712	10.0	9.29	
51 2-Methyl-2-propanol	59		4.913				ND	ND	U
52 Methylene Chloride	84	4.933	4.933	0.000	97	312121	10.0	9.22	
53 Acrylonitrile	53	5.090	5.090	0.000	99	356597	100.0	95.4	
54 Methyl tert-butyl ether	73	5.129	5.129	0.000	98	332519	10.0	10.0	
55 trans-1,2-Dichloroethene	96	5.159	5.159	0.000	95	363718	10.0	8.99	
56 Hexane	57	5.356	5.356	0.000	94	667306	10.0	10.4	
57 Vinyl acetate	43	5.444	5.444	0.000	96	666203	20.0	23.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.484	5.484	0.000	97	675504	10.0	9.75	
62 2-Butanone (MEK)	43	5.887	5.887	0.000	97	170185	40.0	41.3	
66 cis-1,2-Dichloroethene	96	5.936	5.936	0.000	88	348407	10.0	9.17	
65 sec-Butyl Alcohol	45	5.946	5.946	0.000	96	168069	300.0	265.9	
67 2,2-Dichloropropane	77	5.966	5.966	0.000	90	490895	10.0	9.72	
69 Chlorobromomethane	128	6.133	6.133	0.000	87	102012	10.0	8.63	
70 Chloroform	83	6.153	6.153	0.000	98	566722	10.0	9.89	
71 Tetrahydrofuran	42	6.172	6.172	0.000	91	55369	20.0	20.2	
73 1,1,1-Trichloroethane	97	6.379	6.379	0.000	97	480582	10.0	9.55	
72 Isobutyl alcohol	41	6.389	6.389	0.000	95	54345	250.0	253.3	M
74 Cyclohexane	56	6.458	6.458	0.000	98	719458	10.0	9.72	
75 1,1-Dichloropropene	75	6.497	6.497	0.000	93	540239	10.0	10.2	
76 Carbon tetrachloride	117	6.527	6.527	0.000	96	403928	10.0	9.13	
77 1,2-Dichloroethane	62	6.645	6.645	0.000	96	258787	10.0	10.1	
79 Benzene	78	6.674	6.674	0.000	97	1288140	10.0	9.62	
13 n-Heptane	43	6.802	6.802	0.000	96	975750	10.0	11.7	
81 Trichloroethene	95	7.176	7.176	0.000	92	356503	10.0	9.60	
82 2-Pentanone	43	7.235	7.235	0.000	97	257519	40.0	44.6	
84 1,2-Dichloropropane	63	7.363	7.363	0.000	92	313902	10.0	9.85	
85 Methylcyclohexane	55	7.393	7.393	0.000	96	599483	10.0	10.1	
86 1,4-Dioxane	88	7.432	7.432	0.000	92	13861	200.0	173.6	
87 Dibromomethane	93	7.471	7.471	0.000	88	122098	10.0	9.86	
88 Dichlorobromomethane	83	7.560	7.560	0.000	97	336636	10.0	10.2	
90 2-Chloroethyl vinyl ether	63	7.757	7.757	0.000	90	30213	10.0	9.31	
91 cis-1,3-Dichloropropene	75	7.944	7.944	0.000	90	341315	10.0	10.6	
92 4-Methyl-2-pentanone (MIBK	43	8.022	8.022	0.000	96	375131	40.0	42.6	
93 Toluene	91	8.278	8.278	0.000	97	1234480	10.0	9.60	
95 trans-1,3-Dichloropropene	75	8.406	8.406	0.000	98	234580	10.0	10.1	
94 Ethyl methacrylate	69	8.416	8.416	0.000	95	108522	10.0	9.61	
96 1,1,2-Trichloroethane	97	8.583	8.583	0.000	92	130526	10.0	9.60	
98 1,3-Dichloropropane	76	8.760	8.760	0.000	98	233124	10.0	10.4	
97 2-Hexanone	43	8.760	8.760	0.000	95	212475	40.0	44.7	
99 Tetrachloroethene	164	8.800	8.800	0.000	97	248287	10.0	9.21	
100 Chlorodibromomethane	129	8.987	8.987	0.000	90	154113	10.0	9.77	
102 Ethylene Dibromide	107	9.144	9.144	0.000	99	119971	10.0	9.82	
103 1-Chlorohexane	91	9.479	9.479	0.000	92	471723	10.0	10.9	
104 Chlorobenzene	112	9.587	9.587	0.000	91	624440	10.0	9.13	
105 1,1,1,2-Tetrachloroethane	131	9.636	9.636	0.000	96	182504	10.0	9.35	
106 Ethylbenzene	106	9.646	9.646	0.000	99	358155	10.0	9.71	
107 m-Xylene & p-Xylene	106	9.754	9.754	0.000	0	437094	10.0	9.76	
108 o-Xylene	106	10.148	10.148	0.000	88	396889	10.0	10.2	
109 Styrene	104	10.148	10.148	0.000	82	582685	10.0	9.60	
110 Bromoform	173	10.354	10.354	0.000	92	67158	10.0	9.43	
111 Isopropylbenzene	105	10.472	10.472	0.000	97	1099615	10.0	9.91	
113 Cyclohexanone	55	10.581	10.581	0.000	97	85488	400.0	389.5	
114 1,1,2,2-Tetrachloroethane	83	10.689	10.689	0.000	93	126070	10.0	9.61	
115 trans-1,4-Dichloro-2-buten	53	10.738	10.738	0.000	84	22664	10.0	9.75	
116 1,2,3-Trichloropropane	110	10.758	10.758	0.000	85	24003	10.0	9.53	
117 Bromobenzene	156	10.787	10.787	0.000	97	202531	10.0	9.17	
118 N-Propylbenzene	120	10.827	10.827	0.000	99	270941	10.0	9.62	
120 2-Chlorotoluene	126	10.935	10.935	0.000	94	223831	10.0	9.17	
119 1,3,5-Trimethylbenzene	105	10.955	10.955	0.000	94	843494	10.0	9.74	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	11.014	11.014	0.000	98	218704	10.0	9.12	
122 tert-Butylbenzene	119	11.250	11.250	0.000	94	768072	10.0	9.51	
123 1,2,4-Trimethylbenzene	105	11.279	11.279	0.000	98	790857	10.0	9.65	
124 sec-Butylbenzene	134	11.437	11.437	0.000	96	191808	10.0	9.43	
125 4-Isopropyltoluene	119	11.545	11.545	0.000	97	843075	10.0	9.58	
126 1,3-Dichlorobenzene	146	11.574	11.574	0.000	97	384654	10.0	8.87	
127 1,4-Dichlorobenzene	146	11.643	11.643	0.000	91	377931	10.0	8.68	
129 n-Butylbenzene	91	11.909	11.909	0.000	99	970440	10.0	10.4	
130 1,2-Dichlorobenzene	146	11.988	11.988	0.000	96	295598	10.0	8.81	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	ND	U
132 1,2,4-Trichlorobenzene	180	13.592	13.592	0.000	93	163319	10.0	8.68	
133 Hexachlorobutadiene	225	13.759	13.759	0.000	94	127511	10.0	8.00	
134 Naphthalene	128		13.906				ND	ND	U
135 1,2,3-Trichlorobenzene	180	14.192	14.192	0.000	93	125932	10.0	8.35	
S 142 1,2-Dichloroethene, Total	96				0		20.0	18.2	
S 140 1,2-Dichloroethene, Total	1				0		20.0	18.2	
S 137 Xylenes, Total (URS)	1				0		20.0	19.9	
S 141 Xylenes, Total	106				0		20.0	19.9	
S 136 Trihalomethanes, Total	1				0		40.0	39.3	
S 139 1,3-Dichloropropene, Total	1				0		20.0	20.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00072	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

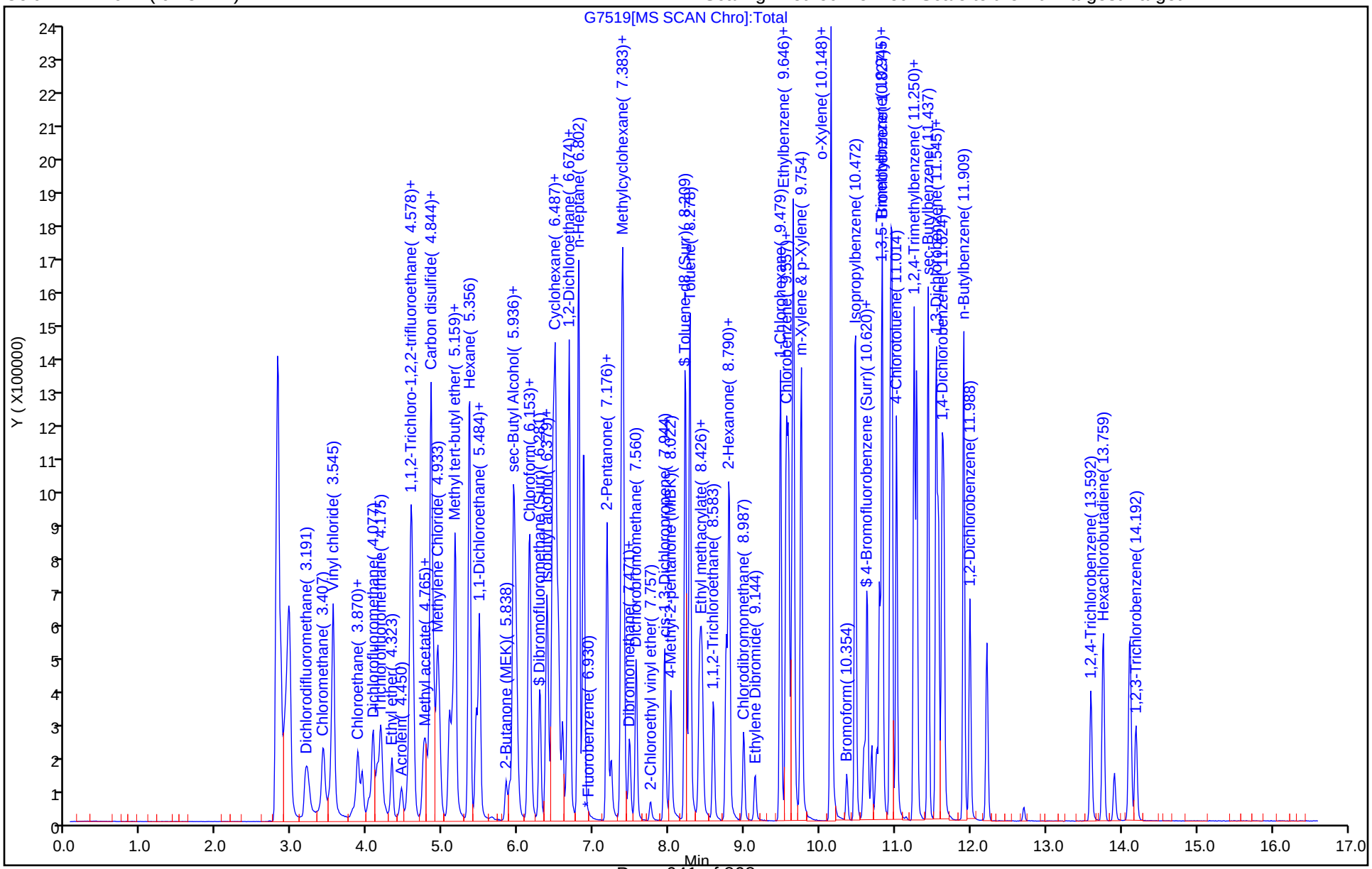
Report Date: 04-May-2018 19:01:42 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7519.D

Injection Date:	03-May-2018 19:08:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/2 Calibration Date: 05/03/2018 19:08

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7519.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4937	0.5070		10.3	10.0	2.7	20.0
Chloromethane	Lin2		0.5127	0.1000	11.0	10.0	10.3	20.0
Vinyl chloride	Lin		0.4196		11.1	10.0	11.2	20.0
Bromomethane	Lin2		0.2751		10.3	10.0	2.7	20.0
Chloroethane	Lin2		0.1842		10.1	10.0	1.3	20.0
Dichlorofluoromethane	Lin2		0.5187		9.88	10.0	-1.2	20.0
Trichlorofluoromethane	Ave	0.5974	0.5975		10.0	10.0	0.0	20.0
Ethyl ether	Ave	0.1509	0.1443		9.56	10.0	-4.4	20.0
Acrolein	Ave	0.0163	0.0155		95.2	100	-4.8	20.0
Acetone	Lin1		0.0333		41.7	40.0	4.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3092	0.2531		8.19	10.0	-18.1	20.0
1,1-Dichloroethene	Ave	0.4305	0.3803		8.83	10.0	-11.7	20.0
Methyl iodide	Ave	0.7292	0.6042		8.28	10.0	-17.2	20.0
Methyl acetate	Ave	0.0931	0.0908		19.5	20.0	-2.5	20.0
3-Chloro-1-propene	Ave	0.8804	0.9266		10.5	10.0	5.3	20.0
Carbon disulfide	Ave	2.014	1.871		9.29	10.0	-7.1	20.0
Methylene Chloride	Ave	0.3769	0.3473		9.22	10.0	-7.8	20.0
Acrylonitrile	Ave	0.0416	0.0397		95.4	100	-4.6	20.0
Methyl tert-butyl ether	Ave	0.3684	0.3700		10.0	10.0	0.4	20.0
trans-1,2-Dichloroethene	Ave	0.4504	0.4047		8.99	10.0	-10.1	20.0
Hexane	Ave	3.776	3.914		10.4	10.0	3.6	20.0
Vinyl acetate	Ave	0.3129	0.3707		23.7	20.0	18.5	20.0
1,1-Dichloroethane	Ave	0.7713	0.7517	0.1000	9.75	10.0	-2.5	20.0
2-Butanone (MEK)	Ave	0.0459	0.0473		41.3	40.0	3.1	20.0
cis-1,2-Dichloroethene	Ave	0.4228	0.3877		9.17	10.0	-8.3	20.0
sec-Butyl Alcohol	Ave	1.372	1.216		266	300	-11.4	20.0
2,2-Dichloropropane	Ave	0.5621	0.5463		9.72	10.0	-2.8	20.0
Bromochloromethane	Ave	0.1315	0.1135		8.63	10.0	-13.7	20.0
Chloroform	Ave	0.6378	0.6306		9.89	10.0	-1.1	20.0
Tetrahydrofuran	Ave	0.0305	0.0308		20.2	20.0	1.0	20.0
1,1,1-Trichloroethane	Ave	0.5599	0.5348		9.55	10.0	-4.5	20.0
Isobutyl alcohol	Ave	0.4657	0.4719		253	250	1.3	20.0
Cyclohexane	Ave	0.8236	0.8006		9.72	10.0	-2.8	20.0
1,1-Dichloropropene	Ave	0.5890	0.6012		10.2	10.0	2.1	20.0
Carbon tetrachloride	Ave	0.4923	0.4495		9.13	10.0	-8.7	20.0
1,2-Dichloroethane	Ave	0.2861	0.2880		10.1	10.0	0.7	20.0
Benzene	Ave	1.490	1.433		9.62	10.0	-3.8	20.0
Trichloroethene	Ave	0.4134	0.3967		9.60	10.0	-4.0	20.0
2-Pentanone	Ave	0.0642	0.0716		44.6	40.0	11.6	20.0
1,2-Dichloropropane	Ave	0.3547	0.3493		9.85	10.0	-1.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/2 Calibration Date: 05/03/2018 19:08

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7519.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6631	0.6671		10.1	10.0	0.6	20.0
1,4-Dioxane	Lin2		0.0008		174	200	-13.2	20.0
Dibromomethane	Ave	0.1378	0.1359		9.86	10.0	-1.4	20.0
Bromodichloromethane	Ave	0.3655	0.3746		10.2	10.0	2.5	20.0
2-Chloroethyl vinyl ether	Lin1		0.0336		9.31	10.0	-6.9	20.0
cis-1,3-Dichloropropene	Ave	1.890	2.002		10.6	10.0	5.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0980	0.1044		42.6	40.0	6.5	20.0
Toluene	Ave	1.431	1.374		9.60	10.0	-4.0	20.0
trans-1,3-Dichloropropene	Lin2		0.2610		10.1	10.0	0.7	20.0
Ethyl methacrylate	Lin2		0.6365		9.61	10.0	-3.9	20.0
1,1,2-Trichloroethane	Ave	0.1512	0.1453		9.60	10.0	-4.0	20.0
1,3-Dichloropropane	Ave	1.309	1.367		10.4	10.0	4.5	20.0
2-Hexanone	Ave	0.2786	0.3116		44.7	40.0	11.8	20.0
Tetrachloroethene	Ave	1.581	1.456		9.21	10.0	-7.9	20.0
Dibromochloromethane	Ave	0.9250	0.9039		9.77	10.0	-2.3	20.0
1,2-Dibromoethane	Ave	0.7169	0.7037		9.82	10.0	-1.8	20.0
1-Chlorohexane	Ave	2.546	2.767		10.9	10.0	8.7	20.0
Chlorobenzene	Ave	4.012	3.662	0.3000	9.13	10.0	-8.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.144	1.070		9.35	10.0	-6.5	20.0
Ethylbenzene	Ave	2.163	2.101		9.71	10.0	-2.9	20.0
m,p-Xylene	Ave	2.626	2.564		9.76	10.0	-2.4	20.0
o-Xylene	Ave	2.291	2.328		10.2	10.0	1.6	20.0
Styrene	Lin2		3.418		9.60	10.0	-4.0	20.0
Bromoform	Ave	0.4176	0.3939	0.1000	9.43	10.0	-5.7	20.0
Isopropylbenzene	Ave	5.263	5.217		9.91	10.0	-0.9	20.0
Cyclohexanone	Ave	0.0129	0.0125		389	400	-2.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6224	0.5981	0.3000	9.61	10.0	-3.9	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1075		9.75	10.0	-2.5	20.0
1,2,3-Trichloropropane	Ave	0.1195	0.1139		9.53	10.0	-4.7	20.0
Bromobenzene	Ave	1.048	0.9608		9.17	10.0	-8.3	20.0
N-Propylbenzene	Ave	1.336	1.285		9.62	10.0	-3.8	20.0
2-Chlorotoluene	Ave	1.158	1.062		9.17	10.0	-8.3	20.0
1,3,5-Trimethylbenzene	Ave	4.110	4.002		9.74	10.0	-2.6	20.0
4-Chlorotoluene	Ave	1.138	1.038		9.12	10.0	-8.8	20.0
tert-Butylbenzene	Ave	3.833	3.644		9.51	10.0	-4.9	20.0
1,2,4-Trimethylbenzene	Ave	3.889	3.752		9.65	10.0	-3.5	20.0
sec-Butylbenzene	Ave	0.9648	0.9099		9.43	10.0	-5.7	20.0
4-Isopropyltoluene	Ave	4.177	4.000		9.58	10.0	-4.2	20.0
1,3-Dichlorobenzene	Ave	2.057	1.825		8.87	10.0	-11.3	20.0
1,4-Dichlorobenzene	Ave	2.066	1.793		8.68	10.0	-13.2	20.0
n-Butylbenzene	Ave	4.447	4.604		10.4	10.0	3.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/2 Calibration Date: 05/03/2018 19:08

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7519.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.591	1.402		8.81	10.0	-11.9	20.0
1,2,4-Trichlorobenzene	Ave	0.8925	0.7748		8.68	10.0	-13.2	20.0
Hexachlorobutadiene	Ave	0.7560	0.6049		8.00	10.0	-20.0	20.0
1,2,3-Trichlorobenzene	Ave	0.7154	0.5974		8.35	10.0	-16.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7519.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2018 19:08:30 ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:40 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 17:10:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.844	4.844	0.000	0	115159	250.0	250.0	
* 1 Fluorobenzene	96	6.871	6.871	0.000	98	1123321	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.557	9.557	0.000	95	213120	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.624	11.624	0.000	97	263490	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.281	6.281	0.000	91	298720	10.0	9.49	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.586	6.586	0.000	0	221621	10.0	11.2	
$ 7 Toluene-d8 (Surr)	98	8.209	8.209	0.000	95	995745	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.620	10.620	0.000	86	301774	10.0	10.4	
25 Dichlorodifluoromethane	85	3.191	3.191	0.000	99	455621	10.0	10.3	
27 Chloromethane	50	3.407	3.407	0.000	100	460727	10.0	11.0	
28 Vinyl chloride	62	3.526	3.526	0.000	99	377102	10.0	11.1	
31 Bromomethane	94	3.870	3.870	0.000	90	247180	10.0	10.3	
32 Chloroethane	64	3.929	3.929	0.000	98	165501	10.0	10.1	
33 Dichlorofluoromethane	67	4.077	4.077	0.000	97	466171	10.0	9.88	
35 Trichlorofluoromethane	101	4.175	4.175	0.000	99	536915	10.0	10.0	
38 Ethyl ether	59	4.323	4.323	0.000	92	129674	10.0	9.56	
41 Acrolein	56	4.450	4.450	0.000	98	139117	100.0	95.2	
42 Acetone	43	4.549	4.549	0.000	97	119718	40.0	41.7	
44 1,1,2-Trichloro-1,2,2-trif	151	4.578	4.578	0.000	97	227445	10.0	8.19	
45 1,1-Dichloroethene	96	4.588	4.588	0.000	96	341757	10.0	8.83	
47 Iodomethane	142	4.756	4.756	0.000	98	542932	10.0	8.28	
48 Methyl acetate	43	4.795	4.795	0.000	100	163141	20.0	19.5	
49 3-Chloro-1-propene	41	4.844	4.844	0.000	87	832680	10.0	10.5	
50 Carbon disulfide	76	4.844	4.844	0.000	99	1681712	10.0	9.29	
51 2-Methyl-2-propanol	59		4.913				ND	ND	U
52 Methylene Chloride	84	4.933	4.933	0.000	97	312121	10.0	9.22	
53 Acrylonitrile	53	5.090	5.090	0.000	99	356597	100.0	95.4	
54 Methyl tert-butyl ether	73	5.129	5.129	0.000	98	332519	10.0	10.0	
55 trans-1,2-Dichloroethene	96	5.159	5.159	0.000	95	363718	10.0	8.99	
56 Hexane	57	5.356	5.356	0.000	94	667306	10.0	10.4	
57 Vinyl acetate	43	5.444	5.444	0.000	96	666203	20.0	23.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.484	5.484	0.000	97	675504	10.0	9.75	
62 2-Butanone (MEK)	43	5.887	5.887	0.000	97	170185	40.0	41.3	
66 cis-1,2-Dichloroethene	96	5.936	5.936	0.000	88	348407	10.0	9.17	
65 sec-Butyl Alcohol	45	5.946	5.946	0.000	96	168069	300.0	265.9	
67 2,2-Dichloropropane	77	5.966	5.966	0.000	90	490895	10.0	9.72	
69 Chlorobromomethane	128	6.133	6.133	0.000	87	102012	10.0	8.63	
70 Chloroform	83	6.153	6.153	0.000	98	566722	10.0	9.89	
71 Tetrahydrofuran	42	6.172	6.172	0.000	91	55369	20.0	20.2	
73 1,1,1-Trichloroethane	97	6.379	6.379	0.000	97	480582	10.0	9.55	
72 Isobutyl alcohol	41	6.389	6.389	0.000	95	54345	250.0	253.3	M
74 Cyclohexane	56	6.458	6.458	0.000	98	719458	10.0	9.72	
75 1,1-Dichloropropene	75	6.497	6.497	0.000	93	540239	10.0	10.2	
76 Carbon tetrachloride	117	6.527	6.527	0.000	96	403928	10.0	9.13	
77 1,2-Dichloroethane	62	6.645	6.645	0.000	96	258787	10.0	10.1	
79 Benzene	78	6.674	6.674	0.000	97	1288140	10.0	9.62	
13 n-Heptane	43	6.802	6.802	0.000	96	975750	10.0	11.7	
81 Trichloroethene	95	7.176	7.176	0.000	92	356503	10.0	9.60	
82 2-Pentanone	43	7.235	7.235	0.000	97	257519	40.0	44.6	
84 1,2-Dichloropropane	63	7.363	7.363	0.000	92	313902	10.0	9.85	
85 Methylcyclohexane	55	7.393	7.393	0.000	96	599483	10.0	10.1	
86 1,4-Dioxane	88	7.432	7.432	0.000	92	13861	200.0	173.6	
87 Dibromomethane	93	7.471	7.471	0.000	88	122098	10.0	9.86	
88 Dichlorobromomethane	83	7.560	7.560	0.000	97	336636	10.0	10.2	
90 2-Chloroethyl vinyl ether	63	7.757	7.757	0.000	90	30213	10.0	9.31	
91 cis-1,3-Dichloropropene	75	7.944	7.944	0.000	90	341315	10.0	10.6	
92 4-Methyl-2-pentanone (MIBK	43	8.022	8.022	0.000	96	375131	40.0	42.6	
93 Toluene	91	8.278	8.278	0.000	97	1234480	10.0	9.60	
95 trans-1,3-Dichloropropene	75	8.406	8.406	0.000	98	234580	10.0	10.1	
94 Ethyl methacrylate	69	8.416	8.416	0.000	95	108522	10.0	9.61	
96 1,1,2-Trichloroethane	97	8.583	8.583	0.000	92	130526	10.0	9.60	
98 1,3-Dichloropropane	76	8.760	8.760	0.000	98	233124	10.0	10.4	
97 2-Hexanone	43	8.760	8.760	0.000	95	212475	40.0	44.7	
99 Tetrachloroethene	164	8.800	8.800	0.000	97	248287	10.0	9.21	
100 Chlorodibromomethane	129	8.987	8.987	0.000	90	154113	10.0	9.77	
102 Ethylene Dibromide	107	9.144	9.144	0.000	99	119971	10.0	9.82	
103 1-Chlorohexane	91	9.479	9.479	0.000	92	471723	10.0	10.9	
104 Chlorobenzene	112	9.587	9.587	0.000	91	624440	10.0	9.13	
105 1,1,1,2-Tetrachloroethane	131	9.636	9.636	0.000	96	182504	10.0	9.35	
106 Ethylbenzene	106	9.646	9.646	0.000	99	358155	10.0	9.71	
107 m-Xylene & p-Xylene	106	9.754	9.754	0.000	0	437094	10.0	9.76	
108 o-Xylene	106	10.148	10.148	0.000	88	396889	10.0	10.2	
109 Styrene	104	10.148	10.148	0.000	82	582685	10.0	9.60	
110 Bromoform	173	10.354	10.354	0.000	92	67158	10.0	9.43	
111 Isopropylbenzene	105	10.472	10.472	0.000	97	1099615	10.0	9.91	
113 Cyclohexanone	55	10.581	10.581	0.000	97	85488	400.0	389.5	
114 1,1,2,2-Tetrachloroethane	83	10.689	10.689	0.000	93	126070	10.0	9.61	
115 trans-1,4-Dichloro-2-buten	53	10.738	10.738	0.000	84	22664	10.0	9.75	
116 1,2,3-Trichloropropane	110	10.758	10.758	0.000	85	24003	10.0	9.53	
117 Bromobenzene	156	10.787	10.787	0.000	97	202531	10.0	9.17	
118 N-Propylbenzene	120	10.827	10.827	0.000	99	270941	10.0	9.62	
120 2-Chlorotoluene	126	10.935	10.935	0.000	94	223831	10.0	9.17	
119 1,3,5-Trimethylbenzene	105	10.955	10.955	0.000	94	843494	10.0	9.74	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	11.014	11.014	0.000	98	218704	10.0	9.12	
122 tert-Butylbenzene	119	11.250	11.250	0.000	94	768072	10.0	9.51	
123 1,2,4-Trimethylbenzene	105	11.279	11.279	0.000	98	790857	10.0	9.65	
124 sec-Butylbenzene	134	11.437	11.437	0.000	96	191808	10.0	9.43	
125 4-Isopropyltoluene	119	11.545	11.545	0.000	97	843075	10.0	9.58	
126 1,3-Dichlorobenzene	146	11.574	11.574	0.000	97	384654	10.0	8.87	
127 1,4-Dichlorobenzene	146	11.643	11.643	0.000	91	377931	10.0	8.68	
129 n-Butylbenzene	91	11.909	11.909	0.000	99	970440	10.0	10.4	
130 1,2-Dichlorobenzene	146	11.988	11.988	0.000	96	295598	10.0	8.81	
131 1,2-Dibromo-3-Chloropropan	157		12.696				ND	ND	U
132 1,2,4-Trichlorobenzene	180	13.592	13.592	0.000	93	163319	10.0	8.68	
133 Hexachlorobutadiene	225	13.759	13.759	0.000	94	127511	10.0	8.00	
134 Naphthalene	128		13.906				ND	ND	U
135 1,2,3-Trichlorobenzene	180	14.192	14.192	0.000	93	125932	10.0	8.35	
S 142 1,2-Dichloroethene, Total	96				0		20.0	18.2	
S 140 1,2-Dichloroethene, Total	1				0		20.0	18.2	
S 137 Xylenes, Total (URS)	1				0		20.0	19.9	
S 141 Xylenes, Total	106				0		20.0	19.9	
S 136 Trihalomethanes, Total	1				0		40.0	39.3	
S 139 1,3-Dichloropropene, Total	1				0		20.0	20.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00072	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

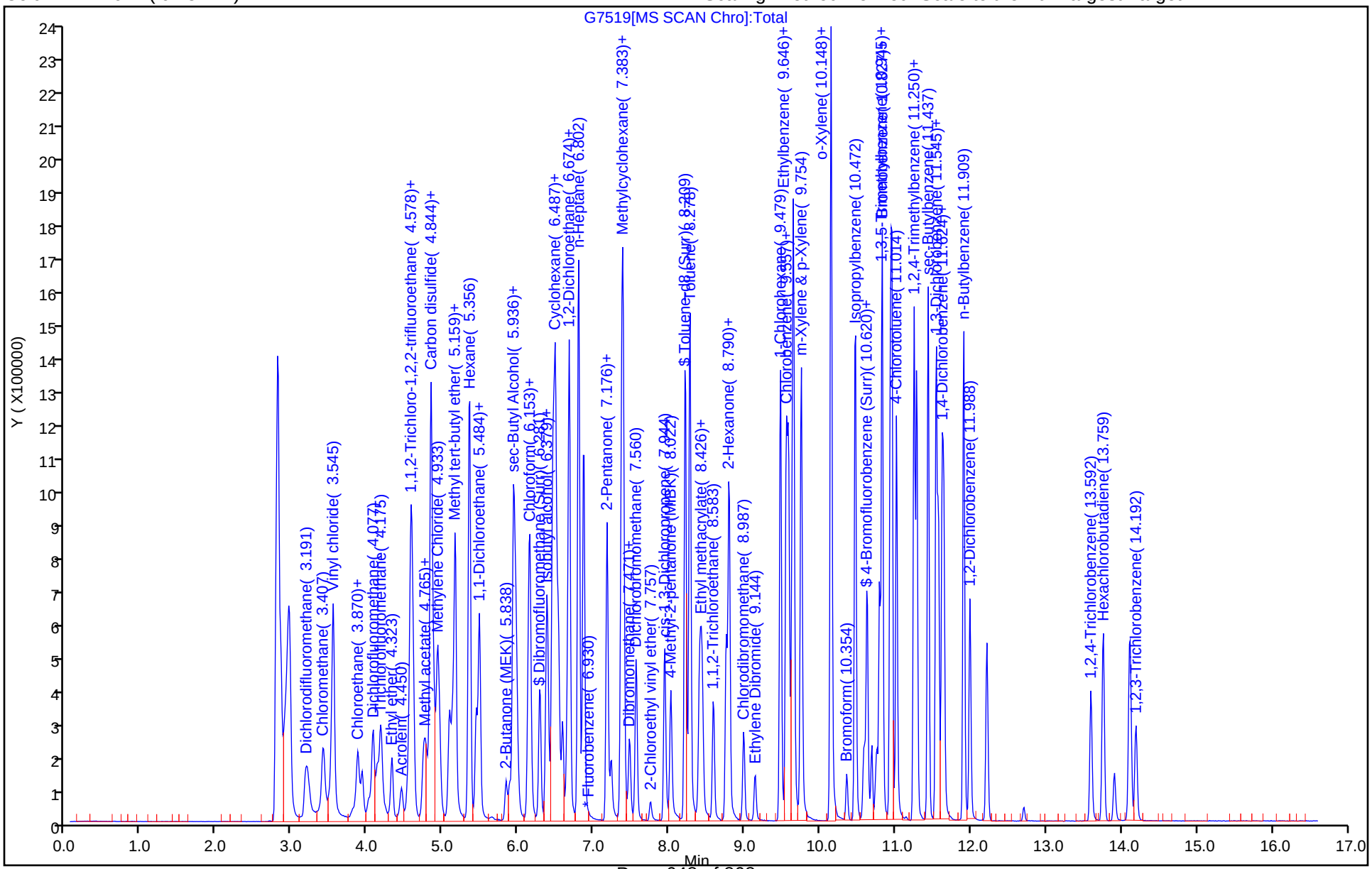
Report Date: 04-May-2018 19:01:42 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7519.D

Injection Date:	03-May-2018 19:08:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

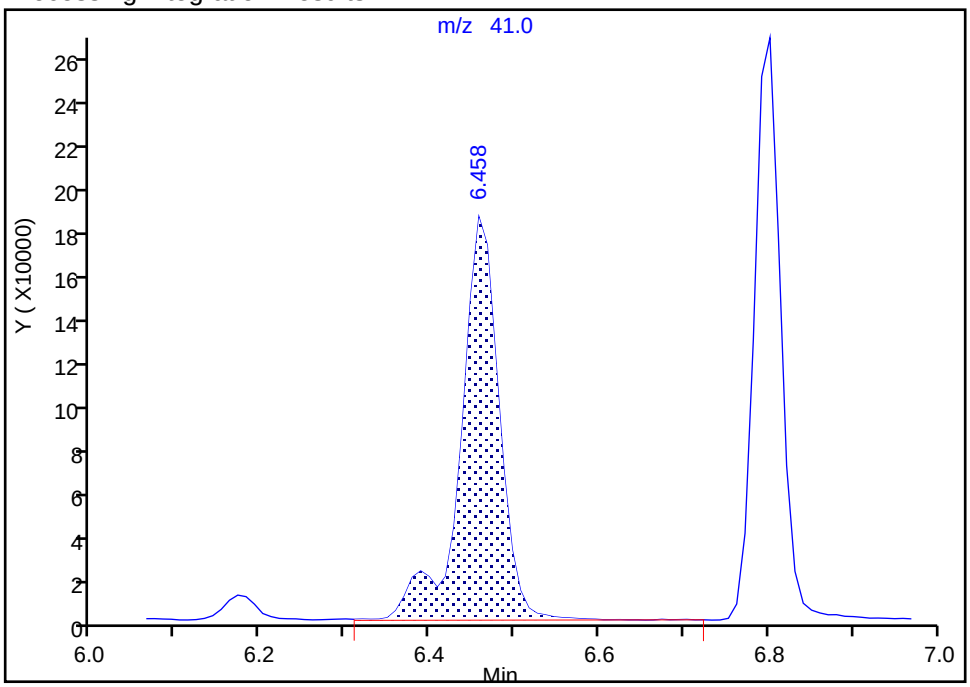
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Injection Date: 03-May-2018 19:08:30 Instrument ID: VMS_G
Lims ID: CCV
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

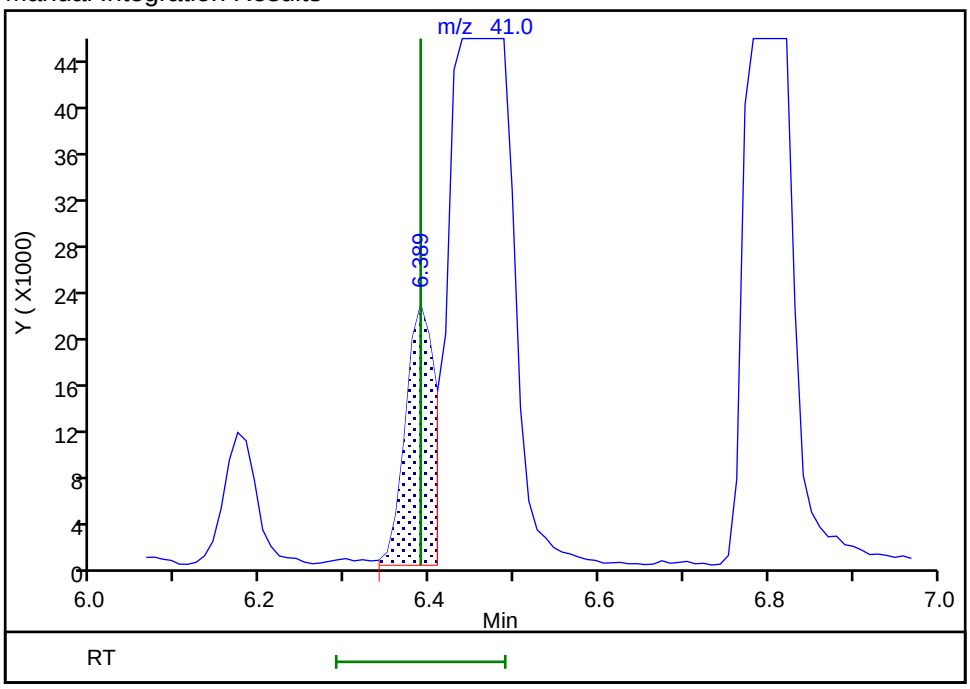
Processing Integration Results

RT: 6.46
Area: 582100
Amount: 2713.5912
Amount Units: ug/l



Manual Integration Results

RT: 6.39
Area: 54345
Amount: 253.3415
Amount Units: ug/l



Reviewer: newcomer, 04-May-2018 17:09:56
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/3 Calibration Date: 05/03/2018 19:28

Instrument ID: VMS_G Calib Start Date: 04/27/2018 13:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/27/2018 15:24

Lab File ID: G7520.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin2		0.0014		616	600	2.6	20.0
Isopropyl alcohol	Ave	0.0067	0.0074		109	100	9.1	20.0
Acetonitrile	Ave	0.0164	0.0193		118	100	17.8	20.0
Diisopropyl ether	Ave	0.1676	0.1838		11.0	10.0	9.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5759	0.7618		13.2	10.0	32.3*	20.0
Tert-butyl ethyl ether	Ave	0.5668	0.6621		11.7	10.0	16.8	20.0
Ethyl acetate	Ave	0.0827	0.0925		22.4	20.0	11.8	20.0
Propionitrile	Ave	0.0117	0.0141		120	100	20.3*	20.0
Methacrylonitrile	Ave	0.0762	0.0943		124	100	23.8*	20.0
Tert-amyl methyl ether	Ave	0.3757	0.4420		11.8	10.0	17.7	20.0
2-Nitropropane	Ave	0.2701	0.3562		26.4	20.0	31.9*	20.0
n-Butanol	Lin		0.0018		252	250	0.9	20.0
Methyl methacrylate	Lin2		0.0204		19.0	20.0	-5.1	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1142	0.1383		24.2	20.0	21.1*	20.0
1,2,3-Trimethylbenzene	Ave	3.333	3.639		10.9	10.0	9.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7520.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2018 19:28:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub122

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:43 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 20:07:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.837	4.837	0.000	0	120537	250.0	250.0	
* 1 Fluorobenzene	96	6.864	6.864	0.000	98	1114172	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.551	9.551	0.000	90	218398	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.617	11.617	0.000	97	255562	12.5	12.5	
30 Ethylene oxide	43	3.794	3.794	0.000	99	468182	1000.0	1135.5	
34 Ethanol	45	4.168	4.168	0.000	92	74459	600.0	615.8	
39 Propene oxide	58	4.404	4.404	0.000	95	2127836	1000.0	1182.8	
43 Isopropyl alcohol	45	4.582	4.582	0.000	99	65492	100.0	109.1	
46 Acetonitrile	41	4.778	4.778	0.000	99	171787	100.0	117.8	
58 Isopropyl ether	87	5.457	5.457	0.000	98	163830	10.0	11.0	
60 2-Chloro-1,3-butadiene	53	5.556	5.556	0.000	93	679043	10.0	13.2	
61 Tert-butyl ethyl ether	59	5.752	5.752	0.000	97	590165	10.0	11.7	
63 Ethyl acetate	43	5.890	5.890	0.000	98	164826	20.0	22.4	
64 Propionitrile	54	5.930	5.930	0.000	98	125990	100.0	120.3	
68 Methacrylonitrile	41	6.067	6.067	0.000	97	840478	100.0	123.8	
78 Tert-amyl methyl ether	73	6.687	6.687	0.000	93	393986	10.0	11.8	
89 2-Nitropropane	41	6.697	6.697	0.000	92	635027	20.0	26.4	
80 n-Butanol	56	6.923	6.923	0.000	93	40333	250.0	252.1	
83 Methyl methacrylate	100	7.346	7.346	0.000	93	36431	20.0	19.0	
101 Tetrahydrothiophene	60	9.039	9.039	0.000	97	39010	20.0	21.3	
112 cis-1,4-Dichloro-2-butene	53	10.485	10.485	0.000	0	56554	20.0	24.2	
128 1,2,3-Trimethylbenzene	105	11.666	11.666	0.000	99	743993	10.0	10.9	
11 1,3,5-Trichlorobenzene	180	12.926	12.926	0.000	95	284047	10.0	9.69	

Reagents:

MV-Supp A_00029 Amount Added: 5.00 Units: uL
MV-568718-D_00014 Amount Added: 1.00 Units: uL

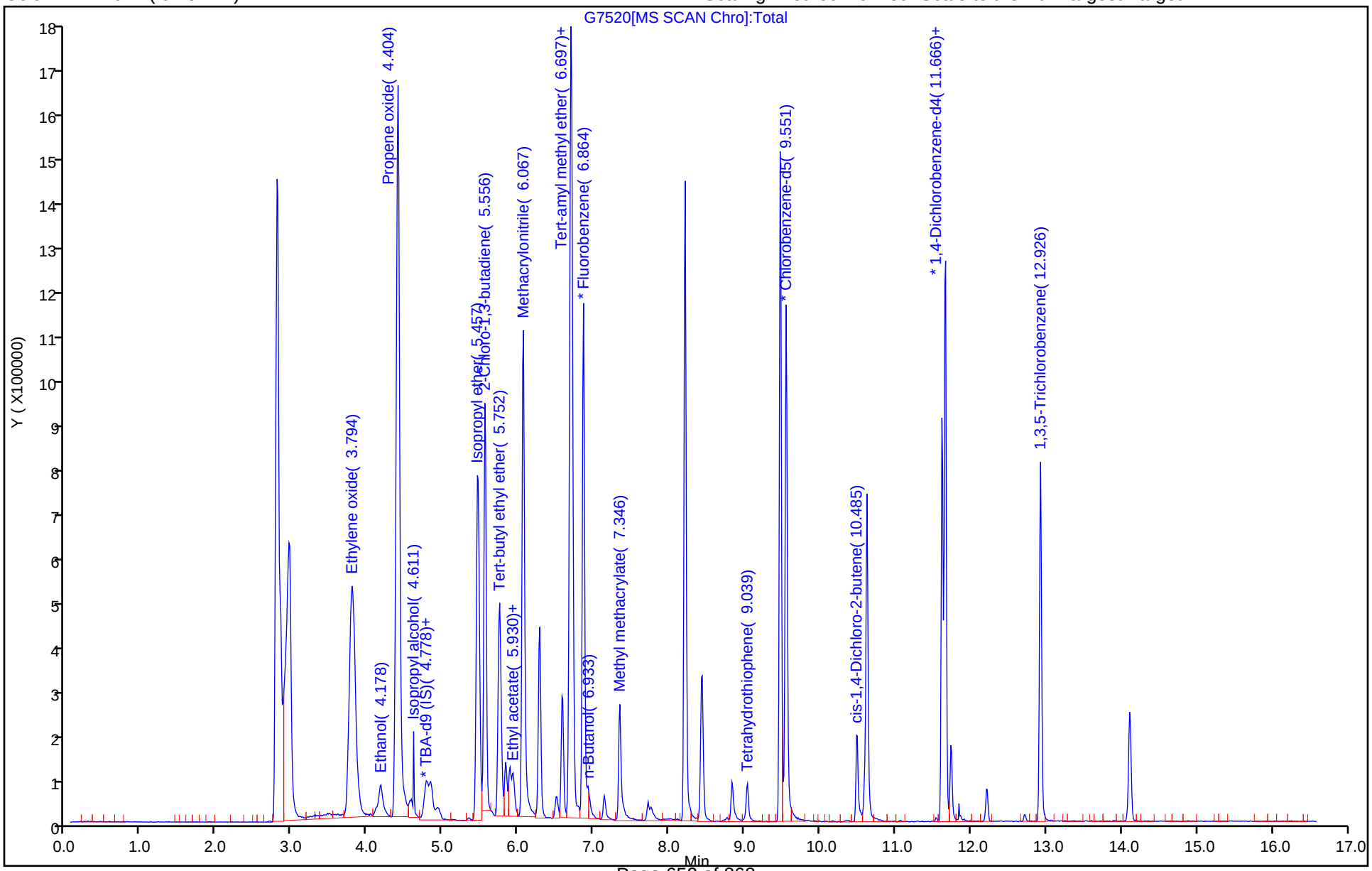
Report Date: 04-May-2018 19:01:44 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7520.D

Injection Date:	03-May-2018 19:28:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413691/4 Calibration Date: 05/03/2018 19:48

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7521.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
t-Butyl alcohol	Ave	1.516	1.358		89.6	100	-10.4	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0550		8.45	10.0	-15.5	20.0
Naphthalene	Lin1		0.7869		7.99	10.0	-20.1*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7521.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2018 19:48:30 ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub115

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:45 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 20:29:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.834	4.834	0.000	0	133049	250.0	250.0	
* 1 Fluorobenzene	96	6.861	6.861	0.000	98	1198935	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.548	9.548	0.000	89	230388	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.614	11.614	0.000	96	285961	12.5	12.5	
38 Ethyl ether	59		4.323				ND	ND	U
44 1,1,2-Trichloro-1,2,2-trif	151		4.578				ND	ND	U
45 1,1-Dichloroethene	96		4.588				ND	ND	U
47 Iodomethane	142		4.756				ND	ND	U
48 Methyl acetate	43		4.795				ND	ND	U
49 3-Chloro-1-propene	41		4.844				ND	ND	U
50 Carbon disulfide	76		4.844				ND	ND	U
51 2-Methyl-2-propanol	59	4.903	4.903	0.000	94	72279	100.0	89.6	
52 Methylene Chloride	84		4.933				ND	ND	U
53 Acrylonitrile	53		5.090				ND	ND	U
54 Methyl tert-butyl ether	73		5.129				ND	ND	U
55 trans-1,2-Dichloroethene	96		5.159				ND	ND	U
56 Hexane	57		5.356				ND	ND	U
59 1,1-Dichloroethane	63		5.484				ND	ND	U
66 cis-1,2-Dichloroethene	96		5.936				ND	ND	U
65 sec-Butyl Alcohol	45		5.946				ND	ND	U
67 2,2-Dichloropropane	77		5.966				ND	ND	U
69 Chlorobromomethane	128		6.133				ND	ND	U
70 Chloroform	83		6.153				ND	ND	U
71 Tetrahydrofuran	42		6.172				ND	ND	U
73 1,1,1-Trichloroethane	97		6.379				ND	ND	U
72 Isobutyl alcohol	41		6.389				ND	ND	MU
74 Cyclohexane	56		6.458				ND	ND	U
75 1,1-Dichloropropene	75		6.497				ND	ND	U
76 Carbon tetrachloride	117		6.527				ND	ND	U
77 1,2-Dichloroethane	62		6.645				ND	ND	U
79 Benzene	78		6.674				ND	ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
13 n-Heptane	43		6.802				ND	ND	U
81 Trichloroethene	95		7.176				ND	ND	U
82 2-Pentanone	43		7.235				ND	ND	U
84 1,2-Dichloropropane	63		7.363				ND	ND	U
85 Methylcyclohexane	55		7.393				ND	ND	U
86 1,4-Dioxane	88		7.432				ND	ND	U
87 Dibromomethane	93		7.471				ND	ND	U
88 Dichlorobromomethane	83		7.560				ND	ND	U
91 cis-1,3-Dichloropropene	75		7.944				ND	ND	U
93 Toluene	91		8.278				ND	ND	U
95 trans-1,3-Dichloropropene	75		8.406				ND	ND	U
94 Ethyl methacrylate	69		8.416				ND	ND	U
96 1,1,2-Trichloroethane	97		8.583				ND	ND	U
98 1,3-Dichloropropane	76		8.760				ND	ND	U
99 Tetrachloroethene	164		8.800				ND	ND	U
100 Chlorodibromomethane	129		8.987				ND	ND	U
102 Ethylene Dibromide	107		9.144				ND	ND	U
103 1-Chlorohexane	91		9.479				ND	ND	U
104 Chlorobenzene	112		9.587				ND	ND	U
105 1,1,1,2-Tetrachloroethane	131		9.636				ND	ND	U
106 Ethylbenzene	106		9.646				ND	ND	U
107 m-Xylene & p-Xylene	106		9.754				ND	ND	U
108 o-Xylene	106		10.148				ND	ND	U
109 Styrene	104		10.148				ND	ND	U
110 Bromoform	173		10.354				ND	ND	U
111 Isopropylbenzene	105		10.472				ND	ND	U
114 1,1,2,2-Tetrachloroethane	83		10.689				ND	ND	U
115 trans-1,4-Dichloro-2-buten	53		10.738				ND	ND	U
116 1,2,3-Trichloropropane	110		10.758				ND	ND	U
117 Bromobenzene	156		10.787				ND	ND	U
118 N-Propylbenzene	120		10.827				ND	ND	U
120 2-Chlorotoluene	126		10.935				ND	ND	U
119 1,3,5-Trimethylbenzene	105		10.955				ND	ND	U
121 4-Chlorotoluene	126		11.014				ND	ND	U
122 tert-Butylbenzene	119		11.250				ND	ND	U
123 1,2,4-Trimethylbenzene	105		11.279				ND	ND	U
124 sec-Butylbenzene	134		11.437				ND	ND	U
125 4-Isopropyltoluene	119		11.545				ND	ND	U
126 1,3-Dichlorobenzene	146		11.574				ND	ND	U
127 1,4-Dichlorobenzene	146		11.643				ND	ND	U
129 n-Butylbenzene	91		11.909				ND	ND	U
130 1,2-Dichlorobenzene	146		11.988				ND	ND	U
131 1,2-Dibromo-3-Chloropropan	157	12.696	12.696	0.000	77	12570	10.0	8.45	
132 1,2,4-Trichlorobenzene	180		13.592				ND	ND	U
133 Hexachlorobutadiene	225		13.759				ND	ND	U
134 Naphthalene	128	13.897	13.897	0.000	97	180012	10.0	7.99	
135 1,2,3-Trichlorobenzene	180		14.192				ND	ND	U
S 142 1,2-Dichloroethene, Total	96		2.000				20.0	ND	
S 140 1,2-Dichloroethene, Total	1		0.000				20.0	ND	
S 138 Total BTEX	1		0.000					ND	
S 137 Xylenes, Total (URS)	1		0.000				20.0	ND	
S 141 Xylenes, Total	106		0.000				20.0	ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 136 Trihalomethanes, Total	1		0.000				40.0	ND	
S 139 1,3-Dichloropropene, Total	1		0.000				20.0	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-Main A_00036	Amount Added:	5.00	Units: uL

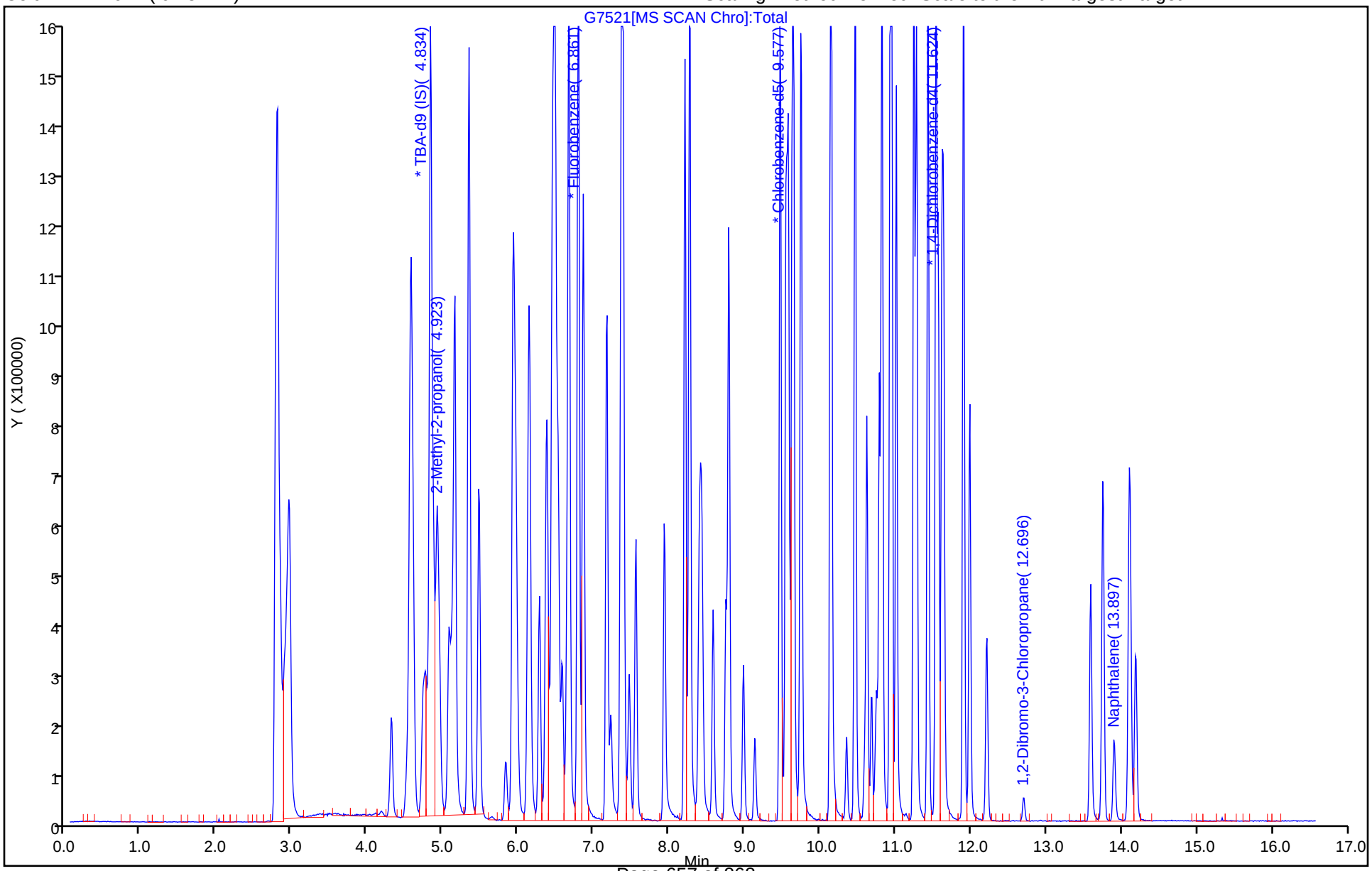
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7521.D

Injection Date:	03-May-2018 19:48:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/37 Calibration Date: 05/04/2018 05:32

Instrument ID: VMS_G Calib Start Date: 04/30/2018 23:12

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 05/01/2018 00:53

Lab File ID: G7550.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3501	0.3535		10.1	10.0	1.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2194	0.2277		10.4	10.0	3.8	50.0
Toluene-d8 (Surr)	Ave	5.774	6.083		10.5	10.0	5.3	50.0
4-Bromofluorobenzene (Surr)	Ave	1.381	1.321		9.57	10.0	-4.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7550.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 05:32:30 ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:07:04 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 18:20:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.829	4.834	-0.005	0	136108	250.0	250.0	
* 1 Fluorobenzene	96	6.856	6.861	-0.005	98	1270535	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.542	9.548	-0.006	89	249545	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.618	11.614	0.004	96	308338	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.275	6.281	-0.006	92	359341	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.580	6.586	-0.006	0	231474	10.0	10.4	
$ 7 Toluene-d8 (Surr)	98	8.204	8.209	-0.005	94	1214324	10.0	10.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.614	10.620	-0.006	86	325912	10.0	9.57	
25 Dichlorodifluoromethane	85	3.195	3.191	0.004	100	496997	10.0	9.90	
27 Chloromethane	50	3.412	3.407	0.005	100	516565	10.0	10.9	
28 Vinyl chloride	62	3.530	3.526	0.004	99	422711	10.0	11.0	
31 Bromomethane	94	3.864	3.870	-0.006	90	277420	10.0	10.2	
32 Chloroethane	64	3.923	3.929	-0.006	98	184387	10.0	9.97	
33 Dichlorofluoromethane	67	4.071	4.077	-0.006	97	544104	10.0	10.2	
35 Trichlorofluoromethane	101	4.169	4.175	-0.006	99	622816	10.0	10.3	
38 Ethyl ether	59	4.317	4.323	-0.006	93	164623	10.0	10.7	
41 Acrolein	56	4.445	4.450	-0.005	99	160111	100.0	96.9	
42 Acetone	43	4.543	4.549	-0.006	97	135694	40.0	41.8	
44 1,1,2-Trichloro-1,2,2-trif	151	4.573	4.578	-0.005	97	299666	10.0	9.53	
45 1,1-Dichloroethene	96	4.592	4.588	0.004	95	453472	10.0	10.4	
47 Iodomethane	142	4.760	4.756	0.004	99	741007	10.0	10.0	
48 Methyl acetate	43	4.789	4.795	-0.006	98	204941	20.0	21.7	
49 3-Chloro-1-propene	41	4.829	4.844	-0.015	89	1052313	10.0	11.8	
50 Carbon disulfide	76	4.838	4.844	-0.006	99	2263757	10.0	11.1	
51 2-Methyl-2-propanol	59	4.898	4.903	-0.005	94	70736	100.0	85.7	
52 Methylene Chloride	84	4.927	4.933	-0.006	98	416054	10.0	10.9	
53 Acrylonitrile	53	5.075	5.090	-0.015	99	450947	100.0	106.6	
54 Methyl tert-butyl ether	73	5.124	5.129	-0.005	98	414882	10.0	11.1	
55 trans-1,2-Dichloroethene	96	5.153	5.159	-0.006	95	485842	10.0	10.6	
56 Hexane	57	5.340	5.356	-0.016	94	837736	10.0	11.1	
57 Vinyl acetate	43	5.429	5.444	-0.015	96	715299	20.0	22.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.478	5.484	-0.006	97	862959	10.0	11.0	
62 2-Butanone (MEK)	43	5.872	5.887	-0.015	97	194970	40.0	41.8	
66 cis-1,2-Dichloroethene	96	5.921	5.936	-0.015	87	451873	10.0	10.5	
65 sec-Butyl Alcohol	45	5.941	5.946	-0.005	97	230752	300.0	308.9	
67 2,2-Dichloropropane	77	5.960	5.966	-0.006	91	575706	10.0	10.1	
69 Chlorobromomethane	128	6.127	6.133	-0.006	87	132301	10.0	9.90	
70 Chloroform	83	6.147	6.153	-0.006	98	716694	10.0	11.1	
71 Tetrahydrofuran	42	6.167	6.172	-0.005	93	68932	20.0	22.2	
73 1,1,1-Trichloroethane	97	6.373	6.379	-0.006	97	620011	10.0	10.9	
72 Isobutyl alcohol	41	6.383	6.389	-0.006	50	72540	250.0	286.1	M
74 Cyclohexane	56	6.452	6.458	-0.006	98	943115	10.0	11.3	
75 1,1-Dichloropropene	75	6.482	6.497	-0.015	94	666622	10.0	11.1	
76 Carbon tetrachloride	117	6.521	6.527	-0.006	96	526545	10.0	10.5	
77 1,2-Dichloroethane	62	6.639	6.645	-0.006	96	320106	10.0	11.0	
79 Benzene	78	6.669	6.674	-0.005	98	1622425	10.0	10.7	
13 n-Heptane	43	6.787	6.802	-0.015	96	1106078	10.0	11.7	
81 Trichloroethene	95	7.171	7.176	-0.006	93	450411	10.0	10.7	
82 2-Pentanone	43	7.220	7.235	-0.015	97	296896	40.0	45.5	
84 1,2-Dichloropropane	63	7.357	7.363	-0.006	93	399550	10.0	11.1	
85 Methylcyclohexane	55	7.377	7.393	-0.016	96	765319	10.0	11.4	
86 1,4-Dioxane	88	7.426	7.432	-0.006	85	17349	200.0	191.2	
87 Dibromomethane	93	7.466	7.471	-0.005	88	149625	10.0	10.7	
88 Dichlorobromomethane	83	7.554	7.560	-0.006	97	414951	10.0	11.2	
90 2-Chloroethyl vinyl ether	63	7.741	7.757	-0.016	90	23864	10.0	6.85	
91 cis-1,3-Dichloropropene	75	7.928	7.944	-0.016	91	419054	10.0	11.1	
92 4-Methyl-2-pentanone (MIBK	43	8.017	8.022	-0.005	96	417628	40.0	41.9	
93 Toluene	91	8.263	8.278	-0.015	97	1549052	10.0	10.7	
95 trans-1,3-Dichloropropene	75	8.391	8.406	-0.015	97	304098	10.0	11.6	
94 Ethyl methacrylate	69	8.410	8.416	-0.006	94	140875	10.0	10.6	
96 1,1,2-Trichloroethane	97	8.578	8.583	-0.005	91	159559	10.0	10.4	
98 1,3-Dichloropropane	76	8.745	8.760	-0.015	97	281269	10.0	10.8	
97 2-Hexanone	43	8.755	8.760	-0.005	97	226818	40.0	40.8	
99 Tetrachloroethene	164	8.784	8.800	-0.016	97	308574	10.0	9.78	
100 Chlorodibromomethane	129	8.981	8.987	-0.006	90	188703	10.0	10.2	
102 Ethylene Dibromide	107	9.129	9.144	-0.015	98	150973	10.0	10.5	
103 1-Chlorohexane	91	9.463	9.479	-0.016	93	582575	10.0	11.5	
104 Chlorobenzene	112	9.571	9.587	-0.016	91	802745	10.0	10.0	
105 1,1,1,2-Tetrachloroethane	131	9.621	9.636	-0.015	95	238070	10.0	10.4	
106 Ethylbenzene	106	9.640	9.646	-0.006	99	457560	10.0	10.6	
107 m-Xylene & p-Xylene	106	9.739	9.754	-0.015	0	573219	10.0	10.9	
108 o-Xylene	106	10.142	10.148	-0.006	88	514600	10.0	11.3	
109 Styrene	104	10.142	10.148	-0.006	83	749588	10.0	10.5	
110 Bromoform	173	10.349	10.354	-0.005	92	82192	10.0	9.86	
111 Isopropylbenzene	105	10.457	10.472	-0.015	96	1443857	10.0	11.1	
113 Cyclohexanone	55	10.575	10.581	-0.006	96	93655	400.0	364.4	
114 1,1,2,2-Tetrachloroethane	83	10.683	10.689	-0.006	93	157825	10.0	10.3	
115 trans-1,4-Dichloro-2-buten	53	10.732	10.738	-0.006	78	23777	10.0	8.80	
116 1,2,3-Trichloropropane	110	10.752	10.758	-0.006	84	30863	10.0	10.5	
117 Bromobenzene	156	10.782	10.787	-0.005	95	266275	10.0	10.3	
118 N-Propylbenzene	120	10.821	10.827	-0.006	99	346916	10.0	10.5	
120 2-Chlorotoluene	126	10.929	10.935	-0.006	94	292439	10.0	10.2	
119 1,3,5-Trimethylbenzene	105	10.949	10.955	-0.005	93	1105091	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	11.008	11.014	-0.006	98	277939	10.0	9.90	
122 tert-Butylbenzene	119	11.244	11.250	-0.006	93	1007570	10.0	10.7	
123 1,2,4-Trimethylbenzene	105	11.274	11.279	-0.005	95	1032501	10.0	10.8	
124 sec-Butylbenzene	134	11.431	11.437	-0.006	96	246412	10.0	10.4	
125 4-Isopropyltoluene	119	11.529	11.545	-0.016	97	1068916	10.0	10.4	
126 1,3-Dichlorobenzene	146	11.569	11.574	-0.005	97	489949	10.0	9.66	
127 1,4-Dichlorobenzene	146	11.638	11.643	-0.005	95	487697	10.0	9.57	
129 n-Butylbenzene	91	11.894	11.909	-0.015	99	1197605	10.0	10.9	
130 1,2-Dichlorobenzene	146	11.982	11.988	-0.006	96	386781	10.0	9.85	
131 1,2-Dibromo-3-Chloropropan	157	12.700	12.696	0.004	73	13248	10.0	8.27	
132 1,2,4-Trichlorobenzene	180	13.586	13.592	-0.006	93	192771	10.0	8.76	
133 Hexachlorobutadiene	225	13.743	13.759	-0.016	94	153230	10.0	8.22	
134 Naphthalene	128	13.891	13.897	-0.006	97	187728	10.0	7.76	
135 1,2,3-Trichlorobenzene	180	14.186	14.192	-0.006	94	145679	10.0	8.25	
S 142 1,2-Dichloroethene, Total	96				0		20.0	21.1	
S 140 1,2-Dichloroethene, Total	1				0		20.0	21.1	
S 138 Total BTEX	1				0			54.1	
S 137 Xylenes, Total (URS)	1				0		20.0	22.2	
S 141 Xylenes, Total	106				0		20.0	22.2	
S 136 Trihalomethanes, Total	1				0		40.0	42.3	
S 139 1,3-Dichloropropene, Total	1				0		20.0	22.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00072	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

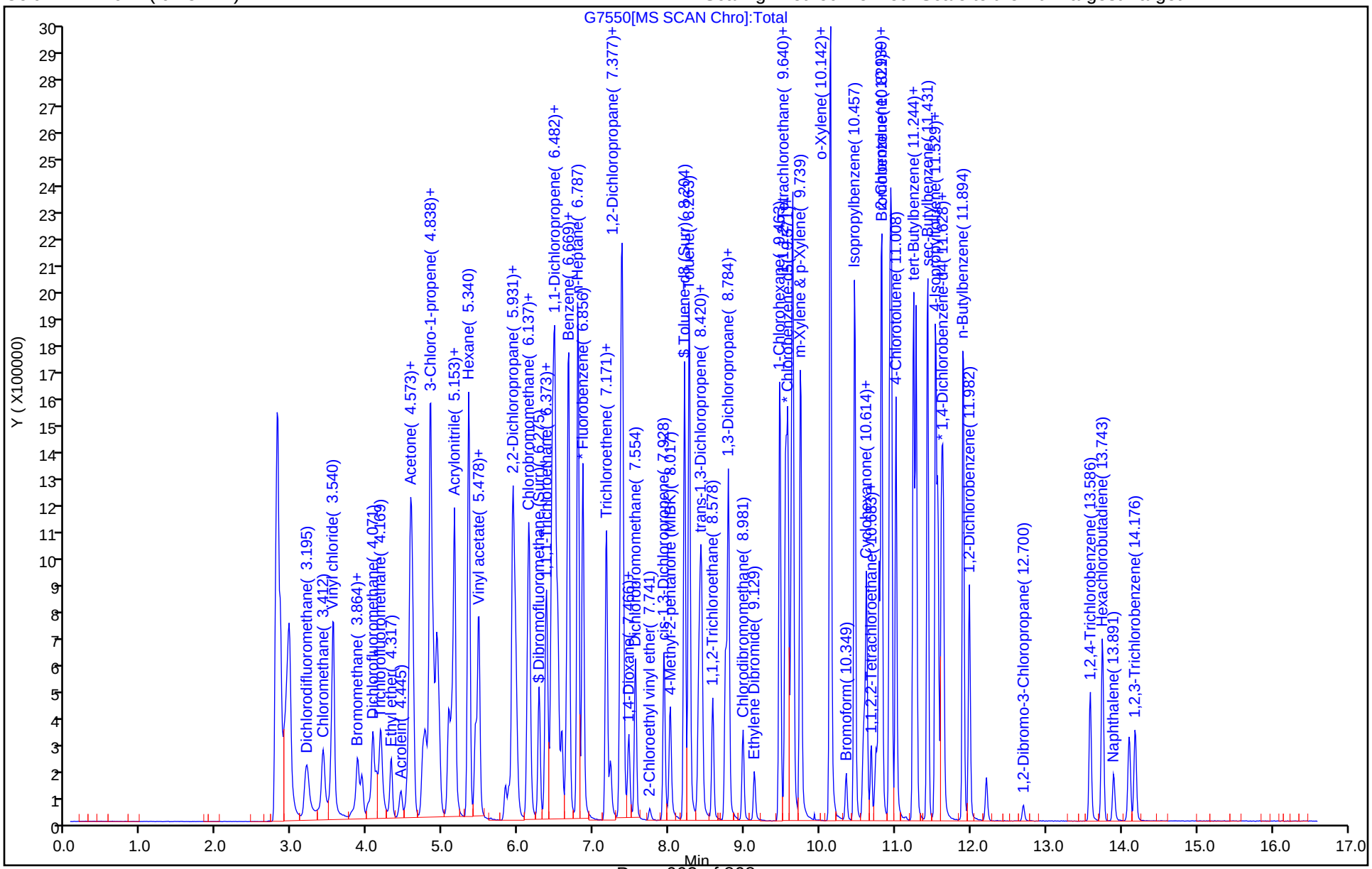
Report Date: 04-May-2018 19:07:05 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7550.D

Injection Date:	04-May-2018 05:32:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/37 Calibration Date: 05/04/2018 05:32

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7550.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4937	0.4890		9.90	10.0	-1.0	50.0
Chloromethane	Lin2		0.5082	0.1000	10.9	10.0	9.3	50.0
Vinyl chloride	Lin		0.4159		11.0	10.0	10.2	50.0
Bromomethane	Lin2		0.2729		10.2	10.0	1.9	50.0
Chloroethane	Lin2		0.1814		9.97	10.0	-0.3	50.0
Dichlorofluoromethane	Lin2		0.5353		10.2	10.0	2.0	50.0
Trichlorofluoromethane	Ave	0.5974	0.6128		10.3	10.0	2.6	50.0
Ethyl ether	Ave	0.1509	0.1620		10.7	10.0	7.3	50.0
Acrolein	Ave	0.0163	0.0158		96.9	100	-3.1	50.0
Acetone	Lin1		0.0334		41.8	40.0	4.5	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3092	0.2948		9.53	10.0	-4.7	50.0
1,1-Dichloroethene	Ave	0.4305	0.4461		10.4	10.0	3.6	50.0
Methyl iodide	Ave	0.7292	0.7290		10.0	10.0	-0.0	50.0
Methyl acetate	Ave	0.0931	0.1008		21.7	20.0	8.3	50.0
3-Chloro-1-propene	Ave	0.8804	1.035		11.8	10.0	17.6	50.0
Carbon disulfide	Ave	2.014	2.227		11.1	10.0	10.6	50.0
t-Butyl alcohol	Ave	1.516	1.299		85.7	100	-14.3	50.0
Methylene Chloride	Ave	0.3769	0.4093		10.9	10.0	8.6	50.0
Acrylonitrile	Ave	0.0416	0.0444		107	100	6.6	50.0
Methyl tert-butyl ether	Ave	0.3684	0.4082		11.1	10.0	10.8	50.0
trans-1,2-Dichloroethene	Ave	0.4504	0.4780		10.6	10.0	6.1	50.0
Hexane	Ave	3.776	4.196		11.1	10.0	11.1	50.0
Vinyl acetate	Ave	0.3129	0.3519		22.5	20.0	12.5	50.0
1,1-Dichloroethane	Ave	0.7713	0.8490	0.1000	11.0	10.0	10.1	50.0
2-Butanone (MEK)	Ave	0.0459	0.0480		41.8	40.0	4.5	50.0
cis-1,2-Dichloroethene	Ave	0.4228	0.4446		10.5	10.0	5.2	50.0
sec-Butyl Alcohol	Ave	1.372	1.413		309	300	3.0	50.0
2,2-Dichloropropane	Ave	0.5621	0.5664		10.1	10.0	0.8	50.0
Bromochloromethane	Ave	0.1315	0.1302		9.90	10.0	-1.0	50.0
Chloroform	Ave	0.6378	0.7051		11.1	10.0	10.6	50.0
Tetrahydrofuran	Ave	0.0305	0.0339		22.2	20.0	11.2	50.0
1,1,1-Trichloroethane	Ave	0.5599	0.6100		10.9	10.0	8.9	50.0
Isobutyl alcohol	Ave	0.4657	0.5330		286	250	14.4	50.0
Cyclohexane	Ave	0.8236	0.9279		11.3	10.0	12.7	50.0
1,1-Dichloropropene	Ave	0.5890	0.6559		11.1	10.0	11.4	50.0
Carbon tetrachloride	Ave	0.4923	0.5180		10.5	10.0	5.2	50.0
1,2-Dichloroethane	Ave	0.2861	0.3149		11.0	10.0	10.1	50.0
Benzene	Ave	1.490	1.596		10.7	10.0	7.2	50.0
Trichloroethene	Ave	0.4134	0.4431		10.7	10.0	7.2	50.0
2-Pentanone	Ave	0.0642	0.0730		45.5	40.0	13.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/37 Calibration Date: 05/04/2018 05:32

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7550.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3547	0.3931		11.1	10.0	10.8	50.0
Methylcyclohexane	Ave	0.6631	0.7530		11.4	10.0	13.5	50.0
1,4-Dioxane	Lin2		0.0009		191	200	-4.4	50.0
Dibromomethane	Ave	0.1378	0.1472		10.7	10.0	6.8	50.0
Bromodichloromethane	Ave	0.3655	0.4082		11.2	10.0	11.7	50.0
2-Chloroethyl vinyl ether	Lin1		0.0235		6.85	10.0	-31.5	50.0
cis-1,3-Dichloropropene	Ave	1.890	2.099		11.1	10.0	11.0	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0980	0.1027		41.9	40.0	4.8	50.0
Toluene	Ave	1.431	1.524		10.7	10.0	6.5	50.0
trans-1,3-Dichloropropene	Lin2		0.2992		11.6	10.0	15.9	50.0
Ethyl methacrylate	Lin2		0.7057		10.6	10.0	6.4	50.0
1,1,2-Trichloroethane	Ave	0.1512	0.1570		10.4	10.0	3.8	50.0
1,3-Dichloropropane	Ave	1.309	1.409		10.8	10.0	7.7	50.0
2-Hexanone	Ave	0.2786	0.2840		40.8	40.0	1.9	50.0
Tetrachloroethene	Ave	1.581	1.546		9.78	10.0	-2.2	50.0
Dibromochloromethane	Ave	0.9250	0.9452		10.2	10.0	2.2	50.0
1,2-Dibromoethane	Ave	0.7169	0.7562		10.5	10.0	5.5	50.0
1-Chlorohexane	Ave	2.546	2.918		11.5	10.0	14.6	50.0
Chlorobenzene	Ave	4.012	4.021	0.3000	10.0	10.0	0.2	50.0
1,1,1,2-Tetrachloroethane	Ave	1.144	1.193		10.4	10.0	4.2	50.0
Ethylbenzene	Ave	2.163	2.292		10.6	10.0	6.0	50.0
m,p-Xylene	Ave	2.626	2.871		10.9	10.0	9.4	50.0
o-Xylene	Ave	2.291	2.578		11.3	10.0	12.5	50.0
Styrene	Lin2		3.755		10.5	10.0	5.3	50.0
Bromoform	Ave	0.4176	0.4117	0.1000	9.86	10.0	-1.4	50.0
Isopropylbenzene	Ave	5.263	5.853		11.1	10.0	11.2	50.0
Cyclohexanone	Ave	0.0129	0.0117		364	400	-8.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6224	0.6398	0.3000	10.3	10.0	2.8	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.0964		8.80	10.0	-12.0	50.0
1,2,3-Trichloropropane	Ave	0.1195	0.1251		10.5	10.0	4.7	50.0
Bromobenzene	Ave	1.048	1.079		10.3	10.0	3.0	50.0
N-Propylbenzene	Ave	1.336	1.406		10.5	10.0	5.2	50.0
2-Chlorotoluene	Ave	1.158	1.186		10.2	10.0	2.4	50.0
1,3,5-Trimethylbenzene	Ave	4.110	4.480		10.9	10.0	9.0	50.0
4-Chlorotoluene	Ave	1.138	1.127		9.90	10.0	-1.0	50.0
tert-Butylbenzene	Ave	3.833	4.085		10.7	10.0	6.6	50.0
1,2,4-Trimethylbenzene	Ave	3.889	4.186		10.8	10.0	7.6	50.0
sec-Butylbenzene	Ave	0.9648	0.999		10.4	10.0	3.5	50.0
4-Isopropyltoluene	Ave	4.177	4.333		10.4	10.0	3.7	50.0
1,3-Dichlorobenzene	Ave	2.057	1.986		9.66	10.0	-3.4	50.0
1,4-Dichlorobenzene	Ave	2.066	1.977		9.57	10.0	-4.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/37 Calibration Date: 05/04/2018 05:32

Instrument ID: VMS_G Calib Start Date: 04/30/2018 10:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/30/2018 13:57

Lab File ID: G7550.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	4.447	4.855		10.9	10.0	9.2	50.0
1,2-Dichlorobenzene	Ave	1.591	1.568		9.85	10.0	-1.5	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0537		8.27	10.0	-17.3	50.0
1,2,4-Trichlorobenzene	Ave	0.8925	0.7815		8.76	10.0	-12.4	50.0
Hexachlorobutadiene	Ave	0.7560	0.6212		8.22	10.0	-17.8	50.0
Naphthalene	Lin1		0.7611		7.76	10.0	-22.4	50.0
1,2,3-Trichlorobenzene	Ave	0.7154	0.5906		8.25	10.0	-17.5	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7550.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 05:32:30 ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:07:04 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 18:20:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.829	4.834	-0.005	0	136108	250.0	250.0	
* 1 Fluorobenzene	96	6.856	6.861	-0.005	98	1270535	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.542	9.548	-0.006	89	249545	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.618	11.614	0.004	96	308338	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.275	6.281	-0.006	92	359341	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.580	6.586	-0.006	0	231474	10.0	10.4	
$ 7 Toluene-d8 (Surr)	98	8.204	8.209	-0.005	94	1214324	10.0	10.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.614	10.620	-0.006	86	325912	10.0	9.57	
25 Dichlorodifluoromethane	85	3.195	3.191	0.004	100	496997	10.0	9.90	
27 Chloromethane	50	3.412	3.407	0.005	100	516565	10.0	10.9	
28 Vinyl chloride	62	3.530	3.526	0.004	99	422711	10.0	11.0	
31 Bromomethane	94	3.864	3.870	-0.006	90	277420	10.0	10.2	
32 Chloroethane	64	3.923	3.929	-0.006	98	184387	10.0	9.97	
33 Dichlorofluoromethane	67	4.071	4.077	-0.006	97	544104	10.0	10.2	
35 Trichlorofluoromethane	101	4.169	4.175	-0.006	99	622816	10.0	10.3	
38 Ethyl ether	59	4.317	4.323	-0.006	93	164623	10.0	10.7	
41 Acrolein	56	4.445	4.450	-0.005	99	160111	100.0	96.9	
42 Acetone	43	4.543	4.549	-0.006	97	135694	40.0	41.8	
44 1,1,2-Trichloro-1,2,2-trif	151	4.573	4.578	-0.005	97	299666	10.0	9.53	
45 1,1-Dichloroethene	96	4.592	4.588	0.004	95	453472	10.0	10.4	
47 Iodomethane	142	4.760	4.756	0.004	99	741007	10.0	10.0	
48 Methyl acetate	43	4.789	4.795	-0.006	98	204941	20.0	21.7	
49 3-Chloro-1-propene	41	4.829	4.844	-0.015	89	1052313	10.0	11.8	
50 Carbon disulfide	76	4.838	4.844	-0.006	99	2263757	10.0	11.1	
51 2-Methyl-2-propanol	59	4.898	4.903	-0.005	94	70736	100.0	85.7	
52 Methylene Chloride	84	4.927	4.933	-0.006	98	416054	10.0	10.9	
53 Acrylonitrile	53	5.075	5.090	-0.015	99	450947	100.0	106.6	
54 Methyl tert-butyl ether	73	5.124	5.129	-0.005	98	414882	10.0	11.1	
55 trans-1,2-Dichloroethene	96	5.153	5.159	-0.006	95	485842	10.0	10.6	
56 Hexane	57	5.340	5.356	-0.016	94	837736	10.0	11.1	
57 Vinyl acetate	43	5.429	5.444	-0.015	96	715299	20.0	22.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.478	5.484	-0.006	97	862959	10.0	11.0	
62 2-Butanone (MEK)	43	5.872	5.887	-0.015	97	194970	40.0	41.8	
66 cis-1,2-Dichloroethene	96	5.921	5.936	-0.015	87	451873	10.0	10.5	
65 sec-Butyl Alcohol	45	5.941	5.946	-0.005	97	230752	300.0	308.9	
67 2,2-Dichloropropane	77	5.960	5.966	-0.006	91	575706	10.0	10.1	
69 Chlorobromomethane	128	6.127	6.133	-0.006	87	132301	10.0	9.90	
70 Chloroform	83	6.147	6.153	-0.006	98	716694	10.0	11.1	
71 Tetrahydrofuran	42	6.167	6.172	-0.005	93	68932	20.0	22.2	
73 1,1,1-Trichloroethane	97	6.373	6.379	-0.006	97	620011	10.0	10.9	
72 Isobutyl alcohol	41	6.383	6.389	-0.006	50	72540	250.0	286.1	M
74 Cyclohexane	56	6.452	6.458	-0.006	98	943115	10.0	11.3	
75 1,1-Dichloropropene	75	6.482	6.497	-0.015	94	666622	10.0	11.1	
76 Carbon tetrachloride	117	6.521	6.527	-0.006	96	526545	10.0	10.5	
77 1,2-Dichloroethane	62	6.639	6.645	-0.006	96	320106	10.0	11.0	
79 Benzene	78	6.669	6.674	-0.005	98	1622425	10.0	10.7	
13 n-Heptane	43	6.787	6.802	-0.015	96	1106078	10.0	11.7	
81 Trichloroethene	95	7.171	7.176	-0.006	93	450411	10.0	10.7	
82 2-Pentanone	43	7.220	7.235	-0.015	97	296896	40.0	45.5	
84 1,2-Dichloropropane	63	7.357	7.363	-0.006	93	399550	10.0	11.1	
85 Methylcyclohexane	55	7.377	7.393	-0.016	96	765319	10.0	11.4	
86 1,4-Dioxane	88	7.426	7.432	-0.006	85	17349	200.0	191.2	
87 Dibromomethane	93	7.466	7.471	-0.005	88	149625	10.0	10.7	
88 Dichlorobromomethane	83	7.554	7.560	-0.006	97	414951	10.0	11.2	
90 2-Chloroethyl vinyl ether	63	7.741	7.757	-0.016	90	23864	10.0	6.85	
91 cis-1,3-Dichloropropene	75	7.928	7.944	-0.016	91	419054	10.0	11.1	
92 4-Methyl-2-pentanone (MIBK	43	8.017	8.022	-0.005	96	417628	40.0	41.9	
93 Toluene	91	8.263	8.278	-0.015	97	1549052	10.0	10.7	
95 trans-1,3-Dichloropropene	75	8.391	8.406	-0.015	97	304098	10.0	11.6	
94 Ethyl methacrylate	69	8.410	8.416	-0.006	94	140875	10.0	10.6	
96 1,1,2-Trichloroethane	97	8.578	8.583	-0.005	91	159559	10.0	10.4	
98 1,3-Dichloropropane	76	8.745	8.760	-0.015	97	281269	10.0	10.8	
97 2-Hexanone	43	8.755	8.760	-0.005	97	226818	40.0	40.8	
99 Tetrachloroethene	164	8.784	8.800	-0.016	97	308574	10.0	9.78	
100 Chlorodibromomethane	129	8.981	8.987	-0.006	90	188703	10.0	10.2	
102 Ethylene Dibromide	107	9.129	9.144	-0.015	98	150973	10.0	10.5	
103 1-Chlorohexane	91	9.463	9.479	-0.016	93	582575	10.0	11.5	
104 Chlorobenzene	112	9.571	9.587	-0.016	91	802745	10.0	10.0	
105 1,1,1,2-Tetrachloroethane	131	9.621	9.636	-0.015	95	238070	10.0	10.4	
106 Ethylbenzene	106	9.640	9.646	-0.006	99	457560	10.0	10.6	
107 m-Xylene & p-Xylene	106	9.739	9.754	-0.015	0	573219	10.0	10.9	
108 o-Xylene	106	10.142	10.148	-0.006	88	514600	10.0	11.3	
109 Styrene	104	10.142	10.148	-0.006	83	749588	10.0	10.5	
110 Bromoform	173	10.349	10.354	-0.005	92	82192	10.0	9.86	
111 Isopropylbenzene	105	10.457	10.472	-0.015	96	1443857	10.0	11.1	
113 Cyclohexanone	55	10.575	10.581	-0.006	96	93655	400.0	364.4	
114 1,1,2,2-Tetrachloroethane	83	10.683	10.689	-0.006	93	157825	10.0	10.3	
115 trans-1,4-Dichloro-2-buten	53	10.732	10.738	-0.006	78	23777	10.0	8.80	
116 1,2,3-Trichloropropane	110	10.752	10.758	-0.006	84	30863	10.0	10.5	
117 Bromobenzene	156	10.782	10.787	-0.005	95	266275	10.0	10.3	
118 N-Propylbenzene	120	10.821	10.827	-0.006	99	346916	10.0	10.5	
120 2-Chlorotoluene	126	10.929	10.935	-0.006	94	292439	10.0	10.2	
119 1,3,5-Trimethylbenzene	105	10.949	10.955	-0.005	93	1105091	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	11.008	11.014	-0.006	98	277939	10.0	9.90	
122 tert-Butylbenzene	119	11.244	11.250	-0.006	93	1007570	10.0	10.7	
123 1,2,4-Trimethylbenzene	105	11.274	11.279	-0.005	95	1032501	10.0	10.8	
124 sec-Butylbenzene	134	11.431	11.437	-0.006	96	246412	10.0	10.4	
125 4-Isopropyltoluene	119	11.529	11.545	-0.016	97	1068916	10.0	10.4	
126 1,3-Dichlorobenzene	146	11.569	11.574	-0.005	97	489949	10.0	9.66	
127 1,4-Dichlorobenzene	146	11.638	11.643	-0.005	95	487697	10.0	9.57	
129 n-Butylbenzene	91	11.894	11.909	-0.015	99	1197605	10.0	10.9	
130 1,2-Dichlorobenzene	146	11.982	11.988	-0.006	96	386781	10.0	9.85	
131 1,2-Dibromo-3-Chloropropan	157	12.700	12.696	0.004	73	13248	10.0	8.27	
132 1,2,4-Trichlorobenzene	180	13.586	13.592	-0.006	93	192771	10.0	8.76	
133 Hexachlorobutadiene	225	13.743	13.759	-0.016	94	153230	10.0	8.22	
134 Naphthalene	128	13.891	13.897	-0.006	97	187728	10.0	7.76	
135 1,2,3-Trichlorobenzene	180	14.186	14.192	-0.006	94	145679	10.0	8.25	
S 142 1,2-Dichloroethene, Total	96				0		20.0	21.1	
S 140 1,2-Dichloroethene, Total	1				0		20.0	21.1	
S 138 Total BTEX	1				0			54.1	
S 137 Xylenes, Total (URS)	1				0		20.0	22.2	
S 141 Xylenes, Total	106				0		20.0	22.2	
S 136 Trihalomethanes, Total	1				0		40.0	42.3	
S 139 1,3-Dichloropropene, Total	1				0		20.0	22.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00072	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

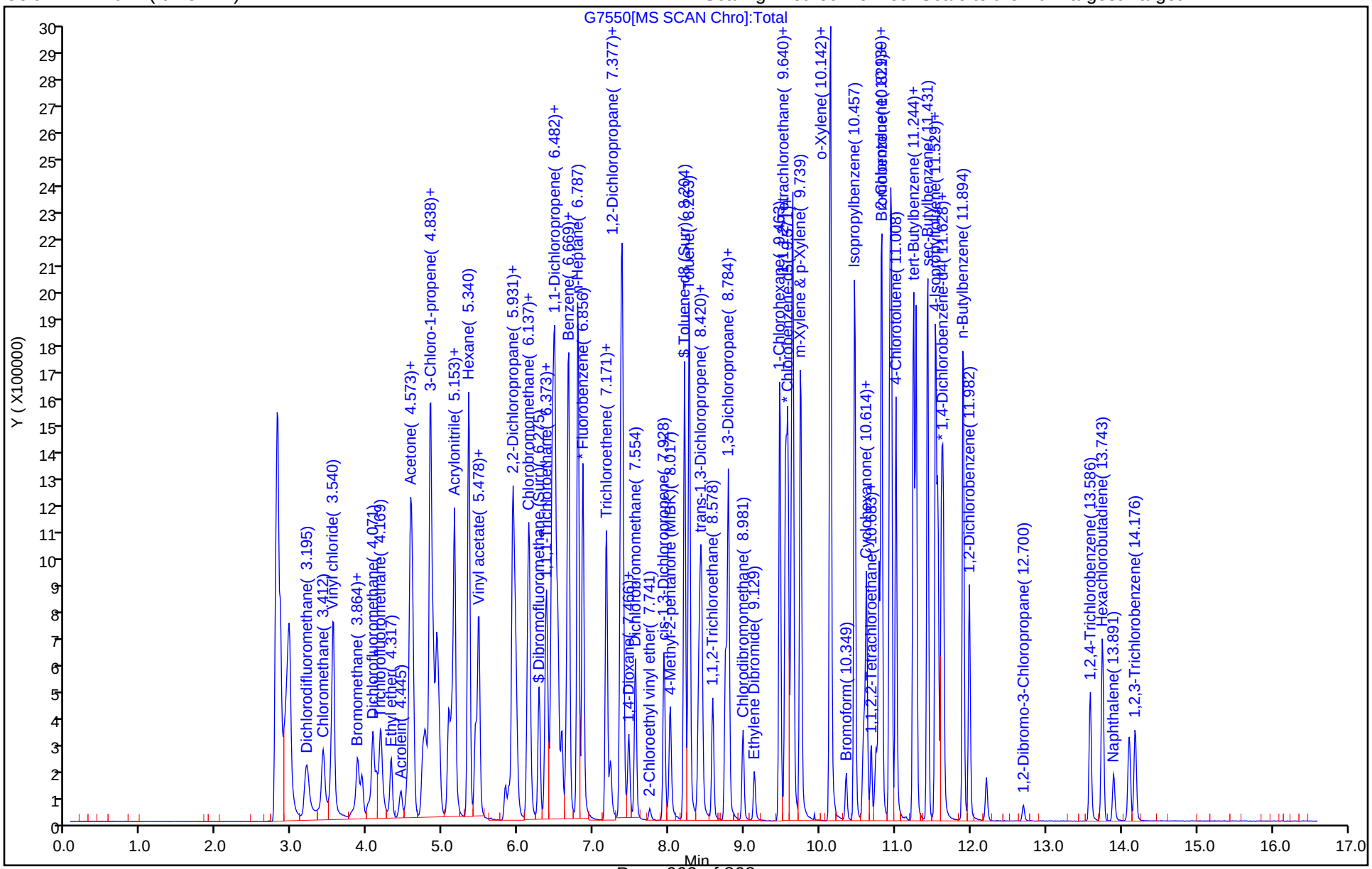
Report Date: 04-May-2018 19:07:05 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7550.D

Injection Date:	04-May-2018 05:32:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

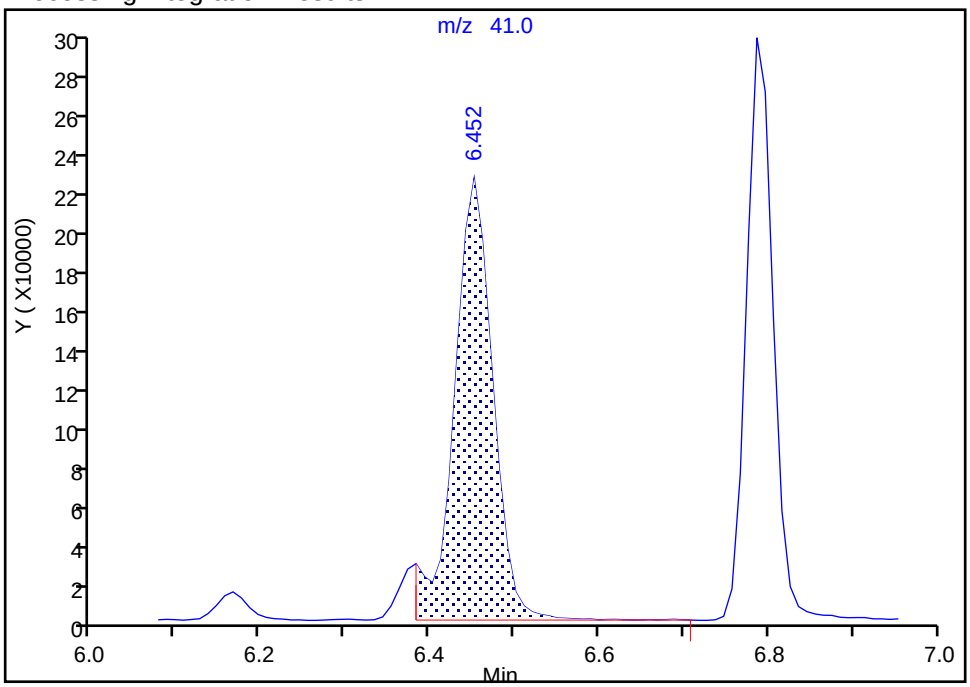
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Injection Date: 04-May-2018 05:32:30 Instrument ID: VMS_G
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

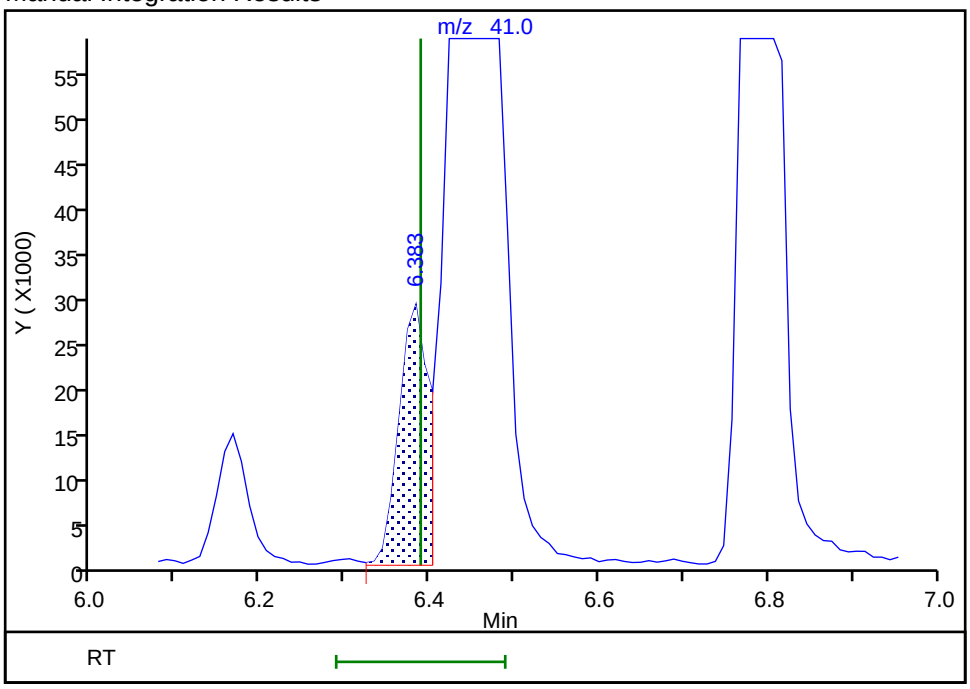
Processing Integration Results

RT: 6.45
Area: 712776
Amount: 2811.3449
Amount Units: ug/l



Manual Integration Results

RT: 6.38
Area: 72540
Amount: 286.1137
Amount Units: ug/l



Reviewer: newcomer, 04-May-2018 18:17:51
Audit Action: Manually Integrated Audit Reason: Assign Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/38 Calibration Date: 05/04/2018 05:52

Instrument ID: VMS_G Calib Start Date: 04/27/2018 13:43

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 04/27/2018 15:24

Lab File ID: G7551.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin2		0.0013		553	600	-7.8	50.0
Isopropyl alcohol	Ave	0.0067	0.0068		101	100	1.4	50.0
Acetonitrile	Ave	0.0164	0.0174		107	100	6.6	50.0
Diisopropyl ether	Ave	0.1676	0.1803		10.8	10.0	7.6	50.0
2-Chloro-1,3-butadiene	Ave	0.5759	0.7243		12.6	10.0	25.8	50.0
Tert-butyl ethyl ether	Ave	0.5668	0.6410		11.3	10.0	13.1	50.0
Ethyl acetate	Ave	0.0827	0.0916		22.2	20.0	10.8	50.0
Propionitrile	Ave	0.0117	0.0122		104	100	3.8	50.0
Methacrylonitrile	Ave	0.0762	0.0882		116	100	15.8	50.0
Tert-amyl methyl ether	Ave	0.3757	0.4256		11.3	10.0	13.3	50.0
2-Nitropropane	Ave	0.2701	0.3358		24.9	20.0	24.3	50.0
n-Butanol	Lin		0.0016		223	250	-10.9	50.0
Methyl methacrylate	Lin2		0.0194		18.0	20.0	-9.8	50.0
cis-1,4-Dichloro-2-butene	Ave	0.1142	0.1132		19.8	20.0	-0.9	50.0
1,2,3-Trimethylbenzene	Ave	3.333	3.573		10.7	10.0	7.2	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7551.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 05:52:30 ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC Supp
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:07:10 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 18:20:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.835	4.834	0.001	0	122061	250.0	250.0	
* 1 Fluorobenzene	96	6.853	6.861	-0.008	98	1264522	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.549	9.548	0.001	90	246473	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.615	11.614	0.001	97	278758	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.272	6.281	-0.009	92	350082	10.0	9.88	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.577	6.586	-0.009	0	235923	10.0	10.6	
$ 7 Toluene-d8 (Surr)	98	8.201	8.209	-0.008	94	1180971	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.621	10.620	0.001	88	316843	10.0	10.3	
30 Ethylene oxide	43	3.792	3.794	-0.002	99	479153	1000.0	1023.9	
34 Ethanol	45	4.166	4.168	-0.002	91	76272	600.0	553.1	
39 Propene oxide	58	4.402	4.404	-0.002	96	2230942	1000.0	1092.7	
43 Isopropyl alcohol	45	4.580	4.582	-0.002	99	69062	100.0	101.4	
46 Acetonitrile	41	4.776	4.778	-0.002	99	176425	100.0	106.6	
58 Isopropyl ether	87	5.455	5.457	-0.002	99	182408	10.0	10.8	
60 2-Chloro-1,3-butadiene	53	5.554	5.556	-0.002	93	732759	10.0	12.6	
61 Tert-butyl ethyl ether	59	5.751	5.752	-0.002	97	648426	10.0	11.3	
63 Ethyl acetate	43	5.888	5.890	-0.002	98	185329	20.0	22.2	
64 Propionitrile	54	5.928	5.930	-0.002	98	123344	100.0	103.8	
68 Methacrylonitrile	41	6.056	6.067	-0.011	97	892054	100.0	115.8	
78 Tert-amyl methyl ether	73	6.685	6.687	-0.002	94	430508	10.0	11.3	
89 2-Nitropropane	41	6.695	6.697	-0.002	77	679419	20.0	24.9	
80 n-Butanol	56	6.921	6.923	-0.002	96	39488	250.0	222.7	
83 Methyl methacrylate	100	7.335	7.346	-0.011	93	39207	20.0	18.0	
101 Tetrahydrothiophene	60	9.027	9.039	-0.012	98	38410	20.0	18.7	
112 cis-1,4-Dichloro-2-butene	53	10.483	10.485	-0.002	96	50473	20.0	19.8	
128 1,2,3-Trimethylbenzene	105	11.654	11.666	-0.012	99	796797	10.0	10.7	
11 1,3,5-Trichlorobenzene	180	12.924	12.926	-0.002	96	295361	10.0	9.24	

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

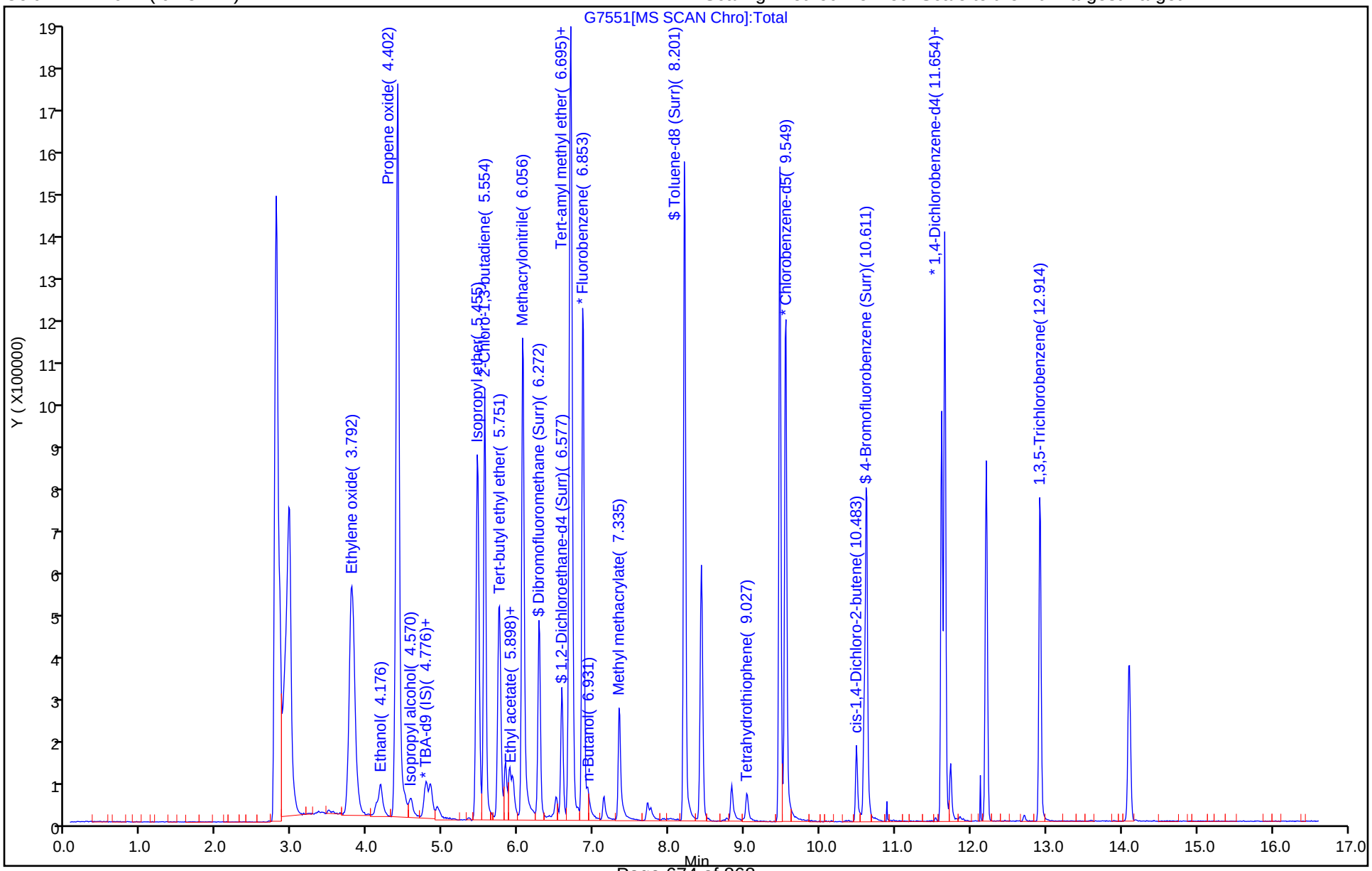
Report Date: 04-May-2018 19:07:11 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7551.D

Injection Date:	04-May-2018 05:52:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413691/38 Calibration Date: 05/04/2018 05:52

Instrument ID: VMS_G Calib Start Date: 04/30/2018 23:12

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 05/01/2018 00:53

Lab File ID: G7551.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3501	0.3461		9.88	10.0	-1.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2194	0.2332		10.6	10.0	6.3	50.0
Toluene-d8 (Surr)	Ave	5.774	5.989		10.4	10.0	3.7	50.0
4-Bromofluorobenzene (Surr)	Ave	1.381	1.421		10.3	10.0	2.9	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7551.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 05:52:30 ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC Supp
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub121

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:07:10 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 18:20:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.835	4.834	0.001	0	122061	250.0	250.0	
* 1 Fluorobenzene	96	6.853	6.861	-0.008	98	1264522	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.549	9.548	0.001	90	246473	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.615	11.614	0.001	97	278758	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.272	6.281	-0.009	92	350082	10.0	9.88	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.577	6.586	-0.009	0	235923	10.0	10.6	
$ 7 Toluene-d8 (Surr)	98	8.201	8.209	-0.008	94	1180971	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.621	10.620	0.001	88	316843	10.0	10.3	
30 Ethylene oxide	43	3.792	3.794	-0.002	99	479153	1000.0	1023.9	
34 Ethanol	45	4.166	4.168	-0.002	91	76272	600.0	553.1	
39 Propene oxide	58	4.402	4.404	-0.002	96	2230942	1000.0	1092.7	
43 Isopropyl alcohol	45	4.580	4.582	-0.002	99	69062	100.0	101.4	
46 Acetonitrile	41	4.776	4.778	-0.002	99	176425	100.0	106.6	
58 Isopropyl ether	87	5.455	5.457	-0.002	99	182408	10.0	10.8	
60 2-Chloro-1,3-butadiene	53	5.554	5.556	-0.002	93	732759	10.0	12.6	
61 Tert-butyl ethyl ether	59	5.751	5.752	-0.002	97	648426	10.0	11.3	
63 Ethyl acetate	43	5.888	5.890	-0.002	98	185329	20.0	22.2	
64 Propionitrile	54	5.928	5.930	-0.002	98	123344	100.0	103.8	
68 Methacrylonitrile	41	6.056	6.067	-0.011	97	892054	100.0	115.8	
78 Tert-amyl methyl ether	73	6.685	6.687	-0.002	94	430508	10.0	11.3	
89 2-Nitropropane	41	6.695	6.697	-0.002	77	679419	20.0	24.9	
80 n-Butanol	56	6.921	6.923	-0.002	96	39488	250.0	222.7	
83 Methyl methacrylate	100	7.335	7.346	-0.011	93	39207	20.0	18.0	
101 Tetrahydrothiophene	60	9.027	9.039	-0.012	98	38410	20.0	18.7	
112 cis-1,4-Dichloro-2-butene	53	10.483	10.485	-0.002	96	50473	20.0	19.8	
128 1,2,3-Trimethylbenzene	105	11.654	11.666	-0.012	99	796797	10.0	10.7	
11 1,3,5-Trichlorobenzene	180	12.924	12.926	-0.002	96	295361	10.0	9.24	

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

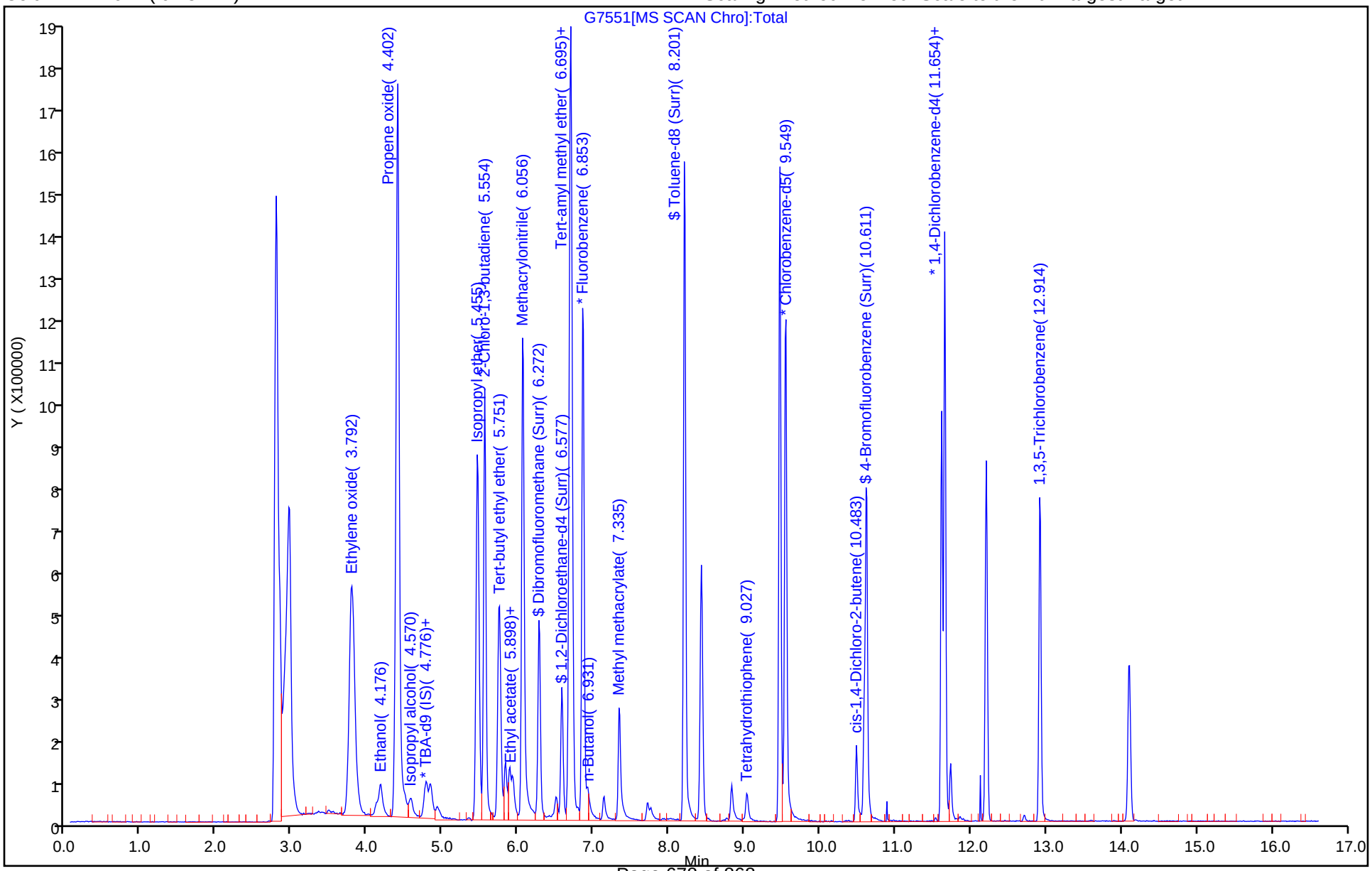
Report Date: 04-May-2018 19:07:11 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7551.D

Injection Date:	04-May-2018 05:52:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-412973/23 Calibration Date: 04/27/2018 19:03

Instrument ID: VMS_G2 Calib Start Date: 12/06/2017 09:39

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 12/06/2017 11:21

Lab File ID: G2_2326.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0010			250	600		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 27-Apr-2018 19:03:30 ALS Bottle#: 32 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:18:29 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:56:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	197545	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1410299	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.547	-0.008	85	344521	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	536587	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	301167	10.0	9.73	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	98	279820	10.0	9.98	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	1246832	10.0	9.50	
$ 9 4-Bromofluorobenzene (Surr	95	11.662	11.655	0.007	92	416948	10.0	9.54	
16 Ethylene oxide	43	2.110	2.110	0.000	100	486803	1000.0	986.9	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	2984372	1000.0	1107.7	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.492	3.520	-0.028	99	107255	100.0	101.5	
47 Isopropyl ether	87	4.931	4.931	0.000	92	295691	10.0	11.3	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	528416	10.0	10.6	
49 Tert-butyl ethyl ether	59	5.559	5.573	-0.014	97	808457	10.0	11.0	
53 Ethyl acetate	43	5.908	5.908	0.000	99	150989	20.0	21.7	
54 Propionitrile	54	5.922	5.922	0.000	99	123006	100.0	104.8	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	674440	100.0	111.7	
68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	99	677628	10.0	10.9	
73 n-Butanol	56	7.787	7.794	-0.007	91	38955	250.0	243.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	86	78307	20.0	20.3	
80 2-Nitropropane	41	8.630	8.630	0.000	97	33632	20.0	20.2	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	90	51241	20.0	17.6	
101 cis-1,4-Dichloro-2-butene	53	11.555	11.562	-0.007	97	78664	20.0	17.2	
116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	98	1276250	10.0	9.83	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	580497	10.0	8.90	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp B_00020	Amount Added:	5.00	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL

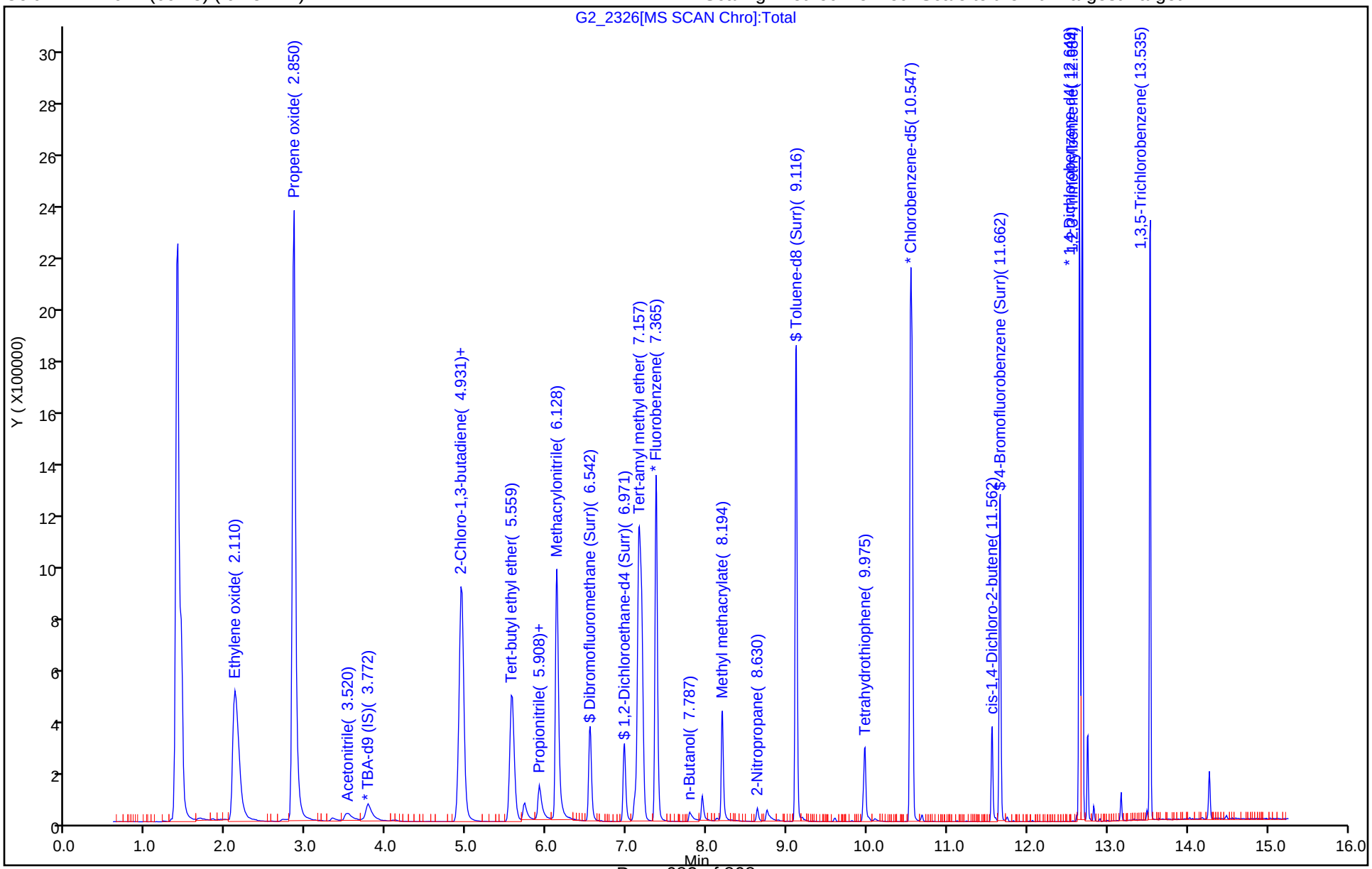
Report Date: 29-Apr-2018 10:16:24 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D

Injection Date:	27-Apr-2018 19:03:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



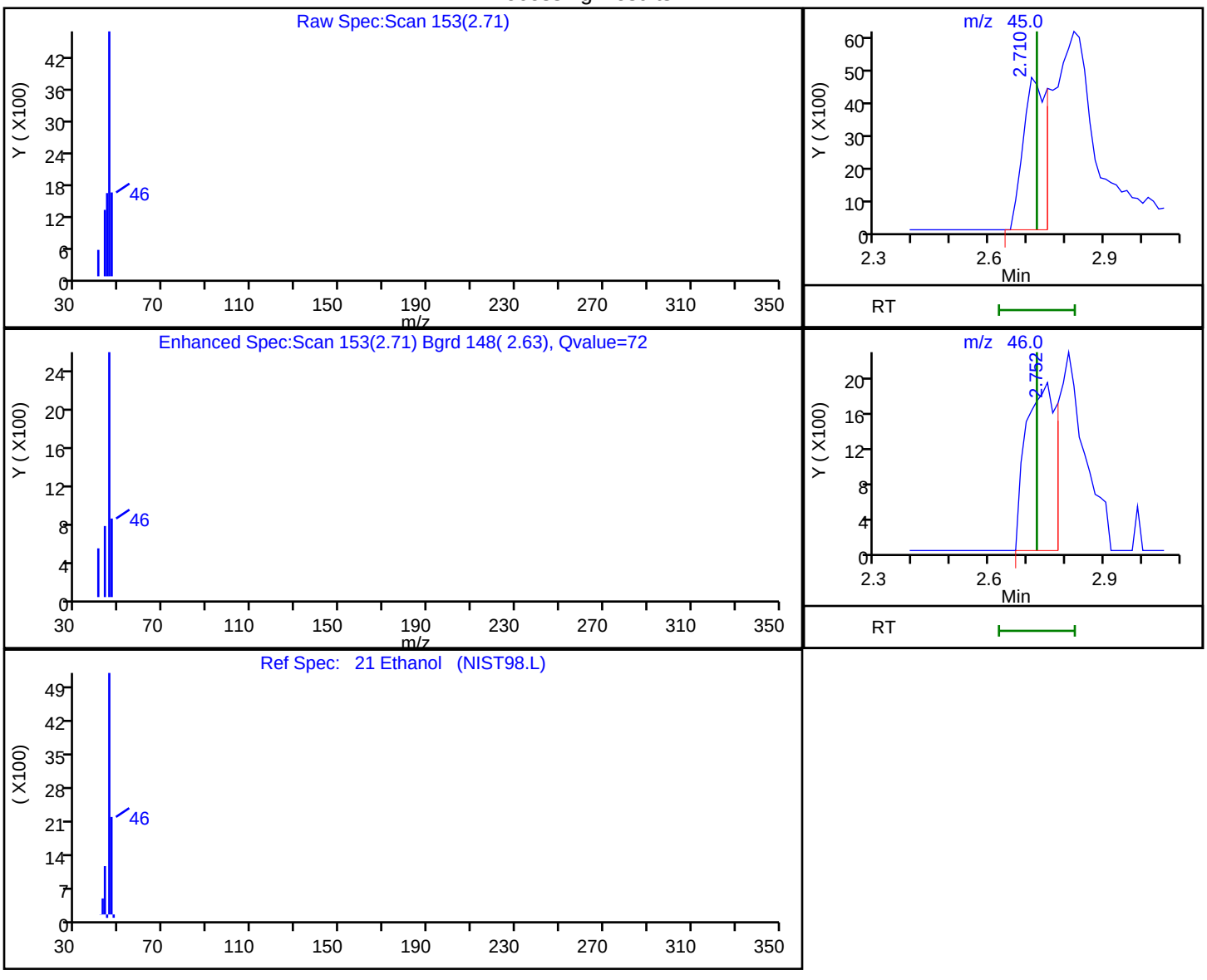
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D				
Injection Date:	27-Apr-2018 19:03:30	Instrument ID:	VMS_G2		
Lims ID:	icv				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	32	Worklist Smp#:	23
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

21 Ethanol, CAS: 64-17-5

Processing Results



RT	Mass	Response	Amount
2.71	45.00	20197	460.6186
2.75	46.00	10752	

Reviewer: ilczyszynd, 28-Apr-2018 07:56:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-412973/23 Calibration Date: 04/27/2018 19:03

Instrument ID: VMS_G2 Calib Start Date: 01/04/2018 15:49

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 01/04/2018 17:33

Lab File ID: G2_2326.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Lin				32.0	100	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 27-Apr-2018 19:03:30 ALS Bottle#: 32 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:18:29 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:56:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	197545	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1410299	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.547	-0.008	85	344521	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	536587	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	301167	10.0	9.73	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	98	279820	10.0	9.98	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	1246832	10.0	9.50	
$ 9 4-Bromofluorobenzene (Surr	95	11.662	11.655	0.007	92	416948	10.0	9.54	
16 Ethylene oxide	43	2.110	2.110	0.000	100	486803	1000.0	986.9	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	2984372	1000.0	1107.7	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.492	3.520	-0.028	99	107255	100.0	101.5	
47 Isopropyl ether	87	4.931	4.931	0.000	92	295691	10.0	11.3	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	528416	10.0	10.6	
49 Tert-butyl ethyl ether	59	5.559	5.573	-0.014	97	808457	10.0	11.0	
53 Ethyl acetate	43	5.908	5.908	0.000	99	150989	20.0	21.7	
54 Propionitrile	54	5.922	5.922	0.000	99	123006	100.0	104.8	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	674440	100.0	111.7	
68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	99	677628	10.0	10.9	
73 n-Butanol	56	7.787	7.794	-0.007	91	38955	250.0	243.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	86	78307	20.0	20.3	
80 2-Nitropropane	41	8.630	8.630	0.000	97	33632	20.0	20.2	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	90	51241	20.0	17.6	
101 cis-1,4-Dichloro-2-butene	53	11.555	11.562	-0.007	97	78664	20.0	17.2	
116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	98	1276250	10.0	9.83	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	580497	10.0	8.90	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp B_00020	Amount Added:	5.00	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL

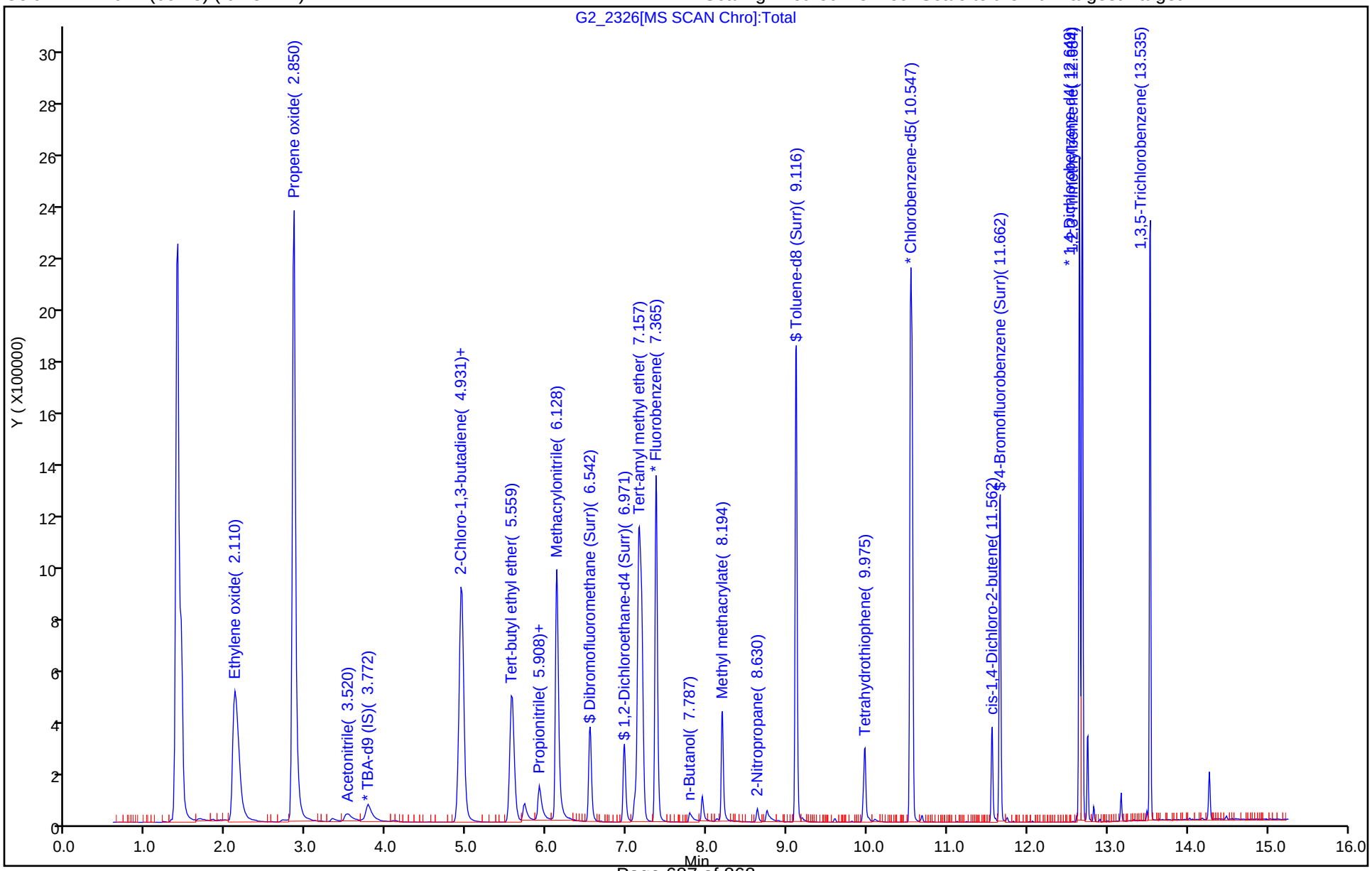
Report Date: 29-Apr-2018 10:16:24 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D

Injection Date:	27-Apr-2018 19:03:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



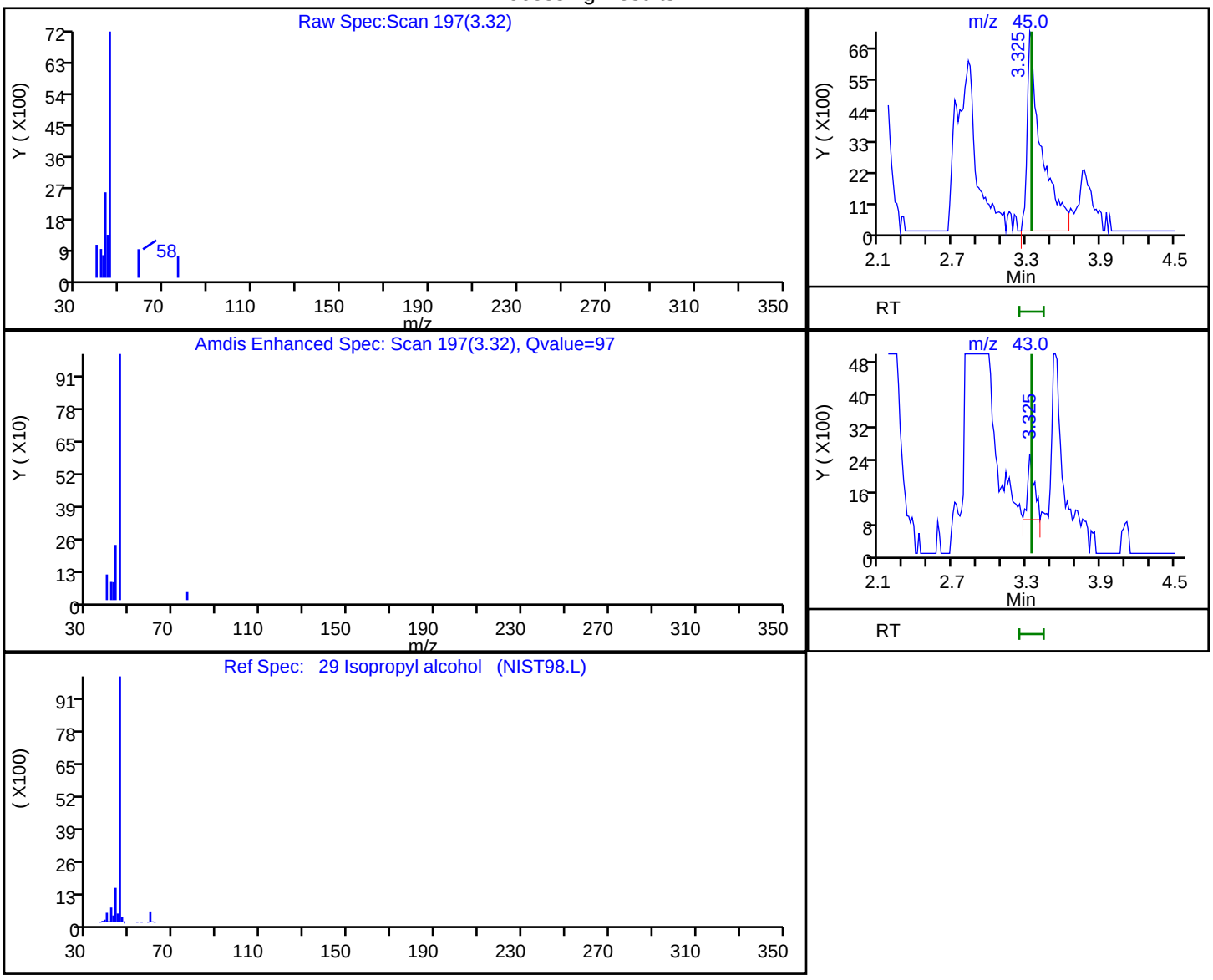
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D
Injection Date: 27-Apr-2018 19:03:30 Instrument ID: VMS_G2
Lims ID: icv
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 32 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

29 Isopropyl alcohol, CAS: 67-63-0

Processing Results



RT	Mass	Response	Amount
3.32	45.00	57818	105.6536
3.32	43.00	6090	

Reviewer: ilczyszynd, 28-Apr-2018 07:56:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-412973/23 Calibration Date: 04/27/2018 19:03

Instrument ID: VMS_G2 Calib Start Date: 04/27/2018 16:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/27/2018 18:42

Lab File ID: G2_2326.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Lin1		0.0095		102	100	1.5	20.0
Isopropyl ether	Ave	0.2315	0.2621		11.3	10.0	13.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4426	0.4684		10.6	10.0	5.8	20.0
Tert-butyl ethyl ether	Ave	0.6512	0.7166		11.0	10.0	10.0	20.0
Ethyl acetate	Lin2		0.0669		21.7	20.0	8.6	20.0
Propionitrile	Lin2		0.0109		105	100	4.8	20.0
Methacrylonitrile	Ave	0.0535	0.0598		112	100	11.7	20.0
Tert-amyl methyl ether	Ave	0.5517	0.6006		10.9	10.0	8.9	20.0
n-Butanol	Lin		0.0014		244	250	-2.4	20.0
Methyl methacrylate	Lin1		0.0347		20.3	20.0	1.7	20.0
2-Nitropropane	Lin1		0.0149		20.2	20.0	1.1	20.0
cis-1,4-Dichloro-2-butene	Lin1		0.0916		17.2	20.0	-13.9	20.0
1,2,3-Trimethylbenzene	Ave	3.026	2.973		9.83	10.0	-1.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2744	0.2669		9.73	10.0	-2.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2484	0.2480		9.98	10.0	-0.2	20.0
Toluene-d8 (Surr)	Ave	4.762	4.524		9.50	10.0	-5.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.019	0.9713		9.54	10.0	-4.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 27-Apr-2018 19:03:30 ALS Bottle#: 32 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:18:29 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 07:56:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.772	0.000	0	197545	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1410299	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.547	-0.008	85	344521	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	536587	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	301167	10.0	9.73	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	98	279820	10.0	9.98	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	1246832	10.0	9.50	
$ 9 4-Bromofluorobenzene (Surr	95	11.662	11.655	0.007	92	416948	10.0	9.54	
16 Ethylene oxide	43	2.110	2.110	0.000	100	486803	1000.0	986.9	
21 Ethanol	45		2.724				ND	ND	U
23 Propene oxide	58	2.850	2.850	0.000	96	2984372	1000.0	1107.7	
29 Isopropyl alcohol	45		3.339				ND	ND	U
31 Acetonitrile	41	3.492	3.520	-0.028	99	107255	100.0	101.5	
47 Isopropyl ether	87	4.931	4.931	0.000	92	295691	10.0	11.3	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	91	528416	10.0	10.6	
49 Tert-butyl ethyl ether	59	5.559	5.573	-0.014	97	808457	10.0	11.0	
53 Ethyl acetate	43	5.908	5.908	0.000	99	150989	20.0	21.7	
54 Propionitrile	54	5.922	5.922	0.000	99	123006	100.0	104.8	
58 Methacrylonitrile	41	6.128	6.128	0.000	89	674440	100.0	111.7	
68 Tert-amyl methyl ether	73	7.186	7.193	-0.007	99	677628	10.0	10.9	
73 n-Butanol	56	7.787	7.794	-0.007	91	38955	250.0	243.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	86	78307	20.0	20.3	
80 2-Nitropropane	41	8.630	8.630	0.000	97	33632	20.0	20.2	
13 Tetrahydrothiophene	60	9.960	9.960	0.000	90	51241	20.0	17.6	
101 cis-1,4-Dichloro-2-butene	53	11.555	11.562	-0.007	97	78664	20.0	17.2	
116 1,2,3-Trimethylbenzene	105	12.684	12.685	0.000	98	1276250	10.0	9.83	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	580497	10.0	8.90	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-Supp B_00020	Amount Added:	5.00	Units: uL
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL

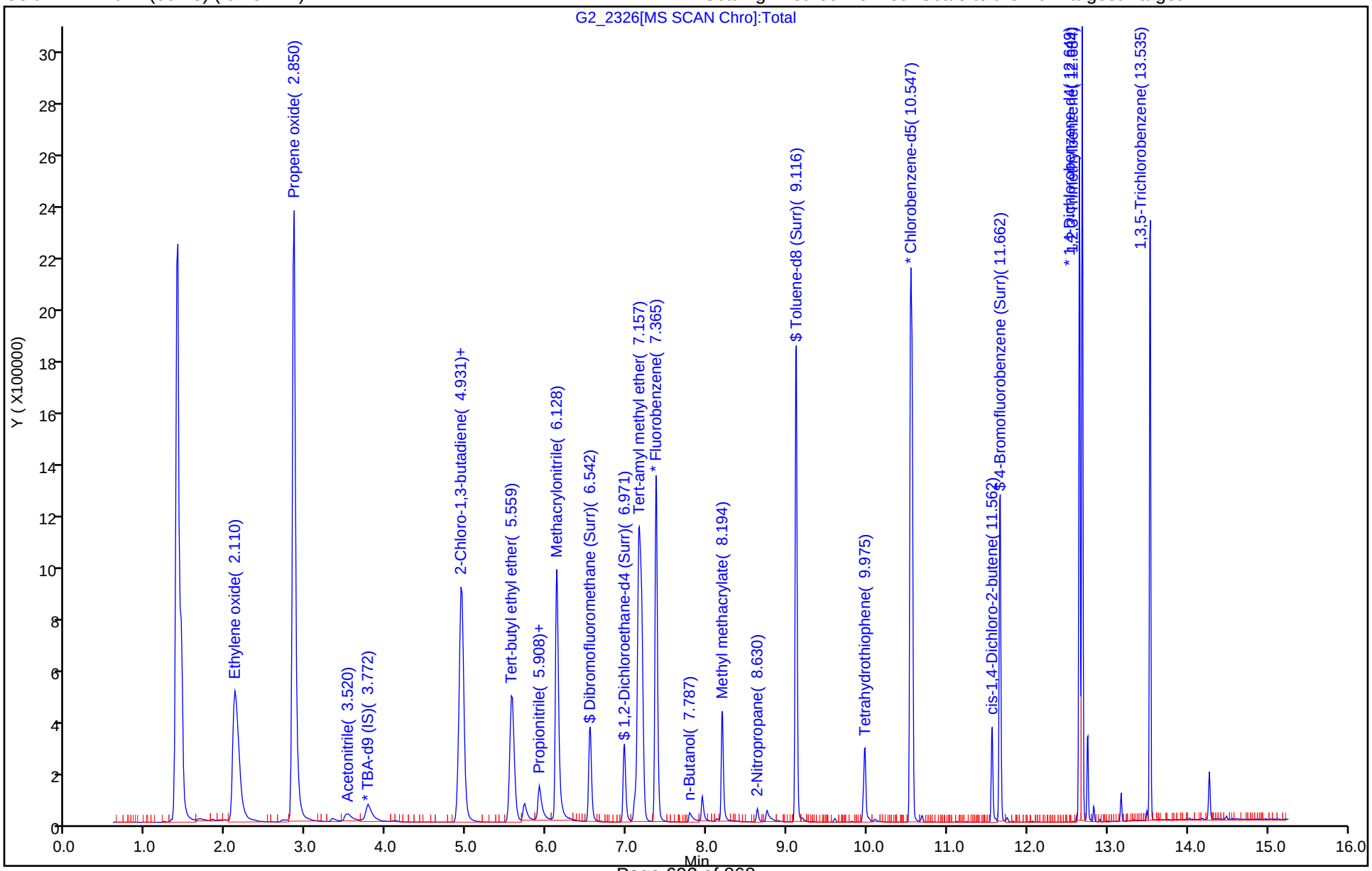
Report Date: 29-Apr-2018 10:16:24 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2326.D

Injection Date:	27-Apr-2018 19:03:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413564/18 Calibration Date: 05/03/2018 01:35

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2545.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.1641	0.1712		10.4	10.0	4.3	20.0
Acrolein	Lin2		0.0163		100	100	0.4	20.0
1,1-Dichloroethene	Ave	0.3052	0.3096		10.1	10.0	1.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2809	0.2790		9.93	10.0	-0.7	20.0
Iodomethane	Ave	0.4712	0.4794		10.2	10.0	1.8	20.0
Carbon disulfide	Ave	1.186	1.138		9.59	10.0	-4.1	20.0
3-Chloro-1-propene	Ave	0.5180	0.5038		9.73	10.0	-2.7	20.0
Methyl acetate	Lin2		0.0722		47.3	50.0	-5.4	20.0
Methylene Chloride	Lin2		0.2908		9.63	10.0	-3.7	20.0
t-Butyl alcohol	Lin2		0.0084		86.3	100	-13.7	20.0
Acrylonitrile	Lin2		0.0345		92.7	100	-7.3	20.0
Methyl tert-butyl ether	Ave	0.5671	0.5382		9.49	10.0	-5.1	20.0
trans-1,2-Dichloroethene	Ave	0.3223	0.3309		10.3	10.0	2.7	20.0
Hexane	Ave	2.526	2.537		10.0	10.0	0.5	20.0
1,1-Dichloroethane	Ave	0.6049	0.5705	0.1000	9.43	10.0	-5.7	20.0
Vinyl acetate	Lin2		0.2333		18.0	20.0	-9.9	20.0
2,2-Dichloropropane	Lin2		0.5367		9.17	10.0	-8.3	20.0
cis-1,2-Dichloroethene	Ave	0.3224	0.3187		9.88	10.0	-1.2	20.0
Bromochloromethane	Lin2		0.1048		9.62	10.0	-3.8	20.0
Tetrahydrofuran	Ave	0.0307	0.0273		17.8	20.0	-11.1	20.0
sec-Butyl Alcohol	Lin1		0.0046		227	300	-24.5*	20.0
Chloroform	Ave	0.5508	0.4971		9.02	10.0	-9.8	20.0
1,1,1-Trichloroethane	Ave	0.5512	0.4988		9.05	10.0	-9.5	20.0
Cyclohexane	Ave	0.6655	0.6419		9.65	10.0	-3.5	20.0
Carbon tetrachloride	Ave	0.4891	0.4453		9.10	10.0	-9.0	20.0
1,1-Dichloropropene	Ave	0.4813	0.4710		9.79	10.0	-2.1	20.0
Benzene	Ave	1.294	1.227		9.49	10.0	-5.1	20.0
1,2-Dichloroethane	Ave	0.3070	0.2642		8.61	10.0	-13.9	20.0
Isobutyl alcohol	Ave	0.0159	0.0141		221	250	-11.6	20.0
Trichloroethene	Ave	0.3361	0.3201		9.52	10.0	-4.8	20.0
2-Pentanone	Lin2		0.0794		38.0	40.0	-5.0	20.0
Methylcyclohexane	Ave	0.5408	0.5051		9.34	10.0	-6.6	20.0
1,2-Dichloropropane	Ave	0.2938	0.2821		9.60	10.0	-4.0	20.0
1,4-Dioxane	Lin2		0.0007		169	200	-15.5	20.0
Dibromomethane	Ave	0.1153	0.1012		8.78	10.0	-12.2	20.0
Bromodichloromethane	Ave	0.3302	0.2991		9.06	10.0	-9.4	20.0
2-Chloroethyl vinyl ether	Lin1		0.0659		8.62	10.0	-13.8	20.0
cis-1,3-Dichloropropene	Lin1		1.597		9.16	10.0	-8.4	20.0
Toluene	Ave	1.337	1.296		9.70	10.0	-3.0	20.0
trans-1,3-Dichloropropene	Lin1		0.2679		8.66	10.0	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413564/18 Calibration Date: 05/03/2018 01:35

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2545.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl methacrylate	Lin1		0.7043		8.17	10.0	-18.3	20.0
1,1,2-Trichloroethane	Ave	0.1585	0.1523		9.61	10.0	-3.9	20.0
Tetrachloroethene	Ave	1.242	1.185		9.54	10.0	-4.6	20.0
1,3-Dichloropropane	Ave	1.307	1.196		9.15	10.0	-8.5	20.0
Dibromochloromethane	Lin2		0.7321		8.93	10.0	-10.7	20.0
1,2-Dibromoethane (EDB)	Ave	0.6045	0.5847		9.67	10.0	-3.3	20.0
1-Chlorohexane	Ave	2.234	2.123		9.50	10.0	-5.0	20.0
Chlorobenzene	Ave	3.723	3.512	0.3000	9.43	10.0	-5.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.218	1.127		9.25	10.0	-7.5	20.0
Ethylbenzene	Ave	2.233	2.104		9.42	10.0	-5.8	20.0
m-Xylene & p-Xylene	Ave	2.671	2.573		9.63	10.0	-3.7	20.0
o-Xylene	Ave	2.372	2.355		9.93	10.0	-0.7	20.0
Styrene	Lin2		3.485		9.63	10.0	-3.7	20.0
Bromoform	Lin1		0.3536	0.1000	8.38	10.0	-16.2	20.0
Isopropylbenzene	Ave	4.383	4.376		9.98	10.0	-0.2	20.0
Bromobenzene	Ave	0.8948	0.8591		9.60	10.0	-4.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4804	0.4435	0.3000	9.23	10.0	-7.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1171	0.1125		9.60	10.0	-4.0	20.0
1,2,3-Trichloropropane	Ave	0.1352	0.1309		9.68	10.0	-3.2	20.0
N-Propylbenzene	Ave	1.257	1.250		9.95	10.0	-0.5	20.0
2-Chlorotoluene	Ave	1.018	0.9888		9.72	10.0	-2.8	20.0
1,3,5-Trimethylbenzene	Ave	3.629	3.537		9.75	10.0	-2.5	20.0
4-Chlorotoluene	Ave	1.033	1.007		9.76	10.0	-2.4	20.0
tert-Butylbenzene	Ave	3.224	3.172		9.84	10.0	-1.6	20.0
1,2,4-Trimethylbenzene	Ave	3.621	3.517		9.71	10.0	-2.9	20.0
sec-Butylbenzene	Ave	1.022	1.027		10.1	10.0	0.5	20.0
1,3-Dichlorobenzene	Ave	1.904	1.810		9.51	10.0	-4.9	20.0
4-Isopropyltoluene	Ave	4.231	4.229		10.0	10.0	-0.0	20.0
1,4-Dichlorobenzene	Ave	1.895	1.787		9.43	10.0	-5.7	20.0
n-Butylbenzene	Ave	4.153	4.135		9.96	10.0	-0.4	20.0
1,2-Dichlorobenzene	Ave	1.624	1.557		9.59	10.0	-4.1	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0692		8.91	10.0	-10.9	20.0
1,2,4-Trichlorobenzene	Ave	1.287	1.225		9.52	10.0	-4.8	20.0
Hexachlorobutadiene	Ave	0.9777	0.9307		9.52	10.0	-4.8	20.0
Naphthalene	Ave	1.639	1.623		9.90	10.0	-1.0	20.0
1,2,3-Trichlorobenzene	Lin2		1.175		9.99	10.0	-0.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2549	0.2475		9.71	10.0	-2.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2529	0.2248		8.89	10.0	-11.1	20.0
Toluene-d8 (Surr)	Ave	4.836	4.828		9.98	10.0	-0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.097	1.087		9.90	10.0	-1.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2545.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-May-2018 01:35:30 ALS Bottle#: 19 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 07:31:11 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: newcomer Date: 03-May-2018 01:58:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.772	-0.001	0	206492	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	99	1691443	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.547	-0.008	85	388155	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	597767	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	334933	10.0	9.71	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	97	304250	10.0	8.89	
$ 8 Toluene-d8 (Surr)	98	9.116	9.117	-0.001	93	1499267	10.0	9.98	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	89	519681	10.0	9.90	
22 Ethyl ether	59	2.780	2.794	-0.014	92	231639	10.0	10.4	
24 Acrolein	56	2.947	2.962	-0.015	99	221086	100.0	100.3	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	96	418962	10.0	10.1	
26 1,1,2-Trichloro-1,2,2-trif	151	3.087	3.101	-0.014	94	377522	10.0	9.93	
28 Iodomethane	142	3.227	3.241	-0.014	99	648756	10.0	10.2	
30 Carbon disulfide	76	3.311	3.311	0.000	99	1539414	10.0	9.59	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	91	681771	10.0	9.73	
32 Methyl acetate	43	3.520	3.520	0.000	63	488118	50.0	47.3	
35 Methylene Chloride	84	3.702	3.702	0.000	94	393425	10.0	9.63	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	97	113895	100.0	86.3	
39 Acrylonitrile	53	4.051	4.051	0.000	98	466155	100.0	92.7	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	97	447749	10.0	10.3	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	95	728206	10.0	9.49	
42 Hexane	57	4.540	4.540	0.000	92	787929	10.0	10.0	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	96	771931	10.0	9.43	
46 Vinyl acetate	43	4.875	4.875	0.000	97	631454	20.0	18.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	431204	10.0	9.88	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	70	726241	10.0	9.17	
56 Chlorobromomethane	128	6.149	6.156	-0.007	98	141796	10.0	9.62	
55 sec-Butyl Alcohol	45	6.178	6.178	0.000	87	184531	300.0	226.6	
57 Tetrahydrofuran	42	6.171	6.178	-0.007	74	73992	20.0	17.8	
59 Chloroform	83	6.328	6.328	0.000	94	672674	10.0	9.02	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	674923	10.0	9.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Cyclohexane	56	6.592	6.592	0.000	91	868572	10.0	9.65	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	602528	10.0	9.10	
63 1,1-Dichloropropene	75	6.735	6.736	-0.001	97	637318	10.0	9.79	
64 Benzene	78	6.979	6.979	-0.001	97	1660951	10.0	9.49	
65 1,2-Dichloroethane	62	7.064	7.072	-0.008	97	357562	10.0	8.61	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	475208	250.0	220.9	
67 n-Heptane	43	7.393	7.393	0.000	93	791591	10.0	9.37	
69 Trichloroethene	95	7.794	7.794	0.000	99	433172	10.0	9.52	
70 2-Pentanone	43	8.022	8.030	-0.008	98	429556	40.0	38.0	
71 Methylcyclohexane	55	8.037	8.044	-0.007	90	683523	10.0	9.34	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	95	381750	10.0	9.60	
75 Dibromomethane	93	8.180	8.180	0.000	97	136909	10.0	8.78	
74 1,4-Dioxane	88	8.180	8.187	-0.007	32	17938	200.0	169.1	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	404719	10.0	9.06	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	91	89147	10.0	8.62	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	95	495871	10.0	9.16	
82 Toluene	91	9.181	9.181	0.000	98	1753657	10.0	9.70	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	93	362543	10.0	8.66	
84 Ethyl methacrylate	69	9.510	9.510	0.000	89	218713	10.0	8.17	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	92	206084	10.0	9.61	
86 Tetrachloroethene	164	9.696	9.696	0.000	97	368013	10.0	9.54	
87 1,3-Dichloropropane	76	9.781	9.782	-0.001	91	371433	10.0	9.15	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	227335	10.0	8.93	
90 Ethylene Dibromide	107	10.096	10.096	0.000	98	181567	10.0	9.67	
91 1-Chlorohexane	91	10.561	10.561	0.000	98	659234	10.0	9.50	
92 Chlorobenzene	112	10.568	10.568	0.000	94	1090705	10.0	9.43	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	94	349857	10.0	9.25	
94 Ethylbenzene	106	10.668	10.668	0.000	99	653392	10.0	9.42	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	100	798891	10.0	9.63	
96 o-Xylene	106	11.147	11.154	-0.007	97	731330	10.0	9.93	
97 Styrene	104	11.169	11.169	0.000	94	1082257	10.0	9.63	
98 Bromoform	173	11.340	11.340	0.000	96	109804	10.0	8.38	
99 Isopropylbenzene	105	11.490	11.498	-0.008	96	2092748	10.0	9.98	
103 Bromobenzene	156	11.783	11.784	-0.001	96	410830	10.0	9.60	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	212104	10.0	9.23	
105 trans-1,4-Dichloro-2-buten	53	11.819	11.826	-0.007	86	53780	10.0	9.60	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	62578	10.0	9.68	
106 N-Propylbenzene	120	11.876	11.884	-0.008	99	597802	10.0	9.95	
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	472866	10.0	9.72	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1691414	10.0	9.75	
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	481778	10.0	9.76	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1517091	10.0	9.84	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	97	1681920	10.0	9.71	
112 sec-Butylbenzene	134	12.498	12.499	-0.001	95	491264	10.0	10.1	
113 1,3-Dichlorobenzene	146	12.591	12.592	-0.001	98	865630	10.0	9.51	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	2022362	10.0	10.0	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	96	854350	10.0	9.43	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1977418	10.0	9.96	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	744552	10.0	9.59	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	83	33107	10.0	8.91	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	585737	10.0	9.52	
122 Hexachlorobutadiene	225	14.021	14.022	-0.001	98	445088	10.0	9.52	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	14.114	14.115	-0.001	97	776145	10.0	9.90	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	79	561895	10.0	9.99	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.2	
S 140 1,3-Dichloropropene, Total	1				0		20.0	17.8	
S 144 1,2-Dichloroethene, Total	1				0		10.0	20.2	
S 142 Trihalomethanes, Total	1				0		40.0	35.4	
S 143 Xylenes, Total	106				0		20.0	19.6	
S 138 Xylenes, Total (URS)	1				0		20.0	19.6	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL
MV-Main B_00020	Amount Added:	5.00	Units: uL
MV-SS 2-Cleve_00043	Amount Added:	5.00	Units: uL

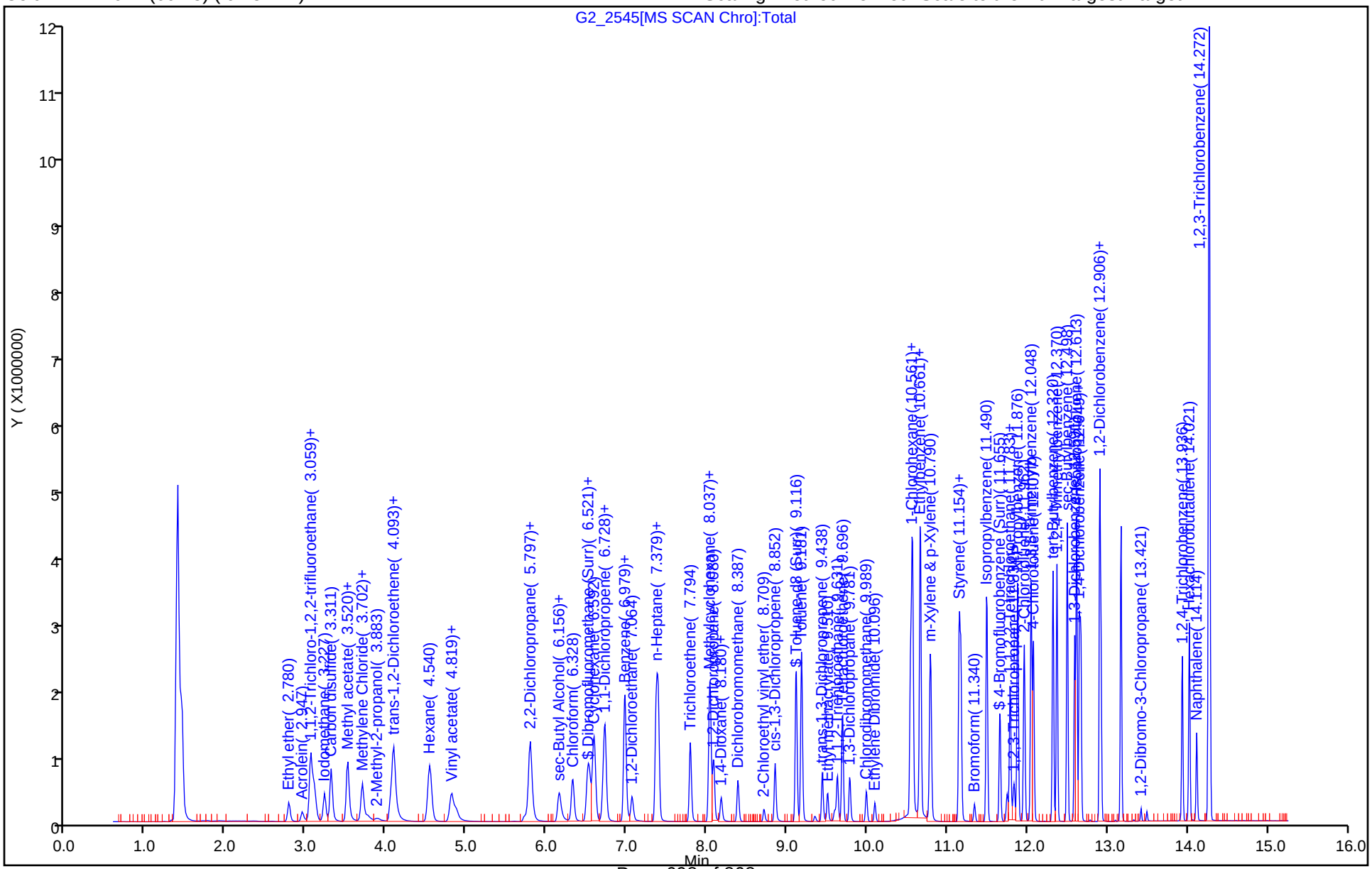
Report Date: 03-May-2018 07:31:15 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2545.D

Injection Date:	03-May-2018 01:35:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: ICV 280-413693/2 Calibration Date: 05/03/2018 21:21

Instrument ID: VMS_G2 Calib Start Date: 05/03/2018 01:55

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 03:55

Lab File ID: G2_2595.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin		0.5013		11.3	10.0	12.5	20.0
Chloromethane	Ave	0.4166	0.3869	0.1000	9.29	10.0	-7.1	20.0
Vinyl chloride	Ave	0.4400	0.4254		9.67	10.0	-3.3	20.0
Bromomethane	Ave	0.2809	0.2623		9.34	10.0	-6.6	20.0
Chloroethane	Ave	0.2462	0.2312		9.39	10.0	-6.1	20.0
Dichlorofluoromethane	Ave	0.7029	0.7304		10.4	10.0	3.9	20.0
Trichlorofluoromethane	Ave	0.6244	0.6516		10.4	10.0	4.4	20.0
Acetone	Ave	0.0278	0.0329		47.3	40.0	18.3	20.0
2-Butanone (MEK)	Lin2		0.0397		40.9	40.0	2.2	20.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.0898		37.2	40.0	-7.0	20.0
2-Hexanone	Lin1		0.2626		35.8	40.0	-10.5	20.0
Cyclohexanone	Lin		0.0097		372	400	-7.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2595.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-May-2018 21:21:30 ALS Bottle#: 14 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 01:49:24 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: newcomer Date: 03-May-2018 21:44:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.771	0.000	0	183228	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1608487	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	88	364076	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	97	521738	12.5	12.5	
12 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	645030	10.0	11.3	
14 Chloromethane	50	1.704	1.704	0.000	99	497798	10.0	9.29	
15 Vinyl chloride	62	1.816	1.816	0.000	98	547426	10.0	9.67	
17 Bromomethane	94	2.123	2.123	0.000	91	337513	10.0	9.34	
18 Chloroethane	64	2.235	2.235	0.000	100	297560	10.0	9.39	
19 Dichlorofluoromethane	67	2.459	2.459	0.000	98	939899	10.0	10.4	
20 Trichlorofluoromethane	101	2.487	2.487	0.000	98	838439	10.0	10.4	
27 Acetone	43	3.115	3.115	0.000	99	169077	40.0	47.3	
52 2-Butanone (MEK)	43	5.825	5.825	0.000	100	204249	40.0	40.9	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.016	0.000	98	462423	40.0	37.2	
88 2-Hexanone	43	9.853	9.853	0.000	98	305879	40.0	35.8	
100 Cyclohexanone	55	11.583	11.583	0.000	95	112442	400.0	372.0	

Reagents:

MV-568718-D_00010 Amount Added: 1.00 Units: uL
MV-Gas/Ket B_00041 Amount Added: 5.00 Units: uL

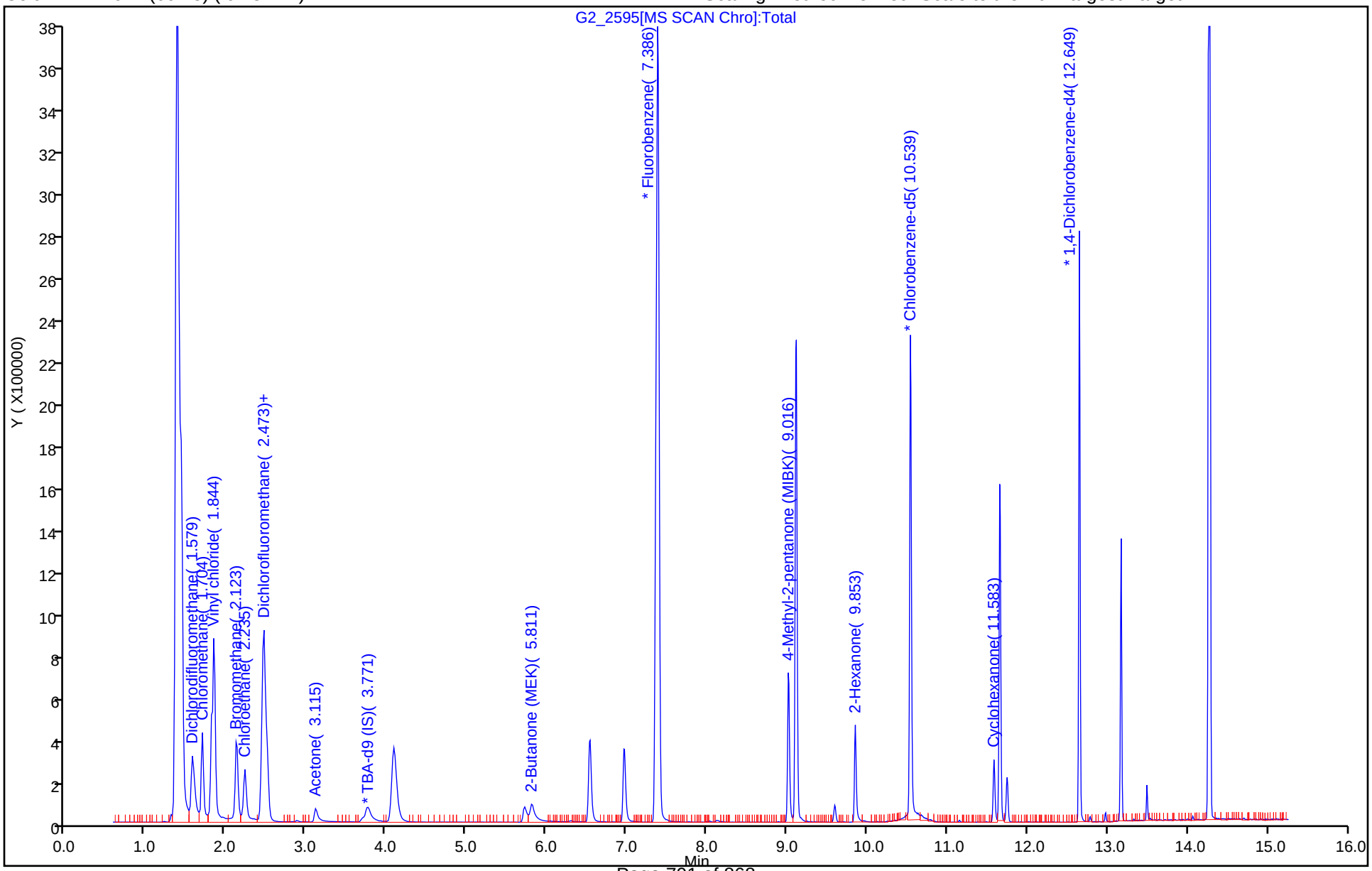
Report Date: 04-May-2018 01:49:25 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2595.D

Injection Date:	03-May-2018 21:21:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/2 Calibration Date: 05/04/2018 20:19

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2662.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.1641	0.1990		12.1	10.0	21.3*	20.0
Acrolein	Lin2		0.0209		127	100	26.8*	20.0
1,1-Dichloroethene	Ave	0.3052	0.3450		11.3	10.0	13.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2809	0.3097		11.0	10.0	10.3	20.0
Iodomethane	Ave	0.4712	0.5388		11.4	10.0	14.4	20.0
Carbon disulfide	Ave	1.186	1.313		11.1	10.0	10.7	20.0
3-Chloro-1-propene	Ave	0.5180	0.5789		11.2	10.0	11.7	20.0
Methyl acetate	Lin2		0.0909		24.1	20.0	20.5*	20.0
Methylene Chloride	Lin2		0.3289		11.0	10.0	9.8	20.0
t-Butyl alcohol	Lin2		0.0116		119	100	18.7	20.0
Acrylonitrile	Lin2		0.0425		113	100	13.4	20.0
trans-1,2-Dichloroethene	Ave	0.3223	0.3673		11.4	10.0	14.0	20.0
Methyl tert-butyl ether	Ave	0.5671	0.6741		11.9	10.0	18.9	20.0
Hexane	Ave	2.526	2.769		11.0	10.0	9.6	20.0
1,1-Dichloroethane	Ave	0.6049	0.6633	0.1000	11.0	10.0	9.7	20.0
Vinyl acetate	Lin2		0.2959		22.5	20.0	12.6	20.0
2,2-Dichloropropane	Lin2		0.6403		11.0	10.0	9.8	20.0
cis-1,2-Dichloroethene	Ave	0.3224	0.3649		11.3	10.0	13.2	20.0
Bromochloromethane	Lin2		0.1206		11.1	10.0	10.6	20.0
Tetrahydrofuran	Ave	0.0307	0.0346		22.5	20.0	12.5	20.0
sec-Butyl Alcohol	Lin1		0.0067		319	300	6.2	20.0
Chloroform	Ave	0.5508	0.5926		10.8	10.0	7.6	20.0
1,1,1-Trichloroethane	Ave	0.5512	0.5885		10.7	10.0	6.8	20.0
Cyclohexane	Ave	0.6655	0.7322		11.0	10.0	10.0	20.0
Carbon tetrachloride	Ave	0.4891	0.5220		10.7	10.0	6.7	20.0
1,1-Dichloropropene	Ave	0.4813	0.5396		11.2	10.0	12.1	20.0
Benzene	Ave	1.294	1.421		11.0	10.0	9.9	20.0
1,2-Dichloroethane	Ave	0.3070	0.3264		10.6	10.0	6.3	20.0
Isobutyl alcohol	Ave	0.0159	0.0172		271	250	8.3	20.0
Trichloroethene	Ave	0.3361	0.3647		10.9	10.0	8.5	20.0
2-Pentanone	Lin2		0.0932		44.3	40.0	10.9	20.0
Methylcyclohexane	Ave	0.5408	0.6043		11.2	10.0	11.7	20.0
1,2-Dichloropropane	Ave	0.2938	0.3194		10.9	10.0	8.7	20.0
Dibromomethane	Ave	0.1153	0.1265		11.0	10.0	9.8	20.0
1,4-Dioxane	Lin2		0.0010		238	200	19.1	20.0
Bromodichloromethane	Ave	0.3302	0.3692		11.2	10.0	11.8	20.0
2-Chloroethyl vinyl ether	Lin1		0.0825		10.6	10.0	6.0	20.0
cis-1,3-Dichloropropene	Lin1		1.810		10.4	10.0	3.6	20.0
Toluene	Ave	1.337	1.504		11.3	10.0	12.5	20.0
trans-1,3-Dichloropropene	Lin1		0.3246		10.4	10.0	4.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/2 Calibration Date: 05/04/2018 20:19

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2662.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl methacrylate	Lin1		0.8958		10.3	10.0	3.0	20.0
1,1,2-Trichloroethane	Ave	0.1585	0.1810		11.4	10.0	14.2	20.0
Tetrachloroethene	Ave	1.242	1.319		10.6	10.0	6.2	20.0
1,3-Dichloropropane	Ave	1.307	1.433		11.0	10.0	9.7	20.0
Dibromochloromethane	Lin2		0.8636		10.5	10.0	4.9	20.0
1,2-Dibromoethane (EDB)	Ave	0.6045	0.6902		11.4	10.0	14.2	20.0
1-Chlorohexane	Ave	2.234	2.318		10.4	10.0	3.8	20.0
Chlorobenzene	Ave	3.723	3.956	0.3000	10.6	10.0	6.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.218	1.272		10.4	10.0	4.4	20.0
Ethylbenzene	Ave	2.233	2.328		10.4	10.0	4.3	20.0
m-Xylene & p-Xylene	Ave	2.671	2.829		10.6	10.0	5.9	20.0
o-Xylene	Ave	2.372	2.630		11.1	10.0	10.9	20.0
Styrene	Lin2		4.067		11.2	10.0	12.3	20.0
Bromoform	Lin1		0.4188	0.1000	9.82	10.0	-1.8	20.0
Isopropylbenzene	Ave	4.383	4.793		10.9	10.0	9.3	20.0
Bromobenzene	Ave	0.8948	0.9630		10.8	10.0	7.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4804	0.5401	0.3000	11.2	10.0	12.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1171	0.1317		11.2	10.0	12.5	20.0
1,2,3-Trichloropropane	Ave	0.1352	0.1528		11.3	10.0	13.0	20.0
N-Propylbenzene	Ave	1.257	1.340		10.7	10.0	6.6	20.0
2-Chlorotoluene	Ave	1.018	1.085		10.7	10.0	6.6	20.0
1,3,5-Trimethylbenzene	Ave	3.629	3.959		10.9	10.0	9.1	20.0
4-Chlorotoluene	Ave	1.033	1.105		10.7	10.0	7.0	20.0
tert-Butylbenzene	Ave	3.224	3.497		10.8	10.0	8.5	20.0
1,2,4-Trimethylbenzene	Ave	3.621	4.001		11.1	10.0	10.5	20.0
sec-Butylbenzene	Ave	1.022	1.110		10.9	10.0	8.6	20.0
1,3-Dichlorobenzene	Ave	1.904	2.026		10.6	10.0	6.4	20.0
4-Isopropyltoluene	Ave	4.231	4.686		11.1	10.0	10.7	20.0
1,4-Dichlorobenzene	Ave	1.895	1.994		10.5	10.0	5.2	20.0
n-Butylbenzene	Ave	4.153	4.576		11.0	10.0	10.2	20.0
1,2-Dichlorobenzene	Ave	1.624	1.717		10.6	10.0	5.7	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0784		10.0	10.0	0.1	20.0
1,2,4-Trichlorobenzene	Ave	1.287	1.367		10.6	10.0	6.2	20.0
Hexachlorobutadiene	Ave	0.9777	1.003		10.3	10.0	2.6	20.0
Naphthalene	Ave	1.639	1.875		11.4	10.0	14.4	20.0
1,2,3-Trichlorobenzene	Lin2		1.274		10.8	10.0	8.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2662.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:19:30 ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub88

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:41 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 21:15:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.785	3.785	0.000	0	237128	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	98	1386386	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.546	10.546	0.000	86	327287	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	515773	12.5	12.5	
12 Dichlorodifluoromethane	85	1.593	1.593	0.000	99	499145	10.0	10.1	
14 Chloromethane	50	1.704	1.704	0.000	99	443121	10.0	9.59	
15 Vinyl chloride	62	1.830	1.830	0.000	98	468930	10.0	9.61	
17 Bromomethane	94	2.137	2.137	0.000	91	312135	10.0	10.0	
18 Chloroethane	64	2.249	2.249	0.000	100	264063	10.0	9.67	
19 Dichlorofluoromethane	67	2.473	2.473	0.000	98	805663	10.0	10.3	
20 Trichlorofluoromethane	101	2.501	2.501	0.000	98	725068	10.0	10.5	
22 Ethyl ether	59	2.794	2.794	0.000	93	220710	10.0	12.1	
24 Acrolein	56	2.961	2.961	0.000	99	231193	100.0	126.8	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	95	382690	10.0	11.3	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	94	343505	10.0	11.0	
27 Acetone	43	3.129	3.129	0.000	100	141308	40.0	45.9	
28 Iodomethane	142	3.241	3.241	0.000	99	597559	10.0	11.4	
30 Carbon disulfide	76	3.311	3.311	0.000	99	1455962	10.0	11.1	
32 Methyl acetate	43	3.520	3.520	0.000	97	201725	20.0	24.1	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	91	642027	10.0	11.2	
35 Methylene Chloride	84	3.702	3.702	0.000	95	364803	10.0	11.0	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	98	129076	100.0	118.7	
39 Acrylonitrile	53	4.065	4.065	0.000	98	471441	100.0	113.4	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	96	407363	10.0	11.4	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	95	747664	10.0	11.9	
42 Hexane	57	4.540	4.540	0.000	93	724986	10.0	11.0	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	735710	10.0	11.0	
46 Vinyl acetate	43	4.875	4.875	0.000	97	656360	20.0	22.5	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	71	710192	10.0	11.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	404734	10.0	11.3	
52 2-Butanone (MEK)	43	5.825	5.825	0.000	99	203245	40.0	47.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
56 Chlorobromomethane	128	6.163	6.163	0.000	98	133726	10.0	11.1	
57 Tetrahydrofuran	42	6.178	6.178	0.000	72	76739	20.0	22.5	
55 sec-Butyl Alcohol	45	6.185	6.185	0.000	88	222341	300.0	318.5	
59 Chloroform	83	6.328	6.328	0.000	94	657306	10.0	10.8	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	98	652660	10.0	10.7	
61 Cyclohexane	56	6.592	6.592	0.000	91	812040	10.0	11.0	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	578992	10.0	10.7	
63 1,1-Dichloropropene	75	6.735	6.735	0.000	96	598451	10.0	11.2	
64 Benzene	78	6.979	6.979	0.000	97	1576212	10.0	11.0	
65 1,2-Dichloroethane	62	7.071	7.071	0.000	98	362028	10.0	10.6	
66 Isobutyl alcohol	41	7.393	7.393	0.000	87	477544	250.0	270.8	
67 n-Heptane	43	7.393	7.393	0.000	94	770588	10.0	11.1	
69 Trichloroethene	95	7.794	7.794	0.000	98	404521	10.0	10.9	
70 2-Pentanone	43	8.022	8.022	0.000	98	413291	40.0	44.3	
71 Methylcyclohexane	55	8.044	8.044	0.000	90	670181	10.0	11.2	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	94	354264	10.0	10.9	
75 Dibromomethane	93	8.180	8.180	0.000	97	140307	10.0	11.0	
74 1,4-Dioxane	88	8.187	8.187	0.000	32	21868	200.0	238.2	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	409488	10.0	11.2	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	92	91469	10.0	10.6	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	473876	10.0	10.4	
81 4-Methyl-2-pentanone (MIBK	43	9.023	9.023	0.000	97	518937	40.0	48.0	
82 Toluene	91	9.181	9.181	0.000	98	1667931	10.0	11.3	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	360041	10.0	10.4	
84 Ethyl methacrylate	69	9.510	9.510	0.000	89	234556	10.0	10.3	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	92	200770	10.0	11.4	
86 Tetrachloroethene	164	9.696	9.696	0.000	97	345348	10.0	10.6	
87 1,3-Dichloropropane	76	9.781	9.781	0.000	92	375289	10.0	11.0	
88 2-Hexanone	43	9.853	9.853	0.000	96	330381	40.0	42.5	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	226107	10.0	10.5	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	180701	10.0	11.4	
91 1-Chlorohexane	91	10.561	10.561	0.000	98	607002	10.0	10.4	
92 Chlorobenzene	112	10.568	10.568	0.000	93	1035858	10.0	10.6	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	93	332979	10.0	10.4	
94 Ethylbenzene	106	10.668	10.668	0.000	99	609557	10.0	10.4	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	740628	10.0	10.6	
96 o-Xylene	106	11.154	11.154	0.000	97	688616	10.0	11.1	
97 Styrene	104	11.169	11.169	0.000	95	1064920	10.0	11.2	
98 Bromoform	173	11.340	11.340	0.000	96	109646	10.0	9.82	
99 Isopropylbenzene	105	11.497	11.497	0.000	96	1977711	10.0	10.9	
100 Cyclohexanone	55	11.583	11.583	0.000	93	160573	400.0	570.9	
103 Bromobenzene	156	11.783	11.783	0.000	96	397366	10.0	10.8	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	94	222841	10.0	11.2	
105 trans-1,4-Dichloro-2-buten	53	11.819	11.819	0.000	84	54353	10.0	11.2	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	63052	10.0	11.3	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	552842	10.0	10.7	
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	447686	10.0	10.7	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1633662	10.0	10.9	
109 4-Chlorotoluene	126	12.077	12.077	0.000	98	456021	10.0	10.7	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1442814	10.0	10.8	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	1650958	10.0	11.1	
112 sec-Butylbenzene	134	12.498	12.498	0.000	95	457948	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
113 1,3-Dichlorobenzene	146	12.591	12.591	0.000	97	836142	10.0	10.6	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	1933361	10.0	11.1	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	94	822678	10.0	10.5	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1888079	10.0	11.0	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	708457	10.0	10.6	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	79	32363	10.0	10.0	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	564044	10.0	10.6	
122 Hexachlorobutadiene	225	14.021	14.021	0.000	98	413799	10.0	10.3	
123 Naphthalene	128	14.114	14.114	0.000	97	773608	10.0	11.4	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	71	525528	10.0	10.8	
S 137 1,2-Dichloroethene, Total	96				0		20.0	22.7	
S 138 Xylenes, Total (URS)	1				0		20.0	21.7	
S 142 Trihalomethanes, Total	1				0		40.0	42.2	
S 143 Xylenes, Total	106				0		20.0	21.7	
S 144 1,2-Dichloroethene, Total	1				0		20.0	22.7	
S 140 1,3-Dichloropropene, Total	1				0		20.0	20.8	

Reagents:

MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL
MV-Gas/Ket A_00070	Amount Added:	5.00	Units: uL
MV-Main A_00036	Amount Added:	5.00	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

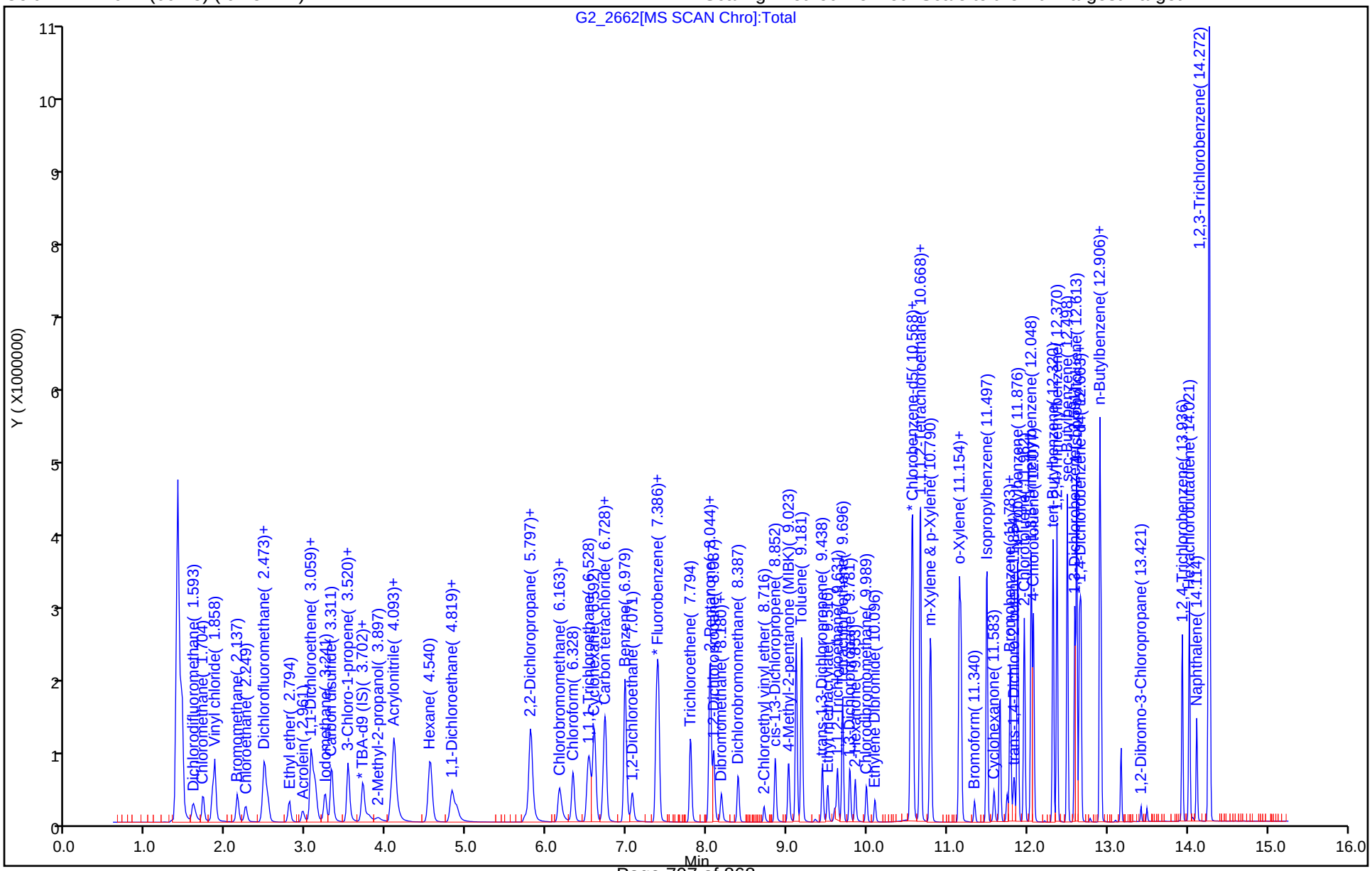
Report Date: 07-May-2018 21:11:43 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2662.D

Injection Date:	04-May-2018 20:19:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/2 Calibration Date: 05/04/2018 20:19

Instrument ID: VMS_G2 Calib Start Date: 05/03/2018 01:55

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 03:55

Lab File ID: G2_2662.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin		0.4500		10.1	10.0	1.4	20.0
Chloromethane	Ave	0.4166	0.3995	0.1000	9.59	10.0	-4.1	20.0
Vinyl chloride	Ave	0.4400	0.4228		9.61	10.0	-3.9	20.0
Bromomethane	Ave	0.2809	0.2814		10.0	10.0	0.2	20.0
Chloroethane	Ave	0.2462	0.2381		9.67	10.0	-3.3	20.0
Dichlorofluoromethane	Ave	0.7029	0.7264		10.3	10.0	3.4	20.0
Trichlorofluoromethane	Ave	0.6244	0.6537		10.5	10.0	4.7	20.0
Acetone	Ave	0.0278	0.0319		45.9	40.0	14.7	20.0
2-Butanone (MEK)	Lin2		0.0458		47.0	40.0	17.5	20.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.1170		48.0	40.0	19.9	20.0
2-Hexanone	Lin1		0.3155		42.5	40.0	6.2	20.0
Cyclohexanone	Lin		0.0153		571	400	42.7*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2662.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:19:30 ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub88

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:41 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 21:15:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.785	3.785	0.000	0	237128	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	98	1386386	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.546	10.546	0.000	86	327287	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	515773	12.5	12.5	
12 Dichlorodifluoromethane	85	1.593	1.593	0.000	99	499145	10.0	10.1	
14 Chloromethane	50	1.704	1.704	0.000	99	443121	10.0	9.59	
15 Vinyl chloride	62	1.830	1.830	0.000	98	468930	10.0	9.61	
17 Bromomethane	94	2.137	2.137	0.000	91	312135	10.0	10.0	
18 Chloroethane	64	2.249	2.249	0.000	100	264063	10.0	9.67	
19 Dichlorofluoromethane	67	2.473	2.473	0.000	98	805663	10.0	10.3	
20 Trichlorofluoromethane	101	2.501	2.501	0.000	98	725068	10.0	10.5	
22 Ethyl ether	59	2.794	2.794	0.000	93	220710	10.0	12.1	
24 Acrolein	56	2.961	2.961	0.000	99	231193	100.0	126.8	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	95	382690	10.0	11.3	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	94	343505	10.0	11.0	
27 Acetone	43	3.129	3.129	0.000	100	141308	40.0	45.9	
28 Iodomethane	142	3.241	3.241	0.000	99	597559	10.0	11.4	
30 Carbon disulfide	76	3.311	3.311	0.000	99	1455962	10.0	11.1	
32 Methyl acetate	43	3.520	3.520	0.000	97	201725	20.0	24.1	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	91	642027	10.0	11.2	
35 Methylene Chloride	84	3.702	3.702	0.000	95	364803	10.0	11.0	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	98	129076	100.0	118.7	
39 Acrylonitrile	53	4.065	4.065	0.000	98	471441	100.0	113.4	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	96	407363	10.0	11.4	
41 Methyl tert-butyl ether	73	4.107	4.107	0.000	95	747664	10.0	11.9	
42 Hexane	57	4.540	4.540	0.000	93	724986	10.0	11.0	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	97	735710	10.0	11.0	
46 Vinyl acetate	43	4.875	4.875	0.000	97	656360	20.0	22.5	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	71	710192	10.0	11.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	404734	10.0	11.3	
52 2-Butanone (MEK)	43	5.825	5.825	0.000	99	203245	40.0	47.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
56 Chlorobromomethane	128	6.163	6.163	0.000	98	133726	10.0	11.1	
57 Tetrahydrofuran	42	6.178	6.178	0.000	72	76739	20.0	22.5	
55 sec-Butyl Alcohol	45	6.185	6.185	0.000	88	222341	300.0	318.5	
59 Chloroform	83	6.328	6.328	0.000	94	657306	10.0	10.8	
60 1,1,1-Trichloroethane	97	6.521	6.521	0.000	98	652660	10.0	10.7	
61 Cyclohexane	56	6.592	6.592	0.000	91	812040	10.0	11.0	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	578992	10.0	10.7	
63 1,1-Dichloropropene	75	6.735	6.735	0.000	96	598451	10.0	11.2	
64 Benzene	78	6.979	6.979	0.000	97	1576212	10.0	11.0	
65 1,2-Dichloroethane	62	7.071	7.071	0.000	98	362028	10.0	10.6	
66 Isobutyl alcohol	41	7.393	7.393	0.000	87	477544	250.0	270.8	
67 n-Heptane	43	7.393	7.393	0.000	94	770588	10.0	11.1	
69 Trichloroethene	95	7.794	7.794	0.000	98	404521	10.0	10.9	
70 2-Pentanone	43	8.022	8.022	0.000	98	413291	40.0	44.3	
71 Methylcyclohexane	55	8.044	8.044	0.000	90	670181	10.0	11.2	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	94	354264	10.0	10.9	
75 Dibromomethane	93	8.180	8.180	0.000	97	140307	10.0	11.0	
74 1,4-Dioxane	88	8.187	8.187	0.000	32	21868	200.0	238.2	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	409488	10.0	11.2	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	92	91469	10.0	10.6	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	473876	10.0	10.4	
81 4-Methyl-2-pentanone (MIBK	43	9.023	9.023	0.000	97	518937	40.0	48.0	
82 Toluene	91	9.181	9.181	0.000	98	1667931	10.0	11.3	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	360041	10.0	10.4	
84 Ethyl methacrylate	69	9.510	9.510	0.000	89	234556	10.0	10.3	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	92	200770	10.0	11.4	
86 Tetrachloroethene	164	9.696	9.696	0.000	97	345348	10.0	10.6	
87 1,3-Dichloropropane	76	9.781	9.781	0.000	92	375289	10.0	11.0	
88 2-Hexanone	43	9.853	9.853	0.000	96	330381	40.0	42.5	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	226107	10.0	10.5	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	180701	10.0	11.4	
91 1-Chlorohexane	91	10.561	10.561	0.000	98	607002	10.0	10.4	
92 Chlorobenzene	112	10.568	10.568	0.000	93	1035858	10.0	10.6	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	93	332979	10.0	10.4	
94 Ethylbenzene	106	10.668	10.668	0.000	99	609557	10.0	10.4	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	740628	10.0	10.6	
96 o-Xylene	106	11.154	11.154	0.000	97	688616	10.0	11.1	
97 Styrene	104	11.169	11.169	0.000	95	1064920	10.0	11.2	
98 Bromoform	173	11.340	11.340	0.000	96	109646	10.0	9.82	
99 Isopropylbenzene	105	11.497	11.497	0.000	96	1977711	10.0	10.9	
100 Cyclohexanone	55	11.583	11.583	0.000	93	160573	400.0	570.9	
103 Bromobenzene	156	11.783	11.783	0.000	96	397366	10.0	10.8	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	94	222841	10.0	11.2	
105 trans-1,4-Dichloro-2-buten	53	11.819	11.819	0.000	84	54353	10.0	11.2	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	85	63052	10.0	11.3	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	552842	10.0	10.7	
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	447686	10.0	10.7	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1633662	10.0	10.9	
109 4-Chlorotoluene	126	12.077	12.077	0.000	98	456021	10.0	10.7	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1442814	10.0	10.8	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	1650958	10.0	11.1	
112 sec-Butylbenzene	134	12.498	12.498	0.000	95	457948	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
113 1,3-Dichlorobenzene	146	12.591	12.591	0.000	97	836142	10.0	10.6	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	1933361	10.0	11.1	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	94	822678	10.0	10.5	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1888079	10.0	11.0	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	708457	10.0	10.6	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	79	32363	10.0	10.0	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	564044	10.0	10.6	
122 Hexachlorobutadiene	225	14.021	14.021	0.000	98	413799	10.0	10.3	
123 Naphthalene	128	14.114	14.114	0.000	97	773608	10.0	11.4	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	71	525528	10.0	10.8	
S 137 1,2-Dichloroethene, Total	96				0		20.0	22.7	
S 138 Xylenes, Total (URS)	1				0		20.0	21.7	
S 142 Trihalomethanes, Total	1				0		40.0	42.2	
S 143 Xylenes, Total	106				0		20.0	21.7	
S 144 1,2-Dichloroethene, Total	1				0		20.0	22.7	
S 140 1,3-Dichloropropene, Total	1				0		20.0	20.8	

Reagents:

MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL
MV-Gas/Ket A_00070	Amount Added:	5.00	Units: uL
MV-Main A_00036	Amount Added:	5.00	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

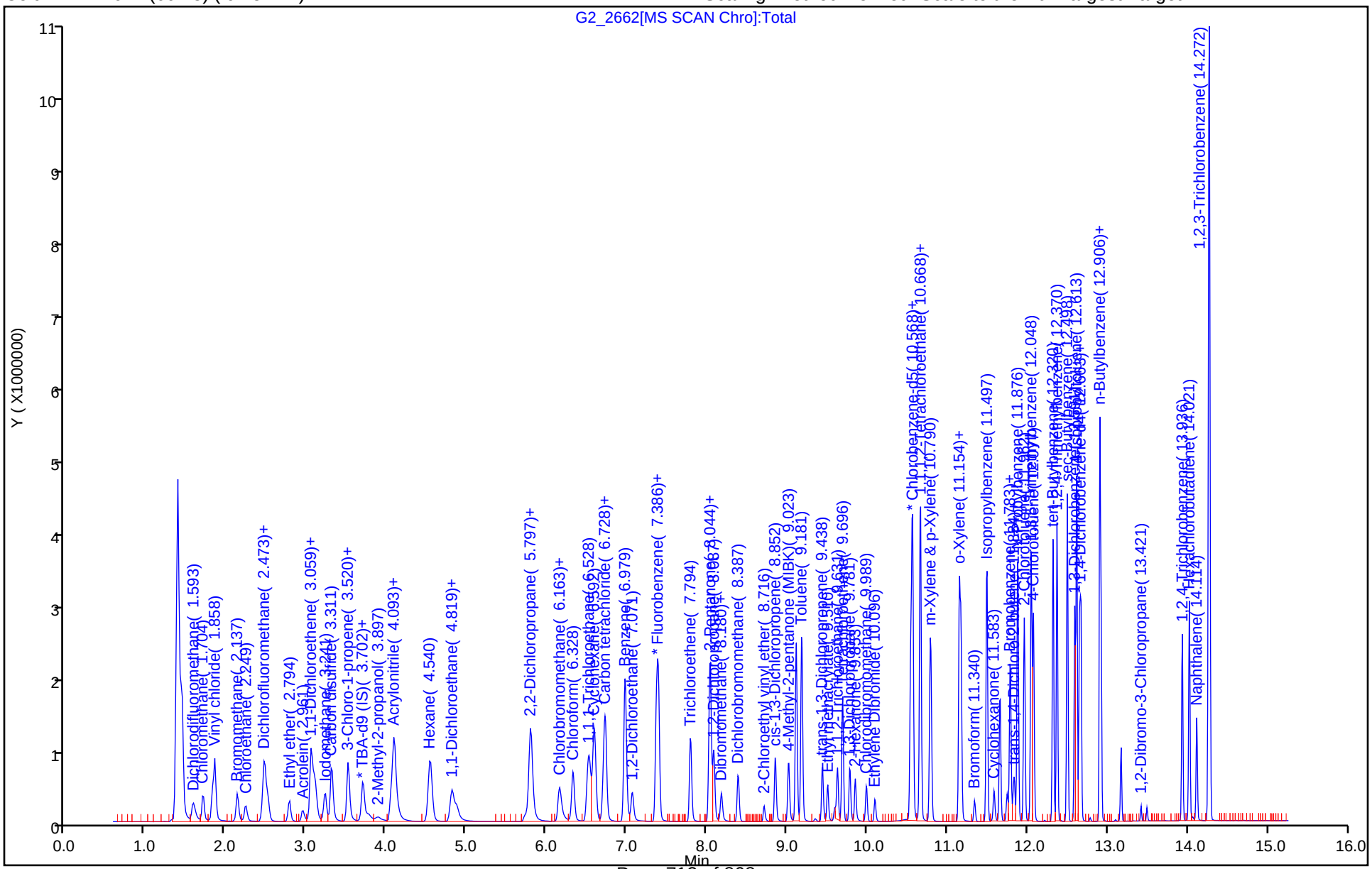
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2662.D

Injection Date:	04-May-2018 20:19:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/3 Calibration Date: 05/04/2018 20:39

Instrument ID: VMS_G2 Calib Start Date: 12/06/2017 09:39

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 12/06/2017 11:21

Lab File ID: G2_2663.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0010	0.0004			600	-54.4*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:39:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 23:36:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.771	0.000	0	244158	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1499240	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	86	348250	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	522457	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	315193	10.0	10.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	311194	10.0	10.3	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	93	1427809	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	485902	10.0	10.6	
16 Ethylene oxide	43	2.110	2.110	0.000	100	729325	1000.0	1579.2	
21 Ethanol	45	2.710	2.710	0.000	97	31592	NC	NC	
23 Propene oxide	58	2.836	2.836	0.000	96	3234227	1000.0	1129.2	
29 Isopropyl alcohol	45	3.325	3.325	0.000	97	73217	NC	NC	
31 Acetonitrile	41	3.492	3.492	0.000	99	123210	100.0	108.9	
47 Isopropyl ether	87	4.931	4.931	0.000	94	271461	10.0	9.78	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	93	605367	10.0	11.4	
49 Tert-butyl ethyl ether	59	5.559	5.559	0.000	97	833157	10.0	10.7	
53 Ethyl acetate	43	5.908	5.908	0.000	99	169972	20.0	22.9	
54 Propionitrile	54	5.908	5.908	0.000	99	128871	100.0	103.3	
58 Methacrylonitrile	41	6.128	6.128	0.000	92	821814	100.0	128.0	
68 Tert-amyl methyl ether	73	7.186	7.186	0.000	98	688657	10.0	10.4	
73 n-Butanol	56	7.787	7.787	0.000	93	42184	250.0	246.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	91	72412	20.0	17.8	
80 2-Nitropropane	41	8.630	8.630	0.000	98	42044	20.0	23.6	
13 Tetrahydrothiophene	60	9.953	9.953	0.000	92	53641	20.0	18.1	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	96	106178	20.0	23.5	
116 1,2,3-Trimethylbenzene	105	12.684	12.684	0.000	99	1396507	10.0	11.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	664491	10.0	10.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

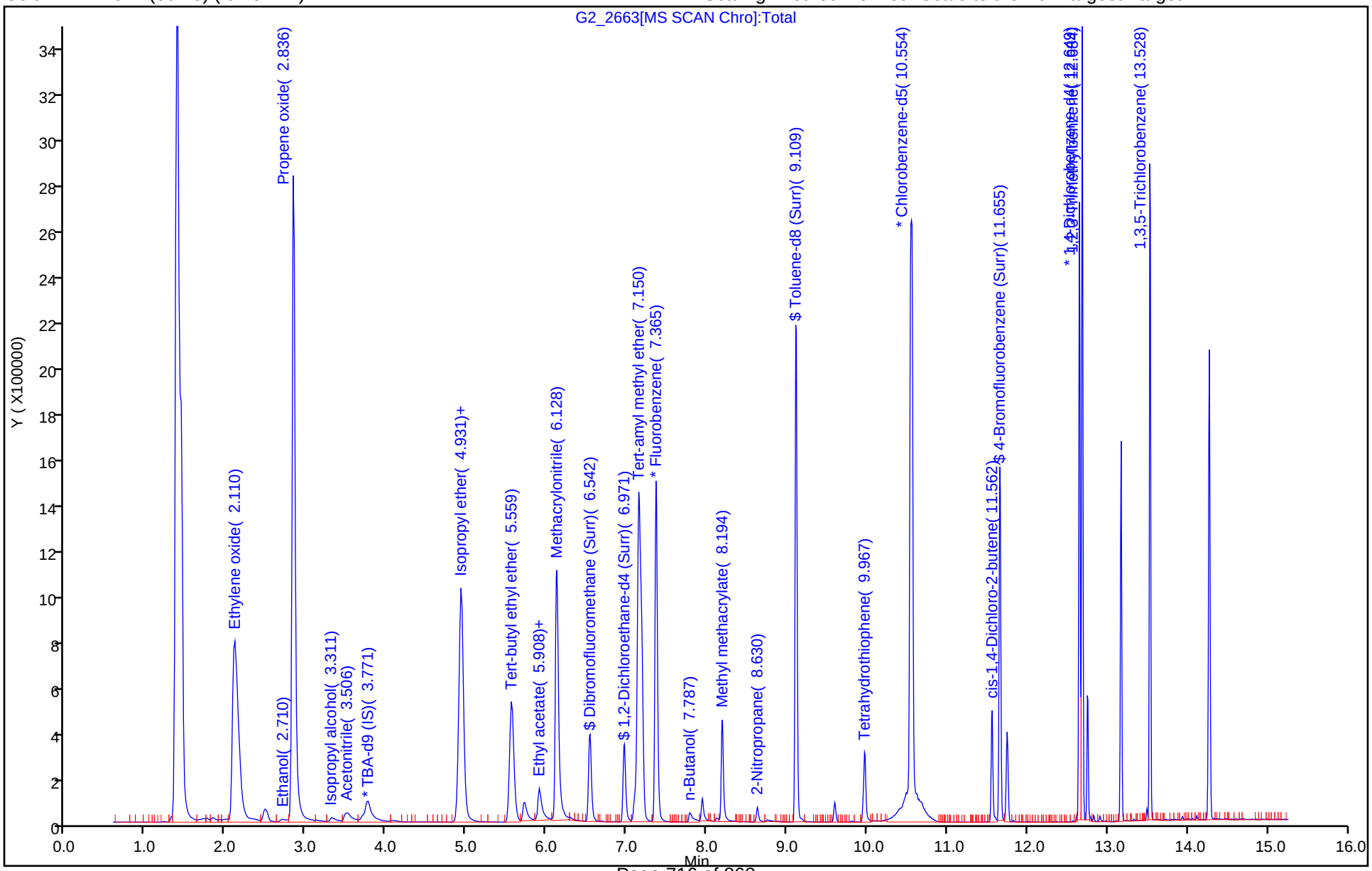
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D

Injection Date:	04-May-2018 20:39:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/3 Calibration Date: 05/04/2018 20:39

Instrument ID: VMS_G2 Calib Start Date: 01/04/2018 15:49

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 01/04/2018 17:33

Lab File ID: G2_2663.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Lin		0.0061			100		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:39:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 23:36:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.771	0.000	0	244158	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1499240	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	86	348250	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	522457	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	315193	10.0	10.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	311194	10.0	10.3	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	93	1427809	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	485902	10.0	10.6	
16 Ethylene oxide	43	2.110	2.110	0.000	100	729325	1000.0	1579.2	
21 Ethanol	45	2.710	2.710	0.000	97	31592	NC	NC	
23 Propene oxide	58	2.836	2.836	0.000	96	3234227	1000.0	1129.2	
29 Isopropyl alcohol	45	3.325	3.325	0.000	97	73217	NC	NC	
31 Acetonitrile	41	3.492	3.492	0.000	99	123210	100.0	108.9	
47 Isopropyl ether	87	4.931	4.931	0.000	94	271461	10.0	9.78	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	93	605367	10.0	11.4	
49 Tert-butyl ethyl ether	59	5.559	5.559	0.000	97	833157	10.0	10.7	
53 Ethyl acetate	43	5.908	5.908	0.000	99	169972	20.0	22.9	
54 Propionitrile	54	5.908	5.908	0.000	99	128871	100.0	103.3	
58 Methacrylonitrile	41	6.128	6.128	0.000	92	821814	100.0	128.0	
68 Tert-amyl methyl ether	73	7.186	7.186	0.000	98	688657	10.0	10.4	
73 n-Butanol	56	7.787	7.787	0.000	93	42184	250.0	246.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	91	72412	20.0	17.8	
80 2-Nitropropane	41	8.630	8.630	0.000	98	42044	20.0	23.6	
13 Tetrahydrothiophene	60	9.953	9.953	0.000	92	53641	20.0	18.1	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	96	106178	20.0	23.5	
116 1,2,3-Trimethylbenzene	105	12.684	12.684	0.000	99	1396507	10.0	11.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	664491	10.0	10.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

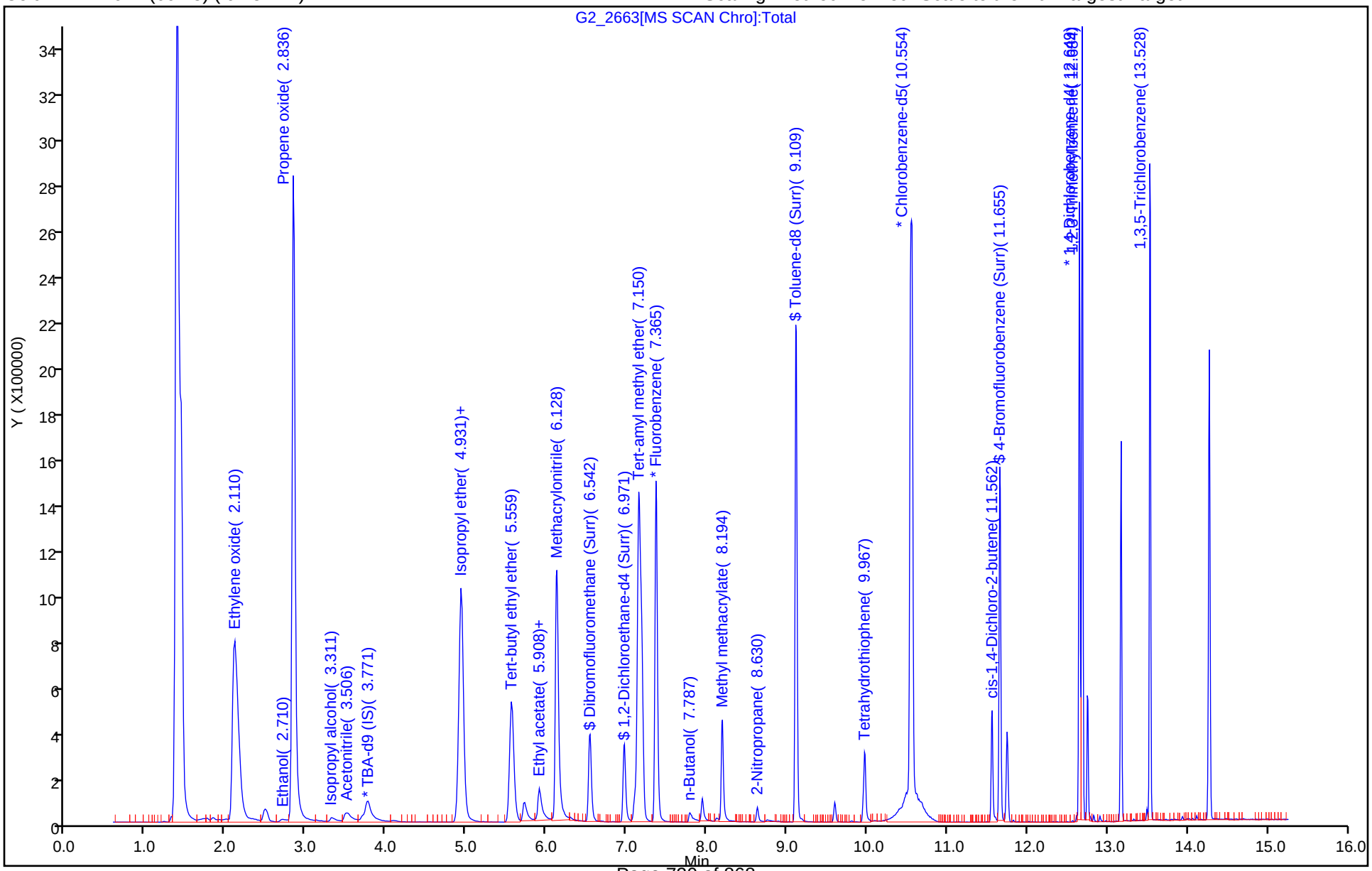
Report Date: 07-May-2018 21:11:45 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D

Injection Date:	04-May-2018 20:39:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/3 Calibration Date: 05/04/2018 20:39

Instrument ID: VMS_G2 Calib Start Date: 04/27/2018 16:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 04/27/2018 18:42

Lab File ID: G2_2663.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Lin1		0.0103		109	100	8.9	20.0
Isopropyl ether	Ave	0.2315	0.2263		9.78	10.0	-2.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4426	0.5047		11.4	10.0	14.0	20.0
Tert-butyl ethyl ether	Ave	0.6512	0.6947		10.7	10.0	6.7	20.0
Ethyl acetate	Lin2		0.0709		22.9	20.0	14.7	20.0
Propionitrile	Lin2		0.0107		103	100	3.3	20.0
Methacrylonitrile	Ave	0.0535	0.0685		128	100	28.0*	20.0
Tert-amyl methyl ether	Ave	0.5517	0.5742		10.4	10.0	4.1	20.0
n-Butanol	Lin		0.0014		247	250	-1.2	20.0
Methyl methacrylate	Lin1		0.0302		17.8	20.0	-10.8	20.0
2-Nitropropane	Lin1		0.0175		23.6	20.0	17.8	20.0
cis-1,4-Dichloro-2-butene	Lin1		0.1270		23.5	20.0	17.4	20.0
1,2,3-Trimethylbenzene	Ave	3.026	3.341		11.0	10.0	10.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:39:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 23:36:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.771	0.000	0	244158	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1499240	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	86	348250	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	522457	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	315193	10.0	10.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	311194	10.0	10.3	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	93	1427809	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	485902	10.0	10.6	
16 Ethylene oxide	43	2.110	2.110	0.000	100	729325	1000.0	1579.2	
21 Ethanol	45	2.710	2.710	0.000	97	31592	NC	NC	
23 Propene oxide	58	2.836	2.836	0.000	96	3234227	1000.0	1129.2	
29 Isopropyl alcohol	45	3.325	3.325	0.000	97	73217	NC	NC	
31 Acetonitrile	41	3.492	3.492	0.000	99	123210	100.0	108.9	
47 Isopropyl ether	87	4.931	4.931	0.000	94	271461	10.0	9.78	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	93	605367	10.0	11.4	
49 Tert-butyl ethyl ether	59	5.559	5.559	0.000	97	833157	10.0	10.7	
53 Ethyl acetate	43	5.908	5.908	0.000	99	169972	20.0	22.9	
54 Propionitrile	54	5.908	5.908	0.000	99	128871	100.0	103.3	
58 Methacrylonitrile	41	6.128	6.128	0.000	92	821814	100.0	128.0	
68 Tert-amyl methyl ether	73	7.186	7.186	0.000	98	688657	10.0	10.4	
73 n-Butanol	56	7.787	7.787	0.000	93	42184	250.0	246.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	91	72412	20.0	17.8	
80 2-Nitropropane	41	8.630	8.630	0.000	98	42044	20.0	23.6	
13 Tetrahydrothiophene	60	9.953	9.953	0.000	92	53641	20.0	18.1	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	96	106178	20.0	23.5	
116 1,2,3-Trimethylbenzene	105	12.684	12.684	0.000	99	1396507	10.0	11.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	664491	10.0	10.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

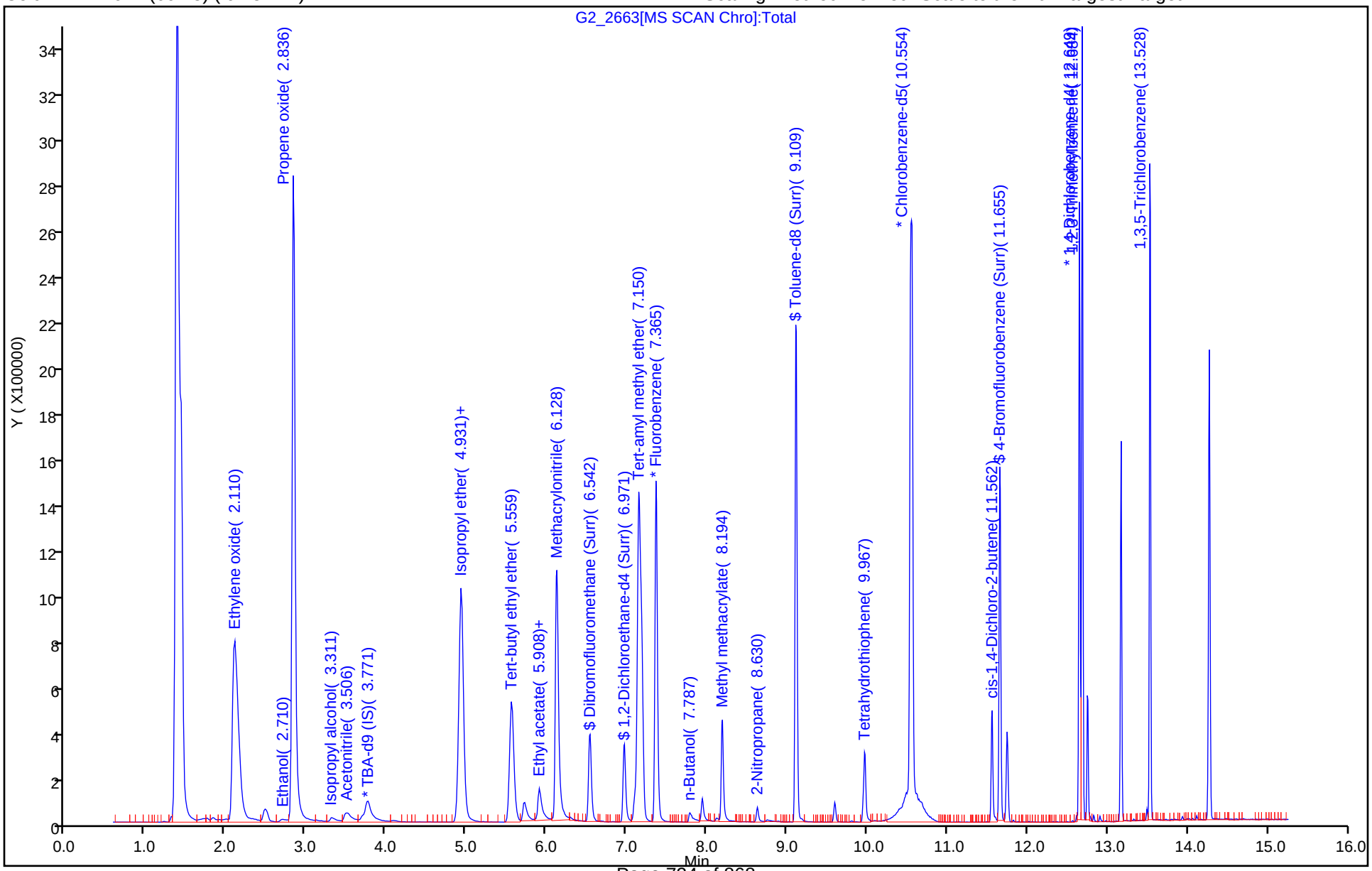
Report Date: 07-May-2018 21:11:45 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D

Injection Date:	04-May-2018 20:39:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCV 280-413840/3 Calibration Date: 05/04/2018 20:39

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2663.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2549	0.2628		10.3	10.0	3.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2529	0.2595		10.3	10.0	2.6	20.0
Toluene-d8 (Surr)	Ave	4.836	5.125		10.6	10.0	6.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.097	1.163		10.6	10.0	6.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2018 20:39:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 04-May-2018 23:36:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.771	0.000	0	244158	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.365	0.000	98	1499240	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.539	10.539	0.000	86	348250	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	522457	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	315193	10.0	10.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	311194	10.0	10.3	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	93	1427809	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	485902	10.0	10.6	
16 Ethylene oxide	43	2.110	2.110	0.000	100	729325	1000.0	1579.2	
21 Ethanol	45	2.710	2.710	0.000	97	31592	NC	NC	
23 Propene oxide	58	2.836	2.836	0.000	96	3234227	1000.0	1129.2	
29 Isopropyl alcohol	45	3.325	3.325	0.000	97	73217	NC	NC	
31 Acetonitrile	41	3.492	3.492	0.000	99	123210	100.0	108.9	
47 Isopropyl ether	87	4.931	4.931	0.000	94	271461	10.0	9.78	
48 2-Chloro-1,3-butadiene	53	4.945	4.945	0.000	93	605367	10.0	11.4	
49 Tert-butyl ethyl ether	59	5.559	5.559	0.000	97	833157	10.0	10.7	
53 Ethyl acetate	43	5.908	5.908	0.000	99	169972	20.0	22.9	
54 Propionitrile	54	5.908	5.908	0.000	99	128871	100.0	103.3	
58 Methacrylonitrile	41	6.128	6.128	0.000	92	821814	100.0	128.0	
68 Tert-amyl methyl ether	73	7.186	7.186	0.000	98	688657	10.0	10.4	
73 n-Butanol	56	7.787	7.787	0.000	93	42184	250.0	246.9	
77 Methyl methacrylate	100	8.194	8.194	0.000	91	72412	20.0	17.8	
80 2-Nitropropane	41	8.630	8.630	0.000	98	42044	20.0	23.6	
13 Tetrahydrothiophene	60	9.953	9.953	0.000	92	53641	20.0	18.1	
101 cis-1,4-Dichloro-2-butene	53	11.562	11.562	0.000	96	106178	20.0	23.5	
116 1,2,3-Trimethylbenzene	105	12.684	12.684	0.000	99	1396507	10.0	11.0	
120 1,3,5-Trichlorobenzene	180	13.535	13.535	0.000	97	664491	10.0	10.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Supp A_00029	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

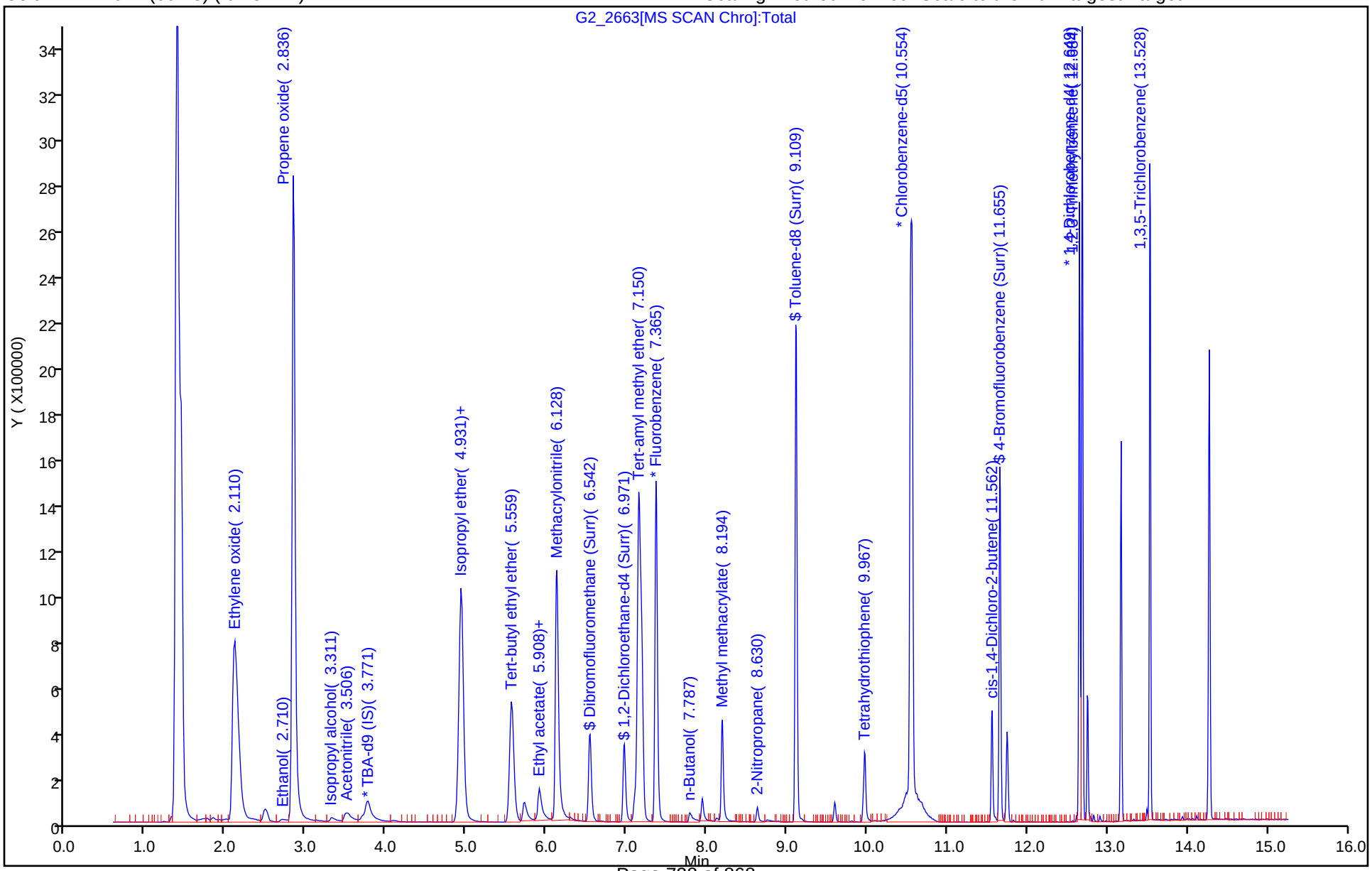
Report Date: 07-May-2018 21:11:45 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2663.D

Injection Date:	04-May-2018 20:39:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413840/14 Calibration Date: 05/04/2018 23:01

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2670.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.1641	0.1853		11.3	10.0	12.9	50.0
Acrolein	Lin2		0.0183		112	100	11.8	50.0
1,1-Dichloroethene	Ave	0.3052	0.3141		10.3	10.0	2.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2809	0.2762		9.83	10.0	-1.7	50.0
Iodomethane	Ave	0.4712	0.4822		10.2	10.0	2.3	50.0
Carbon disulfide	Ave	1.186	1.205		10.2	10.0	1.6	50.0
3-Chloro-1-propene	Ave	0.5180	0.5536		10.7	10.0	6.9	50.0
Methyl acetate	Lin2		0.0883		23.4	20.0	17.1	50.0
Methylene Chloride	Lin2		0.3072		10.2	10.0	2.2	50.0
t-Butyl alcohol	Lin2		0.0103		106	100	5.7	50.0
Acrylonitrile	Lin2		0.0393		105	100	5.1	50.0
Methyl tert-butyl ether	Ave	0.5671	0.6235		11.0	10.0	10.0	50.0
trans-1,2-Dichloroethene	Ave	0.3223	0.3320		10.3	10.0	3.0	50.0
Hexane	Ave	2.526	2.713		10.7	10.0	7.4	50.0
1,1-Dichloroethane	Ave	0.6049	0.6268	0.1000	10.4	10.0	3.6	50.0
Vinyl acetate	Lin2		0.2650		20.3	20.0	1.5	50.0
2,2-Dichloropropane	Lin2		0.5856		10.0	10.0	0.2	50.0
cis-1,2-Dichloroethene	Ave	0.3224	0.3365		10.4	10.0	4.4	50.0
Bromochloromethane	Lin2		0.1113		10.2	10.0	2.2	50.0
Tetrahydrofuran	Ave	0.0307	0.0339		22.0	20.0	10.1	50.0
sec-Butyl Alcohol	Lin1		0.0056		273	300	-9.0	50.0
Chloroform	Ave	0.5508	0.5545		10.1	10.0	0.7	50.0
1,1,1-Trichloroethane	Ave	0.5512	0.5524		10.0	10.0	0.2	50.0
Cyclohexane	Ave	0.6655	0.6816		10.2	10.0	2.4	50.0
Carbon tetrachloride	Ave	0.4891	0.4894		10.0	10.0	0.0	50.0
1,1-Dichloropropene	Ave	0.4813	0.4987		10.4	10.0	3.6	50.0
Benzene	Ave	1.294	1.316		10.2	10.0	1.7	50.0
1,2-Dichloroethane	Ave	0.3070	0.3136		10.2	10.0	2.2	50.0
Isobutyl alcohol	Ave	0.0159	0.0166		260	250	4.1	50.0
Trichloroethene	Ave	0.3361	0.3346		9.95	10.0	-0.5	50.0
2-Pentanone	Lin2		0.0816		39.0	40.0	-2.5	50.0
Methylcyclohexane	Ave	0.5408	0.5609		10.4	10.0	3.7	50.0
1,2-Dichloropropane	Ave	0.2938	0.3022		10.3	10.0	2.9	50.0
Dibromomethane	Ave	0.1153	0.1141		9.90	10.0	-1.0	50.0
1,4-Dioxane	Lin2		0.0007		183	200	-8.5	50.0
Bromodichloromethane	Ave	0.3302	0.3422		10.4	10.0	3.6	50.0
2-Chloroethyl vinyl ether	Lin1		0.0696		9.06	10.0	-9.4	50.0
cis-1,3-Dichloropropene	Lin1		1.687		9.67	10.0	-3.3	50.0
Toluene	Ave	1.337	1.355		10.1	10.0	1.4	50.0
trans-1,3-Dichloropropene	Lin1		0.2900		9.34	10.0	-6.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413840/14 Calibration Date: 05/04/2018 23:01

Instrument ID: VMS_G2 Calib Start Date: 05/02/2018 22:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 00:55

Lab File ID: G2_2670.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl methacrylate	Lin1		0.7954		9.18	10.0	-8.2	50.0
1,1,2-Trichloroethane	Ave	0.1585	0.1580		9.97	10.0	-0.3	50.0
Tetrachloroethene	Ave	1.242	1.206		9.71	10.0	-2.9	50.0
1,3-Dichloropropane	Ave	1.307	1.349		10.3	10.0	3.3	50.0
Dibromochloromethane	Lin2		0.8277		10.1	10.0	0.6	50.0
1,2-Dibromoethane (EDB)	Ave	0.6045	0.6436		10.6	10.0	6.5	50.0
1-Chlorohexane	Ave	2.234	2.158		9.66	10.0	-3.4	50.0
Chlorobenzene	Ave	3.723	3.668	0.3000	9.85	10.0	-1.5	50.0
1,1,1,2-Tetrachloroethane	Ave	1.218	1.219		10.0	10.0	0.0	50.0
Ethylbenzene	Ave	2.233	2.204		9.87	10.0	-1.3	50.0
m-Xylene & p-Xylene	Ave	2.671	2.654		9.93	10.0	-0.7	50.0
o-Xylene	Ave	2.372	2.470		10.4	10.0	4.1	50.0
Styrene	Lin2		3.797		10.5	10.0	4.9	50.0
Bromoform	Lin1		0.3854	0.1000	9.08	10.0	-9.2	50.0
Isopropylbenzene	Ave	4.383	4.493		10.3	10.0	2.5	50.0
Bromobenzene	Ave	0.8948	0.8866		9.91	10.0	-0.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4804	0.4934	0.3000	10.3	10.0	2.7	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1171	0.1244		10.6	10.0	6.2	50.0
1,2,3-Trichloropropane	Ave	0.1352	0.1391		10.3	10.0	2.8	50.0
N-Propylbenzene	Ave	1.257	1.253		9.97	10.0	-0.3	50.0
2-Chlorotoluene	Ave	1.018	1.005		9.88	10.0	-1.2	50.0
1,3,5-Trimethylbenzene	Ave	3.629	3.704		10.2	10.0	2.1	50.0
4-Chlorotoluene	Ave	1.033	1.018		9.85	10.0	-1.5	50.0
tert-Butylbenzene	Ave	3.224	3.289		10.2	10.0	2.0	50.0
1,2,4-Trimethylbenzene	Ave	3.621	3.739		10.3	10.0	3.3	50.0
sec-Butylbenzene	Ave	1.022	1.038		10.2	10.0	1.6	50.0
1,3-Dichlorobenzene	Ave	1.904	1.860		9.77	10.0	-2.3	50.0
4-Isopropyltoluene	Ave	4.231	4.335		10.2	10.0	2.5	50.0
1,4-Dichlorobenzene	Ave	1.895	1.865		9.84	10.0	-1.6	50.0
n-Butylbenzene	Ave	4.153	4.277		10.3	10.0	3.0	50.0
1,2-Dichlorobenzene	Ave	1.624	1.597		9.83	10.0	-1.7	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0708		9.10	10.0	-9.0	50.0
1,2,4-Trichlorobenzene	Ave	1.287	1.268		9.85	10.0	-1.5	50.0
Hexachlorobutadiene	Ave	0.9777	0.9165		9.37	10.0	-6.3	50.0
Naphthalene	Ave	1.639	1.718		10.5	10.0	4.9	50.0
1,2,3-Trichlorobenzene	Lin2		1.106		9.38	10.0	-6.2	50.0
Dibromofluoromethane (Surr)	Ave	0.2549	0.2602		10.2	10.0	2.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2529	0.2529		10.0	10.0	0.0	50.0
Toluene-d8 (Surr)	Ave	4.836	5.132		10.6	10.0	6.1	50.0
4-Bromofluorobenzene (Surr)	Ave	1.097	1.116		10.2	10.0	1.7	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2670.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 23:01:30 ALS Bottle#: 19 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:12:09 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 06-May-2018 11:09:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.785	-0.013	0	217132	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	98	1373939	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.546	-0.006	88	306517	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	486060	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.543	6.542	0.001	93	285987	10.0	10.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.964	6.971	-0.007	99	277995	10.0	10.0	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	94	1258549	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	86	433938	10.0	10.2	
12 Dichlorodifluoromethane	85	1.579	1.593	-0.014	99	469226	10.0	9.63	
14 Chloromethane	50	1.705	1.704	0.001	99	450129	10.0	9.83	
15 Vinyl chloride	62	1.830	1.830	0.000	98	472213	10.0	9.76	
17 Bromomethane	94	2.138	2.137	0.001	91	306400	10.0	9.92	
18 Chloroethane	64	2.235	2.249	-0.014	100	268490	10.0	9.92	
19 Dichlorofluoromethane	67	2.459	2.473	-0.014	97	760865	10.0	9.85	
20 Trichlorofluoromethane	101	2.487	2.501	-0.014	98	685240	10.0	9.98	
22 Ethyl ether	59	2.780	2.794	-0.014	94	203719	10.0	11.3	
24 Acrolein	56	2.948	2.961	-0.013	99	201011	100.0	111.8	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	95	345228	10.0	10.3	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	95	303582	10.0	9.83	
27 Acetone	43	3.115	3.129	-0.014	100	136900	40.0	44.9	
28 Iodomethane	142	3.227	3.241	-0.014	98	529991	10.0	10.2	
30 Carbon disulfide	76	3.311	3.311	0.000	100	1324907	10.0	10.2	
32 Methyl acetate	43	3.520	3.520	0.000	98	194110	20.0	23.4	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	90	608457	10.0	10.7	
35 Methylene Chloride	84	3.702	3.702	0.000	96	337703	10.0	10.2	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	96	113652	100.0	105.7	
39 Acrylonitrile	53	4.051	4.065	-0.014	99	431848	100.0	105.1	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	364915	10.0	10.3	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	96	685362	10.0	11.0	
42 Hexane	57	4.540	4.540	0.000	94	665385	10.0	10.7	
45 1,1-Dichloroethane	63	4.805	4.819	-0.014	96	688904	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.875	4.875	0.000	98	582483	20.0	20.3	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	69	643673	10.0	10.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	369829	10.0	10.4	
52 2-Butanone (MEK)	43	5.811	5.825	-0.013	100	171144	40.0	40.1	
56 Chlorobromomethane	128	6.149	6.163	-0.014	98	122383	10.0	10.2	
57 Tetrahydrofuran	42	6.171	6.178	-0.007	73	74407	20.0	22.0	
55 sec-Butyl Alcohol	45	6.178	6.185	-0.007	87	185437	300.0	273.0	
59 Chloroform	83	6.328	6.328	0.000	94	609495	10.0	10.1	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	607147	10.0	10.0	
61 Cyclohexane	56	6.593	6.592	0.001	92	749200	10.0	10.2	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	537906	10.0	10.0	
63 1,1-Dichloropropene	75	6.728	6.735	-0.007	95	548101	10.0	10.4	
64 Benzene	78	6.979	6.979	0.001	98	1446287	10.0	10.2	
65 1,2-Dichloroethane	62	7.065	7.071	-0.006	98	344678	10.0	10.2	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	454977	250.0	260.3	
67 n-Heptane	43	7.393	7.393	0.000	94	741727	10.0	10.8	
69 Trichloroethene	95	7.794	7.794	0.000	97	367731	10.0	9.95	
70 2-Pentanone	43	8.023	8.022	0.001	97	358629	40.0	39.0	
71 Methylcyclohexane	55	8.037	8.044	-0.007	92	616544	10.0	10.4	
72 1,2-Dichloropropane	63	8.080	8.087	-0.007	95	332159	10.0	10.3	
75 Dibromomethane	93	8.173	8.180	-0.007	95	125450	10.0	9.90	
74 1,4-Dioxane	88	8.180	8.187	-0.007	33	16002	200.0	183.0	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	376143	10.0	10.4	
78 2-Chloroethyl vinyl ether	63	8.709	8.716	-0.007	92	76514	10.0	9.06	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	413573	10.0	9.67	
81 4-Methyl-2-pentanone (MIBK	43	9.017	9.023	-0.006	98	467012	40.0	43.7	
82 Toluene	91	9.181	9.181	0.000	98	1488992	10.0	10.1	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	318763	10.0	9.34	
84 Ethyl methacrylate	69	9.503	9.510	-0.007	90	195038	10.0	9.18	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	173651	10.0	9.97	
86 Tetrachloroethene	164	9.689	9.696	-0.007	95	295649	10.0	9.71	
87 1,3-Dichloropropane	76	9.782	9.781	0.001	93	330907	10.0	10.3	
88 2-Hexanone	43	9.853	9.853	0.000	98	310066	40.0	42.6	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	202954	10.0	10.1	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	157807	10.0	10.6	
91 1-Chlorohexane	91	10.561	10.561	0.000	97	529227	10.0	9.66	
92 Chlorobenzene	112	10.568	10.568	0.000	93	899467	10.0	9.85	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	92	298940	10.0	10.0	
94 Ethylbenzene	106	10.668	10.668	0.000	99	540534	10.0	9.87	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	650765	10.0	9.93	
96 o-Xylene	106	11.147	11.154	-0.007	98	605636	10.0	10.4	
97 Styrene	104	11.169	11.169	0.000	94	931075	10.0	10.5	
98 Bromoform	173	11.340	11.340	0.000	95	94512	10.0	9.08	
99 Isopropylbenzene	105	11.491	11.497	-0.006	96	1747194	10.0	10.3	
100 Cyclohexanone	55	11.583	11.583	0.000	94	142484	400.0	542.7	
103 Bromobenzene	156	11.784	11.783	0.001	97	344747	10.0	9.91	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	191839	10.0	10.3	
105 trans-1,4-Dichloro-2-buten	53	11.819	11.819	0.000	83	48367	10.0	10.6	
104 1,2,3-Trichloropropane	110	11.834	11.841	-0.007	86	54078	10.0	10.3	
106 N-Propylbenzene	120	11.877	11.884	-0.007	99	487178	10.0	9.97	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	390821	10.0	9.88	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1440435	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	395652	10.0	9.85	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1278837	10.0	10.2	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	1453917	10.0	10.3	
112 sec-Butylbenzene	134	12.499	12.498	0.001	95	403659	10.0	10.2	
113 1,3-Dichlorobenzene	146	12.592	12.591	0.001	97	723242	10.0	9.77	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	1685707	10.0	10.2	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	725332	10.0	9.84	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1663010	10.0	10.3	
118 1,2-Dichlorobenzene	146	12.921	12.920	0.001	96	620924	10.0	9.83	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	79	27530	10.0	9.10	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	493167	10.0	9.85	
122 Hexachlorobutadiene	225	14.022	14.021	0.001	98	356367	10.0	9.37	
123 Naphthalene	128	14.115	14.114	0.001	98	668108	10.0	10.5	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	94	430015	10.0	9.38	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.7	
S 138 Xylenes, Total (URS)	1				0		20.0	20.3	
S 142 Trihalomethanes, Total	1				0		40.0	39.6	
S 143 Xylenes, Total	106				0		20.0	20.3	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.7	
S 139 Total BTEX	1				0			50.5	
S 140 1,3-Dichloropropene, Total	1				0		20.0	19.0	

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00070	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

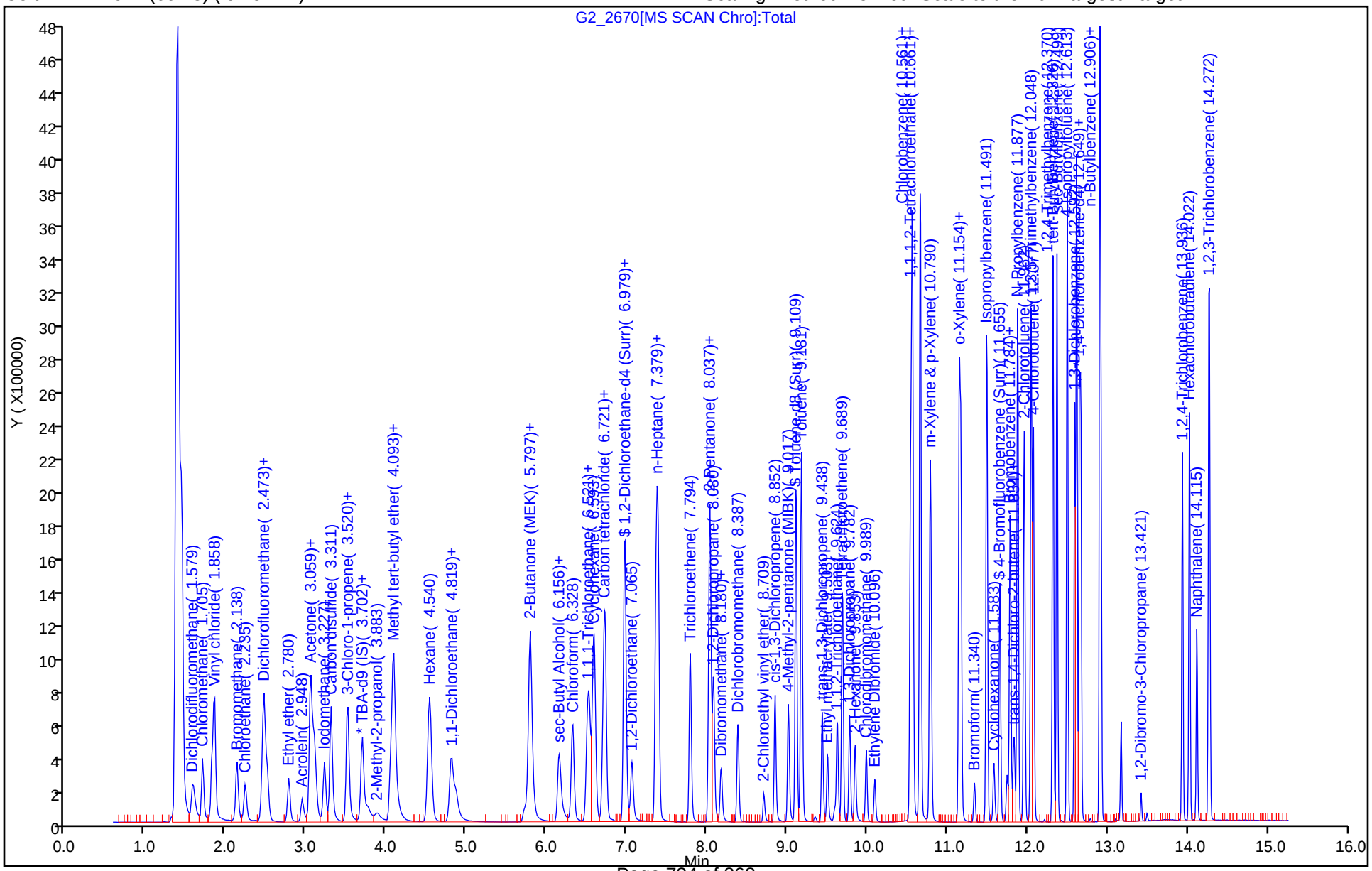
Report Date: 07-May-2018 21:12:10 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2670.D

Injection Date:	04-May-2018 23:01:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Lab Sample ID: CCVC 280-413840/14 Calibration Date: 05/04/2018 23:01

Instrument ID: VMS_G2 Calib Start Date: 05/03/2018 01:55

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/03/2018 03:55

Lab File ID: G2_2670.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin		0.4269		9.63	10.0	-3.7	50.0
Chloromethane	Ave	0.4166	0.4095	0.1000	9.83	10.0	-1.7	50.0
Vinyl chloride	Ave	0.4400	0.4296		9.76	10.0	-2.4	50.0
Bromomethane	Ave	0.2809	0.2788		9.92	10.0	-0.8	50.0
Chloroethane	Ave	0.2462	0.2443		9.92	10.0	-0.8	50.0
Dichlorofluoromethane	Ave	0.7029	0.6922		9.85	10.0	-1.5	50.0
Trichlorofluoromethane	Ave	0.6244	0.6234		9.98	10.0	-0.2	50.0
Acetone	Ave	0.0278	0.0311		44.9	40.0	12.1	50.0
2-Butanone (MEK)	Lin2		0.0389		40.1	40.0	0.3	50.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.1062		43.7	40.0	9.2	50.0
2-Hexanone	Lin1		0.3161		42.6	40.0	6.4	50.0
Cyclohexanone	Lin		0.0145		543	400	35.7	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2670.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2018 23:01:30 ALS Bottle#: 19 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:12:09 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 06-May-2018 11:09:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.785	-0.013	0	217132	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	98	1373939	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.540	10.546	-0.006	88	306517	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	95	486060	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.543	6.542	0.001	93	285987	10.0	10.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.964	6.971	-0.007	99	277995	10.0	10.0	
$ 8 Toluene-d8 (Surr)	98	9.109	9.109	0.000	94	1258549	10.0	10.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	86	433938	10.0	10.2	
12 Dichlorodifluoromethane	85	1.579	1.593	-0.014	99	469226	10.0	9.63	
14 Chloromethane	50	1.705	1.704	0.001	99	450129	10.0	9.83	
15 Vinyl chloride	62	1.830	1.830	0.000	98	472213	10.0	9.76	
17 Bromomethane	94	2.138	2.137	0.001	91	306400	10.0	9.92	
18 Chloroethane	64	2.235	2.249	-0.014	100	268490	10.0	9.92	
19 Dichlorofluoromethane	67	2.459	2.473	-0.014	97	760865	10.0	9.85	
20 Trichlorofluoromethane	101	2.487	2.501	-0.014	98	685240	10.0	9.98	
22 Ethyl ether	59	2.780	2.794	-0.014	94	203719	10.0	11.3	
24 Acrolein	56	2.948	2.961	-0.013	99	201011	100.0	111.8	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	95	345228	10.0	10.3	
26 1,1,2-Trichloro-1,2,2-trif	151	3.101	3.101	0.000	95	303582	10.0	9.83	
27 Acetone	43	3.115	3.129	-0.014	100	136900	40.0	44.9	
28 Iodomethane	142	3.227	3.241	-0.014	98	529991	10.0	10.2	
30 Carbon disulfide	76	3.311	3.311	0.000	100	1324907	10.0	10.2	
32 Methyl acetate	43	3.520	3.520	0.000	98	194110	20.0	23.4	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	90	608457	10.0	10.7	
35 Methylene Chloride	84	3.702	3.702	0.000	96	337703	10.0	10.2	
37 2-Methyl-2-propanol	59	3.897	3.897	0.000	96	113652	100.0	105.7	
39 Acrylonitrile	53	4.051	4.065	-0.014	99	431848	100.0	105.1	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	95	364915	10.0	10.3	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	96	685362	10.0	11.0	
42 Hexane	57	4.540	4.540	0.000	94	665385	10.0	10.7	
45 1,1-Dichloroethane	63	4.805	4.819	-0.014	96	688904	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.875	4.875	0.000	98	582483	20.0	20.3	
50 2,2-Dichloropropane	77	5.797	5.797	0.000	69	643673	10.0	10.0	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	369829	10.0	10.4	
52 2-Butanone (MEK)	43	5.811	5.825	-0.013	100	171144	40.0	40.1	
56 Chlorobromomethane	128	6.149	6.163	-0.014	98	122383	10.0	10.2	
57 Tetrahydrofuran	42	6.171	6.178	-0.007	73	74407	20.0	22.0	
55 sec-Butyl Alcohol	45	6.178	6.185	-0.007	87	185437	300.0	273.0	
59 Chloroform	83	6.328	6.328	0.000	94	609495	10.0	10.1	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	607147	10.0	10.0	
61 Cyclohexane	56	6.593	6.592	0.001	92	749200	10.0	10.2	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	537906	10.0	10.0	
63 1,1-Dichloropropene	75	6.728	6.735	-0.007	95	548101	10.0	10.4	
64 Benzene	78	6.979	6.979	0.001	98	1446287	10.0	10.2	
65 1,2-Dichloroethane	62	7.065	7.071	-0.006	98	344678	10.0	10.2	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	454977	250.0	260.3	
67 n-Heptane	43	7.393	7.393	0.000	94	741727	10.0	10.8	
69 Trichloroethene	95	7.794	7.794	0.000	97	367731	10.0	9.95	
70 2-Pentanone	43	8.023	8.022	0.001	97	358629	40.0	39.0	
71 Methylcyclohexane	55	8.037	8.044	-0.007	92	616544	10.0	10.4	
72 1,2-Dichloropropane	63	8.080	8.087	-0.007	95	332159	10.0	10.3	
75 Dibromomethane	93	8.173	8.180	-0.007	95	125450	10.0	9.90	
74 1,4-Dioxane	88	8.180	8.187	-0.007	33	16002	200.0	183.0	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	376143	10.0	10.4	
78 2-Chloroethyl vinyl ether	63	8.709	8.716	-0.007	92	76514	10.0	9.06	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	94	413573	10.0	9.67	
81 4-Methyl-2-pentanone (MIBK	43	9.017	9.023	-0.006	98	467012	40.0	43.7	
82 Toluene	91	9.181	9.181	0.000	98	1488992	10.0	10.1	
83 trans-1,3-Dichloropropene	75	9.438	9.438	0.000	95	318763	10.0	9.34	
84 Ethyl methacrylate	69	9.503	9.510	-0.007	90	195038	10.0	9.18	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	93	173651	10.0	9.97	
86 Tetrachloroethene	164	9.689	9.696	-0.007	95	295649	10.0	9.71	
87 1,3-Dichloropropane	76	9.782	9.781	0.001	93	330907	10.0	10.3	
88 2-Hexanone	43	9.853	9.853	0.000	98	310066	40.0	42.6	
89 Chlorodibromomethane	129	9.989	9.989	0.000	90	202954	10.0	10.1	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	157807	10.0	10.6	
91 1-Chlorohexane	91	10.561	10.561	0.000	97	529227	10.0	9.66	
92 Chlorobenzene	112	10.568	10.568	0.000	93	899467	10.0	9.85	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	92	298940	10.0	10.0	
94 Ethylbenzene	106	10.668	10.668	0.000	99	540534	10.0	9.87	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	650765	10.0	9.93	
96 o-Xylene	106	11.147	11.154	-0.007	98	605636	10.0	10.4	
97 Styrene	104	11.169	11.169	0.000	94	931075	10.0	10.5	
98 Bromoform	173	11.340	11.340	0.000	95	94512	10.0	9.08	
99 Isopropylbenzene	105	11.491	11.497	-0.006	96	1747194	10.0	10.3	
100 Cyclohexanone	55	11.583	11.583	0.000	94	142484	400.0	542.7	
103 Bromobenzene	156	11.784	11.783	0.001	97	344747	10.0	9.91	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	95	191839	10.0	10.3	
105 trans-1,4-Dichloro-2-buten	53	11.819	11.819	0.000	83	48367	10.0	10.6	
104 1,2,3-Trichloropropane	110	11.834	11.841	-0.007	86	54078	10.0	10.3	
106 N-Propylbenzene	120	11.877	11.884	-0.007	99	487178	10.0	9.97	
107 2-Chlorotoluene	126	11.962	11.962	0.000	95	390821	10.0	9.88	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	1440435	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 4-Chlorotoluene	126	12.077	12.077	0.000	97	395652	10.0	9.85	
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	1278837	10.0	10.2	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	1453917	10.0	10.3	
112 sec-Butylbenzene	134	12.499	12.498	0.001	95	403659	10.0	10.2	
113 1,3-Dichlorobenzene	146	12.592	12.591	0.001	97	723242	10.0	9.77	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	1685707	10.0	10.2	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	93	725332	10.0	9.84	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	1663010	10.0	10.3	
118 1,2-Dichlorobenzene	146	12.921	12.920	0.001	96	620924	10.0	9.83	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	79	27530	10.0	9.10	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	493167	10.0	9.85	
122 Hexachlorobutadiene	225	14.022	14.021	0.001	98	356367	10.0	9.37	
123 Naphthalene	128	14.115	14.114	0.001	98	668108	10.0	10.5	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	94	430015	10.0	9.38	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.7	
S 138 Xylenes, Total (URS)	1				0		20.0	20.3	
S 142 Trihalomethanes, Total	1				0		40.0	39.6	
S 143 Xylenes, Total	106				0		20.0	20.3	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.7	
S 139 Total BTEX	1				0			50.5	
S 140 1,3-Dichloropropene, Total	1				0		20.0	19.0	

Reagents:

MV-Main A_00036	Amount Added:	5.00	Units: uL	
MV-Gas/Ket A_00070	Amount Added:	5.00	Units: uL	
MV-2cleve+AVA_00034	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

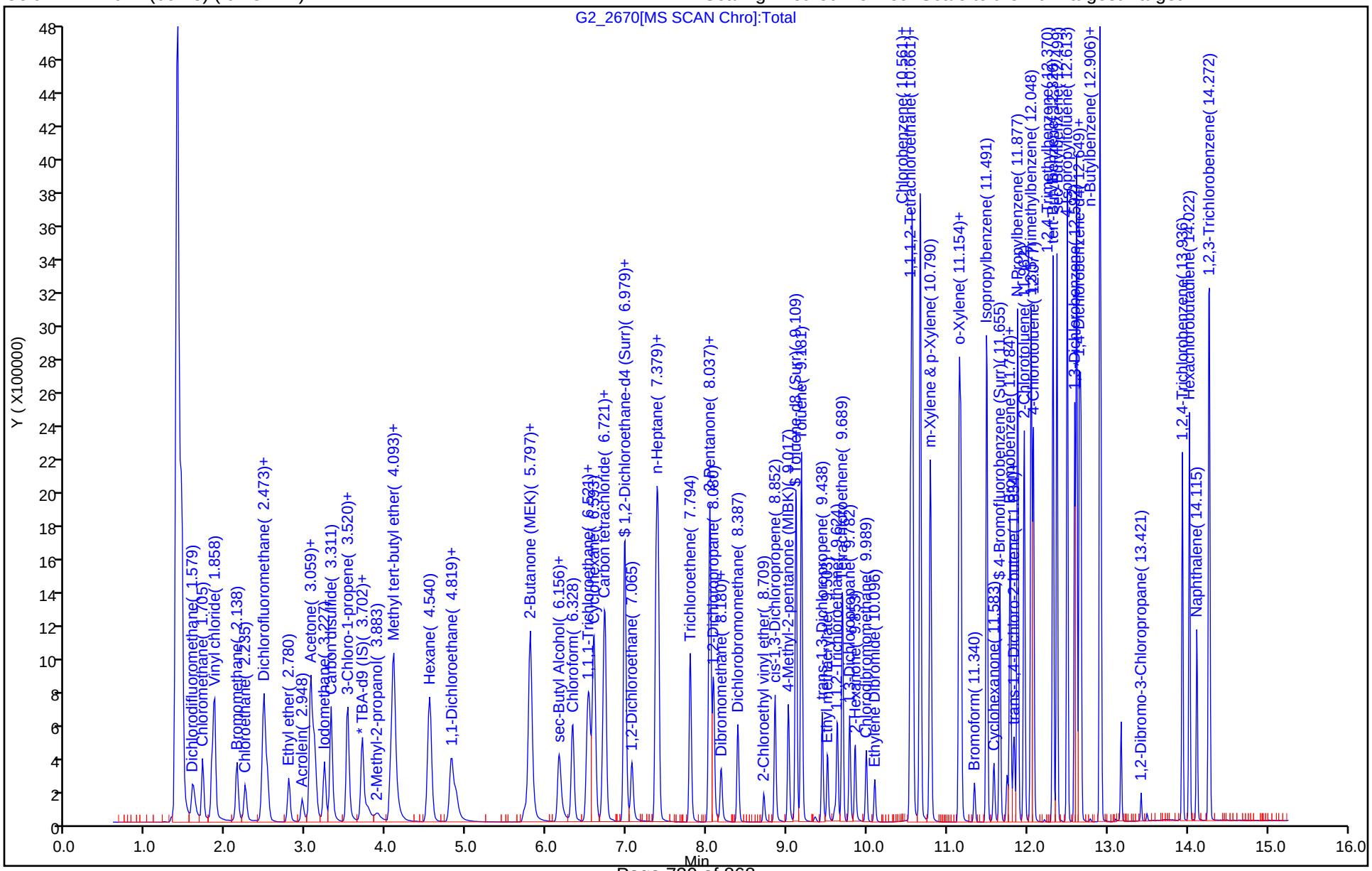
Report Date: 07-May-2018 21:12:10 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2670.D

Injection Date:	04-May-2018 23:01:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7207.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Apr-2018 10:09:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:27:00 Calib Date: 27-Apr-2018 17:46:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 08:27:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.926	3.926	0.000	88	293744	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

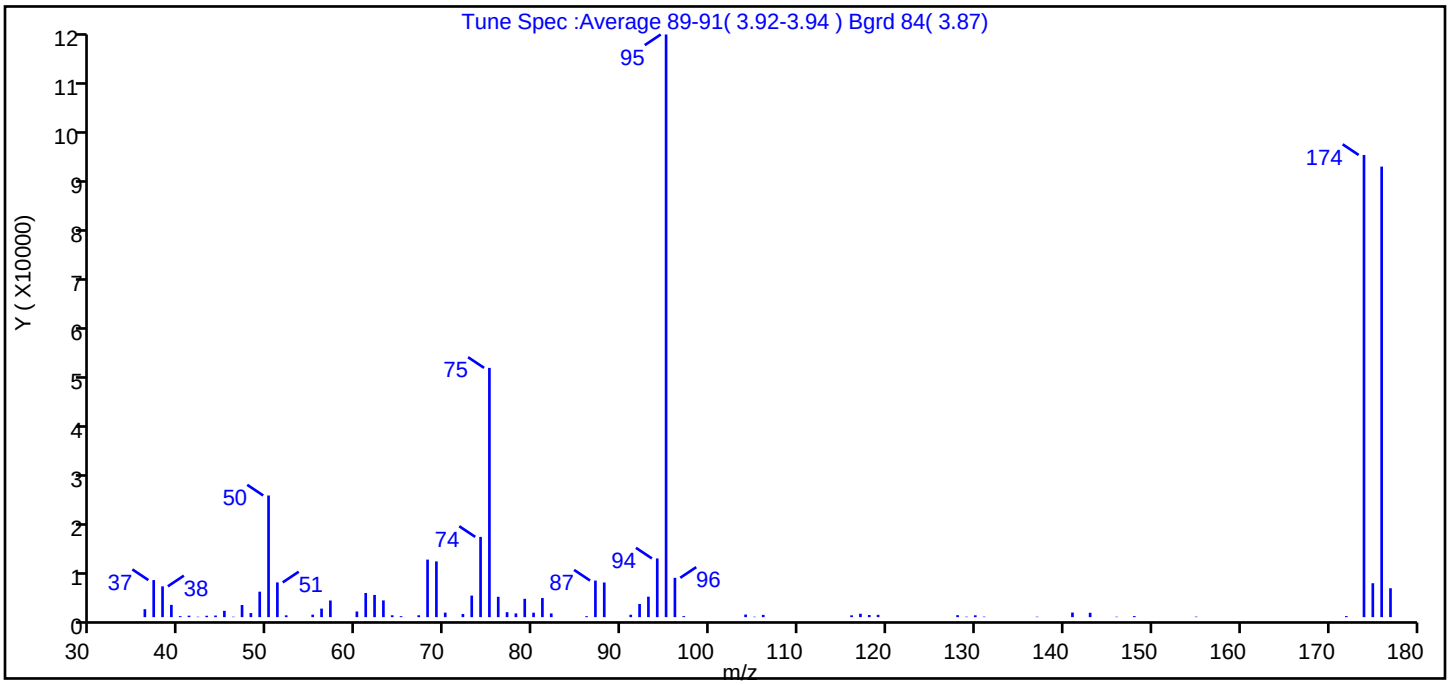
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7207.D
Injection Date: 27-Apr-2018 10:09:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.9
75	30 to 60% of m/z 95	42.8
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	79.3
175	5 to 9% of m/z 174	5.8 (7.3)
176	Greater than 95% but less than 101% of m/z 174	77.3 (97.5)
177	5 to 9% of m/z 176	5.0 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7207.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 27-Apr-2018 10:09:30
Spectrum: Tune Spec :Average 89-91(3.92-3.94) Bgrd 84(3.87)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1585	57.00	3321	80.00	889	119.00	459
37.00	7394	60.00	1130	81.00	3816	128.00	390
38.00	6148	61.00	4822	82.00	742	129.00	92
39.00	2449	62.00	4427	86.00	193	130.00	363
40.00	195	63.00	3338	87.00	7298	131.00	96
41.00	295	64.00	371	88.00	6914	137.00	86
42.00	83	65.00	191	91.00	480	141.00	918
43.00	277	67.00	376	92.00	2630	143.00	872
44.00	320	68.00	11483	93.00	4081	146.00	84
45.00	1265	69.00	11122	94.00	11709	148.00	209
46.00	85	70.00	906	95.00	116256	155.00	99
47.00	2423	72.00	631	96.00	7848	172.00	217
48.00	813	73.00	4301	97.00	197	174.00	92216
49.00	5082	74.00	16012	104.00	519	175.00	6768
50.00	24272	75.00	49736	105.00	84	176.00	89896
51.00	6931	76.00	4059	106.00	450	177.00	5770
52.00	361	77.00	991	116.00	360		
55.00	495	78.00	749	117.00	681		
56.00	1706	79.00	3664	118.00	423		

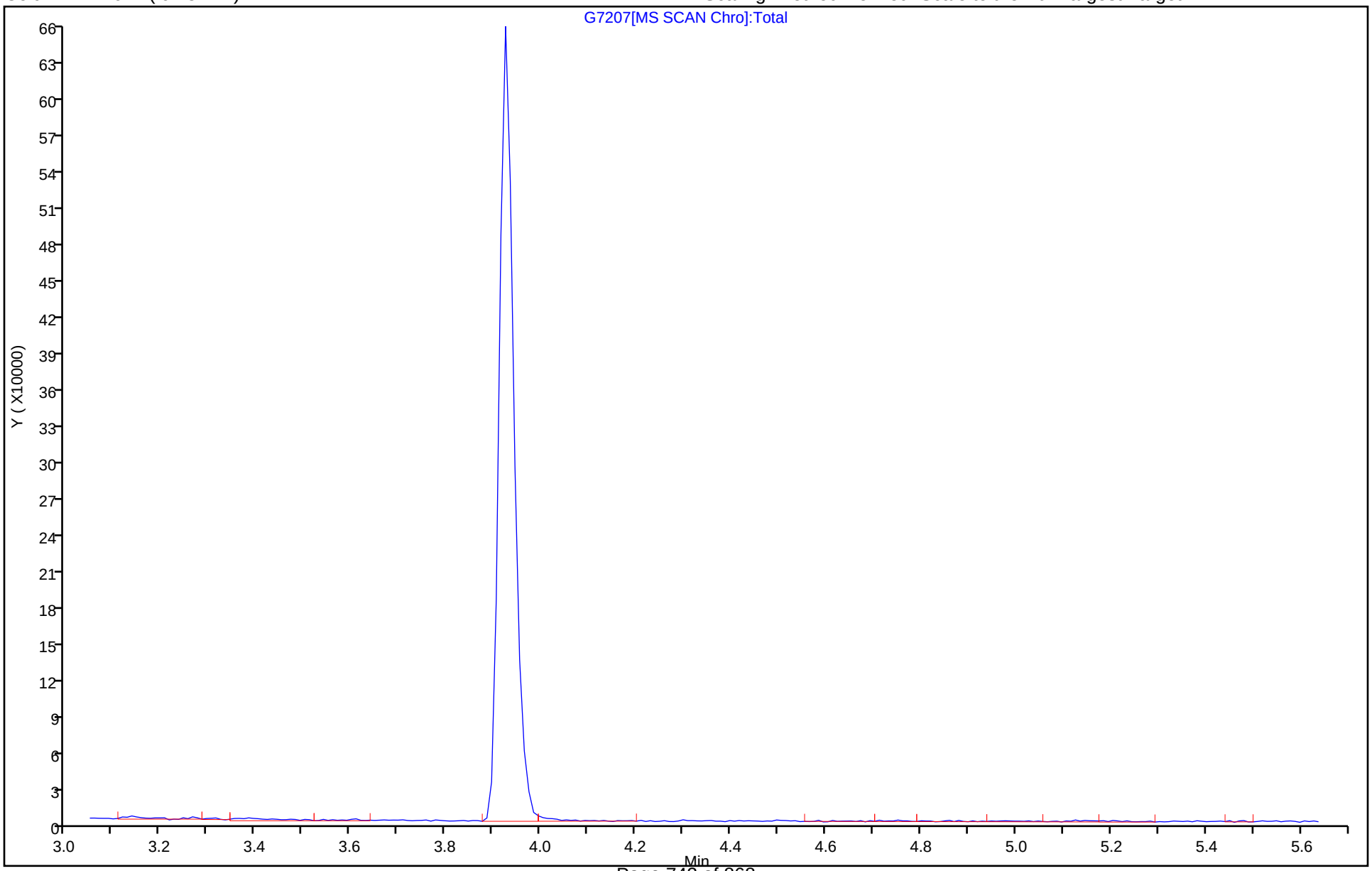
Report Date: 28-Apr-2018 08:27:03 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7207.D

Injection Date:	27-Apr-2018 10:09:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180428-69375.b\G7233.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	28-Apr-2018 08:33:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	ilczyszynd	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180428-69375.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	30-Apr-2018 07:56:14	Calib Date:	27-Apr-2018 17:46:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b\G7229.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.932	3.932	0.000	88	403869	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

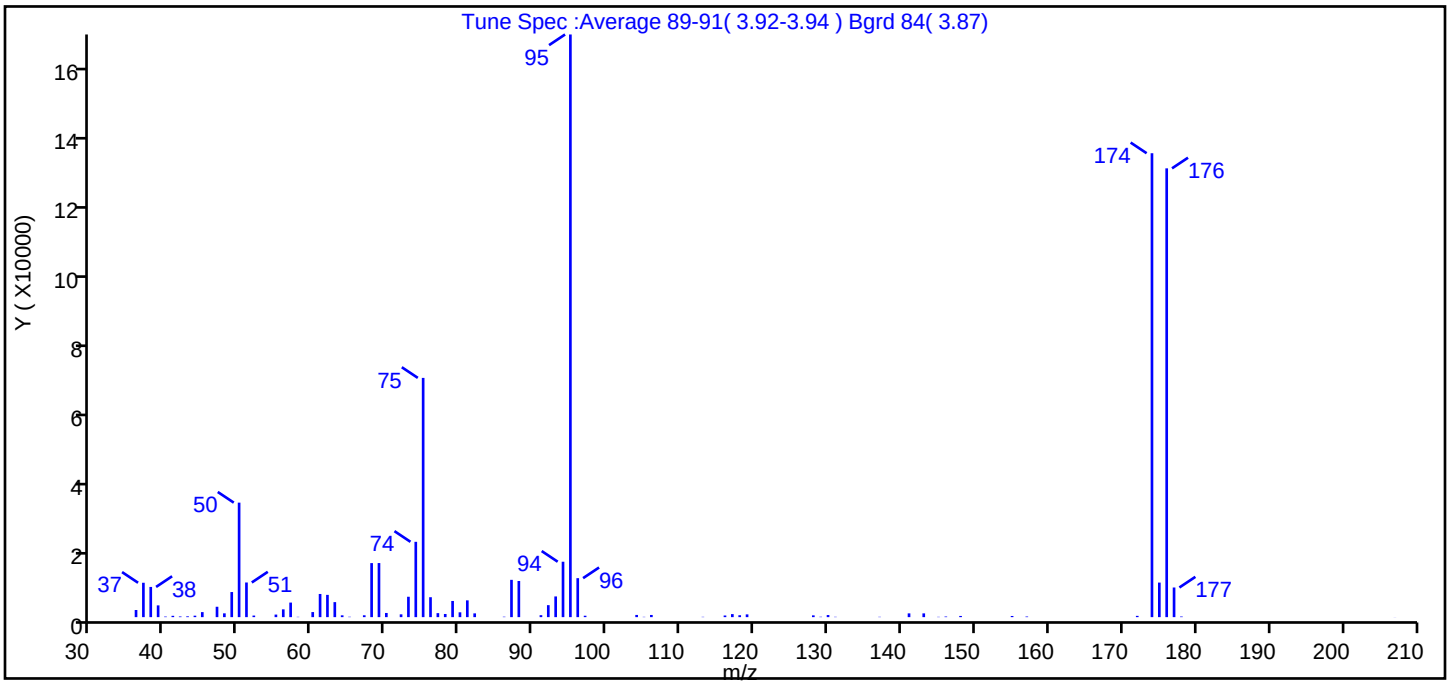
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180428-69375.b\G7233.D
Injection Date: 28-Apr-2018 08:33:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.7
75	30 to 60% of m/z 95	41.1
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	79.6
175	5 to 9% of m/z 174	5.9 (7.5)
176	Greater than 95% but less than 101% of m/z 174	77.0 (96.7)
177	5 to 9% of m/z 176	5.1 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180428-69375.b\G7233.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 28-Apr-2018 08:33:30
Spectrum: Tune Spec :Average 89-91(3.92-3.94) Bgrd 84(3.87)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2059	60.00	1463	82.00	1087	129.00	110
37.00	9916	61.00	6680	86.00	123	130.00	604
38.00	8710	62.00	6420	87.00	10757	131.00	95
39.00	3392	63.00	4331	88.00	10421	137.00	94
40.00	164	64.00	524	91.00	566	141.00	1086
41.00	381	65.00	110	92.00	3455	143.00	1086
42.00	193	67.00	537	93.00	5970	145.00	87
43.00	233	68.00	15582	94.00	15980	146.00	178
44.00	421	69.00	15595	95.00	168000	148.00	345
45.00	1449	70.00	1202	96.00	11241	155.00	335
47.00	2994	72.00	810	97.00	407	157.00	181
48.00	1098	73.00	5880	104.00	636	172.00	369
49.00	7237	74.00	21720	105.00	88	174.00	133760
50.00	33016	75.00	68984	106.00	629	175.00	9966
51.00	9992	76.00	5748	113.00	90	176.00	129400
52.00	456	77.00	1155	116.00	474	177.00	8548
55.00	741	78.00	911	117.00	875	178.00	178
56.00	2249	79.00	4662	118.00	552	207.00	22
57.00	4200	80.00	1393	119.00	796		
58.00	91	81.00	4842	128.00	513		

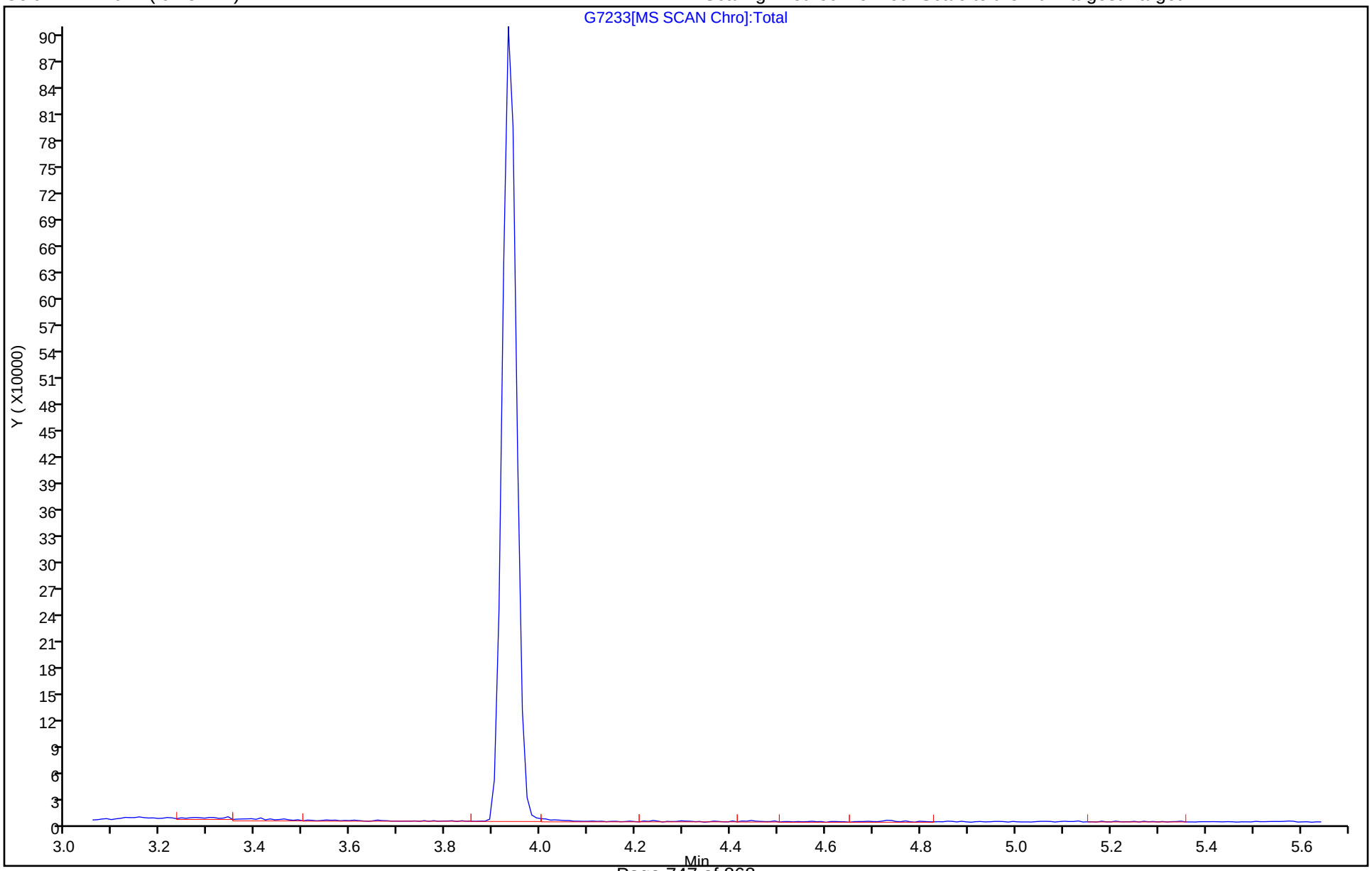
Report Date: 30-Apr-2018 07:56:15 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180428-69375.b\G7233.D

Injection Date:	28-Apr-2018 08:33:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7312.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 30-Apr-2018 09:29:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 08:51:08 Calib Date: 30-Apr-2018 13:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7322.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 01-May-2018 08:51:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.949	3.949	0.000	91	434138	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

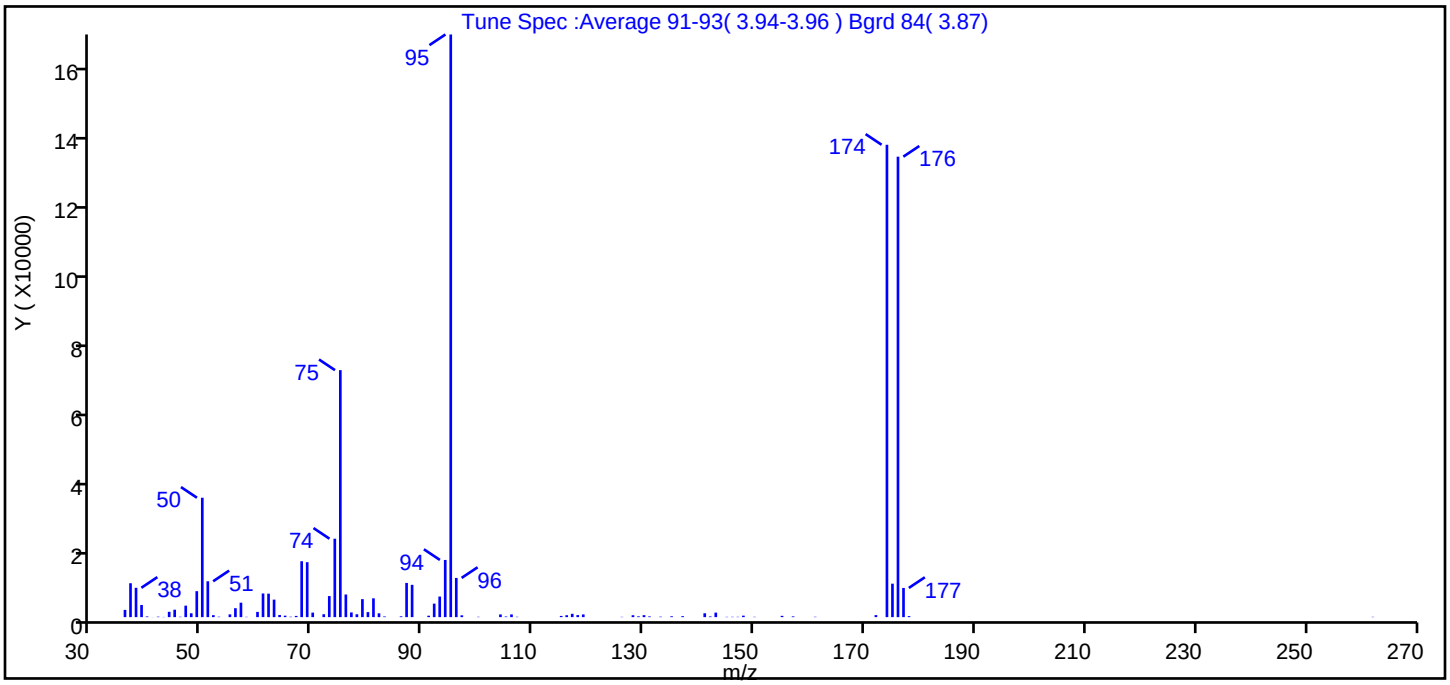
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7312.D
Injection Date: 30-Apr-2018 09:29:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.5
75	30 to 60% of m/z 95	42.4
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	81.1
175	5 to 9% of m/z 174	5.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	79.0 (97.5)
177	5 to 9% of m/z 176	5.0 (6.3)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7312.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 30-Apr-2018 09:29:30
Spectrum: Tune Spec :Average 91-93(3.94-3.96) Bgrd 84(3.87)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2066	61.00	6743	87.00	9747	131.00	203
37.00	9662	62.00	6687	88.00	9207	133.00	129
38.00	8365	63.00	4994	91.00	410	135.00	242
39.00	3470	64.00	616	92.00	3847	137.00	277
40.00	196	65.00	420	93.00	5870	141.00	1106
41.00	24	66.00	120	94.00	16297	142.00	193
42.00	135	67.00	352	95.00	166016	143.00	1292
43.00	56	68.00	15932	96.00	11172	145.00	89
44.00	1519	69.00	15656	97.00	517	146.00	96
45.00	2120	70.00	1291	100.00	95	147.00	96
46.00	108	72.00	830	104.00	770	148.00	424
47.00	3273	73.00	6006	105.00	176	150.00	92
48.00	1103	74.00	22344	106.00	776	155.00	372
49.00	7402	75.00	70376	107.00	101	157.00	216
50.00	34024	76.00	6452	115.00	351	161.00	103
51.00	10218	77.00	1341	116.00	548	172.00	579
52.00	562	78.00	822	117.00	949	174.00	134592
53.00	119	79.00	5133	118.00	587	175.00	9536
55.00	789	80.00	1438	119.00	776	176.00	131200
56.00	2550	81.00	5365	126.00	84	177.00	8320
57.00	4123	82.00	1092	128.00	545	178.00	287
58.00	86	83.00	195	129.00	222	262.00	89
60.00	1494	86.00	229	130.00	564		

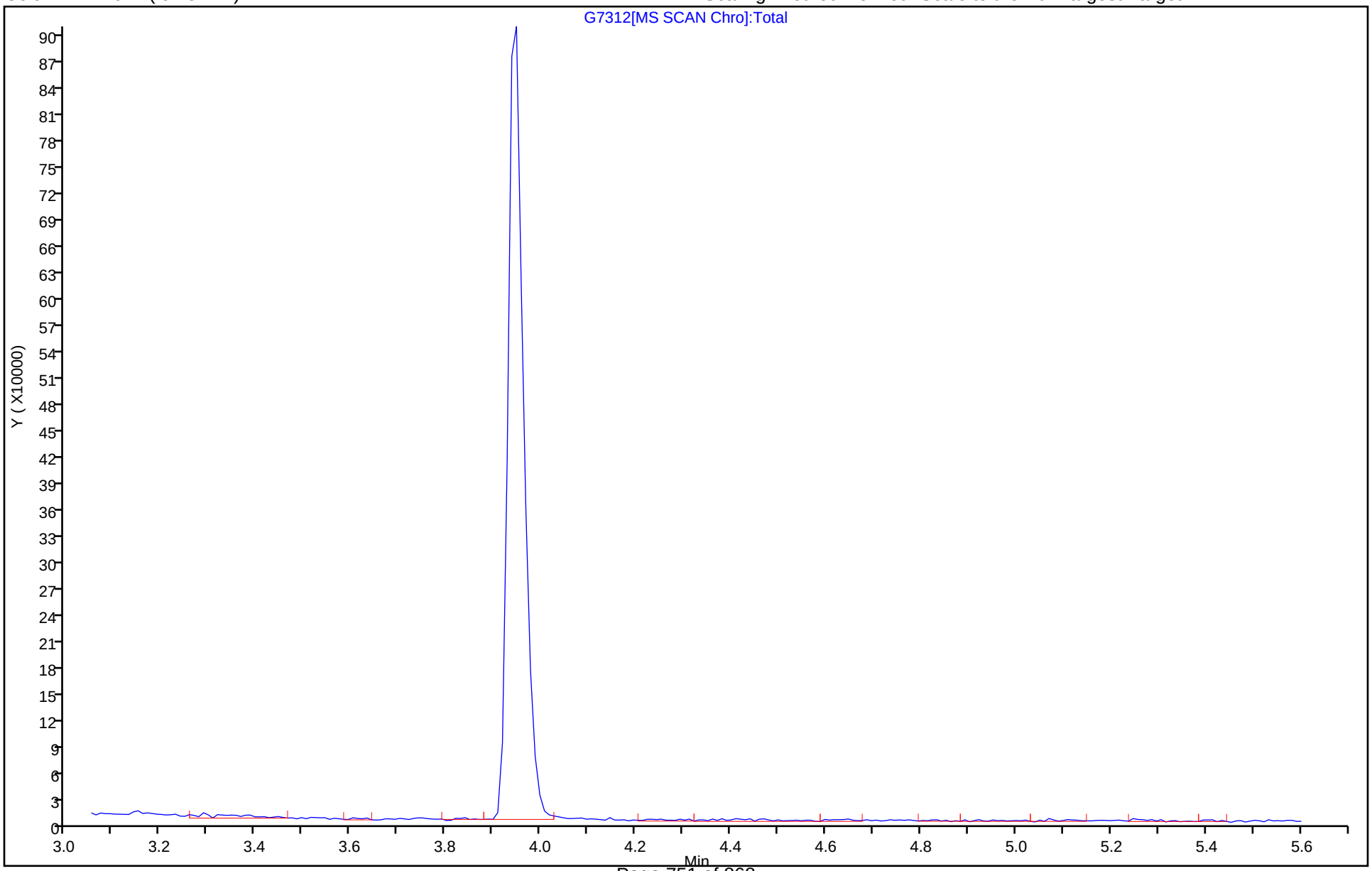
Report Date: 01-May-2018 08:51:09 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b\G7312.D

Injection Date:	30-Apr-2018 09:29:30	Instrument ID:	VMS_G	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7336.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 30-Apr-2018 19:45:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 01-May-2018 09:00:46 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 01-May-2018 09:00:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.954	3.954	0.000	91	576258	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

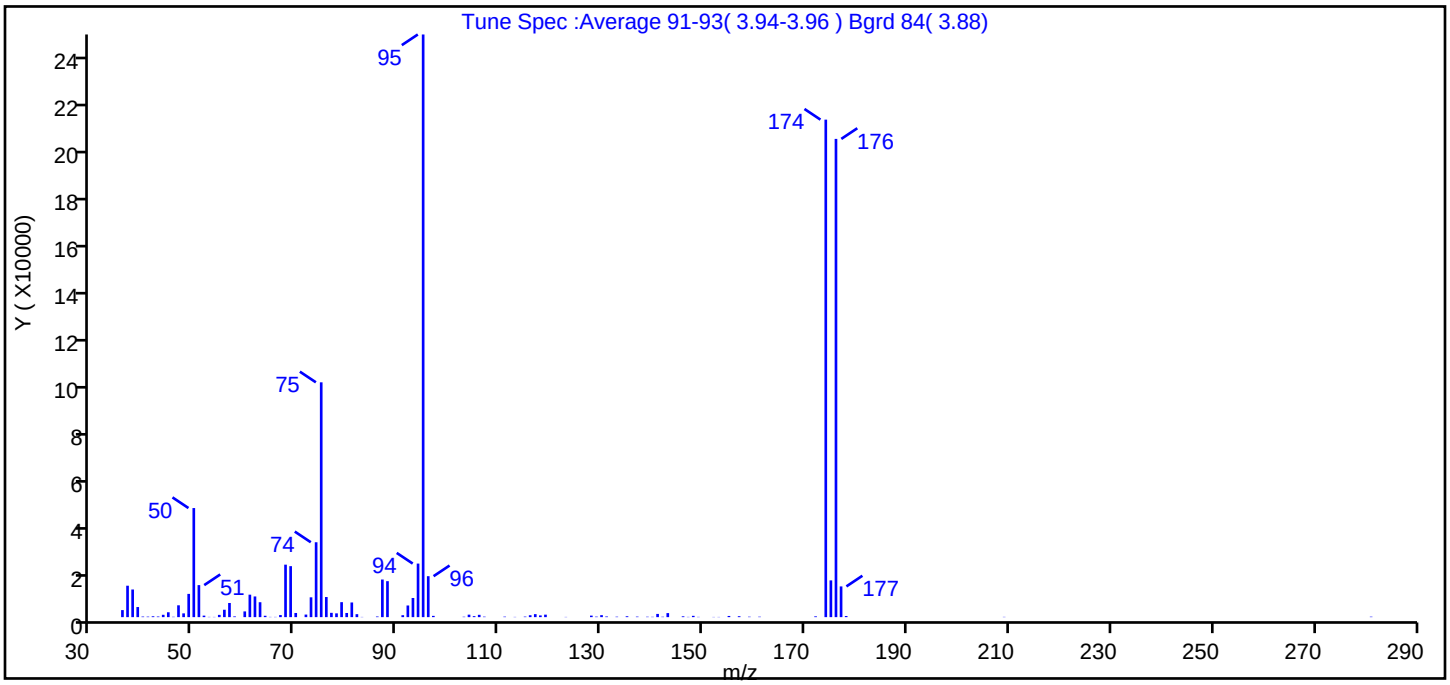
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7336.D
Injection Date: 30-Apr-2018 19:45:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.7
75	30 to 60% of m/z 95	40.3
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	85.4
175	5 to 9% of m/z 174	6.3 (7.4)
176	Greater than 95% but less than 101% of m/z 174	82.1 (96.1)
177	5 to 9% of m/z 176	5.3 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7336.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 30-Apr-2018 19:45:30
Spectrum: Tune Spec :Average 91-93(3.94-3.96) Bgrd 84(3.88)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2951	62.00	8663	92.00	4880	137.00	221
37.00	13157	63.00	6246	93.00	8018	139.00	172
38.00	11573	64.00	578	94.00	22424	140.00	136
39.00	4229	65.00	100	95.00	243904	141.00	1352
40.00	241	66.00	97	96.00	17144	142.00	169
41.00	215	67.00	862	97.00	533	143.00	1692
42.00	358	68.00	21968	103.00	170	146.00	341
43.00	262	69.00	21344	104.00	1039	147.00	105
44.00	985	70.00	1743	105.00	417	148.00	544
45.00	2039	72.00	1080	106.00	975	149.00	107
46.00	150	73.00	8298	107.00	203	152.00	84
47.00	4955	74.00	31352	111.00	208	153.00	85
48.00	1583	75.00	98296	113.00	97	155.00	495
49.00	9735	76.00	8422	115.00	227	157.00	387
50.00	45664	77.00	1805	116.00	795	159.00	187
51.00	13405	78.00	1584	117.00	1256	161.00	187
52.00	634	79.00	6271	118.00	718	172.00	331
53.00	104	80.00	1740	119.00	1043	174.00	208256
54.00	88	81.00	6142	123.00	92	175.00	15387
55.00	948	82.00	1243	128.00	640	176.00	200192
56.00	3102	83.00	89	129.00	213	177.00	12863
57.00	5926	86.00	269	130.00	832	178.00	467
58.00	304	87.00	15747	131.00	274	209.00	110
60.00	2401	88.00	15060	133.00	190	281.00	192
61.00	9406	91.00	811	135.00	374		

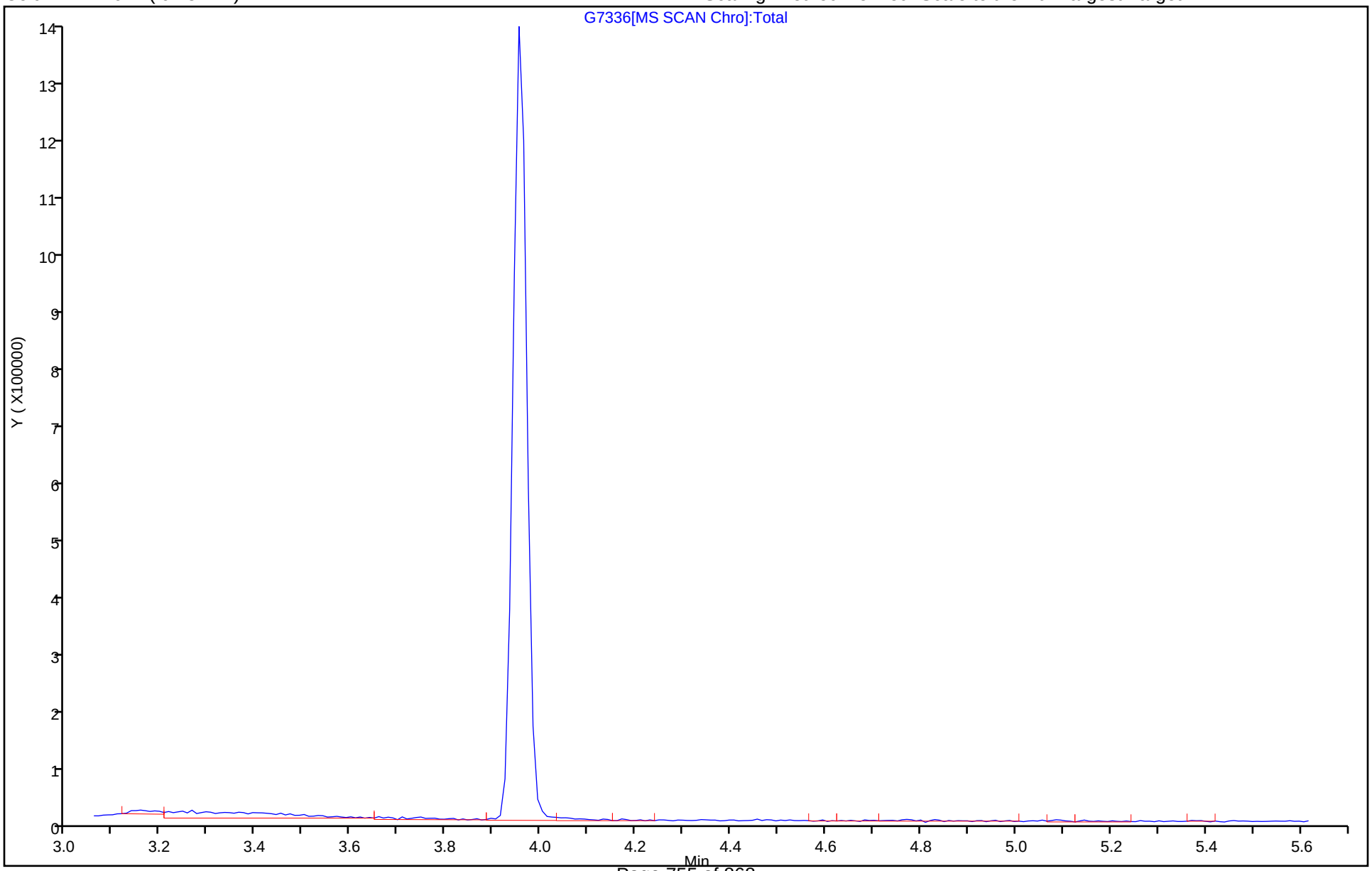
Report Date: 01-May-2018 09:00:47 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7336.D

Injection Date:	30-Apr-2018 19:45:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7517.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-May-2018 18:24:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	04-May-2018 19:01:37	Calib Date:	01-May-2018 00:53:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK001				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.930	3.930	0.000	86	377188	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

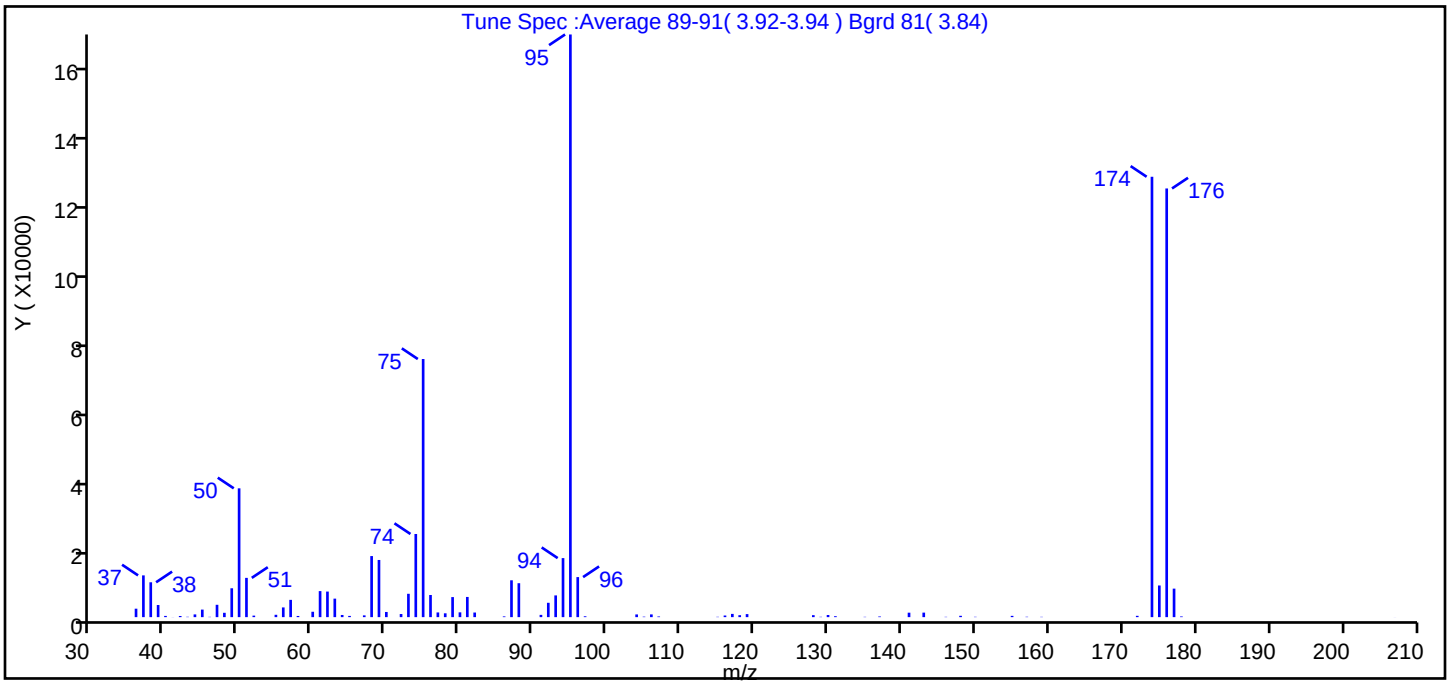
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7517.D
Injection Date: 03-May-2018 18:24:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.1
75	30 to 60% of m/z 95	44.3
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	75.6
175	5 to 9% of m/z 174	5.4 (7.2)
176	Greater than 95% but less than 101% of m/z 174	73.6 (97.3)
177	5 to 9% of m/z 176	4.9 (6.7)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7517.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 03-May-2018 18:24:30
Spectrum: Tune Spec :Average 89-91(3.92-3.94) Bgrd 81(3.84)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 82

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2347	60.00	1496	86.00	204	130.00	592
37.00	11596	61.00	7230	87.00	10233	131.00	260
38.00	9680	62.00	7101	88.00	9422	135.00	85
39.00	3368	63.00	5139	91.00	630	137.00	184
40.00	342	64.00	599	92.00	3983	141.00	1238
41.00	24	65.00	343	93.00	6034	143.00	1255
42.00	317	67.00	492	94.00	16392	146.00	86
43.00	99	68.00	16960	95.00	161792	148.00	373
44.00	761	69.00	15876	96.00	11122	150.00	94
45.00	2096	70.00	1437	97.00	237	155.00	358
46.00	83	72.00	867	104.00	754	157.00	107
47.00	3428	73.00	6486	105.00	133	159.00	84
48.00	1207	74.00	23088	106.00	761	172.00	365
49.00	8017	75.00	71672	107.00	180	174.00	122280
50.00	35768	76.00	6150	115.00	92	175.00	8793
51.00	10904	77.00	1305	116.00	453	176.00	119032
52.00	422	78.00	1065	117.00	902	177.00	7918
55.00	654	79.00	5567	118.00	543	178.00	192
56.00	2698	80.00	1332	119.00	843	207.00	12
57.00	4799	81.00	5607	128.00	550		
58.00	325	82.00	1282	129.00	90		

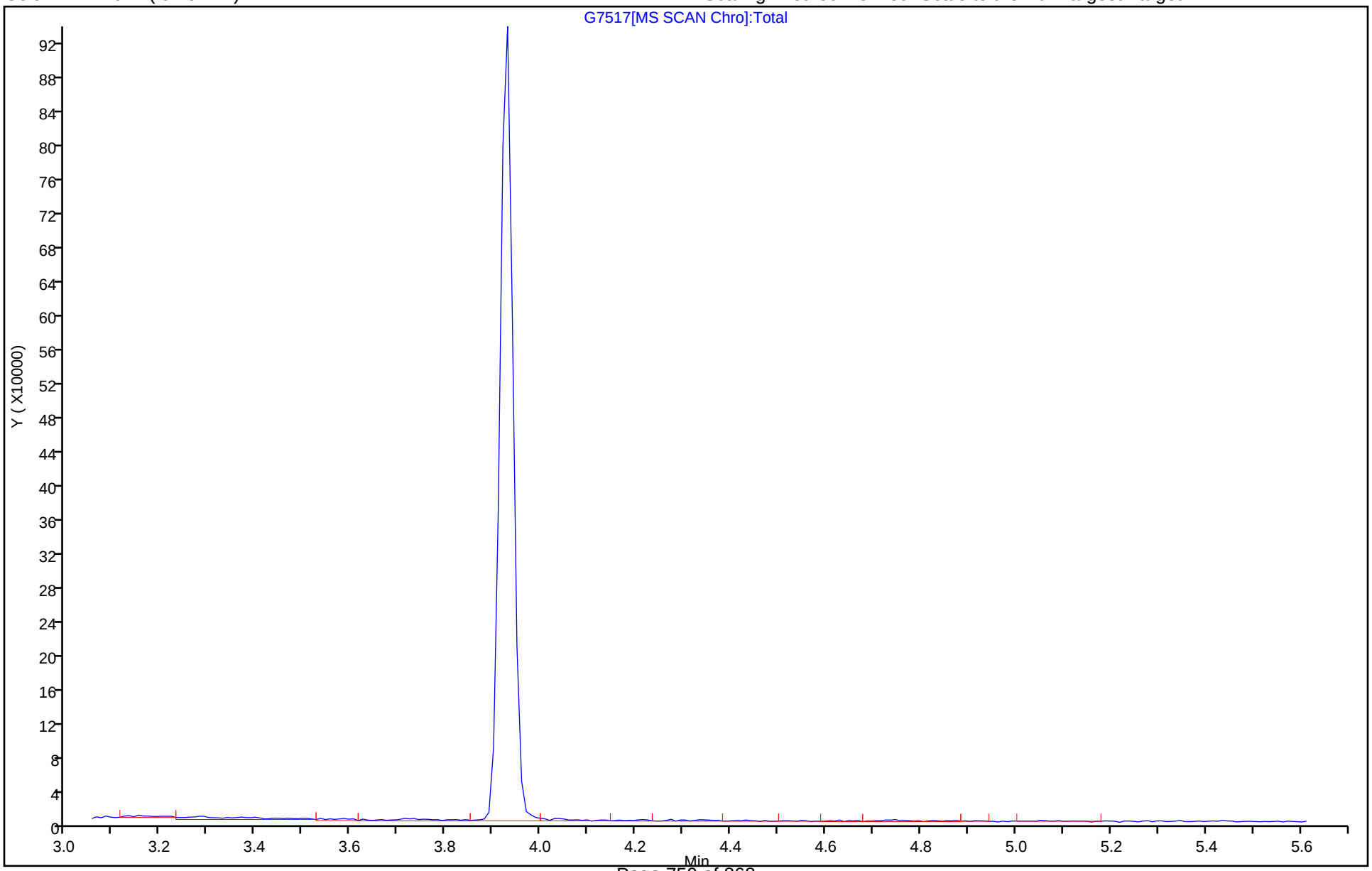
Report Date: 04-May-2018 19:01:38 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7517.D

Injection Date:	03-May-2018 18:24:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2303.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Apr-2018 11:01:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 28-Apr-2018 08:18:29 Calib Date: 27-Apr-2018 18:42:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2325.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: ilczyszynd Date: 28-Apr-2018 08:18:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.137	2.137	0.000	86	161481	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

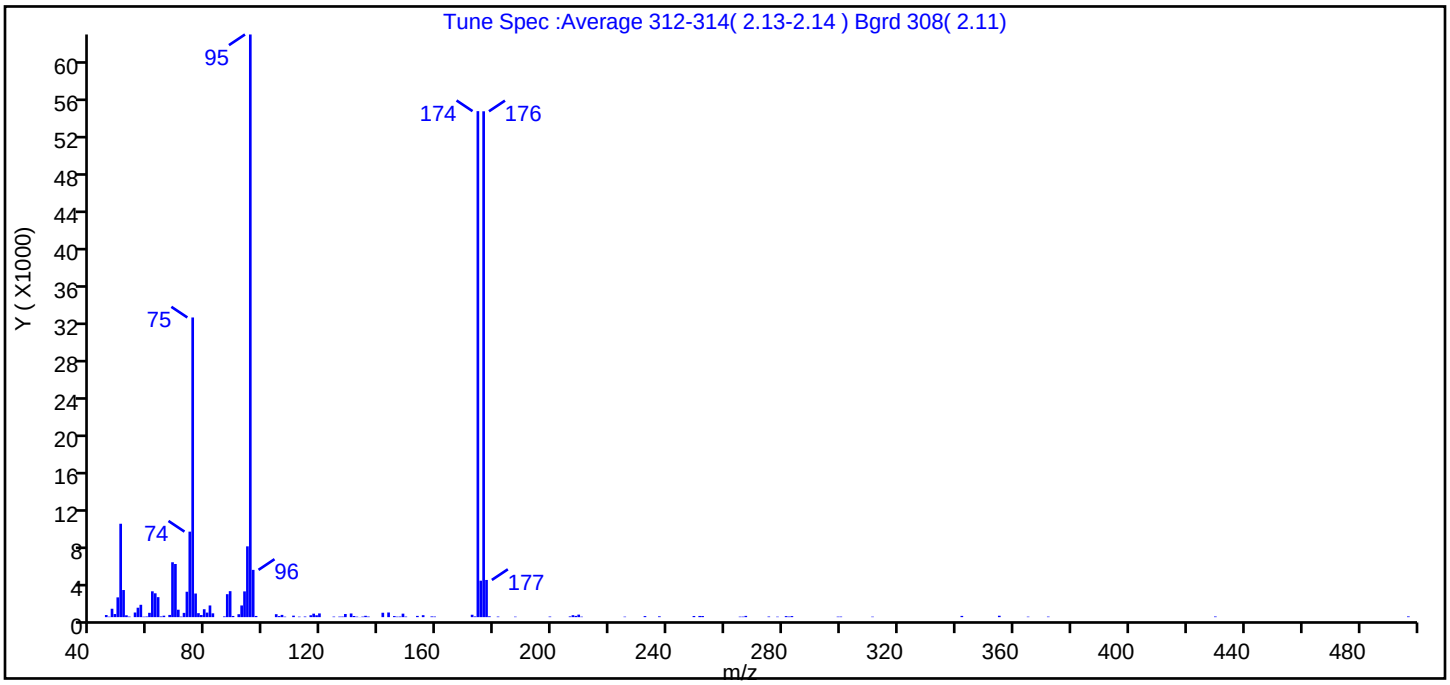
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2303.D
Injection Date: 27-Apr-2018 11:01:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.0
75	30 to 60% of m/z 95	51.4
96	5 to 9% of m/z 95	8.1
173	Less than 2% of m/z 174	0.1 (0.1)
174	50 to 120% of m/z 95	86.8
175	5 to 9% of m/z 174	6.3 (7.2)
176	Greater than 95% but less than 101% of m/z 174	86.8 (100.0)
177	5 to 9% of m/z 176	6.4 (7.4)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2303.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 27-Apr-2018 11:01:30
Spectrum: Tune Spec :Average 312-314(2.13-2.14) Bgrd 308(2.11)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	223	77.00	423	127.00	62	206.00	77
46.00	50	78.00	224	128.00	337	207.00	209
47.00	895	79.00	844	130.00	392	208.00	133
48.00	331	80.00	484	131.00	121	209.00	268
49.00	2107	81.00	1245	132.00	53	210.00	52
50.00	9951	82.00	408	133.00	9	225.00	52
51.00	2888	86.00	80	134.00	56	232.00	113
52.00	197	87.00	2446	135.00	143	237.00	88
53.00	59	88.00	2768	136.00	63	249.00	120
55.00	493	89.00	126	141.00	469	251.00	126
56.00	1005	91.00	312	143.00	495	252.00	121
57.00	1316	92.00	1245	145.00	115	265.00	52
58.00	50	93.00	2744	146.00	53	266.00	54
59.00	67	94.00	7543	147.00	62	267.00	133
60.00	461	95.00	62080	148.00	372	275.00	66
61.00	2753	96.00	5037	149.00	60	278.00	50
62.00	2539	97.00	126	153.00	133	281.00	110
63.00	2129	104.00	314	155.00	208	282.00	64
64.00	74	105.00	112	158.00	77	283.00	112
65.00	156	106.00	240	159.00	63	299.00	54
67.00	236	107.00	51	172.00	254	300.00	58
68.00	5848	110.00	159	173.00	75	311.00	51
69.00	5662	112.00	52	174.00	53912	342.00	133
70.00	791	114.00	66	175.00	3886	355.00	149
71.00	57	116.00	200	176.00	53896	365.00	51
72.00	454	117.00	372	177.00	3962	372.00	57
73.00	2707	118.00	198	178.00	90	430.00	69
74.00	9110	119.00	397	181.00	61	497.00	78
75.00	31928	124.00	59	187.00	51		
76.00	2517	126.00	58	199.00	62		

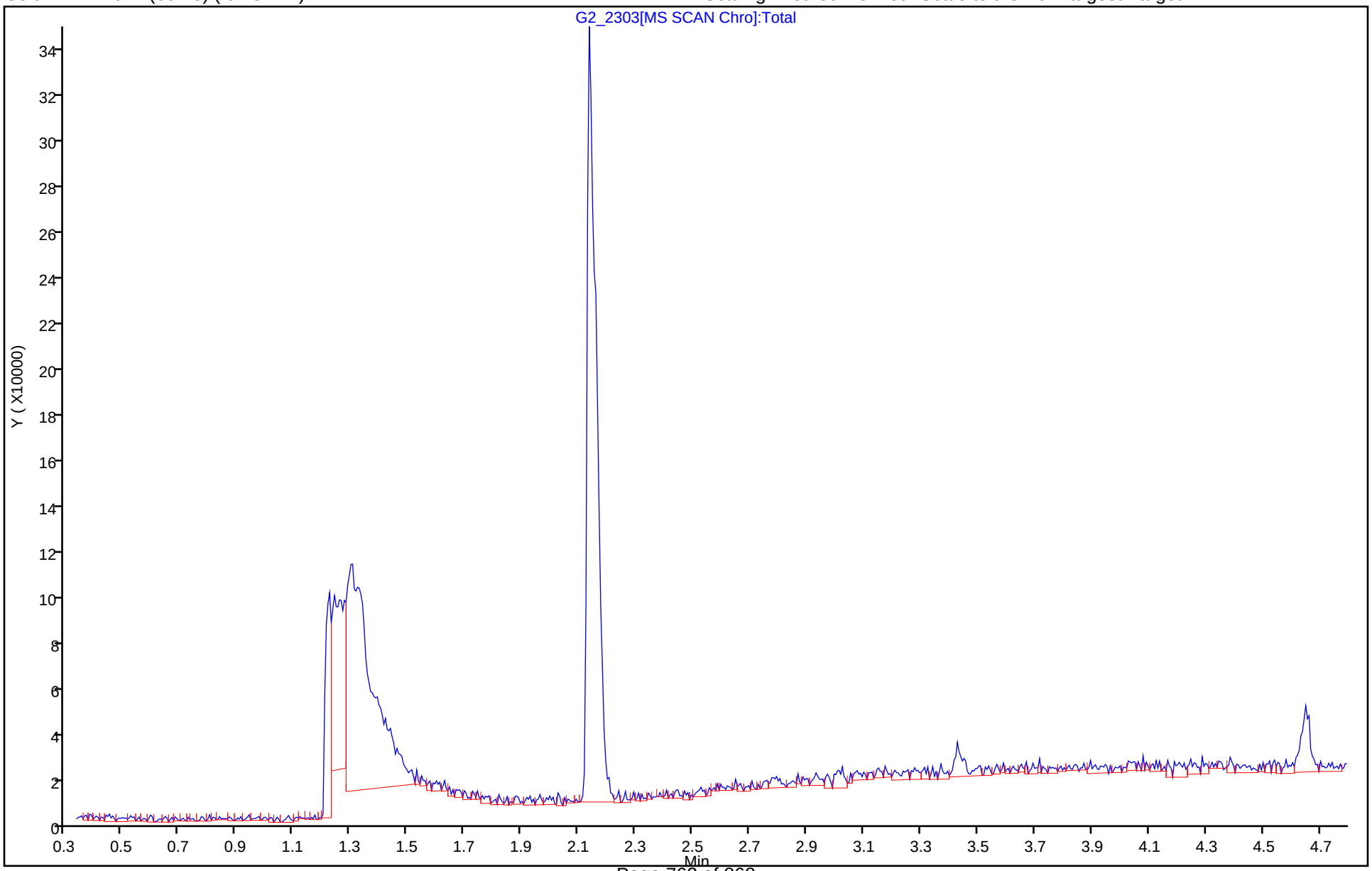
Report Date: 28-Apr-2018 08:18:33 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b\G2_2303.D

Injection Date:	27-Apr-2018 11:01:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2535.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 02-May-2018 22:10:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 03-May-2018 08:06:13 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: ilczyszynd Date: 03-May-2018 08:06:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.143	2.143	0.000	82	208040	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

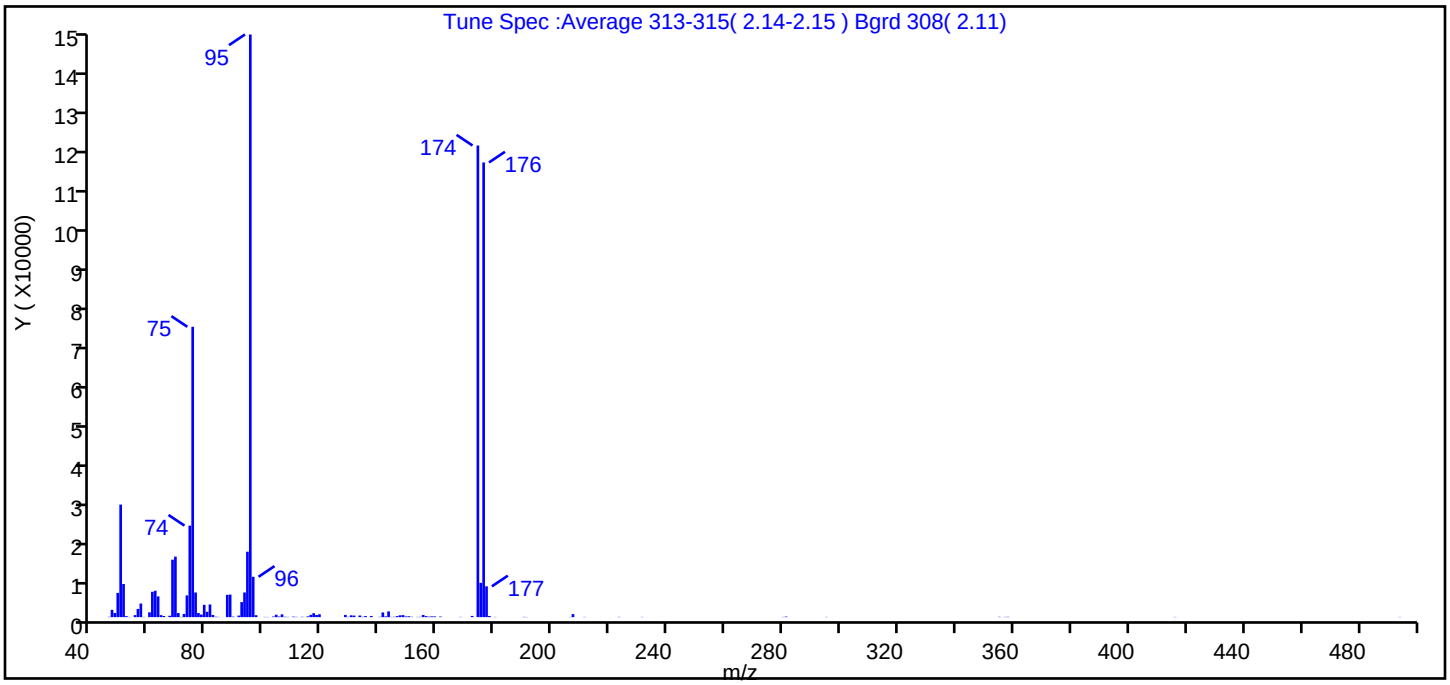
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2535.D
Injection Date: 02-May-2018 22:10:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.3
75	30 to 60% of m/z 95	49.8
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	80.9
175	5 to 9% of m/z 174	5.9 (7.3)
176	Greater than 95% but less than 101% of m/z 174	78.0 (96.4)
177	5 to 9% of m/z 176	5.3 (6.8)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2535.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 02-May-2018 22:10:30
Spectrum: Tune Spec :Average 313-315(2.14-2.15) Bgrd 308(2.11)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 113

m/z	Y	m/z	Y	m/z	Y	m/z	Y
46.00	87	78.00	655	116.00	569	158.00	197
47.00	1834	79.00	3083	117.00	994	159.00	188
48.00	1044	80.00	1343	118.00	541	161.00	149
49.00	6084	81.00	3183	119.00	726	168.00	62
50.00	28232	82.00	547	128.00	556	172.00	305
51.00	8316	83.00	99	129.00	87	174.00	118320
52.00	249	84.00	59	130.00	453	175.00	8604
53.00	56	87.00	5604	131.00	394	176.00	114072
55.00	511	88.00	5662	133.00	409	177.00	7728
56.00	2066	89.00	130	134.00	86	178.00	295
57.00	3418	91.00	391	135.00	272	180.00	55
58.00	62	92.00	3769	137.00	297	190.00	66
60.00	1207	93.00	6189	140.00	90	191.00	40
61.00	6361	94.00	16416	141.00	1175	206.00	52
62.00	6625	95.00	146176	142.00	191	207.00	757
63.00	5197	96.00	10122	143.00	1431	211.00	59
64.00	507	97.00	485	144.00	64	223.00	69
65.00	289	100.00	59	145.00	88	231.00	61
67.00	348	101.00	53	146.00	266	280.00	58
68.00	14417	103.00	155	147.00	461	281.00	138
69.00	15182	104.00	601	148.00	510	295.00	59
70.00	1024	105.00	148	149.00	173	355.00	85
71.00	51	106.00	694	150.00	226	357.00	62
72.00	815	107.00	96	151.00	95	358.00	84
73.00	5460	108.00	61	153.00	60	416.00	56
74.00	22960	110.00	125	154.00	72	494.00	53
75.00	72840	111.00	69	155.00	547		
76.00	6183	113.00	88	156.00	262		
77.00	1030	115.00	204	157.00	133		

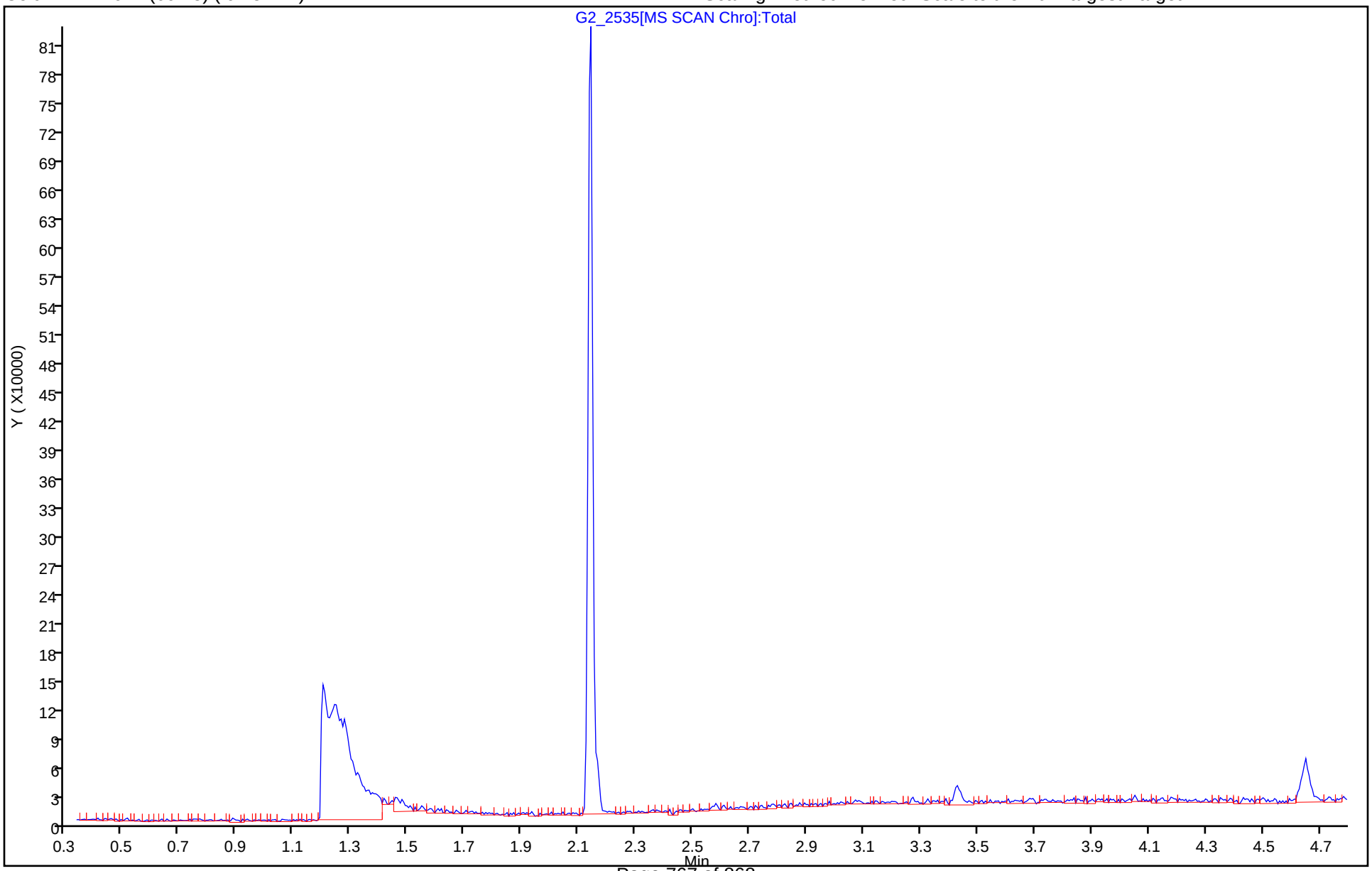
Report Date: 03-May-2018 08:06:14 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2535.D

Injection Date:	02-May-2018 22:10:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2590.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 03-May-2018 19:36:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 01:49:23 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK003

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.137	2.137	0.000	81	210338	NR	NR	7

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

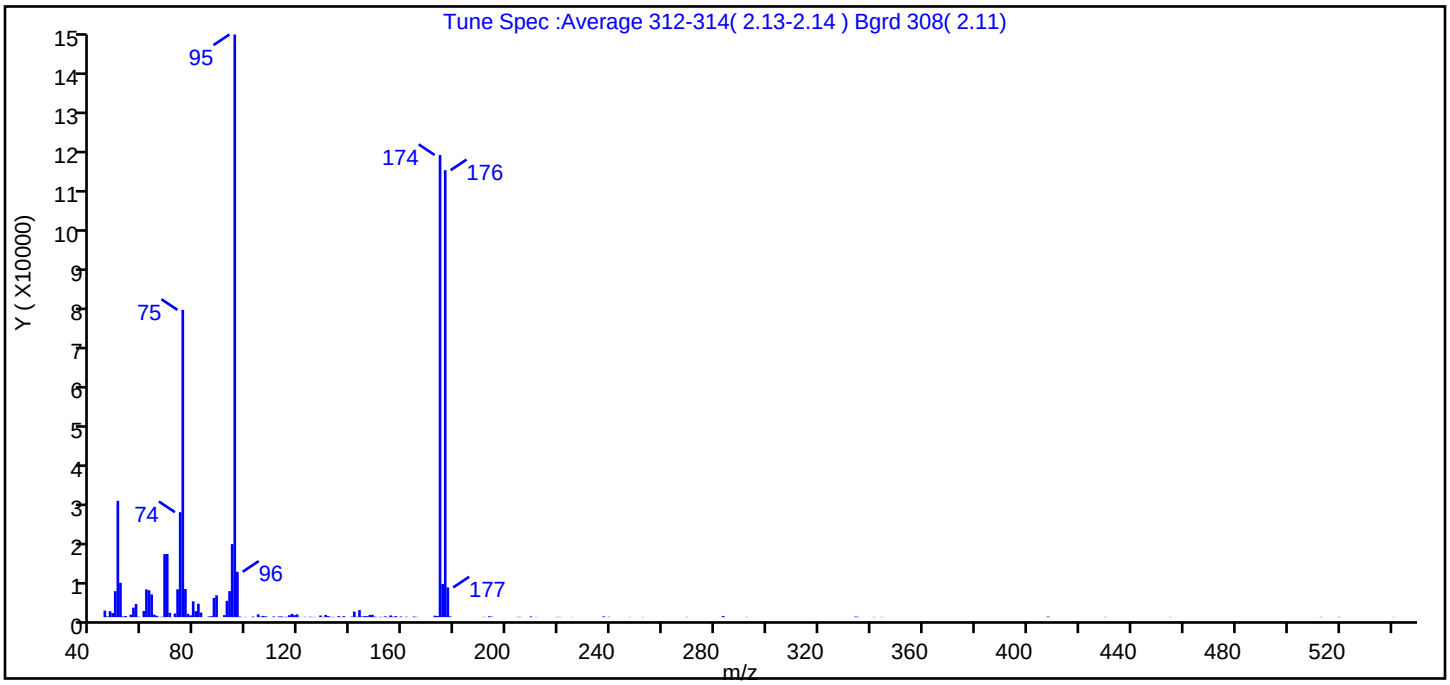
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2590.D
Injection Date: 03-May-2018 19:36:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.0
75	30 to 60% of m/z 95	52.7
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.2 (0.3)
174	50 to 120% of m/z 95	79.3
175	5 to 9% of m/z 174	5.7 (7.2)
176	Greater than 95% but less than 101% of m/z 174	76.7 (96.7)
177	5 to 9% of m/z 176	5.1 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2590.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 03-May-2018 19:36:30
Spectrum: Tune Spec :Average 312-314(2.13-2.14) Bgrd 308(2.11)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 132

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	1601	80.00	1458	126.00	52	174.00	112680
46.00	174	81.00	3250	128.00	390	175.00	8065
47.00	1449	82.00	1125	129.00	56	176.00	108984
48.00	990	85.00	162	130.00	548	177.00	7241
49.00	6333	86.00	238	131.00	248	178.00	173
50.00	28368	87.00	4694	132.00	70	191.00	77
51.00	8372	88.00	5327	133.00	54	193.00	225
52.00	176	91.00	504	135.00	254	194.00	100
53.00	292	92.00	3986	136.00	51	204.00	77
55.00	610	93.00	6341	137.00	252	205.00	61
56.00	2309	94.00	17800	140.00	121	209.00	172
57.00	3207	95.00	142080	141.00	1355	211.00	51
58.00	106	96.00	11061	142.00	83	219.00	74
60.00	1498	97.00	141	143.00	1732	220.00	59
61.00	6764	99.00	55	144.00	157	225.00	50
62.00	6560	102.00	155	145.00	265	237.00	193
63.00	5539	104.00	685	146.00	224	239.00	90
64.00	603	105.00	134	147.00	555	247.00	56
65.00	341	106.00	310	148.00	574	252.00	59
66.00	59	107.00	193	149.00	124	269.00	65
67.00	96	110.00	163	151.00	79	282.00	13
68.00	15366	112.00	162	152.00	57	283.00	292
69.00	15401	113.00	189	153.00	187	292.00	66
70.00	1053	114.00	55	154.00	57	334.00	157
71.00	11	115.00	96	155.00	418	335.00	69
72.00	887	116.00	469	156.00	119	341.00	61
73.00	6785	117.00	817	157.00	246	344.00	60
74.00	25600	118.00	493	159.00	160	408.00	158
75.00	74912	119.00	675	161.00	106	430.00	61
76.00	6855	120.00	54	164.00	150	455.00	62
77.00	812	122.00	83	165.00	75	513.00	70
78.00	436	124.00	98	172.00	355	520.00	85
79.00	3854	125.00	50	173.00	283	541.00	54

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	1601	80.00	1458	126.00	52	174.00	112680
46.00	174	81.00	3250	128.00	390	175.00	8065
47.00	1449	82.00	1125	129.00	56	176.00	108984
48.00	990	85.00	162	130.00	548	177.00	7241
49.00	6333	86.00	238	131.00	248	178.00	173
50.00	28368	87.00	4694	132.00	70	191.00	77
51.00	8372	88.00	5327	133.00	54	193.00	225
52.00	176	91.00	504	135.00	254	194.00	100
53.00	292	92.00	3986	136.00	51	204.00	77
55.00	610	93.00	6341	137.00	252	205.00	61
56.00	2309	94.00	17800	140.00	121	209.00	172
57.00	3207	95.00	142080	141.00	1355	211.00	51
58.00	106	96.00	11061	142.00	83	219.00	74
60.00	1498	97.00	141	143.00	1732	220.00	59
61.00	6764	99.00	55	144.00	157	225.00	50
62.00	6560	102.00	155	145.00	265	237.00	193
63.00	5539	104.00	685	146.00	224	239.00	90
64.00	603	105.00	134	147.00	555	247.00	56
65.00	341	106.00	310	148.00	574	252.00	59
66.00	59	107.00	193	149.00	124	269.00	65
67.00	96	110.00	163	151.00	79	282.00	13
68.00	15366	112.00	162	152.00	57	283.00	292
69.00	15401	113.00	189	153.00	187	292.00	66
70.00	1053	114.00	55	154.00	57	334.00	157
71.00	11	115.00	96	155.00	418	335.00	69
72.00	887	116.00	469	156.00	119	341.00	61
73.00	6785	117.00	817	157.00	246	344.00	60
74.00	25600	118.00	493	159.00	160	408.00	158
75.00	74912	119.00	675	161.00	106	430.00	61
76.00	6855	120.00	54	164.00	150	455.00	62
77.00	812	122.00	83	165.00	75	513.00	70
78.00	436	124.00	98	172.00	355	520.00	85
79.00	3854	125.00	50	173.00	283	541.00	54

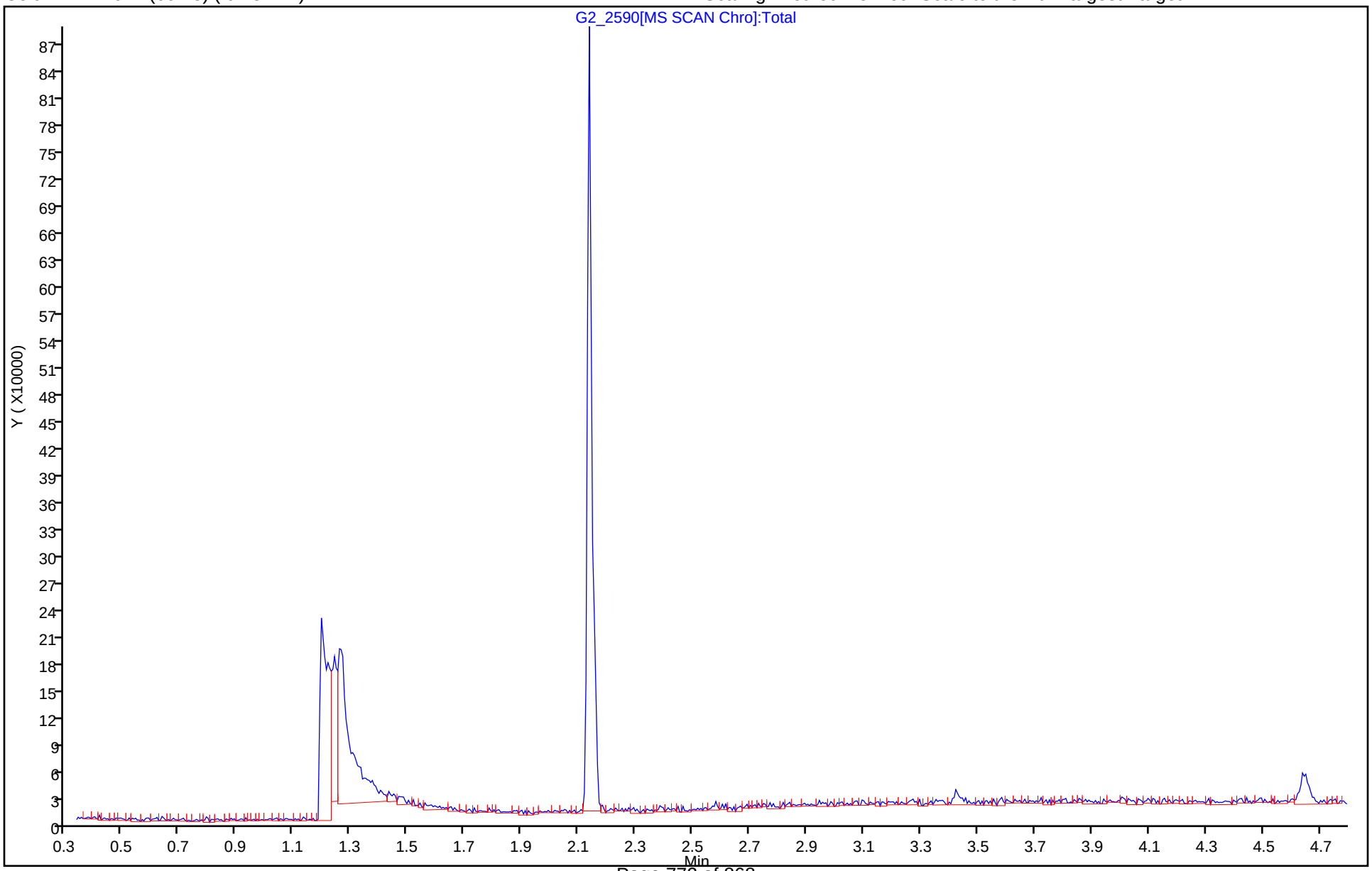
Report Date: 04-May-2018 01:49:23 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180503-69564.b\G2_2590.D

Injection Date:	03-May-2018 19:36:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2660.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	04-May-2018 19:36:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_G2		
Method:	\\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	07-May-2018 21:11:39	Calib Date:	03-May-2018 03:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK026				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.137	2.137	0.000	82	217518	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

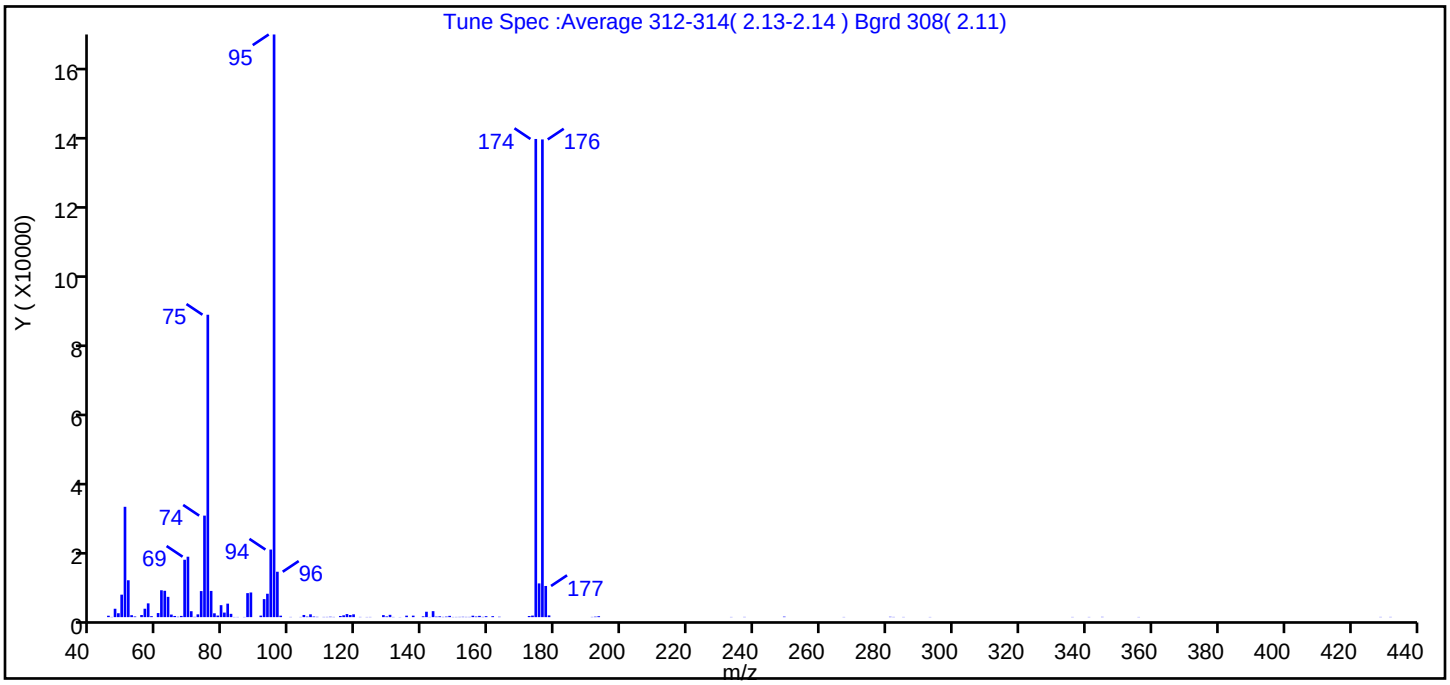
MV-BFB_00025 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2660.D
Injection Date: 04-May-2018 19:36:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	51.9
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.3 (0.3)
174	50 to 120% of m/z 95	82.1
175	5 to 9% of m/z 174	5.8 (7.1)
176	Greater than 95% but less than 101% of m/z 174	82.0 (99.9)
177	5 to 9% of m/z 176	5.3 (6.5)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2660.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 04-May-2018 19:36:30
Spectrum: Tune Spec :Average 312-314(2.13-2.14) Bgrd 308(2.11)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 120

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	392	77.00	1064	116.00	507	156.00	165
46.00	55	78.00	444	117.00	849	157.00	355
47.00	2330	79.00	3320	118.00	590	158.00	73
48.00	1085	80.00	1264	119.00	779	159.00	266
49.00	6237	81.00	3748	121.00	64	161.00	269
50.00	30616	82.00	918	123.00	52	163.00	109
51.00	10231	83.00	50	124.00	59	172.00	309
52.00	538	84.00	55	128.00	562	173.00	427
53.00	185	86.00	51	129.00	198	174.00	132672
55.00	583	87.00	6661	130.00	642	175.00	9362
56.00	2337	88.00	6844	131.00	56	176.00	132544
57.00	3825	91.00	422	133.00	43	177.00	8648
58.00	267	92.00	5003	135.00	413	178.00	480
60.00	1133	93.00	6493	137.00	416	191.00	66
61.00	7459	94.00	18752	140.00	212	192.00	134
62.00	7312	95.00	161664	141.00	1502	193.00	257
63.00	5629	96.00	12597	142.00	55	233.00	55
64.00	716	97.00	407	143.00	1661	237.00	65
65.00	329	100.00	60	144.00	140	249.00	139
66.00	108	103.00	58	145.00	222	267.00	54
67.00	341	104.00	602	146.00	74	281.00	101
68.00	15927	105.00	149	147.00	148	282.00	61
69.00	16768	106.00	781	148.00	357	285.00	56
70.00	1647	107.00	163	149.00	55	293.00	52
71.00	81	108.00	87	150.00	63	336.00	56
72.00	775	110.00	64	151.00	75	341.00	56
73.00	7234	111.00	68	152.00	99	345.00	78
74.00	28168	112.00	112	153.00	73	356.00	51
75.00	83904	113.00	64	154.00	71	429.00	61
76.00	7273	115.00	322	155.00	395	432.00	62

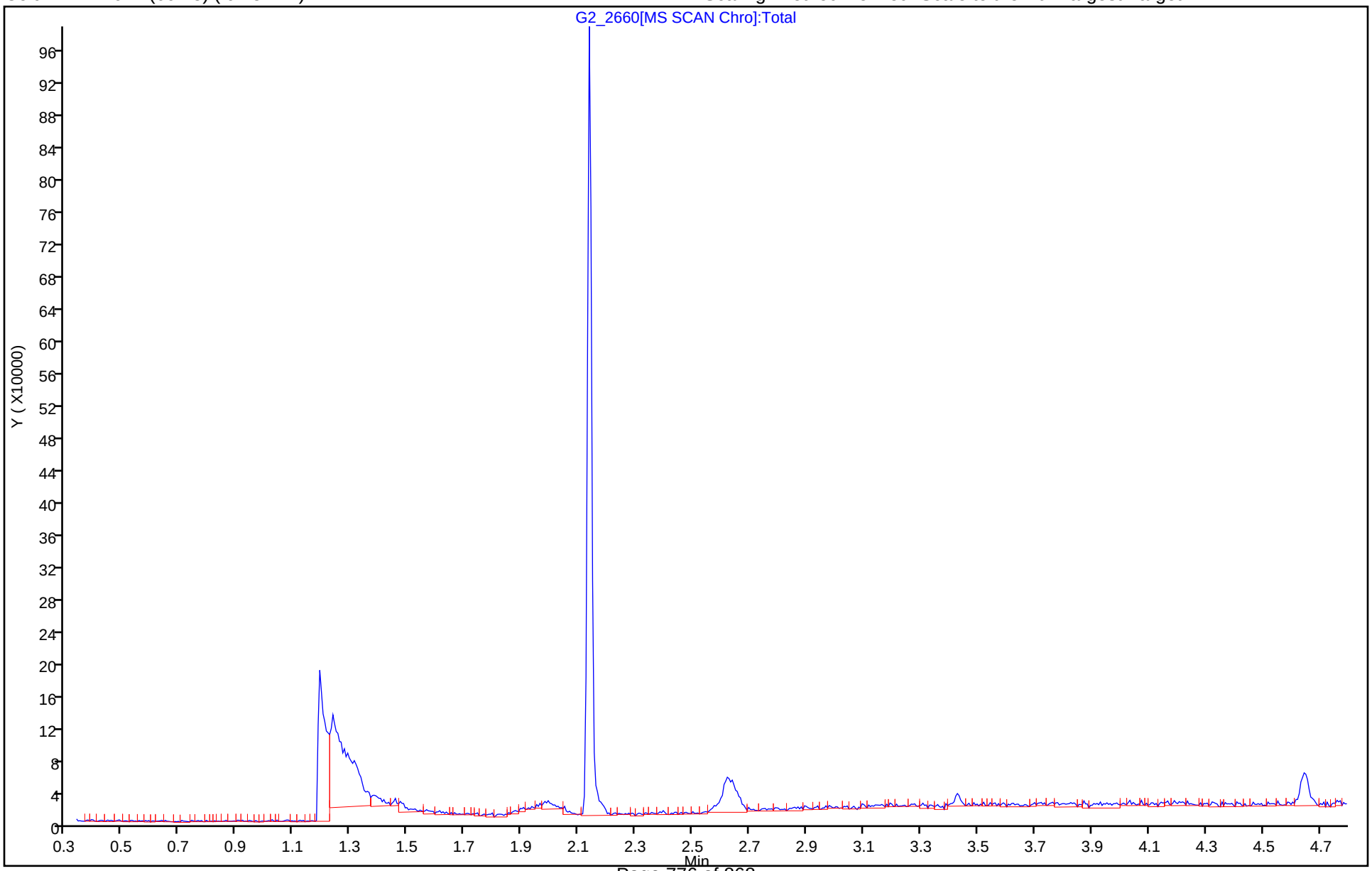
Report Date: 07-May-2018 21:11:40 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2660.D

Injection Date:	04-May-2018 19:36:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-413691/8

Matrix: Water | Lab File ID: G7523.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 20:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-413691/8

Matrix: Water | Lab File ID: G7523.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/03/2018 20:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.355	J	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-413691/8

Matrix: Water Lab File ID: G7523.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 05/03/2018 20:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 413691 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		81-118
460-00-4	4-Bromofluorobenzene (Surr)	109		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7523.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-May-2018 20:28:30 ALS Bottle#: 15 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 20:49:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 149 1,4-Dioxane-d8	96		4.687					ND	
* 150 TBA-d9 (IS)	65	4.845	4.834	0.011	0	128633	250.0	250.0	
* 1 Fluorobenzene	96	6.862	6.861	0.001	98	1113225	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.558	9.548	0.010	90	216435	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.625	11.614	0.011	97	243455	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.282	6.281	0.001	92	320279	10.0	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.587	6.586	0.001	0	224865	10.0	11.5	
$ 7 Toluene-d8 (Surr)	98	8.210	8.209	0.001	95	1023564	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.621	10.620	0.001	86	293083	10.0	10.9	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		3.930					ND	
25 Dichlorodifluoromethane	85		3.191					ND	
27 Chloromethane	50		3.407					ND	
28 Vinyl chloride	62		3.526					ND	
30 Ethylene oxide	43		3.794					ND	
31 Bromomethane	94		3.870					ND	
32 Chloroethane	64		3.929					ND	
24 Chlorotrifluoroethene	116		3.956					ND	
33 Dichlorofluoromethane	67		4.077					ND	
34 Ethanol	45		4.168					ND	
26 1,2-Dichloro-1,1,2,2-tetra	85		4.173					ND	
35 Trichlorofluoromethane	101		4.175					ND	
38 Ethyl ether	59		4.323					ND	
39 Propene oxide	58		4.404					ND	
29 2-Chloro-1,1,1-Trifluoroet	118		4.429					ND	
41 Acrolein	56		4.450					ND	
42 Acetone	43		4.549					ND	
44 1,1,2-Trichloro-1,2,2-trif	151		4.578					ND	
43 Isopropyl alcohol	45		4.582					ND	U
45 1,1-Dichloroethene	96		4.588					ND	
47 Iodomethane	142		4.756					ND	
46 Acetonitrile	41		4.778					ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Methyl acetate	43		4.795					ND	
49 3-Chloro-1-propene	41		4.844					ND	
50 Carbon disulfide	76		4.844					ND	
51 2-Methyl-2-propanol	59		4.903					ND	
52 Methylene Chloride	84	4.943	4.933	0.010	96	11928		0.3554	
53 Acrylonitrile	53		5.090					ND	
54 Methyl tert-butyl ether	73		5.129					ND	
55 trans-1,2-Dichloroethene	96		5.159					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.267					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.297					ND	
56 Hexane	57		5.356					ND	
57 Vinyl acetate	43		5.444					ND	
58 Isopropyl ether	87		5.457					ND	
59 1,1-Dichloroethane	63		5.484					ND	
60 2-Chloro-1,3-butadiene	53		5.556					ND	
61 Tert-butyl ethyl ether	59		5.752					ND	
62 2-Butanone (MEK)	43		5.887					ND	
63 Ethyl acetate	43		5.890					ND	U
64 Propionitrile	54		5.930					ND	
66 cis-1,2-Dichloroethene	96		5.936					ND	
65 sec-Butyl Alcohol	45		5.946					ND	
67 2,2-Dichloropropane	77		5.966					ND	
68 Methacrylonitrile	41		6.067					ND	
69 Chlorobromomethane	128		6.133					ND	
70 Chloroform	83		6.153					ND	
71 Tetrahydrofuran	42		6.172					ND	
73 1,1,1-Trichloroethane	97		6.379					ND	
72 Isobutyl alcohol	41		6.389					ND	U
74 Cyclohexane	56		6.458					ND	
75 1,1-Dichloropropene	75		6.497					ND	
76 Carbon tetrachloride	117		6.527					ND	
77 1,2-Dichloroethane	62		6.645					ND	
79 Benzene	78		6.674					ND	
78 Tert-amyl methyl ether	73		6.687					ND	
89 2-Nitropropane	41		6.697					ND	
13 n-Heptane	43		6.802					ND	
80 n-Butanol	56		6.923					ND	U
81 Trichloroethene	95		7.176					ND	
82 2-Pentanone	43		7.235					ND	
83 Methyl methacrylate	100		7.346					ND	
84 1,2-Dichloropropane	63		7.363					ND	
85 Methylcyclohexane	55		7.393					ND	
86 1,4-Dioxane	88		7.432					ND	
87 Dibromomethane	93		7.471					ND	
88 Dichlorobromomethane	83		7.560					ND	
90 2-Chloroethyl vinyl ether	63		7.757					ND	
91 cis-1,3-Dichloropropene	75		7.944					ND	
92 4-Methyl-2-pentanone (MIBK	43		8.022					ND	
93 Toluene	91		8.278					ND	
95 trans-1,3-Dichloropropene	75		8.406					ND	
94 Ethyl methacrylate	69		8.416					ND	
96 1,1,2-Trichloroethane	97		8.583					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
98 1,3-Dichloropropane	76		8.760					ND	
97 2-Hexanone	43		8.760					ND	
99 Tetrachloroethene	164		8.800					ND	
100 Chlorodibromomethane	129		8.987					ND	
101 Tetrahydrothiophene	60		9.039					ND	
102 Ethylene Dibromide	107		9.144					ND	
103 1-Chlorohexane	91		9.479					ND	
104 Chlorobenzene	112		9.587					ND	
105 1,1,1,2-Tetrachloroethane	131		9.636					ND	
106 Ethylbenzene	106		9.646					ND	
107 m-Xylene & p-Xylene	106		9.754					ND	
108 o-Xylene	106		10.148					ND	
109 Styrene	104		10.148					ND	
110 Bromoform	173		10.354					ND	
111 Isopropylbenzene	105		10.472					ND	
112 cis-1,4-Dichloro-2-butene	53		10.485					ND	
113 Cyclohexanone	55		10.581					ND	
114 1,1,2,2-Tetrachloroethane	83		10.689					ND	
115 trans-1,4-Dichloro-2-buten	53		10.738					ND	
116 1,2,3-Trichloropropane	110		10.758					ND	
117 Bromobenzene	156		10.787					ND	
118 N-Propylbenzene	120		10.827					ND	
120 2-Chlorotoluene	126		10.935					ND	
119 1,3,5-Trimethylbenzene	105		10.955					ND	
121 4-Chlorotoluene	126		11.014					ND	
122 tert-Butylbenzene	119		11.250					ND	
123 1,2,4-Trimethylbenzene	105		11.279					ND	
124 sec-Butylbenzene	134		11.437					ND	
125 4-Isopropyltoluene	119		11.545					ND	
126 1,3-Dichlorobenzene	146		11.574					ND	
127 1,4-Dichlorobenzene	146		11.643					ND	
128 1,2,3-Trimethylbenzene	105		11.666					ND	
129 n-Butylbenzene	91		11.909					ND	
130 1,2-Dichlorobenzene	146		11.988					ND	
131 1,2-Dibromo-3-Chloropropan	157		12.696					ND	
11 1,3,5-Trichlorobenzene	180		12.926					ND	
132 1,2,4-Trichlorobenzene	180		13.592					ND	
133 Hexachlorobutadiene	225		13.759					ND	
134 Naphthalene	128		13.897					ND	
135 1,2,3-Trichlorobenzene	180		14.192					ND	
160 Cyclohexane TIC	1		0.000					ND	
158 1-Chlorohexane TIC	1		0.000					ND	
159 Methyl cyclohexane TIC	1		0.000					ND	
19 2,4-Dimethylpentane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
10 2,2-Dimethylpentane	1		0.000					ND	
21 2-Methylhexane	1		0.000					ND	
9 2,2,3-Trimethylbutane	1		0.000					ND	
12 n-Nonyl Aldehyde	1		0.000					ND	
161 1-Chloro-1-fluoroethane TI	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
17 Dimethyl disulfide	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
16 3-Methylhexane	1		0.000				ND		
14 2,3-Dimethylpentane	1		0.000				ND		
15 3-Ethylpentane	1		0.000				ND		
S 142 1,2-Dichloroethene, Total	96		2.000				ND		
S 140 1,2-Dichloroethene, Total	1		0.000				ND		
S 156 TAH	1				0			0	
S 138 Total BTEX	1		0.000				ND		
S 137 Xylenes, Total (URS)	1		0.000				ND		
S 141 Xylenes, Total	106		0.000				ND		
S 136 Trihalomethanes, Total	1		0.000				ND		
S 139 1,3-Dichloropropene, Total	1		0.000				ND		
T 154 4-Ethyltoluene TIC	105		0.000				ND		
T 153 Dicyclopentadiene TIC	66		0.000				ND		
T 155 1,3-Butadiene TIC	39		0.000				ND		
T 152 Propene TIC	41		0.000				ND		
T 20 2-Butoxyethanol TIC	1		0.000				ND		
T 23 2,3-dichloro-1-propene TIC	75		0.000				ND		
T 40 Propene oxide TIC	58		0.000				ND		
T 22 Dichloroacetonitrile TIC	74		0.000				ND		
T 157 n-Nonane TIC	1		0.000				ND		

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

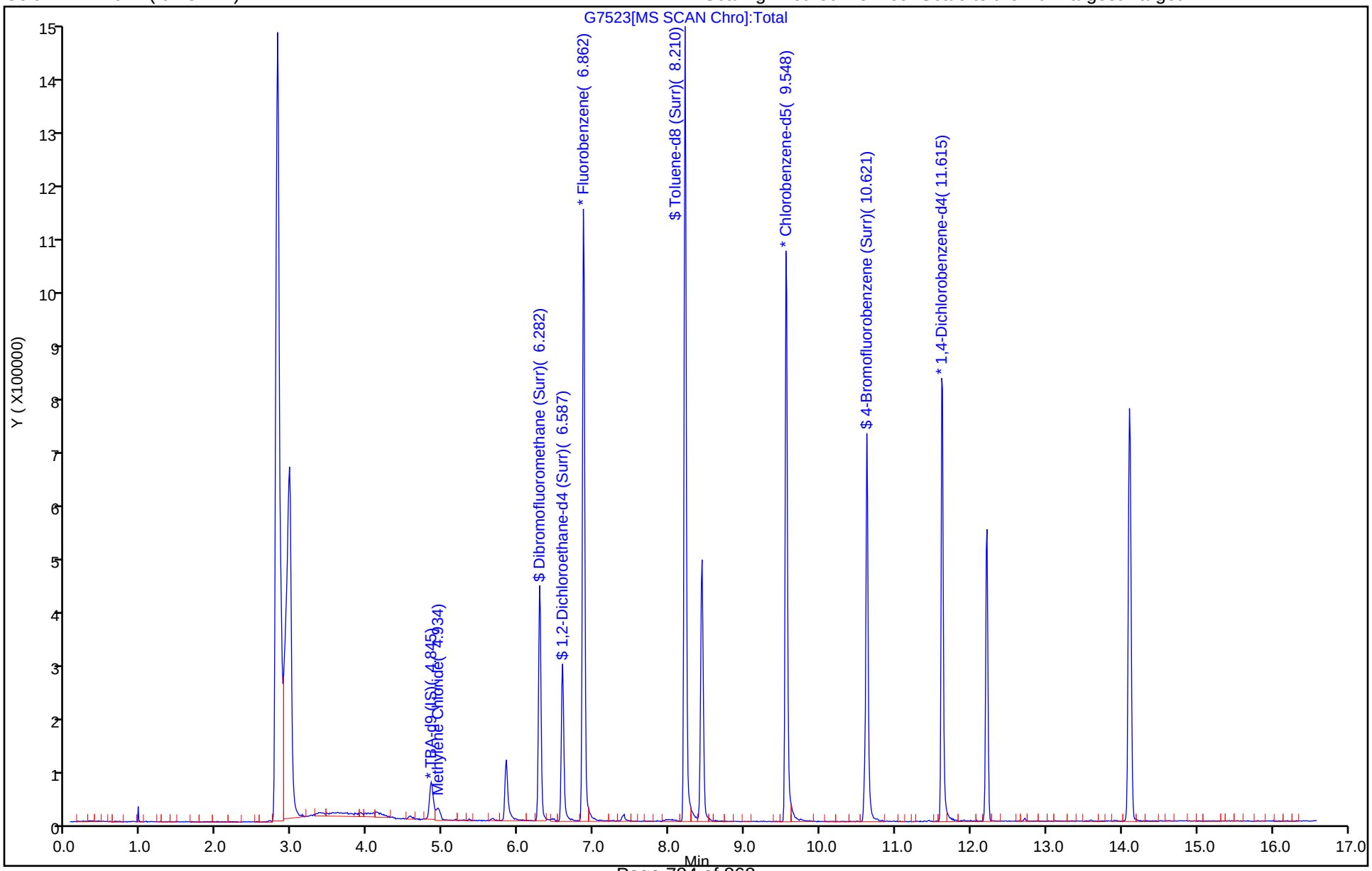
Report Date: 04-May-2018 19:02:14 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7523.D

Injection Date:	03-May-2018 20:28:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	MB			Worklist Smp#:	8
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7523.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-May-2018 20:28:30 ALS Bottle#: 15 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 03-May-2018 20:49:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.3	102.72
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.5	115.09
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.37
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.9	108.94

Report Date: 04-May-2018 19:02:14 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7523.D

Injection Date: 03-May-2018 20:28:30 Instrument ID: VMS_G

Lims ID: MB

Client ID:

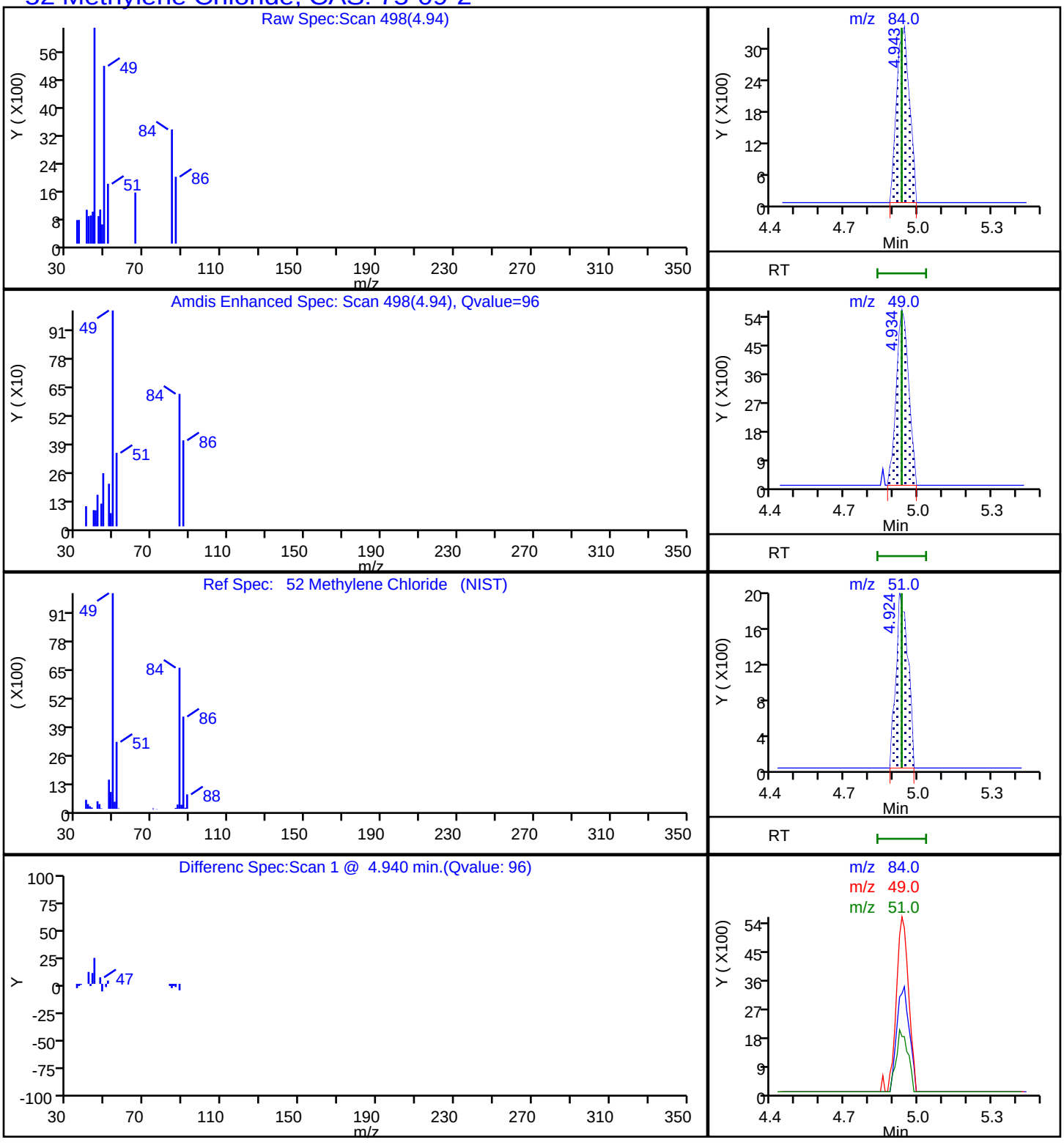
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 8

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (0.25 mm) Detector MS SCAN

52 Methylene Chloride, CAS: 75-09-2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-413840/6

Matrix: Water | Lab File ID: G2_2665.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 21:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413840 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	97		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2665.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 04-May-2018 21:20:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 06-May-2018 10:57:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.772	3.785	-0.013	0	211701	250.0	250.0	
* 2 Fluorobenzene	96	7.372	7.372	0.000	98	1456789	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.547	10.546	0.001	87	332695	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	503870	12.5	12.5	
* 5 1,4-Dioxane-d8	96		0.000					ND	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	287790	10.0	9.69	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	284487	10.0	9.65	
$ 8 Toluene-d8 (Surr)	98	9.117	9.109	0.007	93	1306956	10.0	10.2	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	88	427129	10.0	9.66	
$ 10 Trifluorotoluene (Surr)	1		0.000					ND	
$ 11 BFB	95		2.137					ND	
12 Dichlorodifluoromethane	85		1.593					ND	
34 Chlorotrifluoroethene	116		1.677					ND	
14 Chloromethane	50		1.704					ND	
15 Vinyl chloride	62		1.830					ND	
36 1,2-Dichloro-1,1,2,2-tetra	85		1.830					ND	
16 Ethylene oxide	43		2.110					ND	
38 2-Chloro-1,1,1-Trifluoroet	118		2.110					ND	
17 Bromomethane	94		2.137					ND	
18 Chloroethane	64		2.249					ND	
19 Dichlorofluoromethane	67		2.473					ND	
20 Trichlorofluoromethane	101		2.501					ND	
21 Ethanol	45		2.710					ND	
22 Ethyl ether	59		2.794					ND	
23 Propene oxide	58		2.836					ND	
24 Acrolein	56		2.961					ND	
25 1,1-Dichloroethene	96		3.059					ND	
26 1,1,2-Trichloro-1,2,2-trif	151		3.101					ND	
27 Acetone	43		3.129					ND	
43 1,2-Dichloro-1,1,2-trifluo	117		3.129					ND	
44 1,1,1-Trifluoro-2,2-dichlo	83		3.213					ND	
28 Iodomethane	142		3.241					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
30 Carbon disulfide	76		3.311					ND	
29 Isopropyl alcohol	45		3.325					ND	
31 Acetonitrile	41		3.492					ND	
32 Methyl acetate	43		3.520					ND	
33 3-Chloro-1-propene	41		3.520					ND	
35 Methylene Chloride	84		3.702					ND	
37 2-Methyl-2-propanol	59		3.897					ND	
39 Acrylonitrile	53		4.065					ND	
40 trans-1,2-Dichloroethene	96		4.093					ND	
41 Methyl tert-butyl ether	73		4.107					ND	
42 Hexane	57		4.540					ND	
45 1,1-Dichloroethane	63		4.819					ND	
46 Vinyl acetate	43		4.875					ND	
47 Isopropyl ether	87		4.931					ND	
48 2-Chloro-1,3-butadiene	53		4.945					ND	
49 Tert-butyl ethyl ether	59		5.559					ND	
50 2,2-Dichloropropane	77		5.797					ND	
51 cis-1,2-Dichloroethene	96		5.797					ND	
52 2-Butanone (MEK)	43		5.825					ND	
53 Ethyl acetate	43		5.908					ND	
54 Propionitrile	54		5.908					ND	
58 Methacrylonitrile	41		6.128					ND	
56 Chlorobromomethane	128		6.163					ND	
57 Tetrahydrofuran	42		6.178					ND	
55 sec-Butyl Alcohol	45		6.185					ND	
59 Chloroform	83		6.328					ND	
60 1,1,1-Trichloroethane	97		6.521					ND	
61 Cyclohexane	56		6.592					ND	
62 Carbon tetrachloride	117		6.714					ND	
63 1,1-Dichloropropene	75		6.735					ND	
64 Benzene	78		6.979					ND	
65 1,2-Dichloroethane	62		7.071					ND	
68 Tert-amyl methyl ether	73		7.186					ND	
66 Isobutyl alcohol	41		7.393					ND	
67 n-Heptane	43		7.393					ND	
73 n-Butanol	56		7.787					ND	
69 Trichloroethene	95		7.794					ND	
70 2-Pentanone	43		8.022					ND	
71 Methylcyclohexane	55		8.044					ND	
72 1,2-Dichloropropane	63		8.087					ND	
75 Dibromomethane	93		8.180					ND	
74 1,4-Dioxane	88		8.187					ND	
77 Methyl methacrylate	100		8.194					ND	
76 Dichlorobromomethane	83		8.387					ND	
80 2-Nitropropane	41		8.630					ND	
78 2-Chloroethyl vinyl ether	63		8.716					ND	
79 cis-1,3-Dichloropropene	75		8.852					ND	
81 4-Methyl-2-pentanone (MIBK	43		9.023					ND	U
82 Toluene	91		9.181					ND	
83 trans-1,3-Dichloropropene	75		9.438					ND	
84 Ethyl methacrylate	69		9.510					ND	
85 1,1,2-Trichloroethane	97		9.631					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 Tetrachloroethene	164		9.696					ND	
87 1,3-Dichloropropane	76		9.781					ND	
88 2-Hexanone	43		9.853					ND	
13 Tetrahydrothiophene	60		9.953					ND	
89 Chlorodibromomethane	129		9.989					ND	
90 Ethylene Dibromide	107		10.096					ND	
91 1-Chlorohexane	91		10.561					ND	
92 Chlorobenzene	112		10.568					ND	
93 1,1,1,2-Tetrachloroethane	131		10.661					ND	
94 Ethylbenzene	106		10.668					ND	
95 m-Xylene & p-Xylene	106		10.790					ND	
96 o-Xylene	106		11.154					ND	
97 Styrene	104		11.169					ND	
98 Bromoform	173		11.340					ND	
99 Isopropylbenzene	105		11.497					ND	
101 cis-1,4-Dichloro-2-butene	53		11.562					ND	
100 Cyclohexanone	55		11.583					ND	
103 Bromobenzene	156		11.783					ND	
102 1,1,2,2-Tetrachloroethane	83		11.791					ND	
105 trans-1,4-Dichloro-2-buten	53		11.819					ND	
104 1,2,3-Trichloropropane	110		11.841					ND	
106 N-Propylbenzene	120		11.884					ND	
107 2-Chlorotoluene	126		11.962					ND	
108 1,3,5-Trimethylbenzene	105		12.048					ND	
109 4-Chlorotoluene	126		12.077					ND	
110 tert-Butylbenzene	119		12.320					ND	
111 1,2,4-Trimethylbenzene	105		12.370					ND	
112 sec-Butylbenzene	134		12.498					ND	
113 1,3-Dichlorobenzene	146		12.591					ND	
114 4-Isopropyltoluene	119		12.613					ND	
115 1,4-Dichlorobenzene	146		12.670					ND	
116 1,2,3-Trimethylbenzene	105		12.684					ND	
117 n-Butylbenzene	91		12.906					ND	
118 1,2-Dichlorobenzene	146		12.920					ND	
119 1,2-Dibromo-3-Chloropropan	157		13.421					ND	
120 1,3,5-Trichlorobenzene	180		13.535					ND	
121 1,2,4-Trichlorobenzene	180		13.936					ND	
122 Hexachlorobutadiene	225		14.021					ND	
123 Naphthalene	128		14.114					ND	
124 1,2,3-Trichlorobenzene	180		14.265					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
129 Dimethyl disulfide	1		0.000					ND	
126 2,2-Dimethylpentane	1		0.000					ND	
128 3-Ethylpentane	1		0.000					ND	
125 1-Chlorohexane TIC	1		0.000					ND	
133 2,3-Dimethylpentane	1		0.000					ND	
131 2-Methylhexane	1		0.000					ND	
136 2,4-Dimethylpentane	1		0.000					ND	
135 3,3-Dimethylpentane	1		0.000					ND	
132 Pentachloroethane	167		0.000					ND	
130 2,2,3-Trimethylbutane	1		0.000					ND	
134 3-Methylhexane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 137 1,2-Dichloroethene, Total	96		2.000					ND	
S 138 Xylenes, Total (URS)	1		0.000					ND	
S 142 Trihalomethanes, Total	1		0.000					ND	
S 141 TAH	1				0			0	
S 143 Xylenes, Total	106		0.000					ND	
S 144 1,2-Dichloroethene, Total	1		0.000					ND	
S 139 Total BTEX	1		0.000					ND	
S 140 1,3-Dichloropropene, Total	1		0.000					ND	
T 151 Propene oxide TIC	58		0.000					ND	
T 150 4-Ethyltoluene TIC	105		0.000					ND	
T 152 Methyl cyclohexane TIC	1		0.000					ND	
T 154 2-Butoxyethanol TIC	1		0.000					ND	
T 149 Dicyclopentadiene TIC	66		0.000					ND	
T 146 n-Nonane TIC	1		0.000					ND	
T 145 Propene TIC	41		0.000					ND	
T 147 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 148 1,3-Butadiene TIC	39		0.000					ND	
T 153 Cyclohexane TIC	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

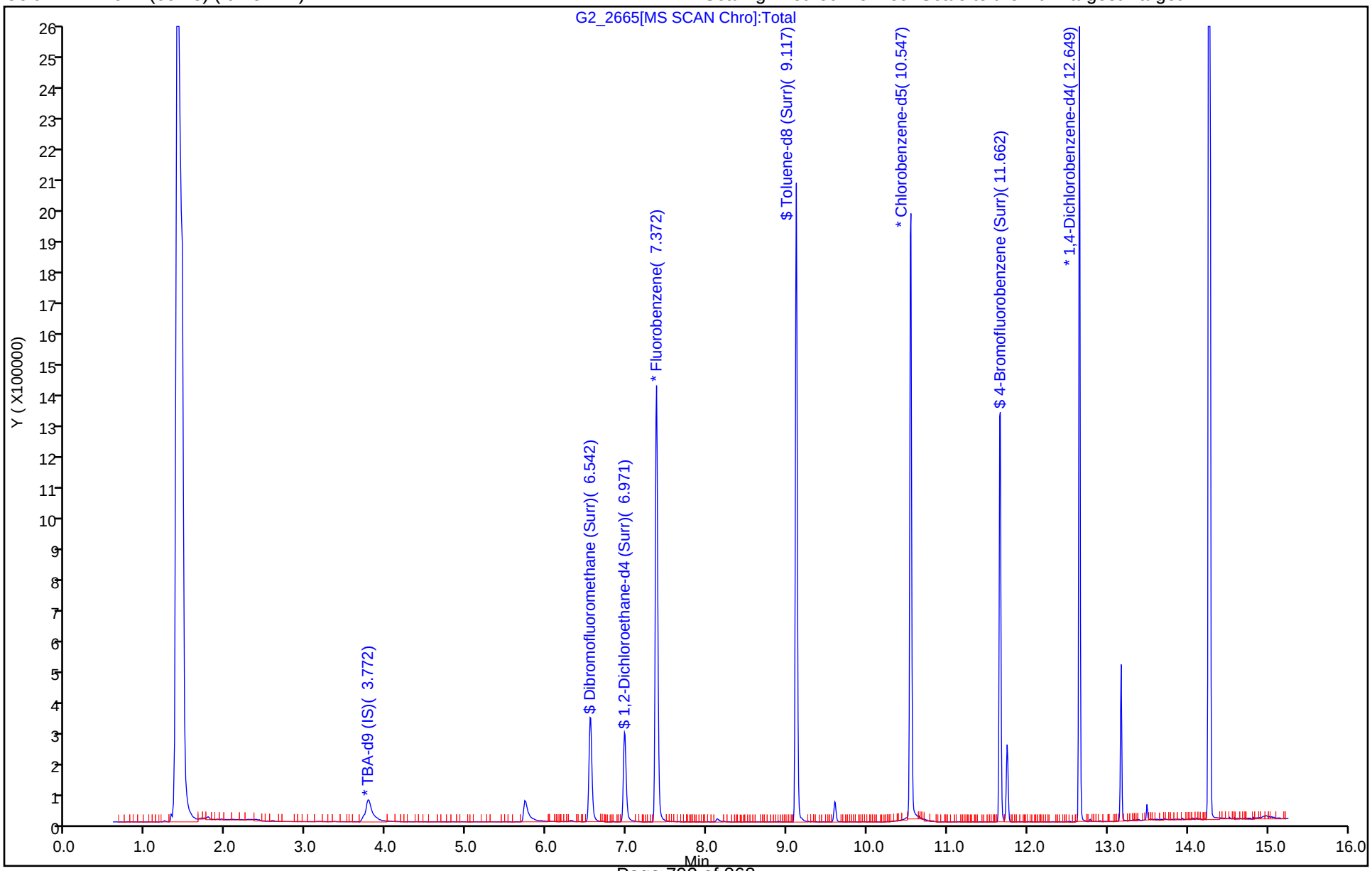
Report Date: 07-May-2018 21:11:51 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2665.D

Injection Date:	04-May-2018 21:20:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2665.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 04-May-2018 21:20:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 06-May-2018 10:57:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.69	96.89
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.65	96.54
$ 8 Toluene-d8 (Surr)	10.0	10.2	101.53
$ 9 4-Bromofluorobenzene (Surr)	10.0	9.66	96.57

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-413691/6

Matrix: Water | Lab File ID: G7536.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 00:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.28		1.0	0.80	0.17
71-55-6	1,1,1-Trichloroethane	5.40		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.98		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	5.02		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	5.52		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	5.08		1.0	0.80	0.14
563-58-6	1,1-Dichloropropene	5.54		1.0	0.40	0.15
87-61-6	1,2,3-Trichlorobenzene	4.28		1.0	0.80	0.18
96-18-4	1,2,3-Trichloropropane	5.11		3.0	0.80	0.77
120-82-1	1,2,4-Trichlorobenzene	4.08		1.0	0.80	0.32
95-63-6	1,2,4-Trimethylbenzene	5.13		1.0	0.40	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	4.03	J	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.06		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.72		1.0	0.40	0.13
107-06-2	1,2-Dichloroethane	5.51		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.2		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	5.44		1.0	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	5.15		1.0	0.40	0.14
541-73-1	1,3-Dichlorobenzene	4.66		1.0	0.40	0.16
142-28-9	1,3-Dichloropropane	5.46		1.0	0.80	0.15
106-46-7	1,4-Dichlorobenzene	4.64		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	5.40		1.0	0.40	0.20
78-93-3	2-Butanone (MEK)	19.1		6.0	4.0	1.8
95-49-8	2-Chlorotoluene	4.87		1.0	0.40	0.17
591-78-6	2-Hexanone	20.0		5.0	4.0	1.4
106-43-4	4-Chlorotoluene	4.75		1.0	0.80	0.17
99-87-6	4-Isopropyltoluene	4.91		1.0	0.40	0.17
108-10-1	4-Methyl-2-pentanone (MIBK)	18.7		5.0	3.2	1.0
67-64-1	Acetone	19.8		10	6.4	1.9
71-43-2	Benzene	5.17		1.0	0.40	0.16
108-86-1	Bromobenzene	4.69		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.79		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.31		1.0	0.40	0.17
75-25-2	Bromoform	4.70		1.0	0.40	0.19
74-83-9	Bromomethane	4.89		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.21		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-413691/6

Matrix: Water | Lab File ID: G7536.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 00:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	5.17		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.07		1.0	0.40	0.17
75-00-3	Chloroethane	4.82		2.0	1.6	0.41
67-66-3	Chloroform	5.51		1.0	0.40	0.16
74-87-3	Chloromethane	5.24		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.01		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.43		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.86		1.0	0.40	0.17
74-95-3	Dibromomethane	5.11		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	5.28		2.0	0.80	0.31
100-41-4	Ethylbenzene	5.11		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.06		1.0	0.80	0.36
98-82-8	Isopropylbenzene	5.10		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.10		2.0	0.80	0.34
74-88-4	Methyl iodide	4.81		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	5.61		5.0	0.80	0.25
75-09-2	Methylene Chloride	5.53		5.0	0.80	0.32
91-20-3	Naphthalene	3.69		1.0	0.80	0.22
104-51-8	n-Butylbenzene	5.15		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.99		1.0	0.40	0.16
95-47-6	o-Xylene	5.34		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.87		1.0	0.40	0.17
100-42-5	Styrene	4.92		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.90		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.84		1.0	0.40	0.20
108-88-3	Toluene	5.04		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.21		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.57		1.0	0.40	0.19
79-01-6	Trichloroethene	5.20		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.81		2.0	0.80	0.29
108-05-4	Vinyl acetate	10.8		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.01		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.4		2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-413691/6

Matrix: Water Lab File ID: G7536.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 05/04/2018 00:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 413691 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7536.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 00:50:30 ALS Bottle#: 28 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:23:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.845	4.834	0.011	0	132213	250.0	250.0	
* 1 Fluorobenzene	96	6.862	6.861	0.001	98	1200610	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.548	9.548	0.000	96	228569	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.614	11.614	0.000	97	294828	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.281	6.281	0.000	91	330678	10.0	9.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.586	6.586	0.000	0	242966	10.0	11.5	
$ 7 Toluene-d8 (Surr)	98	8.210	8.209	0.001	95	1075450	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.620	10.620	0.000	85	313620	10.0	9.63	
25 Dichlorodifluoromethane	85	3.201	3.191	0.010	99	250518	5.00	5.28	
27 Chloromethane	50	3.418	3.407	0.011	100	238036	5.00	5.24	
28 Vinyl chloride	62	3.536	3.526	0.010	98	187480	5.00	5.01	
31 Bromomethane	94	3.870	3.870	0.000	90	129604	5.00	4.89	
32 Chloroethane	64	3.929	3.929	0.000	98	85894	5.00	4.82	
33 Dichlorofluoromethane	67	4.077	4.077	0.000	97	249788	5.00	4.87	
35 Trichlorofluoromethane	101	4.175	4.175	0.000	99	275755	5.00	4.81	
38 Ethyl ether	59	4.323	4.323	0.000	92	80501	5.00	5.55	
41 Acrolein	56	4.441	4.450	-0.009	98	77694	50.0	49.8	
42 Acetone	43	4.549	4.549	0.000	98	68052	20.0	19.8	
44 1,1,2-Trichloro-1,2,2-trif	151	4.579	4.578	0.001	96	142497	5.00	4.80	
45 1,1-Dichloroethene	96	4.599	4.588	0.011	94	209888	5.00	5.08	
47 Iodomethane	142	4.766	4.756	0.010	98	336896	5.00	4.81	
48 Methyl acetate	43	4.795	4.795	0.000	100	271041	25.0	30.3	
49 3-Chloro-1-propene	41	4.835	4.844	-0.009	89	509642	5.00	6.03	
50 Carbon disulfide	76	4.845	4.844	0.001	99	1008327	5.00	5.21	
51 2-Methyl-2-propanol	59	4.904	4.903	0.001	92	36928	50.0	46.1	
52 Methylene Chloride	84	4.933	4.933	0.000	97	200132	5.00	5.53	
53 Acrylonitrile	53	5.081	5.090	-0.009	98	211920	50.0	53.0	
54 Methyl tert-butyl ether	73	5.130	5.129	0.001	97	198447	5.00	5.61	
55 trans-1,2-Dichloroethene	96	5.159	5.159	0.000	95	225191	5.00	5.21	
56 Hexane	57	5.346	5.356	-0.010	92	389233	5.00	5.64	
57 Vinyl acetate	43	5.435	5.444	-0.009	96	325817	10.0	10.8	
59 1,1-Dichloroethane	63	5.484	5.484	0.000	97	408757	5.00	5.52	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 2-Butanone (MEK)	43	5.878	5.887	-0.009	96	84312	20.0	19.1	
66 cis-1,2-Dichloroethene	96	5.927	5.936	-0.009	88	203586	5.00	5.01	
65 sec-Butyl Alcohol	45	5.947	5.946	0.001	95	99242	150.0	136.8	
67 2,2-Dichloropropane	77	5.966	5.966	0.000	92	291575	5.00	5.40	
69 Chlorobromomethane	128	6.134	6.133	0.001	86	60510	5.00	4.79	
70 Chloroform	83	6.153	6.153	0.000	98	337402	5.00	5.51	
71 Tetrahydrofuran	42	6.173	6.172	0.001	95	33119	10.0	11.3	
73 1,1,1-Trichloroethane	97	6.380	6.379	0.001	96	290427	5.00	5.40	
72 Isobutyl alcohol	41	6.389	6.389	0.000	92	33201	125.0	134.8	M
74 Cyclohexane	56	6.458	6.458	0.000	98	430750	5.00	5.45	
75 1,1-Dichloropropene	75	6.488	6.497	-0.009	93	313667	5.00	5.54	
76 Carbon tetrachloride	117	6.527	6.527	0.000	96	244628	5.00	5.17	
77 1,2-Dichloroethane	62	6.645	6.645	0.000	96	151526	5.00	5.51	
79 Benzene	78	6.675	6.674	0.001	97	739925	5.00	5.17	
13 n-Heptane	43	6.793	6.802	-0.009	96	564238	5.00	6.32	
81 Trichloroethene	95	7.177	7.176	0.001	92	206352	5.00	5.20	
82 2-Pentanone	43	7.226	7.235	-0.009	97	134993	20.0	21.9	
84 1,2-Dichloropropane	63	7.363	7.363	0.000	92	185483	5.00	5.44	
85 Methylcyclohexane	55	7.383	7.393	-0.010	96	341978	5.00	5.37	
86 1,4-Dioxane	88	7.432	7.432	0.000	93	7426	100.0	91.0	
87 Dibromomethane	93	7.472	7.471	0.001	88	67655	5.00	5.11	
88 Dichlorobromomethane	83	7.560	7.560	0.000	97	186389	5.00	5.31	
90 2-Chloroethyl vinyl ether	63	7.747	7.757	-0.010	89	12829	5.00	4.39	
91 cis-1,3-Dichloropropene	75	7.934	7.944	-0.010	90	187595	5.00	5.43	
92 4-Methyl-2-pentanone (MIBK	43	8.023	8.022	0.001	96	175861	20.0	18.7	
93 Toluene	91	8.269	8.278	-0.009	97	692715	5.00	5.04	
95 trans-1,3-Dichloropropene	75	8.397	8.406	-0.009	96	141918	5.00	5.57	
94 Ethyl methacrylate	69	8.416	8.416	0.000	94	56235	5.00	4.71	
96 1,1,2-Trichloroethane	97	8.584	8.583	0.001	91	72893	5.00	5.02	
98 1,3-Dichloropropane	76	8.751	8.760	-0.009	97	130673	5.00	5.46	
97 2-Hexanone	43	8.761	8.760	0.001	95	101946	20.0	20.0	
99 Tetrachloroethene	164	8.790	8.800	-0.010	95	139802	5.00	4.84	
100 Chlorodibromomethane	129	8.987	8.987	0.000	89	82123	5.00	4.86	
102 Ethylene Dibromide	107	9.135	9.144	-0.009	98	66394	5.00	5.06	
103 1-Chlorohexane	91	9.469	9.479	-0.010	91	252557	5.00	5.42	
104 Chlorobenzene	112	9.577	9.587	-0.010	91	372106	5.00	5.07	
105 1,1,1,2-Tetrachloroethane	131	9.627	9.636	-0.009	96	110397	5.00	5.28	
106 Ethylbenzene	106	9.646	9.646	0.000	99	201947	5.00	5.11	
107 m-Xylene & p-Xylene	106	9.745	9.754	-0.009	0	244694	5.00	5.10	
108 o-Xylene	106	10.138	10.148	-0.010	90	223667	5.00	5.34	
109 Styrene	104	10.148	10.148	0.000	82	316671	5.00	4.92	
110 Bromoform	173	10.355	10.354	0.001	91	35856	5.00	4.70	
111 Isopropylbenzene	105	10.463	10.472	-0.009	97	632588	5.00	5.10	
113 Cyclohexanone	55	10.571	10.581	-0.010	94	43225	200.0	183.6	
114 1,1,2,2-Tetrachloroethane	83	10.679	10.689	-0.010	91	73140	5.00	4.98	
115 trans-1,4-Dichloro-2-buten	53	10.729	10.738	-0.009	76	12554	5.00	5.12	
116 1,2,3-Trichloropropane	110	10.748	10.758	-0.010	84	14397	5.00	5.11	
117 Bromobenzene	156	10.788	10.787	0.001	97	116041	5.00	4.69	
118 N-Propylbenzene	120	10.827	10.827	0.000	99	157248	5.00	4.99	
120 2-Chlorotoluene	126	10.925	10.935	-0.010	95	133105	5.00	4.87	
119 1,3,5-Trimethylbenzene	105	10.955	10.955	0.001	94	499092	5.00	5.15	
121 4-Chlorotoluene	126	11.014	11.014	0.000	98	127322	5.00	4.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
122 tert-Butylbenzene	119	11.250	11.250	0.000	94	443233	5.00	4.90	
123 1,2,4-Trimethylbenzene	105	11.280	11.279	0.001	99	470659	5.00	5.13	
124 sec-Butylbenzene	134	11.437	11.437	0.000	96	110769	5.00	4.87	
125 4-Isopropyltoluene	119	11.536	11.545	-0.009	97	484155	5.00	4.91	
126 1,3-Dichlorobenzene	146	11.565	11.574	-0.009	97	225873	5.00	4.66	
127 1,4-Dichlorobenzene	146	11.644	11.643	0.001	92	226198	5.00	4.64	
129 n-Butylbenzene	91	11.900	11.909	-0.009	99	540158	5.00	5.15	
130 1,2-Dichlorobenzene	146	11.988	11.988	0.000	96	177045	5.00	4.72	
131 1,2-Dibromo-3-Chloropropan	157	12.706	12.696	0.010	73	5730	5.00	4.03	
132 1,2,4-Trichlorobenzene	180	13.592	13.592	0.000	93	85970	5.00	4.08	
133 Hexachlorobutadiene	225	13.749	13.759	-0.010	93	72474	5.00	4.06	
134 Naphthalene	128	13.897	13.897	0.000	97	75398	5.00	3.69	
135 1,2,3-Trichlorobenzene	180	14.182	14.192	-0.010	93	72167	5.00	4.28	
S 142 1,2-Dichloroethene, Total	96				0		10.0	10.2	
S 140 1,2-Dichloroethene, Total	1				0		5.00	10.2	
S 137 Xylenes, Total (URS)	1				0		10.0	10.4	
S 141 Xylenes, Total	106				0		10.0	10.4	
S 136 Trihalomethanes, Total	1				0		20.0	20.4	
S 139 1,3-Dichloropropene, Total	1				0		10.0	11.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Main B_00020	Amount Added:	2.50	Units: uL	
MV-Gas/Ket B_00041	Amount Added:	2.50	Units: uL	
MV-SS 2-Cleve_00043	Amount Added:	2.50	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

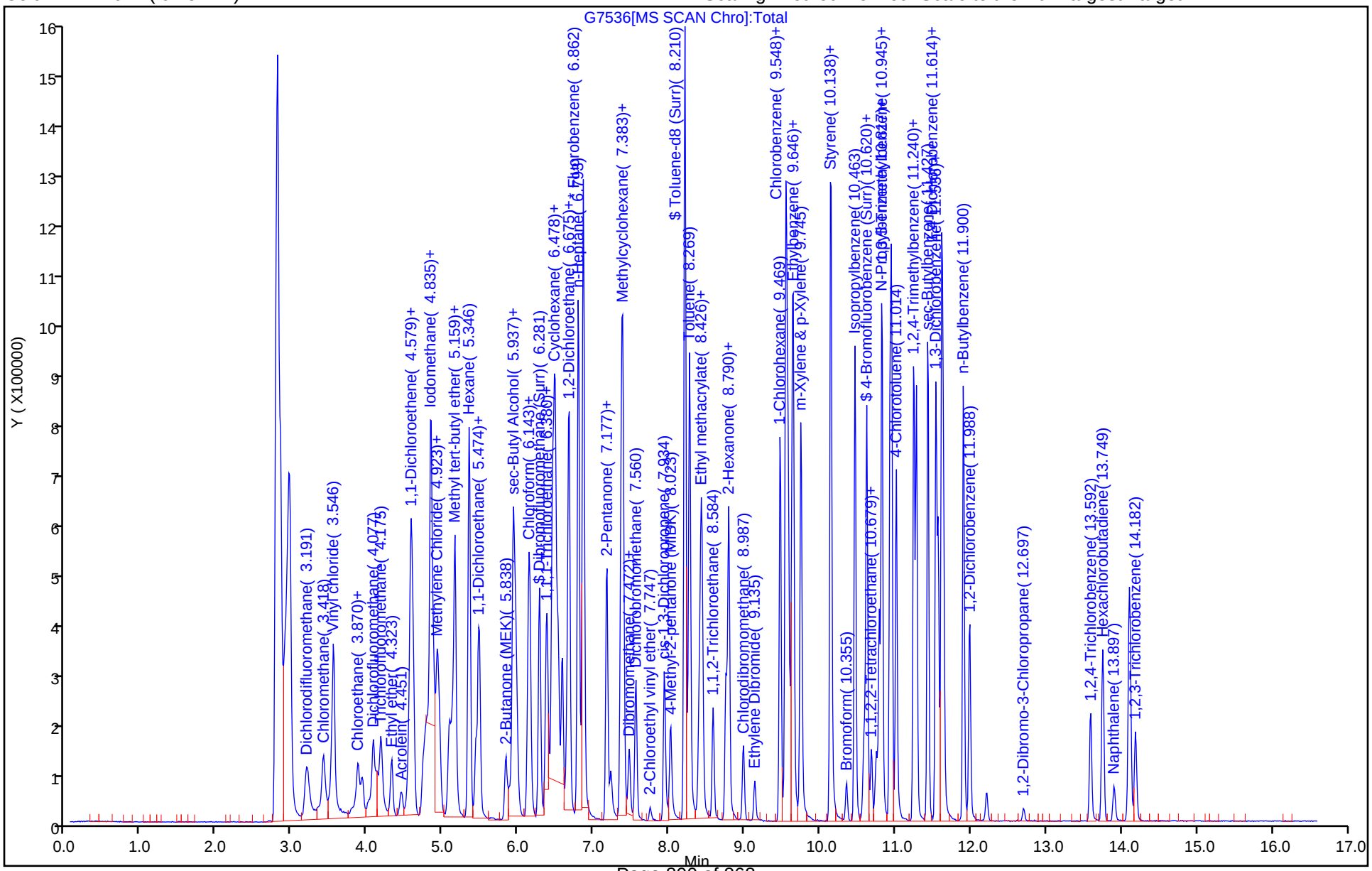
Report Date: 04-May-2018 19:02:11 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7536.D

Injection Date:	04-May-2018 00:50:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7536.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 00:50:30 ALS Bottle#: 28 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:23:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.83	98.34
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.5	115.31
$ 7 Toluene-d8 (Surr)	10.0	10.2	101.85
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.63	96.26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-413691/12

Matrix: Water | Lab File ID: G7537.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 01:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	5.71	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		81-118
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7537.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 01:10:30 ALS Bottle#: 29 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS Supp
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:51:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.841	4.834	0.007	0	135156	250.0	250.0	
* 1 Fluorobenzene	96	6.858	6.861	-0.003	98	1157166	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.554	9.548	0.006	91	227946	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.621	11.614	0.007	97	256754	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.278	6.281	-0.003	91	328629	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.583	6.586	-0.003	0	226728	10.0	11.2	
$ 7 Toluene-d8 (Surr)	98	8.206	8.209	-0.003	95	1092344	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.617	10.620	-0.003	85	293937	10.0	10.4	
30 Ethylene oxide	43	3.788	3.794	-0.006	99	254746	500.0	594.9	
34 Ethanol	45	4.172	4.168	0.004	95	48151	300.0	373.0	
39 Propene oxide	58	4.398	4.404	-0.006	95	1227178	500.0	656.8	
43 Isopropyl alcohol	45	4.575	4.582	-0.007	97	42888	50.0	68.8	
46 Acetonitrile	41	4.772	4.778	-0.006	100	96641	50.0	63.8	
58 Isopropyl ether	87	5.461	5.457	0.004	97	88646	5.00	5.71	
60 2-Chloro-1,3-butadiene	53	5.559	5.556	0.003	93	359153	5.00	6.74	
61 Tert-butyl ethyl ether	59	5.746	5.752	-0.006	96	316876	5.00	6.04	
63 Ethyl acetate	43	5.884	5.890	-0.006	97	101309	10.0	13.2	
64 Propionitrile	54	5.933	5.930	0.003	97	68787	50.0	63.2	
68 Methacrylonitrile	41	6.061	6.067	-0.006	98	444440	50.0	63.0	
78 Tert-amyl methyl ether	73	6.681	6.687	-0.006	92	210280	5.00	6.05	
89 2-Nitropropane	41	6.701	6.697	0.004	91	353127	10.0	14.1	
80 n-Butanol	56	6.937	6.923	0.014	89	18534	125.0	132.8	
83 Methyl methacrylate	100	7.340	7.346	-0.006	93	17161	10.0	9.08	
101 Tetrahydrothiophene	60	9.033	9.039	-0.006	93	17507	10.0	9.64	
112 cis-1,4-Dichloro-2-butene	53	10.489	10.485	0.004	0	24547	10.0	10.5	
128 1,2,3-Trimethylbenzene	105	11.660	11.666	-0.006	99	385144	5.00	5.63	
11 1,3,5-Trichlorobenzene	180	12.919	12.926	-0.007	95	139223	5.00	4.73	

Reagents:

MV-Supp B_00020	Amount Added:	2.50	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

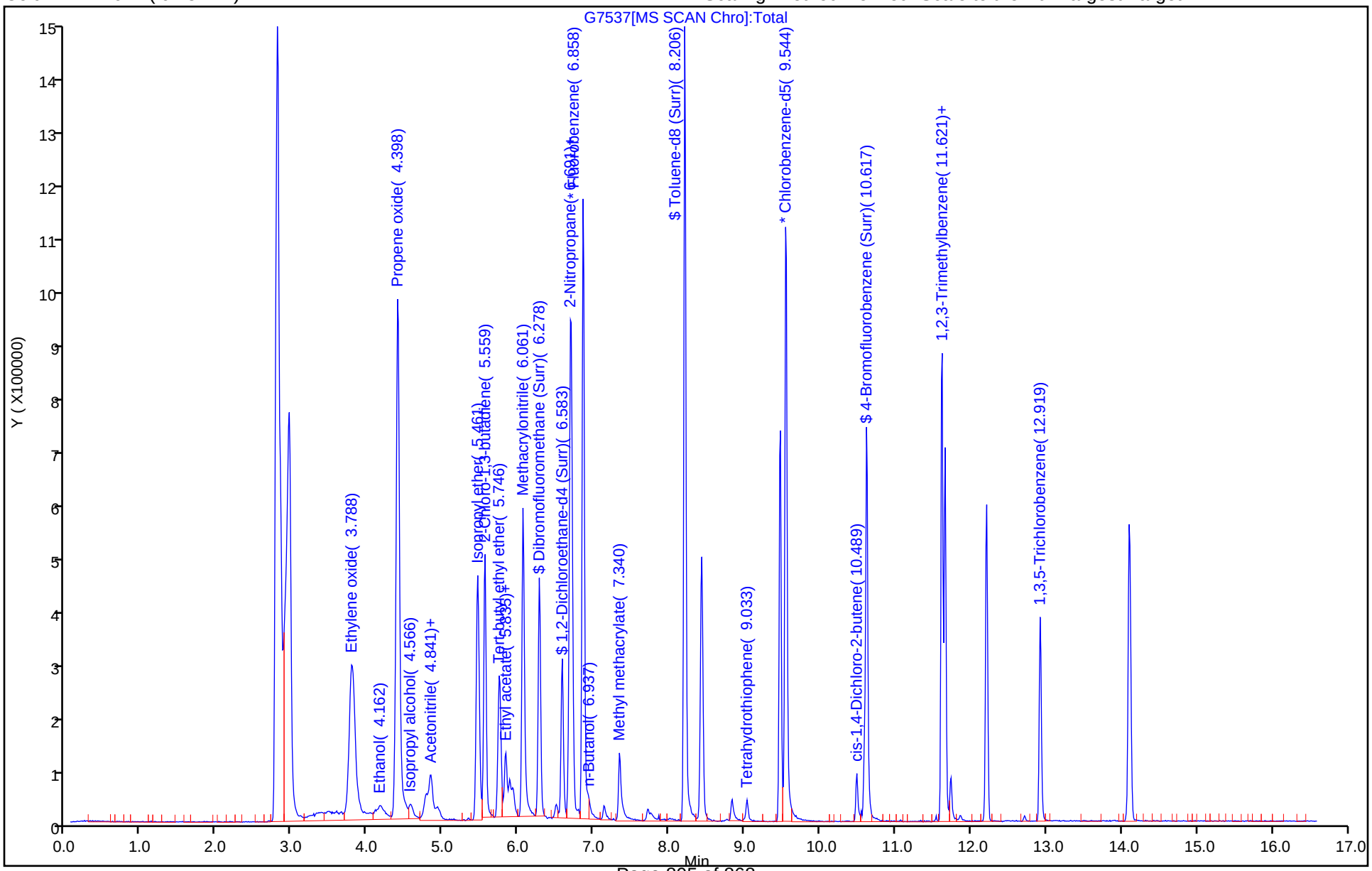
Report Date: 04-May-2018 19:02:17 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7537.D

Injection Date:	04-May-2018 01:10:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7537.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 01:10:30 ALS Bottle#: 29 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS Supp
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:51:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.1	101.39
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.2	111.64
$ 7 Toluene-d8 (Surr)	10.0	10.4	103.73
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.4	103.60

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-413840/4

Matrix: Water | Lab File ID: G2_2664.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 21:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413840 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
79-01-6	Trichloroethene	4.80		1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2664.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 21:00:30 ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 05-May-2018 00:57:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.771	3.785	-0.014	0	231571	250.0	250.0	
* 2 Fluorobenzene	96	7.365	7.372	-0.007	98	1454537	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.546	10.546	0.000	86	341814	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.649	12.649	0.000	96	532559	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.542	6.542	0.000	93	295090	10.0	9.95	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.971	6.971	0.000	99	280682	10.0	9.54	
$ 8 Toluene-d8 (Surr)	98	9.116	9.109	0.007	93	1317670	10.0	9.96	
$ 9 4-Bromofluorobenzene (Surr	95	11.655	11.655	0.000	87	453933	10.0	9.71	
12 Dichlorodifluoromethane	85	1.579	1.593	-0.014	99	259114	5.00	5.18	
14 Chloromethane	50	1.704	1.704	0.000	99	211211	5.00	4.36	
15 Vinyl chloride	62	1.816	1.830	-0.014	98	224643	5.00	4.39	
17 Bromomethane	94	2.123	2.137	-0.014	91	147126	5.00	4.50	
18 Chloroethane	64	2.235	2.249	-0.014	99	130043	5.00	4.54	
19 Dichlorofluoromethane	67	2.459	2.473	-0.014	98	372555	5.00	4.56	
20 Trichlorofluoromethane	101	2.487	2.501	-0.014	98	333900	5.00	4.60	
22 Ethyl ether	59	2.780	2.794	-0.014	93	103160	5.00	5.40	
24 Acrolein	56	2.947	2.961	-0.014	99	88625	50.0	49.1	
25 1,1-Dichloroethene	96	3.059	3.059	0.000	96	186561	5.00	5.25	
26 1,1,2-Trichloro-1,2,2-trif	151	3.087	3.101	-0.014	94	170642	5.00	5.22	
27 Acetone	43	3.115	3.129	-0.014	99	64813	20.0	20.1	
28 Iodomethane	142	3.227	3.241	-0.014	99	280977	5.00	5.12	
30 Carbon disulfide	76	3.311	3.311	0.000	99	683800	5.00	4.96	
32 Methyl acetate	43	3.520	3.520	0.000	98	224979	25.0	25.6	
33 3-Chloro-1-propene	41	3.520	3.520	0.000	91	302888	5.00	5.02	
35 Methylene Chloride	84	3.702	3.702	0.000	95	177329	5.00	4.74	
37 2-Methyl-2-propanol	59	3.883	3.897	-0.014	96	56368	50.0	50.3	
39 Acrylonitrile	53	4.065	4.065	0.000	97	198043	50.0	47.9	
40 trans-1,2-Dichloroethene	96	4.093	4.093	0.000	97	198391	5.00	5.29	
41 Methyl tert-butyl ether	73	4.093	4.107	-0.014	97	339661	5.00	5.15	
42 Hexane	57	4.540	4.540	0.000	93	346429	5.00	5.02	
45 1,1-Dichloroethane	63	4.819	4.819	0.000	96	345382	5.00	4.91	
46 Vinyl acetate	43	4.875	4.875	0.000	98	229984	10.0	8.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
50 2,2-Dichloropropane	77	5.797	5.797	0.000	90	359051	5.00	5.17	
51 cis-1,2-Dichloroethene	96	5.797	5.797	0.000	85	186904	5.00	4.98	
52 2-Butanone (MEK)	43	5.825	5.825	0.001	100	76309	20.0	17.6	
56 Chlorobromomethane	128	6.149	6.163	-0.014	98	61667	5.00	4.91	
57 Tetrahydrofuran	42	6.178	6.178	0.000	78	32622	10.0	9.12	
55 sec-Butyl Alcohol	45	6.178	6.185	-0.007	85	73170	150.0	121.2	
59 Chloroform	83	6.328	6.328	0.000	94	304549	5.00	4.75	
60 1,1,1-Trichloroethane	97	6.514	6.521	-0.007	98	305614	5.00	4.76	
61 Cyclohexane	56	6.592	6.592	0.000	92	393622	5.00	5.08	
62 Carbon tetrachloride	117	6.714	6.714	0.000	97	272294	5.00	4.78	
63 1,1-Dichloropropene	75	6.728	6.735	-0.007	96	281595	5.00	5.03	
64 Benzene	78	6.979	6.979	0.000	97	742025	5.00	4.93	
65 1,2-Dichloroethane	62	7.071	7.071	0.000	98	165697	5.00	4.64	
66 Isobutyl alcohol	41	7.393	7.393	0.000	85	239459	125.0	129.4	
67 n-Heptane	43	7.393	7.393	0.000	93	406440	5.00	5.59	
69 Trichloroethene	95	7.794	7.794	0.000	98	187669	5.00	4.80	
70 2-Pentanone	43	8.030	8.022	0.008	97	191850	20.0	20.4	
71 Methylcyclohexane	55	8.037	8.044	-0.007	91	309090	5.00	4.91	
72 1,2-Dichloropropane	63	8.087	8.087	0.000	95	168653	5.00	4.93	
75 Dibromomethane	93	8.180	8.180	0.000	95	61775	5.00	4.61	
74 1,4-Dioxane	88	8.187	8.187	0.000	32	7790	100.0	98.9	
76 Dichlorobromomethane	83	8.387	8.387	0.000	99	178331	5.00	4.64	
78 2-Chloroethyl vinyl ether	63	8.716	8.716	0.000	93	30699	5.00	3.90	
79 cis-1,3-Dichloropropene	75	8.852	8.852	0.000	95	206111	5.00	4.42	
81 4-Methyl-2-pentanone (MIBK	43	9.016	9.023	-0.007	97	208459	20.0	19.3	
82 Toluene	91	9.181	9.181	0.000	98	784082	5.00	5.04	
83 trans-1,3-Dichloropropene	75	9.445	9.438	0.007	94	151251	5.00	4.41	
84 Ethyl methacrylate	69	9.510	9.510	0.000	90	90101	5.00	3.99	
85 1,1,2-Trichloroethane	97	9.631	9.631	0.000	92	93795	5.00	5.09	
86 Tetrachloroethene	164	9.696	9.696	0.000	96	160966	5.00	4.74	
87 1,3-Dichloropropane	76	9.781	9.781	0.000	92	168401	5.00	4.71	
88 2-Hexanone	43	9.853	9.853	0.000	96	134155	20.0	18.1	
89 Chlorodibromomethane	129	9.989	9.989	0.000	91	96258	5.00	4.44	
90 Ethylene Dibromide	107	10.096	10.096	0.000	99	80626	5.00	4.88	
91 1-Chlorohexane	91	10.561	10.561	0.000	98	288798	5.00	4.73	
92 Chlorobenzene	112	10.568	10.568	0.000	93	481141	5.00	4.73	
93 1,1,1,2-Tetrachloroethane	131	10.661	10.661	0.000	92	150842	5.00	4.53	
94 Ethylbenzene	106	10.668	10.668	0.000	99	278267	5.00	4.56	
95 m-Xylene & p-Xylene	106	10.790	10.790	0.000	99	338560	5.00	4.63	
96 o-Xylene	106	11.154	11.154	0.000	97	310918	5.00	4.79	
97 Styrene	104	11.176	11.169	0.007	96	464815	5.00	4.73	
98 Bromoform	173	11.340	11.340	0.000	96	44500	5.00	4.15	
99 Isopropylbenzene	105	11.497	11.497	0.000	96	905891	5.00	4.85	
100 Cyclohexanone	55	11.583	11.583	0.000	94	57345	200.0	217.7	
103 Bromobenzene	156	11.783	11.783	0.000	96	178332	5.00	4.68	
102 1,1,2,2-Tetrachloroethane	83	11.791	11.791	0.000	94	96114	5.00	4.70	
105 trans-1,4-Dichloro-2-buten	53	11.826	11.819	0.007	75	22969	5.00	4.60	
104 1,2,3-Trichloropropane	110	11.841	11.841	0.000	86	27445	5.00	4.76	
106 N-Propylbenzene	120	11.884	11.884	0.000	99	258697	5.00	4.83	
107 2-Chlorotoluene	126	11.962	11.962	0.000	96	205549	5.00	4.74	
108 1,3,5-Trimethylbenzene	105	12.048	12.048	0.000	94	738106	5.00	4.77	
109 4-Chlorotoluene	126	12.077	12.077	0.000	98	215356	5.00	4.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 tert-Butylbenzene	119	12.320	12.320	0.000	93	657463	5.00	4.79	
111 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	734177	5.00	4.76	
112 sec-Butylbenzene	134	12.498	12.498	0.000	95	211498	5.00	4.86	
113 1,3-Dichlorobenzene	146	12.591	12.591	0.000	97	382321	5.00	4.71	
114 4-Isopropyltoluene	119	12.613	12.613	0.000	97	881830	5.00	4.89	
115 1,4-Dichlorobenzene	146	12.670	12.670	0.000	95	378899	5.00	4.69	
117 n-Butylbenzene	91	12.906	12.906	0.000	98	866784	5.00	4.90	
118 1,2-Dichlorobenzene	146	12.920	12.920	0.000	97	327839	5.00	4.74	
119 1,2-Dibromo-3-Chloropropan	157	13.421	13.421	0.000	78	13880	5.00	4.53	
121 1,2,4-Trichlorobenzene	180	13.936	13.936	0.000	94	251760	5.00	4.59	
122 Hexachlorobutadiene	225	14.021	14.021	0.000	98	190949	5.00	4.58	
123 Naphthalene	128	14.114	14.114	0.000	97	324479	5.00	4.65	
124 1,2,3-Trichlorobenzene	180	14.265	14.265	0.000	76	234866	5.00	4.55	
S 137 1,2-Dichloroethene, Total	96				0		10.0	10.3	
S 138 Xylenes, Total (URS)	1				0		10.0	9.43	
S 142 Trihalomethanes, Total	1				0		20.0	18.0	
S 143 Xylenes, Total	106				0		10.0	9.43	
S 144 1,2-Dichloroethene, Total	1				0		5.00	10.3	
S 140 1,3-Dichloropropene, Total	1				0		10.0	8.83	

Reagents:

MV-SS 2-Cleve_00043	Amount Added:	2.50	Units: uL	
MV-Main B_00020	Amount Added:	2.50	Units: uL	
MV-Gas/Ket B_00041	Amount Added:	2.50	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00093	Amount Added:	0.80	Units: uL	Run Reagent

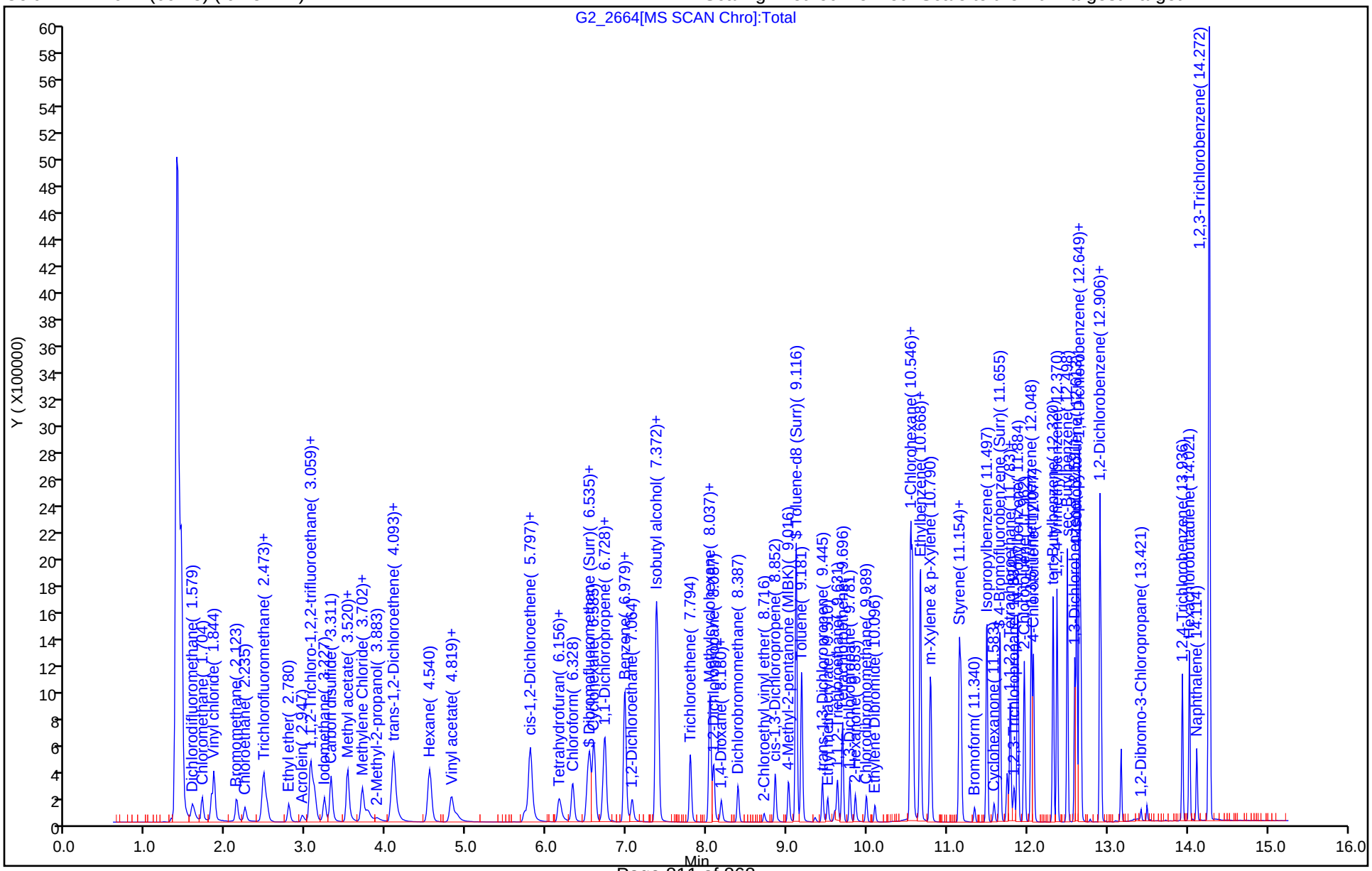
Report Date: 07-May-2018 21:11:48 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2664.D

Injection Date:	04-May-2018 21:00:30	Instrument ID:	VMS_G2	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\G2_2664.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2018 21:00:30 ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-May-2018 21:11:44 Calib Date: 03-May-2018 03:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180502-69524.b\G2_2552.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: newcomer Date: 05-May-2018 00:57:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.95	99.50
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.54	95.40
$ 8 Toluene-d8 (Surr)	10.0	9.96	99.63
$ 9 4-Bromofluorobenzene (Surr)	10.0	9.71	97.10

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-108840-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-413691/13

Matrix: Water | Lab File ID: G7538.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 05/04/2018 01:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 413691 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	6.02	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		81-118
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7538.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 04-May-2018 01:30:30 ALS Bottle#: 30 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD Supp
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:52:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.834	4.834	0.000	0	135929	250.0	250.0	
* 1 Fluorobenzene	96	6.861	6.861	0.000	98	1147233	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.548	9.548	0.000	91	232059	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.614	11.614	0.000	96	250399	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	6.281	6.281	0.000	91	326483	10.0	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.586	6.586	0.000	0	230336	10.0	11.4	
$ 7 Toluene-d8 (Surr)	98	8.209	8.209	0.000	95	1035762	10.0	9.66	
$ 8 4-Bromofluorobenzene (Surr	95	10.620	10.620	0.000	85	285923	10.0	10.3	
30 Ethylene oxide	43	3.791	3.794	-0.003	99	257246	500.0	605.9	
34 Ethanol	45	4.165	4.168	-0.003	97	51723	300.0	406.4	
39 Propene oxide	58	4.401	4.404	-0.003	95	1265203	500.0	683.0	
43 Isopropyl alcohol	45	4.579	4.582	-0.003	97	44091	50.0	71.3	
46 Acetonitrile	41	4.775	4.778	-0.003	100	95016	50.0	63.3	
58 Isopropyl ether	87	5.464	5.457	0.007	98	92630	5.00	6.02	
60 2-Chloro-1,3-butadiene	53	5.553	5.556	-0.003	93	363440	5.00	6.88	
61 Tert-butyl ethyl ether	59	5.750	5.752	-0.002	96	339658	5.00	6.53	
63 Ethyl acetate	43	5.887	5.890	-0.003	97	101276	10.0	13.3	
64 Propionitrile	54	5.927	5.930	-0.003	99	72397	50.0	67.1	
68 Methacrylonitrile	41	6.064	6.067	-0.003	97	470623	50.0	67.3	
78 Tert-amyl methyl ether	73	6.684	6.687	-0.003	94	210665	5.00	6.11	
89 2-Nitropropane	41	6.694	6.697	-0.003	91	354013	10.0	14.3	
80 n-Butanol	56	6.930	6.923	0.007	87	17599	125.0	128.8	
83 Methyl methacrylate	100	7.344	7.346	-0.002	93	17881	10.0	9.50	
101 Tetrahydrothiophene	60	9.036	9.039	-0.003	94	18445	10.0	9.94	
112 cis-1,4-Dichloro-2-butene	53	10.492	10.485	0.007	0	25593	10.0	11.2	
128 1,2,3-Trimethylbenzene	105	11.663	11.666	-0.003	99	381767	5.00	5.72	
11 1,3,5-Trichlorobenzene	180	12.923	12.926	-0.003	95	139579	5.00	4.86	

Reagents:

MV-Supp B_00020	Amount Added:	2.50	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00095	Amount Added:	0.80	Units: uL	Run Reagent

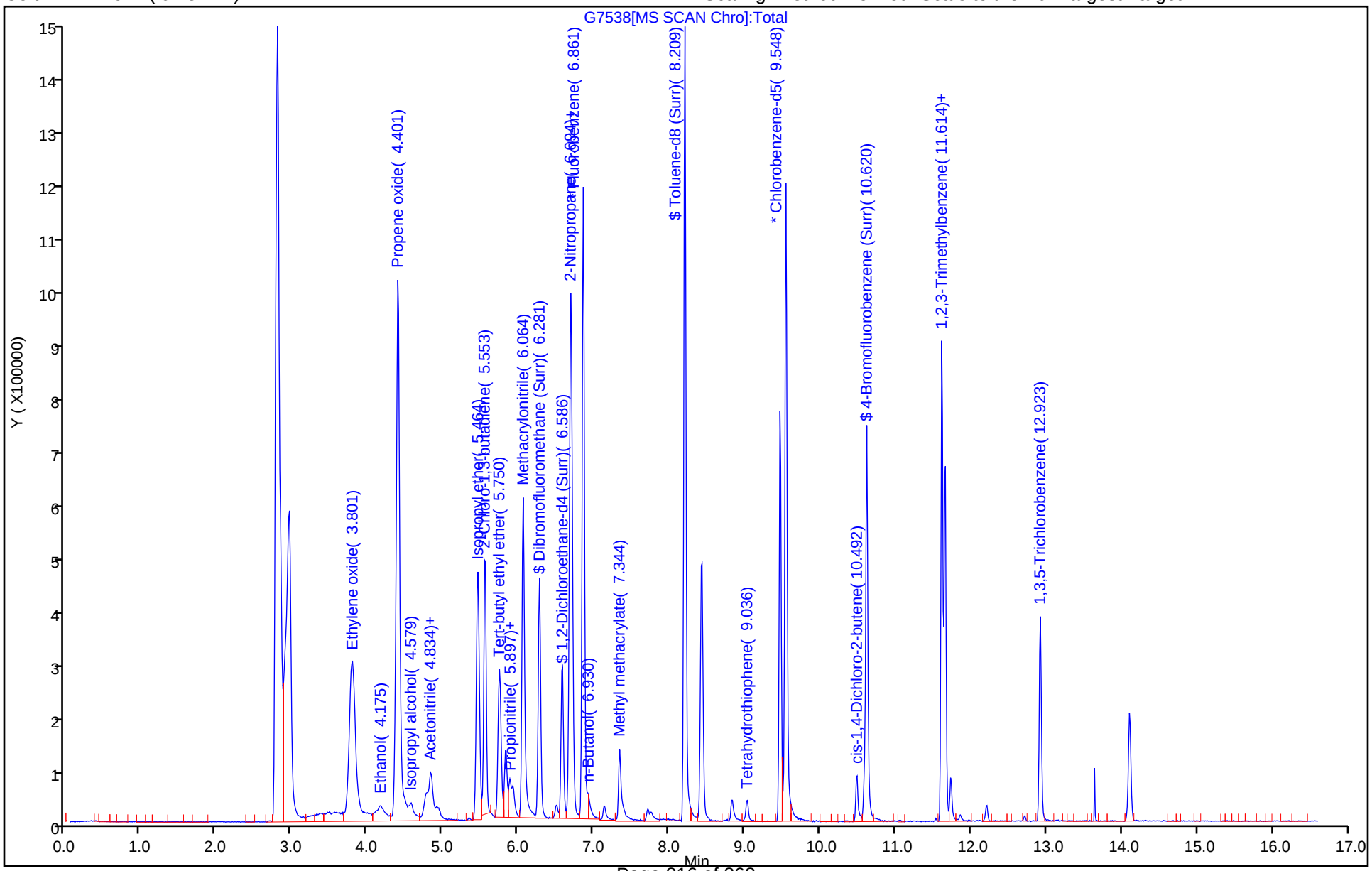
Report Date: 04-May-2018 19:02:19 Chrom Revision: 2.2 26-Apr-2018 11:26:08

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7538.D

Injection Date:	04-May-2018 01:30:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	LCSD			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\G7538.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 04-May-2018 01:30:30 ALS Bottle#: 30 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD Supp
Operator ID: newcomer Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 04-May-2018 19:01:55 Calib Date: 01-May-2018 00:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b\G7351.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: newcomer Date: 04-May-2018 01:52:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.2	101.60
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	114.40
$ 7 Toluene-d8 (Surr)	10.0	9.66	96.62
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.3	103.33

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Start Date: 04/27/2018 10:09

Analysis Batch Number: 412916 End Date: 04/27/2018 18:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-412916/1		04/27/2018 10:09	1	G7207.D	DB-624 v1 32(um)
IC 280-412916/10		04/27/2018 10:35	1		DB-624 v1 32(um)
IC 280-412916/11		04/27/2018 10:55	1		DB-624 v1 32(um)
IC 280-412916/12		04/27/2018 11:15	1		DB-624 v1 32(um)
IC 280-412916/13		04/27/2018 11:35	1		DB-624 v1 32(um)
IC 280-412916/14		04/27/2018 11:56	1		DB-624 v1 32(um)
IC 280-412916/15		04/27/2018 12:16	1		DB-624 v1 32(um)
IC 280-412916/16		04/27/2018 12:36	1		DB-624 v1 32(um)
ICV 280-412916/17		04/27/2018 13:23	1		DB-624 v1 32(um)
IC 280-412916/18		04/27/2018 13:43	1	G7217.D	DB-624 v1 32(um)
IC 280-412916/19		04/27/2018 14:03	1	G7218.D	DB-624 v1 32(um)
IC 280-412916/20		04/27/2018 14:24	1	G7219.D	DB-624 v1 32(um)
ICIS 280-412916/21		04/27/2018 14:44	1	G7220.D	DB-624 v1 32(um)
IC 280-412916/22		04/27/2018 15:04	1	G7221.D	DB-624 v1 32(um)
IC 280-412916/23		04/27/2018 15:24	1	G7222.D	DB-624 v1 32(um)
ICV 280-412916/24		04/27/2018 15:44	1	G7223.D	DB-624 v1 32(um)
IC 280-412916/25		04/27/2018 16:05	1		DB-624 v1 32(um)
IC 280-412916/26		04/27/2018 16:25	1		DB-624 v1 32(um)
IC 280-412916/27		04/27/2018 16:45	1		DB-624 v1 32(um)
IC 280-412916/28		04/27/2018 17:06	1		DB-624 v1 32(um)
IC 280-412916/29		04/27/2018 17:26	1		DB-624 v1 32(um)
IC 280-412916/30		04/27/2018 17:46	1		DB-624 v1 32(um)
ICV 280-412916/31		04/27/2018 18:06	1		DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 04/27/2018 11:01

Analysis Batch Number: 412973 End Date: 04/27/2018 19:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-412973/1		04/27/2018 11:01	1	G2_2303.D	DB-624 (60.25) 0.25(mm)
IC 280-412973/24		04/27/2018 11:29	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/25		04/27/2018 11:50	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/26		04/27/2018 12:10	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/27		04/27/2018 12:31	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/28		04/27/2018 12:51	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/29		04/27/2018 13:12	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/30		04/27/2018 13:32	1		DB-624 (60.25) 0.25(mm)
ICV 280-412973/31		04/27/2018 14:13	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/10		04/27/2018 14:34	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/11		04/27/2018 14:54	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/12		04/27/2018 15:15	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/13		04/27/2018 15:36	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/14		04/27/2018 15:56	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/15		04/27/2018 16:17	1		DB-624 (60.25) 0.25(mm)
ICV 280-412973/16		04/27/2018 16:38	1		DB-624 (60.25) 0.25(mm)
IC 280-412973/17		04/27/2018 16:58	1	G2_2320.D	DB-624 (60.25) 0.25(mm)
IC 280-412973/18		04/27/2018 17:19	1	G2_2321.D	DB-624 (60.25) 0.25(mm)
IC 280-412973/19		04/27/2018 17:40	1	G2_2322.D	DB-624 (60.25) 0.25(mm)
ICIS 280-412973/20		04/27/2018 18:01	1	G2_2323.D	DB-624 (60.25) 0.25(mm)
IC 280-412973/21		04/27/2018 18:21	1	G2_2324.D	DB-624 (60.25) 0.25(mm)
IC 280-412973/22		04/27/2018 18:42	1	G2_2325.D	DB-624 (60.25) 0.25(mm)
ICV 280-412973/23		04/27/2018 19:03	1	G2_2326.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Start Date: 04/28/2018 08:33

Analysis Batch Number: 413080 End Date: 04/28/2018 17:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413080/1		04/28/2018 08:33	1	G7233.D	DB-624 v1 32(um)
CCV 280-413080/2		04/28/2018 09:25	1		DB-624 v1 32(um)
CCV 280-413080/3		04/28/2018 09:45	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 10:06	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 10:26	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 10:46	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 11:06	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 11:26	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 11:47	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 12:07	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 12:27	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 12:47	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 13:07	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 13:27	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 13:47	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 14:08	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 14:28	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 14:48	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 15:08	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 15:29	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 15:49	1		DB-624 v1 32(um)
ZZZZZ		04/28/2018 16:09	100		DB-624 v1 32(um)
ZZZZZ		04/28/2018 16:30	10		DB-624 v1 32(um)
ZZZZZ		04/28/2018 16:50	10		DB-624 v1 32(um)
ZZZZZ		04/28/2018 17:10	40		DB-624 v1 32(um)
ZZZZZ		04/28/2018 17:30	40		DB-624 v1 32(um)
ZZZZZ		04/28/2018 17:51	40		DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Start Date: 04/30/2018 09:29

Analysis Batch Number: 413150 End Date: 04/30/2018 19:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413150/1		04/30/2018 09:29	1	G7312.D	DB-624 v1 32(um)
CCV 280-413150/2		04/30/2018 10:01	1		DB-624 v1 32(um)
IC 280-413150/10		04/30/2018 10:43	1	G7315.D	DB-624 v1 32(um)
IC 280-413150/11		04/30/2018 11:03	1	G7316.D	DB-624 v1 32(um)
IC 280-413150/12		04/30/2018 11:23	1	G7317.D	DB-624 v1 32(um)
IC 280-413150/13		04/30/2018 11:43	1	G7318.D	DB-624 v1 32(um)
IC 280-413150/14		04/30/2018 12:03	1	G7319.D	DB-624 v1 32(um)
IC 280-413150/15		04/30/2018 12:24	1	G7320.D	DB-624 v1 32(um)
IC 280-413150/16		04/30/2018 13:57	1	G7322.D	DB-624 v1 32(um)
ICV 280-413150/17		04/30/2018 14:37	1	G7324.D	DB-624 v1 32(um)
ZZZZZ		04/30/2018 15:45	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 16:06	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 16:26	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 17:20	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 17:40	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 18:00	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 18:20	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 18:41	1		DB-624 v1 32(um)
ZZZZZ		04/30/2018 19:01	1		DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Start Date: 04/30/2018 19:45

Analysis Batch Number: 413243 End Date: 05/01/2018 01:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413243/1		04/30/2018 19:45	1	G7336.D	DB-624 v1 32(um)
STD01 280-413243/10 IC		04/30/2018 23:12	1	G7346.D	DB-624 v1 32(um)
STD02 280-413243/11 IC		04/30/2018 23:32	1	G7347.D	DB-624 v1 32(um)
STD05 280-413243/12 IC		04/30/2018 23:52	1	G7348.D	DB-624 v1 32(um)
STD10 280-413243/13 IC		05/01/2018 00:12	1	G7349.D	DB-624 v1 32(um)
STD30 280-413243/14 IC		05/01/2018 00:33	1	G7350.D	DB-624 v1 32(um)
STD60 280-413243/15 IC		05/01/2018 00:53	1	G7351.D	DB-624 v1 32(um)
ICV 280-413243/16		05/01/2018 01:16	1	G7352.D	DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 05/02/2018 22:10

Analysis Batch Number: 413564 End Date: 05/03/2018 04:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413564/1		05/02/2018 22:10	1	G2_2535.D	DB-624 (60.25) 0.25(mm)
STD003 280-413564/11 IC		05/02/2018 22:54	1	G2_2537.D	DB-624 (60.25) 0.25(mm)
STD01 280-413564/12 IC		05/02/2018 23:14	1	G2_2538.D	DB-624 (60.25) 0.25(mm)
STD02 280-413564/13 IC		05/02/2018 23:34	1	G2_2539.D	DB-624 (60.25) 0.25(mm)
STD05 280-413564/14 IC		05/02/2018 23:55	1	G2_2540.D	DB-624 (60.25) 0.25(mm)
ICIS 280-413564/15		05/03/2018 00:15	1	G2_2541.D	DB-624 (60.25) 0.25(mm)
STD30 280-413564/16 IC		05/03/2018 00:35	1	G2_2542.D	DB-624 (60.25) 0.25(mm)
STD60 280-413564/17 IC		05/03/2018 00:55	1	G2_2543.D	DB-624 (60.25) 0.25(mm)
ICV 280-413564/18		05/03/2018 01:35	1	G2_2545.D	DB-624 (60.25) 0.25(mm)
STD003 280-413564/19 IC		05/03/2018 01:55	1	G2_2546.D	DB-624 (60.25) 0.25(mm)
STD01 280-413564/20 IC		05/03/2018 02:15	1	G2_2547.D	DB-624 (60.25) 0.25(mm)
STD02 280-413564/21 IC		05/03/2018 02:35	1	G2_2548.D	DB-624 (60.25) 0.25(mm)
STD05 280-413564/22 IC		05/03/2018 02:55	1	G2_2549.D	DB-624 (60.25) 0.25(mm)
STD10 280-413564/23 IC		05/03/2018 03:15	1	G2_2550.D	DB-624 (60.25) 0.25(mm)
STD30 280-413564/24 IC		05/03/2018 03:35	1	G2_2551.D	DB-624 (60.25) 0.25(mm)
STD60 280-413564/25 IC		05/03/2018 03:55	1	G2_2552.D	DB-624 (60.25) 0.25(mm)
ICV 280-413564/26		05/03/2018 04:14	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G Start Date: 05/03/2018 18:24

Analysis Batch Number: 413691 End Date: 05/04/2018 05:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413691/1		05/03/2018 18:24	1	G7517.D	DB-624 v1 32(um)
CCV 280-413691/2		05/03/2018 19:08	1	G7519.D	DB-624 v1 32(um)
CCV 280-413691/3		05/03/2018 19:28	1	G7520.D	DB-624 v1 32(um)
CCV 280-413691/4		05/03/2018 19:48	1	G7521.D	DB-624 v1 32(um)
CCV 280-413691/5		05/03/2018 20:08	1		DB-624 v1 32(um)
MB 280-413691/8		05/03/2018 20:28	1	G7523.D	DB-624 v1 32(um)
280-108840-1		05/03/2018 20:48	1	G7524.D	DB-624 v1 32(um)
280-108840-2		05/03/2018 21:08	1	G7525.D	DB-624 v1 32(um)
280-108840-3		05/03/2018 21:29	1	G7526.D	DB-624 v1 32(um)
280-108840-4		05/03/2018 21:49	1	G7527.D	DB-624 v1 32(um)
280-108840-5		05/03/2018 22:09	1	G7528.D	DB-624 v1 32(um)
280-108840-6		05/03/2018 22:29	1	G7529.D	DB-624 v1 32(um)
ZZZZZ		05/03/2018 22:49	1		DB-624 v1 32(um)
280-108840-8		05/03/2018 23:09	1	G7531.D	DB-624 v1 32(um)
ZZZZZ		05/03/2018 23:29	1		DB-624 v1 32(um)
ZZZZZ		05/03/2018 23:50	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 00:10	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 00:30	1		DB-624 v1 32(um)
LCS 280-413691/6		05/04/2018 00:50	1	G7536.D	DB-624 v1 32(um)
LCS 280-413691/12		05/04/2018 01:10	1	G7537.D	DB-624 v1 32(um)
LCSD 280-413691/13		05/04/2018 01:30	1	G7538.D	DB-624 v1 32(um)
ZZZZZ		05/04/2018 01:51	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 02:11	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 02:31	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 02:51	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 03:11	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 03:31	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 03:51	2		DB-624 v1 32(um)
ZZZZZ		05/04/2018 04:11	20		DB-624 v1 32(um)
ZZZZZ		05/04/2018 04:31	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 04:51	1		DB-624 v1 32(um)
ZZZZZ		05/04/2018 05:12	1		DB-624 v1 32(um)
CCVC 280-413691/37		05/04/2018 05:32	1	G7550.D	DB-624 v1 32(um)
CCVC 280-413691/38		05/04/2018 05:52	1	G7551.D	DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 05/03/2018 19:36

Analysis Batch Number: 413693 End Date: 05/04/2018 06:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413693/1		05/03/2018 19:36	1	G2_2590.D	DB-624 (60.25) 0.25(mm)
ICV 280-413693/2		05/03/2018 21:21	1	G2_2595.D	DB-624 (60.25) 0.25(mm)
CCV 280-413693/3		05/03/2018 21:41	1		DB-624 (60.25) 0.25(mm)
CCV 280-413693/4		05/03/2018 22:01	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/03/2018 22:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/03/2018 22:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/03/2018 23:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/03/2018 23:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/03/2018 23:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 00:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 00:24	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 00:44	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 01:04	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 01:24	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 01:45	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 02:05	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 02:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 02:45	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 03:05	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 03:25	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 03:45	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 04:05	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 04:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 04:45	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 05:05	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 05:25	200		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 05:45	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 06:05	1		DB-624 (60.25) 0.25(mm)
CCVC 280-413693/33		05/04/2018 06:25	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 05/04/2018 19:36

Analysis Batch Number: 413840 End Date: 05/05/2018 07:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-413840/1		05/04/2018 19:36	1	G2_2660.D	DB-624 (60.25) 0.25(mm)
CCV 280-413840/2		05/04/2018 20:19	1	G2_2662.D	DB-624 (60.25) 0.25(mm)
CCV 280-413840/3		05/04/2018 20:39	1	G2_2663.D	DB-624 (60.25) 0.25(mm)
LCS 280-413840/4		05/04/2018 21:00	1	G2_2664.D	DB-624 (60.25) 0.25(mm)
MB 280-413840/6		05/04/2018 21:20	1	G2_2665.D	DB-624 (60.25) 0.25(mm)
280-108840-4 RA		05/04/2018 21:40	1	G2_2666.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 22:00	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 22:20	1		DB-624 (60.25) 0.25(mm)
CCVC 280-413840/14		05/04/2018 23:01	1	G2_2670.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		05/04/2018 23:41	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 00:01	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 00:22	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 00:42	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 01:02	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 01:22	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 01:42	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 02:02	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 02:23	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 02:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 03:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 03:23	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 03:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 04:03	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 04:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 04:43	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 05:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 05:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 05:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 06:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 06:24	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 06:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 07:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/05/2018 07:24	2		DB-624 (60.25) 0.25(mm)

Sequence Name: C:\HPCHEM\1\SEQUENCE\050318pm.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\050318pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Test America Denver
Instrument: G
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)

Tune Time: 1824-0552 (Circle)
Lims Batch: 413691

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G7517	BFBTUN	BFB
2	Sample	10	G7518	8260	Blank
3	Sample	11	G7519	8260	CCV
4	Sample	12	G7520	8260	CCV
5	Sample	13	G7521	8260	CCV
6	Sample	14	G7522	8260	CCV
7	Sample	15	G7523	8260	MB
8	Sample	16	G7524	8260	280-108840-A-1 pH<2
9	Sample	17	G7525	8260	d 280-108840-A-2 pH<2
10	Sample	18	G7526	8260	280-108840-A-3 pH<2
11	Sample	19	G7527	8260	280-108840-A-4 pH<2 SS↑
12	Sample	20	G7528	8260	280-108840-A-5 pH<2
13	Sample	21	G7529	8260	280-108840-A-6 pH<2 SS↑
14	Sample	22	G7530	8260	~~280-108840-A-7 pH<2 SS↑~~ DNR
15	Sample	23	G7531	8260	280-108840-A-8 pH<2
16	Sample	24	G7532	8260	280-108964-A-1 pH<2 SS↑
17	Sample	25	G7533	8260	280-108964-A-2 pH<2 SS↑
18	Sample	26	G7534	8260	280-108964-B-2 MS pH<2 SS↑
19	Sample	27	G7535	8260	280-108964-B-2 MSD pH<2
20	Sample	28	G7536	8260	LCS
21	Sample	29	G7537	8260	LCS Supp
22	Sample	30	G7538	8260	LCSD Supp
23	Sample	31	G7539	8260	280-108851-B-1 pH<2
24	Sample	32	G7540	8260	280-108851-B-2 pH<2
25	Sample	33	G7541	8260	280-108851-A-3 pH<2
26	Sample	34	G7542	8260	280-108851-A-4 pH<2
27	Sample	35	G7543	8260	280-108851-A-5 pH<2
28	Sample	36	G7544	8260	280-108851-A-6 pH<2
29	Sample	37	G7545	8260	280-108851-A-7 pH<2 10mL E
30	Sample	38	G7546	8260	280-108851-A-7 pH<2 1 mL
31	Sample	39	G7547	8260	280-108851-B-8 pH<2
32	Sample	40	G7548	8260	280-108851-B-9 pH<2
33	Sample	41	G7549	8260	280-108851-A-10 pH<2
34	Sample	42	G7550	8260	CCVC
35	Sample	43	G7551	8260	CCVC Supp
36	Sample	44	G7552	8260	blk
37	Sample	45	G7553	8260	blk
38					

TestAmerica Laboratories
Worklist Report

Worklist Name: 050318pm Worklist Number: 69562
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00095 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069562-001	# 1 BFB	MV-BFB_00025	BFB	voaWater	1.000	uL	1.000
280-0069562-002	# 2 CCV	MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	CCV	voaWater	20.00	mL	1.000
280-0069562-003	# 3 CCV	MV-Supp A_00029 MV-568718-D_00014	CCV	voaWater	20.00	mL	1.000
280-0069562-004	# 4 CCV	MV-568718-D_00014 MV-Main A_00036	CCV	voaWater	20.00	mL	1.000
280-0069562-005	# 5 CCV	MV-568718-D_00014 MV-Main A_00036	CCV	voaWater	20.00	mL	1.000
280-0069562-006	# 6 LCS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00043	LCS	voaWater	20.00	mL	1.000
280-0069562-007	# 7 LCSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00043	LCSD	voaWater	20.00	mL	1.000
280-0069562-008	# 8 MB		MB	voaWater	20.00	mL	1.000
280-0069562-009	# 9 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0069562-010	#10 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0069562-011	#11 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0069562-012	#12 LCS	MV-Supp B_00020	LCS	voaWater	20.00	mL	1.000
280-0069562-013	#13 LCSD	MV-Supp B_00020	LCSD	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069562-014	#14 280-108840-A-1		Client	voaWater	20.00	mL	1.000
280-0069562-015	#15 280-108840-A-2		Client	voaWater	20.00	mL	1.000
280-0069562-016	#16 280-108840-A-3		Client	voaWater	20.00	mL	1.000
280-0069562-017	#17 280-108840-A-4		Client	voaWater	20.00	mL	1.000
280-0069562-018	#18 280-108840-A-5		Client	voaWater	20.00	mL	1.000
280-0069562-019	#19 280-108840-A-6		Client	voaWater	20.00	mL	1.000
280-0069562-020	#20 280-108840-A-7		Client	voaWater	20.00	mL	1.000
280-0069562-021	#21 280-108840-A-8		Client	voaWater	20.00	mL	1.000
280-0069562-022	#22 280-108964-A-1		Client	voaWater	20.00	mL	1.000
280-0069562-023	#23 280-108964-A-2		Client	voaWater	20.00	mL	1.000
280-0069562-024	#24 280-108964-B-2 MS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00043	MS	voaWater	20.00	mL	1.000
280-0069562-025	#25 280-108964-B-2 MSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00043	MSD	voaWater	20.00	mL	1.000
280-0069562-026	#26 280-108851-B-1		Client	voaWater	20.00	mL	1.000
280-0069562-027	#27 280-108851-B-2		Client	voaWater	20.00	mL	1.000
280-0069562-028	#28 280-108851-A-3		Client	voaWater	20.00	mL	1.000
280-0069562-029	#29 280-108851-A-4		Client	voaWater	20.00	mL	1.000
280-0069562-030	#30 280-108851-A-5		Client	voaWater	20.00	mL	1.000
280-0069562-031	#31 280-108851-A-6		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069562-032	#32 280-108851-A-7		Client	voaWater	20.00	mL	2.000
280-0069562-033	#33 280-108851-A-7		Client	voaWater	20.00	mL	20.00
280-0069562-034	#34 280-108851-B-8		Client	voaWater	20.00	mL	1.000
280-0069562-035	#35 280-108851-B-9		Client	voaWater	20.00	mL	1.000
280-0069562-036	#36 280-108851-A-10		Client	voaWater	20.00	mL	1.000
280-0069562-037	#37 CCVC	MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	CCVC	voaWater	20.00	mL	1.000
280-0069562-038	#38 CCVC	MV-Supp A_00029	CCVC	voaWater	20.00	mL	1.000
280-0069562-039	#39 Samp 39		Client	voaWater	20.00	mL	1.000

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 050318pm Worklist Number: 69562
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Data Directory: \\ChromNA\Denver\ChromData\VMS_G\20180503-69562.b
QC Batching: Disabled Limit Group Batching: Disabled

QC Batch: 1	All Limit Groups Raw Batch: 413691
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 CCV	# 4 CCV
# 5 CCV	# 5 CCV
# 6 LCS	# 6 LCS
# 7 LCSD	# 7 LCSD
# 8 MB	# 8 MB
# 9 280-108595-A-1	# 9 280-108595-A-1
#10 280-108595-A-2	#10 280-108595-A-2
#11 280-108595-A-3	#11 280-108595-A-3
#12 LCS	#12 LCS
#13 LCSD	#13 LCSD
#14 280-108840-A-1	#14 280-108840-A-1
#15 280-108840-A-2	#15 280-108840-A-2
#16 280-108840-A-3	#16 280-108840-A-3
#17 280-108840-A-4	#17 280-108840-A-4
#18 280-108840-A-5	#18 280-108840-A-5
#19 280-108840-A-6	#19 280-108840-A-6
#20 280-108840-A-7	#20 280-108840-A-7
#21 280-108840-A-8	#21 280-108840-A-8
#22 280-108964-A-1	#22 280-108964-A-1
#23 280-108964-A-2	#23 280-108964-A-2
#24 280-108964-B-2 MS	#24 280-108964-B-2 MS
#25 280-108964-B-2 MSD	#25 280-108964-B-2 MSD
#26 280-108851-B-1	#26 280-108851-B-1
#27 280-108851-B-2	#27 280-108851-B-2
#28 280-108851-A-3	#28 280-108851-A-3
#29 280-108851-A-4	#29 280-108851-A-4
#30 280-108851-A-5	#30 280-108851-A-5
#31 280-108851-A-6	#31 280-108851-A-6
#32 280-108851-A-7	#32 280-108851-A-7
#33 280-108851-A-7	#33 280-108851-A-7
#34 280-108851-B-8	#34 280-108851-B-8
#35 280-108851-B-9	#35 280-108851-B-9
#36 280-108851-A-10	#36 280-108851-A-10
#37 CCVC	#37 CCVC
#38 CCVC	#38 CCVC
#39 Samp 39	#39 Samp 39

Sequence Name: C:\msdchem\1\sequence\050418pm.s
Comment:
Operator: newcomer
Data Path: C:\msdchem\1\DATA\050418pm\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Test America Denver
Instrument: G2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 1936 - 0724
Lims Batch: 413840

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

RSN
5/7/18

Line			Sample Name/Misc Info		
1)	Sample	100	G2_2658	BFB	BFB
2)	Sample	100	G2_2659	BFB	BFB
3)	Sample	100	G2_2660	BFB	BFB
4)	Sample	10	G2_2661	8260B2	Blank
5)	Sample	11	G2_2662	8260B2	CCV
6)	Sample	12	G2_2663	8260B2	CCV
7)	Sample	13	G2_2664	8260B2	LCS
8)	Sample	14	G2_2665	8260B2	MB
9)	Sample	15	G2_2666	8260B2	280-108840-B-4 pH<2
10)	Sample	16	G2_2667	8260B2	280-108955-A-33 pH<2
11)	Sample	17	G2_2668	8260B2	280-108955-B-33 MS pH<2
12)	Sample	18	G2_2669	8260B2	280-108955-B-33 MSD pH<2
13)	Sample	19	G2_2670	8260B2	CCVC
14)	Sample	20	G2_2671	8260B2	blank
15)	Sample	21	G2_2672	8260B2	LCS
16)	Sample	22	G2_2673	8260B2	LCSD
17)	Sample	23	G2_2674	8260B2	280-108955-B-34 pH<2
18)	Sample	24	G2_2675	8260B2	280-108955-C-35 pH<2
19)	Sample	25	G2_2676	8260B2	280-108955-A-36 pH<2
20)	Sample	26	G2_2677	8260B2	280-108955-B-37 pH<2 10mL E
21)	Sample	27	G2_2678	8260B2	280-108955-B-37 pH<2 1mL
22)	Sample	28	G2_2679	8260B2	280-108955-A-38 pH<2 E
23)	Sample	29	G2_2680	8260B2	280-108955-A-38 pH<2 5mL
24)	Sample	30	G2_2681	8260B2	280-108955-A-33 MSD pH<2
25)	Sample	31	G2_2682	8260B2	280-108955-C-39 pH<2 E
26)	Sample	32	G2_2683	8260B2	280-108955-C-39 pH<2 5mL
27)	Sample	33	G2_2684	8260B2	280-108955-A-40 pH<2 E
28)	Sample	34	G2_2685	8260B2	280-108955-A-40 pH<2 5mL
29)	Sample	35	G2_2686	8260B2	280-108955-B-41 pH<2 E
30)	Sample	36	G2_2687	8260B2	280-108955-B-41 pH<2 10mL
31)	Sample	37	G2_2688	8260B2	280-108955-B-42 pH<2 E
32)	Sample	38	G2_2689	8260B2	280-108955-A-43 pH<2 SS↑
33)	Sample	39	G2_2690	8260B2	280-108955-A-44 pH<2
34)	Sample	40	G2_2691	8260B2	280-108955-E-45 pH<2
35)	Sample	41	G2_2692	8260B2	280-108955-E-46 pH<2
36)	Sample	42	G2_2693	8260B2	280-108955-D-47 pH<2
37)	Sample	43	G2_2694	8260B2	280-108955-E-48 pH<2 E
38)	Sample	44	G2_2695	8260B2	280-108955-E-48 pH<2 10mL
39)	Sample	45	G2_2696	8260B2	blk

Last Modified: Sat May 05 08:08:24 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 050418pm **Worklist Number:** 69596
Instrument Name: VMS_G2 **Chrom Method:** AQ_VMSG2_8260
Purge Volume: 20.00 **Units:** mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: MV-568718-D_00010 **Amount Added:** 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00093 **Amount Added:** 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069596-001	# 1 BFB	MV-BFB_00025	BFB	voaWater	1.000	uL	1.000
280-0069596-002	# 2 CCV	MV-2cleve+AVA_00034 MV-Gas/Ket A_00070 MV-Main A_00036 MV-568718-D_00010	CCV	voaWater	20.00	mL	1.000
280-0069596-003	# 3 CCV	MV-Supp A_00029	CCV	voaWater	20.00	mL	1.000
280-0069596-004	# 4 LCS	MV-SS 2-Cleve_00043 MV-Main B_00020 MV-Gas/Ket B_00041	LCS	voaWater	20.00	mL	1.000
280-0069596-005	# 5 LCSD	MV-SS 2-Cleve_00043 MV-Gas/Ket B_00041 MV-Main B_00020	LCSD	voaWater	20.00	mL	1.000
280-0069596-006	# 6 MB		MB	voaWater	20.00	mL	1.000
280-0069596-037	#37 LCS	MV-Supp B_00020	LCS	voaWater	20.00	mL	1.000
280-0069596-038	#38 LCSD	MV-Supp B_00020	LCSD	voaWater	20.00	mL	1.000
280-0069596-007	# 7 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0069596-008	# 8 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0069596-009	# 9 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0069596-010	#10 280-108840-B-4		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069596-011	#11 280-108955-A-33		Client	voaWater	20.00	mL	1.000
280-0069596-012	#12 280-108955-B-33 MS	MV-Main B_00020 MV-SS 2-Cleve_00043 MV-Gas/Ket B_00041	MS	voaWater	20.00	mL	1.000
280-0069596-013	#13 280-108955-B-33 MSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00043	MSD	voaWater	20.00	mL	1.000
280-0069596-014	#14 CCVC	MV-Main A_00036 MV-Gas/Ket A_00070 MV-2cleve+AVA_00034	CCVC	voaWater	20.00	mL	1.000
280-0069596-015	#15 280-108955-B-34		Client	voaWater	20.00	mL	1.000
280-0069596-016	#16 280-108955-C-35		Client	voaWater	20.00	mL	1.000
280-0069596-017	#17 280-108955-A-36		Client	voaWater	20.00	mL	1.000
280-0069596-018	#18 280-108955-B-37		Client	voaWater	20.00	mL	2.000
280-0069596-019	#19 280-108955-B-37		Client	voaWater	20.00	mL	20.00
280-0069596-020	#20 280-108955-A-38		Client	voaWater	20.00	mL	1.000
280-0069596-021	#21 280-108955-A-38		Client	voaWater	20.00	mL	4.000
280-0069596-022	#22 280-108955-C-39		Client	voaWater	20.00	mL	1.000
280-0069596-023	#23 280-108955-C-39		Client	voaWater	20.00	mL	4.000
280-0069596-024	#24 280-108955-A-40		Client	voaWater	20.00	mL	1.000
280-0069596-025	#25 280-108955-A-40		Client	voaWater	20.00	mL	4.000
280-0069596-026	#26 280-108955-B-41		Client	voaWater	20.00	mL	1.000
280-0069596-027	#27 280-108955-B-41		Client	voaWater	20.00	mL	2.000
280-0069596-028	#28 280-108955-B-42		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069596-029	#29 280-108955-A-43		Client	voaWater	20.00	mL	1.000
280-0069596-030	#30 280-108955-A-44		Client	voaWater	20.00	mL	1.000
280-0069596-031	#31 280-108955-E-45		Client	voaWater	20.00	mL	1.000
280-0069596-032	#32 280-108955-E-46		Client	voaWater	20.00	mL	1.000
280-0069596-033	#33 280-108955-D-47		Client	voaWater	20.00	mL	1.000
280-0069596-034	#34 280-108955-E-48		Client	voaWater	20.00	mL	1.000
280-0069596-035	#35 280-108955-E-48		Client	voaWater	20.00	mL	2.000
280-0069596-036	#36 Samp 36		Client	voaWater	20.00	mL	1.000

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 050418pm Worklist Number: 69596
Instrument Name: VMS_G2 Chrom Method: AQ_VMSG2_8260
Data Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180504-69596.b
QC Batching: Disabled Limit Group Batching: Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 413840
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
#37 LCS	#37 LCS
#38 LCSD	#38 LCSD
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
#10 280-108840-B-4	#10 280-108840-B-4
#11 280-108955-A-33	#11 280-108955-A-33
#12 280-108955-B-33 MS	#12 280-108955-B-33 MS
#13 280-108955-B-33 MSD	#13 280-108955-B-33 MSD
#14 CCVC	#14 CCVC
#15 280-108955-B-34	#15 280-108955-B-34
#16 280-108955-C-35	#16 280-108955-C-35
#17 280-108955-A-36	#17 280-108955-A-36
#18 280-108955-B-37	#18 280-108955-B-37
#19 280-108955-B-37	#19 280-108955-B-37
#20 280-108955-A-38	#20 280-108955-A-38
#21 280-108955-A-38	#21 280-108955-A-38
#22 280-108955-C-39	#22 280-108955-C-39
#23 280-108955-C-39	#23 280-108955-C-39
#24 280-108955-A-40	#24 280-108955-A-40
#25 280-108955-A-40	#25 280-108955-A-40
#26 280-108955-B-41	#26 280-108955-B-41
#27 280-108955-B-41	#27 280-108955-B-41
#28 280-108955-B-42	#28 280-108955-B-42
#29 280-108955-A-43	#29 280-108955-A-43
#30 280-108955-A-44	#30 280-108955-A-44
#31 280-108955-E-45	#31 280-108955-E-45
#32 280-108955-E-46	#32 280-108955-E-46
#33 280-108955-D-47	#33 280-108955-D-47
#34 280-108955-E-48	#34 280-108955-E-48
#35 280-108955-E-48	#35 280-108955-E-48
#36 Samp 36	#36 Samp 36

Sequence Name: C:\HPCHEM\1\SEQUENCE\042718.S
Comment:
Operator: ilczyszynd
Data Path: C:\HPCHEM\1\DATA\042718\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G7201	BFBTUN	bfb
2	Sample	10	G7202	8260	ccv
3	Sample	11	G7203	8260	ccv
4	Sample	12	G7204	8260	ccv g
5	Sample	13	G7205	8260	lcs
6	Sample	14	G7206	8260	blk
7	Sample	100	G7207	BFBTUN	bfb
8	Sample	10	G7208	8260	ic
9	Sample	11	G7209	8260	ic
10	Sample	12	G7210	8260	ic
11	Sample	13	G7211	8260	ic
12	Sample	14	G7212	8260	ic
13	Sample	15	G7213	8260	ic
14	Sample	16	G7214	8260	ic
15	Sample	17	G7215	8260	blk
16	Sample	18	G7216	8260	icv
17	Sample	19	G7217	8260	ic
18	Sample	20	G7218	8260	ic
19	Sample	21	G7219	8260	ic
20	Sample	22	G7220	8260	ic
21	Sample	23	G7221	8260	ic
22	Sample	24	G7222	8260	ic
23	Sample	25	G7223	8260	icv
24	Sample	26	G7224	8260	ic
25	Sample	27	G7225	8260	ic
26	Sample	28	G7226	8260	ic
27	Sample	29	G7227	8260	ic
28	Sample	30	G7228	8260	ic
29	Sample	31	G7229	8260	ic
30	Sample	32	G7230	8260	icv
31	Sample	33	G7231	8260	pr
32	Sample	34	G7232	8260	pr

Test America Denver
Instrument: G
V-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)
(Circle)
Tune Time: 1009-1606
Lims Batch: ZTOQ 4/30/18
412916

MAIN/CLEV
32249 /
ICV 17

GAS
02 4/30/18
~~32250~~
32251
ICV 31

SUPP/SUPL
32250 /
ICV 24
ICB 21

dichlorodifluoromethane 22.40
2-pentanone -50.10

ZCLEV -20.77

4/30/18

TestAmerica Laboratories
Worklist Report

Worklist Name: 042718 **Worklist Number:** 69339
Instrument Name: VMS_G **Chrom Method:** AQ_VMSG_8260
Purge Volume: 20.00 **Units:** mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20180427-69339.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G
Run Reagent: MV-ARCH SS A_00090 Amount Added: 0.750, Units: uL
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069339-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0069339-002	# 2 CCV	MV-2cleve+AVA_00034 MV-Main A_00035 MV-Gas/Ket A_00070	CCV		voaWater	20.00	mL	1.000
280-0069339-003	# 3 CCV	MV-Supp A_00029 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0069339-004	# 4 LCS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCS		voaWater	20.00	mL	1.000
280-0069339-005	# 5 LCSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCSD		voaWater	20.00	mL	1.000
280-0069339-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0069339-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0069339-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0069339-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0069339-010	#10 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	1	voaWater	20.00	mL	1.000
280-0069339-011	#11 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	2	voaWater	20.00	mL	1.000
280-0069339-012	#12 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	3	voaWater	20.00	mL	1.000
280-0069339-013	#13 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069339-014	#14 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	5	voaWater	20.00	mL	1.000
280-0069339-015	#15 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	6	voaWater	20.00	mL	1.000
280-0069339-016	#16 ic	MV-568718-D_00014 MV-2cleve+AVA_00034 MV-Main A_00035	IC	7	voaWater	20.00	mL	1.000
280-0069339-017	#17 icv	MV-568718-D_00014 MV-Main B_00020 MV-SS 2-Cleve_00042	ICV		voaWater	20.00	mL	1.000
280-0069339-018	#18 ic	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	IC	2	voaWater	20.00	mL	1.000
280-0069339-019	#19 ic	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	IC	3	voaWater	20.00	mL	1.000
280-0069339-020	#20 ic	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	IC	4	voaWater	20.00	mL	1.000
280-0069339-021	#21 icis	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	ICIS	5	voaWater	20.00	mL	1.000
280-0069339-022	#22 ic	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	IC	6	voaWater	20.00	mL	1.000
280-0069339-023	#23 ic	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp A_00029	IC	7	voaWater	20.00	mL	1.000
280-0069339-024	#24 icv	MV-ARCH SS A_00090 MV-568718-D_00014 MV-Supp B_00020	ICV		voaWater	20.00	mL	1.000
280-0069339-025	#25 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	2	voaWater	20.00	mL	1.000
280-0069339-026	#26 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	3	voaWater	20.00	mL	1.000
280-0069339-027	#27 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	4	voaWater	20.00	mL	1.000
280-0069339-028	#28 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	5	voaWater	20.00	mL	1.000
280-0069339-029	#29 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	6	voaWater	20.00	mL	1.000
280-0069339-030	#30 ic	MV-568718-D_00014 MV-Gas/Ket A_00070	IC	7	voaWater	20.00	mL	1.000
280-0069339-031	#31 icv	MV-568718-D_00014 MV-Gas/Ket B_00041	ICV		voaWater	20.00	mL	1.000

Sequence Name: C:\msdchem\1\sequence\042718i.s
Comment:
Operator: ilczyszynd
Data Path: C:\msdchem\1\DATA\042718i\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	100	G2_2303	BFB	bfb
2)	Sample	10	G2_2304	8260B2	ic
3)	Sample	11	G2_2305	8260B2	ic
4)	Sample	12	G2_2306	8260B2	ic
5)	Sample	13	G2_2307	8260B2	ic
6)	Sample	14	G2_2308	8260B2	ic
7)	Sample	15	G2_2309	8260B2	ic
8)	Sample	16	G2_2310	8260B2	ic
9)	Sample	17	G2_2311	8260B2	blk
10)	Sample	18	G2_2312	8260B2	icv
11)	Sample	19	G2_2313	8260B2	ic
12)	Sample	20	G2_2314	8260B2	ic
13)	Sample	21	G2_2315	8260B2	ic
14)	Sample	22	G2_2316	8260B2	ic
15)	Sample	23	G2_2317	8260B2	ic
16)	Sample	24	G2_2318	8260B2	ic
17)	Sample	25	G2_2319	8260B2	icv
18)	Sample	26	G2_2320	8260B2	ic
19)	Sample	27	G2_2321	8260B2	ic
20)	Sample	28	G2_2322	8260B2	ic
21)	Sample	29	G2_2323	8260B2	ic
22)	Sample	30	G2_2324	8260B2	ic
23)	Sample	31	G2_2325	8260B2	ic
24)	Sample	32	G2_2326	8260B2	icv
25)	Sample	33	G2_2327	8260B2	pr
26)	Sample	34	G2_2328	8260B2	pr

Test America Denver
Instrument: G2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (25mL/5mL/5y) (Circle)
Tune Time: 1101 - 1903
Lims Batch: 412973

MAIN/CLEV 32246 ICV 31

GAS 32247 ICV 16

SUPP/SURR 32248 ICV 23 ICIS 20

4-30-18

dichlorodifluoromethane 22.3-/>
2-pentanone -42.3-%
2CLEV -20.10 %

not cal for
ethanol
IPA

TestAmerica Laboratories
Worklist Report

Worklist Name: 042718i **Worklist Number:** 69352
Instrument Name: VMS_G2 **Chrom Method:** AQ_VMSG2_8260
Purge Volume: 20.00 **Units:** mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180427-69352.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: MV-568718-D_00010 **Amount Added:** 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00093 **Amount Added:** 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069352-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0069352-002	# 2 CCV	MV-2cleve+AVA_00034 MV-Main A_00035 MV-Gas/Ket A_00070	CCV		voaWater	20.00	mL	1.000
280-0069352-003	# 3 CCV	MV-568718-D_00010 MV-Supp A_00029	CCV		voaWater	20.00	mL	1.000
280-0069352-004	# 4 LCS	MV-SS 2-Cleve_00042 MV-Main B_00020 MV-Gas/Ket B_00041	LCS		voaWater	20.00	mL	1.000
280-0069352-005	# 5 LCSD	MV-SS 2-Cleve_00042 MV-Gas/Ket B_00041 MV-Main B_00020	LCSD		voaWater	20.00	mL	1.000
280-0069352-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0069352-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0069352-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0069352-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0069352-010	#10 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	2	voaWater	20.00	mL	1.000
280-0069352-011	#11 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	3	voaWater	20.00	mL	1.000
280-0069352-012	#12 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	4	voaWater	20.00	mL	1.000
280-0069352-013	#13 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	5	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069352-014	#14 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	6	voaWater	20.00	mL	1.000
280-0069352-015	#15 ic	MV-568718-D_00010 MV-Gas/Ket A_00071	IC	7	voaWater	20.00	mL	1.000
280-0069352-016	#16 icv	MV-Gas/Ket B_00041 MV-568718-D_00010	ICV		voaWater	20.00	mL	1.000
280-0069352-017	#17 ic	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	IC	2	voaWater	20.00	mL	1.000
280-0069352-018	#18 ic	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	IC	3	voaWater	20.00	mL	1.000
280-0069352-019	#19 ic	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	IC	4	voaWater	20.00	mL	1.000
280-0069352-020	#20 icis	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	ICIS	5	voaWater	20.00	mL	1.000
280-0069352-021	#21 ic	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	IC	6	voaWater	20.00	mL	1.000
280-0069352-022	#22 ic	MV-568718-D_00010 MV-Supp A_00029 MV-ARCH SS A_00093	IC	7	voaWater	20.00	mL	1.000
280-0069352-023	#23 icv	MV-568718-D_00010 MV-Supp B_00020 MV-ARCH SS A_00093	ICV		voaWater	20.00	mL	1.000
280-0069352-024	#24 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	1	voaWater	20.00	mL	1.000
280-0069352-025	#25 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	2	voaWater	20.00	mL	1.000
280-0069352-026	#26 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	3	voaWater	20.00	mL	1.000
280-0069352-027	#27 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	4	voaWater	20.00	mL	1.000
280-0069352-028	#28 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	5	voaWater	20.00	mL	1.000
280-0069352-029	#29 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	6	voaWater	20.00	mL	1.000
280-0069352-030	#30 ic	MV-568718-D_00010 MV-2cleve+AVA_00034 MV-Main A_00035	IC	7	voaWater	20.00	mL	1.000
280-0069352-031	#31 icv	MV-Main B_00020 MV-SS 2-Cleve_00042 MV-568718-D_00010	ICV		voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069352-032	#32 Samp 47		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\043018.S
Comment:
Operator: ilczyszynd
Data Path: C:\HPCHEM\1\DATA\043018\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: G
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)
Tune Time: 929-1909 (Circle)
Lims Batch: 413150

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G7312	BFBTUN	bfb
2	Sample	10	G7313	8260	ccv
3	Sample	11	G7314	8260	ccv
4	Sample	12	G7315	8260	ic
5	Sample	13	G7316	8260	ic
6	Sample	14	G7317	8260	ic
7	Sample	15	G7318	8260	ic
8	Sample	16	G7319	8260	ic
9	Sample	17	G7320	8260	ic
10	Sample	18	G7321	8260	blk
11	Sample	19	G7322	8260	ic
12	Sample	20	G7323	8260	blk
13	Sample	21	G7324	8260	icv
14	Sample	22	G7325	8260	lcs
15	Sample	23	G7326	8260	lcsd
16	Sample	24	G7327	8260	mb
17	Sample	25	G7328	8260	blank
18	Sample	26	G7329	8260	280-109111-Q-1 pH 7
19	Sample	27	G7330	8260	280-109111-AJ-2 pH 8 2X
20	Sample	28	G7331	8260	280-109111-AJ-3 pH 7 20X
21	Sample	29	G7332	8260	280-109111-AJ-3 MS pH 7 20X
22	Sample	30	G7333	8260	280-109111-AJ-3 MSD pH 7 20X
23	Sample	31	G7334	8260	280-109111-C-4 pH 5

computer outage, level 7 reruns

MAIN/GAS/CLEV

32256

ICV line 17

5/1/18

2nd RSN 5/1/18

TestAmerica Laboratories
Worklist Report

Worklist Name: 043018 Worklist Number: 69407
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20180430-69407.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00090 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069407-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0069407-002	# 2 CCV	MV-ARCH SS A_00090 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0069407-003	# 3 CCV	MV-Supp A_00029 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0069407-004	# 4 LCS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042 MV-ARCH SS A_00090 MV-568718-D_00014	LCS		voaWater	20.00	mL	1.000
280-0069407-005	# 5 LCSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042 MV-ARCH SS A_00090 MV-568718-D_00014	LCSD		voaWater	20.00	mL	1.000
280-0069407-006	# 6 MB	MV-ARCH SS A_00090 MV-568718-D_00014	MB		voaWater	20.00	mL	1.000
280-0069407-007	# 7 280-108595-A-1	MV-ARCH SS A_00090 MV-568718-D_00014	Client		voaWater	20.00	mL	1.000
280-0069407-008	# 8 280-108595-A-2	MV-ARCH SS A_00090 MV-568718-D_00014	Client		voaWater	20.00	mL	1.000
280-0069407-009	# 9 280-108595-A-3	MV-ARCH SS A_00090 MV-568718-D_00014	Client		voaWater	20.00	mL	1.000
280-0069407-010	#10 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	1	voaWater	20.00	mL	1.000
280-0069407-011	#11 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069407-012	#12 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	3	voaWater	20.00	mL	1.000
280-0069407-013	#13 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	4	voaWater	20.00	mL	1.000
280-0069407-014	#14 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	5	voaWater	20.00	mL	1.000
280-0069407-015	#15 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	6	voaWater	20.00	mL	1.000
280-0069407-016	#16 ic	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	IC	7	voaWater	20.00	mL	1.000
280-0069407-017	#17 icv	MV-568718-D_00014 MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	ICV		voaWater	20.00	mL	1.000
280-0069407-018	#18 280-109111-Q-1		Client		voaWater	20.00	mL	1.000
280-0069407-019	#19 280-109111-AJ-2		Client		voaWater	20.00	mL	1.000
280-0069407-020	#20 280-109111-AJ-3		Client		voaWater	20.00	mL	1.000
280-0069407-021	#21 280-109111-AJ-3 MS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	MS		voaWater	20.00	mL	1.000
280-0069407-022	#22 280-109111-AJ-3 MSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	MSD		voaWater	20.00	mL	1.000
280-0069407-023	#23 280-109111-C-4		Client		voaWater	20.00	mL	1.000
280-0069407-024	#24 Samp 24		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\043018PM.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\043018pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G7336	BFBTUN	BFB
2	Sample	10	G7337	8260	blank
3	Sample	11	G7338	8260	STD01
4	Sample	12	G7339	8260	STD02
5	Sample	13	G7340	8260	STD05
6	Sample	14	G7341	8260	STD10
7	Sample	15	G7342	8260	STD30
8	Sample	16	G7343	8260	STD60
9	Sample	17	G7344	8260	STD10
10	Sample	18	G7345	8260	Blank
11	Sample	19	G7346	8260	STD01
12	Sample	20	G7347	8260	STD02
13	Sample	21	G7348	8260	STD05
14	Sample	22	G7349	8260	STD10
15	Sample	23	G7350	8260	STD30
16	Sample	24	G7351	8260	STD60
17	Sample	25	G7352	8260	ICV
18	Sample	26	G7353	8260	Blank
19	Sample	27	G7354	8260	Blank
20	Sample	28	G7355	8260	Blank

Test America Denver
Instrument: 6
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (25mL/5mL/5g) (Circle)
Tune Time: 1445 - 1 16
Lims Batch: 413243

SURR
32255
ICV line 16

DQ
5/1/18

2nd RSN 5/1/18

Last Modified: Tue May 01 07:03:29 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 043018pm **Worklist Number:** 69436
Instrument Name: VMS_G **Chrom Method:** AQ_VMSG_8260
Purge Volume: 20.00 **Units:** mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20180430-69436.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G
Run Reagent: MV-568718-D_00014 **Amount Added:** 1.000, **Units:** uL
Run Reagent: MV-ARCH SS A_00095 **Amount Added:** 0.800, **Units:** uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069436-001	# 1 BFB	MV-BFB_00025	BFB		voaWater	1.000	uL	1.000
280-0069436-002	# 2 CCV	MV-568718-D_00014 MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034	CCV		voaWater	20.00	mL	1.000
280-0069436-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00029	CCV		voaWater	20.00	mL	1.000
280-0069436-004	# 4 LCS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCS		voaWater	20.00	mL	1.000
280-0069436-005	# 5 LCSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCSD		voaWater	20.00	mL	1.000
280-0069436-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0069436-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0069436-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0069436-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0069436-010	#10 STD01	MV-568718-D_00014 MV-ARCH SS A_00095	IC	2	voaWater	20.00	mL	1.000
280-0069436-011	#11 STD02	MV-568718-D_00014 MV-ARCH SS A_00095	IC	3	voaWater	20.00	mL	1.000
280-0069436-012	#12 STD05	MV-568718-D_00014 MV-ARCH SS A_00095	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0069436-013	#13 STD10	MV-568718-D_00014 MV-ARCH SS A_00095	IC	5	voaWater	20.00	mL	1.000
280-0069436-014	#14 STD30	MV-568718-D_00014 MV-ARCH SS A_00095	IC	6	voaWater	20.00	mL	1.000
280-0069436-015	#15 STD60	MV-568718-D_00014 MV-ARCH SS A_00095	IC	7	voaWater	20.00	mL	1.000
280-0069436-016	#16 ICV	MV-568718-D_00014 MV-ARCH SS A_00095	ICV		voaWater	20.00	mL	1.000
280-0069436-017	#17 CCV	MV-Main A_00036 MV-Gas/Ket A_00072 MV-2cleve+AVA_00034 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0069436-018	#18 CCV	MV-568718-D_00014 MV-Supp A_00029	CCV		voaWater	20.00	mL	1.000
280-0069436-019	#19 LCS	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCS		voaWater	20.00	mL	1.000
280-0069436-020	#20 LCSD	MV-Main B_00020 MV-Gas/Ket B_00041 MV-SS 2-Cleve_00042	LCSD		voaWater	20.00	mL	1.000
280-0069436-021	#21 MB		MB		voaWater	20.00	mL	1.000
280-0069436-022	#22 Samp 22		Client		voaWater	20.00	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 412916 Batch Start Date: 04/27/18 10:09 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00090	MV-BFB 00025	MV-Supp A 00029
BFB 280-412916/1		8260B		1 uL	1 uL			1 uL	
IC 280-412916/18		8260B		20 mL	20 mL	1 uL	0.08 uL		0.5 uL
IC 280-412916/19		8260B		20 mL	20 mL	1 uL	0.16 uL		1 uL
IC 280-412916/20		8260B		20 mL	20 mL	1 uL	0.4 uL		2.5 uL
ICIS 280-412916/21		8260B		20 mL	20 mL	1 uL	0.8 uL		5 uL
IC 280-412916/22		8260B		20 mL	20 mL	1 uL	2.4 uL		15 uL
IC 280-412916/23		8260B		20 mL	20 mL	1 uL	4.8 uL		30 uL
ICV 280-412916/24		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00020					
BFB 280-412916/1		8260B							
IC 280-412916/18		8260B							
IC 280-412916/19		8260B							
IC 280-412916/20		8260B							
ICIS 280-412916/21		8260B							
IC 280-412916/22		8260B							
IC 280-412916/23		8260B							
ICV 280-412916/24		8260B		5 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 412916 Batch Start Date: 04/27/18 10:09 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 412973 Batch Start Date: 04/27/18 11:01 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00093	MV-BFB 00025	MV-Supp A 00029
BFB 280-412973/1		8260B		1 uL	1 uL			1 uL	
IC 280-412973/17		8260B		20 mL	20 mL	1 uL	0.08 uL		0.5 uL
IC 280-412973/18		8260B		20 mL	20 mL	1 uL	0.16 uL		1 uL
IC 280-412973/19		8260B		20 mL	20 mL	1 uL	0.4 uL		2.5 uL
ICIS 280-412973/20		8260B		20 mL	20 mL	1 uL	0.8 uL		5 uL
IC 280-412973/21		8260B		20 mL	20 mL	1 uL	2.4 uL		15 uL
IC 280-412973/22		8260B		20 mL	20 mL	1 uL	4.8 uL		30 uL
ICV 280-412973/23		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00020					
BFB 280-412973/1		8260B							
IC 280-412973/17		8260B							
IC 280-412973/18		8260B							
IC 280-412973/19		8260B							
ICIS 280-412973/20		8260B							
IC 280-412973/21		8260B							
IC 280-412973/22		8260B							
ICV 280-412973/23		8260B		5 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 412973 Batch Start Date: 04/27/18 11:01 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413080 Batch Start Date: 04/28/18 08:33 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-BFB 00025			
BFB 280-413080/1		8260B		1 uL	1 uL	1 uL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413150 Batch Start Date: 04/30/18 09:29 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00034	MV-568718-D 00014	MV-BFB 00025	MV-Gas/Ket A 00072
BFB 280-413150/1		8260B		1 uL	1 uL			1 uL	
IC 280-413150/10		8260B		20 mL	20 mL	0.15 uL	1 uL		0.15 uL
IC 280-413150/11		8260B		20 mL	20 mL	0.5 uL	1 uL		0.5 uL
IC 280-413150/12		8260B		20 mL	20 mL	1 uL	1 uL		1 uL
IC 280-413150/13		8260B		20 mL	20 mL	2.5 uL	1 uL		2.5 uL
IC 280-413150/14		8260B		20 mL	20 mL	5 uL	1 uL		5 uL
IC 280-413150/15		8260B		20 mL	20 mL	15 uL	1 uL		15 uL
IC 280-413150/16		8260B		20 mL	20 mL	30 uL	1 uL		30 uL
ICV 280-413150/17		8260B		20 mL	20 mL		1 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket B 00041	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00042		
BFB 280-413150/1		8260B							
IC 280-413150/10		8260B			0.15 uL				
IC 280-413150/11		8260B			0.5 uL				
IC 280-413150/12		8260B			1 uL				
IC 280-413150/13		8260B			2.5 uL				
IC 280-413150/14		8260B			5 uL				
IC 280-413150/15		8260B			15 uL				
IC 280-413150/16		8260B			30 uL				
ICV 280-413150/17		8260B		5 uL		5 uL	5 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413150 Batch Start Date: 04/30/18 09:29 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413243 Batch Start Date: 04/30/18 19:45 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00095	MV-BFB 00025	
BFB 280-413243/1		8260B		1 uL	1 uL			1 uL	
STD01 280-413243/10 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD02 280-413243/11 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD05 280-413243/12 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
STD10 280-413243/13 IC		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD30 280-413243/14 IC		8260B		20 mL	20 mL	1 uL	2.4 uL		
STD60 280-413243/15 IC		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-413243/16		8260B		20 mL	20 mL	1 uL	0.8 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413564 Batch Start Date: 05/02/18 22:10 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00034	MV-568718-D 00010	MV-ARCH SS A 00095	MV-BFB 00025
BFB 280-413564/1		8260B		1 uL	1 uL				1 uL
STD003 280-413564/11 IC		8260B		20 mL	20 mL	0.15 uL	1 uL	0.024 uL	
STD01 280-413564/12 IC		8260B		20 mL	20 mL	0.5 uL	1 uL	0.08 uL	
STD02 280-413564/13 IC		8260B		20 mL	20 mL	1 uL	1 uL	0.16 uL	
STD05 280-413564/14 IC		8260B		20 mL	20 mL	2.5 uL	1 uL	0.4 uL	
ICIS 280-413564/15		8260B		20 mL	20 mL	5 uL	1 uL	0.8 uL	
STD30 280-413564/16 IC		8260B		20 mL	20 mL	15 uL	1 uL	2.4 uL	
STD60 280-413564/17 IC		8260B		20 mL	20 mL	30 uL	1 uL	4.8 uL	
ICV 280-413564/18		8260B		20 mL	20 mL		1 uL	0.8 uL	
STD003 280-413564/19 IC		8260B		20 mL	20 mL		1 uL		
STD01 280-413564/20 IC		8260B		20 mL	20 mL		1 uL		
STD02 280-413564/21 IC		8260B		20 mL	20 mL		1 uL		
STD05 280-413564/22 IC		8260B		20 mL	20 mL		1 uL		
STD10 280-413564/23 IC		8260B		20 mL	20 mL		1 uL		
STD30 280-413564/24 IC		8260B		20 mL	20 mL		1 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413564 Batch Start Date: 05/02/18 22:10 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00034	MV-568718-D 00010	MV-ARCH SS A 00095	MV-BFB 00025
STD60 280-413564/25 IC		8260B		20 mL	20 mL		1 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00072	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00043		
BFB 280-413564/1		8260B							
STD003 280-413564/11 IC		8260B			0.15 uL				
STD01 280-413564/12 IC		8260B			0.5 uL				
STD02 280-413564/13 IC		8260B			1 uL				
STD05 280-413564/14 IC		8260B			2.5 uL				
ICIS 280-413564/15		8260B			5 uL				
STD30 280-413564/16 IC		8260B			15 uL				
STD60 280-413564/17 IC		8260B			30 uL				
ICV 280-413564/18		8260B				5 uL	5 uL		
STD003 280-413564/19 IC		8260B		0.15 uL					
STD01 280-413564/20 IC		8260B		0.5 uL					
STD02 280-413564/21 IC		8260B		1 uL					
STD05 280-413564/22 IC		8260B		2.5 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413564 Batch Start Date: 05/02/18 22:10 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00072	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00043		
STD10 280-413564/23 IC		8260B		5 uL					
STD30 280-413564/24 IC		8260B		15 uL					
STD60 280-413564/25 IC		8260B		30 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413691 Batch Start Date: 05/03/18 18:24 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00034	MV-568718-D 00014	MV-ARCH SS A 00095	MV-BFB 00025
BFB 280-413691/1		8260B		1 uL	1 uL				1 uL
CCV 280-413691/2		8260B		20 mL	20 mL	5 uL	1 uL	0.8 uL	
CCV 280-413691/3		8260B		20 mL	20 mL		1 uL		
CCV 280-413691/4		8260B		20 mL	20 mL		1 uL		
LCS 280-413691/6		8260B		20 mL	20 mL		1 uL	0.8 uL	
MB 280-413691/8		8260B		20 mL	20 mL		1 uL	0.8 uL	
LCS 280-413691/12		8260B		20 mL	20 mL		1 uL	0.8 uL	
LCSD 280-413691/13		8260B		20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-1	775VMW-5_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-2	775VMW-5_0418a	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-3	775VMW-6_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-4	775VMW-8_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-5	775MW-27_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-6	775EW-1R_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
280-108840-A-8	775TB_041918	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
CCVC 280-413691/37		8260B		20 mL	20 mL	5 uL	1 uL	0.8 uL	
CCVC 280-413691/38		8260B		20 mL	20 mL		1 uL	0.8 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00072	MV-Gas/Ket B 00041	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00043	MV-Supp A 00029
BFB 280-413691/1		8260B							
CCV 280-413691/2		8260B		5 uL		5 uL			
CCV 280-413691/3		8260B							5 uL
CCV 280-413691/4		8260B				5 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413691 Batch Start Date: 05/03/18 18:24 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00072	MV-Gas/Ket B 00041	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00043	MV-Supp A 00029
LCS 280-413691/6		8260B			2.5 uL		2.5 uL	2.5 uL	
MB 280-413691/8		8260B							
LCS 280-413691/12		8260B							
LCSD 280-413691/13		8260B							
280-108840-A-1	775VMW-5_0418	8260B	T						
280-108840-A-2	775VMW-5_0418a	8260B	T						
280-108840-A-3	775VMW-6_0418	8260B	T						
280-108840-A-4	775VMW-8_0418	8260B	T						
280-108840-A-5	775MW-27_0418	8260B	T						
280-108840-A-6	775EW-1R_0418	8260B	T						
280-108840-A-8	775TB_041918	8260B	T						
CCVC 280-413691/37		8260B		5 uL		5 uL			
CCVC 280-413691/38		8260B							5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00020					
BFB 280-413691/1		8260B							
CCV 280-413691/2		8260B							
CCV 280-413691/3		8260B							
CCV 280-413691/4		8260B							
LCS 280-413691/6		8260B							
MB 280-413691/8		8260B							
LCS 280-413691/12		8260B		2.5 uL					
LCSD 280-413691/13		8260B		2.5 uL					
280-108840-A-1	775VMW-5_0418	8260B	T						
280-108840-A-2	775VMW-5_0418a	8260B	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413691 Batch Start Date: 05/03/18 18:24 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00020					
280-108840-A-3	775VMW-6_0418	8260B	T						
280-108840-A-4	775VMW-8_0418	8260B	T						
280-108840-A-5	775MW-27_0418	8260B	T						
280-108840-A-6	775EW-1R_0418	8260B	T						
280-108840-A-8	775TB_041918	8260B	T						
CCVC 280-413691/37		8260B							
CCVC 280-413691/38		8260B							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413693 Batch Start Date: 05/03/18 19:36 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-BFB 00025	MV-Gas/Ket B 00041	
BFB 280-413693/1		8260B		1 uL	1 uL		1 uL		
ICV 280-413693/2		8260B		20 mL	20 mL	1 uL		5 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-108840-1

SDG No.:

Batch Number: 413840 Batch Start Date: 05/04/18 19:36 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-2cleve+AVA 00034	MV-568718-D 00010	MV-ARCH SS A 00093	MV-BFB 00025
BFB 280-413840/1		8260B		1 uL	1 uL				1 uL
CCV 280-413840/2		8260B		20 mL	20 mL	5 uL	1 uL		
CCV 280-413840/3		8260B		20 mL	20 mL		1 uL	0.8 uL	
LCS 280-413840/4		8260B		20 mL	20 mL		1 uL	0.8 uL	
MB 280-413840/6		8260B		20 mL	20 mL		1 uL	0.8 uL	
280-108840-B-4	775VMW-8_0418	8260B	T	20 mL	20 mL		1 uL	0.8 uL	
CCVC 280-413840/14		8260B		20 mL	20 mL	5 uL	1 uL	0.8 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas/Ket A 00070	MV-Gas/Ket B 00041	MV-Main A 00036	MV-Main B 00020	MV-SS 2-Cleve 00043	MV-Supp A 00029
BFB 280-413840/1		8260B							
CCV 280-413840/2		8260B		5 uL		5 uL			
CCV 280-413840/3		8260B							5 uL
LCS 280-413840/4		8260B			2.5 uL		2.5 uL	2.5 uL	
MB 280-413840/6		8260B							
280-108840-B-4	775VMW-8_0418	8260B	T						
CCVC 280-413840/14		8260B		5 uL		5 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Josh Cranlund	Lab PM: Rothmeyer, Stephanie K	Carrier Tracking No(s):	COC No: 280-73683-24465.1
Client Contact: Marcia Olive	Phone: 315-552-9764	E-Mail: stephanie.rothmeyer@testamericainc.com		Page: Page __ of __
Company: Bhate Environmental				Job #:
Address: 445 Union Blvd Ste.129	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80226				
Phone: 303-597-2450(Tel)	PO #: Purchase Order not required			
Email: molive@bhate.com	WO #:			
Project Name: Griffiss AFB, NY - SD052 Performance Mon	Project #: 28015823			
Site: SD052-02	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_DOD8 - Total VOCs - LTM QAPP List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
775VMW-5_0418	04.19.18	15:48	G	W	N	N	✓		
775VMW-5_0418a	04.19.18	15:48	G	W	N	N	✓		
775VMW-6_0418	04.19.18	12:55	G	W	N	N	✓		
775VMW-8_0418	04.19.18	11:25	G	W	N	N	✓		
775MW-27_0418	04.19.18	14:25	G	W	N	N	✓		
775EW-1R_0418	04.19.18	14.45	G	W	N	N	✓		3% Potassium Permanganate 1 drop
775AB_041918	04.19.18	11:30	AB	W	N	N	✓		
775TB_041918	04.19.18	—	TB	W	N	N	✓		

280-108840 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) IV

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Josh Cranlund	04.20.18	Versar	Red Fe	4-21-18 0845	TH-Pem
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.6 IR4 8.0 Transfer RP 4-21-18

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-108840-1

Login Number: 108840
List Number: 1
Creator: Burtness, Benjamin W

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Griffiss Air Force Base, New York, on September 6 and 7, 2018. Three aqueous samples, three field duplicate, and associated quality control (QC) blank were collected from site SD052-02 Building 775. All analyses were performed by TestAmerica Laboratories, Inc., Arvada, Colorado. The specific samples included in this validation were:

Sample Identification	Matrix	Collection Date	Lab Package	Analyses (USEPA Method Number)
BH1-10	Water	9/6/18	280-114110	VOCs (SW8260B)*
BH1-10-dup				
BH2-5		9/7/18		
BH2-5-dup				
775MW-6				Dissolved Fe/Mn (6010C/6020A)
775MW-6-dup				
Trip Blank		9/6/18		VOCs (SW8260B)*

Notes: USEPA – United States Environmental Protection Agency, VOCs – Volatile Organic Compounds, Fe/Mn – Iron/Manganese, SW – Solid Waste
*TestAmerica Denver holds both Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) and New York National Environmental Laboratory Accreditation Program (NELAP) certifications for method 8260B. The reporting limits for all analytes are much lower by 8260B compared to 8260C.

This data was validated against the laboratory's quality assurance (QA)/QC limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, January 2017), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, January 2017), and per requirements of the DoD Quality Systems Manual (QSM), Version 5.0, as specified in the project-specific Quality Assurance Project Plan (QAPP).

Sample Handling and Holding Times

The samples were properly preserved and transferred under chain-of-custody to the laboratory for analysis and analyzed within the required holding time.

Method Blank

Toluene was detected in the trip blank. Samples BH1-10 and BH1-10-dup reported low level detections that was qualified as non-detect, "UB", and considered an artifact of blank contamination.

Blank Spike Sample (Laboratory Control Sample)/Surrogates

The laboratory control sample (LCS)/LCS duplicate (LCSD) recoveries were within control limits for all analytes but the relative percent different (RPD) between the two was above control limits for 2-butanone and acetone in samples BH2-5 and BH2-5-dup. These compounds were qualified and flagged "J/UJ".

The surrogate recoveries were within control limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

The MS/MSD recoveries, when reported, were within control limits.

Project Specific Quality Assurance/Quality Control

The RPD between sample BH1-10 and its duplicate was outside project defined control limits for acetone. Manganese was outside RPD control limits between sample 775MW-6 and its duplicate. These compounds were all flagged estimated "J".

Calibration Verification Data

The continuing calibration verification (CCV) was within control limits.

Overall Assessment of Data

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Results

Sample Identification	Compound	Result and Qualifier (µg/L)	Reason Code
BH1-10	Acetone Toluene	13 J 0.19 UB	FD RPD TB
BH1-10-dup	Acetone Toluene	21 J 0.18 UB	FD RPD TB
775MW-6	Manganese	45 J	FD RPD
775MW-6-dup	Manganese	74 J	FD RPD
BH2-5	2-Butanone Acetone	4.0 UJ 6.9 J	LCS/LCSD RPD
BH2-5-dup	2-Butanone Acetone	4.0 UJ 7.0 J	LCS/LCSD RPD

Notes: µg/L – micrograms per liter; FD RPD – Field duplicate relative percent difference exceeded; TB – Trip Blank; LCS/LCSD RPD – Laboratory Control Sample/Laboratory Control Sample Duplicate Relative Percent Difference

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-114110-1

Job Description: Griffiss AFB, NY (BRAC Eastern)

For:
Bhate Environmental
445 Union Blvd Ste.129
Lakewood, CO 80226

Attention: Marcia Olive



Approved for release.
Jamie N Ide
Project Manager I
9/27/2018 10:42 AM

Jamie N Ide, Project Manager I
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0126
jamie.ide@testamericainc.com
09/27/2018

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

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

CASE NARRATIVE
Client: Bhate Environmental
Project: Griffiss AFB, NY (BRAC Eastern)
Report Number: 280-114110-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 9/8/2018 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples Trip Blank (280-114110-1), BH1-10 (280-114110-2), BH2-5 (280-114110-3), BH1-10-dup (280-114110-5) and BH2-5-dup (280-114110-6) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 09/19/2018 and 09/20/2018.

2-Butanone (MEK) and Acetone exceeded the RPD limit for LCSD 280-430312/5. The associated LCS/LCSD spike recoveries were in control. The associated data has been flagged “Q”. Refer to the QC report for details.

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

DISSOLVED METALS (ICP)
Samples 775MW-6 (280-114110-4) and 775MW-6-dup (280-114110-7) were analyzed for Dissolved Metals (ICP) in accordance with 6010C. The samples were prepared on 09/20/2018 and analyzed on 09/21/2018.

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

DISSOLVED METALS (ICP/MS)
Samples 775MW-6 (280-114110-4) and 775MW-6-dup (280-114110-7) were analyzed for dissolved metals (ICP/MS) in accordance with 6020A. The samples were prepared on 09/12/2018 and analyzed on 09/20/2018.

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

Detection Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Client Sample ID: Trip Blank — Lab Sample ID: 280-114110-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.19	J	1.0	0.17	ug/L	1		8260B	Total/NA

Client Sample ID: BH1-10 — Lab Sample ID: 280-114110-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.33	J	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	13		10	1.9	ug/L	1		8260B	Total/NA
Chloroform	1.4		1.0	0.16	ug/L	1		8260B	Total/NA
Toluene	0.19	J	1.0	0.17	ug/L	1		8260B	Total/NA
Trichloroethene	25		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: BH2-5 — Lab Sample ID: 280-114110-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.39	J	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	6.9	J Q	10	1.9	ug/L	1		8260B	Total/NA
Chloroform	0.94	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	56		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-6 — Lab Sample ID: 280-114110-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Manganese	45		3.5	0.31	ug/L	1		6020A	Dissolved

Client Sample ID: BH1-10-dup — Lab Sample ID: 280-114110-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.31	J	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	21		10	1.9	ug/L	1		8260B	Total/NA
Chloroform	1.4		1.0	0.16	ug/L	1		8260B	Total/NA
Toluene	0.18	J	1.0	0.17	ug/L	1		8260B	Total/NA
Trichloroethene	24		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: BH2-5-dup — Lab Sample ID: 280-114110-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.0	J Q	10	1.9	ug/L	1		8260B	Total/NA
Chloroform	0.87	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	50		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-6-dup — Lab Sample ID: 280-114110-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Manganese	74		3.5	0.31	ug/L	1		6020A	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: Trip Blank
Lab Sample ID: 280-114110-1

Date Collected: 09/06/18 09:00
Matrix: Water

Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 11:28	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 11:28	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/19/18 11:28	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/19/18 11:28	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/19/18 11:28	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 11:28	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 11:28	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			09/19/18 11:28	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 11:28	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/19/18 11:28	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/19/18 11:28	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/19/18 11:28	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/19/18 11:28	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/19/18 11:28	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/19/18 11:28	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 11:28	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/19/18 11:28	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/19/18 11:28	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 11:28	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			09/19/18 11:28	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/19/18 11:28	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/19/18 11:28	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/19/18 11:28	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/19/18 11:28	1
Acetone	6.4	U	10	1.9	ug/L			09/19/18 11:28	1
Benzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/19/18 11:28	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/19/18 11:28	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/19/18 11:28	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/19/18 11:28	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/19/18 11:28	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/19/18 11:28	1
Chloroform	0.40	U M	1.0	0.16	ug/L			09/19/18 11:28	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/19/18 11:28	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 11:28	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/19/18 11:28	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/19/18 11:28	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/19/18 11:28	1

Client Sample ID: Trip Blank
Lab Sample ID: 280-114110-1
Date Collected: 09/06/18 09:00
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/19/18 11:28	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/19/18 11:28	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/19/18 11:28	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/19/18 11:28	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			09/19/18 11:28	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/19/18 11:28	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/19/18 11:28	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/19/18 11:28	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
Styrene	0.40	U	1.0	0.17	ug/L			09/19/18 11:28	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/19/18 11:28	1
Toluene	**0.19**	**J**	1.0	0.17	ug/L			09/19/18 11:28	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 11:28	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 11:28	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			09/19/18 11:28	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/19/18 11:28	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/19/18 11:28	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/19/18 11:28	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/19/18 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*09/19/18 11:28*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*09/19/18 11:28*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*09/19/18 11:28*	*1*
Toluene-d8 (Surr)	*108*		*89 - 112*		*09/19/18 11:28*	*1*

Client Sample ID: BH1-10
Lab Sample ID: 280-114110-2
Date Collected: 09/06/18 09:00
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 11:50	1
1,1,1-Trichloroethane	**0.33**	**J**	1.0	0.16	ug/L			09/19/18 11:50	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 11:50	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/19/18 11:50	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/19/18 11:50	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/19/18 11:50	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 11:50	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 11:50	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			09/19/18 11:50	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 11:50	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/19/18 11:50	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/19/18 11:50	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/19/18 11:50	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/19/18 11:50	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/19/18 11:50	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/19/18 11:50	1

Client Sample ID: BH1-10
Date Collected: 09/06/18 09:00
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 11:50	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/19/18 11:50	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/19/18 11:50	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 11:50	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			09/19/18 11:50	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/19/18 11:50	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/19/18 11:50	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/19/18 11:50	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/19/18 11:50	1
Acetone	**13**		10	1.9	ug/L			09/19/18 11:50	1
Benzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/19/18 11:50	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/19/18 11:50	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/19/18 11:50	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/19/18 11:50	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/19/18 11:50	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/19/18 11:50	1
Chloroform	**1.4**		1.0	0.16	ug/L			09/19/18 11:50	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/19/18 11:50	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 11:50	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/19/18 11:50	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/19/18 11:50	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/19/18 11:50	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/19/18 11:50	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/19/18 11:50	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/19/18 11:50	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/19/18 11:50	1
Methylene Chloride	0.80	U M	5.0	0.32	ug/L			09/19/18 11:50	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/19/18 11:50	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/19/18 11:50	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/19/18 11:50	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
Styrene	0.40	U	1.0	0.17	ug/L			09/19/18 11:50	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 11:50	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/19/18 11:50	1
Toluene	**0.19**	**J**	1.0	0.17	ug/L			09/19/18 11:50	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 11:50	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 11:50	1

Client Sample ID: BH1-10
Lab Sample ID: 280-114110-2
Date Collected: 09/06/18 09:00
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**25**		1.0	0.16	ug/L			09/19/18 11:50	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/19/18 11:50	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/19/18 11:50	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/19/18 11:50	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/19/18 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*09/19/18 11:50*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*09/19/18 11:50*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*09/19/18 11:50*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*09/19/18 11:50*	*1*

Client Sample ID: BH2-5
Lab Sample ID: 280-114110-3
Date Collected: 09/07/18 08:15
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 16:16	1
1,1,1-Trichloroethane	**0.39**	**J**	1.0	0.16	ug/L			09/20/18 16:16	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 16:16	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/20/18 16:16	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/20/18 16:16	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/20/18 16:16	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 16:16	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 16:16	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.33	ug/L			09/20/18 16:16	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 16:16	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/20/18 16:16	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/20/18 16:16	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/20/18 16:16	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/20/18 16:16	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/20/18 16:16	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/20/18 16:16	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 16:16	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/20/18 16:16	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/20/18 16:16	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 16:16	1
2-Butanone (MEK)	4.0	U Q	6.0	2.0	ug/L			09/20/18 16:16	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/20/18 16:16	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/20/18 16:16	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/20/18 16:16	1
4-Methyl-2-pentanone (MIBK)	3.2	U M	5.0	0.98	ug/L			09/20/18 16:16	1
Acetone	**6.9**	**J Q**	10	1.9	ug/L			09/20/18 16:16	1
Benzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/20/18 16:16	1

Client Sample ID: BH2-5
Lab Sample ID: 280-114110-3
Date Collected: 09/07/18 08:15
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/20/18 16:16	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/20/18 16:16	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/20/18 16:16	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/20/18 16:16	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/20/18 16:16	1
Chloroform	**0.94**	**J**	1.0	0.16	ug/L			09/20/18 16:16	1
Chloromethane	0.80	U M	2.0	0.30	ug/L			09/20/18 16:16	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 16:16	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/20/18 16:16	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/20/18 16:16	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/20/18 16:16	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/20/18 16:16	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/20/18 16:16	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/20/18 16:16	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/20/18 16:16	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			09/20/18 16:16	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/20/18 16:16	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/20/18 16:16	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/20/18 16:16	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
Styrene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:16	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/20/18 16:16	1
Toluene	0.40	U	1.0	0.17	ug/L			09/20/18 16:16	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 16:16	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 16:16	1
Trichloroethene	**56**		1.0	0.16	ug/L			09/20/18 16:16	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/20/18 16:16	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/20/18 16:16	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/20/18 16:16	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/20/18 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*09/20/18 16:16*	*1*
4-Bromofluorobenzene (Surr)	*88*		*85 - 114*		*09/20/18 16:16*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*09/20/18 16:16*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*09/20/18 16:16*	*1*

Client Sample ID: 775MW-6
Lab Sample ID: 280-114110-4

Date Collected: 09/07/18 09:07
Matrix: Water
Date Received: 09/08/18 08:45

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	85	U	100	22	ug/L		09/20/18 18:00	09/21/18 20:03	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**45**		3.5	0.31	ug/L		09/12/18 16:14	09/20/18 11:56	1

Client Sample ID: BH1-10-dup
Lab Sample ID: 280-114110-5

Date Collected: 09/06/18 09:00
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 12:12	1
1,1,1-Trichloroethane	**0.31**	**J**	1.0	0.16	ug/L			09/19/18 12:12	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 12:12	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/19/18 12:12	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/19/18 12:12	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/19/18 12:12	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 12:12	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 12:12	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			09/19/18 12:12	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 12:12	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/19/18 12:12	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/19/18 12:12	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/19/18 12:12	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/19/18 12:12	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/19/18 12:12	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/19/18 12:12	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 12:12	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/19/18 12:12	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/19/18 12:12	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 12:12	1
2-Butanone (MEK)	4.0	U M	6.0	2.0	ug/L			09/19/18 12:12	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/19/18 12:12	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/19/18 12:12	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/19/18 12:12	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/19/18 12:12	1
Acetone	**21**		10	1.9	ug/L			09/19/18 12:12	1
Benzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/19/18 12:12	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/19/18 12:12	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/19/18 12:12	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/19/18 12:12	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/19/18 12:12	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1

Client Sample ID: BH1-10-dup
Lab Sample ID: 280-114110-5
Date Collected: 09/06/18 09:00
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	1.6	U	2.0	0.41	ug/L			09/19/18 12:12	1
Chloroform	**1.4**		1.0	0.16	ug/L			09/19/18 12:12	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/19/18 12:12	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 12:12	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/19/18 12:12	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/19/18 12:12	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/19/18 12:12	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/19/18 12:12	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/19/18 12:12	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/19/18 12:12	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/19/18 12:12	1
Methylene Chloride	0.80	U M	5.0	0.32	ug/L			09/19/18 12:12	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/19/18 12:12	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/19/18 12:12	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/19/18 12:12	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
Styrene	0.40	U	1.0	0.17	ug/L			09/19/18 12:12	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 12:12	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/19/18 12:12	1
Toluene	**0.18**	**J**	1.0	0.17	ug/L			09/19/18 12:12	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 12:12	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 12:12	1
Trichloroethene	**24**		1.0	0.16	ug/L			09/19/18 12:12	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/19/18 12:12	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/19/18 12:12	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/19/18 12:12	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/19/18 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*09/19/18 12:12*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*09/19/18 12:12*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*09/19/18 12:12*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*09/19/18 12:12*	*1*

Client Sample ID: BH2-5-dup
Lab Sample ID: 280-114110-6
Date Collected: 09/07/18 08:15
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 16:37	1
1,1,1-Trichloroethane	0.40	U M	1.0	0.16	ug/L			09/20/18 16:37	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 16:37	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/20/18 16:37	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/20/18 16:37	1

Client Sample ID: BH2-5-dup
Lab Sample ID: 280-114110-6

Date Collected: 09/07/18 08:15
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/20/18 16:37	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 16:37	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 16:37	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			09/20/18 16:37	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 16:37	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/20/18 16:37	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/20/18 16:37	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/20/18 16:37	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/20/18 16:37	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/20/18 16:37	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/20/18 16:37	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 16:37	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/20/18 16:37	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/20/18 16:37	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 16:37	1
2-Butanone (MEK)	4.0	U Q	6.0	2.0	ug/L			09/20/18 16:37	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/20/18 16:37	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/20/18 16:37	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/20/18 16:37	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/20/18 16:37	1
Acetone	**7.0**	**J Q**	10	1.9	ug/L			09/20/18 16:37	1
Benzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/20/18 16:37	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/20/18 16:37	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/20/18 16:37	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/20/18 16:37	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/20/18 16:37	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/20/18 16:37	1
Chloroform	**0.87**	**J**	1.0	0.16	ug/L			09/20/18 16:37	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/20/18 16:37	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 16:37	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/20/18 16:37	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/20/18 16:37	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/20/18 16:37	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/20/18 16:37	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/20/18 16:37	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/20/18 16:37	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/20/18 16:37	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			09/20/18 16:37	1

Client Sample ID: BH2-5-dup
Lab Sample ID: 280-114110-6
Date Collected: 09/07/18 08:15
Matrix: Water
Date Received: 09/08/18 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.80	U	1.0	0.22	ug/L			09/20/18 16:37	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/20/18 16:37	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/20/18 16:37	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
Styrene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 16:37	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/20/18 16:37	1
Toluene	0.40	U	1.0	0.17	ug/L			09/20/18 16:37	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 16:37	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 16:37	1
Trichloroethene	**50**		1.0	0.16	ug/L			09/20/18 16:37	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/20/18 16:37	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/20/18 16:37	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/20/18 16:37	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/20/18 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*09/20/18 16:37*	*1*
4-Bromofluorobenzene (Surr)	*85*		*85 - 114*		*09/20/18 16:37*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*09/20/18 16:37*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*09/20/18 16:37*	*1*

Client Sample ID: 775MW-6-dup
Lab Sample ID: 280-114110-7
Date Collected: 09/07/18 09:07
Matrix: Water
Date Received: 09/08/18 08:45

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	85	U	100	22	ug/L		09/20/18 18:00	09/21/18 20:21	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**74**		3.5	0.31	ug/L		09/12/18 16:14	09/20/18 11:59	1

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.27	ug/L	8260B
1,1-Dichloroethane	1.0	0.22	ug/L	8260B
1,1-Dichloroethene	1.0	0.23	ug/L	8260B
1,1-Dichloropropene	1.0	0.19	ug/L	8260B
1,2,3-Trichlorobenzene	1.0	0.21	ug/L	8260B
1,2,3-Trichloropropane	3.0	0.33	ug/L	8260B
1,2,4-Trichlorobenzene	1.0	0.21	ug/L	8260B
1,2,4-Trimethylbenzene	1.0	0.15	ug/L	8260B
1,2-Dibromo-3-Chloropropane	5.0	0.47	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichlorobenzene	1.0	0.15	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.24	ug/L	8260B
1,2-Dichloropropane	1.0	0.18	ug/L	8260B
1,3,5-Trimethylbenzene	1.0	0.16	ug/L	8260B
1,3-Dichlorobenzene	1.0	0.13	ug/L	8260B
1,3-Dichloropropane	1.0	0.22	ug/L	8260B
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260B
2,2-Dichloropropane	1.0	0.18	ug/L	8260B
2-Butanone (MEK)	6.0	2.0	ug/L	8260B
2-Chlorotoluene	1.0	0.17	ug/L	8260B
2-Hexanone	5.0	1.7	ug/L	8260B
4-Chlorotoluene	1.0	0.21	ug/L	8260B
4-Isopropyltoluene	1.0	0.20	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Dibromomethane	1.0	0.17	ug/L	8260B
Dichlorodifluoromethane	2.0	0.31	ug/L	8260B
Diisopropyl ether	10	0.74	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Hexachlorobutadiene	1.0	0.36	ug/L	8260B
Isopropylbenzene	1.0	0.19	ug/L	8260B
m,p-Xylene	2.0	0.34	ug/L	8260B
Methyl iodide	2.0	0.23	ug/L	8260B

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units	Method
Methyl tert-butyl ether	5.0	0.25	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Naphthalene	1.0	0.22	ug/L	8260B
n-Butylbenzene	1.0	0.32	ug/L	8260B
N-Propylbenzene	1.0	0.16	ug/L	8260B
o-Xylene	1.0	0.19	ug/L	8260B
sec-Butylbenzene	1.0	0.17	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
tert-Butylbenzene	1.0	0.16	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Trichlorofluoromethane	2.0	0.29	ug/L	8260B
Vinyl acetate	3.0	0.94	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	1.0	0.19	ug/L	8260B

Method: 6010C - Metals (ICP) - Dissolved

Prep: 3005A

Analyte	LOQ	DL	Units	Method
Iron	100	22	ug/L	6010C

Method: 6020A - Metals (ICP/MS) - Dissolved

Prep: 3005A

Analyte	LOQ	DL	Units	Method
Manganese	3.5	0.31	ug/L	6020A

Surrogate Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-114110-1	Trip Blank	93	104	101	108
280-114110-2	BH1-10	95	97	100	100
280-114110-3	BH2-5	103	88	107	98
280-114110-5	BH1-10-dup	93	95	98	96
280-114110-6	BH2-5-dup	100	85	106	97
LCS 280-430151/33	Lab Control Sample	103	96	105	100
LCS 280-430151/4	Lab Control Sample	96	89	96	105
LCS 280-430312/32	Lab Control Sample	93	99	95	97
LCS 280-430312/4	Lab Control Sample	90	100	94	102
LCSD 280-430312/5	Lab Control Sample Dup	96	102	98	101
MB 280-430151/6	Method Blank	100	99	104	102
MB 280-430312/6	Method Blank	99	97	99	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-430151/6
Matrix: Water
Analysis Batch: 430151

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 10:58	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/19/18 10:58	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/19/18 10:58	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/19/18 10:58	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/19/18 10:58	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 10:58	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 10:58	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			09/19/18 10:58	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/19/18 10:58	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/19/18 10:58	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/19/18 10:58	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/19/18 10:58	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/19/18 10:58	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/19/18 10:58	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/19/18 10:58	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 10:58	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/19/18 10:58	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/19/18 10:58	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/19/18 10:58	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			09/19/18 10:58	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/19/18 10:58	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/19/18 10:58	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/19/18 10:58	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/19/18 10:58	1
Acetone	6.4	U	10	1.9	ug/L			09/19/18 10:58	1
Benzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/19/18 10:58	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/19/18 10:58	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/19/18 10:58	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/19/18 10:58	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/19/18 10:58	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/19/18 10:58	1
Chloroform	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/19/18 10:58	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 10:58	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/19/18 10:58	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/19/18 10:58	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-430151/6
Matrix: Water
Analysis Batch: 430151

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/19/18 10:58	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/19/18 10:58	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/19/18 10:58	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/19/18 10:58	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/19/18 10:58	1
Methylene Chloride	0.80	U M	5.0	0.32	ug/L			09/19/18 10:58	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/19/18 10:58	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/19/18 10:58	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/19/18 10:58	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
Styrene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/19/18 10:58	1
Toluene	0.40	U	1.0	0.17	ug/L			09/19/18 10:58	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/19/18 10:58	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/19/18 10:58	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			09/19/18 10:58	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/19/18 10:58	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/19/18 10:58	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/19/18 10:58	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/19/18 10:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*09/19/18 10:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*09/19/18 10:58*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*09/19/18 10:58*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*09/19/18 10:58*	*1*

Lab Sample ID: LCS 280-430151/33
Matrix: Water
Analysis Batch: 430151

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diisopropyl ether			4.00	4.36	J	ug/L		109	67 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Lab Sample ID: LCS 280-430151/4
Matrix: Water
Analysis Batch: 430151

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1,2-Tetrachloroethane			5.00	4.73		ug/L		95	78 - 124		

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-430151/4
Matrix: Water
Analysis Batch: 430151

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.76		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.66		ug/L		93	71 - 121
1,1,2-Trichloroethane	5.00	4.87		ug/L		97	80 - 119
1,1-Dichloroethane	5.00	4.91		ug/L		98	77 - 125
1,1-Dichloroethene	5.00	4.77		ug/L		95	71 - 131
1,1-Dichloropropene	5.00	4.65		ug/L		93	79 - 125
1,2,3-Trichlorobenzene	5.00	4.38		ug/L		88	69 - 129
1,2,3-Trichloropropane	5.00	4.78		ug/L		96	73 - 122
1,2,4-Trichlorobenzene	5.00	4.29		ug/L		86	69 - 130
1,2,4-Trimethylbenzene	5.00	4.21		ug/L		84	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	4.53	J	ug/L		91	62 - 128
1,2-Dibromoethane	5.00	4.79		ug/L		96	77 - 121
1,2-Dichlorobenzene	5.00	4.17		ug/L		83	80 - 119
1,2-Dichloroethane	5.00	4.92		ug/L		98	73 - 128
1,2-Dichloroethene, Total	10.0	9.45		ug/L		95	79 - 121
1,2-Dichloropropane	5.00	4.90		ug/L		98	78 - 122
1,3,5-Trimethylbenzene	5.00	4.28		ug/L		86	75 - 124
1,3-Dichlorobenzene	5.00	4.24		ug/L		85	80 - 119
1,3-Dichloropropane	5.00	4.70		ug/L		94	80 - 119
1,4-Dichlorobenzene	5.00	4.21		ug/L		84	79 - 118
2,2-Dichloropropane	5.00	4.74		ug/L		95	60 - 139
2-Butanone (MEK)	20.0	20.8		ug/L		104	56 - 143
2-Chlorotoluene	5.00	4.21		ug/L		84	79 - 122
2-Hexanone	20.0	20.6		ug/L		103	57 - 139
4-Chlorotoluene	5.00	4.49		ug/L		90	78 - 122
4-Isopropyltoluene	5.00	4.20		ug/L		84	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	20.1		ug/L		101	67 - 130
Acetone	20.0	22.6		ug/L		113	39 - 160
Benzene	5.00	4.58		ug/L		92	79 - 120
Bromobenzene	5.00	4.38		ug/L		88	80 - 120
Bromochloromethane	5.00	4.85		ug/L		97	78 - 123
Bromodichloromethane	5.00	4.84		ug/L		97	79 - 125
Bromoform	5.00	4.89		ug/L		98	66 - 130
Bromomethane	5.00	5.09		ug/L		102	53 - 141
Carbon disulfide	5.00	4.49		ug/L		90	64 - 133
Carbon tetrachloride	5.00	4.66		ug/L		93	72 - 136
Chlorobenzene	5.00	4.63		ug/L		93	82 - 118
Chloroethane	5.00	5.27		ug/L		105	60 - 138
Chloroform	5.00	4.87		ug/L		97	79 - 124
Chloromethane	5.00	4.88		ug/L		98	50 - 139
cis-1,2-Dichloroethene	5.00	4.73		ug/L		95	78 - 123
cis-1,3-Dichloropropene	5.00	4.80		ug/L		96	75 - 124
Dibromochloromethane	5.00	4.66		ug/L		93	74 - 126
Dibromomethane	5.00	4.79		ug/L		96	79 - 123
Dichlorodifluoromethane	5.00	4.64		ug/L		93	32 - 152
Ethylbenzene	5.00	4.39		ug/L		88	79 - 121
Hexachlorobutadiene	5.00	4.07		ug/L		81	66 - 134
Isopropylbenzene	5.00	4.37		ug/L		87	72 - 131

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-430151/4
Matrix: Water
Analysis Batch: 430151

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m,p-Xylene	5.00	4.57		ug/L		91	80 - 121
Methyl iodide	5.00	4.76		ug/L		95	69 - 131
Methyl tert-butyl ether	5.00	4.87	J	ug/L		97	71 - 124
Methylene Chloride	5.00	4.47	J	ug/L		89	74 - 124
Naphthalene	5.00	4.74		ug/L		95	61 - 128
n-Butylbenzene	5.00	4.37		ug/L		87	75 - 128
N-Propylbenzene	5.00	4.17		ug/L		83	76 - 126
o-Xylene	5.00	4.31		ug/L		86	78 - 122
sec-Butylbenzene	5.00	4.12		ug/L		82	77 - 126
Styrene	5.00	4.22		ug/L		84	78 - 123
tert-Butylbenzene	5.00	4.14		ug/L		83	78 - 124
Tetrachloroethene	5.00	4.40		ug/L		88	74 - 129
Toluene	5.00	4.51		ug/L		90	80 - 121
trans-1,2-Dichloroethene	5.00	4.72		ug/L		94	75 - 124
trans-1,3-Dichloropropene	5.00	4.92		ug/L		98	73 - 127
Trichloroethene	5.00	4.68		ug/L		94	79 - 123
Trichlorofluoromethane	5.00	5.30		ug/L		106	65 - 141
Vinyl acetate	10.0	10.2		ug/L		102	54 - 146
Vinyl chloride	5.00	5.27		ug/L		105	58 - 137
Xylenes, Total	10.0	8.88		ug/L		89	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*

Lab Sample ID: MB 280-430312/6
Matrix: Water
Analysis Batch: 430312

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 11:49	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			09/20/18 11:49	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			09/20/18 11:49	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			09/20/18 11:49	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			09/20/18 11:49	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 11:49	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 11:49	1
1,2,3-Trichloropropane	0.80	U M	3.0	0.33	ug/L			09/20/18 11:49	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			09/20/18 11:49	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			09/20/18 11:49	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			09/20/18 11:49	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			09/20/18 11:49	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			09/20/18 11:49	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			09/20/18 11:49	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			09/20/18 11:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-430312/6
Matrix: Water
Analysis Batch: 430312

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 11:49	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			09/20/18 11:49	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			09/20/18 11:49	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			09/20/18 11:49	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			09/20/18 11:49	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			09/20/18 11:49	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			09/20/18 11:49	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			09/20/18 11:49	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			09/20/18 11:49	1
Acetone	6.4	U	10	1.9	ug/L			09/20/18 11:49	1
Benzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			09/20/18 11:49	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Bromoform	0.40	U	1.0	0.19	ug/L			09/20/18 11:49	1
Bromomethane	0.80	U	2.0	0.21	ug/L			09/20/18 11:49	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			09/20/18 11:49	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			09/20/18 11:49	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Chloroethane	1.6	U	2.0	0.41	ug/L			09/20/18 11:49	1
Chloroform	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Chloromethane	0.80	U	2.0	0.30	ug/L			09/20/18 11:49	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 11:49	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			09/20/18 11:49	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			09/20/18 11:49	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			09/20/18 11:49	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			09/20/18 11:49	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			09/20/18 11:49	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			09/20/18 11:49	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			09/20/18 11:49	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			09/20/18 11:49	1
Naphthalene	0.80	U	1.0	0.22	ug/L			09/20/18 11:49	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			09/20/18 11:49	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
o-Xylene	0.40	U	1.0	0.19	ug/L			09/20/18 11:49	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
Styrene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			09/20/18 11:49	1
Toluene	0.40	U	1.0	0.17	ug/L			09/20/18 11:49	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			09/20/18 11:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-430312/6
Matrix: Water
Analysis Batch: 430312

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			09/20/18 11:49	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			09/20/18 11:49	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			09/20/18 11:49	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			09/20/18 11:49	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			09/20/18 11:49	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			09/20/18 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*09/20/18 11:49*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*09/20/18 11:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*09/20/18 11:49*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*09/20/18 11:49*	*1*

Lab Sample ID: LCS 280-430312/32
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diisopropyl ether	5.00	4.56	J	ug/L		91	67 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: LCS 280-430312/4
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.14		ug/L		83	78 - 124
1,1,1-Trichloroethane	5.00	4.47		ug/L		89	74 - 131
1,1,2,2-Tetrachloroethane	5.00	3.70		ug/L		74	71 - 121
1,1,2-Trichloroethane	5.00	3.99		ug/L		80	80 - 119
1,1-Dichloroethane	5.00	4.57		ug/L		91	77 - 125
1,1-Dichloroethene	5.00	4.75		ug/L		95	71 - 131
1,1-Dichloropropene	5.00	4.87		ug/L		97	79 - 125
1,2,3-Trichlorobenzene	5.00	3.96		ug/L		79	69 - 129
1,2,3-Trichloropropane	5.00	3.95		ug/L		79	73 - 122
1,2,4-Trichlorobenzene	5.00	3.95		ug/L		79	69 - 130
1,2,4-Trimethylbenzene	5.00	4.78		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	3.34	J	ug/L		67	62 - 128
1,2-Dibromoethane	5.00	4.13		ug/L		83	77 - 121
1,2-Dichlorobenzene	5.00	4.16		ug/L		83	80 - 119
1,2-Dichloroethane	5.00	4.26		ug/L		85	73 - 128
1,2-Dichloroethene, Total	10.0	9.39		ug/L		94	79 - 121
1,2-Dichloropropane	5.00	4.35		ug/L		87	78 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-430312/4
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	4.79		ug/L		96	75 - 124
1,3-Dichlorobenzene	5.00	4.34		ug/L		87	80 - 119
1,3-Dichloropropane	5.00	4.03		ug/L		81	80 - 119
1,4-Dichlorobenzene	5.00	4.24		ug/L		85	79 - 118
2,2-Dichloropropane	5.00	4.46		ug/L		89	60 - 139
2-Butanone (MEK)	20.0	14.9		ug/L		74	56 - 143
2-Chlorotoluene	5.00	4.57		ug/L		91	79 - 122
2-Hexanone	20.0	14.4		ug/L		72	57 - 139
4-Chlorotoluene	5.00	4.69		ug/L		94	78 - 122
4-Isopropyltoluene	5.00	5.05		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	14.3		ug/L		71	67 - 130
Acetone	20.0	16.0		ug/L		80	39 - 160
Benzene	5.00	4.69		ug/L		94	79 - 120
Bromobenzene	5.00	4.40		ug/L		88	80 - 120
Bromochloromethane	5.00	4.33		ug/L		87	78 - 123
Bromodichloromethane	5.00	4.24		ug/L		85	79 - 125
Bromoform	5.00	3.72		ug/L		74	66 - 130
Bromomethane	5.00	4.62		ug/L		92	53 - 141
Carbon disulfide	5.00	4.57		ug/L		91	64 - 133
Carbon tetrachloride	5.00	4.36		ug/L		87	72 - 136
Chlorobenzene	5.00	4.36		ug/L		87	82 - 118
Chloroethane	5.00	5.34		ug/L		107	60 - 138
Chloroform	5.00	4.51		ug/L		90	79 - 124
Chloromethane	5.00	4.67		ug/L		93	50 - 139
cis-1,2-Dichloroethene	5.00	4.55		ug/L		91	78 - 123
cis-1,3-Dichloropropene	5.00	4.37		ug/L		87	75 - 124
Dibromochloromethane	5.00	3.98		ug/L		80	74 - 126
Dibromomethane	5.00	4.08		ug/L		82	79 - 123
Dichlorodifluoromethane	5.00	4.39		ug/L		88	32 - 152
Ethylbenzene	5.00	4.51		ug/L		90	79 - 121
Hexachlorobutadiene	5.00	4.40		ug/L		88	66 - 134
Isopropylbenzene	5.00	4.93		ug/L		99	72 - 131
m,p-Xylene	5.00	4.41		ug/L		88	80 - 121
Methyl iodide	5.00	4.62		ug/L		92	69 - 131
Methyl tert-butyl ether	5.00	4.12	J	ug/L		82	71 - 124
Methylene Chloride	5.00	4.49	J	ug/L		90	74 - 124
Naphthalene	5.00	3.15		ug/L		63	61 - 128
n-Butylbenzene	5.00	4.71		ug/L		94	75 - 128
N-Propylbenzene	5.00	4.81		ug/L		96	76 - 126
o-Xylene	5.00	4.43		ug/L		89	78 - 122
sec-Butylbenzene	5.00	4.59		ug/L		92	77 - 126
Styrene	5.00	4.59		ug/L		92	78 - 123
tert-Butylbenzene	5.00	4.93		ug/L		99	78 - 124
Tetrachloroethene	5.00	4.50		ug/L		90	74 - 129
Toluene	5.00	4.76		ug/L		95	80 - 121
trans-1,2-Dichloroethene	5.00	4.84		ug/L		97	75 - 124
trans-1,3-Dichloropropene	5.00	3.98		ug/L		80	73 - 127
Trichloroethene	5.00	4.43		ug/L		89	79 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-430312/4
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	5.00	4.82		ug/L		96	65 - 141
Vinyl acetate	10.0	7.98		ug/L		80	54 - 146
Vinyl chloride	5.00	4.80		ug/L		96	58 - 137
Xylenes, Total	10.0	8.84		ug/L		88	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 280-430312/5
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.37		ug/L		87	78 - 124	5	20
1,1,1-Trichloroethane	5.00	4.63		ug/L		93	74 - 131	3	20
1,1,2,2-Tetrachloroethane	5.00	4.03		ug/L		81	71 - 121	8	20
1,1,2-Trichloroethane	5.00	4.62		ug/L		92	80 - 119	15	20
1,1-Dichloroethane	5.00	4.78		ug/L		96	77 - 125	4	20
1,1-Dichloroethene	5.00	4.64		ug/L		93	71 - 131	2	20
1,1-Dichloropropene	5.00	4.81		ug/L		96	79 - 125	1	20
1,2,3-Trichlorobenzene	5.00	4.31		ug/L		86	69 - 129	9	20
1,2,3-Trichloropropane	5.00	4.45		ug/L		89	73 - 122	12	20
1,2,4-Trichlorobenzene	5.00	4.35		ug/L		87	69 - 130	10	20
1,2,4-Trimethylbenzene	5.00	4.91		ug/L		98	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	5.00	3.86	J	ug/L		77	62 - 128	14	20
1,2-Dibromoethane	5.00	4.24		ug/L		85	77 - 121	3	20
1,2-Dichlorobenzene	5.00	4.40		ug/L		88	80 - 119	5	20
1,2-Dichloroethane	5.00	4.57		ug/L		91	73 - 128	7	20
1,2-Dichloroethene, Total	10.0	9.81		ug/L		98	79 - 121	4	20
1,2-Dichloropropane	5.00	4.67		ug/L		93	78 - 122	7	20
1,3,5-Trimethylbenzene	5.00	4.87		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene	5.00	4.49		ug/L		90	80 - 119	3	20
1,3-Dichloropropane	5.00	4.40		ug/L		88	80 - 119	9	20
1,4-Dichlorobenzene	5.00	4.32		ug/L		86	79 - 118	2	20
2,2-Dichloropropane	5.00	4.70		ug/L		94	60 - 139	5	20
2-Butanone (MEK)	20.0	18.3	Q	ug/L		92	56 - 143	21	20
2-Chlorotoluene	5.00	4.66		ug/L		93	79 - 122	2	20
2-Hexanone	20.0	15.7		ug/L		78	57 - 139	9	20
4-Chlorotoluene	5.00	4.74		ug/L		95	78 - 122	1	20
4-Isopropyltoluene	5.00	4.93		ug/L		99	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	20.0	16.7		ug/L		83	67 - 130	15	20
Acetone	20.0	19.8	M Q	ug/L		99	39 - 160	21	20
Benzene	5.00	4.87		ug/L		97	79 - 120	4	20
Bromobenzene	5.00	4.48		ug/L		90	80 - 120	2	20
Bromochloromethane	5.00	4.64		ug/L		93	78 - 123	7	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-430312/5
Matrix: Water
Analysis Batch: 430312

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	5.00	4.46		ug/L		89	79 - 125	5	20
Bromoform	5.00	4.04		ug/L		81	66 - 130	8	20
Bromomethane	5.00	5.02		ug/L		100	53 - 141	8	20
Carbon disulfide	5.00	4.71		ug/L		94	64 - 133	3	20
Carbon tetrachloride	5.00	4.54		ug/L		91	72 - 136	4	20
Chlorobenzene	5.00	4.44		ug/L		89	82 - 118	2	20
Chloroethane	5.00	5.50		ug/L		110	60 - 138	3	20
Chloroform	5.00	4.67		ug/L		93	79 - 124	4	20
Chloromethane	5.00	4.96		ug/L		99	50 - 139	6	20
cis-1,2-Dichloroethene	5.00	4.83		ug/L		97	78 - 123	6	20
cis-1,3-Dichloropropene	5.00	4.55		ug/L		91	75 - 124	4	20
Dibromochloromethane	5.00	4.39		ug/L		88	74 - 126	10	20
Dibromomethane	5.00	4.28		ug/L		86	79 - 123	5	20
Dichlorodifluoromethane	5.00	4.53		ug/L		91	32 - 152	3	20
Ethylbenzene	5.00	4.52		ug/L		90	79 - 121	0	20
Hexachlorobutadiene	5.00	4.37		ug/L		87	66 - 134	1	20
Isopropylbenzene	5.00	4.91		ug/L		98	72 - 131	1	20
m,p-Xylene	5.00	4.55		ug/L		91	80 - 121	3	20
Methyl iodide	5.00	4.91		ug/L		98	69 - 131	6	20
Methyl tert-butyl ether	5.00	4.72	J	ug/L		94	71 - 124	14	20
Methylene Chloride	5.00	4.91	J	ug/L		98	74 - 124	9	20
Naphthalene	5.00	3.67		ug/L		73	61 - 128	15	20
n-Butylbenzene	5.00	4.67		ug/L		93	75 - 128	1	20
N-Propylbenzene	5.00	4.76		ug/L		95	76 - 126	1	20
o-Xylene	5.00	4.60		ug/L		92	78 - 122	4	20
sec-Butylbenzene	5.00	4.74		ug/L		95	77 - 126	3	20
Styrene	5.00	4.65		ug/L		93	78 - 123	1	20
tert-Butylbenzene	5.00	4.89		ug/L		98	78 - 124	1	20
Tetrachloroethene	5.00	4.48		ug/L		90	74 - 129	0	20
Toluene	5.00	4.90		ug/L		98	80 - 121	3	20
trans-1,2-Dichloroethene	5.00	4.98		ug/L		100	75 - 124	3	20
trans-1,3-Dichloropropene	5.00	4.29		ug/L		86	73 - 127	7	20
Trichloroethene	5.00	4.56		ug/L		91	79 - 123	3	20
Trichlorofluoromethane	5.00	4.93		ug/L		99	65 - 141	2	20
Vinyl acetate	10.0	8.21		ug/L		82	54 - 146	3	20
Vinyl chloride	5.00	5.04		ug/L		101	58 - 137	5	20
Xylenes, Total	10.0	9.15		ug/L		92	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-429322/1-E
Matrix: Water
Analysis Batch: 430658

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 430229

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	85	U	100	22	ug/L		09/20/18 18:00	09/21/18 19:53	1

Lab Sample ID: LCS 280-429322/2-E
Matrix: Water
Analysis Batch: 430658

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 430229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	1010		ug/L		101	87 - 115

Lab Sample ID: LCSD 280-429322/3-D
Matrix: Water
Analysis Batch: 430658

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 430229

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	1000	998		ug/L		100	87 - 115	1	20

Lab Sample ID: 280-114110-4 MS
Matrix: Water
Analysis Batch: 430658

Client Sample ID: 775MW-6
Prep Type: Dissolved
Prep Batch: 430229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	85	U	1000	1010		ug/L		101	87 - 115

Lab Sample ID: 280-114110-4 MSD
Matrix: Water
Analysis Batch: 430658

Client Sample ID: 775MW-6
Prep Type: Dissolved
Prep Batch: 430229

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	85	U	1000	1010		ug/L		101	87 - 115	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-429322/1-D
Matrix: Water
Analysis Batch: 430284

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 429435

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.95	U	3.5	0.31	ug/L		09/12/18 16:14	09/19/18 17:08	1

Lab Sample ID: LCS 280-429322/2-D
Matrix: Water
Analysis Batch: 430284

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 429435

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	40.0	39.9		ug/L		100	87 - 115

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 280-429322/3-C
Matrix: Water
Analysis Batch: 430284

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 429435

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese			40.0	41.3		ug/L		103	87 - 115	3	20

QC Association Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

GC/MS VOA

Analysis Batch: 430151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-1	Trip Blank	Total/NA	Water	8260B	
280-114110-2	BH1-10	Total/NA	Water	8260B	
280-114110-5	BH1-10-dup	Total/NA	Water	8260B	
MB 280-430151/6	Method Blank	Total/NA	Water	8260B	
LCS 280-430151/33	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-430151/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 430312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-3	BH2-5	Total/NA	Water	8260B	
280-114110-6	BH2-5-dup	Total/NA	Water	8260B	
MB 280-430312/6	Method Blank	Total/NA	Water	8260B	
LCS 280-430312/32	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-430312/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-430312/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Metals

Filtration Batch: 429322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-4	775MW-6	Dissolved	Water	FILTRATION	
280-114110-7	775MW-6-dup	Dissolved	Water	FILTRATION	
MB 280-429322/1-D	Method Blank	Dissolved	Water	FILTRATION	
MB 280-429322/1-E	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-429322/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 280-429322/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-429322/3-C	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
LCSD 280-429322/3-D	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-114110-4 MS	775MW-6	Dissolved	Water	FILTRATION	
280-114110-4 MSD	775MW-6	Dissolved	Water	FILTRATION	

Prep Batch: 429435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-4	775MW-6	Dissolved	Water	3005A	429322
280-114110-7	775MW-6-dup	Dissolved	Water	3005A	429322
MB 280-429322/1-D	Method Blank	Dissolved	Water	3005A	429322
LCS 280-429322/2-D	Lab Control Sample	Dissolved	Water	3005A	429322
LCSD 280-429322/3-C	Lab Control Sample Dup	Dissolved	Water	3005A	429322

Prep Batch: 430229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-4	775MW-6	Dissolved	Water	3005A	429322
280-114110-7	775MW-6-dup	Dissolved	Water	3005A	429322
MB 280-429322/1-E	Method Blank	Dissolved	Water	3005A	429322
LCS 280-429322/2-E	Lab Control Sample	Dissolved	Water	3005A	429322
LCSD 280-429322/3-D	Lab Control Sample Dup	Dissolved	Water	3005A	429322
280-114110-4 MS	775MW-6	Dissolved	Water	3005A	429322
280-114110-4 MSD	775MW-6	Dissolved	Water	3005A	429322

Metals (Continued)

Analysis Batch: 430284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-429322/1-D	Method Blank	Dissolved	Water	6020A	429435
LCS 280-429322/2-D	Lab Control Sample	Dissolved	Water	6020A	429435
LCSD 280-429322/3-C	Lab Control Sample Dup	Dissolved	Water	6020A	429435

Analysis Batch: 430407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-4	775MW-6	Dissolved	Water	6020A	429435
280-114110-7	775MW-6-dup	Dissolved	Water	6020A	429435

Analysis Batch: 430658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114110-4	775MW-6	Dissolved	Water	6010C	430229
280-114110-7	775MW-6-dup	Dissolved	Water	6010C	430229
MB 280-429322/1-E	Method Blank	Dissolved	Water	6010C	430229
LCS 280-429322/2-E	Lab Control Sample	Dissolved	Water	6010C	430229
LCSD 280-429322/3-D	Lab Control Sample Dup	Dissolved	Water	6010C	430229
280-114110-4 MS	775MW-6	Dissolved	Water	6010C	430229
280-114110-4 MSD	775MW-6	Dissolved	Water	6010C	430229

Lab Chronicle

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Client Sample ID: Trip Blank
Date Collected: 09/06/18 09:00
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	430151	09/19/18 11:28	DPI	TAL DEN

Client Sample ID: BH1-10
Date Collected: 09/06/18 09:00
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	430151	09/19/18 11:50	DPI	TAL DEN

Client Sample ID: BH2-5
Date Collected: 09/07/18 08:15
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	430312	09/20/18 16:16	DPI	TAL DEN

Client Sample ID: 775MW-6
Date Collected: 09/07/18 09:07
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	429322	09/11/18 21:35	LLB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	430229	09/20/18 18:00	DAL	TAL DEN
Dissolved	Analysis	6010C		1			430658	09/21/18 20:03	CML	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	429322	09/11/18 21:35	LLB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	429435	09/12/18 16:14	DAL	TAL DEN
Dissolved	Analysis	6020A		1			430407	09/20/18 11:56	LMT	TAL DEN

Client Sample ID: BH1-10-dup
Date Collected: 09/06/18 09:00
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	430151	09/19/18 12:12	DPI	TAL DEN

Client Sample ID: BH2-5-dup
Date Collected: 09/07/18 08:15
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	430312	09/20/18 16:37	DPI	TAL DEN

Lab Chronicle

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Client Sample ID: 775MW-6-dup

Date Collected: 09/07/18 09:07
Date Received: 09/08/18 08:45

Lab Sample ID: 280-114110-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	429322	09/11/18 21:35	LLB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	430229	09/20/18 18:00	DAL	TAL DEN
Dissolved	Analysis	6010C		1			430658	09/21/18 20:21	CML	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	429322	09/11/18 21:35	LLB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	429435	09/12/18 16:14	DAL	TAL DEN
Dissolved	Analysis	6020A		1			430407	09/20/18 11:59	LMT	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-114110-1
Project/Site: Griffiss AFB, NY (BRAC Eastern)

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

Analysis Method	Prep Method	Matrix	Analyte		
New York	NELAP	2	11964	04-01-19	

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6010C	3005A	Water	Iron
6020A	3005A	Water	Manganese
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,1,1-Trichloroethane
8260B		Water	1,1,2,2-Tetrachloroethane
8260B		Water	1,1,2-Trichloroethane
8260B		Water	1,1-Dichloroethane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,3-Trichloropropane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	1,2-Dibromoethane
8260B		Water	1,2-Dichlorobenzene
8260B		Water	1,2-Dichloroethane
8260B		Water	1,2-Dichloroethene, Total
8260B		Water	1,2-Dichloropropane
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichlorobenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Butanone (MEK)
8260B		Water	2-Chlorotoluene
8260B		Water	2-Hexanone
8260B		Water	4-Chlorotoluene
8260B		Water	4-Isopropyltoluene
8260B		Water	4-Methyl-2-pentanone (MIBK)
8260B		Water	Acetone
8260B		Water	Benzene
8260B		Water	Bromobenzene
8260B		Water	Bromochloromethane
8260B		Water	Bromodichloromethane
8260B		Water	Bromoform
8260B		Water	Bromomethane
8260B		Water	Carbon disulfide
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chloroethane
8260B		Water	Chloroform

Laboratory: TestAmerica Denver (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11964	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	Chloromethane
8260B		Water	cis-1,2-Dichloroethene
8260B		Water	cis-1,3-Dichloropropene
8260B		Water	Dibromochloromethane
8260B		Water	Dibromomethane
8260B		Water	Dichlorodifluoromethane
8260B		Water	Diisopropyl ether
8260B		Water	Ethylbenzene
8260B		Water	Hexachlorobutadiene
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	Methyl iodide
8260B		Water	Methyl tert-butyl ether
8260B		Water	Methylene Chloride
8260B		Water	Naphthalene
8260B		Water	n-Butylbenzene
8260B		Water	N-Propylbenzene
8260B		Water	o-Xylene
8260B		Water	sec-Butylbenzene
8260B		Water	Styrene
8260B		Water	tert-Butylbenzene
8260B		Water	Tetrachloroethene
8260B		Water	Toluene
8260B		Water	trans-1,2-Dichloroethene
8260B		Water	trans-1,3-Dichloropropene
8260B		Water	Trichloroethene
8260B		Water	Trichlorofluoromethane
8260B		Water	Vinyl acetate
8260B		Water	Vinyl chloride
8260B		Water	Xylenes, Total

Method Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-114110-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-114110-1	Trip Blank	Water	09/06/18 09:00	09/08/18 08:45
280-114110-2	BH1-10	Water	09/06/18 09:00	09/08/18 08:45
280-114110-3	BH2-5	Water	09/07/18 08:15	09/08/18 08:45
280-114110-4	775MW-6	Water	09/07/18 09:07	09/08/18 08:45
280-114110-5	BH1-10-dup	Water	09/06/18 09:00	09/08/18 08:45
280-114110-6	BH2-5-dup	Water	09/07/18 08:15	09/08/18 08:45
280-114110-7	775MW-6-dup	Water	09/07/18 09:07	09/08/18 08:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 428900

Lab Sample ID: IC 280-428900/18 Client Sample ID:

Date Analyzed: 09/07/18 16:13 Lab File ID: G2_6777.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl acetate		Invalid Compound ID	ilczyszyn d	09/08/18 08:08
Propionitrile		Invalid Compound ID	ilczyszyn d	09/08/18 08:08

Lab Sample ID: ICV 280-428900/24 Client Sample ID:

Date Analyzed: 09/07/18 18:18 Lab File ID: G2_6783.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
n-Butanol		Invalid Compound ID	ilczyszyn d	09/08/18 08:13

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 429808

Lab Sample ID: IC 280-429808/10 Client Sample ID:

Date Analyzed: 09/17/18 08:54 Lab File ID: G2_6995.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Hexanone		Invalid Compound ID	ilczyszyn d	09/17/18 10:23
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	ilczyszyn d	09/17/18 10:23
Acetone		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Bromochloromethane		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Cyclohexanone		Invalid Compound ID	ilczyszyn d	09/17/18 10:23
Isobutyl alcohol		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Methyl tert-butyl ether		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
t-Butyl alcohol		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Toluene-d8 (Surr)		Invalid Compound ID	ilczyszyn d	09/17/18 10:22
Vinyl acetate		Invalid Compound ID	ilczyszyn d	09/17/18 10:22

Lab Sample ID: IC 280-429808/11 Client Sample ID:

Date Analyzed: 09/17/18 09:15 Lab File ID: G2_6996.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrahydrofuran	6.09	Split Peak	ilczyszyn d	09/17/18 11:34
Isobutyl alcohol		Invalid Compound ID	ilczyszyn d	09/17/18 10:24

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 429808

Lab Sample ID: IC 280-429808/12 Client Sample ID:

Date Analyzed: 09/17/18 09:36 Lab File ID: G2_6997.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.12	Split Peak	ilczyszyn d	09/18/18 08:43

Lab Sample ID: IC 280-429808/13 Client Sample ID:

Date Analyzed: 09/17/18 09:57 Lab File ID: G2_6998.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.12	Split Peak	ilczyszyn d	09/18/18 08:44

Lab Sample ID: IC 280-429808/16 Client Sample ID:

Date Analyzed: 09/17/18 11:00 Lab File ID: G2_7001.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chlorotoluene	11.89	Wrong peak	ilczyszyn d	09/17/18 11:31

Lab Sample ID: ICV 280-429808/17 Client Sample ID:

Date Analyzed: 09/17/18 13:28 Lab File ID: G2_7008.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.12	Split Peak	ilczyszyn d	09/18/18 08:44

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 430312

Lab Sample ID: LCSD 280-430312/5 Client Sample ID:

Date Analyzed: 09/20/18 11:08 Lab File ID: G2_7088.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.06	Peak Tail	ilczyszyn d	09/21/18 07:27

Lab Sample ID: MB 280-430312/6 Client Sample ID:

Date Analyzed: 09/20/18 11:49 Lab File ID: G2_7090.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	ilczyszyn d	09/20/18 12:42

Lab Sample ID: 280-114110-3 Client Sample ID: BH2-5

Date Analyzed: 09/20/18 16:16 Lab File ID: G2_7102.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane		Invalid Compound ID	ilczyszyn d	09/21/18 06:59
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	ilczyszyn d	09/21/18 06:59
Chloromethane		Invalid Compound ID	ilczyszyn d	09/21/18 06:58

Lab Sample ID: 280-114110-6 Client Sample ID: BH2-5-dup

Date Analyzed: 09/20/18 16:37 Lab File ID: G2_7103.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane		Invalid Compound ID	ilczyszyn d	09/21/18 06:59

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 428698

Lab Sample ID: IC 280-428698/10 Client Sample ID:

Date Analyzed: 09/07/18 12:35 Lab File ID: Z1188.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
2-Chloroethyl vinyl ether		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
2-Hexanone		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
Cyclohexanone		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
Isobutyl alcohol		Invalid Compound ID	ilczyszyn d	09/08/18 08:21
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/08/18 08:20
t-Butyl alcohol		Invalid Compound ID	ilczyszyn d	09/08/18 08:20

Lab Sample ID: IC 280-428698/11 Client Sample ID:

Date Analyzed: 09/07/18 12:57 Lab File ID: Z1189.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	3.33	Split Peak	ilczyszyn d	09/08/18 08:22
2,2-Dichloropropane	4.65	Split Peak	ilczyszyn d	09/08/18 08:22
Isopropylbenzene	12.49	Split Peak	ilczyszyn d	09/08/18 08:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 428698

Lab Sample ID: IC 280-428698/14 Client Sample ID:

Date Analyzed: 09/07/18 14:04 Lab File ID: Z1192.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloropropene	5.49	Split Peak	ilczyszyn d	09/08/18 08:48
1,3,5-Trimethylbenzene	13.55	Split Peak	ilczyszyn d	09/08/18 08:49
n-Butylbenzene	15.53	Split Peak	ilczyszyn d	09/08/18 08:49

Lab Sample ID: ICV 280-428698/17 Client Sample ID:

Date Analyzed: 09/07/18 15:33 Lab File ID: Z1196.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	ilczyszyn d	09/08/18 09:11

Lab Sample ID: IC 280-428698/18 Client Sample ID:

Date Analyzed: 09/07/18 15:56 Lab File ID: Z1197.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile		Invalid Compound ID	ilczyszyn d	09/08/18 09:06
Ethyl acetate		Invalid Compound ID	ilczyszyn d	09/08/18 09:06
Propionitrile		Invalid Compound ID	ilczyszyn d	09/08/18 09:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 428698

Lab Sample ID: ICV 280-428698/24 Client Sample ID:

Date Analyzed: 09/07/18 18:09 Lab File ID: Z1203.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol		Invalid Compound ID	ilczyszyn d	09/08/18 09:08
Isopropyl alcohol		Invalid Compound ID	ilczyszyn d	09/08/18 09:08
n-Butanol		Invalid Compound ID	ilczyszyn d	09/08/18 09:08

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 429676

Lab Sample ID: IC 280-429676/16 Client Sample ID:

Date Analyzed: 09/14/18 10:48 Lab File ID: Z1435.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichlorobenzene		Invalid Compound ID	ilczyszyn d	09/14/18 12:50
1,2,4-Trichlorobenzene		Invalid Compound ID	ilczyszyn d	09/14/18 12:50
Naphthalene		Invalid Compound ID	ilczyszyn d	09/14/18 12:50

Lab Sample ID: IC 280-429676/10 Client Sample ID:

Date Analyzed: 09/14/18 11:32 Lab File ID: Z1437.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	ilczyszyn d	09/14/18 12:40
2-Chloroethyl vinyl ether		Invalid Compound ID	ilczyszyn d	09/14/18 12:41
2-Hexanone		Invalid Compound ID	ilczyszyn d	09/14/18 12:41
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	ilczyszyn d	09/14/18 12:41
Cyclohexanone		Invalid Compound ID	ilczyszyn d	09/14/18 12:41
Isobutyl alcohol		Invalid Compound ID	ilczyszyn d	09/14/18 12:41
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/14/18 12:40
t-Butyl alcohol		Invalid Compound ID	ilczyszyn d	09/14/18 12:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 429676

Lab Sample ID: ICV 280-429676/17 Client Sample ID:

Date Analyzed: 09/14/18 12:39 Lab File ID: Z1440.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	ilczyszyn d	09/14/18 13:03

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 430151

Lab Sample ID: CCV 280-430151/2 Client Sample ID:

Date Analyzed: 09/19/18 09:51 Lab File ID: Z1623.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloro-1,2,2-trifluoroethane	2.95	Split Peak	ilczyszyn d	09/19/18 10:29

Lab Sample ID: MB 280-430151/6 Client Sample ID:

Date Analyzed: 09/19/18 10:58 Lab File ID: Z1626.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/19/18 11:56

Lab Sample ID: 280-114110-1 Client Sample ID: Trip Blank

Date Analyzed: 09/19/18 11:28 Lab File ID: Z1627.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform		Invalid Compound ID	ilczyszyn d	09/19/18 11:56

Lab Sample ID: 280-114110-2 Client Sample ID: BH1-10

Date Analyzed: 09/19/18 11:50 Lab File ID: Z1628.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/20/18 07:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Analysis Batch Number: 430151

Lab Sample ID: 280-114110-5 Client Sample ID: BH1-10-dup

Date Analyzed: 09/19/18 12:12 Lab File ID: Z1629.D GC Column: DB-624 (75.53 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	ilczyszyn d	09/20/18 07:09
Methylene Chloride		Invalid Compound ID	ilczyszyn d	09/20/18 07:09

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICP CCV_52_00006	02/13/19	09/13/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL1A_00802	250 mL	Iron	2.5 mg/L
.ICP ICAL1A_00802	02/13/19	09/13/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Iron	5 mg/L
..Icp cal std 3_00018	08/23/19	Inorganic Ventures, Lot M2-MEB663620			(Purchased Reagent)		Iron	500 mg/L
ICP CCVH_00607	12/11/18	09/21/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL2A_00505	250 mL	Iron	50 mg/L
.ICP ICAL2A_00505	12/11/18	09/21/18	5%HCl/5% HNO3, Lot see reagent log	1000 mL	10000 Fe_00021	10 mL	Iron	100 mg/L
..10000 Fe_00021	08/08/19	Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)		Iron	10000 mg/L
ICP ICSA_00170	12/14/18	08/29/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	Icp stk ICSA_00024	50 mL	Al	500 mg/L
							Ca	500 mg/L
							Iron	200 mg/L
							Mg	500 mg/L
.Icp stk ICSA_00024	07/30/19	Inorganic Ventures, Lot K2-MEB643109			(Purchased Reagent)		Al	5000 mg/L
							Ca	5000 mg/L
							Iron	2000 mg/L
							Mg	5000 mg/L
ICP ICSAB_00190	10/13/18	09/11/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	10000 Si_00014	0.25 mL	Si	10 mg/L
					ANALYTES B_00014	2.5 mL	Ag	1 mg/L
							Ba	0.5 mg/L
							Be	0.5 mg/L
							Cd	1 mg/L
							Co	0.5 mg/L
							Cr	0.5 mg/L
							Cu	0.5 mg/L
							Manganese	0.5 mg/L
							Ni	1 mg/L
							Pb	1 mg/L
							V	0.5 mg/L
							Zn	1 mg/L
					ICP ISAB 1B_00011	2.5 mL	Tl	10 mg/L
					ICP ISAB STD1_00010	2.5 mL	As	2 mg/L
							B	2 mg/L
							K	50 mg/L
							Li	1 mg/L
							Mo	1 mg/L
							Na	50 mg/L
							P	2 mg/L
							Sb	1 mg/L
							Se	5 mg/L
							Sr	1 mg/L
					ICP ISAB STD2_00013	2.5 mL	Sn	10 mg/L
							Ti	1 mg/L
					Icp stk ICSA_00023	25 mL	Al	500 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ca	500 mg/L
							Iron	200 mg/L
							Mg	500 mg/L
.10000 Si_00014	11/08/18	Inorganic ventures, Lot J2-SI03056			(Purchased Reagent)		Si	10000 mg/L
.ANALYTES B_00014	04/01/19	SPEX, Lot 5-177MKBY			(Purchased Reagent)		Ag	100 mg/L
							Ba	50 mg/L
							Be	50 mg/L
							Cd	100 mg/L
							Co	50 mg/L
							Cr	50 mg/L
							Cu	50 mg/L
							Manganese	50 mg/L
							Ni	100 mg/L
							Pb	100 mg/L
							V	50 mg/L
							Zn	100 mg/L
.ICP ISAB 1B_00011	12/01/18	High Purity, Lot 1734922			(Purchased Reagent)		Tl	1000 mg/L
.ICP ISAB STD1_00010	12/01/18	High Purity, Lot 1734921			(Purchased Reagent)		As	200 mg/L
							B	200 mg/L
							K	5000 mg/L
							Li	100 mg/L
							Mo	100 mg/L
							Na	5000 mg/L
							P	200 mg/L
							Sb	100 mg/L
							Se	500 mg/L
							Sr	100 mg/L
.ICP ISAB STD2_00013	01/03/19	High Purity, Lot 1721944			(Purchased Reagent)		Sn	1000 mg/L
							Ti	100 mg/L
.Icp stk ICSA_00023	02/14/19	Inorganic Ventures, Lot K2-MEB643109			(Purchased Reagent)		Al	5000 mg/L
							Ca	5000 mg/L
							Iron	2000 mg/L
							Mg	5000 mg/L
ICP ICV_00641	09/22/18	09/21/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00013	1 mL	Iron	0.25 ppm
.Icp ICVL A_00013	10/01/18	High Purity, Lot 1729362			(Purchased Reagent)		Iron	25 mg/L
ICP ICVH_52_00020	12/07/18	09/21/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVH_00636	1 mL	Iron	80 mg/L
.Icp ICVH_00636	04/30/19	High Purity, Lot 1717042			(Purchased Reagent)		Iron	8000 mg/L
ICP LLCCV_02357	09/22/18	09/21/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00004	1 mL	Iron	100 ppb
.ICP LLCCV-4_00004	08/02/19	Inorganic Ventures, Lot N2-MEB667359			(Purchased Reagent)		Iron	10 mg/L
ICP PDS 1_00026	08/20/19	Inorganic Ventures, Lot M2-MEB659764			(Purchased Reagent)		Iron	100 mg/L
ICP SPK 2B_00079	09/10/19	Inorganic Ventures, Lot N2-MEB665203			(Purchased Reagent)		B	100 mg/L
							Mo	100 mg/L
							Sb	50 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	200 mg/L
							Sulfur	200 mg/L
							Ti	100 mg/L
							Zr	50 mg/L
ICP SPK 3A_00152	09/12/19	Inorganic Ventures, Lot N2-MEB670997			(Purchased Reagent)		Ag	5 mg/L
							Al	200 mg/L
							As	100 mg/L
							Ba	200 mg/L
							Be	5 mg/L
							Bi	200 mg/L
							Ca	5000 mg/L
							Cd	10 mg/L
							Co	50 mg/L
							Cr	20 mg/L
							Cu	25 mg/L
							Iron	100 mg/L
							K	5000 mg/L
							Li	100 mg/L
							Manganese	50 mg/L
							Mg	5000 mg/L
							Na	5000 mg/L
							Ni	50 mg/L
							P	1000 mg/L
							Pb	50 mg/L
							Se	200 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Tl	200 mg/L
							U	200 mg/L
							V	50 mg/L
							Zn	50 mg/L
ms 77 RL_01758	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	ms 77 cal std_01866	0.5 mL	Manganese	1 ppb
.ms 77 cal std_01866	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Manganese	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Manganese	20 mg/L
ms 77 alt RL_01042	09/20/18	09/19/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	1 ppm Mn_00007	0.05 mL	Manganese	1 ppb
.1 ppm Mn_00007	12/11/18	03/20/18	1% HNO3, Lot 183840	50 mL	1000 Mn_00015	0.05 mL	Manganese	1 mg/L
..1000 Mn_00015	12/11/18	Inorganic Ventures, Lot K2-MN651112			(Purchased Reagent)		Manganese	1000 mg/L
ms 77 cal std_01866	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Manganese	0.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Manganese	20 mg/L
ms 77 ccv_01872	09/20/18	09/19/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	ms 77 cal std_01865	50 mL	Manganese	0.05 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ms 77 cal std_01865	09/20/18	09/19/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Manganese	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Manganese	20 mg/L
ms 77 ccv_01873	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	ms 77 cal std_01866	50 mL	Manganese	0.05 mg/L
.ms 77 cal std_01866	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Manganese	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Manganese	20 mg/L
ms 77 icsa_00378	09/24/18	09/17/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICSA STOCK_00030	5 mL	Mo	2 mg/L
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L
ms 77 icsab_00375	09/24/18	09/17/18	5%HNO3/5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Ag	0.1 mg/L
							As	0.1 mg/L
							Ba	0.1 mg/L
							Be	0.1 mg/L
							Cd	0.1 mg/L
							Co	0.1 mg/L
							Cr	0.1 mg/L
							Cu	0.1 mg/L
							Manganese	0.1 mg/L
							Ni	0.1 mg/L
							Pb	0.1 mg/L
							Se	0.1 mg/L
							Tl	0.1 mg/L
							V	0.1 mg/L
							Zn	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Mo	2.1 mg/L
							Sb	0.1 mg/L
					MS ICSA STOCK_00030	10 mL	Mo	2.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Ag	20 mg/L
							As	20 mg/L
							Ba	20 mg/L
							Be	20 mg/L
							Cd	20 mg/L
							Co	20 mg/L
							Cr	20 mg/L
							Cu	20 mg/L
							Manganese	20 mg/L
							Ni	20 mg/L
							Pb	20 mg/L
							Se	20 mg/L
							Tl	20 mg/L
							V	20 mg/L
							Zn	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Mo	20 mg/L
							Sb	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L
MS 77 ICV_01869	09/20/18	09/19/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICV StockA_00008	0.1 mL	Manganese	40 ug/L
.MS ICV StockA_00008	11/30/18	HIGH PURITY, Lot 1731407			(Purchased Reagent)		Manganese	20 mg/L
MS 77 ICV_01870	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICV StockA_00008	0.1 mL	Manganese	40 ug/L
.MS ICV StockA_00008	11/30/18	HIGH PURITY, Lot 1731407			(Purchased Reagent)		Manganese	20 mg/L
MS 77 LLCCV_01675	09/20/18	09/19/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS LLCCV1_00020	1 mL	Manganese	0.001 mg/L
.MS LLCCV1_00020	08/03/19	Inorganic Ventures, Lot m2-meb664005			(Purchased Reagent)		Manganese	0.1 mg/L
MS 77 LLCCV_01676	09/21/18	09/20/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS LLCCV1_00020	1 mL	Manganese	0.001 mg/L
.MS LLCCV1_00020	08/03/19	Inorganic Ventures, Lot m2-meb664005			(Purchased Reagent)		Manganese	0.1 mg/L
MS CALSTD-1_00129	07/14/19	Inorganic Ventures, Lot M2-MEB660182			(Purchased Reagent)		Ag	20 mg/L
							As	20 mg/L
							Ba	20 mg/L
							Be	20 mg/L
							Cd	20 mg/L
							Co	20 mg/L
							Cr	20 mg/L
							Cu	20 mg/L
							Manganese	20 mg/L
							Ni	20 mg/L
							Pb	20 mg/L
							Se	20 mg/L
							Th	20 mg/L
							Tl	20 mg/L
							U	20 mg/L
							V	20 mg/L
							Zn	20 mg/L
MS spike 2_00070	10/07/18	07/30/18	1% HNO3, Lot 192582	250 mL	1000 B_00017	5 mL	B	20 mg/L
					1000 Li_00036	10 mL	Li	40 mg/L
					1000 Mo_00011	5 mL	Mo	20 mg/L
					1000 Sb_00017	5 mL	Sb	20 mg/L
					1000 Sn_00014	5 mL	Sn	20 mg/L
					1000 Sr_00010	5 mL	Sr	20 mg/L
					1000 W IV_00014	5 mL	W	20 mg/L
					1000 Zr_00016	5 mL	Zr	20 mg/L
					10000 Al_00017	5 mL	Al	200 mg/L
					10000 Fe_00020	5 mL	Iron	200 mg/L
.1000 B_00017	07/25/19	Inorganic Ventures, Lot M2-B663296			(Purchased Reagent)		B	1000 mg/L
.1000 Li_00036	02/21/19	Inorganic Ventures, Lot M2-LI657553			(Purchased Reagent)		Li	1000 mg/L
.1000 Mo_00011	10/07/18	Inorganic Ventures, Lot k2-MO02086			(Purchased Reagent)		Mo	1000 mg/L
.1000 Sb_00017	10/07/18	Inorganic Ventures, Lot k2-SB03048			(Purchased Reagent)		Sb	1000 mg/L
.1000 Sn_00014	12/11/18	Inorganic Ventures, Lot K2-SN653888			(Purchased Reagent)		Sn	1000 mg/L
.1000 Sr_00010	10/13/18	Inorganic Ventures, Lot K2-SR02059			(Purchased Reagent)		Sr	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.1000 W IV_00014	07/06/19	Inorganic Ventures, Lot n2-w664865			(Purchased Reagent)		W	1000 mg/L
.1000 Zr_00016	10/13/18	Inorganic Ventures, Lot K2-ZR01106			(Purchased Reagent)		Zr	1000 mg/L
.10000 Al_00017	10/13/18	Inorganic Ventures, Lot K2-AL			(Purchased Reagent)		Al	10000 mg/L
.10000 Fe_00020	12/22/18	Inorganic Ventures, Lot M2-FE657857			(Purchased Reagent)		Iron	10000 mg/L
MV-568718-D_00010	05/31/22	RESTEK, Lot A0127975			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-568718-D_00014	05/31/22	RESTEK, Lot A0127975			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00102	02/09/19	08/09/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00026							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-MegaMain B_00001	09/30/18	09/06/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569724.sec_00019	1000 uL	Vinyl acetate	100 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569724.sec_00019	10/31/18		RESTEK, Lot A0137486		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00001	10/06/18	09/06/18	P&T Methanol, Lot 181124	50 mL	MV-568720_00022	750 uL	Acrolein	296.25 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00004	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00007	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.MV-568720_00022	10/31/18		RESTEK, Lot A0137497		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00004	12/31/20		RESTEK, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00007	02/29/20		RESTEK, Lot A0124672		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
MV-MegaMainA_00001	10/06/18	09/06/18	P&T Methanol, Lot 181124	50 mL	MV-571992_00001	1000 uL	1,2-Dichloroethene, Total	100 ug/mL
							Xylenes, Total	100 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Supp A_00032	11/20/18	08/03/18	P&T Methanol, Lot 12799	10 mL	mv-570808_00004	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	80 ug/mL
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
					mv-570809_00004	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-571993_00002	160 uL	Acetonitrile	400 ug/mL
							Diisopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-571994_00002	240 uL	Ethanol	2400 ug/mL
					mv-VO-TAOH-5_00005	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
							Ethylene oxide	4000 ug/mL
.mv-570808_00004	05/31/19		Restek, Lot A0132816		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809_00004	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00002	11/30/19		RESTEK, Lot A0132831		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00002	11/30/20		RESTEK, Lot A0132270		(Purchased Reagent)		Ethanol	100000 ug/mL
.mv-VO-TAOH-5_00005	11/20/18		SPEX, Lot EN180524019		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
							Ethylene oxide	50000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-Supp B_00021	09/30/18	06/30/18	P&T Methanol, Lot 127999	10 mL	mv-571993.sec_00002	160 uL	Diisopropyl ether	40 ug/mL
.mv-571993.sec_00002	04/30/19	RESTEK, Lot A0126826			(Purchased Reagent)		Diisopropyl ether	2500 ug/mL

Reagent

1000 B_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"
10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"
- Chemical Testing - Accredited / A2LA Certificate Number 883.01
- Chemical Testing - Accredited / A2LA Certificate Number 883.01
10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"
10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Material Producer - Accredited / A2LA Certificate Number 883.02
- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY
11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date
11.1 Certification Issue Date
December 18, 2017
December 18, 2017
- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec. 7.1. This certification is nullified if instructions in Sec. 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.
- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec. 7.1. This certification is nullified if instructions in Sec. 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date
11.2 Lot Expiration Date
- December 18, 2021
- December 18, 2021
- The date after which this CRM/RM should not be used.
- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long-term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long-term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity
11.3 Period of Validity
- Sealed TCT Bag Open Date: _____
- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:
Certificate Approved By:
Michael Booth
Michael Booth
Supervisor, Quality Control
Supervisor, Quality Control

Certifying Officer:
Certifying Officer:
Paul Gaines
Paul Gaines
CEO, Senior Technical Director
CEO, Senior Technical Director

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INORGANIC VENTURES

CERTIFICATE OF ANALYSIS
CERTIFICATE OF ANALYSIS

Christiansburg, VA 24073 - USA
toll: 800.669.6799 - FAX: 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".
INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".
Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).
Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION
2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGB1
Lot Number:	M2-B663296
Matrix:	H2O
Value / Analyte(s):	1,000 µg/mL ea: Boron
Starting Material:	Recrystallized Boric Acid
Starting Material Lot#:	M2-B02142
Starting Material Purity:	100.0000%

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGB1
Lot Number: M2-B663296
Matrix: H2O
Value / Analyte(s): 1,000 µg/mL ea: Boron
Starting Material: Recrystallized Boric Acid
Starting Material Lot#: M2-B02142
Starting Material Purity: 100.0000%

ID: 1938586 00017
1000 B IV
Prod: SJS

3.0 CERTIFIED VALUES AND UNCERTAINTIES
3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1000 ± 5 µg/mL
Density:	1.001 g/mL (measured at 20 ± 4 °C)

Certified Value: 1000 ± 5 µg/mL
Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:
Assay Information:

Assay Method #1	998 ± 4 µg/mL ICP Assay NIST SRM 3107 Lot Number: 110830
Assay Method #2	1004 ± 5 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

Assay Method #1 998 ± 4 µg/mL
ICP Assay NIST SRM 3107 Lot Number: 110830
Assay Method #2 1004 ± 5 µg/mL
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.
The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Page 1 of 4

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = *mean of Assay Method A with standard uncertainty* $u_{char\ a}$

X_b = *mean of Assay Method B with standard uncertainty* $u_{char\ b}$

w_a and w_b = *the weighting factors for each method calculated using the inverse square of the variance:*

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = *coverage factor = 2 in all cases at Inorganic Ventures*

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ *where* $u_{char\ a}$ *and* $u_{char\ b}$ *are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume*

u_{bb} = *bottle to bottle homogeneity standard uncertainty*

u_{lts} = *long term stability standard uncertainty (storage)*

u_{ts} = *transport stability standard uncertainty*

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = *mean of Assay Method A with* standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = *coverage factor = 2 in all cases at* Inorganic Ventures

$u_{char\ a}$ = *square root of the sum of the squares of the errors from characterization which include* instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = *long term stability standard* uncertainty (storage)

u_{ts} = *transport* stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA Filter is 99.9995% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000108	M	Eu	<	0.000108	O	Na	<	0.006144	M	Se	<	0.001738	M	Zn	0.000509
O	Al	<	0.030720	M	Fe	<	0.004779	M	Nb	<	0.000108	O	Si		0.001028	M	Zr	< 0.000217
M	As	<	0.000869	M	Ga	<	0.000108	M	Nd	<	0.000108	M	Sm	<	0.000108			
M	Au	<	0.000108	M	Gd	<	0.000108	M	Ni	<	0.001303	M	Sn	<	0.000325			
s	B	<		M	Ge	<	0.000434	M	Os	<	0.003039	M	Sr	<	0.000108			
M	Ba	<	0.000217	M	Hf	<	0.000108	i	P	<	0.000001	M	Ta	<	0.000108			
O	Be	<	0.000409	M	Hg	<	0.000217	M	Pb	<	0.000108	M	Tb	<	0.000108			
M	Bi	<	0.000108	M	Ho	<	0.000108	M	Pd	<	0.000108	M	Te	<	0.000325			
O	Ca		0.000284	M	In	<	0.000108	M	Pr	<	0.000108	M	Th	<	0.000108			
M	Cd	<	0.000108	M	Ir	<	0.000108	M	Pt	<	0.000108	M	Ti	<	0.000651			
M	Ce	<	0.000108	O	K	<	0.010240	M	Rb	<	0.000108	M	Tl	<	0.000108			
M	Co	<	0.000108	M	La	<	0.000108	M	Re	<	0.000108	M	Tm	<	0.000108			
M	Cr	<	0.000434	M	Li	<	0.000108	M	Rh	<	0.000108	M	U	<	0.000108			
M	Cs	<	0.000108	M	Lu	<	0.000108	M	Ru	<	0.000108	M	V	<	0.004128			
M	Cu	<	0.000434	O	Mg		0.000019	i	S	<	0.000001	M	W	<	0.000108			
M	Dy	<	0.000108	M	Mn	<	0.000217	M	Sb	<	0.000434	M	Y	<	0.000108			
M	Er	<	0.000108	M	Mo	<	0.000217	M	Sc	<	0.001955	M	Yb	<	0.000108			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
m - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 10.81 +3 4 B(OH)3 and B(OH)4-1

Chemical Compatibility -Moderately soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices and very soluble in NH_4OH . Stable with all metals and inorganic anions at low to moderate ppm levels.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-1,000 ppm solutions chemically stable for years in 1% HNO_3 / LDPE container. 1000 -10,000 ppm stable for years in dilute NH_4OH / LDPE container.

B Containing Samples (Preparation and Solution) -Metal (Crystalline form is scarcely attacked by acids or alkaline solutions; amorphous form is soluble in conc. HNO_3 or H_2SO_4); B(OH)3 (water soluble); Ores(avoid acid digestions and use caustic fusions in PtE); Organic Matrices (dry ash mixed with Na_2CO_3 in PtE at 450EC then increase heat to 1000EC to fuse; or perform a Na_2O_2 fusion in a NiE crucible / Parr bomb).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 11 amu	700 ppt	N/A	
ICP-OES 208.959 nm	0.007/0.0005 µg/mL	1	Mo
ICP-OES 249.678 nm	0.004/0.003 µg/mL	1	Os, W, Co, Cr, Hf
ICP-OES 249.773 nm	0.003/0.001 µg/mL	1	W, Ce, Co, Th, Ta, Mn, Mo, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Li_00036

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 25, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 25, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGLI1
Lot Number:	M2-LI657553
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Lithium
Starting Material:	Li2CO3
Starting Material Lot#:	1613
Starting Material Purity:	99.9985%

4884435
ID: 1000 LI_00036
Exp: 05/25/21 Prpd: BJS
1000 LI IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 2 µg/mL

Certified Density: 1.005 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1000 ± 3 µg/mL**
ICP Assay NIST SRM 3129a Lot Number: 100714

Assay Method #2 **1001 ± 1 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two Independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003736	M	Eu	<	0.005604	O	Na		0.014408	M	Se	<	0.014944	O	Zn	0.001440
O	Al		0.000408	O	Fe		0.000960	M	Nb	<	0.000934	O	Si		0.023053	M	Zr	< 0.009340
M	As	<	0.018680	M	Ga	<	0.001868	M	Nd	<	0.003736	M	Sm	<	0.001868			
M	Au	<	0.005604	M	Gd	<	0.001868	O	Ni	<	0.002300	O	Sn	<	0.006000			
O	B		0.000240	M	Ge	<	0.011208	n	Os	<		O	Sr		0.000096			
O	Ba		0.000096	M	Hf	<	0.003736	O	P	<	0.002500	M	Ta	<	0.013076			
O	Be	<	0.000200	O	Hg	<	0.015000	M	Pb	<	0.005604	M	Tb	<	0.000560			
M	Bi	<	0.000747	M	Ho	<	0.000934	M	Pd	<	0.009340	M	Te	<	0.056041			
O	Ca		0.022092	O	In	<	0.004000	M	Pr	<	0.000560	M	Th	<	0.001868			
M	Cd	<	0.005604	M	Ir	<	0.009340	M	Pt	<	0.003736	O	Tl	<	0.000700			
M	Ce	<	0.009340	O	K		0.009845	M	Rb	<	0.001868	M	Tl	<	0.001868			
M	Co	<	0.005604	M	La	<	0.000934	M	Re	<	0.001868	M	Tm	<	0.000747			
M	Cr	<	0.009340	s	Li	<		M	Rh	<	0.001868	M	U	<	0.003736			
M	Cs	<	0.000560	M	Lu	<	0.000747	M	Ru	<	0.003736	O	V	<	0.000900			
O	Cu	<	0.001400	O	Mg		0.006243	O	S		0.008164	O	W	<	0.004000			
M	Dy	<	0.011208	O	Mn		0.000033	M	Sb	<	0.000934	M	Y	<	0.074721			
M	Er	<	0.009340	M	Mo	<	0.003736	M	Sc	<	0.018680	M	Yb	<	0.001868			

M - Checked by ICP-MS O - Checked by ICP-OES I - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 6.94 +1 (6) Li+(aq) large effective radius due to hydration sphere

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Li Containing Samples (Preparation and Solution) -Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of Li in sodium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 7 amu	10 ppt	n/a	
ICP-OES 323.261 nm	1.1 / 0.05 micro;g/mL	1	Sb, Th, Ni
ICP-OES 460.286 nm	0.9 / 0.04 µg/mL	1	Zr, Th
ICP-OES 670.784 nm	0.002 / 0.00002 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Mn_00015

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 22, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 22, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 · ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN1
Lot Number:	K2-MN651112
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Manganese
Starting Material:	Mn Flake
Starting Material Lot#:	1909 and 1573
Starting Material Purity:	99.9920%

4628197
ID: 1000 Mn_00016
Exp:8/22/20 Prpd:sus
1000 Mn IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 995 ± 4 µg/mL

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 — **996 ± 4 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 — **995 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000671	M	Eu	<	0.000671	O	Na		0.012155	M	Se	<	0.014098	O	Zn	<	0.023580
O	Al		0.003685	O	Fe		0.000937	M	Nb	<	0.000671	O	Si		0.012627	M	Zr	<	0.004699
M	As	<	0.006713	M	Ga	<		M	Nd	<	0.006713	M	Sm	<	0.004028				
M	Au	<	0.000671	M	Gd	<	0.006713	M	Ni		0.001426	M	Sn	<	0.004028				
M	B		0.011628	M	Ge	<	0.100699	M	Os	<	0.000650	O	Sr		0.000157				
M	Ba	<	0.003357	M	Hf	<	0.000671	i	P	<		M	Ta	<	0.000671				
M	Be	<	0.001343	M	Hg	<	0.003249	M	Pb		0.001101	M	Tb	<	0.000671				
M	Bi	<	0.000671	M	Ho	<	0.000671	M	Pd	<	0.006713	M	Te	<	0.040280				
O	Ca		0.005090	M	In	<	0.000671	M	Pr	<	0.002685	M	Th	<	0.000671				
M	Cd	<	0.001343	M	Ir	<	0.000650	M	Pt	<	0.000671	O	Ti	<	0.001179				
M	Ce	<	0.013427	O	K		0.001934	M	Rb	<	0.010741	M	Tl	<	0.000671				
M	Co		0.001971	M	La	<	0.006713	M	Re	<	0.000671	M	Tm	<	0.000671				
M	Cr		0.000927	O	Li		0.000081	M	Rh	<	0.020140	M	U	<	0.004028				
M	Cs	<	0.000671	M	Lu	<	0.000671	M	Ru	<	0.000650	M	V	<	0.000671				
M	Cu		0.001333	O	Mg		0.037056	i	S	<		M	W	<	0.006713				
M	Dy	<	0.003357	s	Mn	<		M	Sb	<	0.013427	M	Y	<	0.033566				
M	Er	<	0.003357	O	Mo	<	0.011790	O	Sc	<	0.001179	M	Yb	<	0.002014				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H2O)6^{2+}$

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H2SO4 and heat to SO3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Mo_00011

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2)^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.006075	M	Eu	<	0.001518	O	Na	<	0.010480	M	Se	<	0.005062	M	Zn	<	0.026833
M	Al		0.002196	M	Fe		0.000617	M	Nb	<	0.126574	i	Si	<		M	Zr	<	0.003797
M	As		0.010771	M	Ga		0.000470	i	Nd	<		M	Sm	<	0.005062				
M	Au	<	0.001519	M	Gd	<	0.002531	M	Ni	<	0.010125	M	Sn	<	0.002025				
M	B	<	0.016454	M	Ge	<	0.022277	M	Os	<	0.006077	O	Sr	<	0.001572				
M	Ba	<	0.012657	M	Hf	<	0.001518	i	P	<		M	Ta	<	0.001012				
M	Be	<	0.000506	M	Hg	<	0.015192	M	Pb	<	0.010632	M	Tb	<	0.000253				
M	Bi	<	0.000253	M	Ho	<	0.000506	M	Pd	<	0.040503	i	Te	<					
O	Ca		0.001731	M	In	<	0.025314	M	Pr	<	0.101259	M	Th	<	0.001012				
O	Cd	<	0.010480	M	Ir	<	0.001519	M	Pt	<	0.001518	O	Ti	<	0.001048				
M	Ce	<	0.063287	O	K		0.008211	M	Rb	<	0.010632	M	Tl	<	0.005569				
M	Co	<	0.006075	M	La	<	0.001518	M	Re		0.002227	M	Tm	<	0.000253				
M	Cr	<	0.011138	O	Li	<	0.005240	M	Rh	<	0.001012	M	U	<	0.002531				
M	Cs	<	0.006581	M	Lu	<	0.000253	M	Ru	<	0.001519	O	V	<					
M	Cu	<	0.014176	M	Mg		0.000564	i	S	<		M	W		0.111065				
M	Dy	<	0.010632	M	Mn	<	0.037972	M	Sb	<	0.012657	M	Y	<	0.000253				
M	Er	<	0.001518	s	Mo	<		O	Sc	<	0.010480	M	Yb	<	0.002025				

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 USA
Inorganic Ventures

CERTIFICATE OF ANALYSIS

Tel: 540.961.0012
Info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	K2-MO02086
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	1934
Starting Material Purity:	99.9942%

4280050
ID: 1000 Mo_00011
Exp: 05/19/20 Prpd: SJS
1000 Mo IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5799; 540.585.3030, Fax: 540.586.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 19, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 19, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Product Documentation Supervisor

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4] -2(chemical form as received)
Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5] -2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4] -2 chemically stable for years in 1% NH4OH in a LDPE container.
Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Sb_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 01, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
TSG Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
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Inorganic Ventures

CERTIFICATE OF ANALYSIS

Fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB1
Lot Number:	K2-SB03048
Matrix:	1% (v/v) HNO3 3% Tartaric Acid
Value / Analyte(s):	1 000 µg/mL ea: Antimony
Starting Material:	Sb Pieces
Starting Material Lot#:	1857/1647
Starting Material Purity:	99.9835%

4389926
ID: 1000 Sb_00017
Exp: 07/01/20 Prpd: SJS
1000 Sb IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 8 µg/mL

Certified Density: 1.020 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1000 ± 5 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 061229 Sb

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000303	M	Eu	< 0.000404	O	Na	0.007895	M	Se	< 0.002022	O	Zn	0.000398
O	Al	0.001425	O	Fe	0.002492	M	Nb	< 0.001011	O	Si	0.035346	O	Zr	< 0.003088
M	As	< 0.003842	M	Ga	< 0.000101	M	Nd	< 0.000101	M	Sm	< 0.000202			
M	Au	< 0.001961	M	Gd	< 0.000101	O	Ni	< 0.011715	M	Sn	< 0.002629			
M	B	0.005849	M	Ge	< 0.000303	M	Os	< 0.000103	O	Sr	< 0.000198			
O	Ba	< 0.001065	M	Hf	< 0.000202	O	P	0.061438	M	Ta	< 0.002224			
M	Be	< 0.000404	M	Hg	< 0.000103	M	Pb	< 0.001618	M	Tb	< 0.000101			
M	Bi	0.000704	M	Ho	< 0.000101	M	Pd	< 0.000202	M	Te	< 0.001213			
O	Ca	0.001146	M	In	< 0.000101	M	Pr	< 0.001415	M	Th	< 0.000101			
M	Cd	< 0.000101	M	Ir	< 0.000103	M	Pt	< 0.000101	M	Ti	0.000652			
O	Ce	< 0.010490	O	K	0.047431	M	Rb	< 0.002831	M	Tl	< 0.000404			
O	Co	< 0.001160	O	La	< 0.002587	M	Re	< 0.000101	M	Tm	< 0.000101			
O	Cr	0.008875	O	Li	0.000016	M	Rh	< 0.000101	M	U	< 0.000101			
M	Cs	< 0.001011	M	Lu	< 0.000404	M	Ru	< 0.000103	M	V	< 0.000404			
M	Cu	0.000441	O	Mg	0.000330	n	S	<	M	W	< 0.000202			
M	Dy	< 0.003438	O	Mn	0.000152	s	Sb	<	M	Y	< 0.000101			
M	Er	< 0.000101	M	Mo	< 0.006269	O	Sc	< 0.000711	M	Yb	< 0.000101			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1
Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.
Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Sn_00014

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Christiansburg, VA 24073, USA

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

4447795
IB. 1000 Sn_00014
Exp: 12/1/08 Pkg: 5/5
1000 Sn IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSN1
Lot Number:	K2-SN653888
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Tin
Starting Material:	Sn shot
Starting Material Lot#:	1789
Starting Material Purity:	99.9976%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1 000 ± 7 µg/mL

Certified Density: 1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1 000 ± 5 µg/mL**
ICP Assay NIST SRM 3161a Lot Number: 140917

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used in equal weighting when one of the methods of characterization is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$ and mean of Assay Method B with standard uncertainty $u_{char\ b}$ weighted when one of the methods of characterization is the weighted mean of the two results:

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = weighting factors for each method calculated using the inverse square of the uncertainties

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ u_{CRM/RM} = k\ [u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{tts}]^{1/2}$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM}$ = $k\ u_{CRM/RM}$ = $k\ [u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{tts}]^{1/2}$ ensures a 95% confidence level.

k = coverage factor = 2 in all cases at inorganic ventures

$u_{char\ a\&b}$ = square root of the sum of the squares of the errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{tts} = transport stability standard uncertainty

Characterization of CRM by one method

Characterization of CRM by one method

Characterization of CRM/RM by One Method

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ u_{CRM/RM} = k\ [u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{tts}]^{1/2}$

k = coverage factor = 2 in all cases at inorganic ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{tts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term "in-house std." is specified.

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term "in-house std." is specified.

4.1 Thermometer Calibration

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9995% efficient for the removal of particles down to 0.3 µm.

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9995% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000100	M	Eu	< 0.000100	O	Na	0.000684	M	Se	< 0.005701	O	Zn	< 0.000308
M	Al	< 0.000106	M	Fe	< 0.000881	M	Nb	< 0.000200	O	Si	0.012538	O	Zr	< 0.000514
M	As	< 0.000159	M	Ga	< 0.000100	M	Nd	< 0.000100	M	Sm	< 0.000100			
M	Au	< 0.000289	M	Gd	< 0.000500	O	Ni	< 0.001234	S	Sn	<			
M	Ba	< 0.001246	M	Ge	< 0.000700	M	Os	< 0.000099	O	Sr	< 0.000025			
M	Be	< 0.000016	M	Hf	< 0.000600	O	P	< 0.020580	O	Ta	< 0.009261			
M	Bi	0.000337	M	Hg	< 0.000936	M	Pb	< 0.003707	M	Tb	< 0.000100			
M	Ca	< 0.002471	M	Ho	< 0.000100	M	Pd	< 0.000100	M	Te	< 0.001800			
M	Cd	< 0.000284	M	In	< 0.000099	M	Pr	< 0.006001	M	Th	< 0.000100			
M	Ce	< 0.013091	M	Ir	< 0.005479	M	Pt	< 0.000200	O	Ti	< 0.000514			
M	Co	< 0.001237	O	K	< 0.003447	M	Rb	< 0.000500	M	Tl	< 0.000100			
M	Cr	< 0.000089	O	La	< 0.001025	M	Re	< 0.000100	M	Tm	< 0.000100			
M	Cs	< 0.000695	M	Li	< 0.000077	M	Rh	< 0.000100	M	U	< 0.000100			
M	Cu	< 0.002658	M	Lu	< 0.000200	M	Ru	< 0.000099	M	V	< 0.000500			
M	Dy	< 0.000100	M	Mg	< 0.000390	M	S	<	M	W	< 0.000100			
M	Er	< 0.000100	M	Mn	< 0.000037	O	Sb	< 0.020580	M	Y	< 0.000100			
M	Eu	< 0.000100	M	Mo	< 0.000100	O	Sc	< 0.000164	M	Yb	< 0.000100			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 118.71 +4 4,5, 6,7,8 Sn(OH)xFy2-

Chemical Compatibility -Soluble in HCl and dilute HF / HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away. (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated.) Stable with most inorganic anions provided it is in the chemical form shown above.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Sn(OH)xFy2- for 1 year in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Sn(OH)xFy2- chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.

Sn Containing Samples (Preparation and Solution) - Metal (Soluble in HF / HNO3 or HCl); Oxides - SnO (soluble in HCl), SnO2 -very resistant to all acids including HF(Fusion with equal parts of Na2CO3 and S. It is then soluble in water or dilute acids as the thiostannate.); Alloys (Treat first 0.1 g with 10 mL conc. H2SO4 to boiling until the alloy disintegrates and nearly all of the sulfuric acid is expelled. Then add 100 mL O2 free water and 50 mL of conc HCl or transfer to a plastic container and add 1 mL HF in either case warming gently to bring about solution.); Organic Matrices (Volatility and precipitation of the insoluble stannic oxide are problems. Consultation of the literature should be made for individual matrices / Sn compounds.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 120 amu	5 ppt	N/A	120Te, 104Ru16O, 104Pd16O
ICP-OES 189.989 nm	0.03 / 0.003 µg/mL	1	
ICP-OES 242.949 nm	0.1 / 0.01 µg/mL	1	W, Mo, Rh ,Ta, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 13, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 13, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

1000 Sr_00010

300 Technology Drive
Lindenhurst, NY 11757 USA
Tel: 631.659.0710 • 516.334.7500
Fax: 631.659.0769
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	K2-SR02059
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	1922
Starting Material Purity:	99.9967%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1005 ± 5 µg/mL
Certified Density:	1.001 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1003 ± 4 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**1005 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000562	M	Eu	<	0.000562	O	Na		0.000359	M	Se	<	0.007311	O	Zn		0.000195
M	Al		0.000790	O	Fe		0.000965	M	Nb	<	0.000562	O	Si		0.002245	M	Zr	<	0.002812
M	As	<	0.000562	M	Ga	<	0.000562	M	Nd	<	0.000562	M	Sm	<	0.000562				
M	Au	<	0.001680	M	Gd	<	0.000562	O	Ni		0.000179	M	Sn	<	0.003374				
O	B	<	0.001118	M	Ge	<	0.000562	M	Os	<	0.001680	s	Sr	<					
O	Ba		0.044452	M	Hf	<	0.000562	O	P	<	0.055900	M	Ta	<	0.000562				
O	Be	<	0.000111	M	Hg	<	0.000560	M	Pb	<	0.005624	M	Tb	<	0.000562				
M	Bi	<	0.002812	M	Ho	<	0.000562	M	Pd	<	0.000562	M	Te	<	0.005624				
O	Ca		0.003075	M	In	<	0.000562	M	Pr	<	0.000562	M	Th	<	0.000562				
O	Cd	<	0.000894	M	Ir	<	0.000560	M	Pt	<	0.000562	O	Ti	<	0.001118				
M	Ce		0.002450	M	K		0.002970	M	Rb	<	0.028120	M	Tl	<	0.000562				
M	Co	<	0.002249	O	La	<	0.005590	M	Re	<	0.000562	M	Tm	<	0.000562				
O	Cr		0.000118	M	Li	<	0.001687	O	Rh	<	0.011180	M	U	<	0.001124				
M	Cs	<	0.000562	M	Lu	<	0.000562	M	Ru	<	0.000560	M	V	<	0.000562				
M	Cu	<	0.011248	O	Mg		0.000067	O	S		0.003143	M	W	<	0.000562				
M	Dy	<	0.000562	O	Mn		0.000808	M	Sb	<	0.001124	O	Y	<	0.004472				
M	Er	<	0.000562	M	Mo	<	0.000562	O	Sc	<	0.003354	M	Yb	<	0.000562				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H2O)6+2
Chemical Compatibility - Soluble in HCl, and HNO3. Avoid H2SO4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO3 / LDPE container.
Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 18, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 18, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

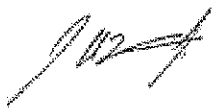
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

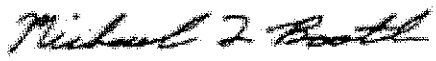
Certificate Prepared By:

James King Jr
Product Documentation Supervisor



Certificate Approved By:

Michael Booth
QC Supervisor



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director



Reagent

1000 W IV_00014

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGW1
Lot Number:	N2-W664865
Matrix:	0.2% (v/v) HNO3 2% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Tungsten
Starting Material:	W Powder
Starting Material Lot#:	1898
Starting Material Purity:	99.9941%

5204592
ID: 1000 W IV_00014
Exp:07/05/19 Prpd:LMT Opnd:07/05/18
1000 Tungsten IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL
Density: 1.007 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 6 µg/mL**
ICP Assay NIST SRM 3163 Lot Number: 140606

Assay Method #2 **997 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

SRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.001202	M	Eu	< 0.000200	O	Na	0.001960	M	Se	< 0.004000	M	Zn	0.002074			
O	Al	< 0.033570	M	Fe	< 0.079372	M	Nb	< 0.180390	i	Si	<	O	Zr	< 0.005595			
M	As	< 0.010422	M	Ga	< 0.000200	M	Nd	< 0.000200	M	Sm	< 0.000200						
M	Au	< 0.030804	M	Gd	< 0.000200	M	Ni	< 0.017638	M	Sn	0.000266						
M	B	< 0.003808	M	Ge	< 0.001403	M	Os	< 0.000200	M	Sr	< 0.000801						
M	Ba	< 0.002004	M	Hf	0.000288	i	P	<	M	Ta	0.011947						
M	Be	< 0.000601	i	Hg	<	M	Pb	< 0.005612	M	Tb	< 0.000200						
M	Bi	< 0.009219	M	Ho	< 0.000200	M	Pd	< 0.001800	M	Te	< 0.001603						
O	Ca	0.004290	M	In	< 0.000200	M	Pr	< 0.000601	M	Th	< 0.012426						
M	Cd	< 0.000200	M	Ir	< 0.000200	M	Pt	< 0.001603	M	Ti	0.004115						
M	Ce	< 0.000200	O	K	0.039229	M	Rb	< 0.001603	M	Tl	< 0.003206						
M	Co	< 0.000200	M	La	< 0.000200	M	Re	< 0.300651	M	Tm	< 0.000200						
O	Cr	< 0.011190	O	Li	< 0.000434	M	Rh	< 0.000200	M	U	< 0.001202						
M	Cs	0.000088	M	Lu	< 0.000200	M	Ru	< 0.000200	M	V	< 0.009219						
M	Cu	< 0.003607	M	Mg	0.000632	i	S	<	s	W	<						
M	Dy	< 0.000200	M	Mn	< 0.005211	M	Sb	< 0.008819	M	Y	< 0.000200						
M	Er	< 0.000200	M	Mo	0.000232	O	Sc	< 0.000543	M	Yb	< 0.000200						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 183.85 +6 6,7,8,9 WOF5-2(chemical form as received)
Chemical Compatibility -W is very readily hydrolyzed requiring 0.1 to 1% HF solutions for stabile acidic solutions. The [WOF5]-2 is soluble in % levels of HCl and HNO3 provided it is in the [WOF5]-2 form. Stable at ppm levels with some metals provided it is fluorinated. <U>Do not mix with Alkaline or Rare Earths</U>. W is best to be mixed only with other fluorinated metals (Ti, Zr, Hf, Nb, Ta, Mo, Si, Sn, Ge). Look for yellow WO3 precipitate if mixed with other transitions at higher levels indicating instability. The yellow WO3 will form over a period of weeks even in trace HF, therefore, <U>HF levels of W multi-element blends should be ∼ 1%</U>.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [WOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [WOF5]-2 chemically stable for years in 1% HF in a LDPE container.
W Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3); Oxide (soluble in HF or NH4OH) ; Organic Matrices (dry ash at 450 0C in Pt0 and dissolve oxide with HF).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 182 amu	5 ppt	N/A	166Er16O
ICP-OES 207.911 nm	0.03/0.001 µg/mL	1	Ru, In
ICP-OES 209.475 nm	0.05/0.008 µg/mL	1	Mo
ICP-OES 224.875 nm	0.05/0.005 µg/mL	1	Co, Rh, Ag

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 19, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 19, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

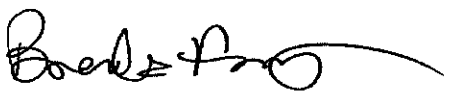
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

1000 Zr_00016

INORGANIC VENTURES
200 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

4292765
ID: 1000 Zr_00016
Exp: 05/13/16 Prpd: SJS
1000 Zr IV

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZR1
Lot Number:	K2-ZR01116
Matrix:	tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Zirconium
Starting Material:	ZrO2
Starting Material Lot#:	1842
Starting Material Purity:	99.9913%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Certified Density: 1.000 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1000 ± 3 µg/mL**
ICP Assay NIST SRM 3169 Lot Number: 130920

Assay Method #2 **999 ± 4 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

SRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

n	Ag	<		M	Eu	<	0.000247	O	Na	<	0.314400	M	Se	<	0.494400	O	Zn		0.000103
O	Al	<	0.073360	O	Fe		0.004483	O	Nb	<	0.104800	O	Si	<	0.104800	s	Zr	<	
M	As	<	0.012360	M	Ga	<	0.001236	M	Nd	<	0.000742	M	Sm	<	0.007416				
M	Au	<	0.012360	M	Gd	<	0.000247	O	Ni	<	0.003144	M	Sn	<	0.024720				
M	B	<	0.009888	M	Ge	<	0.000742	n	Os	<		M	Sr		0.000296				
M	Ba	<	0.007416	O	Hf		0.010760	O	P	<	0.052400	O	Ta	<	0.104800				
M	Be	<	0.000247	O	Hg	<	0.001048	M	Pb		0.000317	M	Tb	<	0.000247				
M	Bi	<	0.017304	M	Ho	<	0.000247	M	Pd	<	0.024720	M	Te	<	0.247200				
O	Ca	<	0.104800	M	In	<	0.002472	M	Pr	<	0.000247	M	Th	<	0.012360				
O	Cd		0.059178	M	Ir	<	0.012360	M	Pt	<	0.024720	M	Ti	<	0.017304				
M	Ce	<	0.002472	O	K	<	0.157200	M	Rb	<	0.002472	M	Tl	<	0.000247				
M	Co	<	0.002472	M	La	<	0.000247	M	Re	<	0.000247	M	Tm	<	0.000247				
O	Cr	<	0.010480	M	Li	<	0.009888	M	Rh	<	0.000247	M	U	<	0.001236				
M	Cs	<	0.012360	M	Lu	<	0.000247	M	Ru	<	0.000247	M	V	<	0.019776				
O	Cu		0.002242	O	Mg		0.000112	O	S		0.044831	M	W	<	0.024720				
M	Dy	<	0.000247	M	Mn	<	0.012360	M	Sb	<	0.002472	M	Y	<	0.000247				
M	Er	<	0.000247	O	Mo		0.001659	O	Sc	<	0.002096	M	Yb	<	0.000247				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 91.22 +4 6,7,8 Zr(F)6-2
Chemical Compatibility -Soluble in concentrated HCl, HF, H2SO4 (very hot) and HNO3. Avoid H3PO4and neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions but precipitation with phosphate, oxalate, and tartrate with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Zr(F)6-2 + Zr(OH)4F2-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Zr(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.
Zr Containing Samples (Preparation and Solution) -Metal (Soluble in H2O / HF / HNO3); Oxide unlike TiO2 the ZrO2 is best fused in one of the following ways (Na2O2 in Ni0, Na2CO3 in Pt0 or Borax in Pt0); Organic Matrices (dry ash at 450 0C in Pt0 and dissolve by fusing with Na2CO3 and dissolving in HF / HNO3 / H2O).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 90 amu	2 ppt	N/A	74Ge16O, 74Se16O, [180X+2 (where X = Hf, Ta, W)]
ICP-OES 272.261 nm	0.018/0.001 µg/mL	1	Cr, V, Th, W
ICP-OES 339.198 nm	0.008/0.0007 µg/mL	1	Th, Mo
ICP-OES 343.823 nm	0.007/0.0004 µg/mL	1	Hf, Nb

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 13, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 13, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
QC Supervisor

Michael J Booth

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

10000 Al_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA, Telephone 800.669.6799, 540.585.3030, Fax 540.585.3012, ino.ganicventures.com, info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 08, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
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tel: 800.669.6799 ; 540.585.3030
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

4447793
ID: 10000 AL_66017
Exp: 11/2020 Prod: 9/8
10000 Al IV

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	K2-AL653003
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al Shot
Starting Material Lot#:	1834
Starting Material Purity:	99.9965%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL
Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 — **10008 ± 39 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 — **10039 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{GRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

GRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000521	M	Eu	<	0.000521	O	Na		0.039566	M	Se	<	0.003648	M	Zn	0.030987
s	Al	<		O	Fe		0.031494	M	Nb	<	0.000521	O	Si		0.185691	O	Zr	0.000399
M	As	<	0.012509	M	Ga		0.002264	M	Nd		0.004290	M	Sm	<	0.002085			
M	Au	<	0.000518	M	Gd	<	0.004170	O	Ni	<	0.012890	M	Sn	<	0.005212			
O	B		0.008253	M	Ge	<	0.002606	M	Os	<	0.000518	O	Sr		0.000202			
O	Ba	<	0.000659	M	Hf	<	0.000521	n	P	<		M	Ta	<	0.000521			
O	Be	<	0.000258	M	Hg	<	0.001555	M	Pb		0.001549	M	Tb	<	0.000521			
M	Bi	<	0.005212	M	Ho	<	0.000521	M	Pd	<	0.000521	M	Te	<	0.014072			
O	Ca		0.013185	M	In	<	0.002085	M	Pr		0.000953	M	Th	<	0.007297			
M	Cd	<	0.004170	M	Ir	<	0.000518	M	Pt	<	0.000521	O	Ti		0.001589			
M	Ce		0.011680	O	K		0.026175	M	Rb	<	0.000521	M	Tl		0.003099			
M	Co	<	0.000521	O	La		0.007115	M	Re	<	0.000521	M	Tm	<	0.000521			
O	Cr		0.001038	O	Li	<	0.000103	M	Rh	<	0.000521	M	U	<	0.005212			
M	Cs	<	0.000521	M	Lu	<	0.000521	M	Ru	<	0.000518	M	V		0.001549			
O	Cu		0.030608	O	Mg		0.016615	i	S	<		M	W	<	0.000521			
M	Dy	<	0.003127	O	Mn		0.000589	M	Sb	<	0.018763	O	Y	<	0.002578			
M	Er		0.000834	M	Mo	<	0.002085	O	Sc		0.000548	M	Yb	<	0.000521			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 Fe_00020

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

4687897
ID: 10000 Fe_00020
Exp:05/16/21 Prpd: SJS
10000 Fe IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	M2-FE657857
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron
Starting Material:	Iron Metal
Starting Material Lot#:	2031
Starting Material Purity:	99.9970%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10067 ± 22 µg/mL

Certified Density: 1.041 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10065 ± 29 µg/mL**
ICP Assay NIST SRM 3126a Lot Number: 140812

Assay Method #2 **10068 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001204	M	Eu	<	0.000602	O	Na		0.014101	M	Se	<	0.003000	M	Zn	<	0.021079
O	Al		0.005127	s	Fe	<		M	Nb	<	0.001204	O	Si		0.056662	M	Zr	<	0.002409
M	As	<	0.063841	M	Ga	<	0.018068	M	Nd	<	0.000602	M	Sm	<	0.000602				
M	Au	<	0.000600	M	Gd	<	0.000602	M	Ni		0.029758	M	Sn	<	0.006022				
O	B	<	0.037050	i	Ge	<		M	Os	<	0.000600	M	Sr	<	0.000602				
O	Ba	<	0.001852	M	Hf	<	0.000602	i	P	<		M	Ta	<	0.000602				
O	Be	<	0.000617	M	Hg	<	0.003000	M	Pb	<	0.004818	M	Tb	<	0.000602				
M	Bi	<	0.000602	M	Ho	<	0.000602	M	Pd	<	0.001204	M	Te	<	0.008431				
O	Ca		0.011793	M	In	<	0.000602	M	Pr	<	0.000602	M	Th	<	0.000602				
M	Cd	<	0.000602	M	Ir	<	0.000600	M	Pt	<	0.000602	M	Ti	<	0.001806				
M	Ce	<	0.000602	O	K		0.005640	M	Rb	<	0.001204	M	Tl	<	0.000602				
M	Co		0.038260	M	La	<	0.000602	M	Re	<	0.000602	M	Tm	<	0.000602				
O	Cr		0.030253	O	Li	<	0.000123	M	Rh	<	0.000602	M	U	<	0.000602				
M	Cs	<	0.000602	M	Lu	<	0.000602	M	Ru	<	0.000600	M	V	<	0.004818				
M	Cu		0.023381	O	Mg		0.001794	O	S		0.020254	M	W	<	0.001204				
M	Dy	<	0.000602	O	Mn		0.076916	M	Sb		0.035634	M	Y	<	0.000602				
M	Er	<	0.000602	M	Mo		0.005876	M	Sc	<	0.001204	M	Yb	<	0.000602				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H, 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 18, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 18, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

10000 Fe_00021

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

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300 Technology Drive
Christiansburg, VA 24073 - USA
Tel: 800-669-6799 - 540-585-3030
Fax: 540-585-3012
inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	M2-FE659835
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron
Starting Material:	Iron Metal
Starting Material Lot#:	2031 & 2146
Starting Material Purity:	99.9919%

4954179
ID: 10000 Fe_00021
Exp: 07/12/21 Prpd: SJS
10000 Fe IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	9993 ± 25 µg/mL
Density:	1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10014 ± 52 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**9988 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000607	M	Eu	<	0.000607	O	Na		0.009866	M	Se	<	0.032805	O	Zn	0.119626
M	Al		0.009492	s	Fe	<		M	Nb	<	0.000607	O	Si		0.035517	M	Zr	< 0.002430
M	As		0.060562	M	Ga	<	0.048601	M	Nd	<	0.000607	M	Sm	<	0.000607			
M	Au	<	0.008508	M	Gd	<	0.000607	O	Ni		0.182522	M	Sn	<	0.012150			
M	B	<	0.015187	M	Ge		0.060202	M	Os	<	0.001215	O	Sr	<	0.000997			
O	Ba	<	0.002494	M	Hf	<	0.000607	i	P	<	0.000001	M	Ta	<	0.000607			
M	Be	<	0.000607	M	Hg	<	0.001215	M	Pb		0.001321	M	Tb	<	0.000607			
M	Bi	<	0.000607	M	Ho	<	0.000607	M	Pd	<	0.000607	M	Te	<	0.001822			
O	Ca		0.022445	M	In	<	0.000607	M	Pr	<	0.000607	M	Th	<	0.001215			
M	Cd	<	0.000607	M	Ir	<	0.006685	M	Pt	<	0.000607	M	Tl	<	0.009720			
M	Ce	<	0.000607	O	K		0.003453	M	Rb	<	0.000607	M	Tl	<	0.000607			
O	Co		0.254052	M	La	<	0.000607	M	Re	<	0.000607	M	Tm	<	0.000607			
O	Cr		0.034284	O	Li	<	0.000124	M	Rh	<	0.000607	M	U	<	0.002430			
M	Cs	<	0.000607	M	Lu	<	0.000607	M	Ru	<	0.000607	M	V	<	0.003645			
O	Cu		0.019732	O	Mg		0.001973	O	S		0.032064	M	W	<	0.003645			
M	Dy	<	0.000607	O	Mn		0.073995	M	Sb		0.043139	M	Y	<	0.000607			
M	Er	<	0.000607	M	Mo		0.012016	M	Sc	<	0.001822	M	Yb	<	0.000607			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at a high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H , 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Si_00014

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 865.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI10
Lot Number:	K2-SI03060
Matrix:	1% (v/v) HNO3 1.4% (v/v) HF
Value / Analyte(s):	10 000 µg/mL ea: Silicon
Starting Material:	Fumed Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9929%

4060916
ID: 10000 SI_00014
Exp: 04/16/16 Prpd: SJS
10000 Si IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10 012 ± 55 µg/mL

Certified Density: 1.045 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10 012 ± 46 µg/mL**
ICP Assay NIST SRM 3150 Lot Number: 130912

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000703	M	Eu	<	0.000351	O	Na		0.008156	M	Se	<	0.008447	O	Zn	<	0.023040
O	Al		0.041068	M	Fe		0.019299	O	Nb	<	0.005760	s	Si	<		O	Zr	<	0.000806
M	As	<	0.035197	M	Ga	<	0.000351	M	Nd	<	0.000351	M	Sm	<	0.000351				
M	Au	<	0.000703	M	Gd	<	0.000351	M	Ni	<	0.001055	M	Sn	<	0.001055				
O	B		0.114646	M	Ge	<	0.000703	M	Os	<	0.000351	O	Sr	<	0.000138				
O	Ba		0.000676	M	Hf	<	0.002111	O	P	<	0.115200	M	Ta		0.002951				
O	Be	<	0.000036	M	Hg	<	0.001406	M	Pb	<	0.002815	M	Tb	<	0.000351				
M	Bi	<	0.000351	M	Ho	<	0.000351	M	Pd	<	0.000351	M	Te	<	0.010559				
O	Ca		0.004976	M	In	<	0.000351	M	Pr	<	0.000351	M	Th	<	0.000351				
M	Cd	<	0.000351	M	Ir	<	0.000351	M	Pt	<	0.000351	O	Ti		0.002759				
M	Ce	<	0.000351	O	K		0.001857	M	Rb	<	0.007039	M	Tl	<	0.000351				
M	Co	<	0.000351	M	La	<	0.000351	M	Re	<	0.000351	M	Tm	<	0.000351				
M	Cr	<	0.005631	O	Li	<	0.000029	M	Rh	<	0.000351	M	U	<	0.000351				
M	Cs	<	0.000351	M	Lu	<	0.000351	M	Ru	<	0.000351	O	V	<	0.001728				
M	Cu	<	0.004223	O	Mg		0.001645	O	S		1.529492	M	W	<	0.000351				
M	Dy	<	0.000351	M	Mn	<	0.003519	M	Sb	<	0.002111	M	Y	<	0.000351				
M	Er	<	0.000351	M	Mo	<	0.004927	O	Sc	<	0.000039	M	Yb	<	0.000351				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-
Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.
Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.
Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si-O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.8799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 18, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 18, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

ANALYTES B_00014

Reference Materials Producer
Cert #2495.01

SPEX CertiPrep®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: INTEB1 **Lot No.** 5177MKBY

Description: Analytes B

Matrix: 5% HNO_3

This **ASSURANCE**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3151*	Be	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3105a*
Cd	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3108*	Co	50 µg/mL	49.4 µg/mL	±0.3 µg/mL	3113*
Ni	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3136*	Cr	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3112a*
Pb	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3128*	Cu	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3114*
Zn	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3168a*	Mn	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3132*
Ba	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3104a*	V	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3165*

*- indicates NIST SRM †- indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# 9-164YP, 12-03YP

5078581
ID: ANALYTES B 00014
Exp: 04/01/18 Prod: SJS
ICP ANALYTES B SPEX

Balances are calibrated regularly with weight sets traceable to NIST #s 2836, 2837, and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified (measured) value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: APR 20 2018 Certifying Officer:

©2017 SPEX CertiPrep, LLC

Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

Icp cal std 3_00018

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

[illegible]
[illegible]
[illegible]

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-STD-3B
Lot Number:	M2-MEB663620
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium, 4 000 µg/mL ea: Magnesium, 1 000 µg/mL ea: Calcium, Sodium, 500 µg/mL ea: Iron, 200 µg/mL ea: Lithium, Phosphorus, 100 µg/mL ea: Strontium, Vanadium, Zinc, Manganese, Cadmium, Cobalt, Chromium, Copper, Silver, Aluminum, Boron, Barium, Beryllium, Nickel

4888686
ID: icp cal std 3_00018
Exp: 12/05/20 Prpd: SJB
ICP CAL STD 3B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.5 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.7 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Cadmium, Cd	100.0 ± 0.5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Chromium, Cr	100.0 ± 0.6 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.4 µg/mL	Iron, Fe	500.0 ± 2.0 µg/mL
Lithium, Li	200.0 ± 0.7 µg/mL	Magnesium, Mg	4 000 ± 16 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Phosphorus, P	200.0 ± 0.9 µg/mL	Potassium, K	10 000.0 ± 40.0 µg/mL
Silver, Ag	100.0 ± 0.4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	100.0 ± 0.4 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 °C)

Assay Information:

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Icp ICVH_00636

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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICVH
Part Number:	**SM-606-125**
Lot Number:	**1810619**
Matrix:	5% HNO_3
Purity:	99.96% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	4000 ± 20	3101a	140903	Th	300 ± 2	*	
Fe	8000 ± 40	3126a	140812	U	500 ± 3	3164	080521
Na	4000 ± 20	3152a	120715				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**
Certificate Issue Date: April 17, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

5073921
ID: icp ICVH_00636
Exp: 04/30/19 Prpd: SJS
ICP ICVH HP

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Subboiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Icp ICVL A_00013

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Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062**
	Solution A
Lot Number:	**1729362**
Matrix:	5% HNO_3
Purity:	99.5% - 99.9999%

4812545
ID: Icp ICVL A_00013
Exp: 10/01/18 Prpd: SJS
ICP ICVL SOLUTION A H

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	25.0 ± 0.1	3101a	140903	Li	25.0 ± 0.2	3129a	100714
As	25.0 ± 0.3	3103a	100818	Mg	1000 ± 5	3131a	140110
Ba	25.0 ± 0.2	3104a	140909	Mn	25.0 ± 0.3	3132	050429
Be	25.0 ± 0.3	3105a	090514	Ni	25.0 ± 0.1	3136	120619
B	25.0 ± 0.1	3107	110830	K	2000 ± 10	3141a	140813
Cd	25.0 ± 0.1	3108	130116	Se	50.0 ± 0.5	3149	100901
Ca	200 ± 1	3109a	130213	Na	200 ± 1	3152a	120715
Cr	25.0 ± 0.1	3112a	030730	Sr	25.0 ± 0.1	*	
Co	25.0 ± 0.1	3113	000630	Tl	50.0 ± 0.3	*	
Cu	25.0 ± 0.1	3114	121207	V	25.0 ± 0.2	*	
Fe	25.0 ± 0.1	3126a	140812	Zn	25.0 ± 0.1	3168a	120629
Pb	25.0 ± 0.2	3128	101026				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **October 2017**

Expiration Date: **October 2018**

Certificate Issue Date: October 20, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB 1B_00011

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P.O. Box 41727
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Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #1
Part Number:	**SM-606-037** Solution B
Lot Number:	**1734922**
Matrix:	2% HNO_3
Purity:	99.99%

4902379
ID: ICP ISAB 1B_00011
Exp: 12/01/18 Prpd: SJB
ICP ICSAB STD 1 SOL B H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#
Tl	1000 ± 6	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	December 15, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB STD1_00010

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Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER — ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ilac-MRA

ANAB ACCREDITED TESTING LABORATORY — ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	**ICS-AB STD#1**
Part Number:	**SM-606-037**
	Solution A
Lot Number:	**1734921**
Matrix:	**20% HCl**
Purity:	**99.999% - 99.9999%**

4902371
ID: ICP ISAB STD1_00010
Exp: 12/01/18 Prod: SJS
ICAP ICSAB STD 1 SOL A

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	140911	P	200.0 ± 1.2	3139a	060717
As	200 ± 2	3103a	100818	K	5000 ± 25	3141a	140813
B	200.0 ± 1.2	3107	110830	Se	500 ± 5	3149	100901
Li	100.0 ± 0.6	3129a	100714	Na	5000 ± 25	3152a	120715
Mo	100.0 ± 0.6	3134	130418	Sr	100.0 ± 0.5	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.
* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	**December 15, 2017**

Movem Mututurvari

Movem Mututurvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB STD2_00013

Sample Name: ICP ISAB STD2_00011 Acquired: 7/3/2018 7:25:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%) 20x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00690**	**-.00583**	**-.00005**	**.00046**	**-.00003**	**.00889**	**.04235**	**.00044**
Stddev	.00020	.00053	.00126	.00130	.00003	.00012	.00399	.00007	.00003
%RSD	321.04	7.6209	21.545	2405.4	6.1016	392.14	44.929	.16754	6.0746
#1	.00008	-.00727	-.00494	.00086	.00048	.00005	.01172	.04230	.00042
#2	-.00021	-.00653	-.00672	-.00097	.00044	-.00011	.00607	.04240	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00034**	**.00216**	**.01862**	**-.04392**	**-.00198**	**.00334**	**.00042**	**.00066**
Stddev	.00037	.00042	.00041	.00103	.03980	.00234	.00617	.00010	.00004
%RSD	85.544	124.10	19.108	5.5287	90.616	117.88	184.52	23.313	6.6074
#1	.00017	.00064	.00187	.01935	-.01578	-.00363	.00770	.00049	.00063
#2	.00070	.00004	.00245	.01789	-.07206	-.00033	-.00102	.00035	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02159**	**.00057**	**-.00434**	F **-.00317**	**-.04238**	**-.00080**	**-.00166**	**.00671**	**.01436**
Stddev	.00014	.00044	.00114	.00110	.00159	.00456	.00058	.02387	.05109
%RSD	.64346	76.481	26.343	34.690	3.7552	568.46	34.810	355.63	355.63
#1	-.02149	.00026	-.00514	-.00239	-.04125	-.00403	-.00207	.02359	.05049
#2	-.02169	.00088	-.00353	-.00395	-.04351	.00242	-.00126	-.01017	-.02176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit				.00900					
Low Limit				-.00300					

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **49.229**	**.00004**	**-.00191**	F **4.9283**	**-.00214**	**.00870**	**-.00054**	**.00342**	**-.00298**
Stddev	.046	.00006	.00139	.0140	.00067	.04390	.00027	.00029	.00057
%RSD	.09407	174.51	73.200	.28319	31.237	504.79	50.451	8.6155	19.050
#1	49.197	-.00001	-.00289	4.9382	-.00166	.03974	-.00074	.00321	-.00258
#2	49.262	.00008	-.00092	4.9185	-.00261	-.02235	-.00035	.00362	-.00338
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.01000					
Low Limit	-.10000			-.01000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2971.1**	**55500.**	**4143.0**
Stddev	4.3	184.	14.9
%RSD	.14605	.33103	.36040
#1	2968.0	55630.	4132.5
#2	2974.2	55370.	4153.6

Sample Name: ICP ISAB STD2_00011 Acquired: 7/2/2018 19:23:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.01595**	**-.02613**	**.00451**	**.00011**	**-.00048**	**.21371**	**.01037**	**.00138**
Stddev	.00113	.00143	.00031	.00000	.00001	.00002	.00145	.00962	.00042
%RSD	186.17	8.9974	1.1694	.04020	11.626	3.3907	.67814	92.772	30.675
#1	-.00141	-.01493	-.02592	.00451	.00011	-.00046	.21269	.00357	.00108
#2	.00019	-.01696	-.02635	.00451	.00010	-.00049	.21474	.01717	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00296**	**.00228**	**.05492**	**.01936**	**.08715**	F **-.02178**	**.00687**	**.00106**	**.00035**
Stddev	.00111	.00004	.00101	.00051	.00382	.00388	.00211	.00012	.00007
%RSD	37.565	1.6037	1.8430	2.6171	4.3864	17.824	30.758	11.120	19.271
#1	-.00217	.00225	.05564	.01900	.08986	-.01904	.00538	.00098	.00040
#2	-.00375	.00230	.05421	.01972	.08445	-.02453	.00836	.00114	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						25.000			
Low Limit						-.02000			

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02917**	**-.00052**	**-.01876**	**.00406**	**-.10075**	**.07719**	**.00456**	**.02709**	**.05798**
Stddev	.00696	.00044	.00243	.00121	.00935	.00444	.00209	.00419	.00897
%RSD	23.859	83.080	12.962	29.867	9.2760	5.7520	45.870	15.478	15.478
#1	.03409	-.00022	-.01704	.00320	-.09414	.08033	.00308	.02413	.05163
#2	.02425	-.00083	-.02048	.00491	-.10735	.07405	.00604	.03006	.06433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **619.55**	**.00010**	**.00732**	F **96.343**	**-.01120**	**-.10281**	**-.01118**	**.00211**	**-.00184**
Stddev	4.12	.00010	.00115	.638	.00088	.02135	.00080	.00006	.00099
%RSD	.66567	101.87	15.727	.66246	7.8719	20.768	7.1813	2.6625	53.824
#1	622.47	.00017	.00651	96.794	-.01182	-.08772	-.01175	.00207	-.00114
#2	616.64	.00003	.00814	95.892	-.01057	-.11791	-.01061	.00215	-.00254
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	50.000			10.000					
Low Limit	-.20000			-.02000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2883.4**	**51409.**	**4166.8**
Stddev	1.2	118.	2.3
%RSD	.04117	.22890	.05610
#1	2882.6	51326.	4168.5
#2	2884.3	51492.	4165.2

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #2
Part Number:	**SM-606-038**
Lot Number:	**1721944**
Matrix:	20% HCl
Purity:	99.98% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sn	1000 ± 10	3161a	140917	Ti	100 ± 1	3162a	130925

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**August 2017**
Expiration Date:	**August 2018**
Certificate Issue Date:	August 8, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP LLCCV-4_00004

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 • USA
Tel: 540.382.4570 • Fax: 540.382.4573
Email: info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICP-LLCCV-4
Lot Number:	N2-MEB667359
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	300 mg/L ea: Potassium, 100 mg/L ea: Sodium, 20 mg/L ea: Magnesium, Calcium, 10 mg/L ea: Bismuth, Aluminum, Iron, Sulfur, 6 mg/L ea: Uranium, 4 mg/L ea: Nickel, 2 mg/L ea: Selenium, Zinc, Lithium, 1.5 mg/L ea: Copper, Arsenic, Thorium, Thallium, 1 mg/L ea: Vanadium, Strontium, Barium, Silver, Cobalt, Chromium, Manganese, 0.9 mg/L ea: Lead, 0.5 mg/L ea: Cadmium, 0.1 mg/L ea: Beryllium

5078623
ID: ICP LLCCV-4_00004
Exp: 04/19/21 Prpd: SJS
ICP LLCCV STD 4 - IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	10.00 ± 0.05 mg/L	Arsenic, As	1.500 ±0.011 mg/L
Barium, Ba	1.000 ± 0.006 mg/L	Beryllium, Be	0.1000 ± 0.0006 mg/L
Bismuth, Bi	10.00 ± 0.07 mg/L	Cadmium, Cd	0.5000 ± 0.0037 mg/L
Calcium, Ca	20.00 ± 0.08 mg/L	Chromium, Cr	1.000 ± 0.007 mg/L
Cobalt, Co	1.000 ± 0.006 mg/L	Copper, Cu	1.500 ± 0.006 mg/L
Iron, Fe	10.00 ± 0.05 mg/L	Lead, Pb	0.900 ± 0.004 mg/L
Lithium; Li	2.000 ± 0.012 mg/L	Magnesium, Mg	20.01 ±0.12 mg/L
Manganese, Mn	1.000 ± 0.005 mg/L	Nickel, Ni	4.001 ± 0.024 mg/L
Potassium, K	300.0 ± 1.1 mg/L	Selenium, Se	2.000 ± 0.015 mg/L
Silver, Ag	1.000 ± 0.008 mg/L	Sodium, Na	100.0 ±0.4 mg/L
Strontium, Sr	1.000 ± 0.006 mg/L	Sulfur, S	10.01 ± 0.05 mg/L
Thallium, Tl	1.500 ± 0.010 mg/L	Thorium, Th	1.500 ± 0.009 mg/L
Uranium, U	6.000 ± 0.032 mg/L	Vanadium, V	1.000 ± 0.006 mg/L
Zinc, Zn	2.001 ± 0.012 mg/L		

Density: 1.013 g/mL (measured at 20 ± 4 °C)

Assay Information:

V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 19, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 19, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Bi	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	ICP Assay	3154	892205
S	Acidimetric		traceable to 84L
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

Reagent

ICP SPK 2B_00079

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICP-SPK-2B
Lot Number:	N2-MEB665203
Matrix:	5% (v/v) HNO3 0.5% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 200 µg/mL ea: Tin, Sulfur, 100 µg/mL ea: Boron, Molybdenum, Titanium, 50 µg/mL ea: Zirconium, Antimony

5234428
ID: ICP SPK 2B_0007a
Exp: 02/2021 Appl: LLB
ICP PREP SPIKE 2B

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	50.00 ± 0.30 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Molybdenum, Mo	100.0 ± 0.5 µg/mL	Silicon, Si	1 000 ± 6 µg/mL
Sulfur, S	200.0 ± 1.0 µg/mL	Tin, Sn	200.0 ± 0.8 µg/mL
Titanium, Ti	100.0 ± 0.6 µg/mL	Zirconium, Zr	50.00 ± 0.35 µg/mL

Density: 1.028 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
S	ICP Assay	3154	892205
S	Acidimetric		traceable to 84L
Sb	ICP Assay	3102a	1409H1
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	070830
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 06, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

ICP SPK 3A_00152

INORGANIC VENTURES
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-SPK-3A
Lot Number:	N2-MEB670997
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Calcium,	Potassium,	Magnesium,
Sodium,		
1 000 µg/mL ea:		
Phosphorus,		
200 µg/mL ea:		
Thallium,	Uranium,	Selenium,
Bismuth,	Aluminum,	Barium,
100 µg/mL ea:		
Arsenic,	Lithium,	Iron,
Strontium,	Thorium,	
50 µg/mL ea:		
Vanadium,	Zinc,	Lead,
Nickel,	Cobalt,	Manganese,
25 µg/mL ea:		
Copper,		
20 µg/mL ea:		
Chromium,		
10 µg/mL ea:		
Cadmium,		
5 µg/mL ea:		
Silver,	Beryllium	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	100.0 ± 0.5 µg/mL
Barium, Ba	200.0 ± 0.9 µg/mL	Beryllium, Be	5.000 ± 0.020 µg/mL
Bismuth, Bi	200.0 ± 1.2 µg/mL	Cadmium, Cd	10.00 ± 0.06 µg/mL
Calcium, Ca	5000 ± 20 µg/mL	Chromium, Cr	20.00 ± 0.14 µg/mL
Cobalt, Co	50.01 ± 0.22 µg/mL	Copper, Cu	25.00 ± 0.10 µg/mL
Iron, Fe	1000 ± 4 µg/mL	Lead, Pb	50.00 ± 0.27 µg/mL
Lithium, Li	1000 ± 4 µg/mL	Magnesium, Mg	5000 ± 20 µg/mL
Manganese, Mn	50.00 ± 0.26 µg/mL	Nickel, Ni	50.00 ± 0.26 µg/mL
Phosphorus, P	1000 ± 5 µg/mL	Potassium, K	4999 ± 19 µg/mL
Selenium, Se	200.0 ± 1.2 µg/mL	Silver, Ag	4.999 ± 0.034 µg/mL
Sodium, Na	4999 ± 19 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	200.0 ± 1.2 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	200.0 ± 1.1 µg/mL	Vanadium, V	50.00 ± 0.21 µg/mL
Zinc, Zn	50.00 ± 0.22 µg/mL		

Density: 1.093 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Bi	ICP Assay	3106	991212
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706

Zn^{Zn}	ICP Assay	3168a	120629
Zn^{Zn}	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

CRM/RM Expanded Uncertainty ($\pm$) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b}$ = square root of the sum of the squares of errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty ($\pm$) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES ((TMI)) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 23, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 23, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

Icp stk ICSA_00023

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com
tel: 800.669.6793 - 540.562.9099
fax: 540.585.9072
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

4698822
ID: icp stk ICSA_00023
Exp: 07/01/20 Prpd: SJS
ICP stock ICSA solution

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 22 µg/mL	Calcium, Ca	5 000 ± 20 µg/mL
Iron, Fe	2 000 ± 8 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

Reagent

Icp stk ICSA_00024

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

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ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

5128867
ID: lcp stk ICSA_06024
Exp: 07/01/20 Pkg: BS
ICP stock ICSA solution

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 22 µg/mL	Calcium, Ca	5 000 ± 20 µg/mL
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Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
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Mg	EDTA	928	928

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$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

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Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

Reagent

MS CALSTD-1_00125

INORGANIC VENTURES
Christiansburg, VA 24073 - USA
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	M2-MEB660182
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Silver, Arsenic, Barium,
Beryllium, Cadmium, Cobalt,
Chromium, Copper, Manganese,
Nickel, Lead, Selenium,
Thorium, Thallium, Uranium,
Vanadium, Zinc

4902218
ID: MS CALSTD-1_00125
Exp: 07/21/20 Prpd: LMT
ICP-MS Cal Std 1 IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

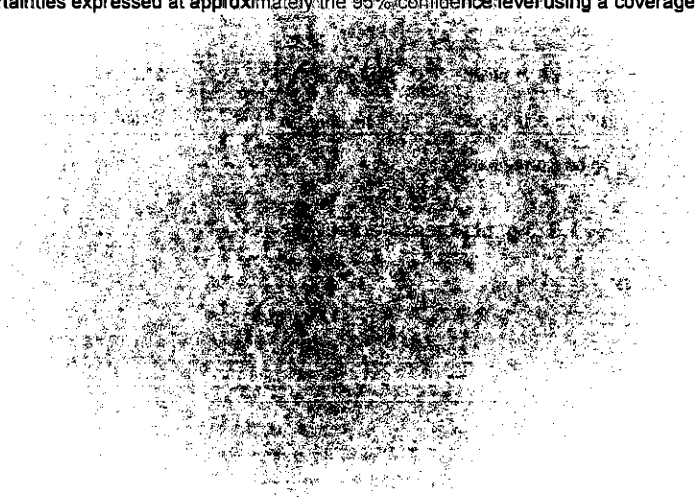
ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	20.00 ± 0.18 µg/mL	Barium, Ba	20.02 ± 0.09 µg/mL
Beryllium, Be	20.01 ± 0.09 µg/mL	Cadmium, Cd	20.01 ± 0.09 µg/mL
Chromium, Cr	20.00 ± 0.13 µg/mL	Cobalt, Co	20.00 ± 0.11 µg/mL
Copper, Cu	20.00 ± 0.10 µg/mL	Lead, Pb	20.00 ± 0.11 µg/mL
Manganese, Mn	20.00 ± 0.10 µg/mL	Nickel, Ni	20.00 ± 0.10 µg/mL
Selenium, Se	20.00 ± 0.13 µg/mL	Silver, Ag	20.01 ± 0.09 µg/mL
Thallium, Tl	20.01 ± 0.11 µg/mL	Thorium, Th	20.01 ± 0.10 µg/mL
Uranium, U	20.00 ± 0.10 µg/mL	Vanadium, V	20.00 ± 0.10 µg/mL
Zinc, Zn	20.00 ± 0.10 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty, u_{charA}

X_b = mean of Assay Method B with standard uncertainty u_{charb}

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{charA})^2 / ((1/u_{charA})^2 + (1/u_{charb})^2))$$

$$w_b = (1/u_{charb})^2 / ((1/u_{charA})^2 + (1/u_{charb})^2))$$

CRM/RM Expanded Uncertainty (u_c) = $U_{CRM/RM} = k(u^2_{characterization} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{characterization} = [(w_a)^2 (u_{charA})^2 + (w_b)^2 (u_{charb})^2]^{1/2}$, where u_{charA} and u_{charb} are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty u_{charA}

CRM/RM Expanded Uncertainty (u_c) = $U_{CRM/RM} = k(u^2_{charA} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

u_{charA} = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.37 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30°C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag, transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep capably sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4°C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited // A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited // A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 21, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 21, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAGS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS CALSTD-1_00129

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 853.01 ACCREDITED Reference Material Producer Certificate 853.02

5216342
ID: MS CALSTD-1_60129
Exp:07/14/19 Prpd:MRJ Opn:07/14/18
ICP-MS Cal Std 1 IV prep

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	M2-MEB660182
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Silver,	Arsenic,	Barium,
Beryllium,	Cadmium,	Cobalt,
Chromium,	Copper,	Manganese,
Nickel,	Lead,	Selenium,
Thorium,	Thallium,	Uranium,
Vanadium,	Zinc	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	20.00 ± 0.18 µg/mL	Barium, Ba	20.02 ± 0.09 µg/mL
Beryllium, Be	20.01 ± 0.09 µg/mL	Cadmium, Cd	20.01 ± 0.09 µg/mL
Chromium, Cr	20.00 ± 0.13 µg/mL	Cobalt, Co	20.00 ± 0.11 µg/mL
Copper, Cu	20.00 ± 0.10 µg/mL	Lead, Pb	20.00 ± 0.11 µg/mL
Manganese, Mn	20.00 ± 0.10 µg/mL	Nickel, Ni	20.00 ± 0.10 µg/mL
Selenium, Se	20.00 ± 0.13 µg/mL	Silver, Ag	20.01 ± 0.09 µg/mL
Thallium, Tl	20.01 ± 0.11 µg/mL	Thorium, Th	20.01 ± 0.10 µg/mL
Uranium, U	20.00 ± 0.10 µg/mL	Vanadium, V	20.00 ± 0.10 µg/mL
Zinc, Zn	20.00 ± 0.10 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by two independent methods Characterization of CRM/RM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty u_{charra}

X_b = mean of Assay Method B with standard uncertainty u_{charrb}

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{charra})^2 / ((1/u_{charra})^2 + (1/u_{charrb})^2))$$

$$w_b = (1/u_{charrb})^2 / ((1/u_{charra})^2 + (1/u_{charrb})^2))$$

$$CRM/RM\ Expanded\ Uncertainty\ (\pm) = u_{CRM/RM} = k(u^2_{charra\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{charra\&b} = [(w_a)^2(u_{charra})^2 + (w_b)^2(u_{charrb})^2]^{1/2}$ where u_{charra} and u_{charrb} are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{charra}$$

$$CRM/RM\ Expanded\ Uncertainty\ (\pm) = u_{CRM/RM} = k(u^2_{charra} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

u_{charra} = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.37 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30°C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag, transpiration of the CRM/RM will occur resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ±4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA, Telephone 800.669.3788, 540.585.3030, Fax: 540.585.3012, inorganicventures.com, info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 21, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 21, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

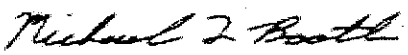
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

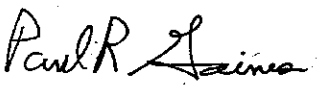
Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MS CALSTD-2_00094

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS
[illegible]
Christiansburg, VA 24073 USA
[illegible]
tel: 540.561.3000
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-2
Lot Number:	M2-MEB664004
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	20 µg/mL ea: Molybdenum, Antimony, Tin

5106413
ID: MS CALSTD-2_00094
Exp: 12/14/20 Prpd: LMT
ICP-MS Cal Std 2 IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	20.00 ± 0.14 µg/mL	Molybdenum, Mo	20.00 ± 0.12 µg/mL
Tin, Sn	20.00 ± 0.16 µg/mL		

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\,a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\,b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = ((1/u_{char\,a})^2 / ((1/u_{char\,a})^2 + (1/u_{char\,b})^2))$

$w_b = ((1/u_{char\,b})^2 / ((1/u_{char\,a})^2 + (1/u_{char\,b})^2))$

CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k\,(u^2_{char\,ab} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\,ab} = [(w_a)^2\,(u_{char\,a})^2 + (w_b)^2\,(u_{char\,b})^2]^{1/2}$ where $u_{char\,a}$ and $u_{char\,b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\,a}$

CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k\,(u^2_{char\,a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\,a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 14, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAG

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MS ICSA STOCK_00030

[illegible]
[illegible] · [illegible] · USA
[illegible]

tel: 800.669.4779 · 540.589.3059
fax: 540.589.3063
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	M2-MEB662772
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride, 2 000 µg/mL ea: Carbon, 1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur, 20 µg/mL ea: Titanium, Molybdenum

5103134
ID: MS ICSA STOCK_00030
Exp: 11/01/21 Prpd:LMT
ICP-MS ICS-0A STOCK SOLUT

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 3 µg/mL	Calcium, Ca	1 001 ± 4 µg/mL
Carbon, C	2 002 ± 4 µg/mL	Chloride, Cl	10 010.0 ± 60.0 µg/mL
Iron, Fe	1 001 ± 4 µg/mL	Magnesium, Mg	1 001 ± 4 µg/mL
Molybdenum, Mo	20.02 ± 0.10 µg/mL	Phosphorus, P	1 001 ± 4 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 4 µg/mL	Titanium, Ti	20.03 ± 0.12 µg/mL

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cl	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric		traceable to 84L
S	Acidimetric	84L	84L
S	ICP Assay	3154	892205
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'In-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	s	Na	<		M	Se	<	0.003000	M	Zn		0.004001
s	Al	<		s	Fe	<		M	Nb	<	0.000100	n	Si	<		M	Zr	<	0.000800
M	As	<	0.030009	M	Ga	<	0.000100	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000100	M	Gd	<	0.000100	M	Ni	<	0.006402	M	Sn	<	0.000600				
M	B	<	0.005901	M	Ge	<	0.003000	M	Os	<	0.001000	M	Sr		0.006802				
M	Ba		0.000800	M	Hf	<	0.000100	s	P	<		M	Ta	<	0.000200				
M	Be	<	0.000100	M	Hg	<	0.000100	M	Pb		0.001300	M	Tb	<	0.000100				
M	Bi	<	0.000100	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.006402				
s	Ca	<		M	In	<	0.008802	M	Pr	<	0.000100	M	Th	<	0.000100				
O	Cd	<	0.003102	M	Ir	<	0.000100	M	Pt	<	0.000100	s	Ti	<					
M	Ce	<	0.000400	s	K	<		M	Rb		0.015304	M	Tl	<	0.000100				
O	Co	<	0.007238	M	La	<	0.000100	M	Re	<	0.000400	M	Tm	<	0.000100				
M	Cr		0.002200	O	Li		0.001137	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000100	M	Lu	<	0.000100	M	Ru	<	0.000100	M	V	<	0.003401				
M	Cu		0.004701	s	Mg	<		s	S	<		M	W		0.001800				
M	Dy	<	0.000100	O	Mn	<	0.010340	M	Sb	<	0.002400	M	Y	<	0.000100				
M	Er	<	0.000100	s	Mo	<		M	Sc	<	0.000800	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 01, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

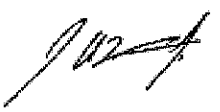
- Sealed TCT Bag Open Date: See TMS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael 2 Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS ICV StockA_00008

HIGH-PURITY STANDARDS
www.high-purity-standards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

4851656

ID: MS ICV StockA_60007
Exp:11/30/18 Prpd:LMT Opn:11/29/17
ICP-MS ICV STOCK A HP

Product Description:

Name:	MS ICV Stock
Part Number:	**SM-606-134**
	Solution A
Lot Number:	**1731407**
Matrix:	2% HNO_3
Purity:	99.97% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	2000 ± 12	3101a	140903	Pb	20.0 ± 0.2	3128	101026
As	20.0 ± 0.2	3103a	100818	Mn	20.0 ± 0.3	3132	050429
Ba	20.00 ± 0.12	3104a	140909	Ni	20.00 ± 0.12	3136	120619
Be	20.0 ± 0.2	3105a	090514	Se	20.0 ± 0.2	3149	100901
Cd	20.00 ± 0.12	3108	130116	Tl	20.00 ± 0.12	*	
Cr	20.00 ± 0.12	3112a	030730	Th	20.0 ± 0.2	*	
Co	20.00 ± 0.12	3113	000630	U	20.00 ± 0.12	3164	080521
Cu	20.00 ± 0.12	3114	121207	V	20.0 ± 0.2	*	
Fe	2000 ± 12	3126a	140812	Zn	20.00 ± 0.12	3168a	120629

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: November 2017
Expiration Date: November 2018
Certificate Issue Date: November 10, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Subboiling distilled high purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot numbers specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MS LLCCV1_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
Inorganic Ventures.com

CERTIFICATE OF ANALYSIS

Fax: 540.382.3012

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".

Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-10084).

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-LLCCV-1
Lot Number:	M2-MEB664005
Matrix:	5% ((w/v) HNO3
Value / Analyte(s):	10 µg/mL ea: Potassium, 5 µg/mL ea: Magnesium, Iron, Calcium, Sodium, 3 µg/mL ea: Aluminum, 1 µg/mL ea: Zinc, 0.5 µg/mL ea: Vanadium, Arsenic, Silver, Selenium, 0.2 µg/mL ea: Thorium, Chromium, Copper, Nickel, 0.1 µg/mL ea: Lead, Cadmium, Cobalt, Barium, Beryllium, Thallium, Uranium, Manganese

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	3.000 ± 0.015 µg/mL	Arsenic, As	0.5000 ± 0.0037 µg/mL
Barium, Ba	0.1000 ± 0.0006 µg/mL	Beryllium, Be	0.1000 ± 0.0007 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	4.999 ± 0.019 µg/mL
Chromium, Cr	0.1999 ± 0.0012 µg/mL	Cobalt, Co	0.1000 ± 0.0007 µg/mL
Copper, Cu	0.2000 ± 0.0012 µg/mL	Iron, Fe	5.000 ± 0.025 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Magnesium, Mg	4.999 ± 0.030 µg/mL
Manganese, Mn	0.1000 ± 0.0007 µg/mL	Nickel, Ni	0.2000 ± 0.0015 µg/mL
Potassium, K	10.00 ± 0.05 µg/mL	Selenium, Se	0.5000 ± 0.0037 µg/mL
Silver, Ag	0.5001 ± 0.0040 µg/mL	Sodium, Na	4.999 ± 0.025 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.2000 ± 0.0012 µg/mL
Uranium, U	0.1000 ± 0.0009 µg/mL	Vanadium, V	0.4999 ± 0.0028 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.022 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = ((1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.21 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 15, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 15, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See IACS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MV-567650_00027

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

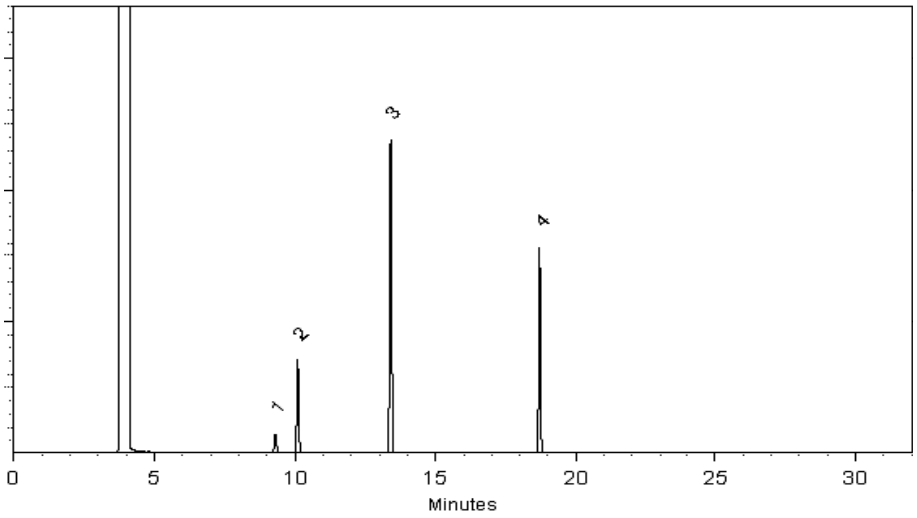
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol	5,022.1 µg/mL	+/- 29.1976 µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot I-201)		+/- 107.5241 µg/mL	Unstressed
	Purity 99%		+/- 110.6500 µg/mL	Stressed
2	2-Butanone-d5	1,257.5 µg/mL	+/- 7.3114 µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M-276)		+/- 26.9239 µg/mL	Unstressed
	Purity 99%		+/- 27.7067 µg/mL	Stressed
3	Fluorobenzene	250.8 µg/mL	+/- 1.4613 µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/- 5.3699 µg/mL	Unstressed
	Purity 99%		+/- 5.5259 µg/mL	Stressed
4	1,4-Dioxane-d8	5,009.4 µg/mL	+/- 29.1236 µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot I-19942)		+/- 107.2514 µg/mL	Unstressed
	Purity 99%		+/- 110.3694 µg/mL	Stressed
5	Chlorobenzene-d5	251.7 µg/mL	+/- 1.4666 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-21944)		+/- 5.3891 µg/mL	Unstressed
	Purity 99%		+/- 5.5458 µg/mL	Stressed
6	1,4-Dichlorobenzene-d4	251.3 µg/mL	+/- 1.4645 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 5.3813 µg/mL	Unstressed
	Purity 99%		+/- 5.5377 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

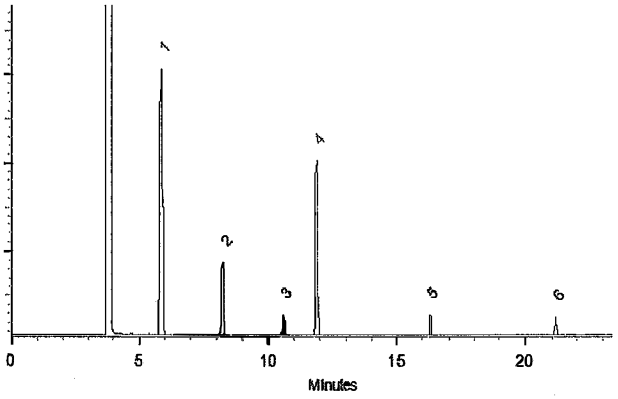
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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rec'd 3/1/18

Catalog No.: 568718 **Lot No.:** A0127975

Description: 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size: 5 mL **Pkg Amt:** > 5 mL

Expiration Date: May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 Purity 99%	(Lot I-201)	5,022.1	µg/mL	+/- 29.1976 +/- 107.5241 +/- 110.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 CAS # 24313-50-6 Purity 99%	(Lot M-276)	1,257.5	µg/mL	+/- 7.3114 +/- 26.9239 +/- 27.7067	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene CAS # 462-06-6 Purity 99%	(Lot BCBK8171V)	250.8	µg/mL	+/- 1.4613 +/- 5.3699 +/- 5.5259	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99%	(Lot I-19942)	5,009.4	µg/mL	+/- 29.1236 +/- 107.2514 +/- 110.3694	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99%	(Lot PR-21944)	251.7	µg/mL	+/- 1.4666 +/- 5.3891 +/- 5.5458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99%	(Lot PR-18488)	251.3	µg/mL	+/- 1.4645 +/- 5.3813 +/- 5.5377	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

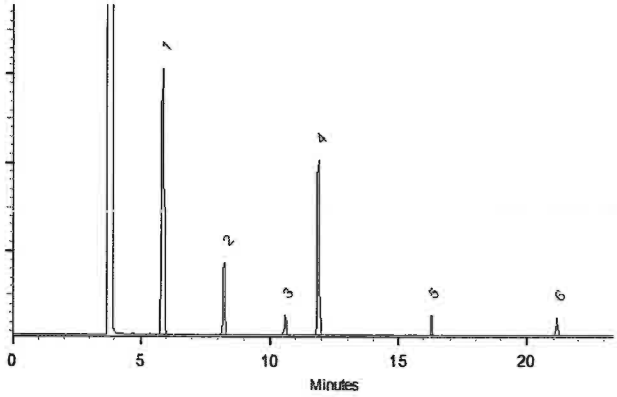
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Reagent

MV-569721.sec_00005

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Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

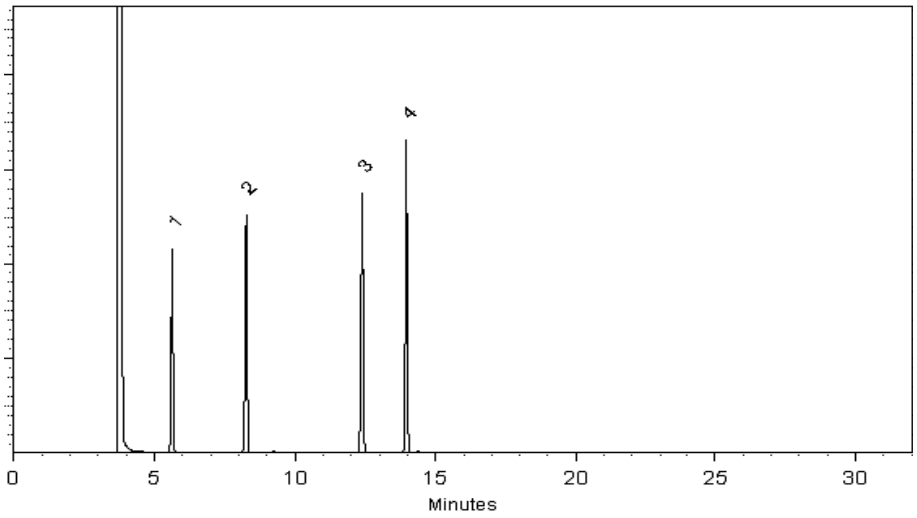
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00006

Reagent

MV-569722.sec_00005

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Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0128832

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,505.9 µg/mL	+/- 22.3986 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 141.5312 µg/mL	Unstressed
	Purity 99%		+/- 144.7955 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.7 µg/mL	+/- 24.8413 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.8153 µg/mL	Unstressed
	Purity 99%		+/- 145.0675 µg/mL	Stressed
3	Vinyl chloride	2,503.2 µg/mL	+/- 25.9197 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.9813 µg/mL	Unstressed
	Purity 99%		+/- 145.2285 µg/mL	Stressed
4	1,3-Butadiene	2,508.9 µg/mL	+/- 20.6969 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 141.4379 µg/mL	Unstressed
	Purity 99%		+/- 144.7121 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.6 µg/mL	+/- 26.2540 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 142.0076 µg/mL	Unstressed
	Purity 99%		+/- 145.2526 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,510.6 µg/mL	+/- 24.9094 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 142.2038 µg/mL	Unstressed
	Purity 99%		+/- 145.4650 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,510.9 µg/mL	+/- 25.6719 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 142.3575 µg/mL	Unstressed
	Purity 99%		+/- 145.6160 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.9	µg/mL	+/-	18.9312	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 253600)			+/-	140.9660	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

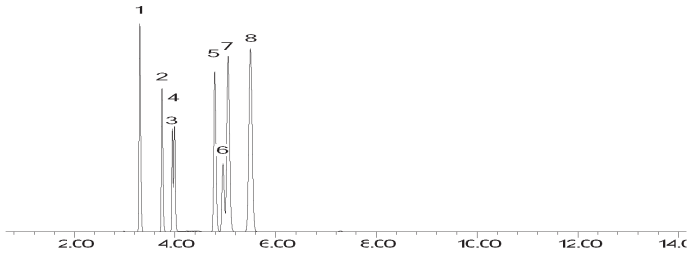
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569722_00008

Reagent

MV-569723_00004

Reagent

MV-569724.sec_00019

Reagent

MV-569724_00016

Reagent

MV-569727_00007

RESTEK®
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0124672

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,006.0 µg/mL	+/- 146.4156 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.8223 µg/mL	Unstressed
	Purity 99%		+/- 1,512.4040 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

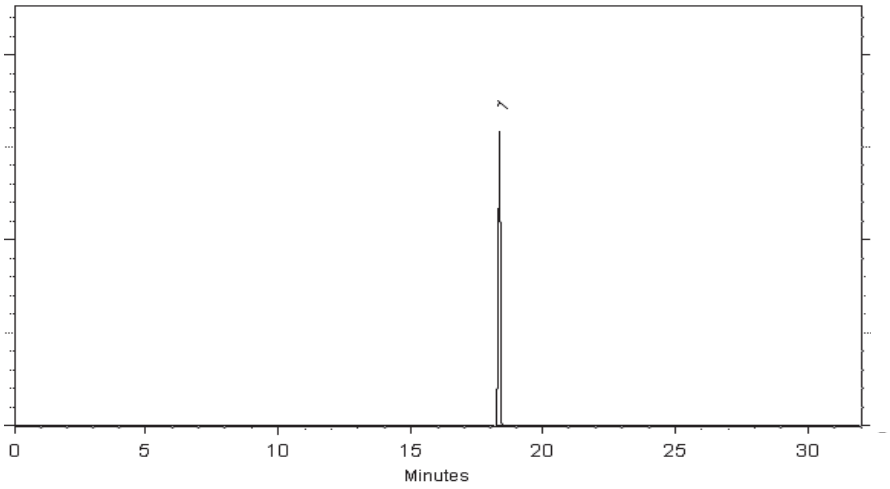
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-570808_00004

Reagent

mv-570809_00004

Reagent

MV-571992.sec_00001

Reagent

MV-571992_00001

Reagent

mv-571993.sec_00002

Reagent

mv-571993_00002

Reagent

mv-571994_00002

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001,, and calibrated Class A glassware in the manufacturing off these standards.

John Russo
President

Vincent Wang, Ph.D.
Director off QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET - NORTH KINGSTOWN, RHODE ISLAND 02852 - WWW.ULTRASCI.COM

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 (75. ID: 0.53(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
Trip Blank	280-114110-1	101	93	108	104
BH1-10	280-114110-2	100	95	100	97
BH2-5	280-114110-3	107	103	98	88
BH1-10-dup	280-114110-5	98	93	96	95
BH2-5-dup	280-114110-6	106	100	97	85
	MB 280-430151/6	104	100	102	99
	MB 280-430312/6	99	99	97	97
	LCS 280-430151/4	96	96	105	89
	LCS 280-430151/33	105	103	100	96
	LCS 280-430312/4	94	90	102	100
	LCS 280-430312/32	95	93	97	99
	LCSD 280-430312/5	98	96	101	102

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z1625.D

Lab ID: LCS 280-430151/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.73	95	78-124	
1,1,1-Trichloroethane	5.00	4.76	95	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.66	93	71-121	
1,1,2-Trichloroethane	5.00	4.87	97	80-119	
1,1-Dichloroethane	5.00	4.91	98	77-125	
1,1-Dichloroethene	5.00	4.77	95	71-131	
1,1-Dichloropropene	5.00	4.65	93	79-125	
1,2,3-Trichlorobenzene	5.00	4.38	88	69-129	
1,2,3-Trichloropropane	5.00	4.78	96	73-122	
1,2,4-Trichlorobenzene	5.00	4.29	86	69-130	
1,2,4-Trimethylbenzene	5.00	4.21	84	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.53 J	91	62-128	
1,2-Dibromoethane	5.00	4.79	96	77-121	
1,2-Dichlorobenzene	5.00	4.17	83	80-119	
1,2-Dichloroethane	5.00	4.92	98	73-128	
1,2-Dichloroethene, Total	10.0	9.45	95	79-121	
1,2-Dichloropropane	5.00	4.90	98	78-122	
1,3,5-Trimethylbenzene	5.00	4.28	86	75-124	
1,3-Dichlorobenzene	5.00	4.24	85	80-119	
1,3-Dichloropropane	5.00	4.70	94	80-119	
1,4-Dichlorobenzene	5.00	4.21	84	79-118	
2,2-Dichloropropane	5.00	4.74	95	60-139	
2-Butanone (MEK)	20.0	20.8	104	56-143	
2-Chlorotoluene	5.00	4.21	84	79-122	
2-Hexanone	20.0	20.6	103	57-139	
4-Chlorotoluene	5.00	4.49	90	78-122	
4-Isopropyltoluene	5.00	4.20	84	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	20.1	101	67-130	
Acetone	20.0	22.6	113	39-160	
Benzene	5.00	4.58	92	79-120	
Bromobenzene	5.00	4.38	88	80-120	
Bromochloromethane	5.00	4.85	97	78-123	
Bromodichloromethane	5.00	4.84	97	79-125	
Bromoform	5.00	4.89	98	66-130	
Bromomethane	5.00	5.09	102	53-141	
Carbon disulfide	5.00	4.49	90	64-133	
Carbon tetrachloride	5.00	4.66	93	72-136	
Chlorobenzene	5.00	4.63	93	82-118	
Chloroethane	5.00	5.27	105	60-138	
Chloroform	5.00	4.87	97	79-124	
Chloromethane	5.00	4.88	98	50-139	
cis-1,2-Dichloroethene	5.00	4.73	95	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z1625.D

Lab ID: LCS 280-430151/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	4.80	96	75-124	
Dibromochloromethane	5.00	4.66	93	74-126	
Dibromomethane	5.00	4.79	96	79-123	
Dichlorodifluoromethane	5.00	4.64	93	32-152	
Ethylbenzene	5.00	4.39	88	79-121	
Hexachlorobutadiene	5.00	4.07	81	66-134	
Isopropylbenzene	5.00	4.37	87	72-131	
m,p-Xylene	5.00	4.57	91	80-121	
Methyl iodide	5.00	4.76	95	69-131	
Methyl tert-butyl ether	5.00	4.87 J	97	71-124	
Methylene Chloride	5.00	4.47 J	89	74-124	
Naphthalene	5.00	4.74	95	61-128	
n-Butylbenzene	5.00	4.37	87	75-128	
N-Propylbenzene	5.00	4.17	83	76-126	
o-Xylene	5.00	4.31	86	78-122	
sec-Butylbenzene	5.00	4.12	82	77-126	
Styrene	5.00	4.22	84	78-123	
tert-Butylbenzene	5.00	4.14	83	78-124	
Tetrachloroethene	5.00	4.40	88	74-129	
Toluene	5.00	4.51	90	80-121	
trans-1,2-Dichloroethene	5.00	4.72	94	75-124	
trans-1,3-Dichloropropene	5.00	4.92	98	73-127	
Trichloroethene	5.00	4.68	94	79-123	
Trichlorofluoromethane	5.00	5.30	106	65-141	
Vinyl acetate	10.0	10.2	102	54-146	
Vinyl chloride	5.00	5.27	105	58-137	
Xylenes, Total	10.0	8.88	89	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z1650.D

Lab ID: LCS 280-430151/33 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diisopropyl ether	4.00	4.36 J	109	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_7087.D

Lab ID: LCS 280-430312/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.14	83	78-124	
1,1,1-Trichloroethane	5.00	4.47	89	74-131	
1,1,2,2-Tetrachloroethane	5.00	3.70	74	71-121	
1,1,2-Trichloroethane	5.00	3.99	80	80-119	
1,1-Dichloroethane	5.00	4.57	91	77-125	
1,1-Dichloroethene	5.00	4.75	95	71-131	
1,1-Dichloropropene	5.00	4.87	97	79-125	
1,2,3-Trichlorobenzene	5.00	3.96	79	69-129	
1,2,3-Trichloropropane	5.00	3.95	79	73-122	
1,2,4-Trichlorobenzene	5.00	3.95	79	69-130	
1,2,4-Trimethylbenzene	5.00	4.78	96	76-124	
1,2-Dibromo-3-Chloropropane	5.00	3.34 J	67	62-128	
1,2-Dibromoethane	5.00	4.13	83	77-121	
1,2-Dichlorobenzene	5.00	4.16	83	80-119	
1,2-Dichloroethane	5.00	4.26	85	73-128	
1,2-Dichloroethene, Total	10.0	9.39	94	79-121	
1,2-Dichloropropane	5.00	4.35	87	78-122	
1,3,5-Trimethylbenzene	5.00	4.79	96	75-124	
1,3-Dichlorobenzene	5.00	4.34	87	80-119	
1,3-Dichloropropane	5.00	4.03	81	80-119	
1,4-Dichlorobenzene	5.00	4.24	85	79-118	
2,2-Dichloropropane	5.00	4.46	89	60-139	
2-Butanone (MEK)	20.0	14.9	74	56-143	
2-Chlorotoluene	5.00	4.57	91	79-122	
2-Hexanone	20.0	14.4	72	57-139	
4-Chlorotoluene	5.00	4.69	94	78-122	
4-Isopropyltoluene	5.00	5.05	101	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	14.3	71	67-130	
Acetone	20.0	16.0	80	39-160	
Benzene	5.00	4.69	94	79-120	
Bromobenzene	5.00	4.40	88	80-120	
Bromochloromethane	5.00	4.33	87	78-123	
Bromodichloromethane	5.00	4.24	85	79-125	
Bromoform	5.00	3.72	74	66-130	
Bromomethane	5.00	4.62	92	53-141	
Carbon disulfide	5.00	4.57	91	64-133	
Carbon tetrachloride	5.00	4.36	87	72-136	
Chlorobenzene	5.00	4.36	87	82-118	
Chloroethane	5.00	5.34	107	60-138	
Chloroform	5.00	4.51	90	79-124	
Chloromethane	5.00	4.67	93	50-139	
cis-1,2-Dichloroethene	5.00	4.55	91	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_7087.D

Lab ID: LCS 280-430312/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	4.37	87	75-124	
Dibromochloromethane	5.00	3.98	80	74-126	
Dibromomethane	5.00	4.08	82	79-123	
Dichlorodifluoromethane	5.00	4.39	88	32-152	
Ethylbenzene	5.00	4.51	90	79-121	
Hexachlorobutadiene	5.00	4.40	88	66-134	
Isopropylbenzene	5.00	4.93	99	72-131	
m,p-Xylene	5.00	4.41	88	80-121	
Methyl iodide	5.00	4.62	92	69-131	
Methyl tert-butyl ether	5.00	4.12 J	82	71-124	
Methylene Chloride	5.00	4.49 J	90	74-124	
Naphthalene	5.00	3.15	63	61-128	
n-Butylbenzene	5.00	4.71	94	75-128	
N-Propylbenzene	5.00	4.81	96	76-126	
o-Xylene	5.00	4.43	89	78-122	
sec-Butylbenzene	5.00	4.59	92	77-126	
Styrene	5.00	4.59	92	78-123	
tert-Butylbenzene	5.00	4.93	99	78-124	
Tetrachloroethene	5.00	4.50	90	74-129	
Toluene	5.00	4.76	95	80-121	
trans-1,2-Dichloroethene	5.00	4.84	97	75-124	
trans-1,3-Dichloropropene	5.00	3.98	80	73-127	
Trichloroethene	5.00	4.43	89	79-123	
Trichlorofluoromethane	5.00	4.82	96	65-141	
Vinyl acetate	10.0	7.98	80	54-146	
Vinyl chloride	5.00	4.80	96	58-137	
Xylenes, Total	10.0	8.84	88	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_7089.D

Lab ID: LCS 280-430312/32 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diisopropyl ether	5.00	4.56 J	91	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_7088.D

Lab ID: LCSD 280-430312/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.37	87	5	20	78-124	
1,1,1-Trichloroethane	5.00	4.63	93	3	20	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.03	81	8	20	71-121	
1,1,2-Trichloroethane	5.00	4.62	92	15	20	80-119	
1,1-Dichloroethane	5.00	4.78	96	4	20	77-125	
1,1-Dichloroethene	5.00	4.64	93	2	20	71-131	
1,1-Dichloropropene	5.00	4.81	96	1	20	79-125	
1,2,3-Trichlorobenzene	5.00	4.31	86	9	20	69-129	
1,2,3-Trichloropropane	5.00	4.45	89	12	20	73-122	
1,2,4-Trichlorobenzene	5.00	4.35	87	10	20	69-130	
1,2,4-Trimethylbenzene	5.00	4.91	98	3	20	76-124	
1,2-Dibromo-3-Chloropropane	5.00	3.86 J	77	14	20	62-128	
1,2-Dibromoethane	5.00	4.24	85	3	20	77-121	
1,2-Dichlorobenzene	5.00	4.40	88	5	20	80-119	
1,2-Dichloroethane	5.00	4.57	91	7	20	73-128	
1,2-Dichloroethene, Total	10.0	9.81	98	4	20	79-121	
1,2-Dichloropropane	5.00	4.67	93	7	20	78-122	
1,3,5-Trimethylbenzene	5.00	4.87	97	2	20	75-124	
1,3-Dichlorobenzene	5.00	4.49	90	3	20	80-119	
1,3-Dichloropropane	5.00	4.40	88	9	20	80-119	
1,4-Dichlorobenzene	5.00	4.32	86	2	20	79-118	
2,2-Dichloropropane	5.00	4.70	94	5	20	60-139	
2-Butanone (MEK)	20.0	18.3	92	21	20	56-143	Q
2-Chlorotoluene	5.00	4.66	93	2	20	79-122	
2-Hexanone	20.0	15.7	78	9	20	57-139	
4-Chlorotoluene	5.00	4.74	95	1	20	78-122	
4-Isopropyltoluene	5.00	4.93	99	2	20	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	16.7	83	15	20	67-130	
Acetone	20.0	19.8	99	21	20	39-160	M Q
Benzene	5.00	4.87	97	4	20	79-120	
Bromobenzene	5.00	4.48	90	2	20	80-120	
Bromochloromethane	5.00	4.64	93	7	20	78-123	
Bromodichloromethane	5.00	4.46	89	5	20	79-125	
Bromoform	5.00	4.04	81	8	20	66-130	
Bromomethane	5.00	5.02	100	8	20	53-141	
Carbon disulfide	5.00	4.71	94	3	20	64-133	
Carbon tetrachloride	5.00	4.54	91	4	20	72-136	
Chlorobenzene	5.00	4.44	89	2	20	82-118	
Chloroethane	5.00	5.50	110	3	20	60-138	
Chloroform	5.00	4.67	93	4	20	79-124	
Chloromethane	5.00	4.96	99	6	20	50-139	
cis-1,2-Dichloroethene	5.00	4.83	97	6	20	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G2_7088.D

Lab ID: LCSD 280-430312/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	4.55	91	4	20	75-124	
Dibromochloromethane	5.00	4.39	88	10	20	74-126	
Dibromomethane	5.00	4.28	86	5	20	79-123	
Dichlorodifluoromethane	5.00	4.53	91	3	20	32-152	
Ethylbenzene	5.00	4.52	90	0	20	79-121	
Hexachlorobutadiene	5.00	4.37	87	1	20	66-134	
Isopropylbenzene	5.00	4.91	98	1	20	72-131	
m,p-Xylene	5.00	4.55	91	3	20	80-121	
Methyl iodide	5.00	4.91	98	6	20	69-131	
Methyl tert-butyl ether	5.00	4.72 J	94	14	20	71-124	
Methylene Chloride	5.00	4.91 J	98	9	20	74-124	
Naphthalene	5.00	3.67	73	15	20	61-128	
n-Butylbenzene	5.00	4.67	93	1	20	75-128	
N-Propylbenzene	5.00	4.76	95	1	20	76-126	
o-Xylene	5.00	4.60	92	4	20	78-122	
sec-Butylbenzene	5.00	4.74	95	3	20	77-126	
Styrene	5.00	4.65	93	1	20	78-123	
tert-Butylbenzene	5.00	4.89	98	1	20	78-124	
Tetrachloroethene	5.00	4.48	90	0	20	74-129	
Toluene	5.00	4.90	98	3	20	80-121	
trans-1,2-Dichloroethene	5.00	4.98	100	3	20	75-124	
trans-1,3-Dichloropropene	5.00	4.29	86	7	20	73-127	
Trichloroethene	5.00	4.56	91	3	20	79-123	
Trichlorofluoromethane	5.00	4.93	99	2	20	65-141	
Vinyl acetate	10.0	8.21	82	3	20	54-146	
Vinyl chloride	5.00	5.04	101	5	20	58-137	
Xylenes, Total	10.0	9.15	92	3	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: Z1626.D Lab Sample ID: MB 280-430151/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_Z Date Analyzed: 09/19/2018 10:58

GC Column: DB-624 (75.53) ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-430151/4	Z1625.D	09/19/2018 10:36
Trip Blank	280-114110-1	Z1627.D	09/19/2018 11:28
BH1-10	280-114110-2	Z1628.D	09/19/2018 11:50
BH1-10-dup	280-114110-5	Z1629.D	09/19/2018 12:12
	LCS 280-430151/33	Z1650.D	09/19/2018 20:01

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: G2_7090.D Lab Sample ID: MB 280-430312/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_G2 Date Analyzed: 09/20/2018 11:49

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-430312/4	G2_7087.D	09/20/2018 10:47
	LCSD 280-430312/5	G2_7088.D	09/20/2018 11:08
	LCS 280-430312/32	G2_7089.D	09/20/2018 11:29
BH2-5	280-114110-3	G2_7102.D	09/20/2018 16:16
BH2-5-dup	280-114110-6	G2_7103.D	09/20/2018 16:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: G2_6760.D BFB Injection Date: 09/07/2018

Instrument ID: VMS_G2 BFB Injection Time: 08:12

Analysis Batch No.: 428900

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	48.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	87.6	
175	5.0 - 9.0 % of mass 174	7.2	(8.3) 1
176	95.0 - 101.0 % of mass 174	86.2	(98.3) 1
177	5.0 - 9.0 % of mass 176	6.0	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-428900/18	G2_6777.D	09/07/2018	16:13
	IC 280-428900/19	G2_6778.D	09/07/2018	16:34
	IC 280-428900/20	G2_6779.D	09/07/2018	16:55
	ICIS 280-428900/21	G2_6780.D	09/07/2018	17:16
	IC 280-428900/22	G2_6781.D	09/07/2018	17:36
	IC 280-428900/23	G2_6782.D	09/07/2018	17:57
	ICV 280-428900/24	G2_6783.D	09/07/2018	18:18

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: G2_6994b.D BFB Injection Date: 09/17/2018

Instrument ID: VMS_G2 BFB Injection Time: 08:13

Analysis Batch No.: 429808

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.7	
75	30.0 - 60.0 % of mass 95	53.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	93.4	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	91.5	(98.0) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-429808/10	G2_6995.D	09/17/2018	08:54
	IC 280-429808/11	G2_6996.D	09/17/2018	09:15
	IC 280-429808/12	G2_6997.D	09/17/2018	09:36
	IC 280-429808/13	G2_6998.D	09/17/2018	09:57
	IC 280-429808/14	G2_6999.D	09/17/2018	10:18
	IC 280-429808/15	G2_7000.D	09/17/2018	10:39
	IC 280-429808/16	G2_7001.D	09/17/2018	11:00
	ICV 280-429808/17	G2_7008.D	09/17/2018	13:28

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: G2_7084.D BFB Injection Date: 09/20/2018

Instrument ID: VMS_G2 BFB Injection Time: 09:19

Analysis Batch No.: 430312

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.8	
75	30.0 - 60.0 % of mass 95	52.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	90.2	
175	5.0 - 9.0 % of mass 174	6.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	86.5	(95.8) 1
177	5.0 - 9.0 % of mass 176	6.7	(7.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-430312/2	G2_7085.D	09/20/2018	10:05
	CCV 280-430312/3	G2_7086.D	09/20/2018	10:26
	LCS 280-430312/4	G2_7087.D	09/20/2018	10:47
	LCSD 280-430312/5	G2_7088.D	09/20/2018	11:08
	LCS 280-430312/32	G2_7089.D	09/20/2018	11:29
	MB 280-430312/6	G2_7090.D	09/20/2018	11:49
BH2-5	280-114110-3	G2_7102.D	09/20/2018	16:16
BH2-5-dup	280-114110-6	G2_7103.D	09/20/2018	16:37
	CCVC 280-430312/33	G2_7114.D	09/20/2018	20:26

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: Z1178.D BFB Injection Date: 09/07/2018

Instrument ID: VMS_Z BFB Injection Time: 08:41

Analysis Batch No.: 428698

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	46.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	5.0	(7.6) 1
176	95.0 - 101.0 % of mass 174	63.6	(96.1) 1
177	5.0 - 9.0 % of mass 176	4.5	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-428698/10	Z1188.D	09/07/2018	12:35
	IC 280-428698/11	Z1189.D	09/07/2018	12:57
	IC 280-428698/12	Z1190.D	09/07/2018	13:20
	IC 280-428698/13	Z1191.D	09/07/2018	13:42
	IC 280-428698/14	Z1192.D	09/07/2018	14:04
	IC 280-428698/15	Z1193.D	09/07/2018	14:26
	IC 280-428698/16	Z1194.D	09/07/2018	14:49
	ICV 280-428698/17	Z1196.D	09/07/2018	15:33
	IC 280-428698/18	Z1197.D	09/07/2018	15:56
	IC 280-428698/19	Z1198.D	09/07/2018	16:18
	IC 280-428698/20	Z1199.D	09/07/2018	16:40
	ICIS 280-428698/21	Z1200.D	09/07/2018	17:02
	IC 280-428698/22	Z1201.D	09/07/2018	17:24
	IC 280-428698/23	Z1202.D	09/07/2018	17:47
	ICV 280-428698/24	Z1203.D	09/07/2018	18:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: Z1428.D BFB Injection Date: 09/14/2018

Instrument ID: VMS_Z BFB Injection Time: 08:10

Analysis Batch No.: 429676

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.2	
75	30.0 - 60.0 % of mass 95	41.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	69.9	
175	5.0 - 9.0 % of mass 174	5.0	(7.2) 1
176	95.0 - 101.0 % of mass 174	67.2	(96.1) 1
177	5.0 - 9.0 % of mass 176	4.4	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-429676/13	Z1432.D	09/14/2018	09:41
	IC 280-429676/14	Z1433.D	09/14/2018	10:03
	IC 280-429676/15	Z1434.D	09/14/2018	10:25
	IC 280-429676/16	Z1435.D	09/14/2018	10:48
	IC 280-429676/10	Z1437.D	09/14/2018	11:32
	IC 280-429676/11	Z1438.D	09/14/2018	11:55
	IC 280-429676/12	Z1439.D	09/14/2018	12:17
	ICV 280-429676/17	Z1440.D	09/14/2018	12:39

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab File ID: Z1621.D BFB Injection Date: 09/19/2018

Instrument ID: VMS_Z BFB Injection Time: 09:00

Analysis Batch No.: 430151

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.0	
75	30.0 - 60.0 % of mass 95	40.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	70.9	
175	5.0 - 9.0 % of mass 174	5.3	(7.4) 1
176	95.0 - 101.0 % of mass 174	68.5	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.7	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-430151/2	Z1623.D	09/19/2018	09:51
	CCV 280-430151/3	Z1624.D	09/19/2018	10:14
	LCS 280-430151/4	Z1625.D	09/19/2018	10:36
	MB 280-430151/6	Z1626.D	09/19/2018	10:58
Trip Blank	280-114110-1	Z1627.D	09/19/2018	11:28
BH1-10	280-114110-2	Z1628.D	09/19/2018	11:50
BH1-10-dup	280-114110-5	Z1629.D	09/19/2018	12:12
	LCS 280-430151/33	Z1650.D	09/19/2018	20:01
	CCVC 280-430151/34	Z1651.D	09/19/2018	20:24

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Sample No.: ICIS 280-428900/21 Date Analyzed: 09/07/2018 17:16

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_6780.D Heated Purge: (Y/N) N

Calibration ID: 33626

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		413290	3.72	2044485	7.29	455197	10.48
UPPER LIMIT		826580	4.22	4088970	7.79	910394	10.98
LOWER LIMIT		206645	3.22	1022243	6.79	227599	9.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-428900/24		368929	3.72	2036813	7.29	440498	10.48
ICV 280-429808/17		461210	3.72	2348642	7.29	512671	10.48
CCV 280-430312/2		440283	3.70	2422395	7.29	521324	10.48
CCV 280-430312/3		533344	3.72	2440959	7.29	537026	10.48
LCS 280-430312/4		357975	3.72	2354243	7.29	504321	10.48
LCSD 280-430312/5		407096	3.72	2349036	7.29	516070	10.48
LCS 280-430312/32		399482	3.70	2273622	7.29	484307	10.48
MB 280-430312/6		447504	3.72	2161580	7.29	458745	10.48
280-114110-3	BH2-5	338177	3.72	1673136	7.29	361009	10.48
CCVC 280-430312/33		332035	3.70	1791493	7.29	383699	10.48

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Sample No.: ICIS 280-428900/21 Date Analyzed: 09/07/2018 17:16

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): G2_6780.D Heated Purge: (Y/N) N

Calibration ID: 33626

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		757928	12.59				
UPPER LIMIT		1515856	13.09				
LOWER LIMIT		378964	12.09				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-428900/24		708003	12.59				
ICV 280-429808/17		900482	12.59				
CCV 280-430312/2		910843	12.59				
CCV 280-430312/3		860002	12.59				
LCS 280-430312/4		854924	12.59				
LCSD 280-430312/5		885947	12.59				
LCS 280-430312/32		740064	12.59				
MB 280-430312/6		728119	12.59				
280-114110-3	BH2-5	591133	12.59				
CCVC 280-430312/33		725726	12.59				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Sample No.: ICIS 280-428698/21 Date Analyzed: 09/07/2018 17:02

Instrument ID: VMS_Z GC Column: DB-624 (75.53) ID: 0.53(mm)

Lab File ID (Standard): Z1200.D Heated Purge: (Y/N) N

Calibration ID: 33628

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		138842	3.33	1066922	6.12	232000	10.70
UPPER LIMIT		277684	3.83	2133844	6.62	464000	11.20
LOWER LIMIT		69421	2.83	533461	5.62	116000	10.20
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-428698/24		153987	3.35	1076041	6.12	232978	10.68
CCV 280-430151/2		163028	3.35	1342226	6.13	278153	10.71
CCV 280-430151/3		193188	3.34	1318480	6.14	299990	10.72
LCS 280-430151/4		143230	3.34	1290272	6.12	270061	10.72
MB 280-430151/6		140420	3.35	1165681	6.13	266442	10.71
280-114110-1	Trip Blank	111767	3.31	1213634	6.12	263016	10.71
280-114110-2	BH1-10	147402	3.35	1237967	6.14	280297	10.72
LCS 280-430151/33		159520	3.35	1208299	6.13	277246	10.73
CCVC 280-430151/34		159042	3.35	1267712	6.14	272185	10.71

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Sample No.: ICIS 280-428698/21 Date Analyzed: 09/07/2018 17:02

Instrument ID: VMS_Z GC Column: DB-624 (75.53) ID: 0.53(mm)

Lab File ID (Standard): Z1200.D Heated Purge: (Y/N) N

Calibration ID: 33628

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		416882	14.77				
UPPER LIMIT		833764	15.27				
LOWER LIMIT		208441	14.27				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-428698/24		416740	14.77				
CCV 280-430151/2		559807	14.80				
CCV 280-430151/3		568244	14.81				
LCS 280-430151/4		540771	14.81				
MB 280-430151/6		480913	14.80				
280-114110-1	Trip Blank	451752	14.80				
280-114110-2	BH1-10	504266	14.81				
LCS 280-430151/33		525814	14.80				
CCVC 280-430151/34		553638	14.80				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: Trip Blank | Lab Sample ID: 280-114110-1

Matrix: Water | Lab File ID: Z1627.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: Trip Blank | Lab Sample ID: 280-114110-1

Matrix: Water | Lab File ID: Z1627.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U M	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.19	J	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: Trip Blank | Lab Sample ID: 280-114110-1

Matrix: Water | Lab File ID: Z1627.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	108		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1627.D
Lims ID: 280-114110-B-1
Client ID: Trip Blank
Sample Type: Client
Inject. Date: 19-Sep-2018 11:28:30 ALS Bottle#: 6 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 280-114110-B-1 pH2
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:57:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.312	3.349	-0.037	0	111767	250.0	
* 2 Fluorobenzene	96	6.115	6.134	-0.019	99	1213634	12.5	
* 3 1,4-Dioxane-d8	96		7.184				ND	
* 4 Chlorobenzene-d5	119	10.710	10.712	-0.002	87	263016	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.803	-0.002	95	451752	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.227	5.233	-0.006	93	633000	11.6	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.645	5.669	-0.023	0	228591	10.7	
$ 10 Toluene-d8 (Surr)	98	8.413	8.401	0.012	92	1286077	12.4	
$ 11 4-Bromofluorobenzene (Surr	95	12.747	12.736	0.011	88	694656	12.0	
$ 6 Trifluorotoluene (Surr)	1		0.000				ND	
$ 7 BFB	95		2.391				ND	
27 Dichlorodifluoromethane	85		1.835				ND	
26 Chlorotrifluoroethene	116		1.872				ND	
30 Chloromethane	50		1.991				ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		1.994				ND	
32 Vinyl chloride	62		2.061				ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.133				ND	
34 Ethylene oxide	43		2.222				ND	
35 Bromomethane	94		2.287				ND	
36 Chloroethane	64		2.322				ND	
37 Dichlorofluoromethane	67		2.461				ND	
38 Trichlorofluoromethane	101		2.496				ND	
40 Ethyl ether	59		2.688				ND	
42 Propene oxide	58		2.744				ND	
44 Acrolein	56		2.792				ND	
41 1,2-Dichloro-1,1,2-trifluo	117		2.812				ND	
39 Ethanol	45		2.857				ND	
43 1,1,1-Trifluoro-2,2-dichlo	83		2.864				ND	
45 1,1-Dichloroethene	96		2.914				ND	
48 Acetone	43		2.931				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		2.949				ND	
47 Isopropyl alcohol	45	3.017	3.022	-0.005	99	31053	NC	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
49 Iodomethane	142		3.053				ND	
50 Carbon disulfide	76		3.140				ND	
53 Acetonitrile	41		3.162				ND	
52 3-Chloro-1-propene	41		3.210				ND	
51 Methyl acetate	43	3.173	3.210	-0.037	98	28457	3.89	
54 Methylene Chloride	84	3.295	3.314	-0.019	92	4363	0.1541	
55 2-Methyl-2-propanol	59		3.419				ND	
58 Acrylonitrile	53		3.523				ND	
57 trans-1,2-Dichloroethene	96		3.593				ND	
56 Methyl tert-butyl ether	73		3.610				ND	
59 Hexane	57		3.871				ND	
62 1,1-Dichloroethane	63		4.010				ND	
61 Vinyl acetate	43		4.045				ND	
60 Isopropyl ether	87		4.102				ND	
63 2-Chloro-1,3-butadiene	53		4.119				ND	
64 Tert-butyl ethyl ether	59		4.520				ND	
65 cis-1,2-Dichloroethene	96		4.672				ND	
67 2-Butanone (MEK)	43		4.672				ND	
66 2,2-Dichloropropane	77		4.689				ND	
69 Propionitrile	54		4.729				ND	
68 Ethyl acetate	43		4.746				ND	
70 sec-Butyl Alcohol	45		4.896				ND	
73 Methacrylonitrile	41		4.903				ND	
71 Chlorobromomethane	128		4.950				ND	
72 Tetrahydrofuran	42		5.037				ND	
74 Chloroform	83		5.037				ND	U
75 1,1,1-Trichloroethane	97		5.316				ND	
76 Cyclohexane	56		5.403				ND	
78 1,1-Dichloropropene	75		5.507				ND	
77 Carbon tetrachloride	117		5.542				ND	
80 Isobutyl alcohol	41		5.647				ND	U
82 1,2-Dichloroethane	62		5.769				ND	
81 Benzene	78		5.769				ND	
83 Tert-amyl methyl ether	73		5.947				ND	
84 n-Heptane	43		6.152				ND	U
86 n-Butanol	56		6.574				ND	
85 Trichloroethene	95		6.639				ND	
89 2-Pentanone	43		6.863				ND	
87 Methylcyclohexane	55		6.935				ND	
90 1,2-Dichloropropane	63		6.935				ND	
92 Dibromomethane	93		7.092				ND	
91 Methyl methacrylate	100		7.131				ND	
93 1,4-Dioxane	88		7.144				ND	
94 Dichlorobromomethane	83		7.318				ND	
95 2-Nitropropane	41		7.618				ND	
96 2-Chloroethyl vinyl ether	63		7.788				ND	
97 cis-1,3-Dichloropropene	75		7.979				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.240				ND	
99 Toluene	91	8.517	8.519	-0.002	97	22664	0.1860	
100 trans-1,3-Dichloropropene	75		8.850				ND	
101 Ethyl methacrylate	69		9.041				ND	
102 1,1,2-Trichloroethane	97		9.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
104 1,3-Dichloropropane	76		9.389				ND	
103 Tetrachloroethene	164		9.389				ND	
105 2-Hexanone	43		9.563				ND	
106 Tetrahydrothiophene	60		9.742				ND	
107 Chlorodibromomethane	129		9.755				ND	
109 Ethylene Dibromide	107		9.929				ND	
110 1-Chlorohexane	91	10.693	10.760	-0.067	36	4128		NC
111 Chlorobenzene	112		10.764				ND	
113 1,1,1,2-Tetrachloroethane	131		10.904				ND	
112 Ethylbenzene	106		10.973				ND	
114 m-Xylene & p-Xylene	106		11.182				ND	
115 o-Xylene	106		11.844				ND	
116 Styrene	104		11.861				ND	
117 Bromoform	173		12.140				ND	
118 Isopropylbenzene	105		12.505				ND	
120 cis-1,4-Dichloro-2-butene	53		12.596				ND	
119 Cyclohexanone	55		12.610				ND	
121 Bromobenzene	156		12.992				ND	
122 1,1,2,2-Tetrachloroethane	83		13.010				ND	
124 1,2,3-Trichloropropane	110		13.062				ND	
125 trans-1,4-Dichloro-2-buten	53		13.114				ND	
123 N-Propylbenzene	120		13.236				ND	
126 2-Chlorotoluene	126		13.341				ND	
128 4-Chlorotoluene	126		13.549				ND	
127 1,3,5-Trimethylbenzene	105		13.567				ND	
129 tert-Butylbenzene	119		14.124				ND	
130 1,2,4-Trimethylbenzene	105		14.211				ND	
131 sec-Butylbenzene	134		14.524				ND	
132 1,3-Dichlorobenzene	146		14.681				ND	
133 4-Isopropyltoluene	119		14.803				ND	
134 1,4-Dichlorobenzene	146		14.838				ND	
135 1,2,3-Trimethylbenzene	105		14.964				ND	
138 1,2-Dichlorobenzene	146		15.499				ND	
137 n-Butylbenzene	91		15.551				ND	
139 1,2-Dibromo-3-Chloropropan	157		16.665				ND	
140 1,3,5-Trichlorobenzene	180		16.966				ND	
141 1,2,4-Trichlorobenzene	180		17.640				ND	
142 Hexachlorobutadiene	225		17.832				ND	
143 Naphthalene	128		17.866				ND	
144 1,2,3-Trichlorobenzene	180		18.110				ND	
16 2-Methylhexane	1		0.000				ND	
14 3-Methylhexane	1		0.000				ND	
23 2,4-Dimethylpentane	1		0.000				ND	
12 2,2,3-Trimethylbutane	1		0.000				ND	
21 2,2-Dimethylpentane	1		0.000				ND	
13 2,3-Dimethylpentane	1		0.000				ND	
20 3,3-Dimethylpentane	1		0.000				ND	
17 n-Nonyl Aldehyde	1		0.000				ND	
22 Dimethyl disulfide	1		0.000				ND	
18 Pentachloroethane	167		0.000				ND	
157 n-Nonane TIC	1		0.000				ND	
28 3-Ethylpentane	1		1.795				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
S 156 TAH	1				0		0	7
S 150 Xylenes, Total (URS)	1		0.000				ND	
S 151 Total BTEX	1				0		0.1860	
S 146 Xylenes, Total	106		0.000				ND	
S 148 1,3-Dichloropropene, Total	1		0.000				ND	
S 145 1,2-Dichloroethene, Total	1		0.000				ND	
S 147 1,2-Dichloroethene, Total	96		0.000				ND	
S 149 Trihalomethanes, Total	1		0.000				ND	
T 79 Propene oxide TIC	58		0.000				ND	
T 160 Cyclohexane TIC	56		0.000				ND	
T 154 4-Ethyltoluene TIC	105		0.000				ND	
T 155 1,3-Butadiene TIC	39		0.000				ND	
T 25 Dichloroacetonitrile TIC	74		0.000				ND	
T 19 2-Butoxyethanol TIC	1		0.000				ND	
T 24 2,3-dichloro-1-propene TIC	75		0.000				ND	
T 159 Methyl cyclohexane TIC	55		0.000				ND	
T 152 Propene TIC	41		0.000				ND	
T 153 Dicyclopentadiene TIC	66		0.000				ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

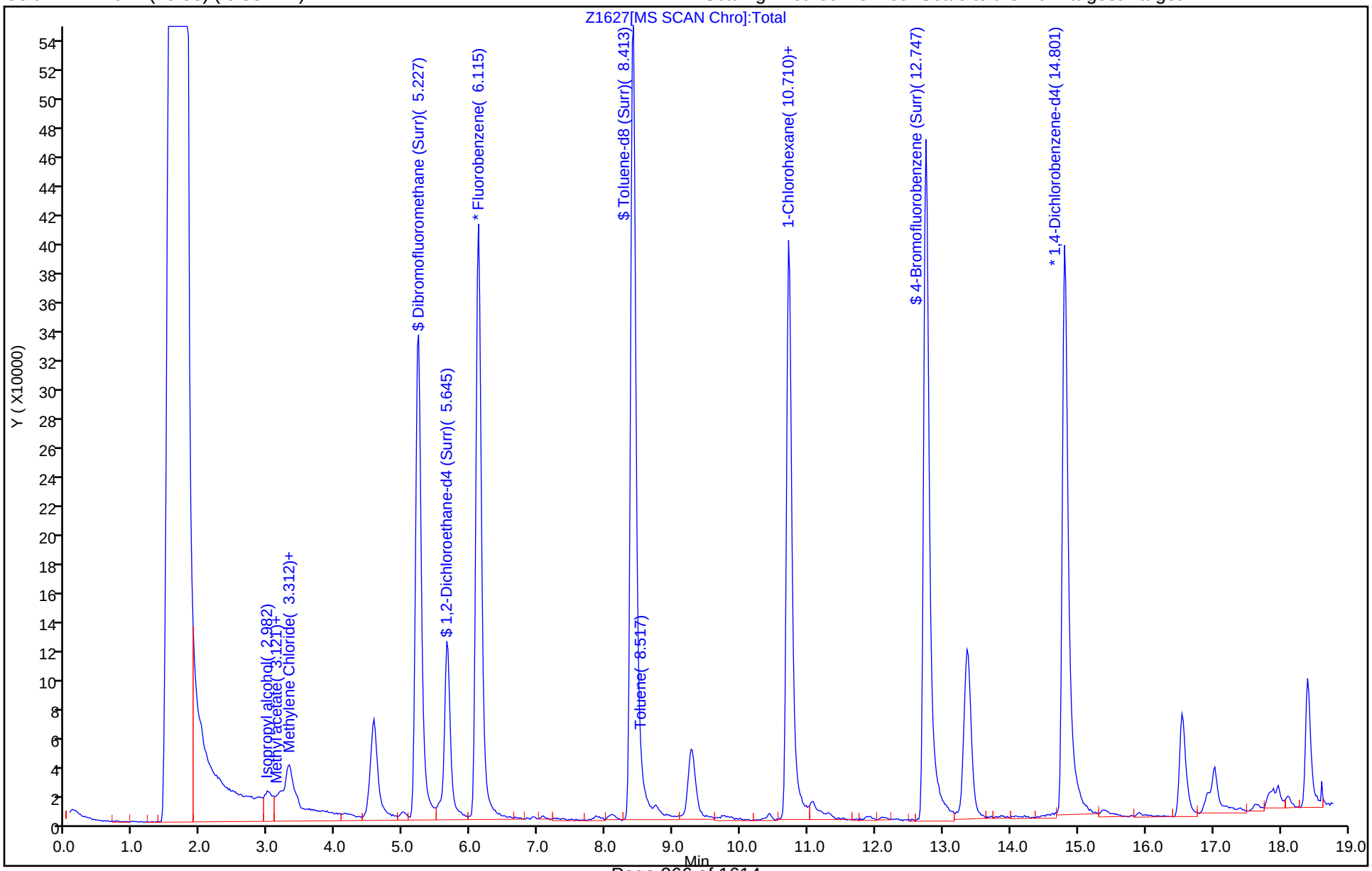
Report Date: 20-Sep-2018 07:32:38 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1627.D

Injection Date:	19-Sep-2018 11:28:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	280-114110-B-1	Lab Sample ID:	280-114110-1	Worklist Smp#:	10
Client ID:	Trip Blank				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1627.D
Lims ID: 280-114110-B-1
Client ID: Trip Blank
Sample Type: Client
Inject. Date: 19-Sep-2018 11:28:30 ALS Bottle#: 6 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 280-114110-B-1 pH2
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:57:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.6	100.91
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	10.7	92.83
$ 10 Toluene-d8 (Surr)	11.5	12.4	107.57
$ 11 4-Bromofluorobenzene (Surr)	11.5	12.0	104.18

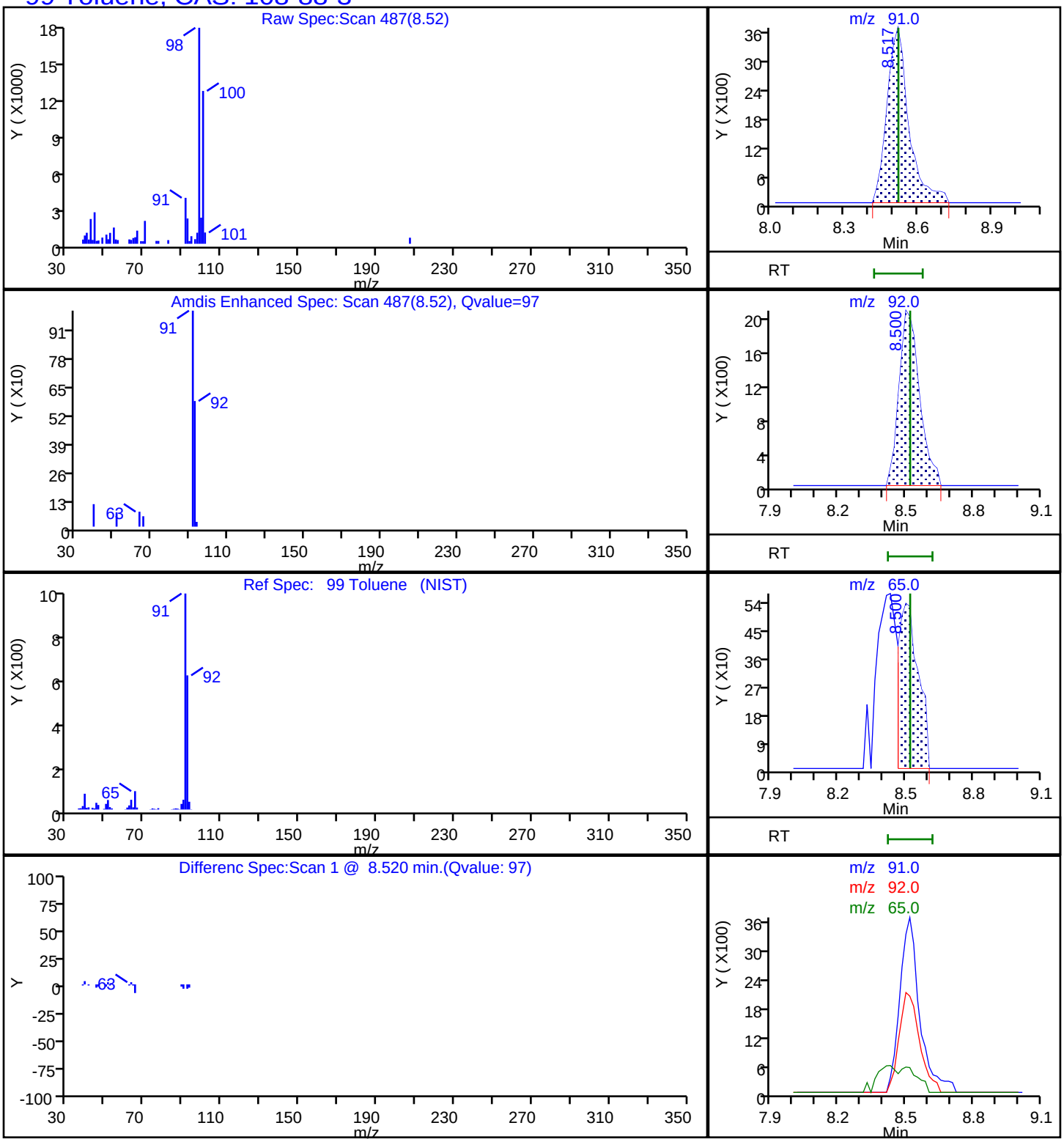
Report Date: 20-Sep-2018 07:32:39 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1627.D

Injection Date:	19-Sep-2018 11:28:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-B-1	Lab Sample ID:	280-114110-1		
Client ID:	Trip Blank				
Operator ID:	ilczyszynd	ALS Bottle#:	6	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

99 Toluene, CAS: 108-88-3



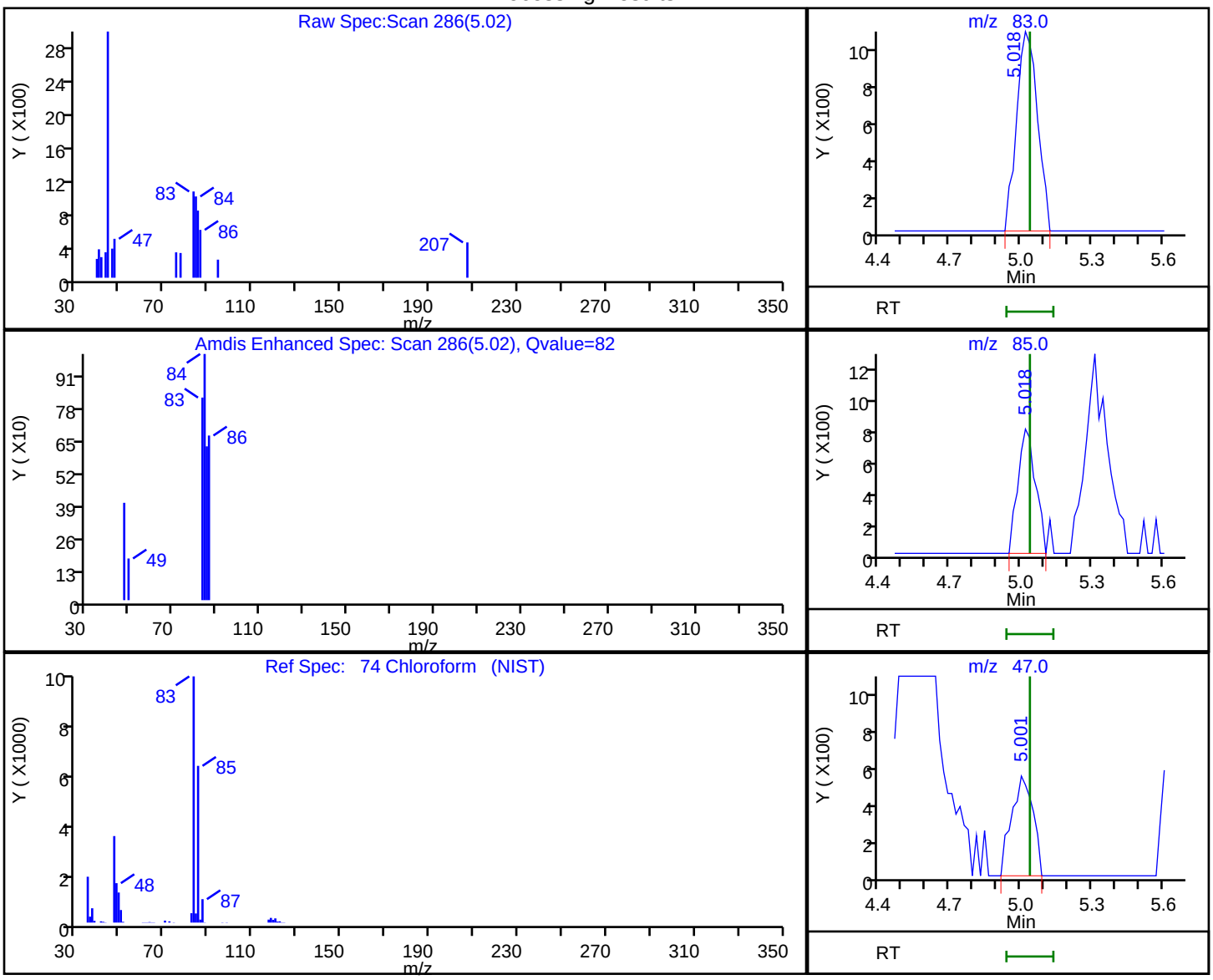
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1627.D				
Injection Date:	19-Sep-2018 11:28:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-B-1	Lab Sample ID:	280-114110-1		
Client ID:	Trip Blank				
Operator ID:	ilczyszynd	ALS Bottle#:	6	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

74 Chloroform, CAS: 67-66-3

Processing Results



RT	Mass	Response	Amount
5.02	83.00	6338	0.102805
5.02	85.00	4169	
5.00	47.00	3213	

Reviewer: ilczyszynd, 19-Sep-2018 11:56:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10 | Lab Sample ID: 280-114110-2

Matrix: Water | Lab File ID: Z1628.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.33	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	13		10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10 | Lab Sample ID: 280-114110-2

Matrix: Water | Lab File ID: Z1628.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.4		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.19	J	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	25		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10 | Lab Sample ID: 280-114110-2

Matrix: Water | Lab File ID: Z1628.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 11:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D
Lims ID: 280-114110-A-2
Client ID: BH1-10
Sample Type: Client
Inject. Date: 19-Sep-2018 11:50:30 ALS Bottle#: 7 Worklist Smp#: 11
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 280-114110-A-2 pH2
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.354	3.349	0.005	0	147402	250.0	
* 2 Fluorobenzene	96	6.139	6.134	0.005	99	1237967	12.5	
* 3 1,4-Dioxane-d8	96	7.096	7.184	-0.088	0	7741	0	
* 4 Chlorobenzene-d5	119	10.717	10.712	0.005	87	280297	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.808	14.803	0.005	94	504266	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.251	5.233	0.018	95	637472	11.5	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.669	5.669	0.001	0	239559	11.0	
$ 10 Toluene-d8 (Surr)	98	8.419	8.401	0.018	92	1272581	11.5	
$ 11 4-Bromofluorobenzene (Surr	95	12.754	12.736	0.018	89	719544	11.1	
$ 6 Trifluorotoluene (Surr)	1		0.000				ND	
$ 7 BFB	95		2.391				ND	
27 Dichlorodifluoromethane	85		1.835				ND	
26 Chlorotrifluoroethene	116		1.872				ND	
30 Chloromethane	50		1.991				ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		1.994				ND	
32 Vinyl chloride	62		2.061				ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.133				ND	
34 Ethylene oxide	43		2.222				ND	
35 Bromomethane	94		2.287				ND	
36 Chloroethane	64		2.322				ND	
37 Dichlorofluoromethane	67		2.461				ND	
38 Trichlorofluoromethane	101		2.496				ND	
40 Ethyl ether	59		2.688				ND	
42 Propene oxide	58		2.744				ND	
44 Acrolein	56		2.792				ND	
41 1,2-Dichloro-1,1,2-trifluo	117		2.812				ND	
39 Ethanol	45		2.857				ND	
43 1,1,1-Trifluoro-2,2-dichlo	83		2.864				ND	
45 1,1-Dichloroethene	96		2.914				ND	
48 Acetone	43	2.919	2.931	-0.012	99	21522	12.8	
46 1,1,2-Trichloro-1,2,2-trif	151		2.949				ND	
47 Isopropyl alcohol	45		3.022				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
49 Iodomethane	142		3.053				ND	
50 Carbon disulfide	76	3.145	3.140	0.005	95	14518	0.1291	
53 Acetonitrile	41		3.162				ND	
52 3-Chloro-1-propene	41		3.210				ND	
51 Methyl acetate	43	3.215	3.210	0.005	98	23708	3.06	
54 Methylene Chloride	84		3.314				ND	U
55 2-Methyl-2-propanol	59		3.419				ND	
58 Acrylonitrile	53		3.523				ND	
57 trans-1,2-Dichloroethene	96		3.593				ND	
56 Methyl tert-butyl ether	73		3.610				ND	
59 Hexane	57		3.871				ND	
62 1,1-Dichloroethane	63		4.010				ND	
61 Vinyl acetate	43		4.045				ND	
60 Isopropyl ether	87		4.102				ND	
63 2-Chloro-1,3-butadiene	53		4.119				ND	
64 Tert-butyl ethyl ether	59		4.520				ND	
65 cis-1,2-Dichloroethene	96		4.672				ND	
67 2-Butanone (MEK)	43		4.672				ND	
66 2,2-Dichloropropane	77		4.689				ND	
69 Propionitrile	54		4.729				ND	
68 Ethyl acetate	43		4.746				ND	
70 sec-Butyl Alcohol	45		4.896				ND	
73 Methacrylonitrile	41		4.903				ND	
71 Chlorobromomethane	128		4.950				ND	
72 Tetrahydrofuran	42		5.037				ND	
74 Chloroform	83	5.042	5.037	0.005	94	87362	1.39	
75 1,1,1-Trichloroethane	97	5.321	5.316	0.005	97	21502	0.3302	
76 Cyclohexane	56		5.403				ND	
78 1,1-Dichloropropene	75		5.507				ND	
77 Carbon tetrachloride	117		5.542				ND	
80 Isobutyl alcohol	41		5.647				ND	U
82 1,2-Dichloroethane	62		5.769				ND	
81 Benzene	78		5.769				ND	
83 Tert-amyl methyl ether	73		5.947				ND	
84 n-Heptane	43		6.152				ND	U
86 n-Butanol	56		6.574				ND	
85 Trichloroethene	95	6.644	6.639	0.005	97	1213163	24.9	
89 2-Pentanone	43		6.863				ND	
87 Methylcyclohexane	55		6.935				ND	
90 1,2-Dichloropropane	63		6.935				ND	
92 Dibromomethane	93		7.092				ND	
91 Methyl methacrylate	100		7.131				ND	
93 1,4-Dioxane	88		7.144				ND	
94 Dichlorobromomethane	83		7.318				ND	
95 2-Nitropropane	41		7.618				ND	
96 2-Chloroethyl vinyl ether	63		7.788				ND	
97 cis-1,3-Dichloropropene	75		7.979				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.240				ND	
99 Toluene	91	8.524	8.519	0.005	99	23879	0.1922	
100 trans-1,3-Dichloropropene	75		8.850				ND	
101 Ethyl methacrylate	69		9.041				ND	
102 1,1,2-Trichloroethane	97		9.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
104 1,3-Dichloropropane	76		9.389				ND	
103 Tetrachloroethene	164		9.389				ND	
105 2-Hexanone	43		9.563				ND	
106 Tetrahydrothiophene	60		9.742				ND	
107 Chlorodibromomethane	129		9.755				ND	
109 Ethylene Dibromide	107		9.929				ND	
110 1-Chlorohexane	91	10.734	10.760	-0.026	33	2373	NC	
111 Chlorobenzene	112		10.764				ND	
113 1,1,1,2-Tetrachloroethane	131		10.904				ND	
112 Ethylbenzene	106		10.973				ND	
114 m-Xylene & p-Xylene	106	11.187	11.182	0.005	0	11434	0.1917	
115 o-Xylene	106	11.866	11.844	0.022	96	6709	0.1250	
116 Styrene	104		11.861				ND	
117 Bromoform	173		12.140				ND	
118 Isopropylbenzene	105		12.505				ND	
120 cis-1,4-Dichloro-2-butene	53		12.596				ND	
119 Cyclohexanone	55		12.610				ND	
121 Bromobenzene	156		12.992				ND	
122 1,1,2,2-Tetrachloroethane	83		13.010				ND	
124 1,2,3-Trichloropropane	110		13.062				ND	
125 trans-1,4-Dichloro-2-buten	53		13.114				ND	
123 N-Propylbenzene	120		13.236				ND	
126 2-Chlorotoluene	126		13.341				ND	
128 4-Chlorotoluene	126		13.549				ND	
127 1,3,5-Trimethylbenzene	105		13.567				ND	
129 tert-Butylbenzene	119		14.124				ND	
130 1,2,4-Trimethylbenzene	105		14.211				ND	
131 sec-Butylbenzene	134		14.524				ND	
132 1,3-Dichlorobenzene	146		14.681				ND	
133 4-Isopropyltoluene	119		14.803				ND	
134 1,4-Dichlorobenzene	146		14.838				ND	
135 1,2,3-Trimethylbenzene	105		14.964				ND	
138 1,2-Dichlorobenzene	146		15.499				ND	
137 n-Butylbenzene	91		15.551				ND	
139 1,2-Dibromo-3-Chloropropan	157		16.665				ND	
140 1,3,5-Trichlorobenzene	180		16.966				ND	
141 1,2,4-Trichlorobenzene	180		17.640				ND	
142 Hexachlorobutadiene	225		17.832				ND	
143 Naphthalene	128		17.866				ND	
144 1,2,3-Trichlorobenzene	180		18.110				ND	
16 2-Methylhexane	1		0.000				ND	
14 3-Methylhexane	1		0.000				ND	
23 2,4-Dimethylpentane	1		0.000				ND	
12 2,2,3-Trimethylbutane	1		0.000				ND	
21 2,2-Dimethylpentane	1		0.000				ND	
13 2,3-Dimethylpentane	1		0.000				ND	
20 3,3-Dimethylpentane	1		0.000				ND	
17 n-Nonyl Aldehyde	1		0.000				ND	
22 Dimethyl disulfide	1		0.000				ND	
18 Pentachloroethane	167		0.000				ND	
157 n-Nonane TIC	1		0.000				ND	
28 3-Ethylpentane	1		1.795				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
S 156 TAH	1				0		0	7
S 150 Xylenes, Total (URS)	1				0		0.3167	
S 151 Total BTEX	1				0		0.5089	
S 146 Xylenes, Total	106				0		0.3167	
S 148 1,3-Dichloropropene, Total	1		0.000				ND	
S 145 1,2-Dichloroethene, Total	1		0.000				ND	
S 147 1,2-Dichloroethene, Total	96		0.000				ND	
S 149 Trihalomethanes, Total	1				0		1.39	
T 79 Propene oxide TIC	58		0.000				ND	
T 160 Cyclohexane TIC	56		0.000				ND	
T 154 4-Ethyltoluene TIC	105		0.000				ND	
T 155 1,3-Butadiene TIC	39		0.000				ND	
T 25 Dichloroacetonitrile TIC	74		0.000				ND	
T 19 2-Butoxyethanol TIC	1		0.000				ND	
T 24 2,3-dichloro-1-propene TIC	75		0.000				ND	
T 159 Methyl cyclohexane TIC	55		0.000				ND	
T 152 Propene TIC	41		0.000				ND	
T 153 Dicyclopentadiene TIC	66		0.000				ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

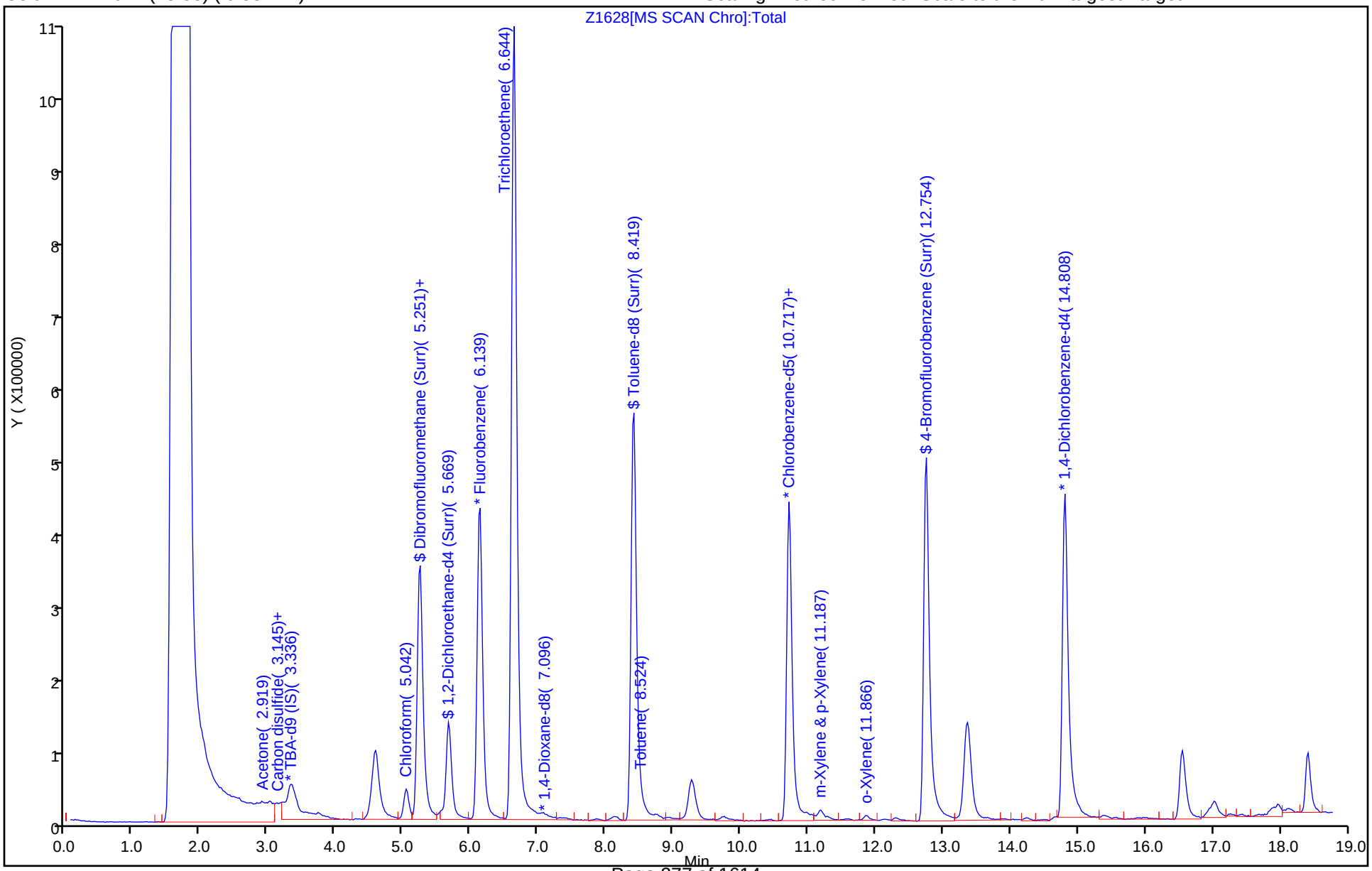
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2	Worklist Smp#:	11
Client ID:	BH1-10				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D				
Lims ID:	280-114110-A-2				
Client ID:	BH1-10				
Sample Type:	Client				
Inject. Date:	19-Sep-2018 11:50:30	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	280-114110-A-2 pH2				
Operator ID:	ilczyszynd	Instrument ID:	VMS_Z		
Method:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	20-Sep-2018 07:32:08	Calib Date:	14-Sep-2018 12:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	CTX0305				

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.5	99.62
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	11.0	95.38
$ 10 Toluene-d8 (Surr)	11.5	11.5	99.88
$ 11 4-Bromofluorobenzene (Surr)	11.5	11.1	96.67

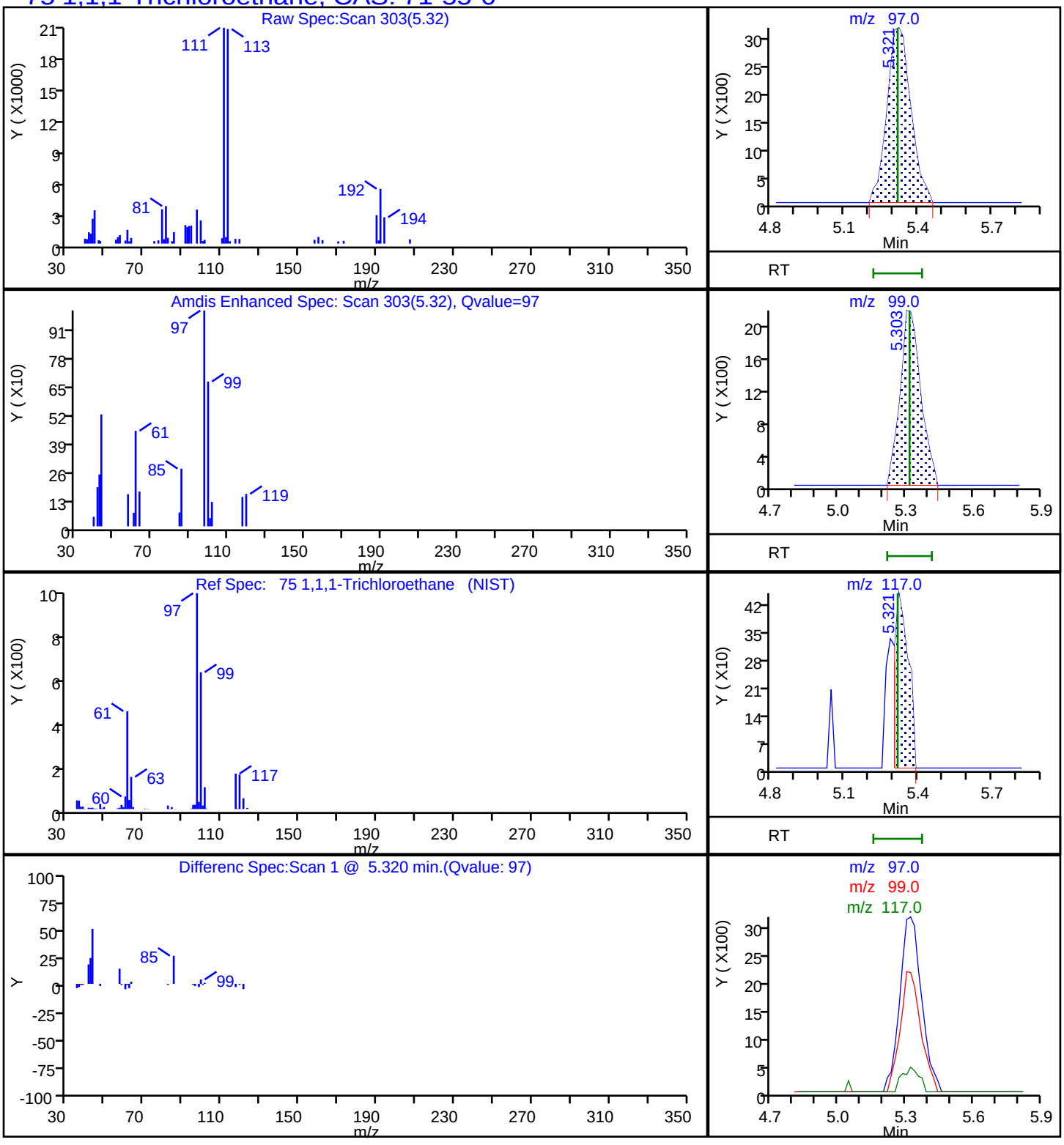
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2		
Client ID:	BH1-10				
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

75 1,1,1-Trichloroethane, CAS: 71-55-6



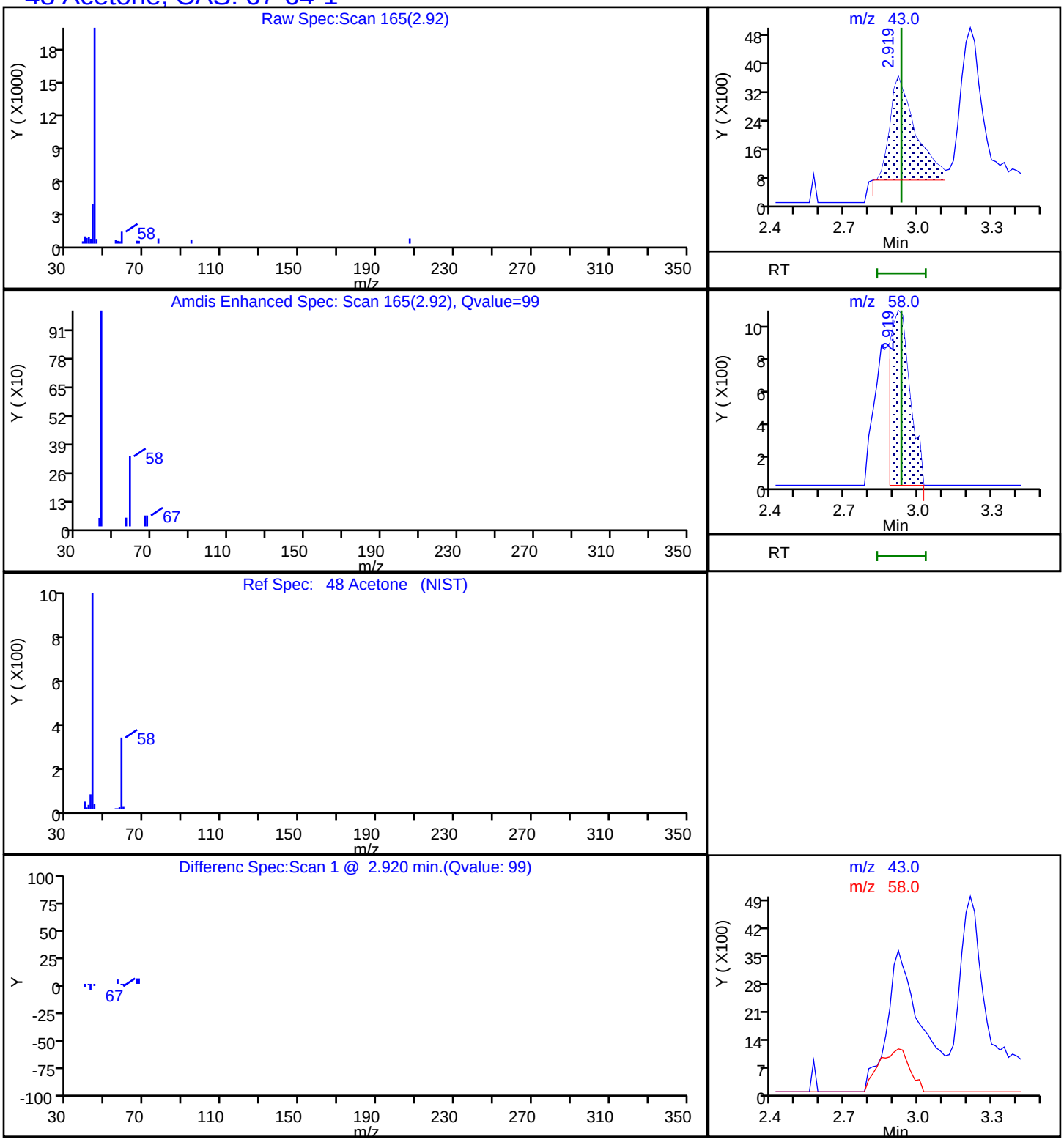
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2		
Client ID:	BH1-10				
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

48 Acetone, CAS: 67-64-1



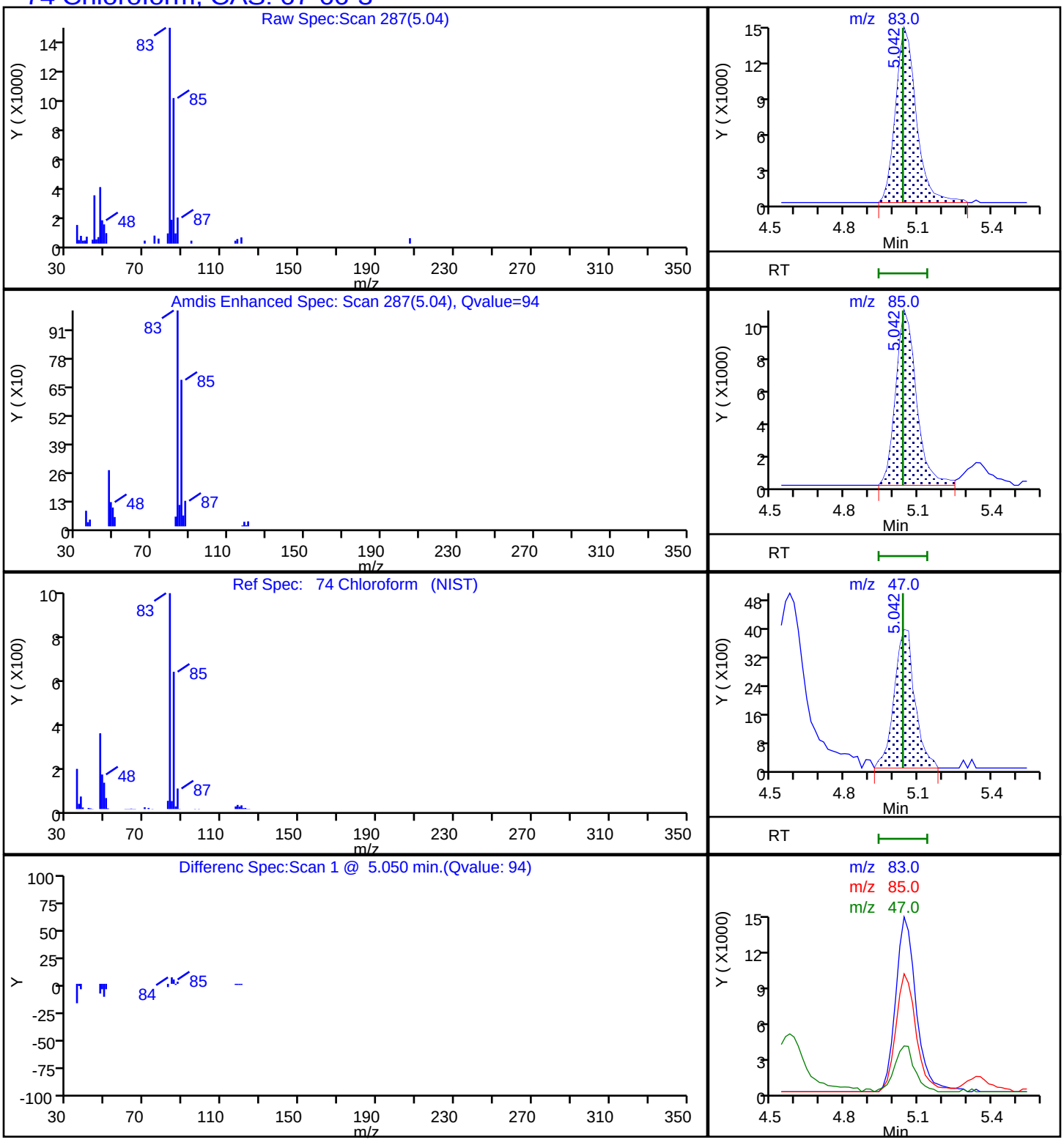
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2
Client ID:	BH1-10		
Operator ID:	ilczyszynd	ALS Bottle#:	7 Worklist Smp#: 11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN

74 Chloroform, CAS: 67-66-3



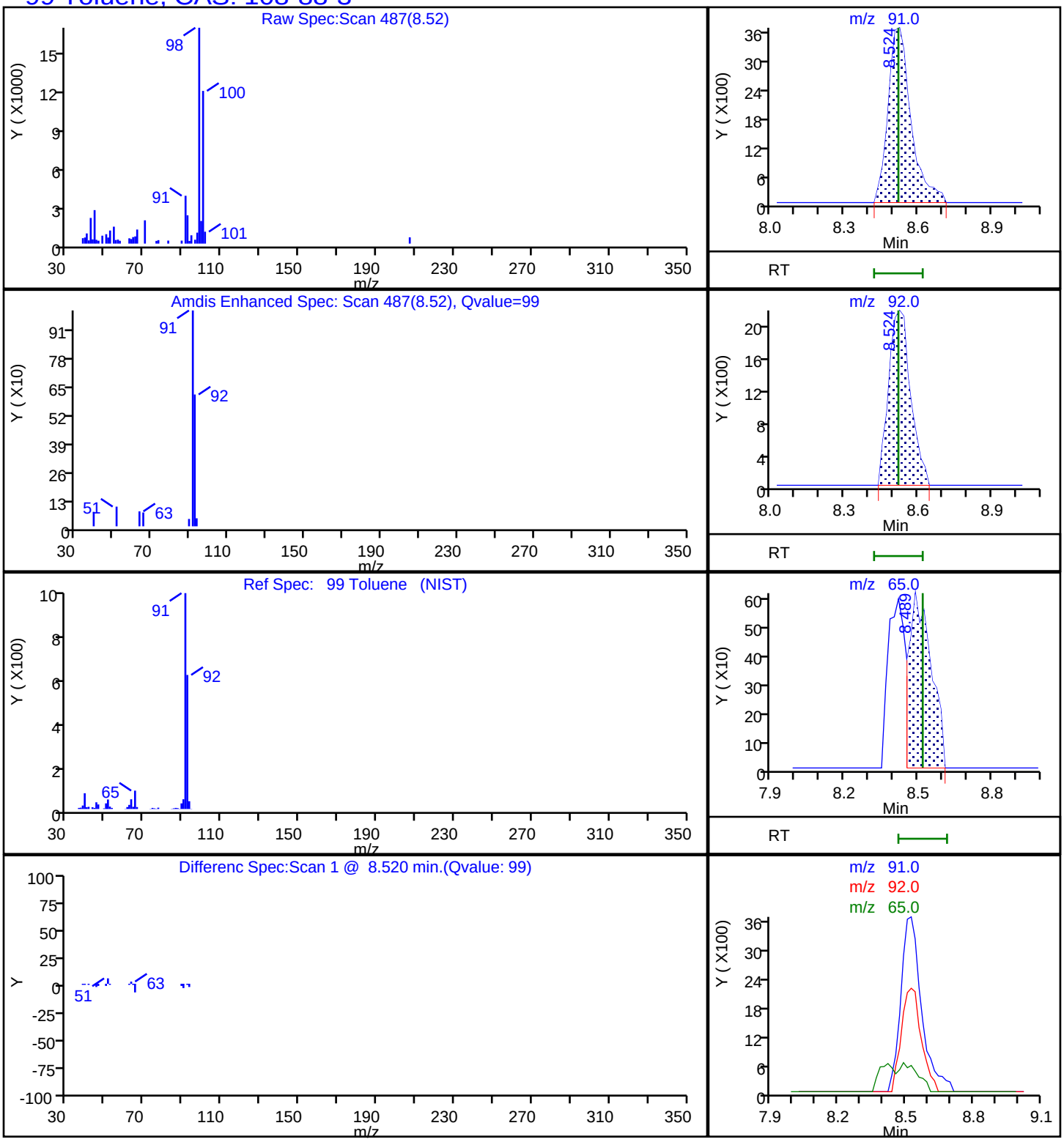
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2		
Client ID:	BH1-10				
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

99 Toluene, CAS: 108-88-3



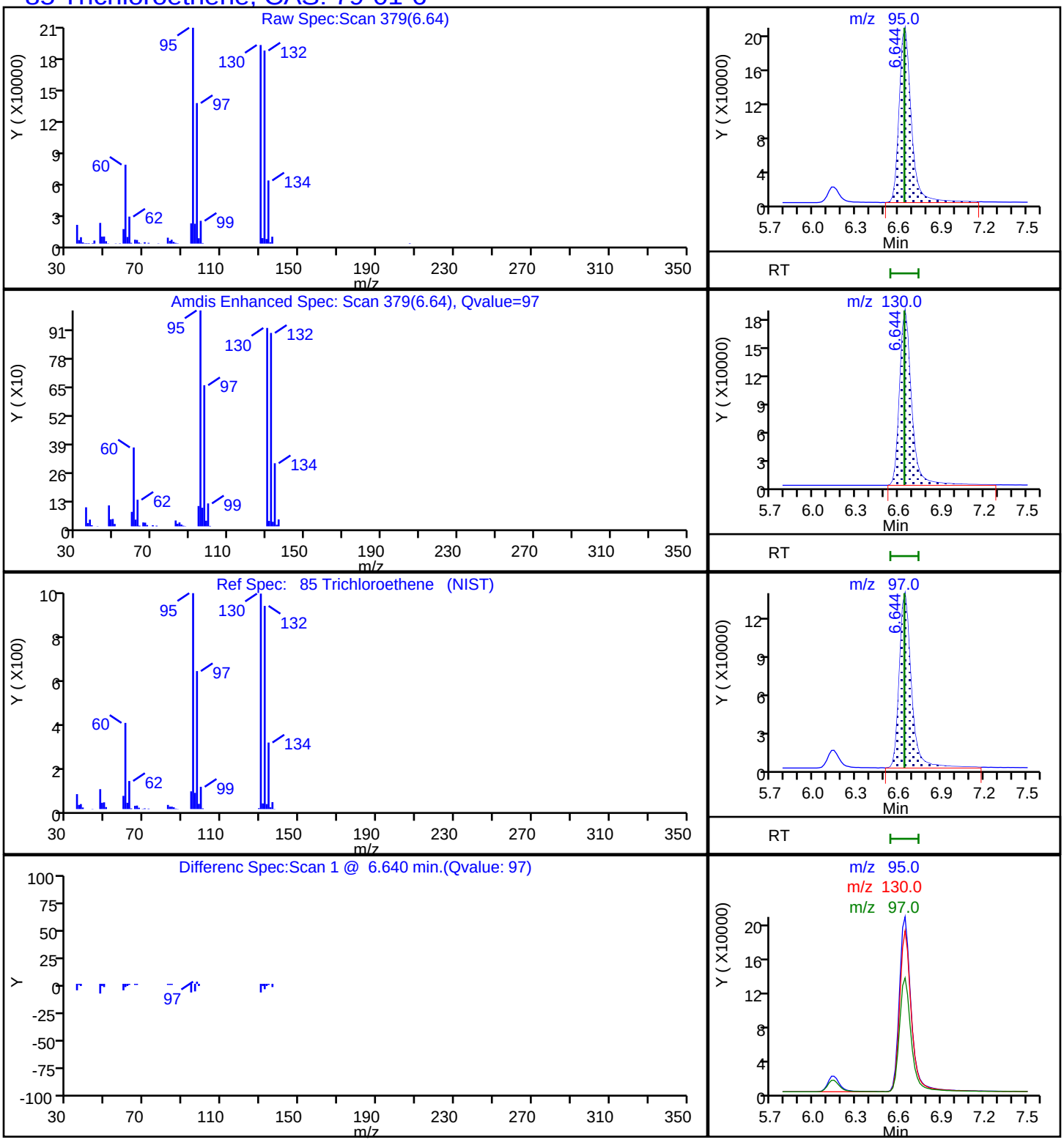
Report Date: 20-Sep-2018 07:32:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D

Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2		
Client ID:	BH1-10				
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

85 Trichloroethene, CAS: 79-01-6



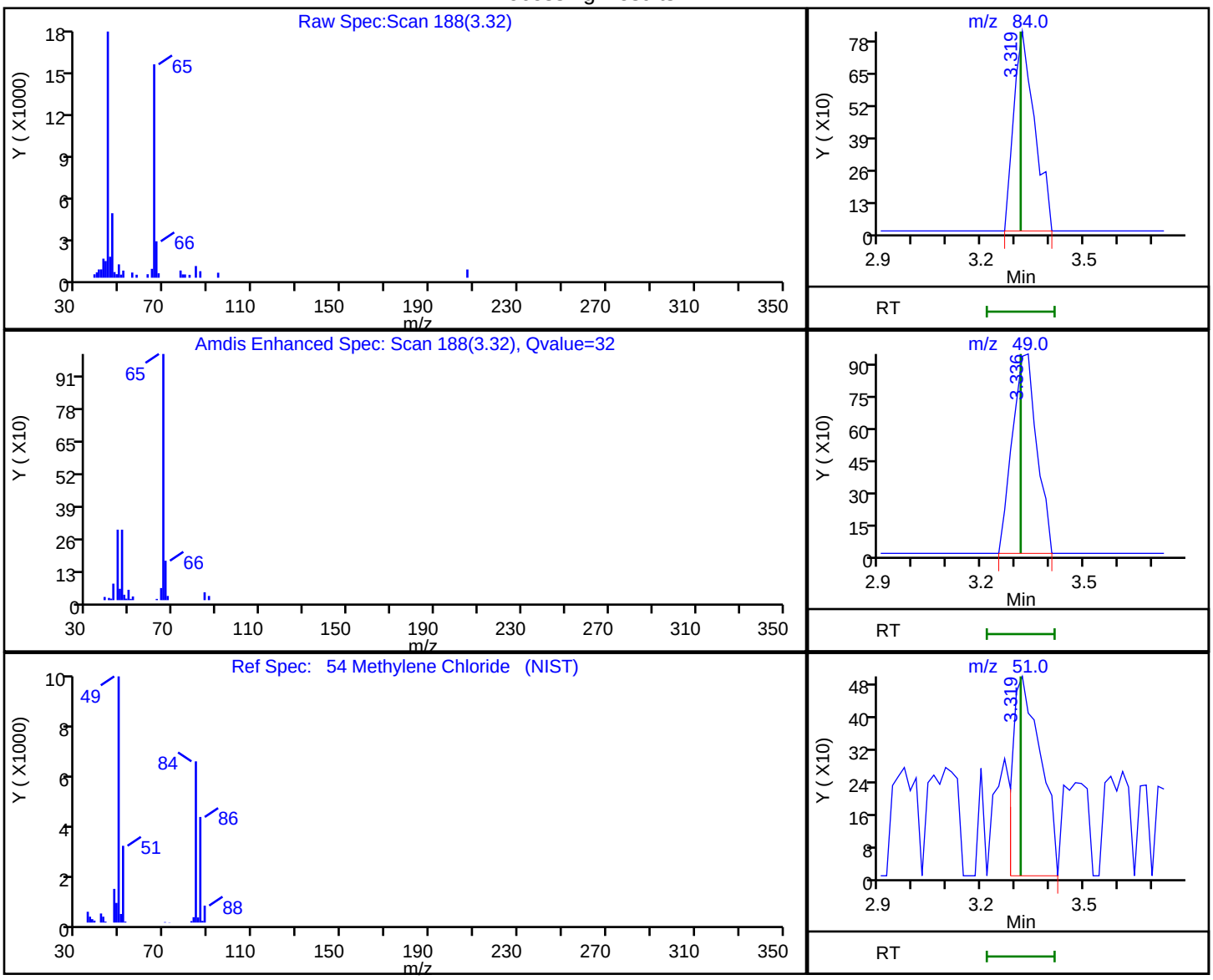
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1628.D				
Injection Date:	19-Sep-2018 11:50:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-A-2	Lab Sample ID:	280-114110-2		
Client ID:	BH1-10				
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.32	84.00	3474	0.120294
3.34	49.00	4728	
3.32	51.00	2837	

Reviewer: ilczyszynd, 20-Sep-2018 07:07:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5 | Lab Sample ID: 280-114110-3

Matrix: Water | Lab File ID: G2_7102.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.39	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U Q	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U M	5.0	3.2	0.98
67-64-1	Acetone	6.9	J Q	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5 | Lab Sample ID: 280-114110-3

Matrix: Water | Lab File ID: G2_7102.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.94	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U M	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	56		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5 | Lab Sample ID: 280-114110-3

Matrix: Water | Lab File ID: G2_7102.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	88		85-114
1868-53-7	Dibromofluoromethane (Surr)	107		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D
Lims ID: 280-114110-A-3
Client ID: BH2-5
Sample Type: Client
Inject. Date: 20-Sep-2018 16:16:30 ALS Bottle#: 27 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-A-3 pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	338177	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	1673136	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	361009	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	591133	12.5	
* 5 1,4-Dioxane-d8	96		0.000				ND	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	304954	10.7	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.886	0.007	99	296232	10.3	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	95	1098642	9.75	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	93	302229	8.80	
12 Dichlorodifluoromethane	85		1.551				ND	
14 Chloromethane	50		1.677				ND	U
15 Vinyl chloride	62		1.802				ND	
17 Bromomethane	94		2.096				ND	
18 Chloroethane	64		2.180				ND	
20 Trichlorofluoromethane	101	2.431	2.445	-0.014	91	15240	0.1752	
25 1,1-Dichloroethene	96		2.990				ND	
27 Acetone	43	3.045	3.045	0.000	97	27642	6.94	
28 Iodomethane	142		3.157				ND	
30 Carbon disulfide	76		3.227				ND	
35 Methylene Chloride	84	3.618	3.618	0.000	89	7772	0.2342	
40 trans-1,2-Dichloroethene	96		3.995				ND	
41 Methyl tert-butyl ether	73		4.009				ND	
45 1,1-Dichloroethane	63		4.707				ND	
46 Vinyl acetate	43		4.763				ND	
47 Isopropyl ether	87		4.833				ND	
50 2,2-Dichloropropane	77		5.699				ND	
51 cis-1,2-Dichloroethene	96		5.699				ND	
52 2-Butanone (MEK)	43		5.727				ND	
56 Chlorobromomethane	128		6.056				ND	
59 Chloroform	83	6.242	6.242	0.000	96	57839	0.9361	
60 1,1,1-Trichloroethane	97	6.428	6.428	0.000	95	27235	0.3865	
62 Carbon tetrachloride	117		6.628				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
63 1,1-Dichloropropene	75		6.643				ND	
64 Benzene	78		6.893				ND	
65 1,2-Dichloroethane	62		6.986				ND	
69 Trichloroethene	95	7.715	7.722	-0.007	96	2012571	56.3	
72 1,2-Dichloropropane	63		8.008				ND	
75 Dibromomethane	93		8.108				ND	
76 Dichlorobromomethane	83		8.316				ND	
79 cis-1,3-Dichloropropene	75		8.781				ND	
81 4-Methyl-2-pentanone (MIBK	43		8.952				ND	U
82 Toluene	91		9.109				ND	
83 trans-1,3-Dichloropropene	75		9.374				ND	
85 1,1,2-Trichloroethane	97		9.560				ND	
86 Tetrachloroethene	164		9.624				ND	
87 1,3-Dichloropropane	76		9.717				ND	
88 2-Hexanone	43		9.789				ND	
89 Chlorodibromomethane	129		9.925				ND	
90 Ethylene Dibromide	107		10.025				ND	
92 Chlorobenzene	112		10.504				ND	
93 1,1,1,2-Tetrachloroethane	131		10.590				ND	
94 Ethylbenzene	106		10.597				ND	
95 m-Xylene & p-Xylene	106		10.725				ND	
96 o-Xylene	106		11.083				ND	
97 Styrene	104		11.104				ND	
98 Bromoform	173		11.276				ND	
99 Isopropylbenzene	105		11.426				ND	
103 Bromobenzene	156		11.719				ND	
102 1,1,2,2-Tetrachloroethane	83		11.719				ND	
104 1,2,3-Trichloropropane	110		11.769				ND	U
106 N-Propylbenzene	120		11.812				ND	
107 2-Chlorotoluene	126		11.891				ND	
108 1,3,5-Trimethylbenzene	105		11.977				ND	
109 4-Chlorotoluene	126		12.005				ND	
110 tert-Butylbenzene	119		12.256				ND	
111 1,2,4-Trimethylbenzene	105		12.306				ND	
112 sec-Butylbenzene	134		12.441				ND	
113 1,3-Dichlorobenzene	146		12.534				ND	
114 4-Isopropyltoluene	119		12.556				ND	
115 1,4-Dichlorobenzene	146		12.613				ND	
117 n-Butylbenzene	91		12.849				ND	
118 1,2-Dichlorobenzene	146		12.863				ND	
119 1,2-Dibromo-3-Chloropropan	157		13.371				ND	
121 1,2,4-Trichlorobenzene	180		13.879				ND	
122 Hexachlorobutadiene	225		13.964				ND	
123 Naphthalene	128		14.057				ND	
124 1,2,3-Trichlorobenzene	180		14.200				ND	
S 144 1,2-Dichloroethene, Total	1		0.000				ND	
S 143 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

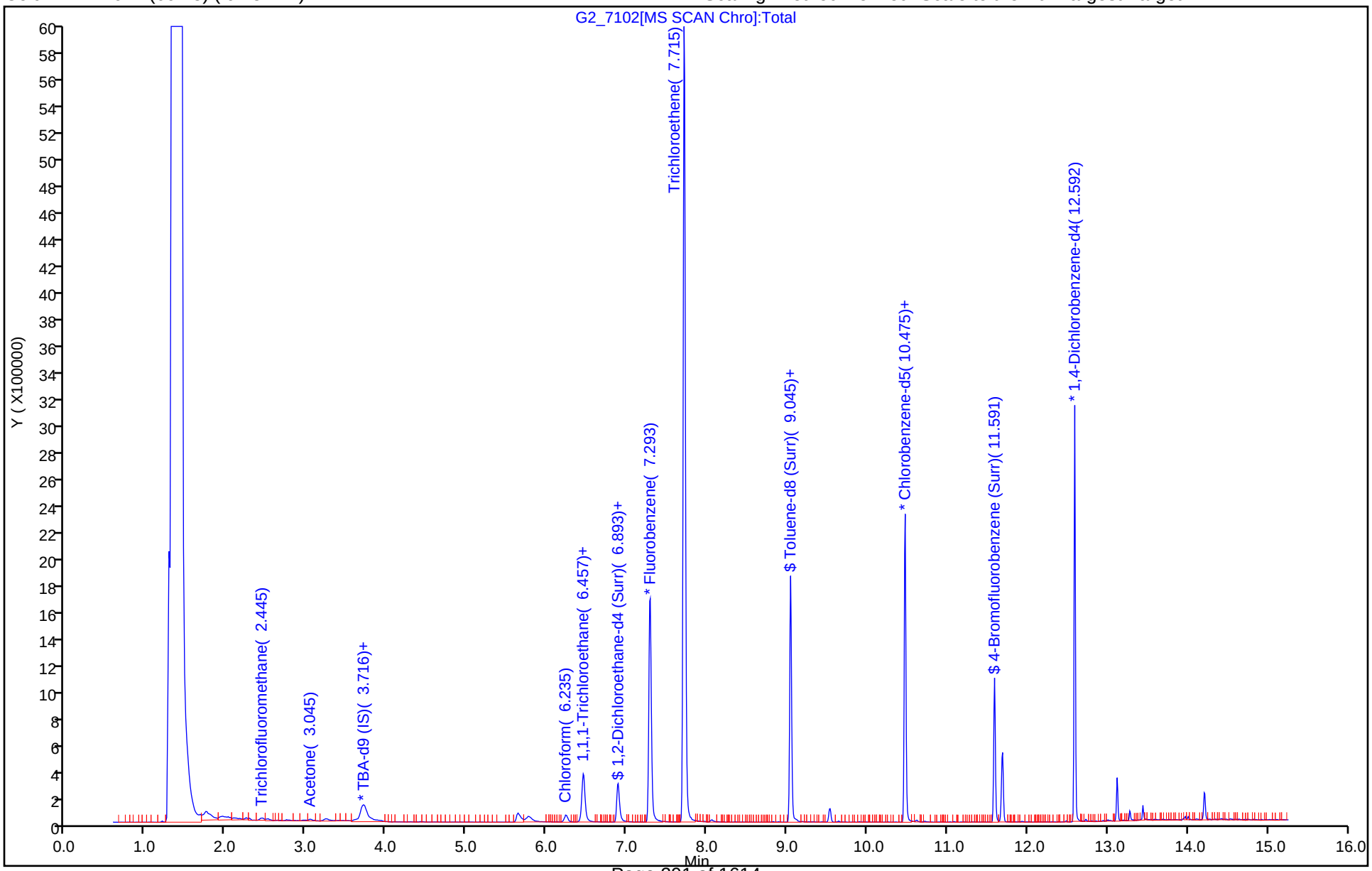
Report Date: 21-Sep-2018 07:06:25 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D

Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3	Worklist Smp#:	21
Client ID:	BH2-5				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D
Lims ID: 280-114110-A-3
Client ID: BH2-5
Sample Type: Client
Inject. Date: 20-Sep-2018 16:16:30 ALS Bottle#: 27 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-A-3 pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	10.7	107.49
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	103.01
$ 8 Toluene-d8 (Surr)	10.0	9.75	97.53
$ 9 4-Bromofluorobenzene (Surr)	10.0	8.80	88.05
$ 11 BFB	0.0	0	0.00

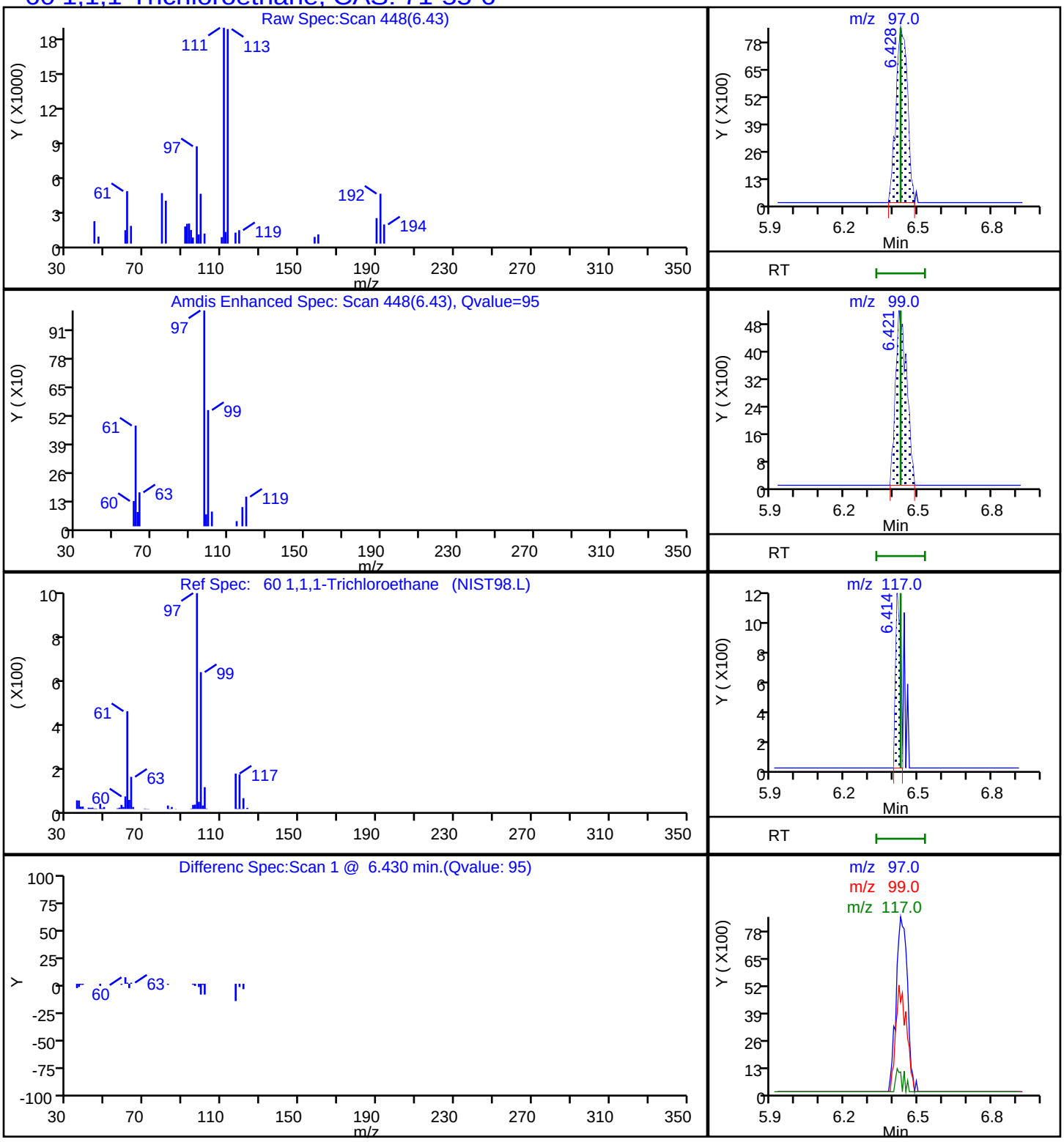
Report Date: 21-Sep-2018 07:06:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D

Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3		
Client ID:	BH2-5				
Operator ID:	ilczyszynd	ALS Bottle#:	27	Worklist Smp#:	21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

60 1,1,1-Trichloroethane, CAS: 71-55-6



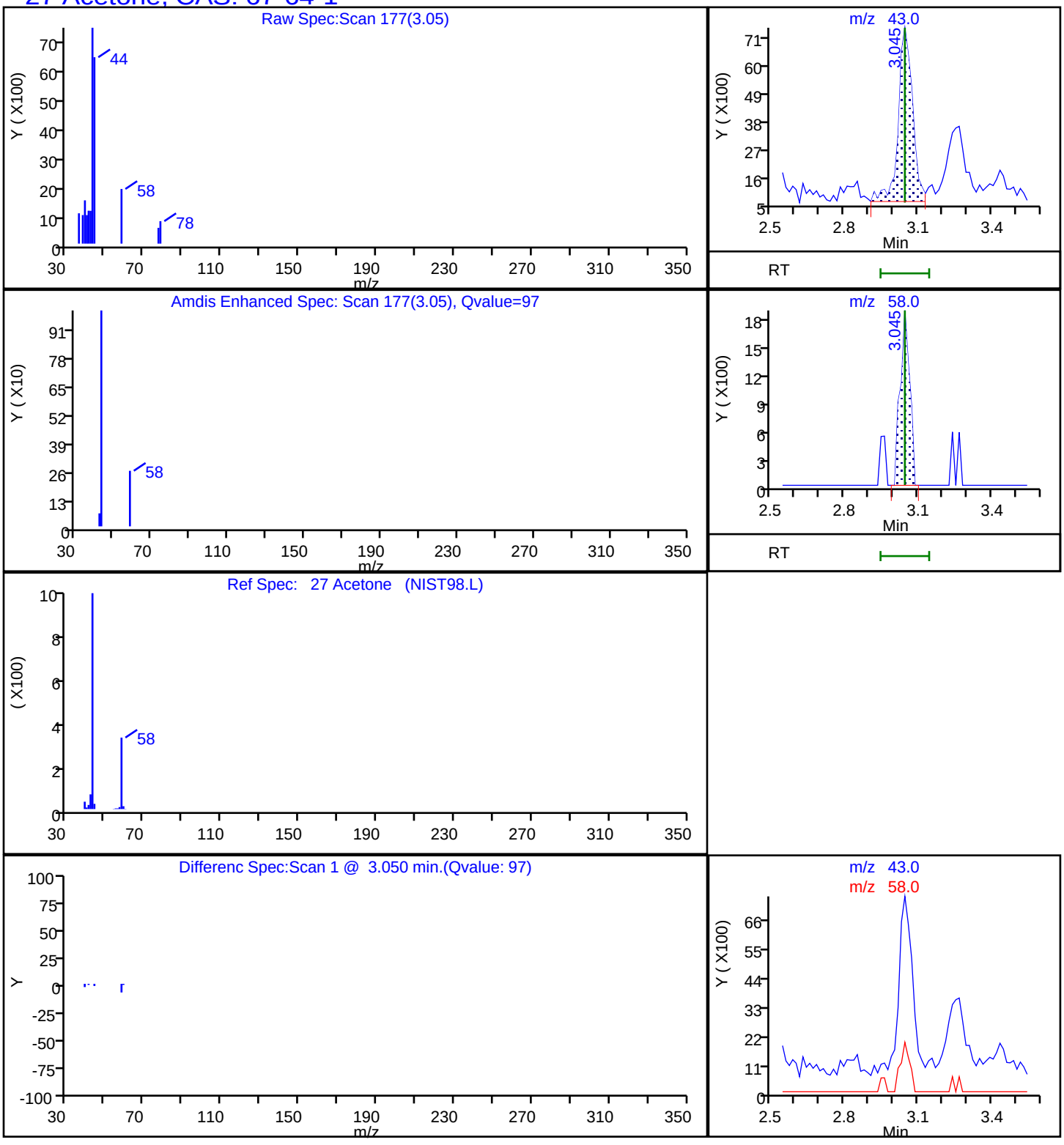
Report Date: 21-Sep-2018 07:06:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D

Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3
Client ID:	BH2-5		
Operator ID:	ilczyszynd	ALS Bottle#:	27 Worklist Smp#: 21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

27 Acetone, CAS: 67-64-1



Report Date: 21-Sep-2018 07:06:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D

Injection Date: 20-Sep-2018 16:16:30 Instrument ID: VMS_G2

Lims ID: 280-114110-A-3 Lab Sample ID: 280-114110-3

Client ID: BH2-5

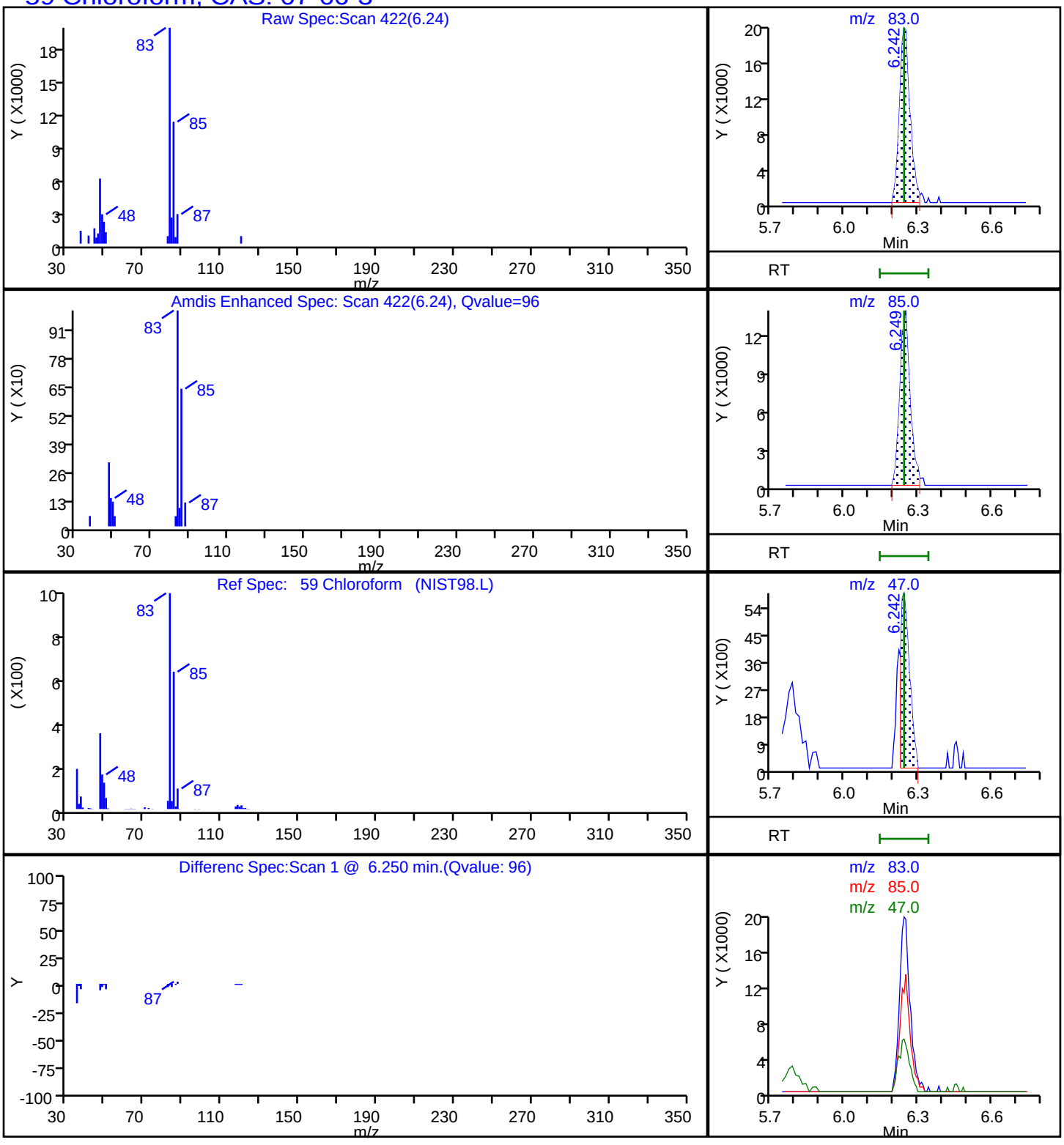
Operator ID: ilczyszynd ALS Bottle#: 27 Worklist Smp#: 21

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

59 Chloroform, CAS: 67-66-3



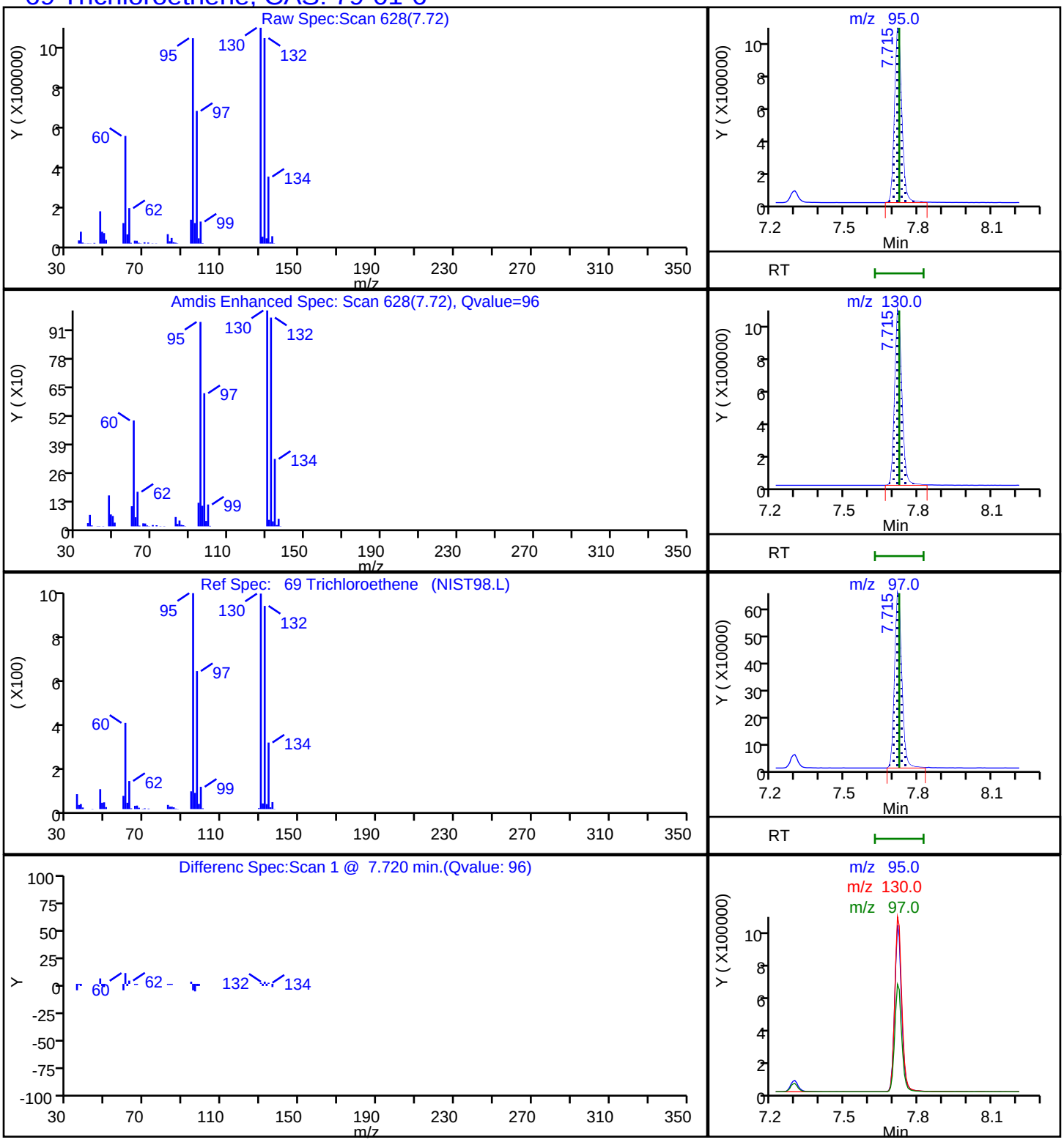
Report Date: 21-Sep-2018 07:06:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D

Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3
Client ID:	BH2-5		
Operator ID:	ilczyszynd	ALS Bottle#:	27 Worklist Smp#: 21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

69 Trichloroethene, CAS: 79-01-6



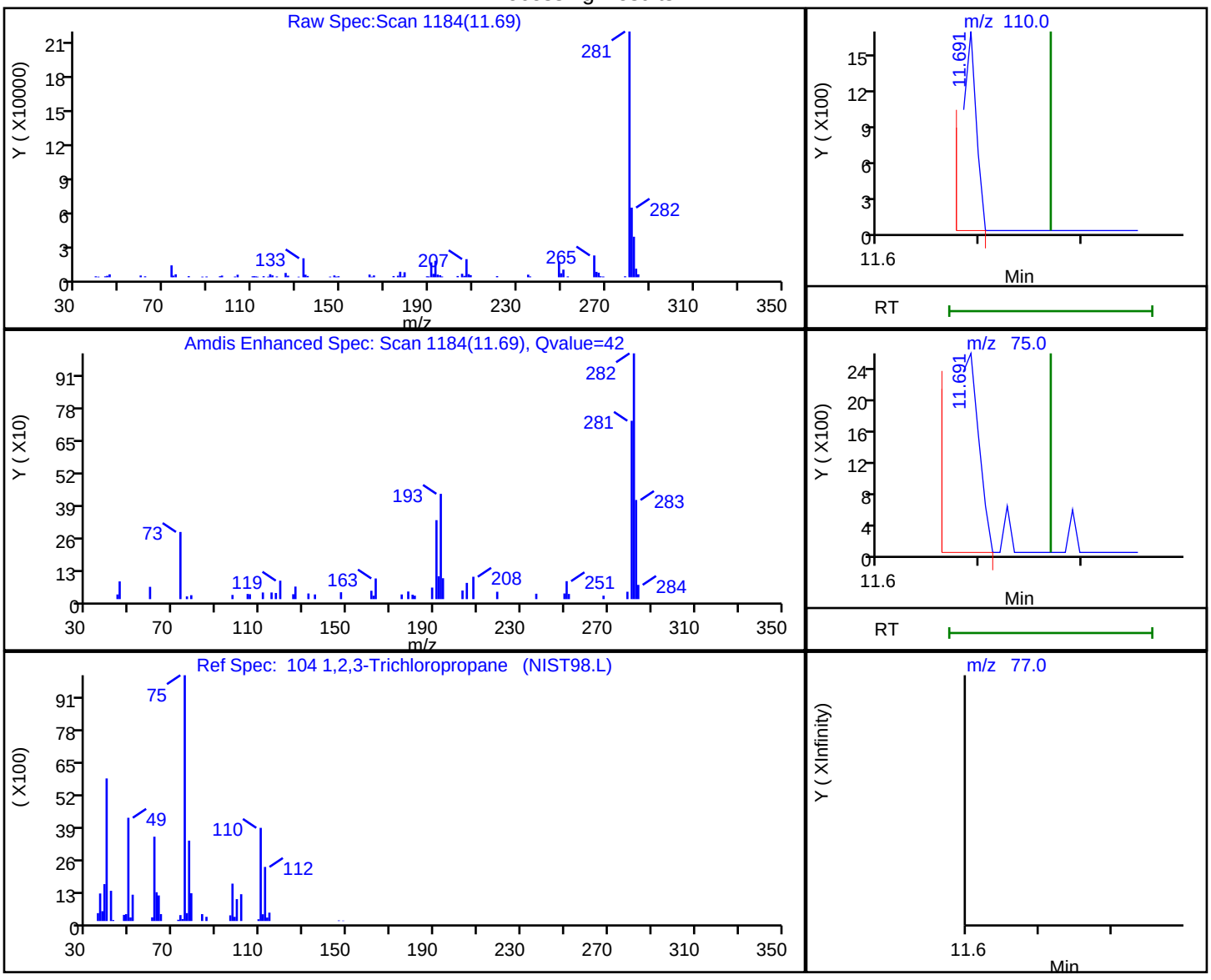
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D				
Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3		
Client ID:	BH2-5				
Operator ID:	ilczyszynd	ALS Bottle#:	27	Worklist Smp#:	21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

104 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
11.69	110.00	1446	0.252651
11.69	75.00	4351	
11.77	77.00	0	

Reviewer: ilczyszynd, 21-Sep-2018 06:59:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

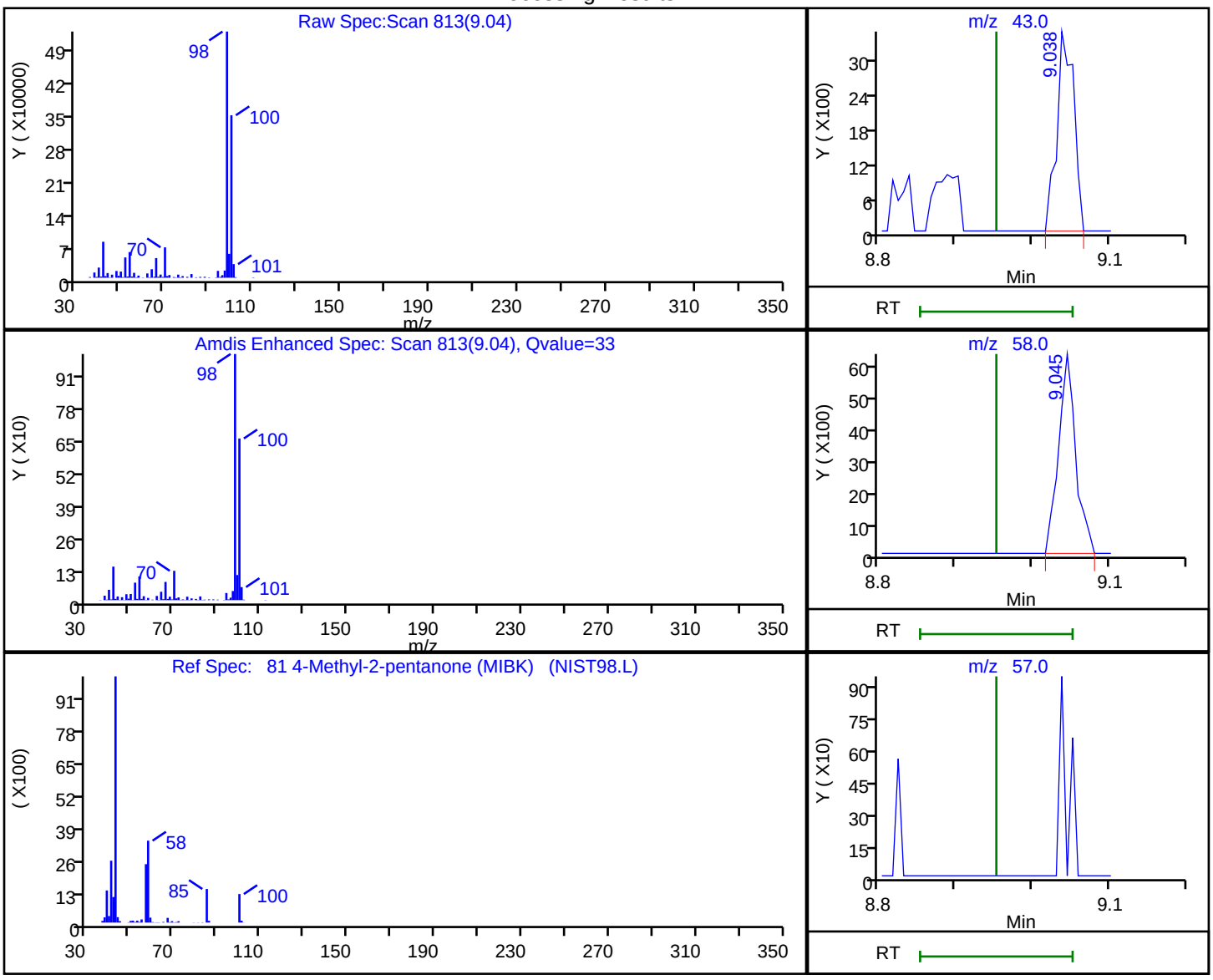
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D				
Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3		
Client ID:	BH2-5				
Operator ID:	ilczyszynd	ALS Bottle#:	27	Worklist Smp#:	21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

81 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.04	43.00	5309	0.479201
9.05	58.00	9875	
8.95	57.00	0	

Reviewer: ilczyszynd, 21-Sep-2018 06:59:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

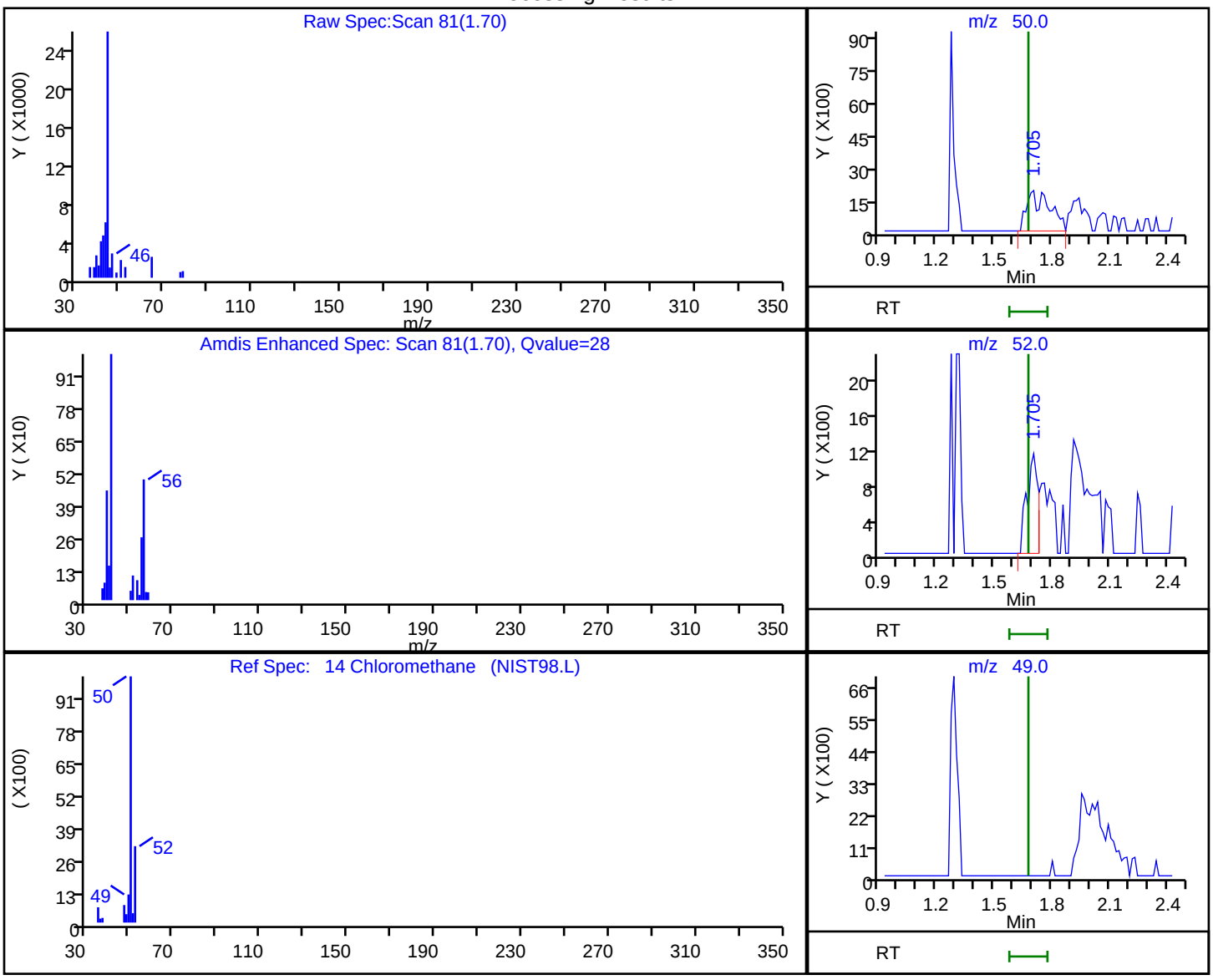
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7102.D				
Injection Date:	20-Sep-2018 16:16:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-A-3	Lab Sample ID:	280-114110-3		
Client ID:	BH2-5				
Operator ID:	ilczyszynd	ALS Bottle#:	27	Worklist Smp#:	21
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

14 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.70	50.00	15207	0.300575
1.70	52.00	4514	
1.68	49.00	0	

Reviewer: ilczyszynd, 21-Sep-2018 06:58:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup | Lab Sample ID: 280-114110-5

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.31	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U M	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	21		10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup | Lab Sample ID: 280-114110-5

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.4		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.18	J	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	24		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup | Lab Sample ID: 280-114110-5

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D
Lims ID: 280-114110-C-2 DU
Client ID: BH1-10-dup
Sample Type: DU
Inject. Date: 19-Sep-2018 12:12:30 ALS Bottle#: 8 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 280-114110-C-2 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.349	-0.001	0	156339	250.0	250.0	
* 2 Fluorobenzene	96	6.133	6.134	-0.001	99	1256311	12.5	12.5	
* 3 1,4-Dioxane-d8	96	7.108	7.184	-0.076	0	6763		0	
* 4 Chlorobenzene-d5	119	10.728	10.712	0.016	90	288061	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.802	14.803	-0.001	95	514394	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.245	5.233	0.012	94	636237	11.5	11.3	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.680	5.669	0.012	0	238191	11.5	10.7	
$ 10 Toluene-d8 (Surr)	98	8.413	8.401	0.012	92	1253170	11.5	11.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.748	12.736	0.012	89	720853	11.5	10.9	
$ 6 Trifluorotoluene (Surr)	1		0.000					ND	
$ 7 BFB	95		2.391					ND	
27 Dichlorodifluoromethane	85		1.835					ND	
26 Chlorotrifluoroethene	116		1.872					ND	
30 Chloromethane	50		1.991					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		1.994					ND	
32 Vinyl chloride	62		2.061					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.133					ND	
34 Ethylene oxide	43		2.222					ND	
35 Bromomethane	94		2.287					ND	
36 Chloroethane	64		2.322					ND	
37 Dichlorofluoromethane	67		2.461					ND	
38 Trichlorofluoromethane	101		2.496					ND	
40 Ethyl ether	59		2.688					ND	
42 Propene oxide	58		2.744					ND	
44 Acrolein	56		2.792					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		2.812					ND	
39 Ethanol	45		2.857					ND	
43 1,1,1-Trifluoro-2,2-dichlo	83		2.864					ND	
45 1,1-Dichloroethene	96		2.914					ND	
48 Acetone	43	2.930	2.931	-0.001	99	34186		21.2	
46 1,1,2-Trichloro-1,2,2-trif	151		2.949					ND	
47 Isopropyl alcohol	45	3.035	3.022	0.013	95	28365		NC	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 Iodomethane	142		3.053					ND	
50 Carbon disulfide	76	3.139	3.140	-0.001	95	14664		0.1285	
53 Acetonitrile	41		3.162					ND	
52 3-Chloro-1-propene	41		3.210					ND	
51 Methyl acetate	43	3.226	3.210	0.016	95	20118		2.46	
54 Methylene Chloride	84		3.314					ND	U
55 2-Methyl-2-propanol	59		3.419					ND	
58 Acrylonitrile	53		3.523					ND	
57 trans-1,2-Dichloroethene	96		3.593					ND	
56 Methyl tert-butyl ether	73		3.610					ND	
59 Hexane	57		3.871					ND	
62 1,1-Dichloroethane	63		4.010					ND	
61 Vinyl acetate	43		4.045					ND	
60 Isopropyl ether	87		4.102					ND	
63 2-Chloro-1,3-butadiene	53		4.119					ND	
64 Tert-butyl ethyl ether	59		4.520					ND	
65 cis-1,2-Dichloroethene	96		4.672					ND	
67 2-Butanone (MEK)	43		4.672					ND	U
66 2,2-Dichloropropane	77		4.689					ND	
69 Propionitrile	54		4.729					ND	
68 Ethyl acetate	43		4.746					ND	U
70 sec-Butyl Alcohol	45		4.896					ND	
73 Methacrylonitrile	41		4.903					ND	
71 Chlorobromomethane	128		4.950					ND	
72 Tetrahydrofuran	42		5.037					ND	
74 Chloroform	83	5.054	5.037	0.017	95	87524		1.37	
75 1,1,1-Trichloroethane	97	5.332	5.316	0.016	97	20764		0.3142	
76 Cyclohexane	56		5.403					ND	
78 1,1-Dichloropropene	75		5.507					ND	
77 Carbon tetrachloride	117		5.542					ND	
80 Isobutyl alcohol	41		5.647					ND	U
82 1,2-Dichloroethane	62		5.769					ND	
81 Benzene	78		5.769					ND	
83 Tert-amyl methyl ether	73		5.947					ND	
84 n-Heptane	43		6.152					ND	U
86 n-Butanol	56		6.574					ND	
85 Trichloroethene	95	6.638	6.639	-0.001	97	1199016		24.3	
89 2-Pentanone	43		6.863					ND	
87 Methylcyclohexane	55		6.935					ND	
90 1,2-Dichloropropane	63		6.935					ND	
92 Dibromomethane	93		7.092					ND	
91 Methyl methacrylate	100		7.131					ND	
93 1,4-Dioxane	88		7.144					ND	
94 Dichlorobromomethane	83		7.318					ND	
95 2-Nitropropane	41		7.618					ND	
96 2-Chloroethyl vinyl ether	63		7.788					ND	
97 cis-1,3-Dichloropropene	75		7.979					ND	
98 4-Methyl-2-pentanone (MIBK	43		8.240					ND	
99 Toluene	91	8.518	8.519	-0.001	98	22654		0.1796	
100 trans-1,3-Dichloropropene	75		8.850					ND	
101 Ethyl methacrylate	69		9.041					ND	
102 1,1,2-Trichloroethane	97		9.128					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichloropropane	76		9.389					ND	
103 Tetrachloroethene	164		9.389					ND	
105 2-Hexanone	43		9.563					ND	
106 Tetrahydrothiophene	60		9.742					ND	
107 Chlorodibromomethane	129		9.755					ND	
109 Ethylene Dibromide	107		9.929					ND	
110 1-Chlorohexane	91	10.728	10.760	-0.032	33	2154		NC	
111 Chlorobenzene	112		10.764					ND	
113 1,1,1,2-Tetrachloroethane	131		10.904					ND	
112 Ethylbenzene	106		10.973					ND	
114 m-Xylene & p-Xylene	106	11.198	11.182	0.016	0	11883		0.1939	
115 o-Xylene	106	11.860	11.844	0.016	97	6133		0.1112	
116 Styrene	104		11.861					ND	
117 Bromoform	173		12.140					ND	
118 Isopropylbenzene	105		12.505					ND	
120 cis-1,4-Dichloro-2-butene	53		12.596					ND	
119 Cyclohexanone	55		12.610					ND	
121 Bromobenzene	156		12.992					ND	
122 1,1,2,2-Tetrachloroethane	83		13.010					ND	
124 1,2,3-Trichloropropane	110		13.062					ND	
125 trans-1,4-Dichloro-2-buten	53		13.114					ND	
123 N-Propylbenzene	120		13.236					ND	
126 2-Chlorotoluene	126		13.341					ND	
128 4-Chlorotoluene	126		13.549					ND	
127 1,3,5-Trimethylbenzene	105		13.567					ND	
129 tert-Butylbenzene	119		14.124					ND	
130 1,2,4-Trimethylbenzene	105		14.211					ND	
131 sec-Butylbenzene	134		14.524					ND	
132 1,3-Dichlorobenzene	146		14.681					ND	
133 4-Isopropyltoluene	119		14.803					ND	
134 1,4-Dichlorobenzene	146		14.838					ND	
135 1,2,3-Trimethylbenzene	105		14.964					ND	
138 1,2-Dichlorobenzene	146		15.499					ND	
137 n-Butylbenzene	91		15.551					ND	
139 1,2-Dibromo-3-Chloropropan	157		16.665					ND	
140 1,3,5-Trichlorobenzene	180		16.966					ND	
141 1,2,4-Trichlorobenzene	180		17.640					ND	
142 Hexachlorobutadiene	225		17.832					ND	
143 Naphthalene	128		17.866					ND	
144 1,2,3-Trichlorobenzene	180		18.110					ND	
16 2-Methylhexane	1		0.000					ND	
14 3-Methylhexane	1		0.000					ND	
23 2,4-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
21 2,2-Dimethylpentane	1		0.000					ND	
13 2,3-Dimethylpentane	1		0.000					ND	
20 3,3-Dimethylpentane	1		0.000					ND	
17 n-Nonyl Aldehyde	1		0.000					ND	
22 Dimethyl disulfide	1		0.000					ND	
18 Pentachloroethane	167		0.000					ND	
157 n-Nonane TIC	1		0.000					ND	
28 3-Ethylpentane	1		1.795					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 156 TAH	1				0			0	7
S 150 Xylenes, Total (URS)	1				0			0.3050	
S 151 Total BTEX	1				0			0.4847	
S 146 Xylenes, Total	106				0			0.3050	
S 148 1,3-Dichloropropene, Total	1		0.000					ND	
S 145 1,2-Dichloroethene, Total	1		0.000					ND	
S 147 1,2-Dichloroethene, Total	96		0.000					ND	
S 149 Trihalomethanes, Total	1				0			1.37	
T 158 1-Chlorohexane TIC	91		0.000					ND	
T 79 Propene oxide TIC	58		0.000					ND	
T 160 Cyclohexane TIC	56		0.000					ND	
T 154 4-Ethyltoluene TIC	105		0.000					ND	
T 155 1,3-Butadiene TIC	39		0.000					ND	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 19 2-Butoxyethanol TIC	1		0.000					ND	
T 24 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 159 Methyl cyclohexane TIC	55		0.000					ND	
T 152 Propene TIC	41		0.000					ND	
T 153 Dicyclopentadiene TIC	66		0.000					ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

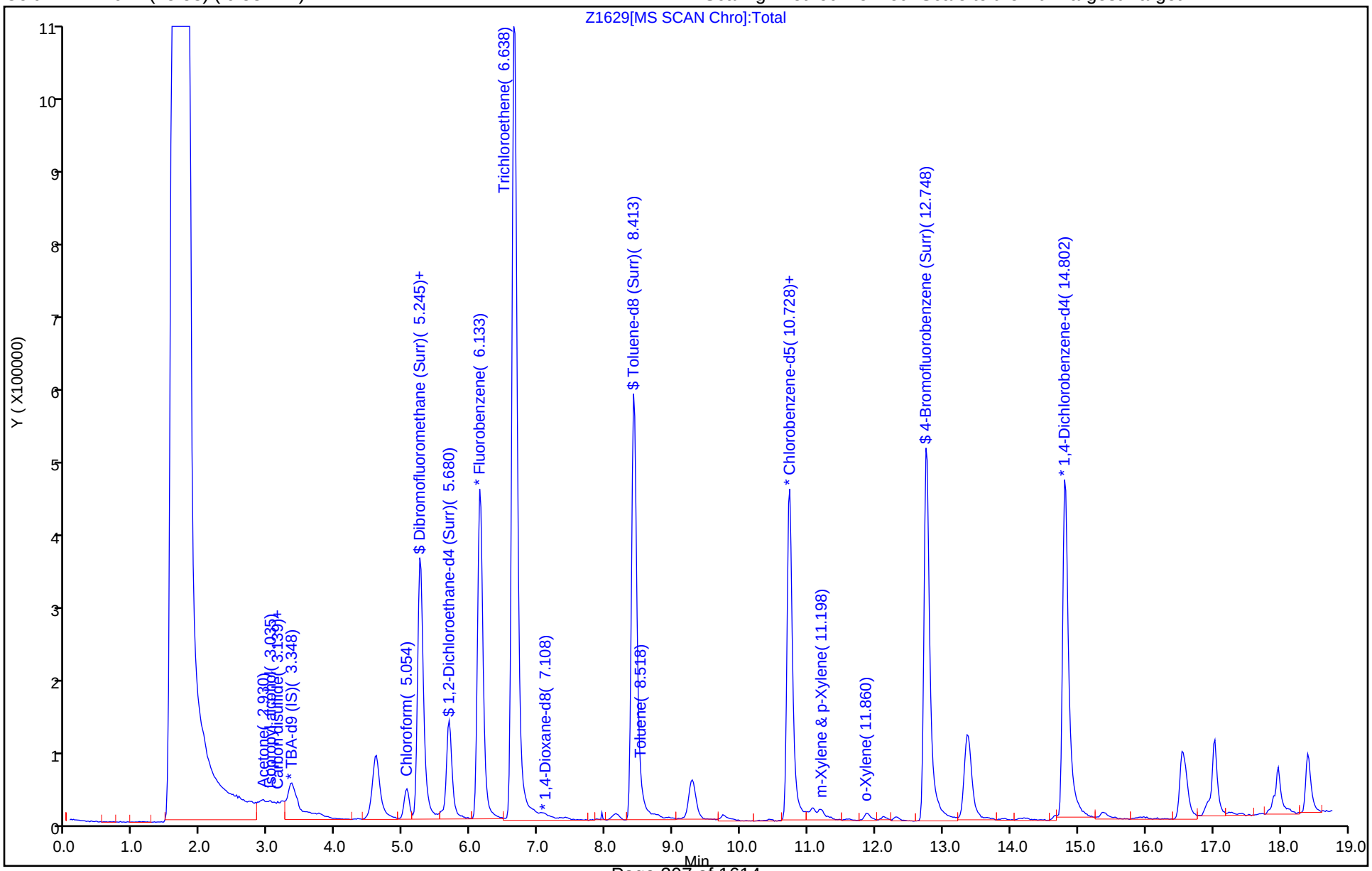
Report Date: 20-Sep-2018 07:32:45 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D

Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	280-114110-C-2 DU			Worklist Smp#:	12
Client ID:	BH1-10-dup				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Sample Type:	DU				
Inject. Date:	19-Sep-2018 12:12:30	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	280-114110-C-2 DU pH2				
Operator ID:	ilczyszynd	Instrument ID:	VMS_Z		
Method:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	20-Sep-2018 07:32:08	Calib Date:	14-Sep-2018 12:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	CTX0305				

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.3	97.98
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	10.7	93.45
$ 10 Toluene-d8 (Surr)	11.5	11.0	95.71
$ 11 4-Bromofluorobenzene (Surr)	11.5	10.9	94.94

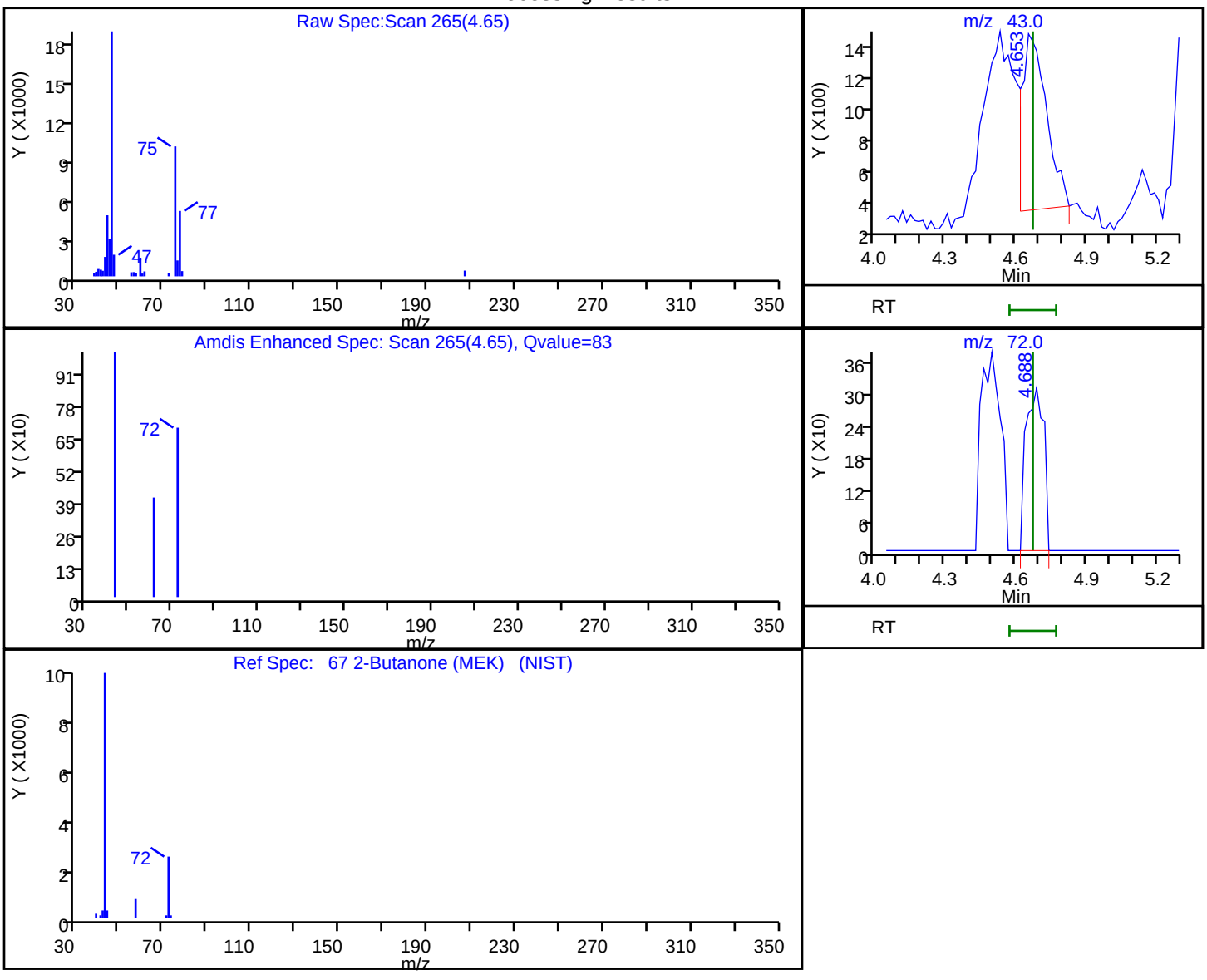
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

67 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
4.65	43.00	7849	2.242806
4.69	72.00	1646	

Reviewer: ilczyszynd, 20-Sep-2018 07:09:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

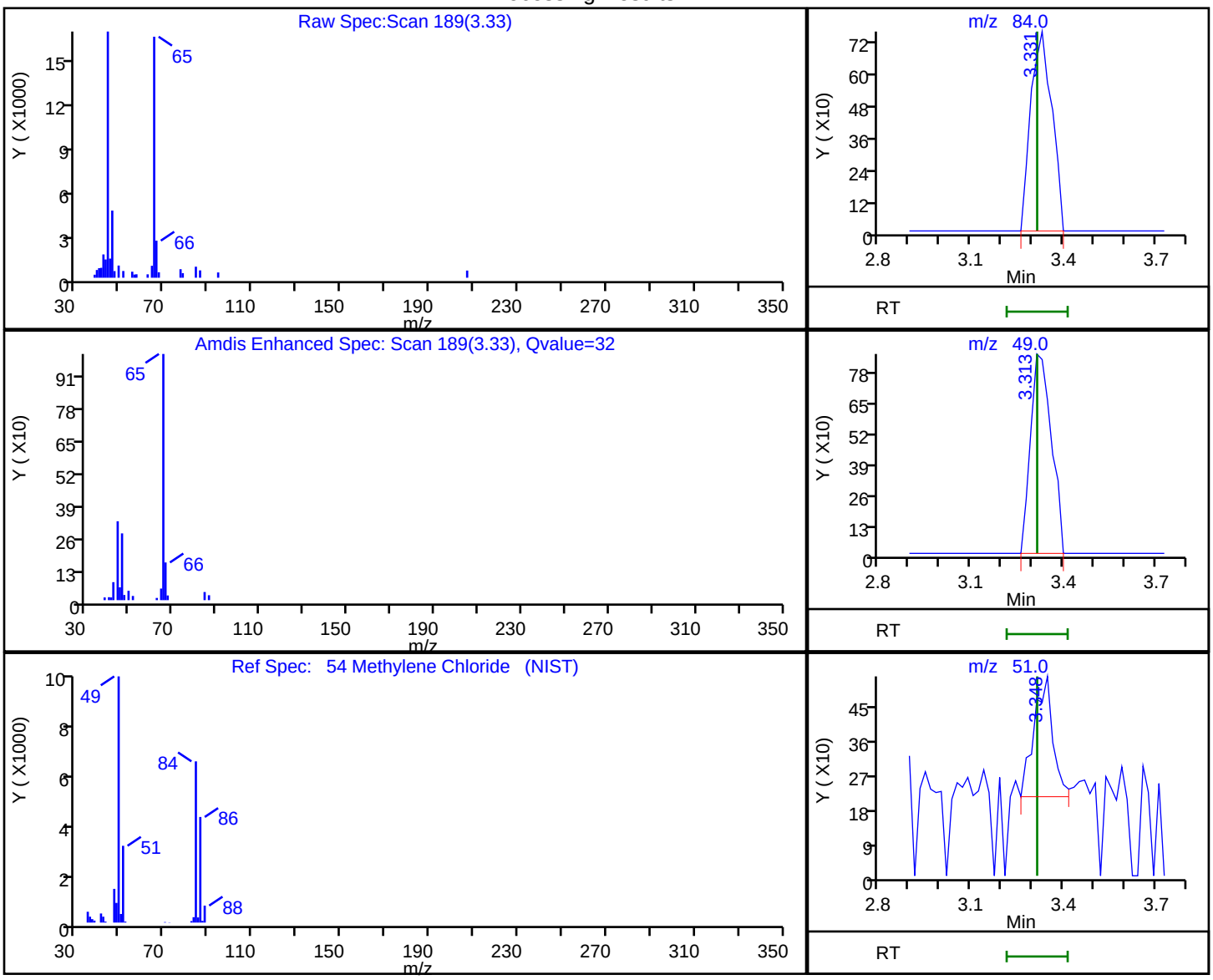
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.33	84.00	3601	0.122871
3.31	49.00	4039	
3.35	51.00	1366	

Reviewer: ilczyszynd, 20-Sep-2018 07:09:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup | Lab Sample ID: 280-114110-6

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U M	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U Q	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	7.0	J Q	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup | Lab Sample ID: 280-114110-6

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.87	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	50		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup | Lab Sample ID: 280-114110-6

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	85		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D
Lims ID: 280-114110-B-3 DU
Client ID: BH2-5-dup
Sample Type: DU
Inject. Date: 20-Sep-2018 16:37:30 ALS Bottle#: 28 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-B-3 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	298609	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.293	-0.007	98	1611024	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	88	347447	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	569423	12.5	12.5	
* 5 1,4-Dioxane-d8	96		0.000					ND	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	93	289559	10.0	10.6	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.886	6.886	0.000	98	277023	10.0	10.0	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	95	1053219	10.0	9.71	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	92	282358	10.0	8.54	
$ 10 Trifluorotoluene (Surr)	1		0.000					ND	
$ 11 BFB	95	1.300	2.085	-0.785	0	12116		NR	
12 Dichlorodifluoromethane	85		1.551					ND	
34 Chlorotrifluoroethene	116		1.677					ND	
14 Chloromethane	50		1.677					ND	
15 Vinyl chloride	62		1.802					ND	
36 1,2-Dichloro-1,1,2,2-tetra	85		1.830					ND	
16 Ethylene oxide	43		2.054					ND	
17 Bromomethane	94		2.096					ND	
38 2-Chloro-1,1,1-Trifluoroet	118		2.110					ND	
18 Chloroethane	64		2.180					ND	
19 Dichlorofluoromethane	67		2.403					ND	
20 Trichlorofluoromethane	101	2.445	2.445	0.000	96	13985		0.1670	
21 Ethanol	45		2.640					ND	
22 Ethyl ether	59		2.724					ND	
23 Propene oxide	58		2.794					ND	
24 Acrolein	56		2.878					ND	
25 1,1-Dichloroethene	96		2.990					ND	
26 1,1,2-Trichloro-1,2,2-trif	151		3.031					ND	
27 Acetone	43	3.045	3.045	0.000	98	26941		7.03	
43 1,2-Dichloro-1,1,2-trifluo	117		3.129					ND	
28 Iodomethane	142		3.157					ND	
44 1,1,1-Trifluoro-2,2-dichlo	83		3.213					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
30 Carbon disulfide	76		3.227					ND	
29 Isopropyl alcohol	45	3.255	3.269	-0.014	94	69201		104.5	
31 Acetonitrile	41		3.409					ND	
32 Methyl acetate	43		3.436					ND	
33 3-Chloro-1-propene	41		3.436					ND	
35 Methylene Chloride	84	3.618	3.618	0.000	93	5989		0.1874	
37 2-Methyl-2-propanol	59		3.828					ND	U
39 Acrylonitrile	53		3.953					ND	
40 trans-1,2-Dichloroethene	96		3.995					ND	
41 Methyl tert-butyl ether	73		4.009					ND	
42 Hexane	57		4.428					ND	
45 1,1-Dichloroethane	63		4.707					ND	
46 Vinyl acetate	43		4.763					ND	
47 Isopropyl ether	87		4.833					ND	
48 2-Chloro-1,3-butadiene	53		4.833					ND	
49 Tert-butyl ethyl ether	59		5.476					ND	
50 2,2-Dichloropropane	77		5.699					ND	
51 cis-1,2-Dichloroethene	96		5.699					ND	
52 2-Butanone (MEK)	43		5.727					ND	
53 Ethyl acetate	43		5.825					ND	U
54 Propionitrile	54		5.839					ND	
58 Methacrylonitrile	41		6.049					ND	
56 Chlorobromomethane	128		6.056					ND	
57 Tetrahydrofuran	42		6.092					ND	
55 sec-Butyl Alcohol	45		6.113					ND	
59 Chloroform	83	6.242	6.242	0.000	95	51663		0.8684	
60 1,1,1-Trichloroethane	97		6.428					ND	U
61 Cyclohexane	56		6.507					ND	
62 Carbon tetrachloride	117		6.628					ND	
63 1,1-Dichloropropene	75		6.643					ND	
64 Benzene	78		6.893					ND	
66 Isobutyl alcohol	41		6.929					ND	
65 1,2-Dichloroethane	62		6.986					ND	
68 Tert-amyl methyl ether	73		7.115					ND	
67 n-Heptane	43		7.315					ND	
69 Trichloroethene	95	7.715	7.722	-0.007	96	1716897		49.9	
73 n-Butanol	56		7.737					ND	
70 2-Pentanone	43		7.958					ND	
71 Methylcyclohexane	55		7.965					ND	
72 1,2-Dichloropropane	63		8.008					ND	
75 Dibromomethane	93		8.108					ND	
74 1,4-Dioxane	88		8.108					ND	
77 Methyl methacrylate	100		8.130					ND	
76 Dichlorobromomethane	83		8.316					ND	
80 2-Nitropropane	41		8.559					ND	
78 2-Chloroethyl vinyl ether	63		8.645					ND	
79 cis-1,3-Dichloropropene	75		8.781					ND	
81 4-Methyl-2-pentanone (MIBK	43		8.952					ND	
82 Toluene	91		9.109					ND	
83 trans-1,3-Dichloropropene	75		9.374					ND	
84 Ethyl methacrylate	69		9.446					ND	
85 1,1,2-Trichloroethane	97		9.560					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 Tetrachloroethene	164		9.624					ND	
87 1,3-Dichloropropane	76		9.717					ND	
88 2-Hexanone	43		9.789					ND	
13 Tetrahydrothiophene	60		9.882					ND	
89 Chlorodibromomethane	129		9.925					ND	
90 Ethylene Dibromide	107		10.025					ND	
91 1-Chlorohexane	91	10.475	10.496	-0.021	6	1717		NC	
92 Chlorobenzene	112	10.504	10.504	0.000	84	11417		0.1273	
93 1,1,1,2-Tetrachloroethane	131		10.590					ND	
94 Ethylbenzene	106		10.597					ND	
95 m-Xylene & p-Xylene	106		10.725					ND	
96 o-Xylene	106		11.083					ND	
97 Styrene	104		11.104					ND	
98 Bromoform	173		11.276					ND	
99 Isopropylbenzene	105		11.426					ND	
101 cis-1,4-Dichloro-2-butene	53		11.491					ND	
100 Cyclohexanone	55		11.512					ND	U
103 Bromobenzene	156		11.719					ND	
102 1,1,2,2-Tetrachloroethane	83		11.719					ND	
105 trans-1,4-Dichloro-2-buten	53		11.755					ND	
104 1,2,3-Trichloropropane	110		11.769					ND	
106 N-Propylbenzene	120		11.812					ND	
107 2-Chlorotoluene	126		11.891					ND	
108 1,3,5-Trimethylbenzene	105		11.977					ND	
109 4-Chlorotoluene	126		12.005					ND	
110 tert-Butylbenzene	119		12.256					ND	
111 1,2,4-Trimethylbenzene	105		12.306					ND	
112 sec-Butylbenzene	134		12.441					ND	
113 1,3-Dichlorobenzene	146		12.534					ND	
114 4-Isopropyltoluene	119		12.556					ND	
115 1,4-Dichlorobenzene	146		12.613					ND	
116 1,2,3-Trimethylbenzene	105		12.627					ND	
117 n-Butylbenzene	91		12.849					ND	
118 1,2-Dichlorobenzene	146		12.863					ND	
119 1,2-Dibromo-3-Chloropropan	157		13.371					ND	
120 1,3,5-Trichlorobenzene	180		13.478					ND	
121 1,2,4-Trichlorobenzene	180		13.879					ND	
122 Hexachlorobutadiene	225		13.964					ND	
123 Naphthalene	128		14.057					ND	
124 1,2,3-Trichlorobenzene	180		14.200					ND	
126 2,2-Dimethylpentane	1		0.000					ND	
125 1-Chlorohexane TIC	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
129 Dimethyl disulfide	1		0.000					ND	
128 3-Ethylpentane	1		0.000					ND	
130 2,2,3-Trimethylbutane	1		0.000					ND	
135 3,3-Dimethylpentane	1		0.000					ND	
133 2,3-Dimethylpentane	1		0.000					ND	
132 Pentachloroethane	167		0.000					ND	
131 2-Methylhexane	1		0.000					ND	
134 3-Methylhexane	1		0.000					ND	
136 2,4-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 137 1,2-Dichloroethene, Total	96		2.000					ND	
S 144 1,2-Dichloroethene, Total	1		0.000					ND	
S 138 Xylenes, Total (URS)	1		0.000					ND	
S 139 Total BTEX	1		0.000					ND	
S 140 1,3-Dichloropropene, Total	1		0.000					ND	
S 143 Xylenes, Total	106		0.000					ND	
S 142 Trihalomethanes, Total	1				0			0.8684	
S 141 TAH	1				0			0	7
T 154 2-Butoxyethanol TIC	1		0.000					ND	
T 155 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 149 Dicyclopentadiene TIC	66		0.000					ND	
T 151 Propene oxide TIC	58		0.000					ND	
T 152 Methyl cyclohexane TIC	1		0.000					ND	
T 147 Dichloroacetonitrile TIC	74		0.000					ND	
T 145 Propene TIC	41		0.000					ND	
T 146 n-Nonane TIC	1		0.000					ND	
T 150 4-Ethyltoluene TIC	105		0.000					ND	
T 153 Cyclohexane TIC	1		0.000					ND	
T 148 1,3-Butadiene TIC	39		0.000					ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

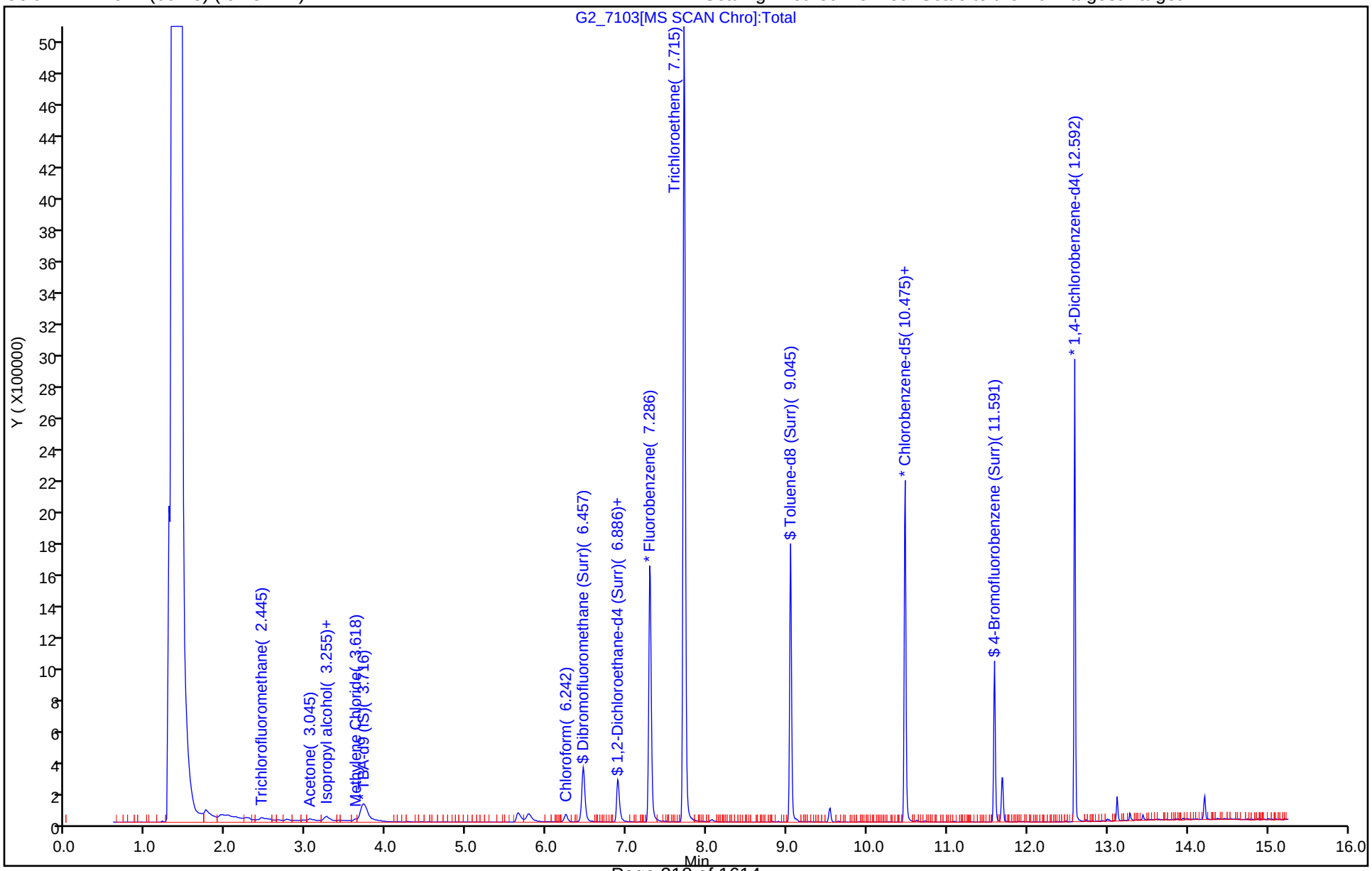
Report Date: 21-Sep-2018 07:06:27 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D

Injection Date:	20-Sep-2018 16:37:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	280-114110-B-3 DU			Worklist Smp#:	22
Client ID:	BH2-5-dup				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D
Lims ID: 280-114110-B-3 DU
Client ID: BH2-5-dup
Sample Type: DU
Inject. Date: 20-Sep-2018 16:37:30 ALS Bottle#: 28 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-B-3 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	10.6	106.00
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	10.0	100.05
$ 8 Toluene-d8 (Surr)	10.0	9.71	97.15
$ 9 4-Bromofluorobenzene (Surr)	10.0	8.54	85.39
$ 11 BFB	0	0	0.00

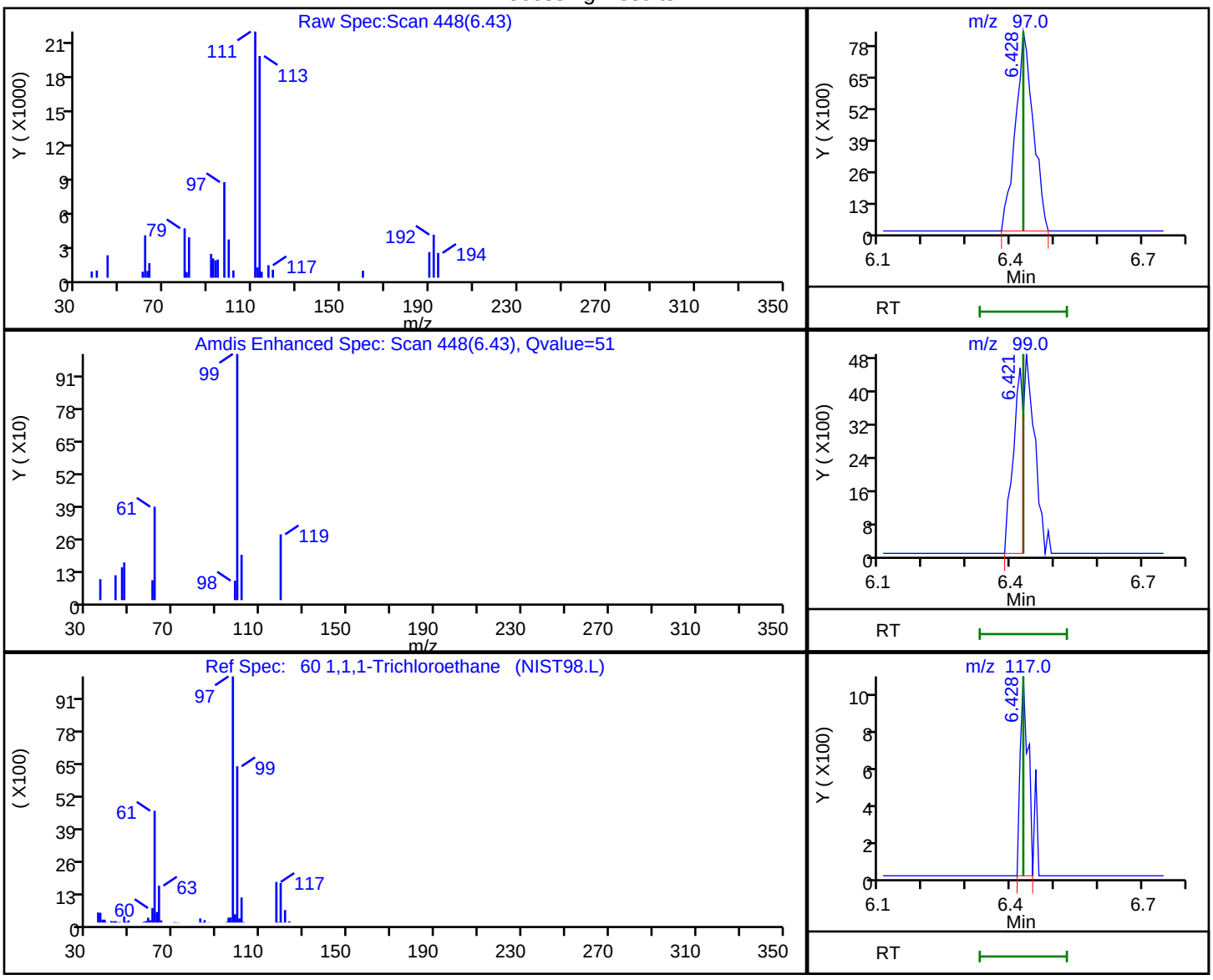
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D				
Injection Date:	20-Sep-2018 16:37:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-B-3 DU				
Client ID:	BH2-5-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	28	Worklist Smp#:	22
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

60 1,1,1-Trichloroethane, CAS: 71-55-6

Processing Results



RT	Mass	Response	Amount
6.43	97.00	23547	0.347085
6.42	99.00	7409	
6.43	117.00	1359	

Reviewer: ilczyszynd, 21-Sep-2018 06:59:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428900

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 16:13 Calibration End Date: 09/07/2018 17:57 Calibration ID: 33626

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428900/18	G2_6777.D
Level 2	IC 280-428900/19	G2_6778.D
Level 3	IC 280-428900/20	G2_6779.D
Level 4	ICIS 280-428900/21	G2_6780.D
Level 5	IC 280-428900/22	G2_6781.D
Level 6	IC 280-428900/23	G2_6782.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethylene oxide	0.0032 0.0018	0.0028	0.0023	0.0022	0.0019	Lin2	0.1301	0.0020							0.9940		0.9900
Ethanol	0.0014 0.0010	0.0011	0.0011	0.0011	0.0009	Lin2	0.0237	0.0010							0.9920		0.9900
Isopropyl alcohol	0.0083 0.0049	0.0071	0.0045	0.0058	0.0047	Lin1	0.0349	0.0048							0.9950		0.9900
Acetonitrile	0.0135 0.0089	0.0107	0.0100	0.0100	0.0082	Lin2	0.0467	0.0088							0.9950		0.9900
2-Chloro-1,3-butadiene	0.4203 0.4676	0.4289	0.4308	0.4331	0.4690	Ave		0.4416				4.8		15.0			
Diisopropyl ether	0.1836 0.1932	0.1814	0.1774	0.1878	0.1882	Ave		0.1853				3.0		15.0			
Tert-butyl ethyl ether	0.5029 0.5573	0.5326	0.4947	0.5307	0.5288	Ave		0.5245				4.3		15.0			
Ethyl acetate	+++++ 0.0615	0.0491	0.0518	0.0515	0.0567	Ave		0.0541				9.2		15.0			
Propionitrile	+++++ 0.0106	0.0081	0.0062	0.0081	0.0087	Lin	-0.238	0.0107							0.9930		0.9900
Methacrylonitrile	0.0388 0.0517	0.0428	0.0473	0.0509	0.0508	Ave		0.0470				11.1		15.0			
Tert-amyl methyl ether	0.3953 0.4231	0.4093	0.3815	0.4071	0.4053	Ave		0.4036				3.5		15.0			
Methyl methacrylate	0.0147 0.0258	0.0196	0.0212	0.0228	0.0248	Lin2	-0.020	0.0246							0.9980		0.9900
2-Nitropropane	0.0108 0.0116	0.0111	0.0097	0.0086	0.0098	Ave		0.0103				10.7		15.0			
cis-1,4-Dichloro-2-butene	0.0314 0.0500	0.0387	0.0380	0.0392	0.0461	Lin2	-0.028	0.0450							0.9900		0.9900
1,2,3-Trimethylbenzene	2.5296 2.4654	2.5758	2.5353	2.5653	2.5993	Ave		2.5451				1.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428900

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 16:13 Calibration End Date: 09/07/2018 17:57 Calibration ID: 33626

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.1876 0.2057	0.1984	0.1909	0.1958	0.2023	Ave		0.1968				3.5		15.0			
1,2-Dichloroethane-d4 (Surr)	0.1815 0.1901	0.1891	0.1819	0.1850	0.1872	Ave		0.1858				2.0		15.0			
Toluene-d8 (Surr)	4.0553 3.9243	4.0092	4.0485	3.9713	4.1198	Ave		4.0214				1.7		15.0			
4-Bromofluorobenzene (Surr)	0.8112 0.8314	0.7964	0.8074	0.7979	0.8398	Ave		0.8140				2.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428900

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 16:13 Calibration End Date: 09/07/2018 17:57 Calibration ID: 33626

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428900/18	G2_6777.D
Level 2	IC 280-428900/19	G2_6778.D
Level 3	IC 280-428900/20	G2_6779.D
Level 4	ICIS 280-428900/21	G2_6780.D
Level 5	IC 280-428900/22	G2_6781.D
Level 6	IC 280-428900/23	G2_6782.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene oxide	FB	Lin2	51654 1812969	95227	196937	359110	999261	100 6000	200	500	1000	3000
Ethanol	FB	Lin2	13575 573908	21921	54966	107657	281816	60.0 3600	120	300	600	1800
Isopropyl alcohol	FB	Lin1	13497 492005	24420	38390	94204	245669	10.0 600	20.0	50.0	100	300
Acetonitrile	FB	Lin2	22086 888813	37074	85172	163013	424798	10.0 600	20.0	50.0	100	300
2-Chloro-1,3-butadiene	FB	Ave	68542 4682316	148193	366365	708428	2425724	1.00 60.0	2.00	5.00	10.0	30.0
Diisopropyl ether	FB	Ave	29951 1934562	62660	150901	307242	973368	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	82020 5580407	184018	420766	867954	2735136	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	+++++ 1231612	33899	88174	168341	586900	+++++ 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Lin	+++++ 1058693	27942	52887	132183	451170	+++++ 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	63236 5181513	147767	402465	831828	2625840	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	64464 4237208	141401	324429	665834	2096259	1.00 60.0	2.00	5.00	10.0	30.0
Methyl methacrylate	FB	Lin2	4801 516344	13567	35991	74628	256943	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	3528 231578	7673	16448	28179	101350	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Lin2	3622 338612	9638	22471	47595	159788	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	145721 8351870	320957	749359	1555462	4506041	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	30592 2059424	68558	162384	320290	1046450	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428900

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 16:13 Calibration End Date: 09/07/2018 17:57 Calibration ID: 33626

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane-d4 (Surr)	FB	Ave	29602 1903899	65336	154700	302635	968028	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	142631 8507195	303432	740225	1446170	4557858	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	46730 2816335	99240	238646	483782	1455856	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6777.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Sep-2018 16:13:30 ALS Bottle#: 19 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:05 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:09:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	377542	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	99	2038659	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	439640	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	720085	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	30592	1.00	0.9532	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.900	6.893	0.007	98	29602	1.00	0.9769	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	142631	1.00	1.01	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	90	46730	1.00	1.00	
16 Ethylene oxide	43	2.054	2.040	0.014	99	51654	100.0	95.1	
21 Ethanol	45	2.640	2.640	0.000	46	13575	60.0	62.1	
23 Propene oxide	58	2.780	2.780	0.000	96	179314	100.0	102.6	
29 Isopropyl alcohol	45	3.255	3.255	0.000	97	13497	10.0	9.97	
31 Acetonitrile	41	3.408	3.408	0.000	97	22086	10.0	10.1	
47 Isopropyl ether	87	4.833	4.833	0.000	92	29951	1.00	0.99	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	80	68542	1.00	0.9517	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	96	82020	1.00	0.9588	
53 Ethyl acetate	43		5.825				ND	ND	U
54 Propionitrile	54		5.839				ND	ND	U
58 Methacrylonitrile	41	6.056	6.042	0.014	93	63236	10.0	8.24	
68 Tert-amyl methyl ether	73	7.122	7.114	0.008	91	64464	1.00	0.9794	
73 n-Butanol	56		7.729				ND	ND	
77 Methyl methacrylate	100	8.123	8.130	-0.007	93	4801	2.00	2.02	
80 2-Nitropropane	41	8.566	8.566	0.000	91	3528	2.00	2.11	
13 Tetrahydrothiophene	60		9.889				ND	ND	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	84	3622	2.00	2.03	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	145721	1.00	0.99	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	78482	1.00	1.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.08	Units: uL
MV-Supp A_00032	Amount Added:	0.50	Units: uL

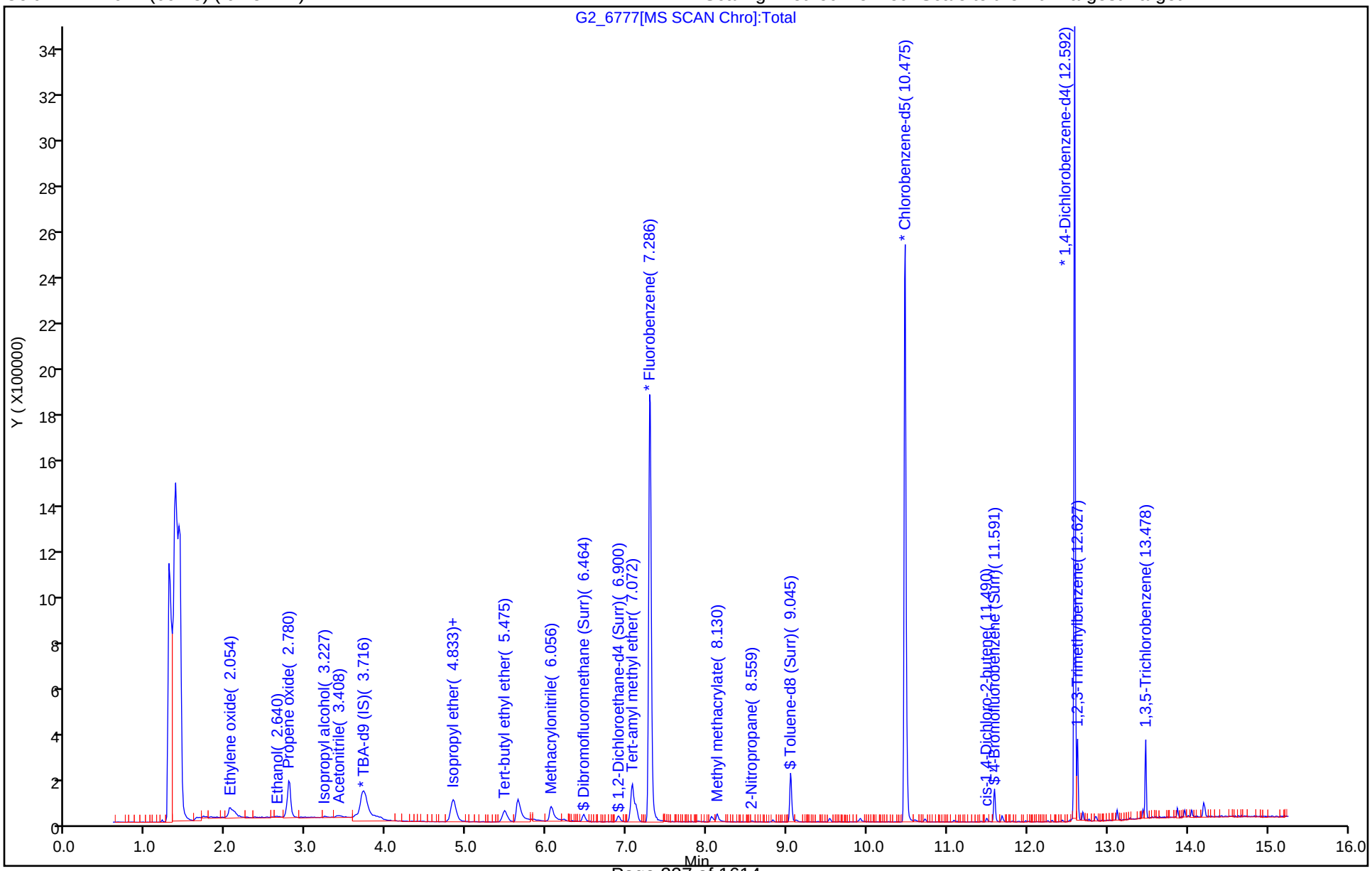
Report Date: 08-Sep-2018 11:27:05 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6777.D

Injection Date:	07-Sep-2018 16:13:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



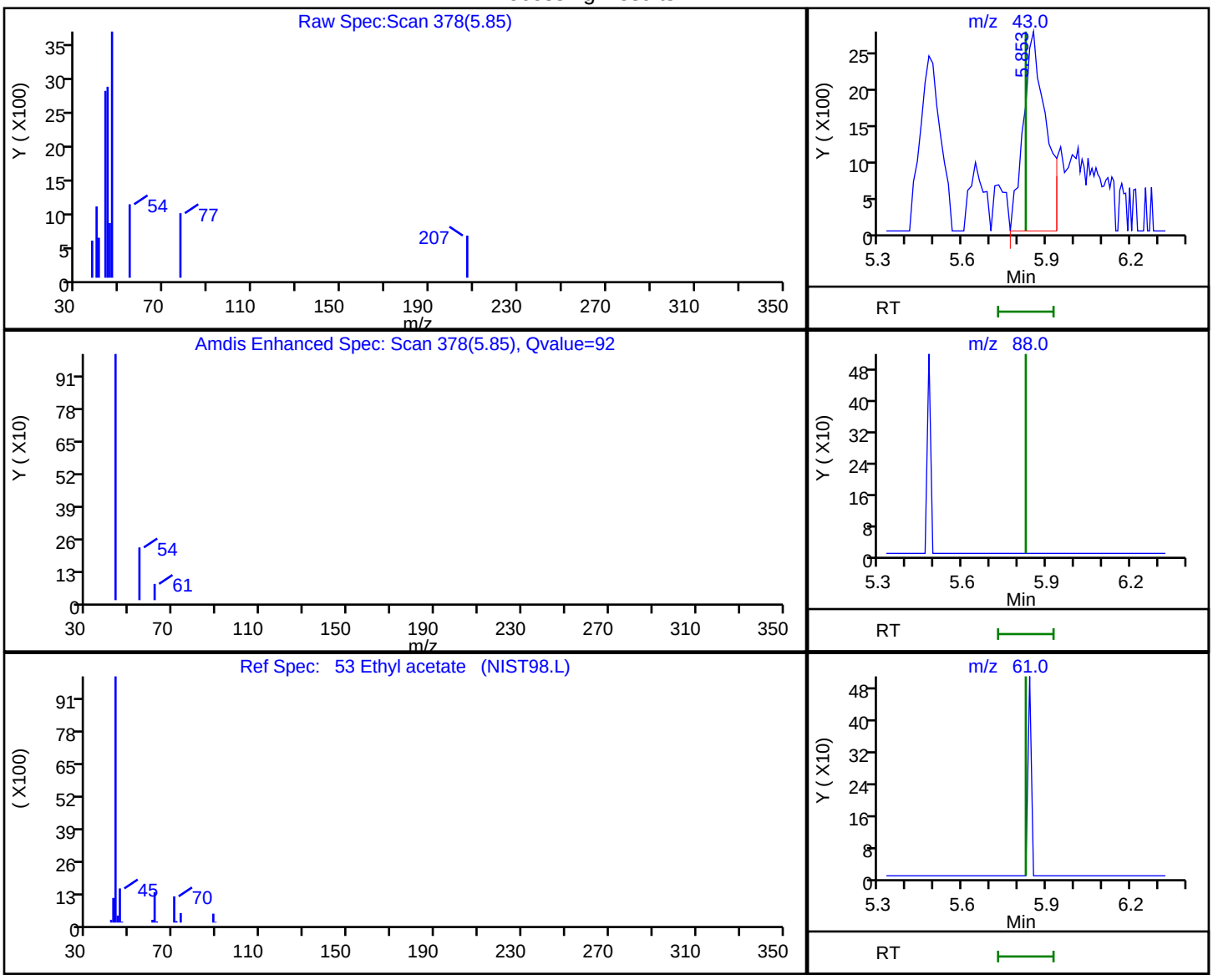
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6777.D				
Injection Date:	07-Sep-2018 16:13:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	19	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

53 Ethyl acetate, CAS: 141-78-6

Processing Results



RT	Mass	Response	Amount
5.85	43.00	15414	1.784108
5.82	88.00	0	
5.82	61.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 08:08:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

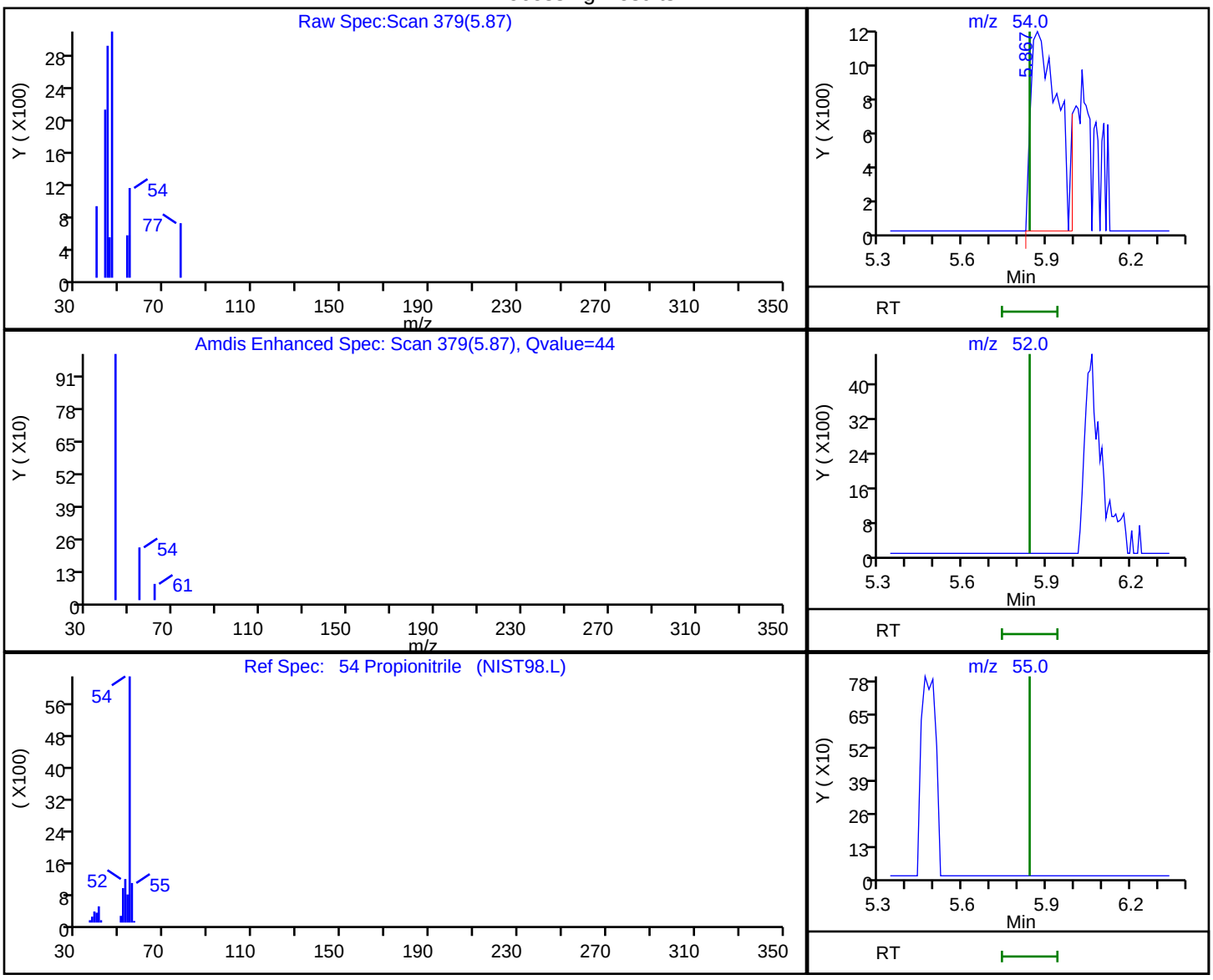
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6777.D				
Injection Date:	07-Sep-2018 16:13:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	19	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

54 Propionitrile, CAS: 107-12-0

Processing Results



RT	Mass	Response	Amount
5.87	54.00	7814	22.300057
5.82	52.00	0	
5.82	55.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 08:08:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6778.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Sep-2018 16:34:30 ALS Bottle#: 20 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:07 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:09:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	411968	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	2159287	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	473019	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	778794	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	92	68558	2.00	2.02	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	98	65336	2.00	2.04	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	92	303432	2.00	1.99	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.001	92	99240	2.00	1.96	
16 Ethylene oxide	43	2.054	2.040	0.014	100	95227	200.0	214.7	
21 Ethanol	45	2.654	2.640	0.014	90	21921	120.0	107.7	
23 Propene oxide	58	2.794	2.780	0.014	96	397119	200.0	214.6	
29 Isopropyl alcohol	45	3.255	3.255	0.000	98	24420	20.0	22.2	
31 Acetonitrile	41	3.408	3.408	0.000	100	37074	20.0	19.1	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	81	148193	2.00	1.94	
47 Isopropyl ether	87	4.833	4.833	0.000	92	62660	2.00	1.96	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	97	184018	2.00	2.03	
53 Ethyl acetate	43	5.839	5.825	0.014	99	33899	4.00	3.63	
54 Propionitrile	54	5.853	5.839	0.014	97	27942	20.0	37.4	
58 Methacrylonitrile	41	6.049	6.042	0.007	93	147767	20.0	18.2	
68 Tert-amyl methyl ether	73	7.114	7.114	0.000	95	141401	2.00	2.03	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.137	8.130	0.007	91	13567	4.00	4.02	
80 2-Nitropropane	41	8.566	8.566	0.000	95	7673	4.00	4.33	
13 Tetrahydrothiophene	60	9.896	9.889	0.007	76	3098	4.00	4.71	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	89	9638	4.00	4.07	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	320957	2.00	2.02	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	98	165646	2.00	2.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.16	Units: uL
MV-Supp A_00032	Amount Added:	1.00	Units: uL

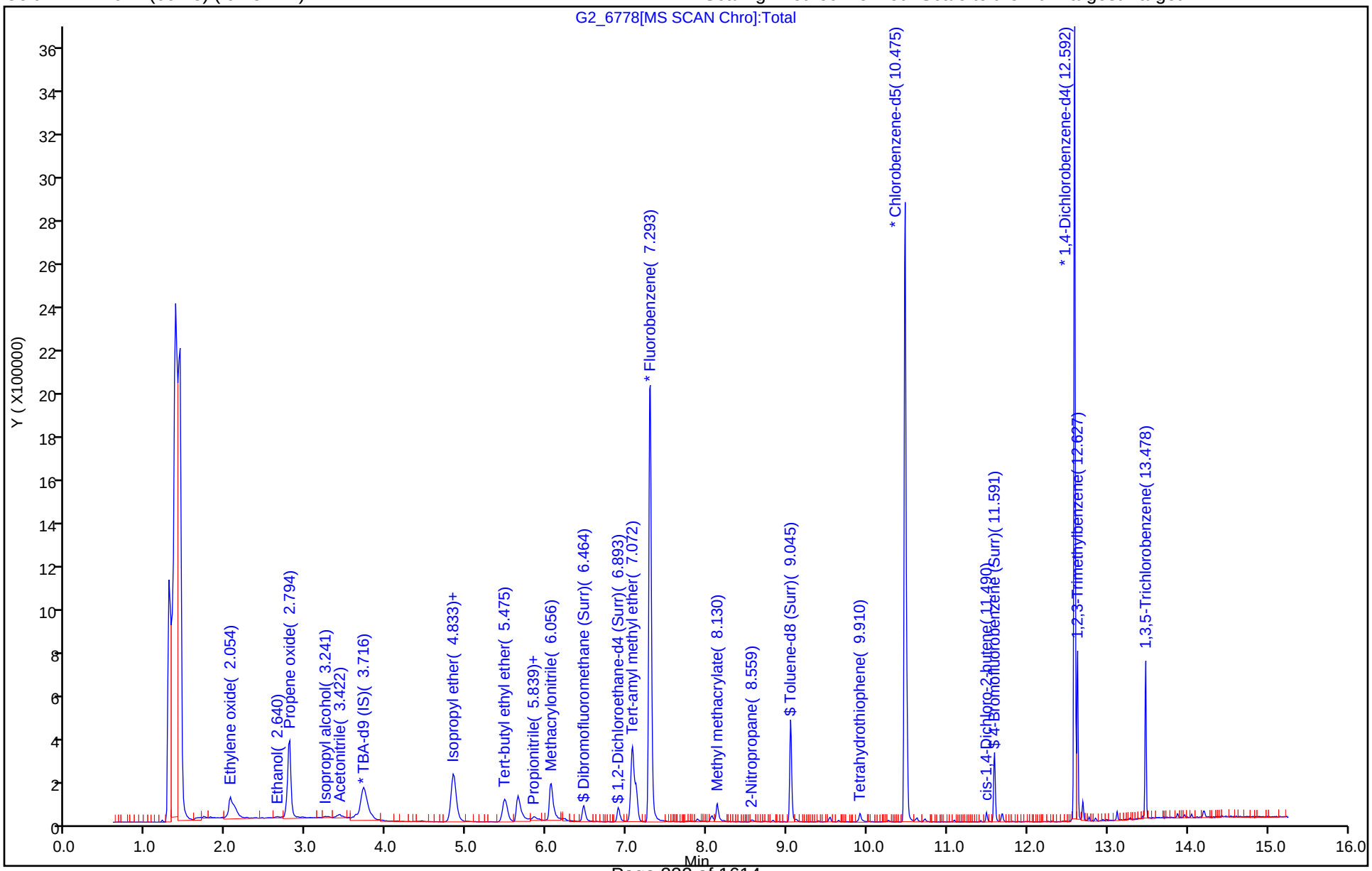
Report Date: 08-Sep-2018 11:27:08 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6778.D

Injection Date:	07-Sep-2018 16:34:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6779.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Sep-2018 16:55:30 ALS Bottle#: 21 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:09 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:10:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	387218	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	2126258	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	457093	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	738930	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	93	162384	5.00	4.85	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	154700	5.00	4.89	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	740225	5.00	5.03	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.001	91	238646	5.00	4.96	
16 Ethylene oxide	43	2.054	2.040	0.014	100	196937	500.0	523.9	
21 Ethanol	45	2.640	2.640	0.000	95	54966	300.0	312.4	
23 Propene oxide	58	2.794	2.780	0.014	96	899611	500.0	493.7	
29 Isopropyl alcohol	45	3.269	3.255	0.014	96	38390	50.0	39.7	
31 Acetonitrile	41	3.409	3.408	0.001	100	85172	50.0	51.7	
47 Isopropyl ether	87	4.833	4.833	0.000	93	150901	5.00	4.79	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	86	366365	5.00	4.88	
49 Tert-butyl ethyl ether	59	5.490	5.475	0.015	97	420766	5.00	4.72	
53 Ethyl acetate	43	5.839	5.825	0.014	99	88174	10.0	9.58	
54 Propionitrile	54	5.853	5.839	0.014	72	52887	50.0	51.4	
58 Methacrylonitrile	41	6.049	6.042	0.007	93	402465	50.0	50.3	
68 Tert-amyl methyl ether	73	7.115	7.114	0.001	95	324429	5.00	4.73	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.130	8.130	0.000	93	35991	10.0	9.42	
80 2-Nitropropane	41	8.566	8.566	0.000	93	16448	10.0	9.42	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	88	8715	10.0	9.55	
101 cis-1,4-Dichloro-2-butene	53	11.491	11.490	0.001	89	22471	10.0	9.09	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	99	749359	5.00	4.98	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	98	378272	5.00	4.93	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.40	Units: uL
MV-Supp A_00032	Amount Added:	2.50	Units: uL

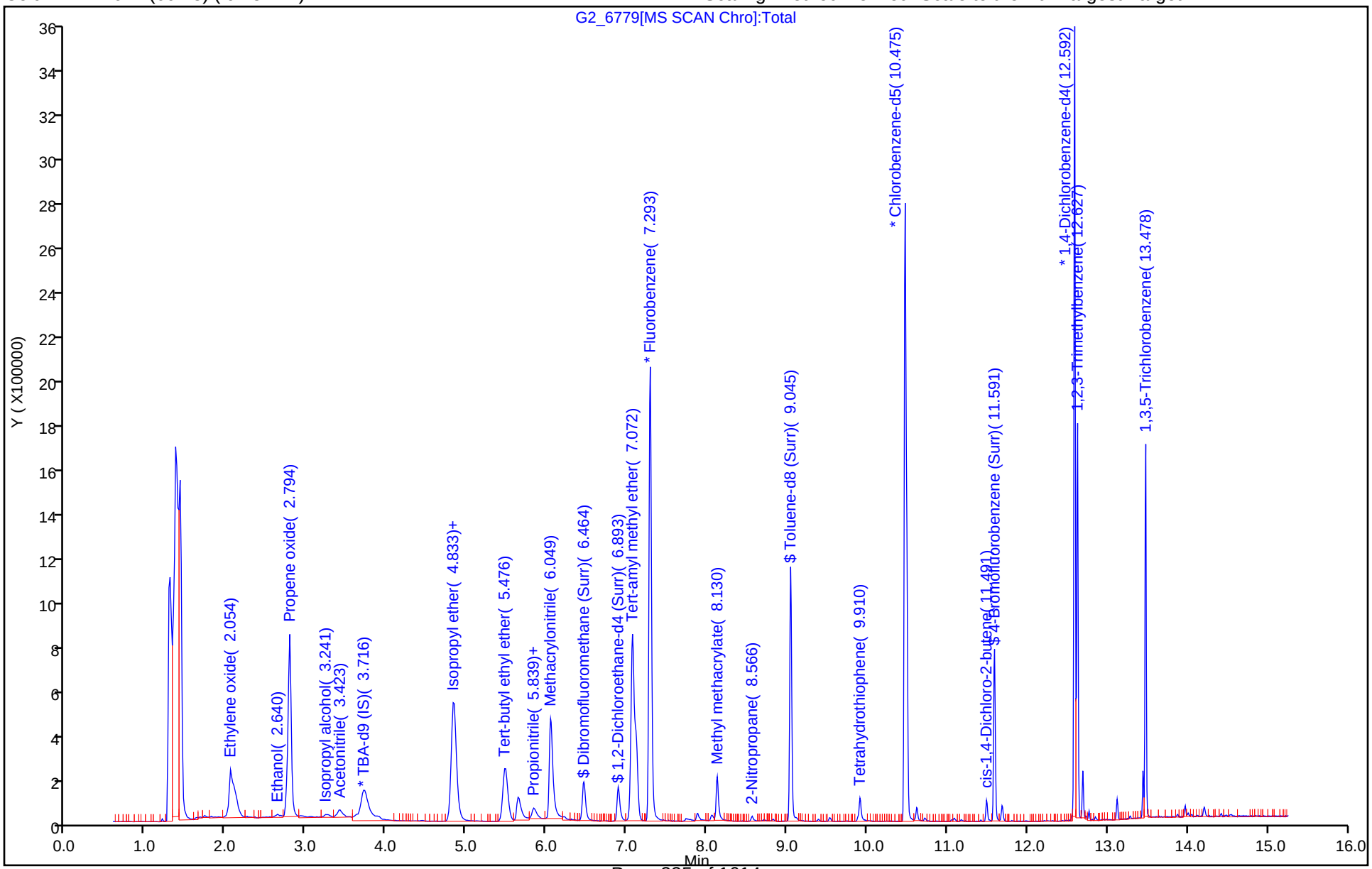
Report Date: 08-Sep-2018 11:27:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6779.D

Injection Date:	07-Sep-2018 16:55:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	20
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6780.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 07-Sep-2018 17:16:30 ALS Bottle#: 22 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:11 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:10:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	413290	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2044485	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	455197	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	757928	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	320290	10.0	9.95	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	302635	10.0	9.96	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	1446170	10.0	9.88	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	93	483782	10.0	9.80	
16 Ethylene oxide	43	2.040	2.040	0.000	100	359110	1000.0	1053.0	
21 Ethanol	45	2.640	2.640	0.000	98	107657	600.0	661.9	
23 Propene oxide	58	2.780	2.780	0.000	96	1806473	1000.0	1031.1	
29 Isopropyl alcohol	45	3.255	3.255	0.000	96	94204	100.0	112.6	
31 Acetonitrile	41	3.408	3.408	0.000	99	163013	100.0	108.2	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	85	708428	10.0	9.81	
47 Isopropyl ether	87	4.833	4.833	0.000	92	307242	10.0	10.1	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	97	867954	10.0	10.1	
53 Ethyl acetate	43	5.825	5.825	0.000	100	168341	20.0	19.0	
54 Propionitrile	54	5.839	5.839	0.000	99	132183	100.0	97.9	
58 Methacrylonitrile	41	6.042	6.042	0.000	93	831828	100.0	108.1	
68 Tert-amyl methyl ether	73	7.114	7.114	0.000	96	665834	10.0	10.1	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.130	8.130	0.000	92	74628	20.0	19.3	
80 2-Nitropropane	41	8.566	8.566	0.000	99	28179	20.0	16.8	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	92	17979	20.0	17.4	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	94	47595	20.0	18.1	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	1555462	10.0	10.1	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	781564	10.0	9.93	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL

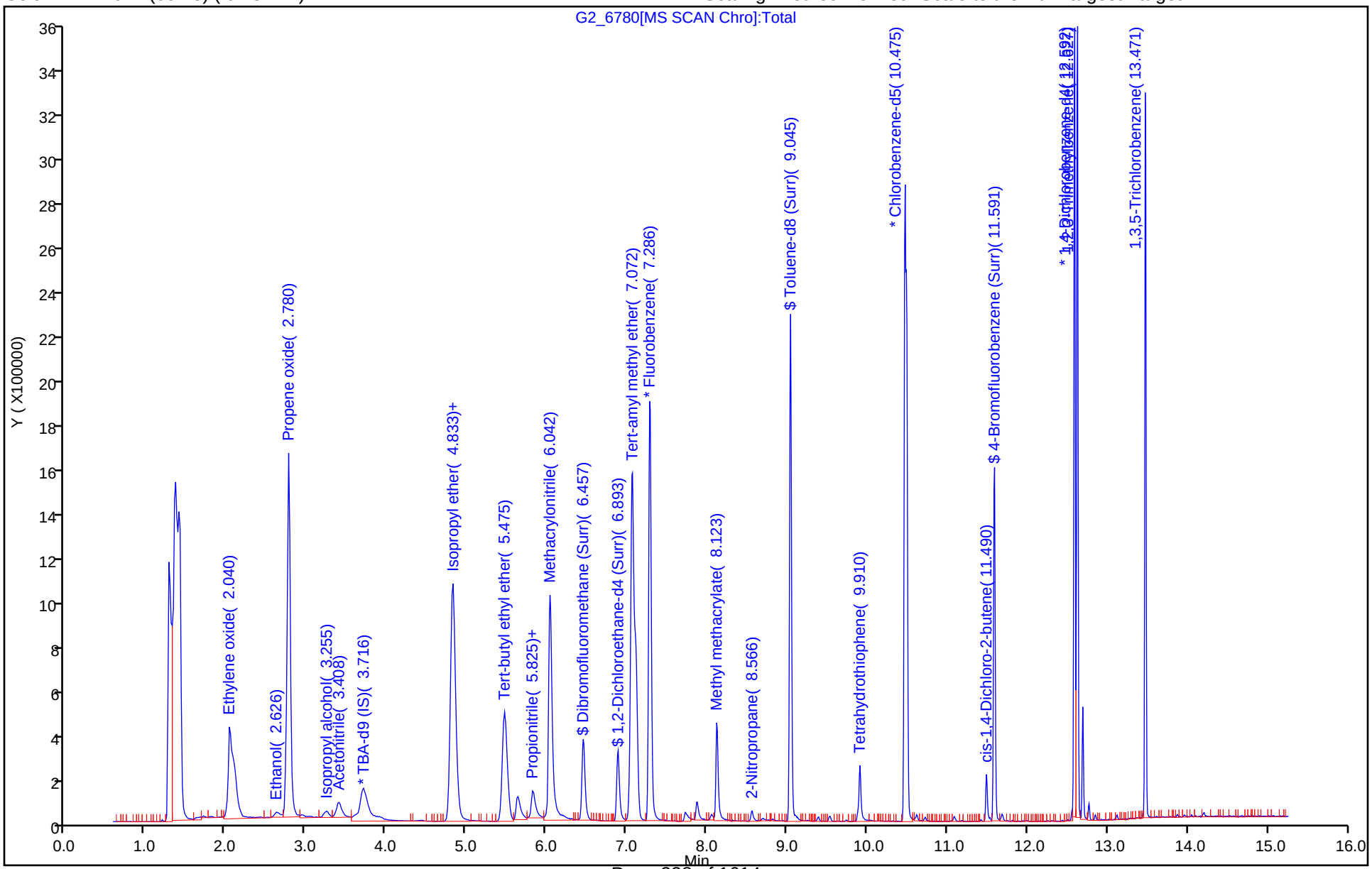
Report Date: 08-Sep-2018 11:27:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6780.D

Injection Date:	07-Sep-2018 17:16:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icis			Worklist Smp#:	21
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6781.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 07-Sep-2018 17:36:30 ALS Bottle#: 23 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:13 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:10:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.730	3.716	0.014	0	363804	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2155195	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	460969	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	722321	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	94	1046450	30.0	30.8	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	968028	30.0	30.2	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	4557858	30.0	30.7	
$ 9 4-Bromofluorobenzene (Surr	95	11.590	11.591	0.000	93	1455856	30.0	31.0	
16 Ethylene oxide	43	2.054	2.040	0.014	100	999261	3000.0	2888.3	
21 Ethanol	45	2.640	2.640	0.000	99	281816	1800.0	1680.4	
23 Propene oxide	58	2.794	2.780	0.014	96	5230144	3000.0	2831.8	
29 Isopropyl alcohol	45	3.269	3.255	0.014	97	245669	300.0	289.3	
31 Acetonitrile	41	3.408	3.408	0.000	99	424798	300.0	275.2	
47 Isopropyl ether	87	4.847	4.833	0.014	92	973368	30.0	30.5	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	91	2425724	30.0	31.9	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	97	2735136	30.0	30.2	
53 Ethyl acetate	43	5.825	5.825	0.000	100	586900	60.0	62.9	
54 Propionitrile	54	5.825	5.839	-0.014	99	451170	300.0	267.2	
58 Methacrylonitrile	41	6.049	6.042	0.007	94	2625840	300.0	323.8	
68 Tert-amyl methyl ether	73	7.122	7.114	0.008	96	2096259	30.0	30.1	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.123	8.130	-0.007	92	256943	60.0	61.3	
80 2-Nitropropane	41	8.566	8.566	0.000	98	101350	60.0	57.3	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	92	65537	60.0	57.1	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	98	159788	60.0	62.1	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	4506041	30.0	30.6	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	2211879	30.0	29.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	2.40	Units: uL
MV-Supp A_00032	Amount Added:	15.00	Units: uL

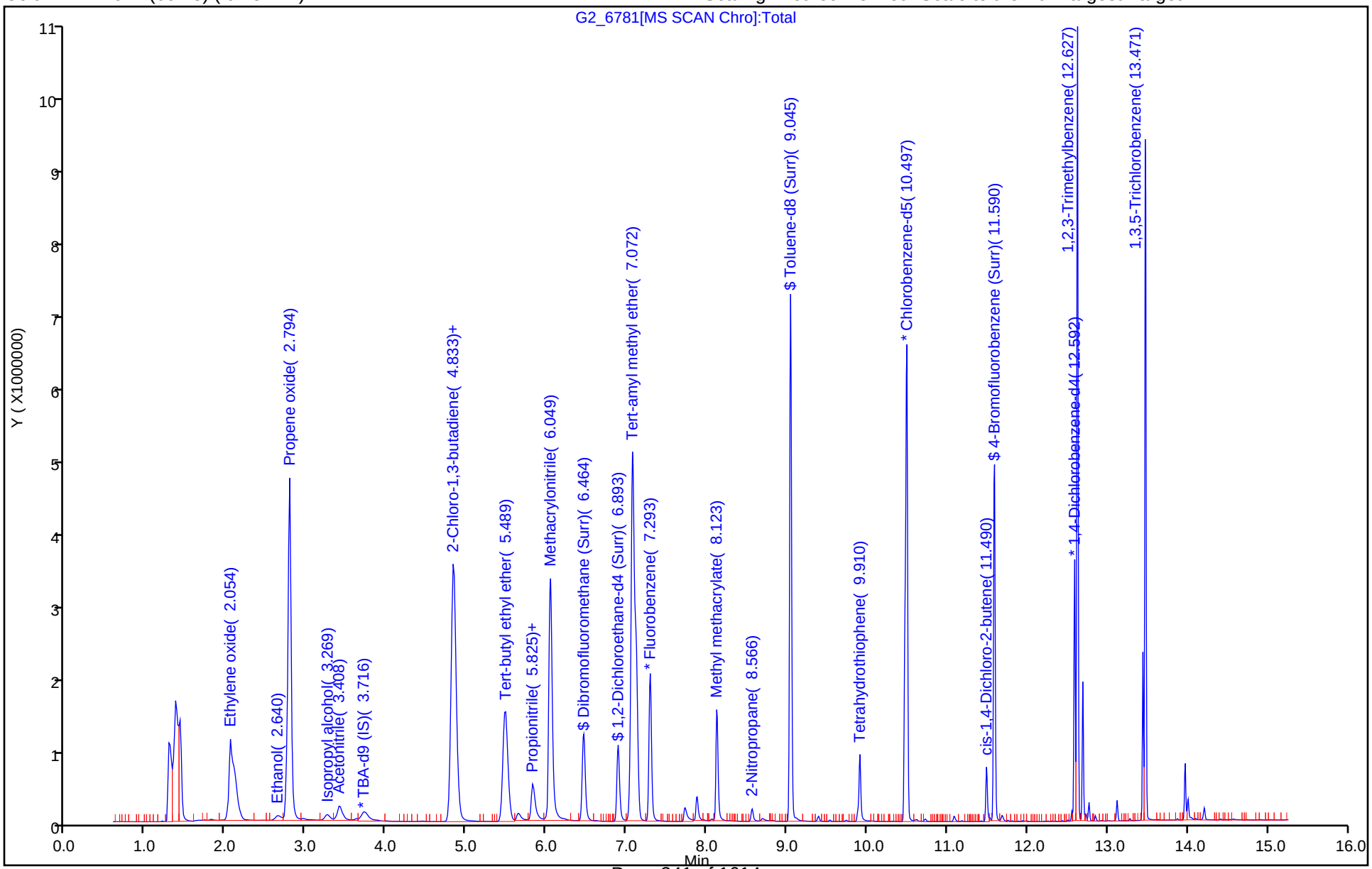
Report Date: 08-Sep-2018 11:27:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6781.D

Injection Date:	07-Sep-2018 17:36:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	22
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Sep-2018 17:57:30 ALS Bottle#: 24 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub129

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:15 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:11:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.730	3.716	0.014	0	385673	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2086228	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	85	451631	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	705756	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	94	2059424	60.0	62.7	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	1903899	60.0	61.4	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	8507195	60.0	58.6	
$ 9 4-Bromofluorobenzene (Surr	95	11.583	11.591	-0.007	92	2816335	60.0	61.3	
16 Ethylene oxide	43	2.054	2.040	0.014	100	1812969	6000.0	5471.5	
21 Ethanol	45	2.654	2.640	0.014	99	573908	3600.0	3562.5	
23 Propene oxide	58	2.794	2.780	0.014	96	10064189	6000.0	5629.2	
29 Isopropyl alcohol	45	3.269	3.255	0.014	97	492005	600.0	606.3	
31 Acetonitrile	41	3.409	3.408	0.001	99	888813	600.0	601.0	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	94	4682316	60.0	63.5	
47 Isopropyl ether	87	4.833	4.833	0.000	93	1934562	60.0	62.6	
49 Tert-butyl ethyl ether	59	5.476	5.475	0.001	97	5580407	60.0	63.7	
53 Ethyl acetate	43	5.825	5.825	0.000	99	1231612	120.0	136.4	
54 Propionitrile	54	5.825	5.839	-0.014	99	1058693	600.0	616.0	
58 Methacrylonitrile	41	6.042	6.042	0.000	93	5181513	600.0	660.0	
68 Tert-amyl methyl ether	73	7.122	7.114	0.008	97	4237208	60.0	62.9	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.123	8.130	-0.007	92	516344	120.0	126.4	
80 2-Nitropropane	41	8.566	8.566	0.000	100	231578	120.0	135.2	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	92	143700	120.0	125.2	
101 cis-1,4-Dichloro-2-butene	53	11.491	11.490	0.000	95	338612	120.0	134.0	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	8351870	60.0	58.1	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	4232649	60.0	57.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	4.80	Units: uL
MV-Supp A_00032	Amount Added:	30.00	Units: uL

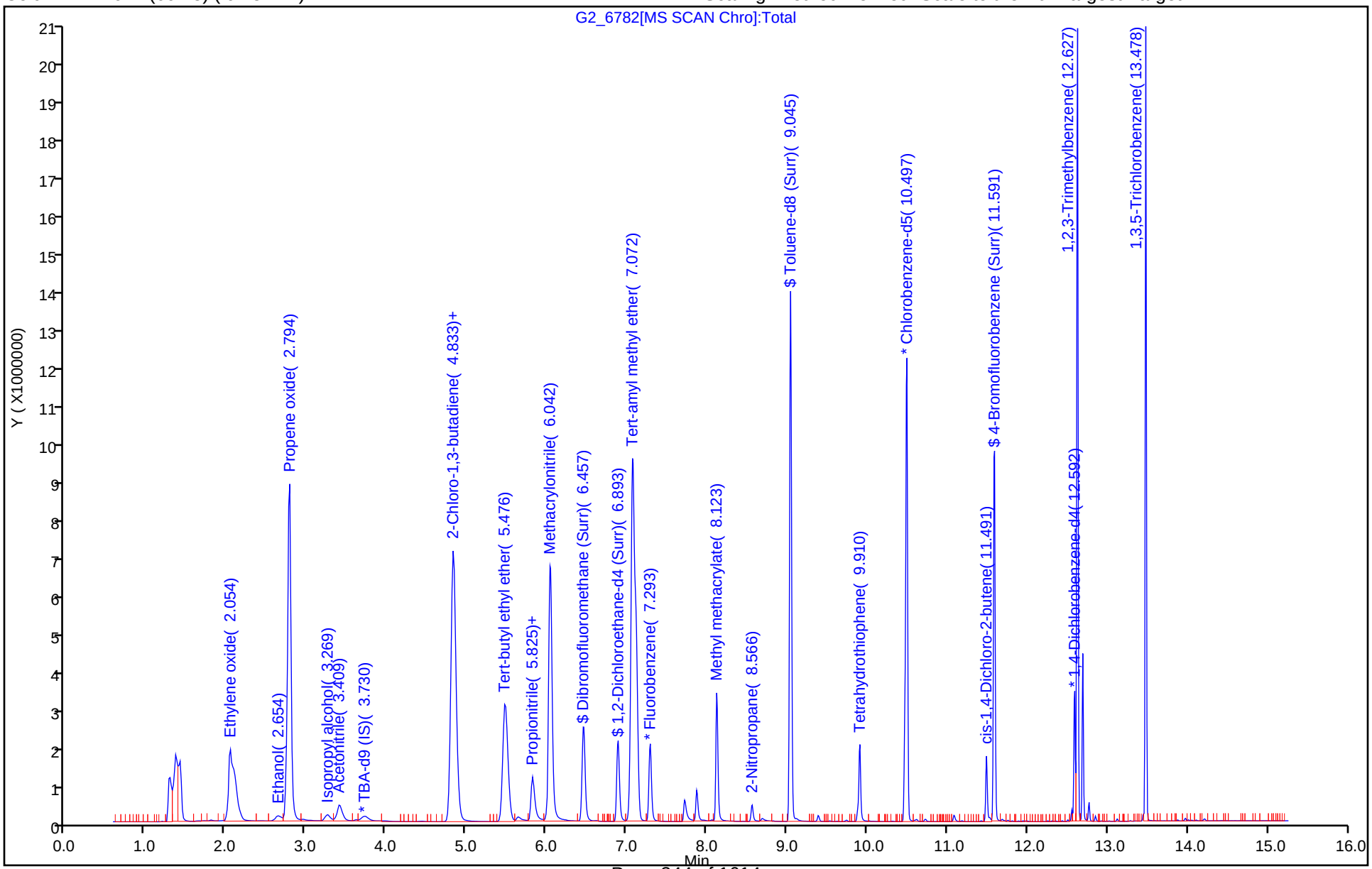
Report Date: 08-Sep-2018 11:27:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Injection Date:	07-Sep-2018 17:57:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-429808/10	G2_6995.D
Level 2	IC 280-429808/11	G2_6996.D
Level 3	IC 280-429808/12	G2_6997.D
Level 4	IC 280-429808/13	G2_6998.D
Level 5	IC 280-429808/14	G2_6999.D
Level 6	IC 280-429808/15	G2_7000.D
Level 7	IC 280-429808/16	G2_7001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.6082 0.4523	0.4900 0.4274	0.5024	0.4492	0.4539	Ave		0.4834				12.6		15.0			
Chloromethane	0.4677 0.3538	0.4085 0.3298	0.3933	0.3520	0.3407	Ave		0.3780			0.1000	12.9		15.0			
Vinyl chloride	+++++ 0.3741	0.4129 0.3541	0.4329	0.3645	0.3600	Ave		0.3831				8.4		30.0			
Bromomethane	0.3497 0.2474	0.2956 0.2389	0.2797	0.2520	0.2439	Ave		0.2725				14.6		15.0			
Chloroethane	0.3071 0.2051	0.2428 0.1957	0.2445	0.2063	0.2063	Lin2	0.0525	0.2008							0.9970		0.9900
Dichlorofluoromethane	0.7649 0.5392	0.6450 0.5126	0.6461	0.5518	0.5504	Ave		0.6014				14.8		15.0			
Trichlorofluoromethane	0.8171 0.5890	0.7023 0.5582	0.6981	0.5947	0.5901	Ave		0.6499				14.3		15.0			
Ethyl ether	0.1363 0.1132	0.1444 0.1104	0.1351	0.1088	0.1104	Ave		0.1227				12.4		15.0			
Acrolein	0.0164 0.0143	0.0173 0.0137	0.0167	0.0140	0.0136	Ave		0.0151				10.5		15.0			
1,1-Dichloroethene	0.3594 0.2702	0.3095 0.2630	0.3181	0.2652	0.2670	Ave		0.2932				12.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3866 0.3140	0.3548 0.2935	0.3786	0.3091	0.3095	Ave		0.3352				11.2		15.0			
Acetone	+++++ 0.0280	0.0340 0.0253	0.0321	0.0291	0.0300	Ave		0.0297				10.3		15.0			
Methyl iodide	0.5646 0.4628	0.5425 0.4479	0.5296	0.4661	0.4610	Ave		0.4964				9.6		15.0			
Carbon disulfide	1.1440 0.9324	0.9842 0.8877	1.0101	0.8920	0.9158	Ave		0.9666				9.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.5407 0.3767	0.4581 0.3661	0.4531	0.3741	0.3777	Lin2	0.0870	0.3730							0.9970		0.9900
Methyl acetate	0.0796 0.0621	0.0874 0.0565	0.0785	0.0613	0.0619	Lin1	0.0421	0.0580							0.9970		0.9900
Methylene Chloride	+++++ 0.2283	0.2982 0.2151	0.2748	0.2396	0.2317	Ave		0.2480				12.8		15.0			
t-Butyl alcohol	+++++ 0.0104	0.0128 0.0095	0.0133	0.0109	0.0099	Ave		0.0111				14.0		15.0			
Acrylonitrile	0.0373 0.0321	0.0389 0.0333	0.0373	0.0332	0.0338	Ave		0.0352				7.5		15.0			
trans-1,2-Dichloroethene	0.3292 0.2741	0.3058 0.2677	0.3133	0.2644	0.2779	Ave		0.2904				8.8		15.0			
Methyl tert-butyl ether	+++++ 0.4502	0.4677 0.4494	0.4689	0.4324	0.4307	Ave		0.4499				3.7		15.0			
Hexane	1.9811 1.8058	1.7600 1.9334	1.7624	1.6174	1.7343	Ave		1.7992				6.9		15.0			
1,1-Dichloroethane	0.5556 0.4578	0.5189 0.4444	0.5216	0.4523	0.4547	Ave		0.4865			0.1000	9.1		15.0			
Vinyl acetate	+++++ 0.2008	0.1458 0.2200	0.1344	0.1441	0.1661	Lin1	-0.283	0.2122							0.9920		0.9900
2,2-Dichloropropane	1.3074 0.5328	0.9663 0.5050	0.7407	0.5725	0.5392	Lin2	0.4106	0.5115							0.9960		0.9900
cis-1,2-Dichloroethene	0.2801 0.2660	0.2772 0.2650	0.2687	0.2431	0.2557	Ave		0.2651				4.8		15.0			
2-Butanone (MEK)	+++++ 0.0343	0.0246 0.0330	0.0483	0.0301	0.0322	Lin1	0.0069	0.0332							0.9930		0.9900
Bromochloromethane	+++++ 0.0910	0.0994 0.0908	0.1027	0.0876	0.0912	Ave		0.0938				6.3		15.0			
Tetrahydrofuran	+++++ 0.0192	0.0180 0.0212	0.0157	0.0122	0.0145	Qua	-0.027	0.0175	0.0000330						0.9990		0.9900
Chloroform	0.5020 0.4354	0.5072 0.4189	0.5104	0.4265	0.4308	Ave		0.4616				9.2		30.0			
1,1,1-Trichloroethane	0.5983 0.5119	0.5253 0.4946	0.5697	0.4844	0.5006	Ave		0.5264				8.0		15.0			
Cyclohexane	0.5160 0.5349	0.4335 0.5209	0.4783	0.4546	0.5054	Ave		0.4919				7.6		15.0			
Carbon tetrachloride	0.5474 0.4740	0.4723 0.4575	0.5001	0.4431	0.4607	Ave		0.4793				7.3		15.0			
1,1-Dichloropropene	0.3535 0.3717	0.3377 0.3753	0.3636	0.3176	0.3480	Ave		0.3525				5.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Benzene	1.0120 0.9745	1.0204 0.9317	1.0395	0.9140	0.9528	Ave		0.9778				4.9		15.0			
Isobutyl alcohol	+++++ 0.0033	+++++ 0.0030	0.0025	0.0026	0.0028	Ave		0.0028				11.8		15.0			
1,2-Dichloroethane	+++++ 0.2508	0.2708 0.2443	0.2834	0.2447	0.2475	Ave		0.2569				6.3		15.0			
Trichloroethene	0.3042 0.2591	0.2839 0.2579	0.2741	0.2379	0.2519	Ave		0.2670				8.3		15.0			
Methylcyclohexane	0.4323 0.4603	0.4108 0.4415	0.4395	0.4032	0.4475	Ave		0.4336				4.7		15.0			
1,2-Dichloropropane	0.2482 0.2080	0.2170 0.2061	0.2424	0.1865	0.2058	Ave		0.2163				10.1		30.0			
Dibromomethane	0.0919 0.0909	0.0982 0.0891	0.0968	0.0867	0.0868	Ave		0.0915				5.0		15.0			
1,4-Dioxane	+++++ 0.0008	+++++ 0.0010	0.0007	0.0008	0.0008	Lin1	-0.012	0.0009							0.9940		0.9900
Bromodichloromethane	0.2577 0.2683	0.2546 0.2717	0.2712	0.2389	0.2539	Ave		0.2595				4.6		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0299	0.0169 0.0369	0.0232	0.0213	0.0231	Qua	-0.015	0.0248	0.0002071						1.0000		0.9900
cis-1,3-Dichloropropene	1.1239 1.1994	0.9674 1.3185	1.0137	0.9799	1.0959	Ave		1.0998				11.6		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.0946	0.0712 0.0919	0.0785	0.0762	0.0842	Ave		0.0828				11.1		15.0			
Toluene	1.0137 1.0605	1.0306 0.9784	1.0869	0.9979	1.0512	Ave		1.0313				3.7		30.0			
trans-1,3-Dichloropropene	0.1513 0.2162	0.1791 0.2280	0.1736	0.1722	0.1897	Ave		0.1871				14.3		15.0			
Ethyl methacrylate	+++++ 0.6229	0.4298 0.7062	0.4596	0.4701	0.5208	Lin1	-0.454	0.6755							0.9910		0.9900
1,1,2-Trichloroethane	0.1427 0.1217	0.1380 0.1207	0.1391	0.1191	0.1184	Ave		0.1285				8.4		15.0			
Tetrachloroethene	1.5338 1.1447	1.3104 1.1619	1.3193	1.1127	1.1760	Ave		1.2513				11.9		15.0			
1,3-Dichloropropane	0.9725 0.9625	1.0374 1.0219	1.0401	0.9476	0.9789	Ave		0.9944				3.8		15.0			
2-Hexanone	+++++ 0.2472	0.1806 0.2632	0.2102	0.2056	0.2201	Ave		0.2212				13.5		15.0			
Dibromochloromethane	0.5921 0.6822	0.6410 0.7576	0.6363	0.5960	0.6518	Ave		0.6510				8.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dibromoethane	0.4735 0.4907	0.5178 0.5272	0.5083	0.4697	0.4825	Ave		0.4957				4.5		15.0			
Chlorobenzene	3.8683 2.8928	3.4576 2.9055	3.4928	2.9313	3.0437	Ave		3.2274			0.3000	11.8		15.0			
1,1,1,2-Tetrachloroethane	1.0659 1.1440	1.0791 1.1832	1.1718	1.0640	1.1212	Ave		1.1185				4.5		15.0			
Ethylbenzene	1.6910 1.8462	1.7462 1.8486	1.8025	1.7056	1.8443	Ave		1.7835				3.8		30.0			
m,p-Xylene	2.1407 2.2347	2.0686 2.2571	2.2184	2.0415	2.2498	Ave		2.1730				4.1		15.0			
o-Xylene	1.7513 2.1689	1.7409 2.1856	1.9309	1.9272	2.1723	Ave		1.9824				9.9		15.0			
Styrene	2.2944 3.2168	2.6136 3.1962	3.0170	3.0013	3.2514	Ave		2.9415				12.2		15.0			
Bromoform	0.2611 0.3635	0.3360 0.4144	0.3228	0.3262	0.3318	Ave		0.3365			0.1000	13.7		15.0			
Isopropylbenzene	3.0296 3.7381	2.8279 3.5241	3.2494	3.1323	3.6016	Ave		3.3005				10.0		15.0			
Cyclohexanone	+++++ 0.0163	0.0118 0.0170	0.0128	0.0125	0.0148	Lin1	-0.329	0.0167							0.9970		0.9900
Bromobenzene	0.7214 0.7246	0.7579 0.7625	0.7717	0.6807	0.7192	Ave		0.7340				4.3		15.0			
1,1,2,2-Tetrachloroethane	0.4221 0.3838	0.4100 0.4041	0.4031	0.3656	0.3591	Ave		0.3926			0.3000	6.0		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1006	0.0720 0.1120	0.0866	0.0803	0.0857	Lin1	-0.059	0.1077							0.9930		0.9900
1,2,3-Trichloropropane	0.1156 0.1198	0.1295 0.1267	0.1256	0.1172	0.1128	Ave		0.1210				5.2		15.0			
N-Propylbenzene	0.8826 1.0524	0.8625 1.0575	0.9795	0.9372	1.0100	Ave		0.9688				8.0		15.0			
2-Chlorotoluene	0.8014 0.8423	0.7748 0.8671	0.8316	0.7626	0.8223	Ave		0.8146				4.6		15.0			
1,3,5-Trimethylbenzene	2.4984 3.0713	2.4254 2.9606	2.7748	2.6749	3.0349	Ave		2.7772				9.3		15.0			
4-Chlorotoluene	0.7788 0.8030	0.8295 0.8307	0.8457	0.7628	0.8064	Ave		0.8081				3.7		15.0			
tert-Butylbenzene	2.0148 2.7194	1.9398 2.6721	2.2465	2.1749	2.5204	Ave		2.3268				13.4		15.0			
1,2,4-Trimethylbenzene	2.3384 3.0708	2.4832 2.8536	2.9601	2.7849	3.0140	Ave		2.7864				9.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	0.7587 0.9294	0.7170 0.9475	0.8440	0.7770	0.8823	Ave		0.8365				10.6		15.0			
1,3-Dichlorobenzene	1.7581 1.5483	1.7241 1.5284	1.6843	1.4745	1.5653	Ave		1.6119				6.8		15.0			
4-Isopropyltoluene	2.9949 3.6574	2.9917 3.1212	3.4284	3.2383	3.6728	Ave		3.3007				8.8		15.0			
1,4-Dichlorobenzene	1.9866 1.5163	1.8055 1.4886	1.7565	1.4885	1.5538	Ave		1.6566				11.8		15.0			
n-Butylbenzene	3.1286 3.3256	2.8857 2.7740	3.1997	3.0362	3.4041	Ave		3.1077				7.3		15.0			
1,2-Dichlorobenzene	1.7977 1.3999	1.5183 1.3658	1.5863	1.3817	1.4335	Ave		1.4976				10.3		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0698	0.0625 0.0790	0.0637	0.0560	0.0583	Ave		0.0649				12.9		15.0			
1,2,4-Trichlorobenzene	1.2772 1.2007	1.0904 1.1596	1.0789	1.0423	1.1510	Ave		1.1429				7.0		15.0			
Hexachlorobutadiene	1.1651 0.9030	0.9506 0.8657	0.9251	0.7969	0.8874	Ave		0.9277				12.5		15.0			
Naphthalene	1.2179 1.6277	1.1206 1.5937	1.1469	1.2648	1.4125	Lin1	-0.440	1.5833							0.9970		0.9900
1,2,3-Trichlorobenzene	1.1063 1.0226	0.9512 0.9710	0.9387	0.9172	0.9617	Ave		0.9813				6.5		15.0			
Dibromofluoromethane (Surr)	+++++ 0.2158	0.2059 0.2093	0.2146	0.2111	0.2150	Ave		0.2119				1.8		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2107	0.2311 0.2041	0.2172	0.2120	0.2139	Ave		0.2148				4.2		15.0			
Toluene-d8 (Surr)	+++++ 3.9714	3.6024 3.9160	3.7677	4.0336	4.1115	Ave		3.9004				4.8		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.7664	0.6468 0.7942	0.6722	0.7164	0.7591	Ave		0.7259				7.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-429808/10	G2_6995.D
Level 2	IC 280-429808/11	G2_6996.D
Level 3	IC 280-429808/12	G2_6997.D
Level 4	IC 280-429808/13	G2_6998.D
Level 5	IC 280-429808/14	G2_6999.D
Level 6	IC 280-429808/15	G2_7000.D
Level 7	IC 280-429808/16	G2_7001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47406 1940318	85010 4652827	164866	369902	763187	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	36455 1518035	70862 3590770	129065	289800	572896	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	+++++ 1604773	71636 3854737	142067	300113	605267	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	27258 1061359	51282 2601130	91800	207495	410063	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Lin2	23935 880098	42125 2130351	80232	169853	346945	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	59616 2313089	111894 5580715	212034	454385	925412	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	63687 2527046	121832 6076951	229085	489636	992230	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	10621 485736	25049 1202064	44349	89607	185645	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	7563 362458	17755 883474	32376	68255	135051	2.96 148	5.93 356	11.9	29.6	59.3
1,1-Dichloroethene	FB	Ave	28014 1159263	53686 2862923	104394	218332	448993	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	30129 1347104	61553 3195214	124249	254523	520304	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	+++++ 480073	23598 1103295	42141	95709	201754	+++++ 100	4.00 240	8.00	20.0	40.0
Methyl iodide	FB	Ave	44009 1985633	94113 4875589	173794	383750	775200	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	89163 4000211	170737 9663687	331478	734511	1539793	0.500 25.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Lin2	42143 1615965	79463 3985516	148686	308058	635079	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Lin1	12411 532462	30321 1230725	51551	100908	208104	1.00 50.0	2.00 120	4.00	10.0	20.0
Methylene Chloride	FB	Ave	+++++ 979355	51737 2342057	90179	197305	389626	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	FB	Ave	+++++ 445317	22278 1035613	43497	89788	166685	+++++ 250	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Ave	29098 1378264	67541 3621033	122506	273690	569122	5.00 250	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	25659 1176060	53053 2914783	102823	217691	467296	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	+++++ 1931245	81136 4892600	153864	356078	724091	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	32280 1735142	66019 4474080	124730	285811	633396	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	43301 1964015	90022 4837903	171170	372454	764542	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Lin1	+++++ 1722560	50597 4789512	88202	237245	558453	+++++ 50.0	2.00 120	4.00	10.0	20.0
2,2-Dichloropropane	FB	Lin2	101904 2285668	167634 5497809	243084	471395	906635	0.500 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,2-Dichloroethene	FB	Ave	21829 1141084	48094 2884624	88188	200145	430012	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Lin1	+++++ 587766	17081 1437876	63423	98978	216409	+++++ 100	4.00 240	8.00	20.0	40.0
Bromochloromethane	FB	Ave	+++++ 390327	17244 988240	33717	72169	153265	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Qua	+++++ 164754	6254 461322	10311	20060	48859	+++++ 50.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	39130 1867902	87983 4560282	167496	351194	724304	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	46629 2195959	91120 5384371	186961	398880	841721	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	40219 2294872	75200 5670597	156944	374356	849771	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	42666 2033389	81931 4980071	164099	364874	774533	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	27553 1594707	58578 4086173	119308	261488	585131	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	78874 4180821	177023 10142983	341133	752557	1602006	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	FB	Ave	+++++ 355468	+++++ 811015	20488	52500	118198	+++++ 625	+++++ 1500	50.0	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	+++++ 1076012	46985 2659999	93014	201489	416128	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	23708 1111402	49256 2807616	89957	195868	423580	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	33697 1974658	71273 4806638	144229	331954	752364	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	19343 892196	37637 2243872	79550	153572	346089	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	7165 389908	17028 969854	31781	71418	145862	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin1	+++++ 70238	+++++ 207043	4749	13247	25873	+++++ 500	+++++ 1200	40.0	100	200
Bromodichloromethane	FB	Ave	20089 1151016	44165 2957406	88985	196726	426908	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Qua	+++++ 128200	2935 402075	7622	17579	38894	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	18313 1152484	36288 3051157	71738	173161	400248	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1622710	49426 4003049	103059	251050	566075	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	79007 4549693	178778 10650983	356667	821672	1767459	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	11793 927379	31070 2481537	56971	141804	318931	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin1	+++++ 598514	16121 1634134	32525	83062	190198	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	11124 522258	23947 1313456	45652	98094	198997	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	24992 1099872	49156 2688798	93371	196625	429519	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	15846 924864	38915 2364876	73607	167444	357520	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	+++++ 949950	27104 2436437	59504	145358	321543	+++++ 100	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	9648 655497	24045 1753124	45034	105310	238069	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	7716 471502	19424 1220112	35972	83003	176228	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	63030 2779584	129700 6723586	247192	517979	1111645	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	17368 1099200	40477 2738111	82931	188020	409491	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethylbenzene	CBNZ d5	Ave	27553 1773951	65503 4277872	127568	301395	673573	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m,p-Xylene	CBNZ d5	Ave	34880 2147168	77598 5223196	157002	360749	821673	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	28535 2083996	65304 5057709	136655	340545	793357	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	37385 3090872	98040 7396286	213515	530355	1187482	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	4254 349281	12603 959051	22845	57649	121181	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	85428 6188364	189106 13353588	421212	1016769	2388111	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Lin1	+++++ 624635	17764 1572854	36094	88276	215675	+++++ 1000	40.0 2400	80.0	200	400
Bromobenzene	DCBd 4	Ave	20341 1199632	50680 2889204	100033	220952	476858	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	11902 635458	27420 1531253	52258	118675	238130	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	+++++ 166597	4817 424328	11220	26076	56846	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	3260 198248	8662 480041	16285	38035	74781	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	24888 1742328	57676 4006963	126965	304216	669659	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	22596 1394392	51811 3285530	107803	247538	545249	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	70447 5084585	162185 11218387	359690	868278	2012323	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	21961 1329315	55471 3147679	109631	247607	534683	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	56811 4501953	129715 10125171	291206	705989	1671159	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	65938 5083634	166056 10812881	383708	904005	1998460	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	21392 1538542	47946 3590324	109407	252204	585022	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	49573 2563149	115293 5791427	218337	478640	1037912	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	84449 6054797	200056 11826662	444417	1051180	2435315	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	56018 2510284	120734 5640624	227687	483190	1030288	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429808

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2018 08:54 Calibration End Date: 09/17/2018 11:00 Calibration ID: 33704

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	88219 5505544	192968 10510997	414775	985561	2257146	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	50689 2317581	101528 5175291	205631	448501	950501	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 115590	4178 299321	8251	18177	38687	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	36015 1987805	72919 4393771	139853	338347	763155	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	32852 1494836	63566 3280237	119922	258666	588383	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Lin1	34341 2694685	74937 6038642	148676	410568	936599	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	31195 1692972	63609 3679467	121683	297727	637686	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 1110888	35712 2278361	70419	173851	361539	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 1084804	40092 2222214	71264	174599	359669	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 4579150	135130 9061951	266643	712777	1501633	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 1522623	43249 3009394	87138	232548	503332	+++++ 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 17-Sep-2018 08:54:30 ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:17 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 10:23:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.702	0.000	0	337397	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	1948539	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	407351	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	704933	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111		6.457				ND	ND	
$ 7 1,2-Dichloroethane-d4 (Sur	65		6.893				ND	ND	
$ 8 Toluene-d8 (Surr)	98		9.045				ND	ND	U
$ 9 4-Bromofluorobenzene (Surr	95		11.591				ND	ND	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	98	47406	0.5000	0.6292	
14 Chloromethane	50	1.677	1.677	0.000	97	36455	0.5000	0.6187	
15 Vinyl chloride	62	1.788	1.802	-0.014	74	41083	0.5000	0.6880	
17 Bromomethane	94	2.082	2.096	-0.014	90	27258	0.5000	0.6418	
18 Chloroethane	64	2.179	2.180	-0.001	98	23935	0.5000	0.5033	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	59616	0.5000	0.6359	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	98	63687	0.5000	0.6286	
22 Ethyl ether	59	2.724	2.724	0.000	87	10621	0.5000	0.5554	
24 Acrolein	56	2.892	2.878	0.014	96	7563	2.96	3.21	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	98	28014	0.5000	0.6129	
26 1,1,2-Trichloro-1,2,2-trif	151	3.017	3.031	-0.014	90	30129	0.5000	0.5767	
27 Acetone	43		3.045				ND	ND	U
28 Iodomethane	142	3.157	3.157	0.000	99	44009	0.5000	0.5688	
30 Carbon disulfide	76	3.241	3.241	0.000	100	89163	0.5000	0.5917	
32 Methyl acetate	43	3.436	3.436	0.000	45	12411	1.00	0.6469	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	83	42143	0.5000	0.4916	
35 Methylene Chloride	84		3.618				ND	ND	U
37 2-Methyl-2-propanol	59		3.828				ND	ND	U
39 Acrylonitrile	53	3.967	3.967	0.000	91	29098	5.00	5.31	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	96	25659	0.5000	0.5669	
41 Methyl tert-butyl ether	73		4.009				ND	ND	U
42 Hexane	57	4.428	4.442	-0.014	89	32280	0.5000	0.5505	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	43301	0.5000	0.5710	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43		4.763				ND	ND	U
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	85	21829	0.5000	0.5282	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	86	101904	0.5000	0.4753	
52 2-Butanone (MEK)	43		5.741				ND	ND	
56 Chlorobromomethane	128		6.071				ND	ND	U
57 Tetrahydrofuran	42		6.099				ND	ND	
59 Chloroform	83	6.242	6.242	0.000	95	39130	0.5000	0.5438	
60 1,1,1-Trichloroethane	97	6.428	6.435	-0.007	96	46629	0.5000	0.5683	
61 Cyclohexane	56	6.500	6.507	-0.007	92	40219	0.5000	0.5245	
62 Carbon tetrachloride	117	6.628	6.628	0.000	93	42666	0.5000	0.5711	
63 1,1-Dichloropropene	75	6.643	6.643	0.000	92	27553	0.5000	0.5015	
64 Benzene	78	6.893	6.893	0.000	97	78874	0.5000	0.5174	
66 Isobutyl alcohol	41		6.929				ND	ND	U
65 1,2-Dichloroethane	62		6.986				ND	ND	
67 n-Heptane	43	7.315	7.315	0.000	90	43176	0.5000	0.5850	
69 Trichloroethene	95	7.722	7.722	0.000	95	23708	0.5000	0.5696	
71 Methylcyclohexane	55	7.958	7.965	-0.007	90	33697	0.5000	0.4986	
72 1,2-Dichloropropane	63	8.008	8.016	-0.007	89	19343	0.5000	0.5737	
75 Dibromomethane	93	8.116	8.108	0.008	91	7165	0.5000	0.5024	
74 1,4-Dioxane	88		8.116				ND	ND	
76 Dichlorobromomethane	83	8.316	8.316	0.000	98	20089	0.5000	0.4967	
78 2-Chloroethyl vinyl ether	63		8.645				ND	ND	
79 cis-1,3-Dichloropropene	75	8.788	8.781	0.007	92	18313	0.5000	0.5110	
81 4-Methyl-2-pentanone (MIBK	43		8.952				ND	ND	U
82 Toluene	91	9.117	9.109	0.008	97	79007	0.5000	0.4915	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	96	11793	0.5000	0.4042	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	88	5703	0.5000	0.9318	
85 1,1,2-Trichloroethane	97	9.567	9.560	0.007	94	11124	0.5000	0.5552	
86 Tetrachloroethene	164	9.624	9.624	0.000	96	24992	0.5000	0.6129	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	15846	0.5000	0.4890	
88 2-Hexanone	43		9.789				ND	ND	U
89 Chlorodibromomethane	129	9.917	9.925	-0.008	85	9648	0.5000	0.4548	
90 Ethylene Dibromide	107	10.032	10.025	0.007	97	7716	0.5000	0.4777	
92 Chlorobenzene	112	10.504	10.504	0.000	93	63030	0.5000	0.5993	
93 1,1,1,2-Tetrachloroethane	131	10.597	10.590	0.007	88	17368	0.5000	0.4765	
94 Ethylbenzene	106	10.604	10.597	0.007	99	27553	0.5000	0.4741	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	98	34880	0.5000	0.4926	
96 o-Xylene	106	11.090	11.083	0.007	98	28535	0.5000	0.4417	
97 Styrene	104	11.104	11.104	0.000	93	37385	0.5000	0.3900	
98 Bromoform	173	11.276	11.269	0.007	69	4254	0.5000	0.3879	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	85428	0.5000	0.4590	
100 Cyclohexanone	55		11.512				ND	ND	U
103 Bromobenzene	156	11.719	11.712	0.007	92	20341	0.5000	0.4914	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	69	11902	0.5000	0.5376	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	61	2303	0.5000	0.9234	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	87	3260	0.5000	0.4776	
106 N-Propylbenzene	120	11.812	11.812	0.000	98	24888	0.5000	0.4555	
107 2-Chlorotoluene	126	11.891	11.891	0.000	97	22596	0.5000	0.4919	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	93	70447	0.5000	0.4498	
109 4-Chlorotoluene	126	12.005	12.005	0.000	97	21961	0.5000	0.4819	
110 tert-Butylbenzene	119	12.256	12.256	0.000	94	56811	0.5000	0.4329	
111 1,2,4-Trimethylbenzene	105	12.313	12.306	0.007	98	65938	0.5000	0.4196	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.442	-0.001	95	21392	0.5000	0.4534	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	49573	0.5000	0.5454	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	84449	0.5000	0.4537	
115 1,4-Dichlorobenzene	146	12.613	12.606	0.007	93	56018	0.5000	0.5996	
117 n-Butylbenzene	91	12.849	12.849	0.000	97	88219	0.5000	0.5034	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	96	50689	0.5000	0.6002	
119 1,2-Dibromo-3-Chloropropan	157	13.364	13.378	-0.014	1	1219	0.5000	0.3332	
121 1,2,4-Trichlorobenzene	180	13.879	13.893	-0.014	92	36015	0.5000	0.5588	
122 Hexachlorobutadiene	225	13.964	13.979	-0.015	94	32852	0.5000	0.6280	
123 Naphthalene	128	14.050	14.065	-0.015	96	34341	0.5000	0.6628	
124 1,2,3-Trichlorobenzene	180	14.200	14.215	-0.015	95	31195	0.5000	0.5637	
S 137 1,2-Dichloroethene, Total	96				0		1.00	1.10	
S 144 1,2-Dichloroethene, Total	1				0		1.00	1.10	
S 138 Xylenes, Total (URS)	1				0		1.00	0.9343	
S 139 Total BTEX	1				0			2.42	
S 140 1,3-Dichloropropene, Total	1				0		1.00	0.9152	
S 143 Xylenes, Total	106				0		1.00	0.9343	
S 142 Trihalomethanes, Total	1				0		2.00	1.88	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.02	Units: uL
MV-MegaMainA_00001	Amount Added:	0.20	Units: uL

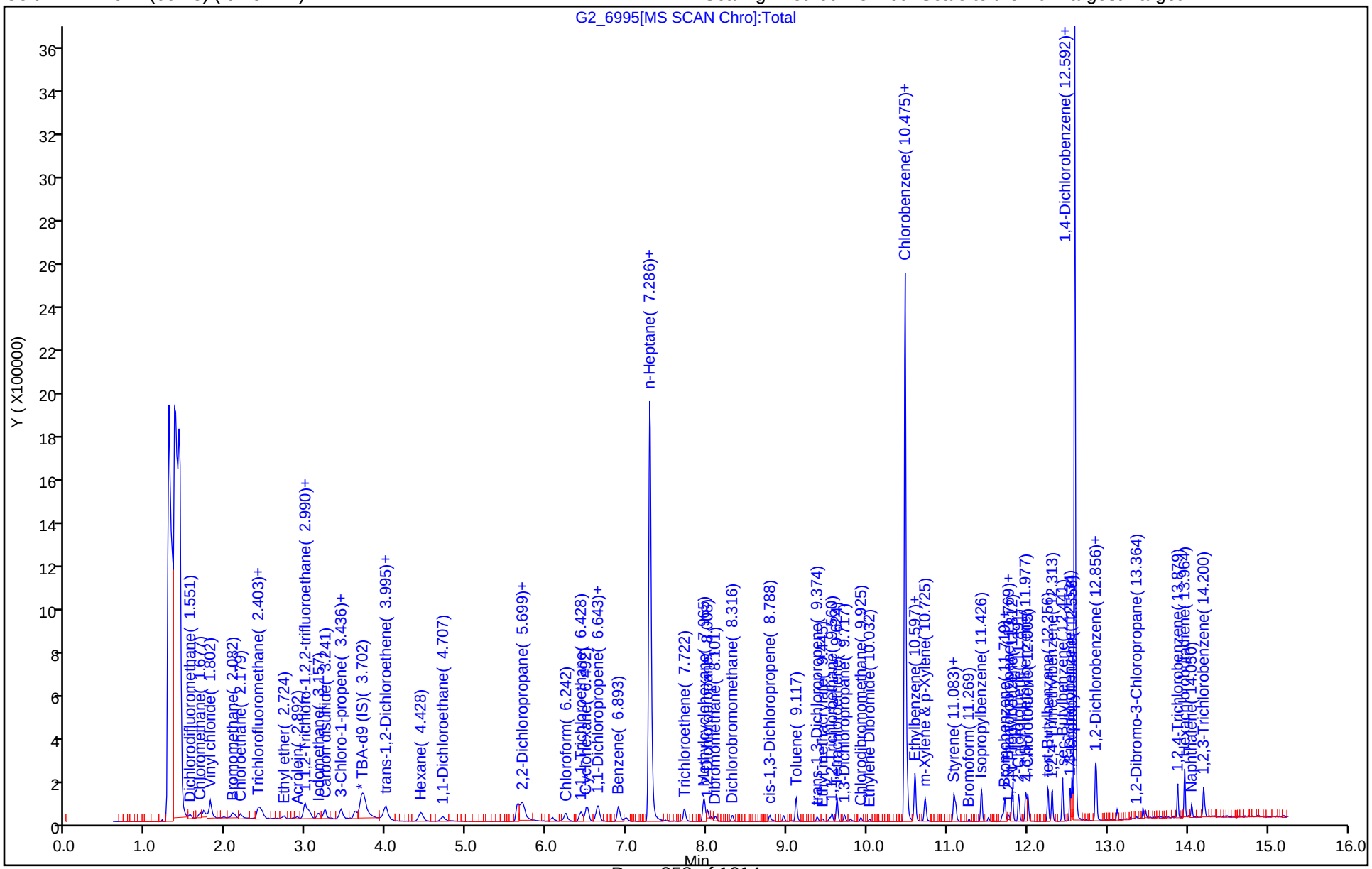
Report Date: 18-Sep-2018 08:49:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D

Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



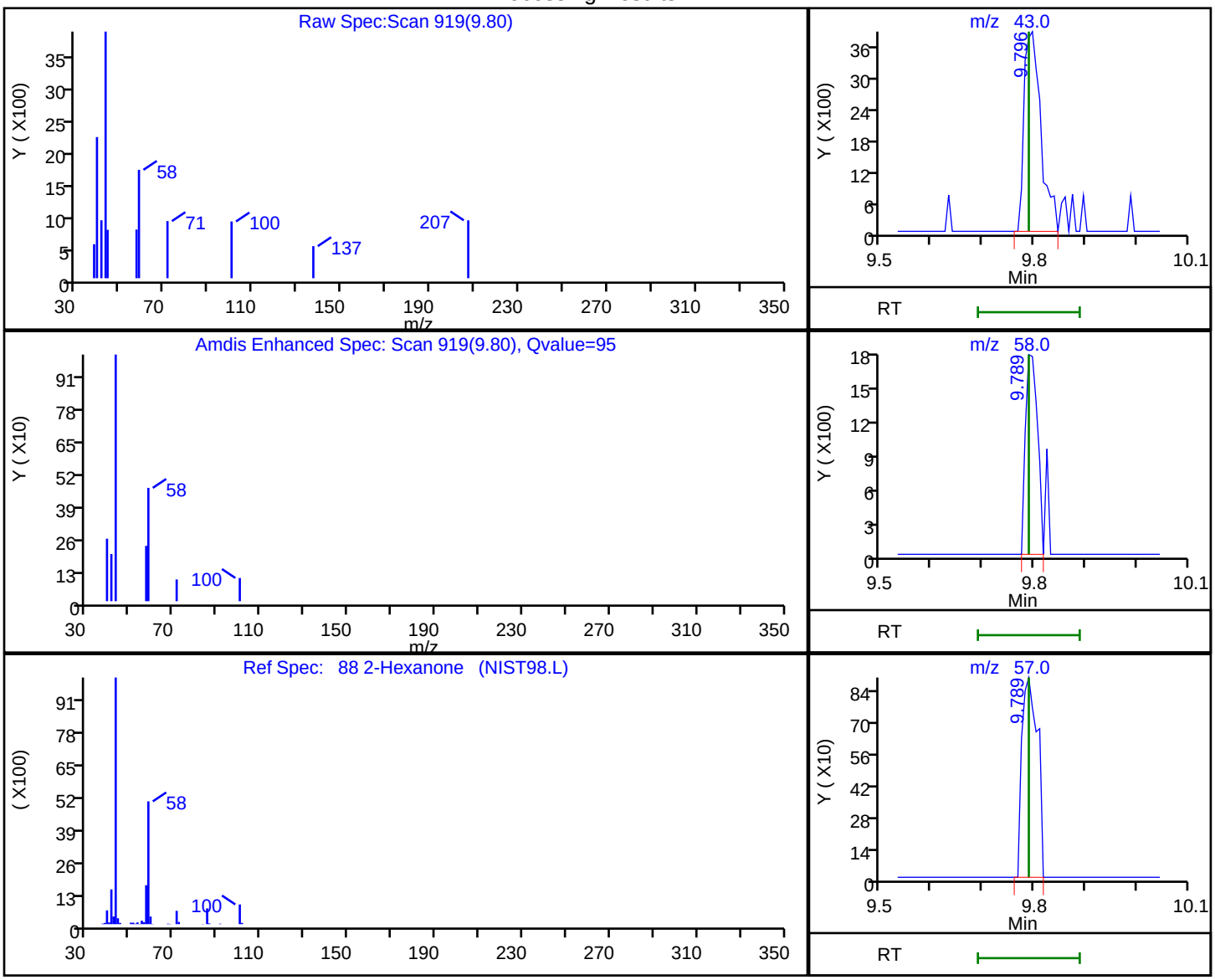
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

88 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.80	43.00	8842	1.983135
9.79	58.00	2818	
9.79	57.00	1907	

Reviewer: ilczyszynd, 17-Sep-2018 10:23:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

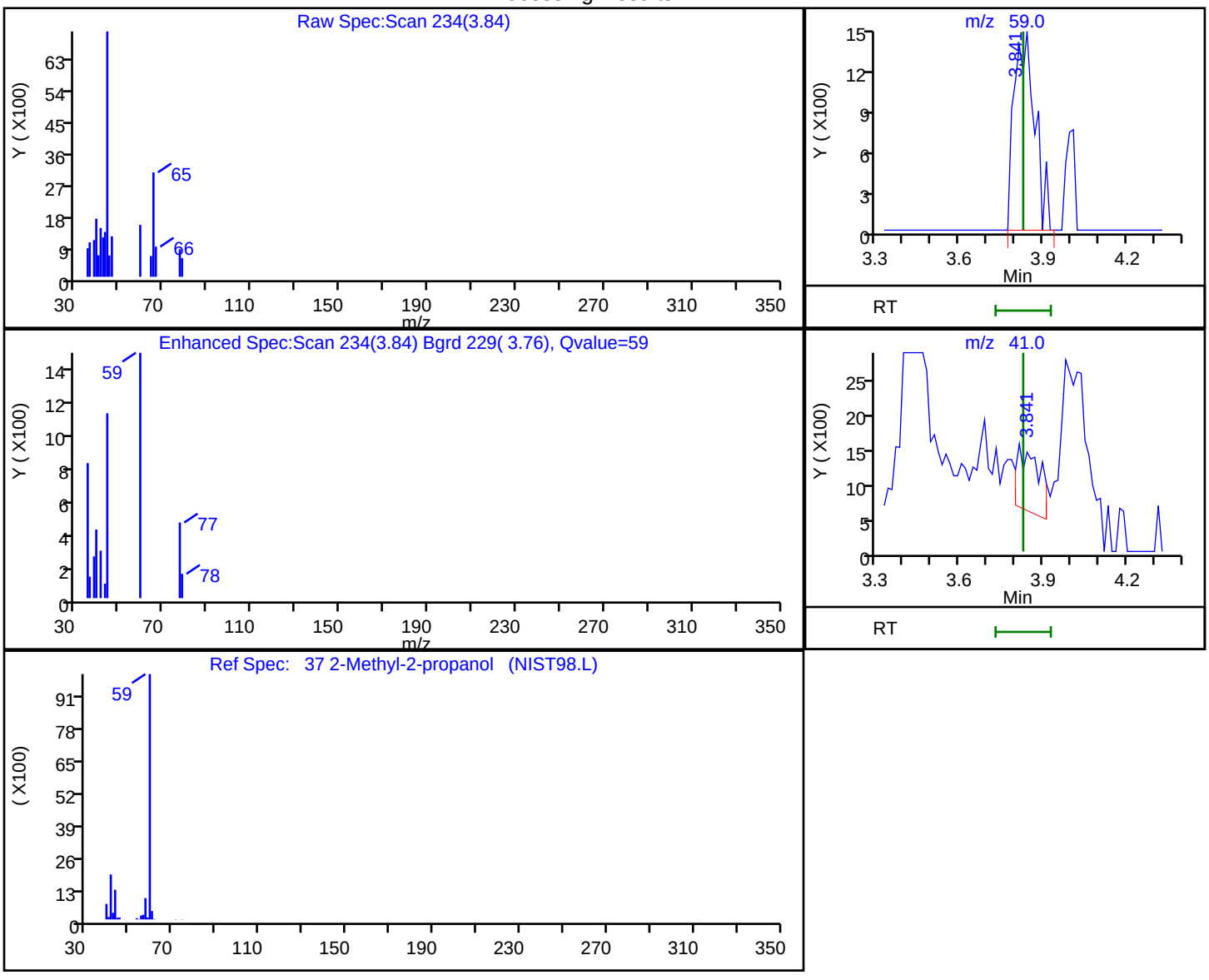
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

37 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
3.84	59.00	7758	4.239639
3.84	41.00	5096	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

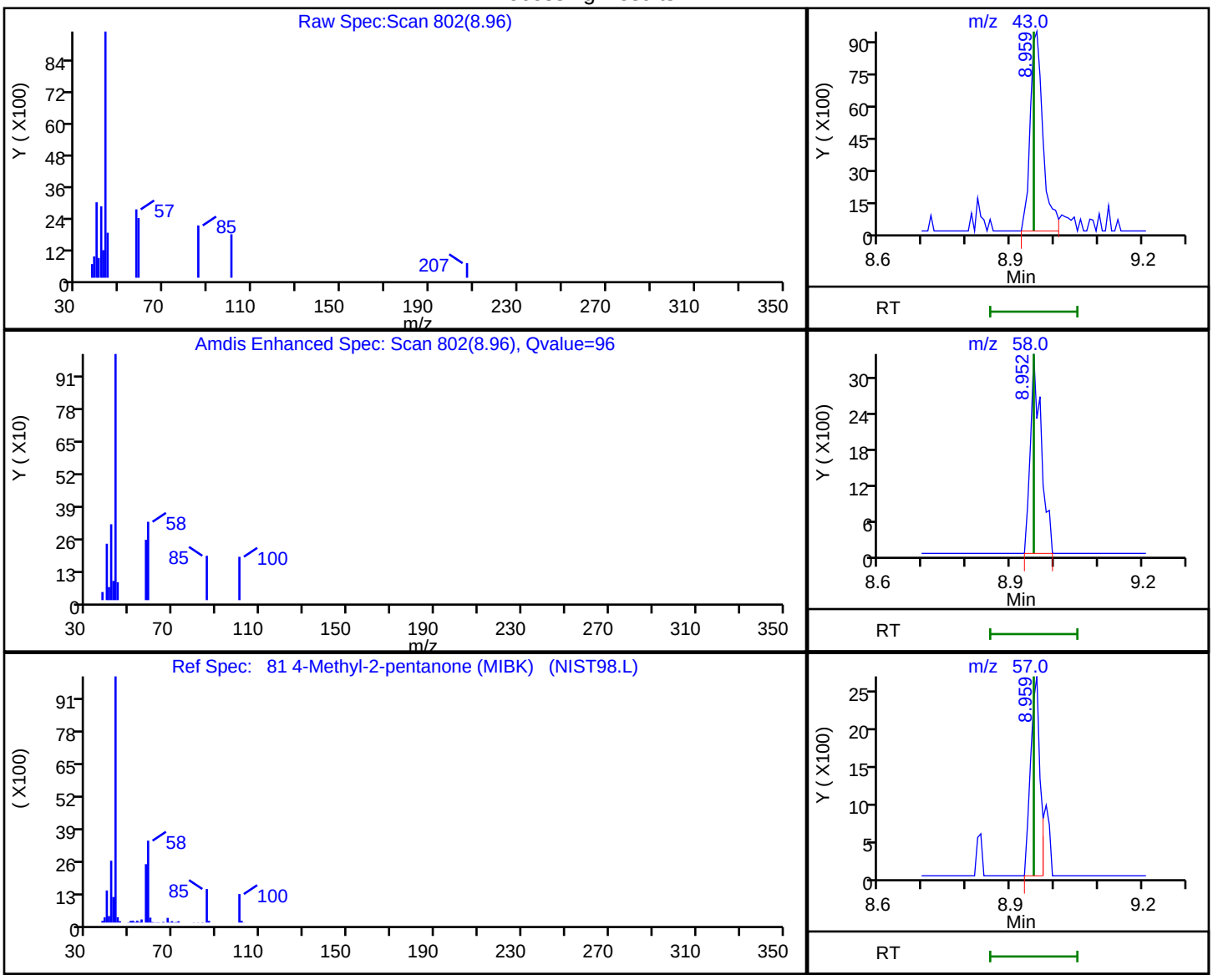
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

81 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.96	43.00	19055	1.703180
8.95	58.00	5822	
8.96	57.00	3926	

Reviewer: ilczyszynd, 17-Sep-2018 10:23:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

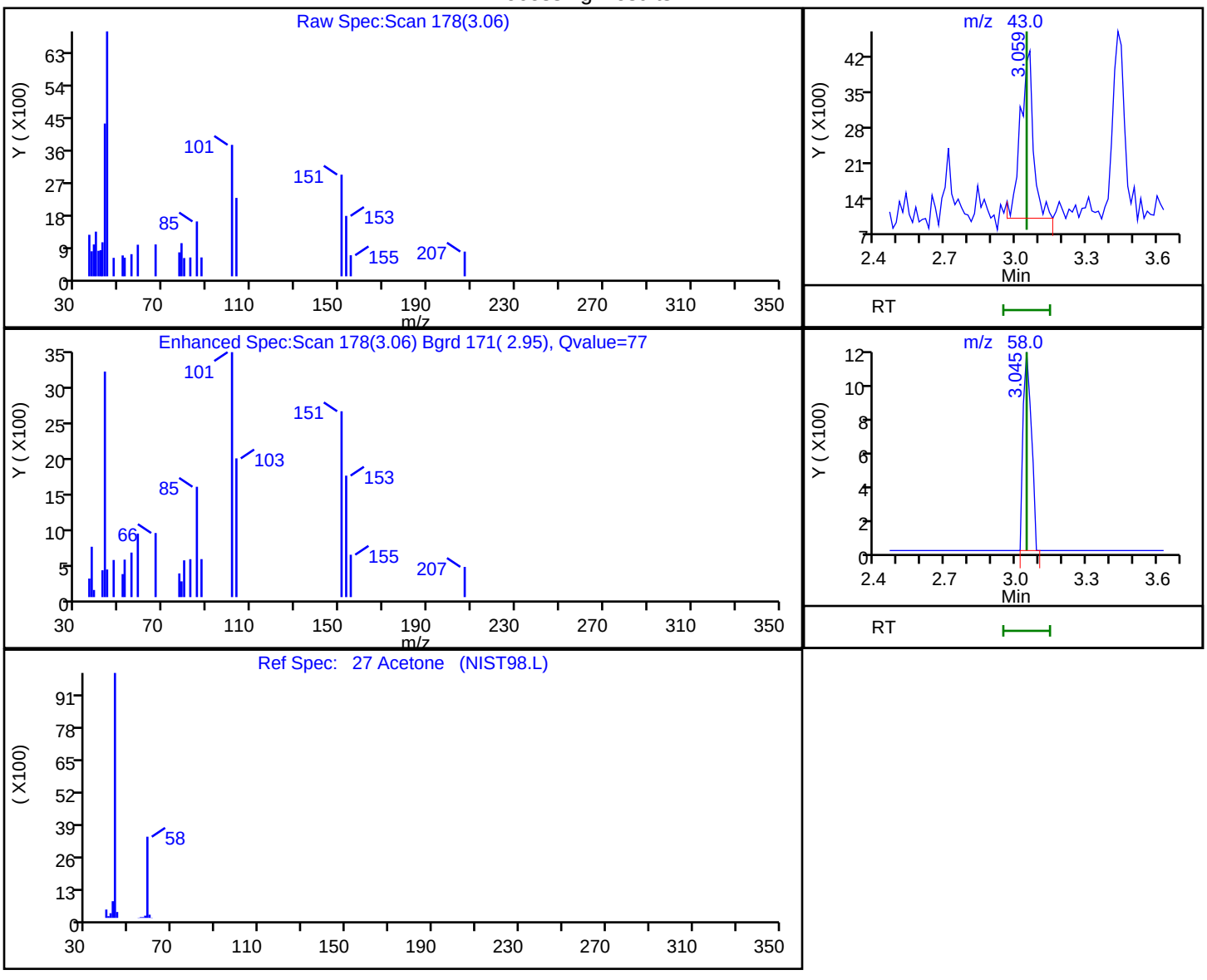
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D
Injection Date: 17-Sep-2018 08:54:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

27 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.06	43.00	12515	2.373303
3.05	58.00	2893	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

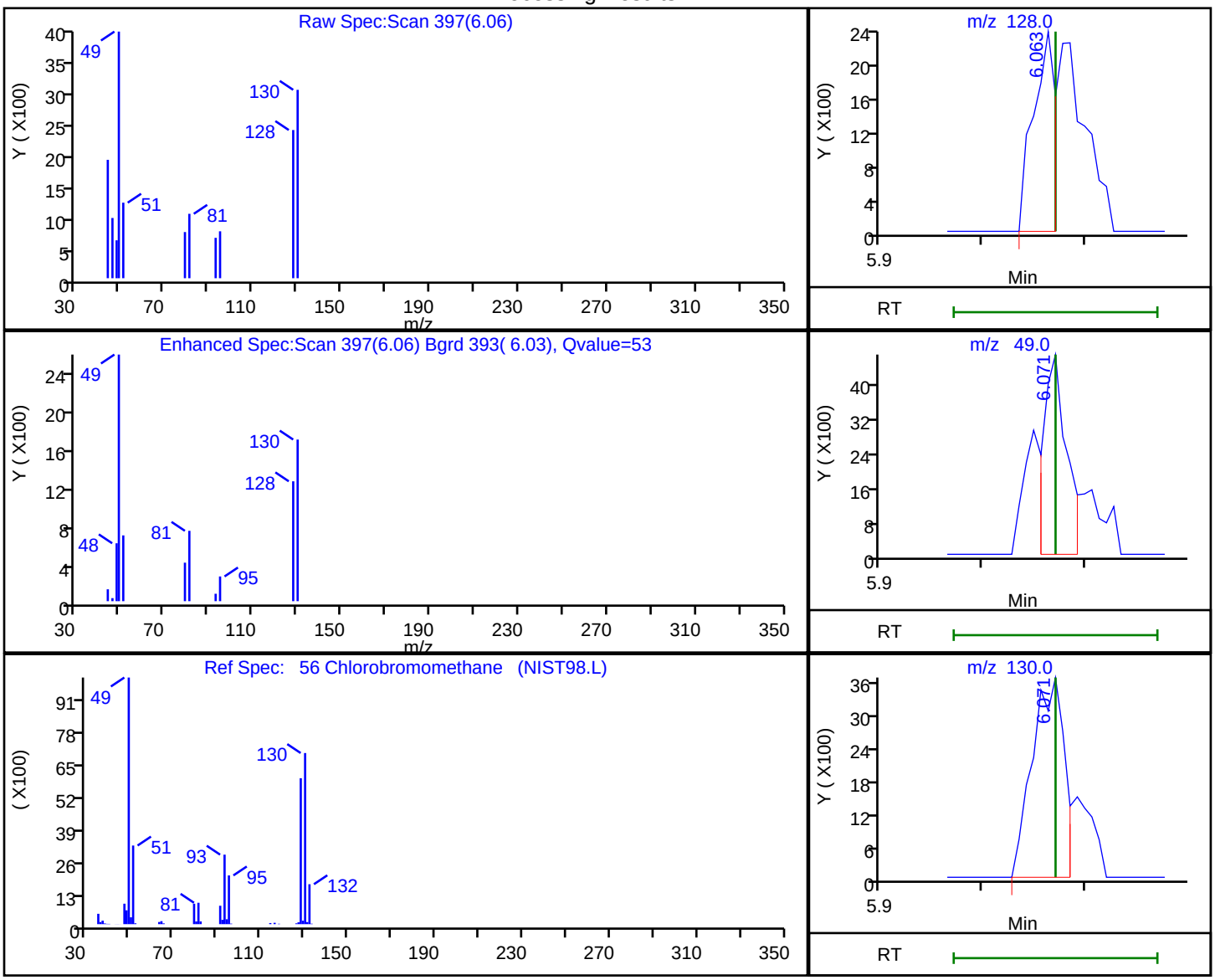
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

56 Chlorobromomethane, CAS: 74-97-5

Processing Results



RT	Mass	Response	Amount
6.06	128.00	3557	0.469752
6.07	49.00	7364	
6.07	130.00	7966	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

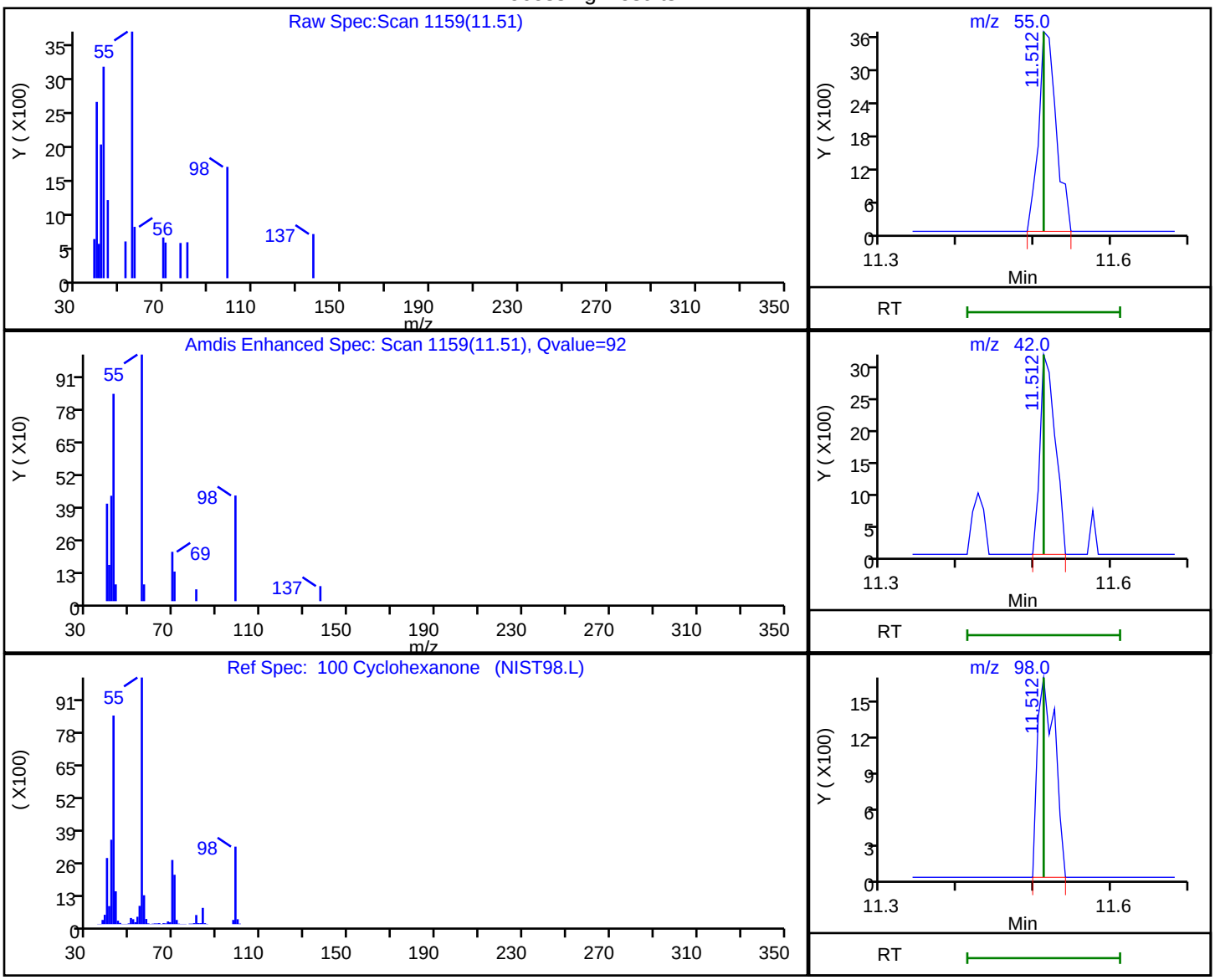
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D
Injection Date: 17-Sep-2018 08:54:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

100 Cyclohexanone, CAS: 108-94-1

Processing Results



RT	Mass	Response	Amount
11.51	55.00	5847	19.595424
11.51	42.00	4307	
11.51	98.00	2606	

Reviewer: ilczyszynd, 17-Sep-2018 10:23:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

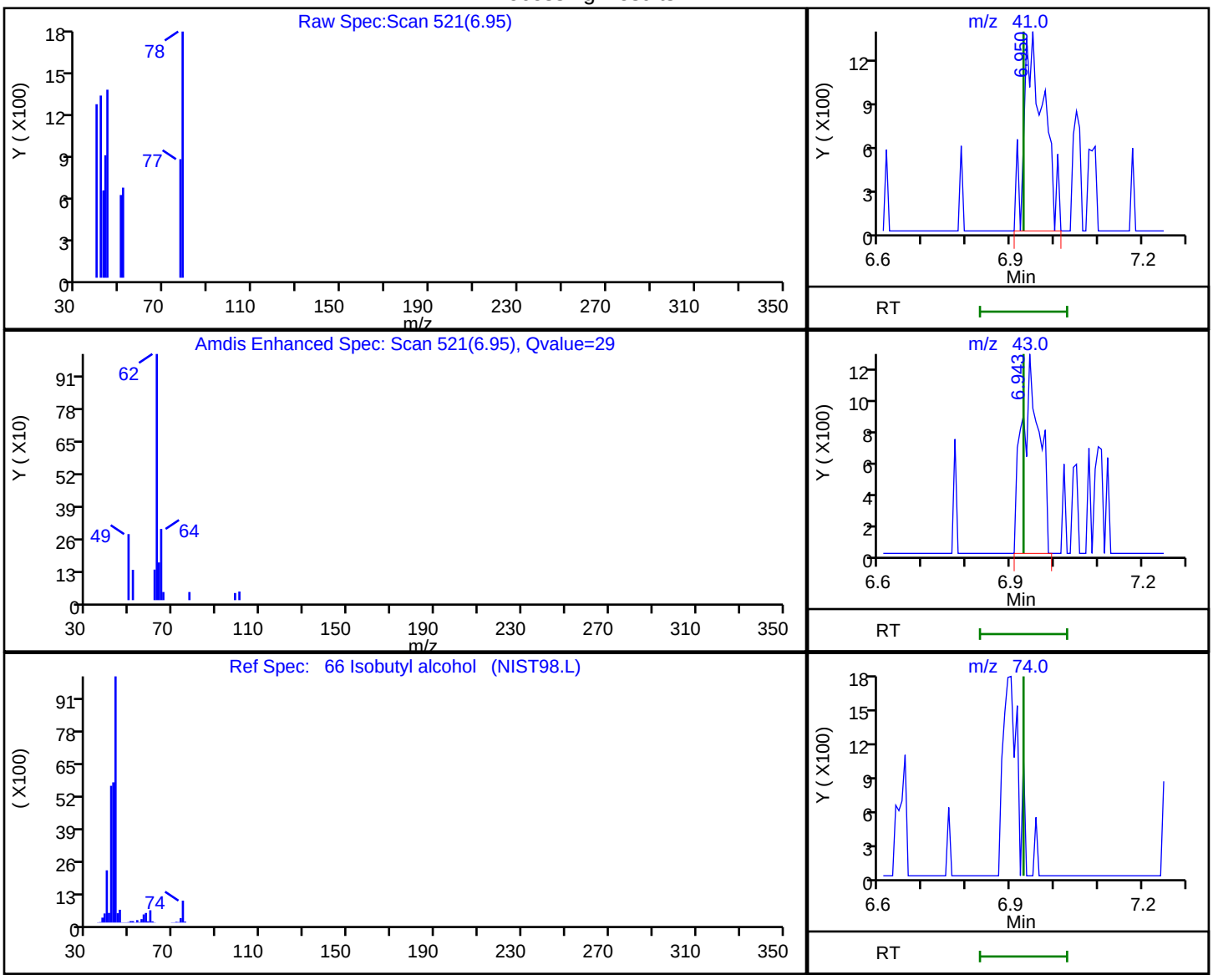
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

66 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
6.95	41.00	4183	10.889216
6.94	43.00	3350	
6.93	74.00	0	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

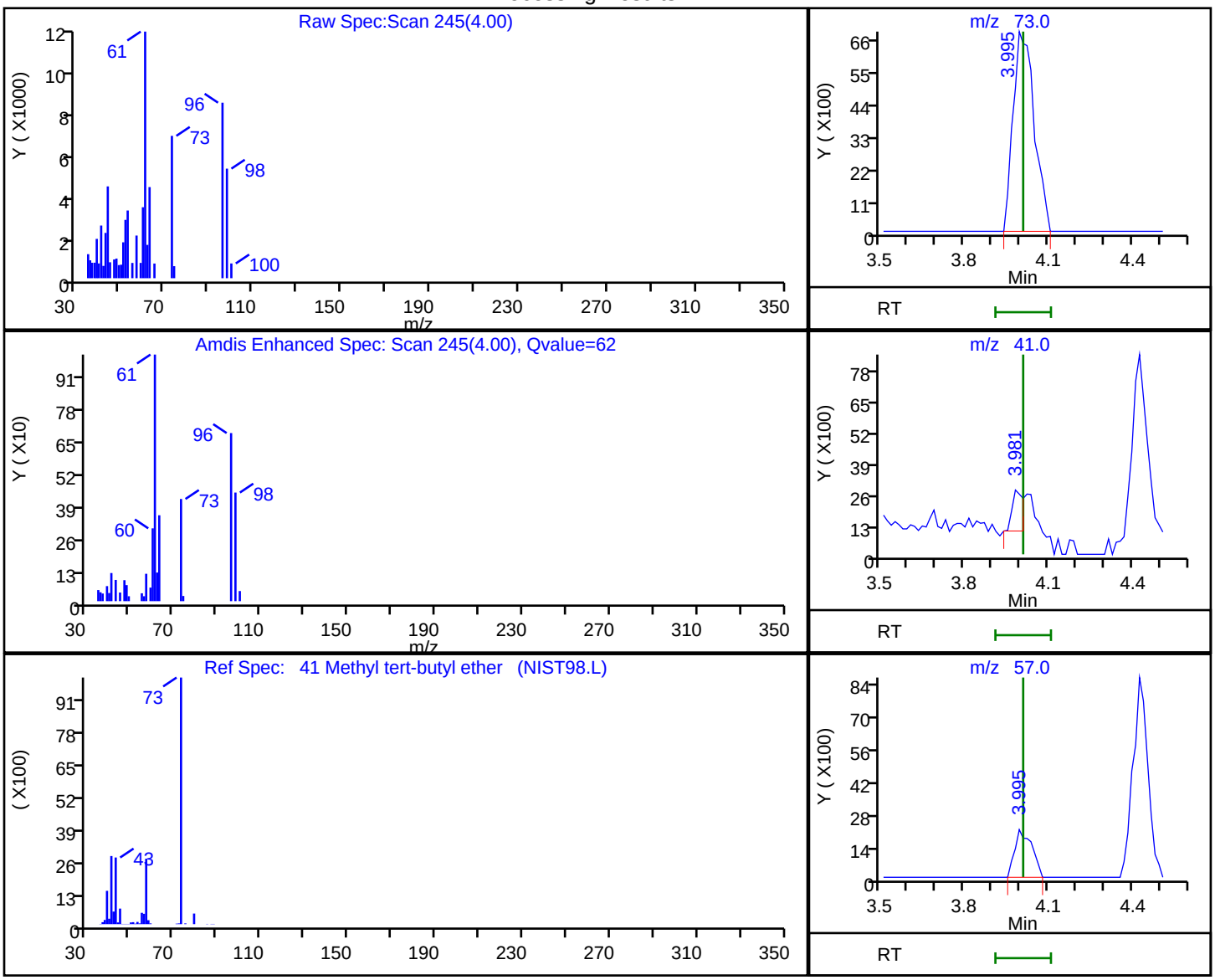
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D
Injection Date: 17-Sep-2018 08:54:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

41 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
4.00	73.00	36126	0.505861
3.98	41.00	4623	
4.00	57.00	8749	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:36
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

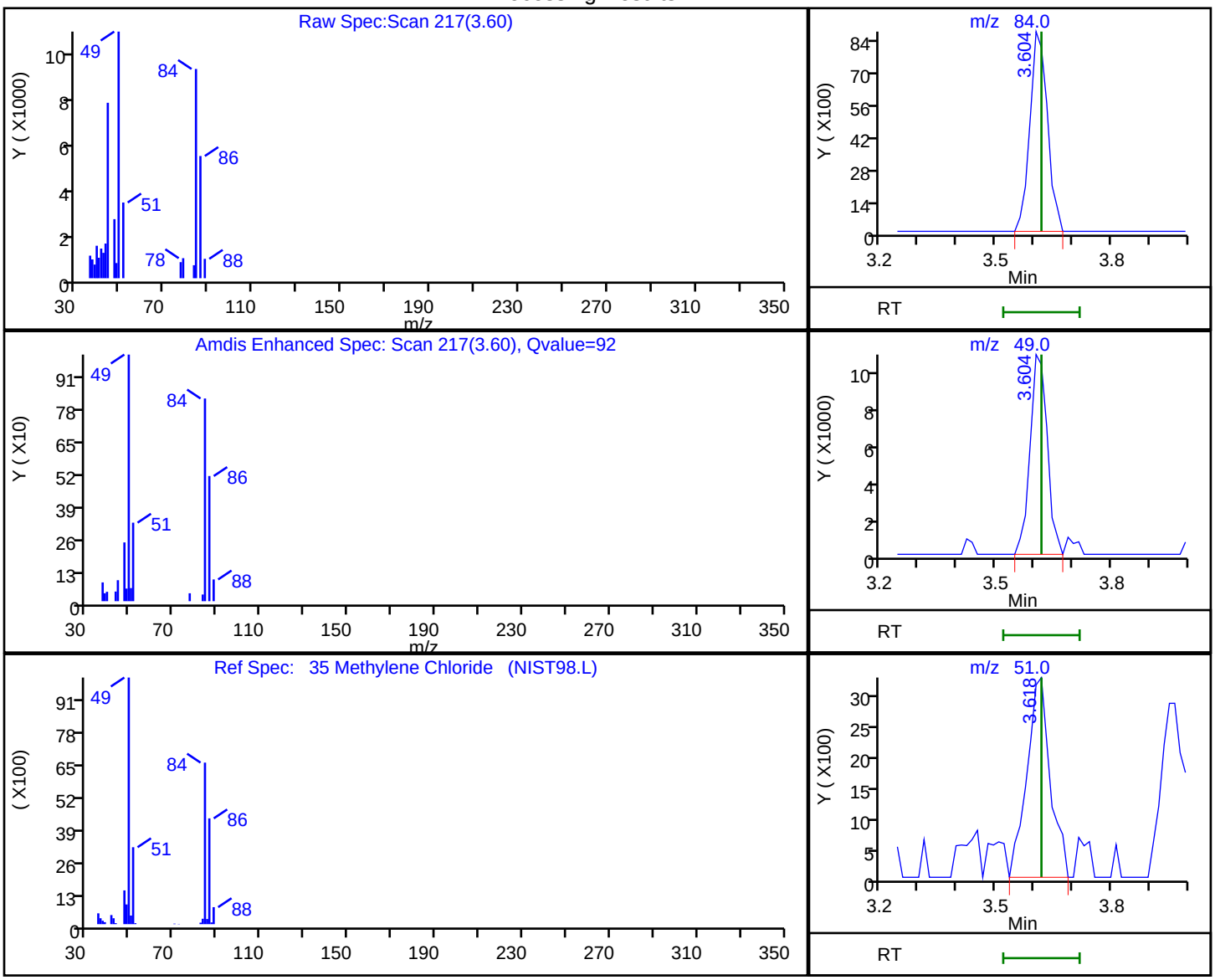
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D
Injection Date: 17-Sep-2018 08:54:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

35 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.60	84.00	27973	0.496325
3.60	49.00	32291	
3.62	51.00	13934	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:21
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

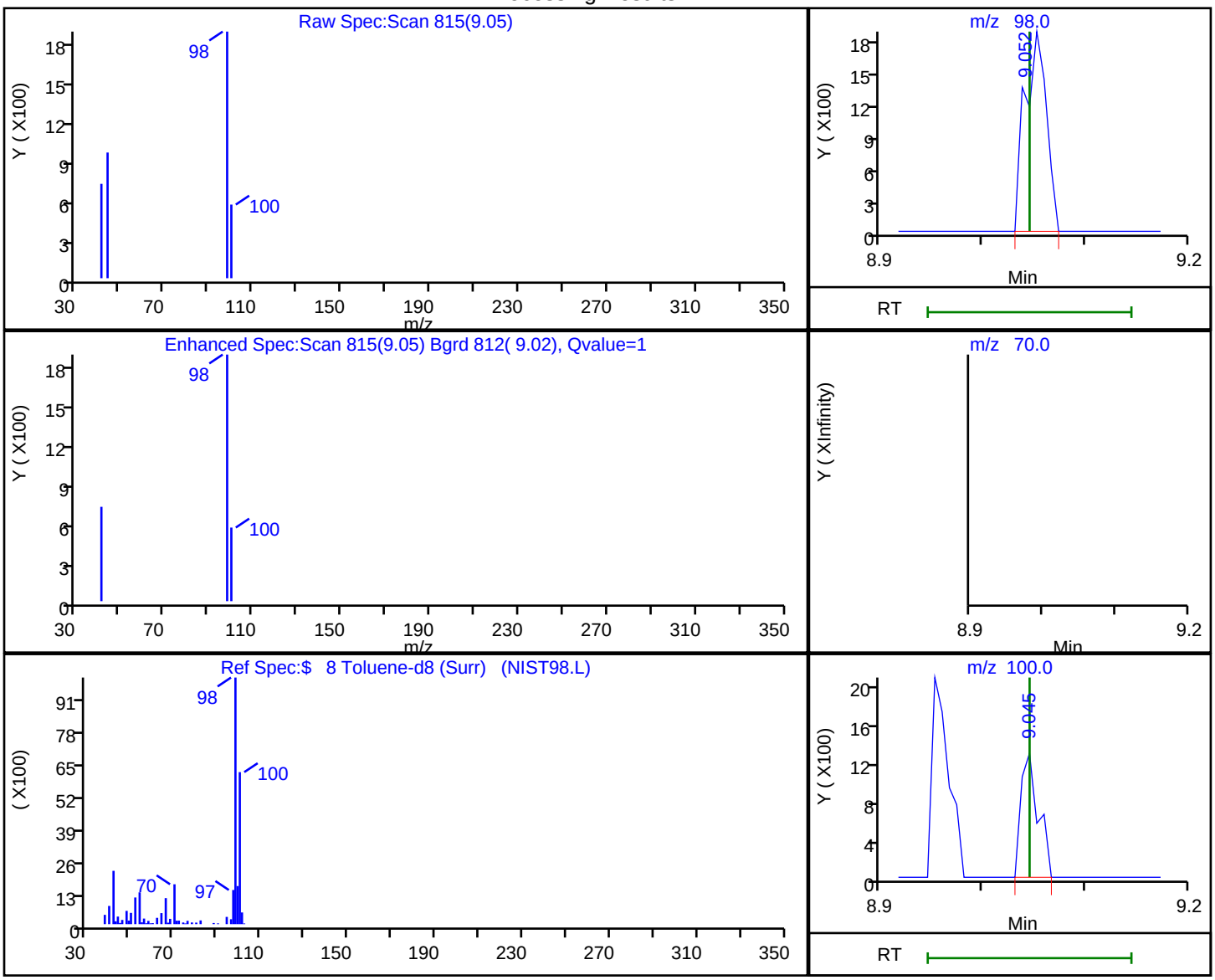
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

$ 8 Toluene-d8 (Surr), CAS: 2037-26-5

Processing Results



RT	Mass	Response	Amount
9.05	98.00	2668	0.294324
9.04	70.00	0	
9.05	100.00	1473	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

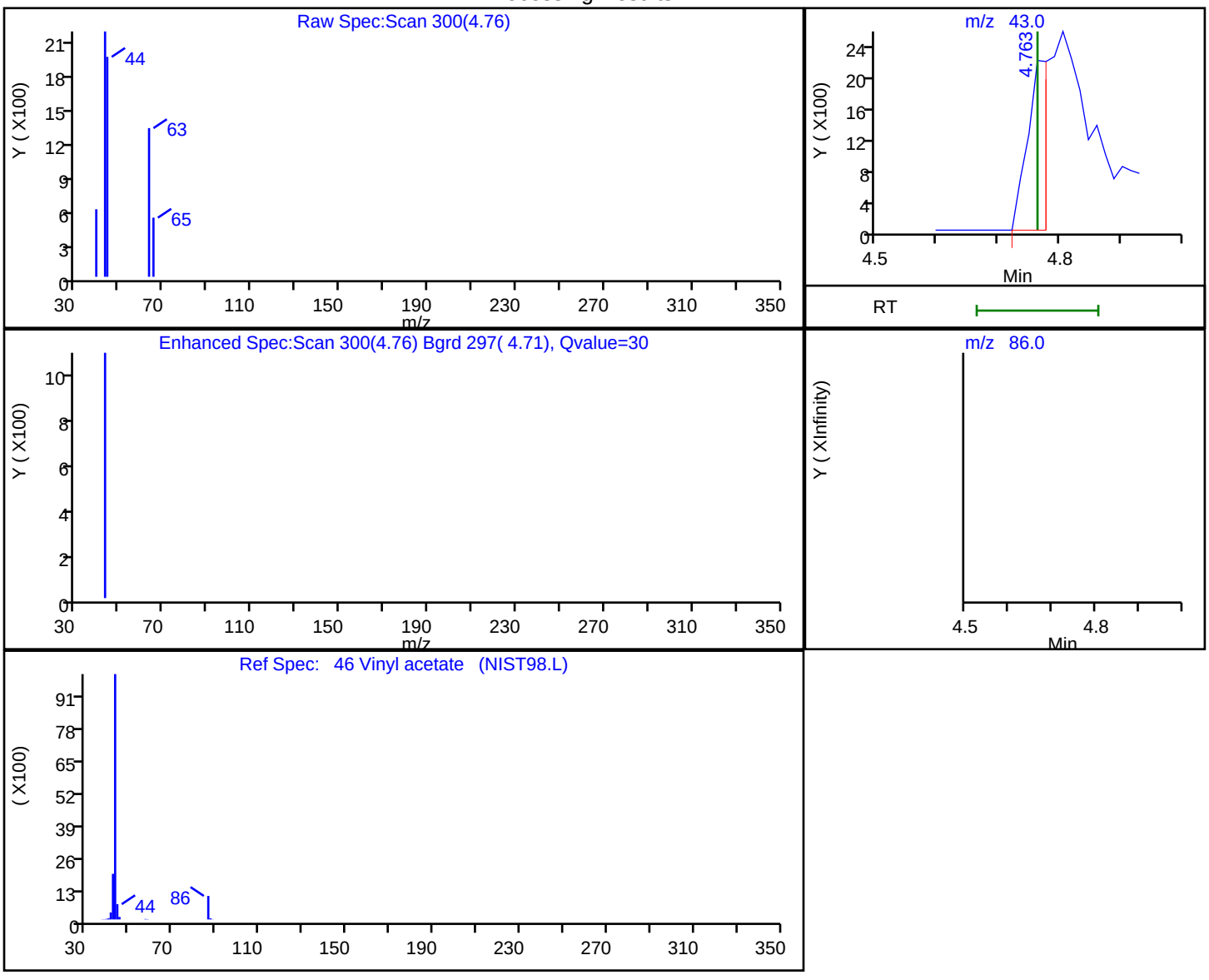
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6995.D				
Injection Date:	17-Sep-2018 08:54:30	Instrument ID:	VMS_G2		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

46 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
4.76	43.00	5238	0.669847
4.76	86.00	0	

Reviewer: ilczyszynd, 17-Sep-2018 10:22:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6996.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 17-Sep-2018 09:15:30 ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:21 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 10:24:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	452432	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2168464	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	468894	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	835882	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.471	6.457	0.014	92	35712	1.00	0.9713	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.900	6.893	0.007	49	40092	1.00	1.08	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	135130	1.00	0.9236	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	91	43249	1.00	0.8910	
12 Dichlorodifluoromethane	85	1.565	1.551	0.014	98	85010	1.00	1.01	
14 Chloromethane	50	1.677	1.677	0.000	98	70862	1.00	1.08	
15 Vinyl chloride	62	1.802	1.802	0.000	97	71636	1.00	1.08	
17 Bromomethane	94	2.096	2.096	0.000	93	51282	1.00	1.08	
18 Chloroethane	64	2.193	2.180	0.013	99	42125	1.00	0.9480	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	111894	1.00	1.07	
20 Trichlorofluoromethane	101	2.445	2.431	0.014	98	121832	1.00	1.08	
22 Ethyl ether	59	2.738	2.724	0.014	92	25049	1.00	1.18	
24 Acrolein	56	2.892	2.878	0.014	97	17755	5.93	6.77	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	98	53686	1.00	1.06	
26 1,1,2-Trichloro-1,2,2-trif	151	3.045	3.031	0.014	90	61553	1.00	1.06	
27 Acetone	43	3.059	3.045	0.014	57	23598	4.00	4.57	
28 Iodomethane	142	3.157	3.157	0.000	99	94113	1.00	1.09	
30 Carbon disulfide	76	3.241	3.241	0.000	100	170737	1.00	1.02	
33 3-Chloro-1-propene	41	3.450	3.436	0.014	88	79463	1.00	0.99	
32 Methyl acetate	43	3.450	3.436	0.014	49	30321	2.00	2.29	
35 Methylene Chloride	84	3.632	3.618	0.014	90	51737	1.00	1.20	
37 2-Methyl-2-propanol	59	3.841	3.828	0.013	95	22278	10.0	11.5	
39 Acrylonitrile	53	3.967	3.967	0.000	94	67541	10.0	11.1	
40 trans-1,2-Dichloroethene	96	4.009	3.995	0.014	96	53053	1.00	1.05	
41 Methyl tert-butyl ether	73	4.023	4.009	0.014	89	81136	1.00	1.04	
42 Hexane	57	4.442	4.442	0.000	89	66019	1.00	0.9782	
45 1,1-Dichloroethane	63	4.721	4.707	0.014	97	90022	1.00	1.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.805	4.763	0.042	97	50597	2.00	2.71	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	84	167634	1.00	1.09	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	84	48094	1.00	1.05	
52 2-Butanone (MEK)	43	5.727	5.741	-0.014	19	17081	4.00	2.76	
56 Chlorobromomethane	128	6.071	6.071	0.000	92	17244	1.00	1.06	
57 Tetrahydrofuran	42	6.092	6.099	-0.007	31	6254	2.00	3.59	M
59 Chloroform	83	6.249	6.242	0.007	94	87983	1.00	1.10	
60 1,1,1-Trichloroethane	97	6.442	6.435	0.007	97	91120	1.00	1.00	
61 Cyclohexane	56	6.521	6.507	0.014	92	75200	1.00	0.8812	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	81931	1.00	0.9854	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	91	58578	1.00	0.9580	
64 Benzene	78	6.900	6.893	0.007	98	177023	1.00	1.04	
66 Isobutyl alcohol	41		6.929				ND	ND	U
65 1,2-Dichloroethane	62	7.000	6.986	0.014	96	46985	1.00	1.05	
67 n-Heptane	43	7.315	7.315	0.000	88	82078	1.00	1.00	
69 Trichloroethene	95	7.722	7.722	0.000	97	49256	1.00	1.06	
71 Methylcyclohexane	55	7.965	7.965	0.000	93	71273	1.00	0.9476	
72 1,2-Dichloropropane	63	8.015	8.016	0.000	90	37637	1.00	1.00	
75 Dibromomethane	93	8.116	8.108	0.008	86	17028	1.00	1.07	
74 1,4-Dioxane	88		8.116				ND	ND	
76 Dichlorobromomethane	83	8.316	8.316	0.000	96	44165	1.00	0.9812	
78 2-Chloroethyl vinyl ether	63	8.652	8.645	0.007	71	2935	1.00	1.28	
79 cis-1,3-Dichloropropene	75	8.788	8.781	0.007	91	36288	1.00	0.8796	
81 4-Methyl-2-pentanone (MIBK	43	8.959	8.952	0.007	98	49426	4.00	3.44	
82 Toluene	91	9.117	9.109	0.008	98	178778	1.00	1.00	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	31070	1.00	0.9570	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	86	16121	1.00	1.31	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	94	23947	1.00	1.07	
86 Tetrachloroethene	164	9.624	9.624	0.000	96	49156	1.00	1.05	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	38915	1.00	1.04	
88 2-Hexanone	43	9.789	9.789	0.000	94	27104	4.00	3.27	
89 Chlorodibromomethane	129	9.917	9.925	-0.008	90	24045	1.00	0.9846	
90 Ethylene Dibromide	107	10.032	10.025	0.007	93	19424	1.00	1.04	
92 Chlorobenzene	112	10.504	10.504	0.000	94	129700	1.00	1.07	
93 1,1,1,2-Tetrachloroethane	131	10.590	10.590	0.000	89	40477	1.00	0.9648	
94 Ethylbenzene	106	10.597	10.597	0.000	99	65503	1.00	0.9791	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	77598	1.00	0.9520	
96 o-Xylene	106	11.083	11.083	0.000	97	65304	1.00	0.8782	
97 Styrene	104	11.104	11.104	0.000	96	98040	1.00	0.8885	
98 Bromoform	173	11.276	11.269	0.007	93	12603	1.00	1.00	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	189106	1.00	0.8568	
100 Cyclohexanone	55	11.512	11.512	0.000	90	17764	40.0	48.0	
103 Bromobenzene	156	11.719	11.712	0.007	93	50680	1.00	1.03	
102 1,1,2,2-Tetrachloroethane	83	11.726	11.719	0.007	93	27420	1.00	1.04	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	62	4817	1.00	1.21	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	8662	1.00	1.07	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	57676	1.00	0.8903	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	51811	1.00	0.9512	
108 1,3,5-Trimethylbenzene	105	11.984	11.977	0.007	93	162185	1.00	0.8733	
109 4-Chlorotoluene	126	12.005	12.005	0.000	97	55471	1.00	1.03	
110 tert-Butylbenzene	119	12.256	12.256	0.000	94	129715	1.00	0.8337	
111 1,2,4-Trimethylbenzene	105	12.313	12.306	0.007	98	166056	1.00	0.8912	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.442	-0.001	96	47946	1.00	0.8571	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	99	115293	1.00	1.07	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	200056	1.00	0.9064	
115 1,4-Dichlorobenzene	146	12.606	12.606	0.000	93	120734	1.00	1.09	
117 n-Butylbenzene	91	12.849	12.849	0.000	97	192968	1.00	0.9286	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	96	101528	1.00	1.01	
119 1,2-Dibromo-3-Chloropropan	157	13.371	13.378	-0.007	78	4178	1.00	0.9630	
121 1,2,4-Trichlorobenzene	180	13.879	13.893	-0.014	93	72919	1.00	0.9541	
122 Hexachlorobutadiene	225	13.964	13.979	-0.015	96	63566	1.00	1.02	
123 Naphthalene	128	14.050	14.065	-0.015	97	74937	1.00	0.9860	
124 1,2,3-Trichlorobenzene	180	14.200	14.215	-0.015	94	63609	1.00	0.9694	
S 137 1,2-Dichloroethene, Total	96				0		2.00	2.10	
S 143 Xylenes, Total	106				0		2.00	1.83	
S 142 Trihalomethanes, Total	1				0		4.00	4.06	
S 140 1,3-Dichloropropene, Total	1				0		2.00	1.84	
S 144 1,2-Dichloroethene, Total	1				0		2.00	2.10	
S 138 Xylenes, Total (URS)	1				0		2.00	1.83	
S 139 Total BTEX	1				0			4.85	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.08	Units: uL
MV-MegaMainA_00001	Amount Added:	0.40	Units: uL

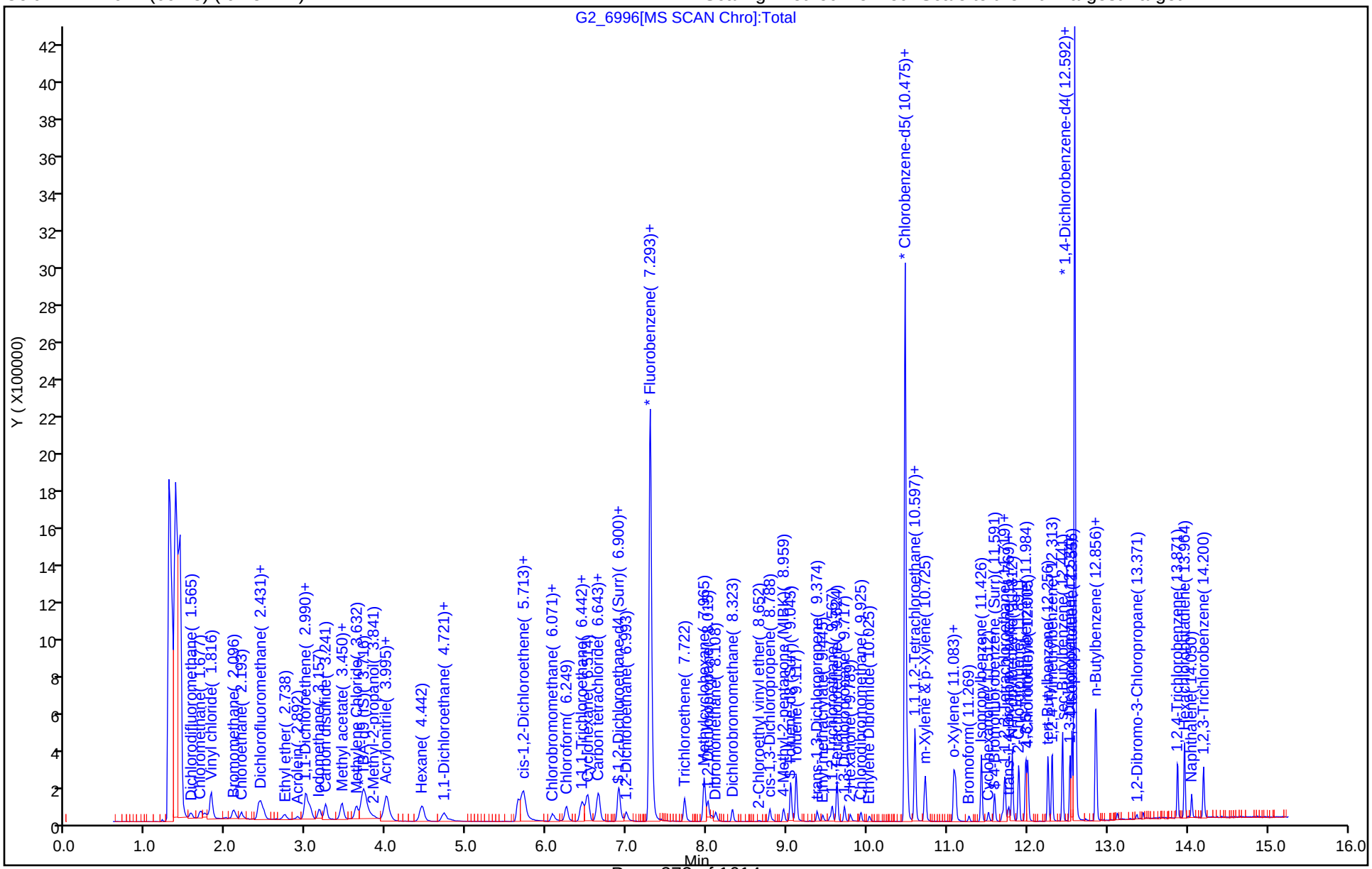
Report Date: 18-Sep-2018 08:49:23 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6996.D

Injection Date:	17-Sep-2018 09:15:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

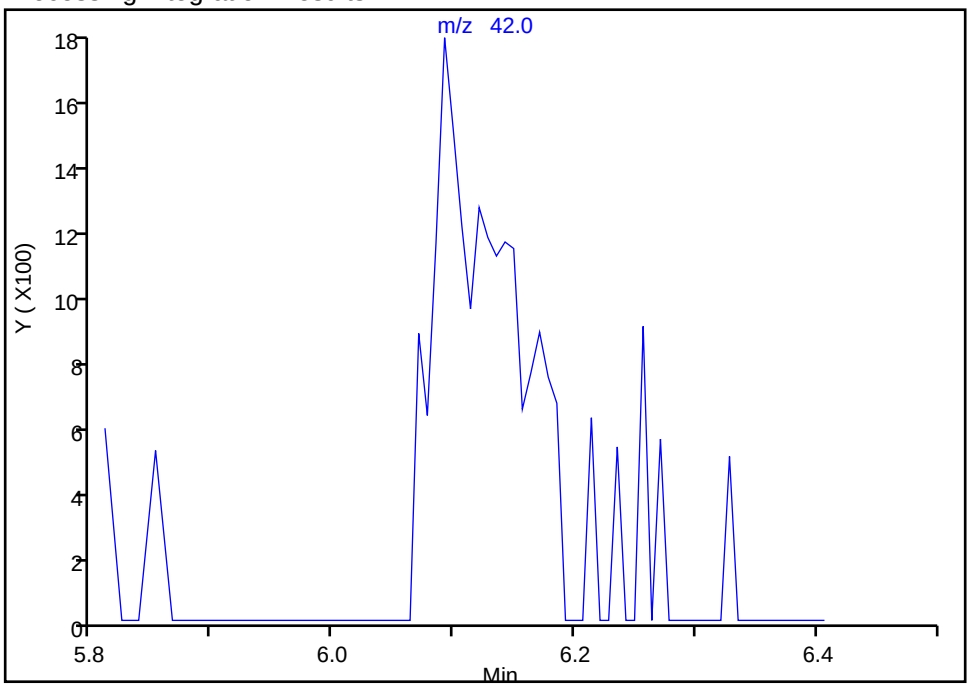
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Injection Date: 17-Sep-2018 09:15:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

57 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

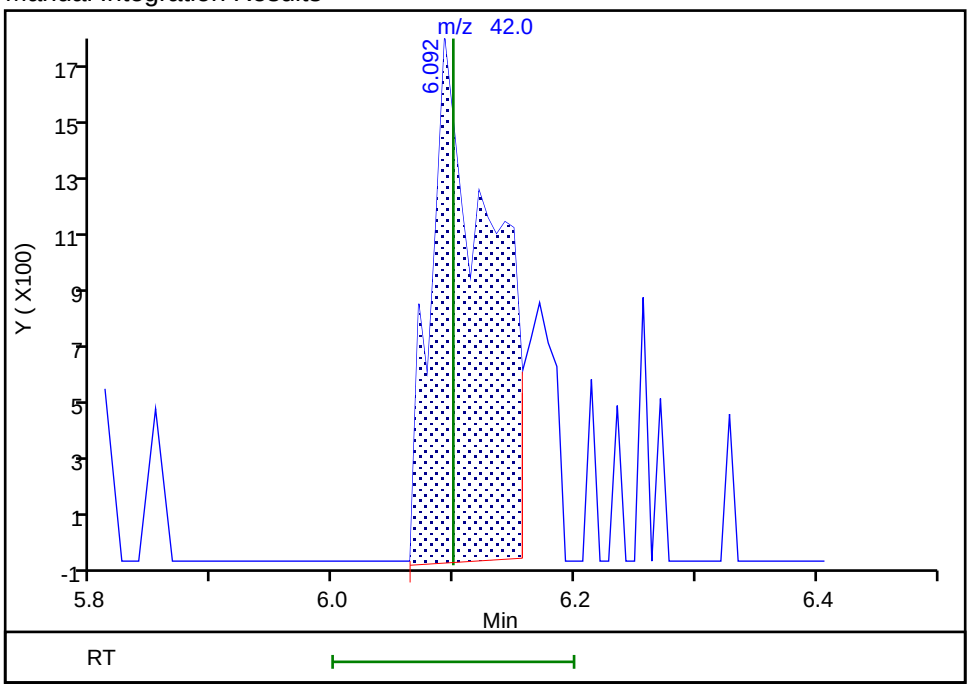
Not Detected
Expected RT: 6.10

Processing Integration Results



Manual Integration Results

RT: 6.09
Area: 6254
Amount: 3.592048
Amount Units: ug/l



Reviewer: ilczyszynd, 17-Sep-2018 11:34:52
Audit Action: Manually Integrated Audit Reason: Split Peak

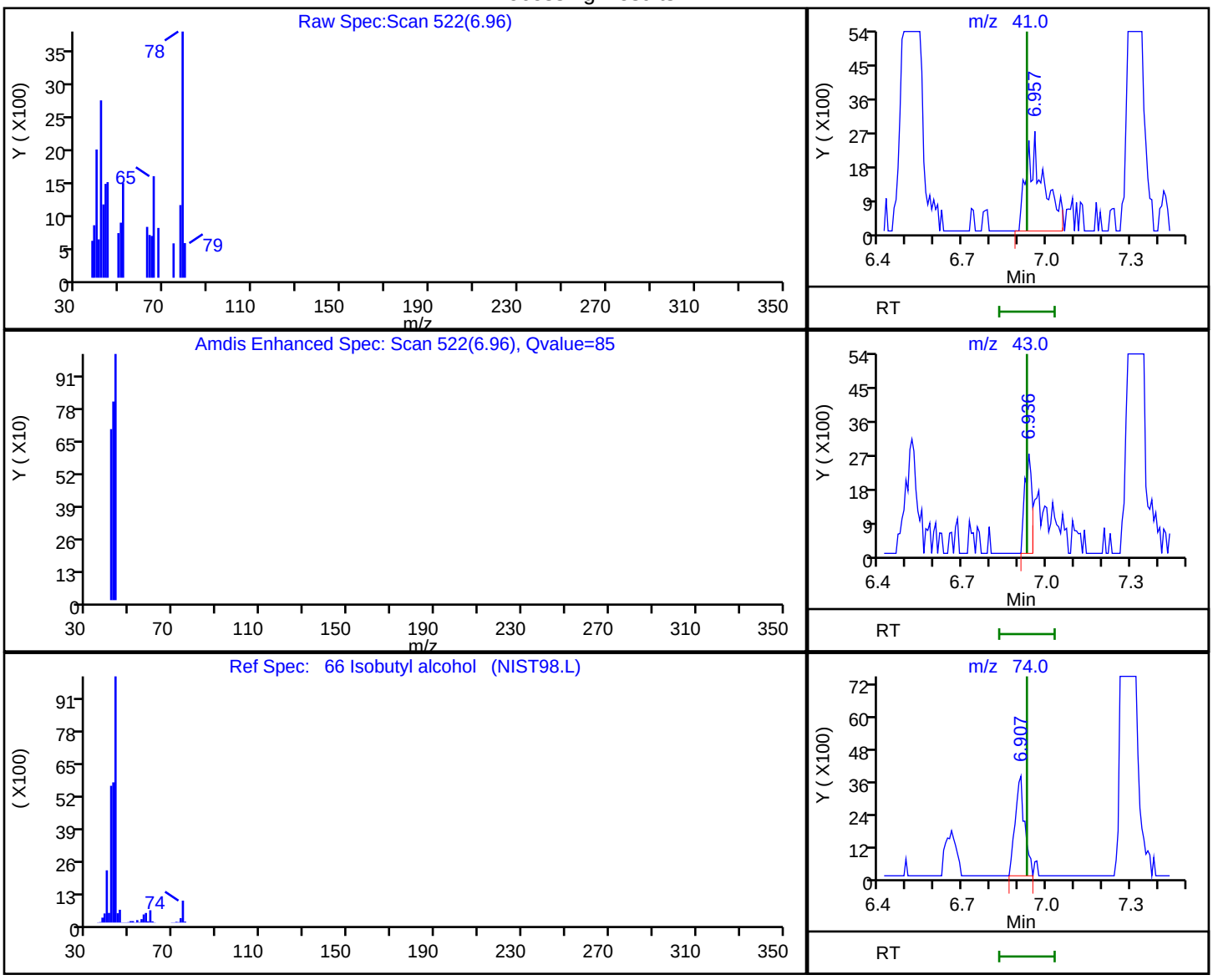
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6996.D
Injection Date: 17-Sep-2018 09:15:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

66 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
6.96	41.00	11548	25.900442
6.94	43.00	4625	
6.91	74.00	8842	

Reviewer: ilczyszynd, 17-Sep-2018 10:24:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6997.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 17-Sep-2018 09:36:30 ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:26 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 10:17:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.702	0.000	0	428474	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2051004	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	85	442320	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	93	810171	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	53	70419	2.00	2.02	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	48	71264	2.00	2.02	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	79	266643	2.00	1.93	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	91	87138	2.00	1.85	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	84	164866	2.00	2.08	
14 Chloromethane	50	1.677	1.677	0.000	87	129065	2.00	2.08	
15 Vinyl chloride	62	1.788	1.802	-0.014	82	142067	2.00	2.26	
17 Bromomethane	94	2.096	2.096	0.000	88	91800	2.00	2.05	
18 Chloroethane	64	2.179	2.180	-0.001	92	80232	2.00	2.17	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	81	212034	2.00	2.15	
20 Trichlorofluoromethane	101	2.445	2.431	0.014	84	229085	2.00	2.15	
22 Ethyl ether	59	2.724	2.724	0.000	86	44349	2.00	2.20	
24 Acrolein	56	2.878	2.878	0.000	90	32376	11.9	13.1	
25 1,1-Dichloroethene	96	2.989	2.990	-0.001	89	104394	2.00	2.17	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	79	124249	2.00	2.26	
27 Acetone	43	3.045	3.045	0.000	52	42141	8.00	8.63	
28 Iodomethane	142	3.157	3.157	0.000	99	173794	2.00	2.13	
30 Carbon disulfide	76	3.241	3.241	0.000	99	331478	2.00	2.09	
32 Methyl acetate	43	3.436	3.436	0.000	43	51551	4.00	4.69	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	76	148686	2.00	2.20	
35 Methylene Chloride	84	3.618	3.618	0.000	86	90179	2.00	2.22	
37 2-Methyl-2-propanol	59	3.827	3.828	-0.001	7	43497	20.0	23.8	
39 Acrylonitrile	53	3.967	3.967	0.000	97	122506	20.0	21.2	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	94	102823	2.00	2.16	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	81	153864	2.00	2.08	
42 Hexane	57	4.442	4.442	0.000	89	124730	2.00	1.96	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	80	171170	2.00	2.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.777	4.763	0.014	96	88202	4.00	3.86	
51 cis-1,2-Dichloroethene	96	5.699	5.699	0.000	71	88188	2.00	2.03	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	83	243084	2.00	2.09	
52 2-Butanone (MEK)	43	5.741	5.741	0.000	46	63423	8.00	11.4	
56 Chlorobromomethane	128	6.071	6.071	0.000	84	33717	2.00	2.19	
57 Tetrahydrofuran	42	6.106	6.099	0.007	73	10311	4.00	5.10	
59 Chloroform	83	6.242	6.242	0.000	82	167496	2.00	2.21	
60 1,1,1-Trichloroethane	97	6.435	6.435	0.000	88	186961	2.00	2.16	
61 Cyclohexane	56	6.507	6.507	0.000	91	156944	2.00	1.94	
62 Carbon tetrachloride	117	6.635	6.628	0.007	83	164099	2.00	2.09	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	86	119308	2.00	2.06	
64 Benzene	78	6.900	6.893	0.007	97	341133	2.00	2.13	
66 Isobutyl alcohol	41	6.936	6.929	0.007	43	20488	50.0	44.1	
65 1,2-Dichloroethane	62	6.993	6.986	0.007	75	93014	2.00	2.21	
67 n-Heptane	43	7.315	7.315	0.000	58	166584	2.00	2.14	
69 Trichloroethene	95	7.722	7.722	0.000	91	89957	2.00	2.05	
71 Methylcyclohexane	55	7.965	7.965	0.000	89	144229	2.00	2.03	
72 1,2-Dichloropropane	63	8.008	8.016	-0.007	82	79550	2.00	2.24	
75 Dibromomethane	93	8.108	8.108	0.000	85	31781	2.00	2.12	
74 1,4-Dioxane	88	8.123	8.116	0.007	32	4749	40.0	44.9	M
76 Dichlorobromomethane	83	8.316	8.316	0.000	89	88985	2.00	2.09	
78 2-Chloroethyl vinyl ether	63	8.652	8.645	0.007	32	7622	2.00	2.43	
79 cis-1,3-Dichloropropene	75	8.788	8.781	0.007	75	71738	2.00	1.84	
81 4-Methyl-2-pentanone (MIBK	43	8.959	8.952	0.007	70	103059	8.00	7.59	
82 Toluene	91	9.109	9.109	0.000	97	356667	2.00	2.11	
83 trans-1,3-Dichloropropene	75	9.381	9.374	0.007	82	56971	2.00	1.86	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	86	32525	2.00	2.03	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	65	45652	2.00	2.16	
86 Tetrachloroethene	164	9.624	9.624	0.000	90	93371	2.00	2.11	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	88	73607	2.00	2.09	
88 2-Hexanone	43	9.789	9.789	0.000	93	59504	8.00	7.60	
89 Chlorodibromomethane	129	9.917	9.925	-0.008	80	45034	2.00	1.95	
90 Ethylene Dibromide	107	10.025	10.025	0.000	82	35972	2.00	2.05	
92 Chlorobenzene	112	10.504	10.504	0.000	88	247192	2.00	2.16	
93 1,1,1,2-Tetrachloroethane	131	10.589	10.590	-0.001	46	82931	2.00	2.10	
94 Ethylbenzene	106	10.604	10.597	0.007	98	127568	2.00	2.02	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	98	157002	2.00	2.04	
96 o-Xylene	106	11.083	11.083	0.000	98	136655	2.00	1.95	
97 Styrene	104	11.104	11.104	0.000	96	213515	2.00	2.05	
98 Bromoform	173	11.269	11.269	0.000	85	22845	2.00	1.92	
99 Isopropylbenzene	105	11.426	11.426	0.000	96	421212	2.00	1.97	
100 Cyclohexanone	55	11.512	11.512	0.000	88	36094	80.0	80.6	
103 Bromobenzene	156	11.719	11.712	0.007	89	100033	2.00	2.10	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	56	52258	2.00	2.05	
105 trans-1,4-Dichloro-2-buten	53	11.762	11.755	0.007	1	11220	2.00	2.15	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	34	16285	2.00	2.08	
106 N-Propylbenzene	120	11.812	11.812	0.000	97	126965	2.00	2.02	
107 2-Chlorotoluene	126	11.891	11.891	0.000	95	107803	2.00	2.04	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	94	359690	2.00	2.00	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	109631	2.00	2.09	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	83	291206	2.00	1.93	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	77	383708	2.00	2.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.442	-0.001	95	109407	2.00	2.02	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	68	218337	2.00	2.09	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	95	444417	2.00	2.08	
115 1,4-Dichlorobenzene	146	12.613	12.606	0.007	92	227687	2.00	2.12	
117 n-Butylbenzene	91	12.849	12.849	0.000	96	414775	2.00	2.06	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	94	205631	2.00	2.12	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.378	0.000	49	8251	2.00	1.96	
121 1,2,4-Trichlorobenzene	180	13.886	13.893	-0.007	94	139853	2.00	1.89	
122 Hexachlorobutadiene	225	13.972	13.979	-0.007	93	119922	2.00	1.99	
123 Naphthalene	128	14.065	14.065	-0.001	96	148676	2.00	1.73	
124 1,2,3-Trichlorobenzene	180	14.208	14.215	-0.007	92	121683	2.00	1.91	
S 137 1,2-Dichloroethene, Total	96				0		4.00	4.19	
S 144 1,2-Dichloroethene, Total	1				0		4.00	4.19	
S 138 Xylenes, Total (URS)	1				0		4.00	3.99	
S 139 Total BTEX	1				0			10.2	
S 140 1,3-Dichloropropene, Total	1				0		4.00	3.70	
S 143 Xylenes, Total	106				0		4.00	3.99	
S 142 Trihalomethanes, Total	1				0		8.00	8.17	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.16	Units: uL
MV-MegaMainA_00001	Amount Added:	0.80	Units: uL

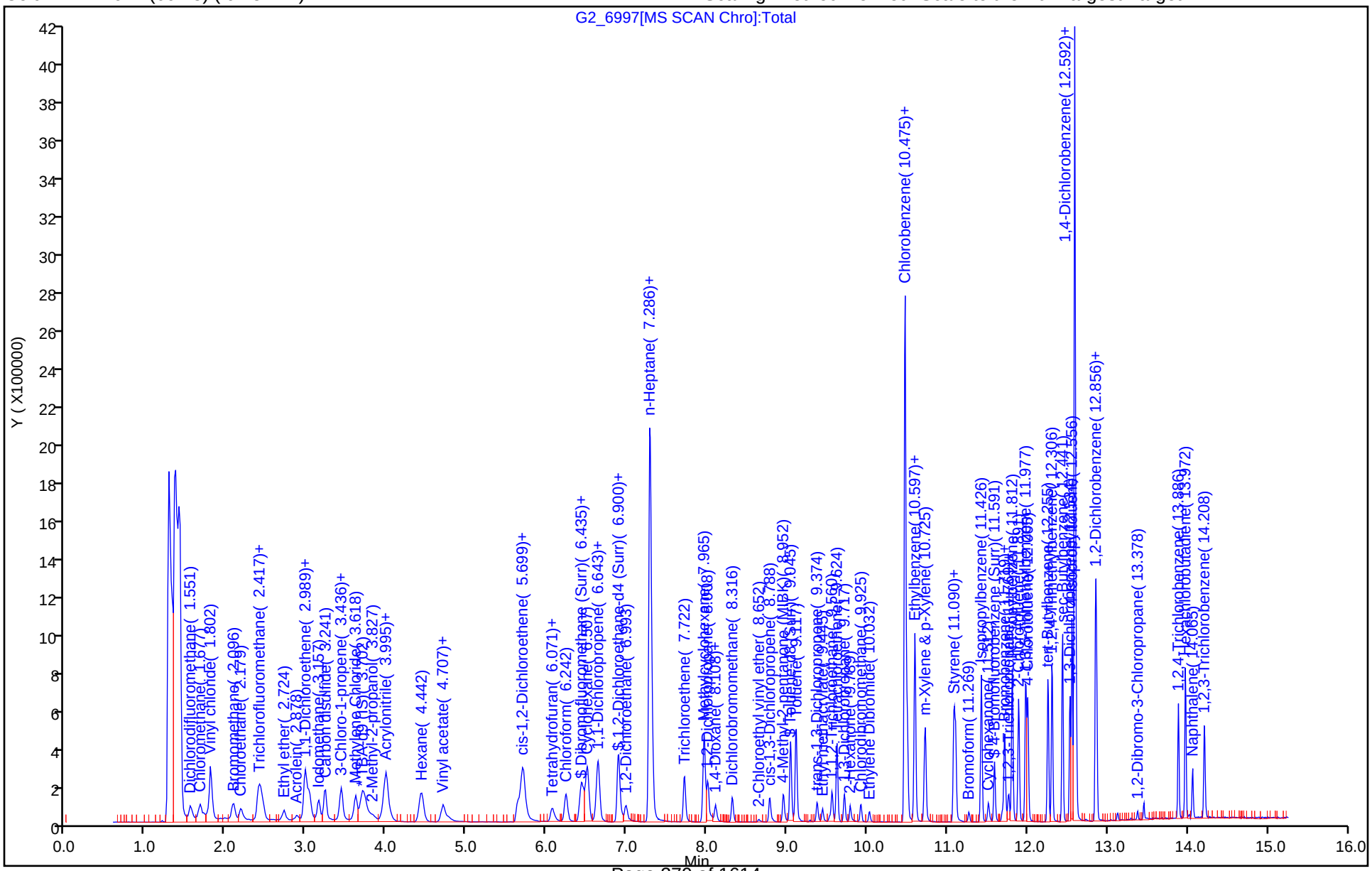
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6997.D

Injection Date:	17-Sep-2018 09:36:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

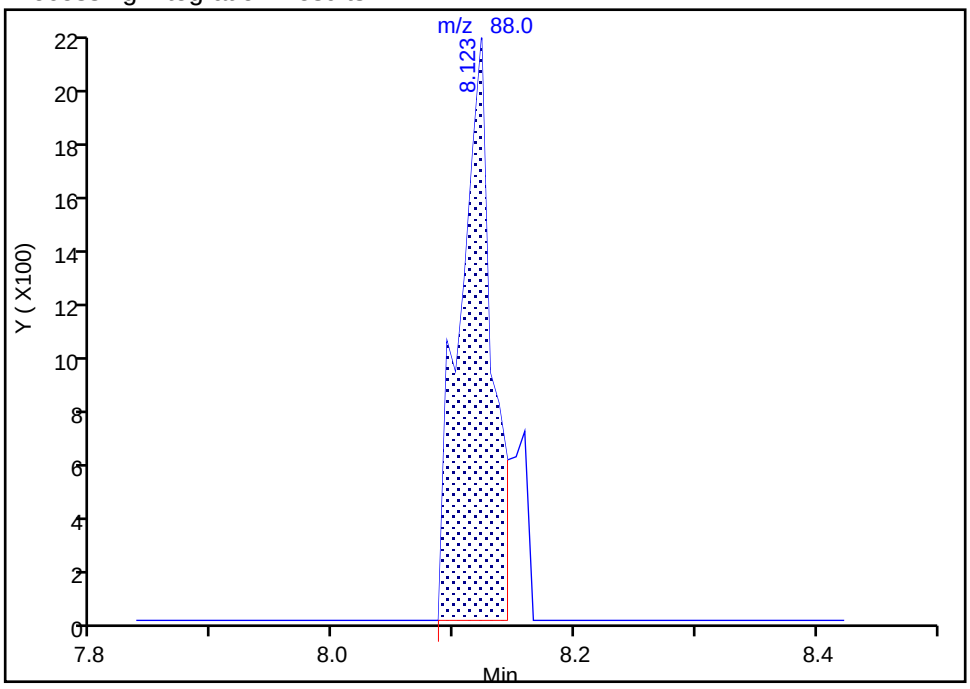
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Injection Date: 17-Sep-2018 09:36:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

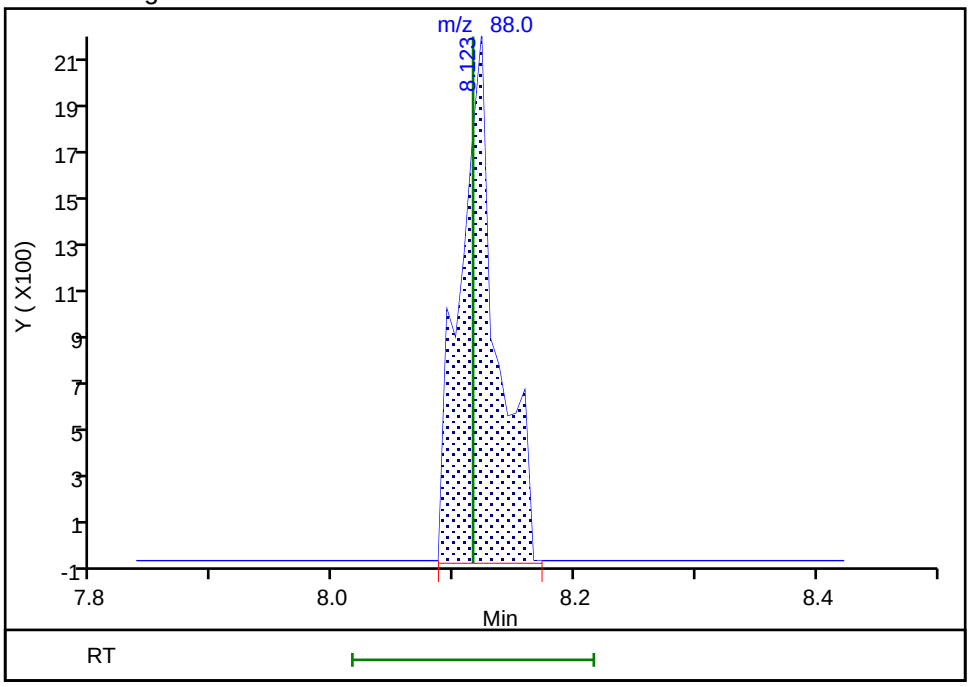
Processing Integration Results

RT: 8.12
Area: 4117
Amount: 45.278894
Amount Units: ug/l



Manual Integration Results

RT: 8.12
Area: 4749
Amount: 44.940076
Amount Units: ug/l



Reviewer: ilczyszynd, 18-Sep-2018 08:43:32
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6998.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 17-Sep-2018 09:57:30 ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:31 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 10:27:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	441748	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2058498	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	441770	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	811514	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	173851	5.00	4.98	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	51	174599	5.00	4.93	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	712777	5.00	5.17	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	-0.001	93	232548	5.00	4.93	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	369902	5.00	4.65	
14 Chloromethane	50	1.677	1.677	0.000	99	289800	5.00	4.66	
15 Vinyl chloride	62	1.802	1.802	0.000	98	300113	5.00	4.76	
17 Bromomethane	94	2.082	2.096	-0.014	92	207495	5.00	4.62	
18 Chloroethane	64	2.179	2.180	-0.001	100	169853	5.00	4.88	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	454385	5.00	4.59	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	98	489636	5.00	4.57	
22 Ethyl ether	59	2.724	2.724	0.000	91	89607	5.00	4.44	
24 Acrolein	56	2.878	2.878	0.000	99	68255	29.6	27.4	
25 1,1-Dichloroethene	96	2.989	2.990	-0.001	98	218332	5.00	4.52	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	92	254523	5.00	4.61	
27 Acetone	43	3.045	3.045	0.000	98	95709	20.0	19.5	
28 Iodomethane	142	3.157	3.157	0.000	99	383750	5.00	4.69	
30 Carbon disulfide	76	3.241	3.241	0.000	100	734511	5.00	4.61	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	86	308058	5.00	4.78	
32 Methyl acetate	43	3.436	3.436	0.000	44	100908	10.0	9.84	
35 Methylene Chloride	84	3.618	3.618	0.000	91	197305	5.00	4.83	
37 2-Methyl-2-propanol	59	3.827	3.828	-0.001	95	89788	50.0	49.0	
39 Acrylonitrile	53	3.967	3.967	0.000	96	273690	50.0	47.3	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	217691	5.00	4.55	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	82	356078	5.00	4.81	
42 Hexane	57	4.428	4.442	-0.014	90	285811	5.00	4.49	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	372454	5.00	4.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.777	4.763	0.014	98	237245	10.0	8.12	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	90	471395	5.00	4.79	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	85	200145	5.00	4.58	
52 2-Butanone (MEK)	43	5.741	5.741	0.000	100	98978	20.0	17.9	
56 Chlorobromomethane	128	6.071	6.071	0.000	95	72169	5.00	4.67	
57 Tetrahydrofuran	42	6.106	6.099	0.007	81	20060	10.0	8.39	
59 Chloroform	83	6.242	6.242	0.000	94	351194	5.00	4.62	
60 1,1,1-Trichloroethane	97	6.428	6.435	-0.007	98	398880	5.00	4.60	
61 Cyclohexane	56	6.507	6.507	0.000	93	374356	5.00	4.62	
62 Carbon tetrachloride	117	6.628	6.628	0.000	97	364874	5.00	4.62	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	91	261488	5.00	4.50	
64 Benzene	78	6.893	6.893	0.000	98	752557	5.00	4.67	
66 Isobutyl alcohol	41	6.936	6.929	0.007	94	52500	125.0	112.6	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	99	201489	5.00	4.76	
67 n-Heptane	43	7.315	7.315	0.000	91	356792	5.00	4.58	
69 Trichloroethene	95	7.722	7.722	0.000	97	195868	5.00	4.45	
71 Methylcyclohexane	55	7.965	7.965	0.000	92	331954	5.00	4.65	
72 1,2-Dichloropropane	63	8.008	8.016	-0.007	93	153572	5.00	4.31	
75 Dibromomethane	93	8.101	8.108	-0.007	92	71418	5.00	4.74	
74 1,4-Dioxane	88	8.115	8.116	-0.001	32	13247	100.0	101.0	M
76 Dichlorobromomethane	83	8.316	8.316	0.000	98	196726	5.00	4.60	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	93	17579	5.00	4.73	
79 cis-1,3-Dichloropropene	75	8.780	8.781	-0.001	92	173161	5.00	4.45	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	251050	20.0	18.4	
82 Toluene	91	9.109	9.109	0.000	97	821672	5.00	4.84	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	98	141804	5.00	4.60	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	90	83062	5.00	4.15	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	95	98094	5.00	4.63	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	196625	5.00	4.45	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	96	167444	5.00	4.76	
88 2-Hexanone	43	9.789	9.789	0.000	98	145358	20.0	18.6	
89 Chlorodibromomethane	129	9.924	9.925	-0.001	91	105310	5.00	4.58	
90 Ethylene Dibromide	107	10.025	10.025	0.000	100	83003	5.00	4.74	
92 Chlorobenzene	112	10.504	10.504	0.000	94	517979	5.00	4.54	
93 1,1,1,2-Tetrachloroethane	131	10.589	10.590	-0.001	90	188020	5.00	4.76	
94 Ethylbenzene	106	10.597	10.597	0.000	99	301395	5.00	4.78	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	360749	5.00	4.70	
96 o-Xylene	106	11.083	11.083	0.000	97	340545	5.00	4.86	
97 Styrene	104	11.104	11.104	0.000	95	530355	5.00	5.10	
98 Bromoform	173	11.276	11.269	0.007	97	57649	5.00	4.85	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	1016769	5.00	4.75	
100 Cyclohexanone	55	11.512	11.512	0.000	92	88276	200.0	169.0	
103 Bromobenzene	156	11.719	11.712	0.007	95	220952	5.00	4.64	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	98	118675	5.00	4.66	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	74	26076	5.00	4.27	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	38035	5.00	4.84	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	304216	5.00	4.84	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	247538	5.00	4.68	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	95	868278	5.00	4.82	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	247607	5.00	4.72	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	94	705989	5.00	4.67	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	98	904005	5.00	5.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.442	-0.001	95	252204	5.00	4.64	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	478640	5.00	4.57	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	1051180	5.00	4.91	
115 1,4-Dichlorobenzene	146	12.606	12.606	0.000	95	483190	5.00	4.49	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	985561	5.00	4.88	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	448501	5.00	4.61	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.378	0.000	77	18177	5.00	4.32	
121 1,2,4-Trichlorobenzene	180	13.886	13.893	-0.007	94	338347	5.00	4.56	
122 Hexachlorobutadiene	225	13.972	13.979	-0.007	96	258666	5.00	4.29	
123 Naphthalene	128	14.064	14.065	-0.001	97	410568	5.00	4.27	
124 1,2,3-Trichlorobenzene	180	14.207	14.215	-0.008	95	297727	5.00	4.67	
S 137 1,2-Dichloroethene, Total	96				0		10.0	9.14	
S 143 Xylenes, Total	106				0		10.0	9.56	
S 142 Trihalomethanes, Total	1				0		20.0	18.6	
S 140 1,3-Dichloropropene, Total	1				0		10.0	9.06	
S 144 1,2-Dichloroethene, Total	1				0		10.0	9.14	
S 138 Xylenes, Total (URS)	1				0		10.0	9.56	
S 139 Total BTEX	1				0			23.9	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.40	Units: uL
MV-MegaMainA_00001	Amount Added:	2.00	Units: uL

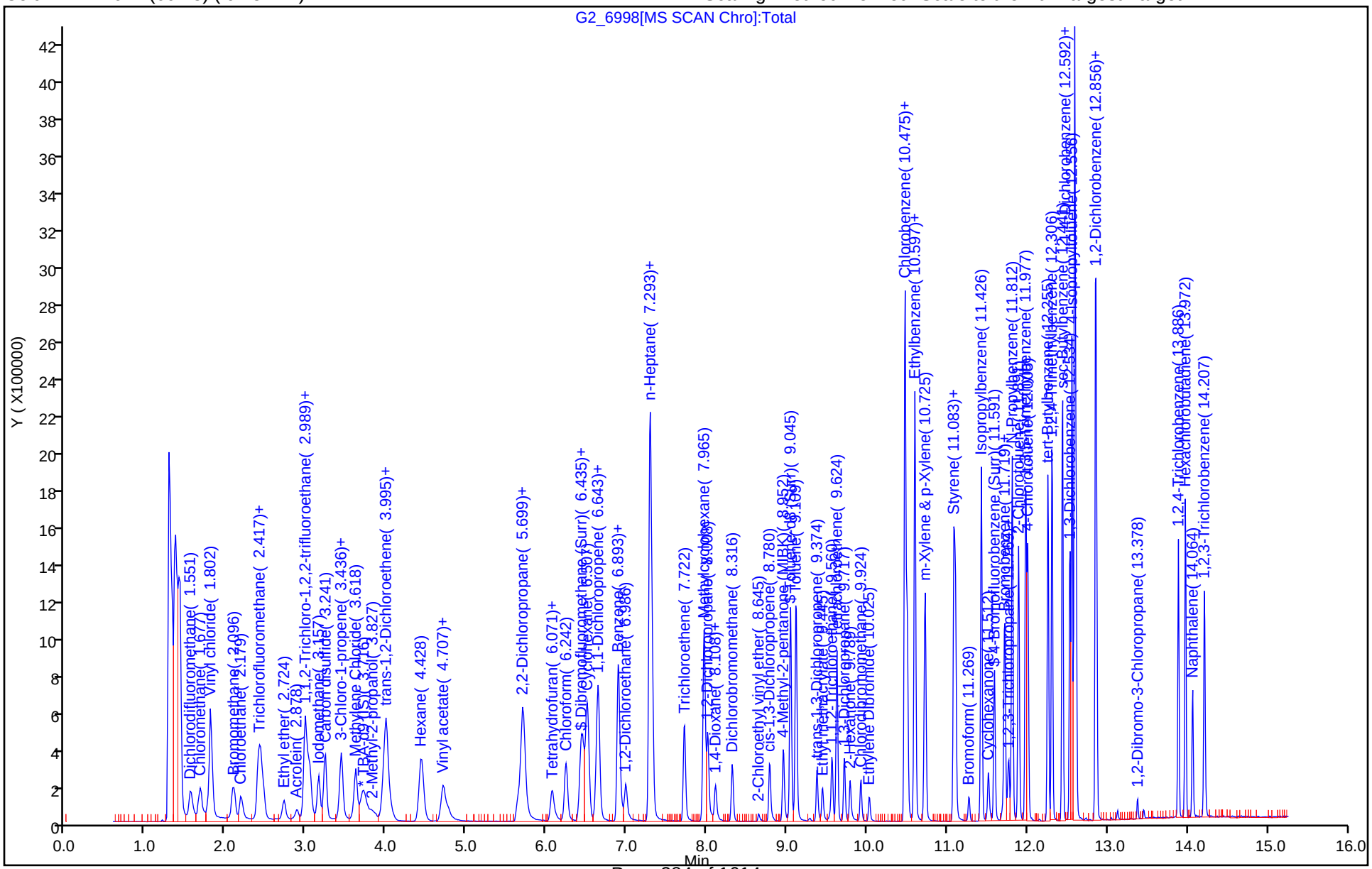
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6998.D

Injection Date:	17-Sep-2018 09:57:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

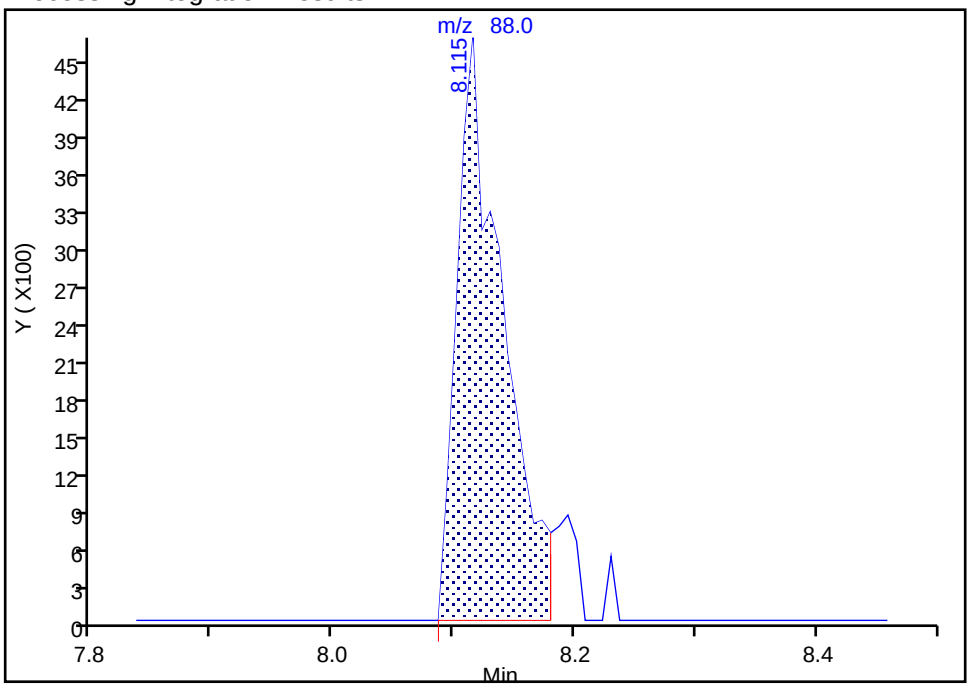
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Injection Date: 17-Sep-2018 09:57:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

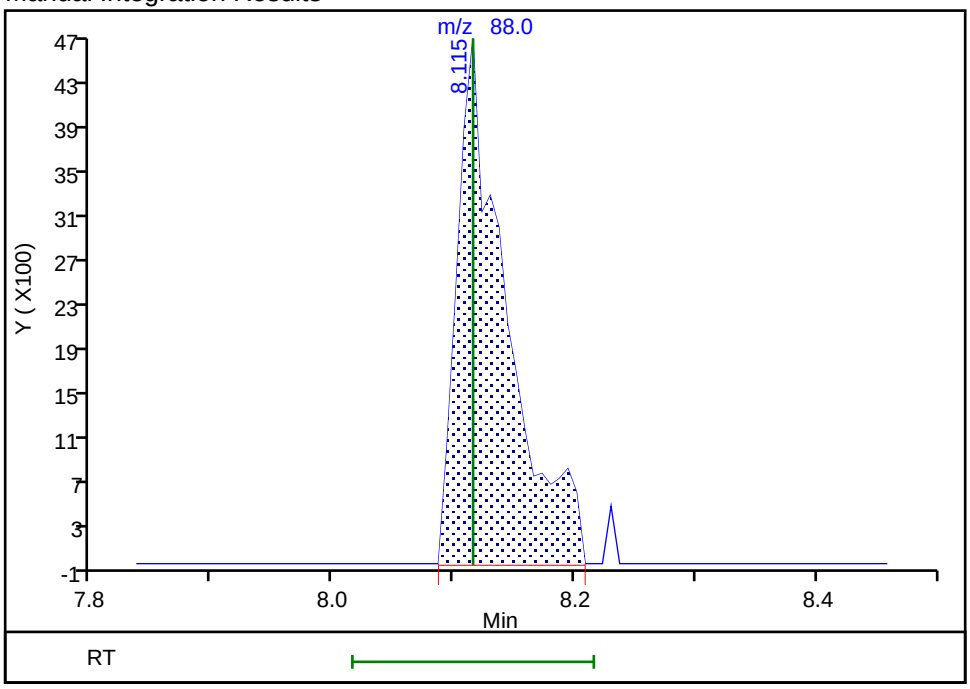
Processing Integration Results

RT: 8.12
Area: 12189
Amount: 95.613775
Amount Units: ug/l



Manual Integration Results

RT: 8.12
Area: 13247
Amount: 100.9533
Amount Units: ug/l



Reviewer: ilczyszynd, 18-Sep-2018 08:44:08
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6999.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 17-Sep-2018 10:18:30 ALS Bottle#: 16 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:35 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 11:17:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.702	0.000	0	410797	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2101728	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	456529	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	828826	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	361539	10.0	10.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	96	359669	10.0	9.96	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1501633	10.0	10.5	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	91	503332	10.0	10.5	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	763187	10.0	9.39	
14 Chloromethane	50	1.677	1.677	0.000	99	572896	10.0	9.01	
15 Vinyl chloride	62	1.802	1.802	0.000	98	605267	10.0	9.40	
17 Bromomethane	94	2.096	2.096	0.000	91	410063	10.0	8.95	
18 Chloroethane	64	2.180	2.180	0.000	99	346945	10.0	10.0	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	925412	10.0	9.15	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	99	992230	10.0	9.08	
22 Ethyl ether	59	2.724	2.724	0.000	90	185645	10.0	9.00	
24 Acrolein	56	2.878	2.878	0.000	98	135051	59.3	53.1	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	98	448993	10.0	9.11	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	91	520304	10.0	9.23	
27 Acetone	43	3.045	3.045	0.000	98	201754	40.0	40.3	
28 Iodomethane	142	3.157	3.157	0.000	99	775200	10.0	9.29	
30 Carbon disulfide	76	3.241	3.241	0.000	100	1539793	10.0	9.47	
32 Methyl acetate	43	3.436	3.436	0.000	42	208104	20.0	20.6	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	86	635079	10.0	9.89	
35 Methylene Chloride	84	3.618	3.618	0.000	92	389626	10.0	9.35	
37 2-Methyl-2-propanol	59	3.828	3.828	0.000	96	166685	100.0	89.0	
39 Acrylonitrile	53	3.967	3.967	0.000	97	569122	100.0	96.3	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	467296	10.0	9.57	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	98	724091	10.0	9.57	
42 Hexane	57	4.442	4.442	0.000	92	633396	10.0	9.64	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	764542	10.0	9.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.763	4.763	0.000	98	558453	20.0	17.0	
51 cis-1,2-Dichloroethene	96	5.699	5.699	0.000	85	430012	10.0	9.65	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	90	906635	10.0	9.74	
52 2-Butanone (MEK)	43	5.741	5.741	0.000	100	216409	40.0	38.6	
56 Chlorobromomethane	128	6.071	6.071	0.000	95	153265	10.0	9.72	
57 Tetrahydrofuran	42	6.099	6.099	0.000	81	48859	20.0	17.6	
59 Chloroform	83	6.242	6.242	0.000	94	724304	10.0	9.33	
60 1,1,1-Trichloroethane	97	6.435	6.435	0.000	98	841721	10.0	9.51	
61 Cyclohexane	56	6.507	6.507	0.000	94	849771	10.0	10.3	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	774533	10.0	9.61	
63 1,1-Dichloropropene	75	6.643	6.643	0.000	92	585131	10.0	9.87	
64 Benzene	78	6.893	6.893	0.000	98	1602006	10.0	9.74	
66 Isobutyl alcohol	41	6.929	6.929	0.000	88	118198	250.0	248.3	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	99	416128	10.0	9.63	
67 n-Heptane	43	7.315	7.315	0.000	90	756983	10.0	9.51	
69 Trichloroethene	95	7.722	7.722	0.000	97	423580	10.0	9.44	
71 Methylcyclohexane	55	7.965	7.965	0.000	93	752364	10.0	10.3	
72 1,2-Dichloropropane	63	8.016	8.016	0.000	91	346089	10.0	9.52	
75 Dibromomethane	93	8.108	8.108	0.000	92	145862	10.0	9.48	
74 1,4-Dioxane	88	8.116	8.116	0.000	31	25873	200.0	180.8	
76 Dichlorobromomethane	83	8.316	8.316	0.000	98	426908	10.0	9.79	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	93	38894	10.0	9.23	
79 cis-1,3-Dichloropropene	75	8.781	8.781	0.000	92	400248	10.0	9.96	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	566075	40.0	40.7	
82 Toluene	91	9.109	9.109	0.000	98	1767459	10.0	10.2	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	318931	10.0	10.1	
84 Ethyl methacrylate	69	9.446	9.446	0.000	90	190198	10.0	8.38	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	95	198997	10.0	9.21	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	429519	10.0	9.40	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	357520	10.0	9.84	
88 2-Hexanone	43	9.789	9.789	0.000	98	321543	40.0	39.8	
89 Chlorodibromomethane	129	9.925	9.925	0.000	89	238069	10.0	10.0	
90 Ethylene Dibromide	107	10.025	10.025	0.000	99	176228	10.0	9.73	
92 Chlorobenzene	112	10.504	10.504	0.000	94	1111645	10.0	9.43	
93 1,1,1,2-Tetrachloroethane	131	10.590	10.590	0.000	92	409491	10.0	10.0	
94 Ethylbenzene	106	10.597	10.597	0.000	99	673573	10.0	10.3	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	821673	10.0	10.4	
96 o-Xylene	106	11.083	11.083	0.000	97	793357	10.0	11.0	
97 Styrene	104	11.104	11.104	0.000	95	1187482	10.0	11.1	
98 Bromoform	173	11.269	11.269	0.000	97	121181	10.0	9.86	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	2388111	10.0	10.9	
100 Cyclohexanone	55	11.512	11.512	0.000	94	215675	400.0	372.8	
103 Bromobenzene	156	11.712	11.712	0.000	95	476858	10.0	9.80	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	97	238130	10.0	9.15	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	83	56846	10.0	8.51	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	74781	10.0	9.32	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	669659	10.0	10.4	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	545249	10.0	10.1	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	94	2012323	10.0	10.9	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	534683	10.0	9.98	
110 tert-Butylbenzene	119	12.256	12.256	0.000	93	1671159	10.0	10.8	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	98	1998460	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.442	12.442	0.000	95	585022	10.0	10.5	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	1037912	10.0	9.71	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	2435315	10.0	11.1	
115 1,4-Dichlorobenzene	146	12.606	12.606	0.000	95	1030288	10.0	9.38	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	2257146	10.0	11.0	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	950501	10.0	9.57	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.378	0.000	80	38687	10.0	8.99	
121 1,2,4-Trichlorobenzene	180	13.893	13.893	0.000	93	763155	10.0	10.1	
122 Hexachlorobutadiene	225	13.979	13.979	0.000	96	588383	10.0	9.57	
123 Naphthalene	128	14.065	14.065	0.000	97	936599	10.0	9.20	
124 1,2,3-Trichlorobenzene	180	14.215	14.215	0.000	95	637686	10.0	9.80	
S 137 1,2-Dichloroethene, Total	96				0		20.0	19.2	
S 144 1,2-Dichloroethene, Total	1				0		20.0	19.2	
S 138 Xylenes, Total (URS)	1				0		20.0	21.3	
S 140 1,3-Dichloropropene, Total	1				0		20.0	20.1	
S 143 Xylenes, Total	106				0		20.0	21.3	
S 142 Trihalomethanes, Total	1				0		40.0	39.0	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-MegaMainA_00001	Amount Added:	4.00	Units: uL

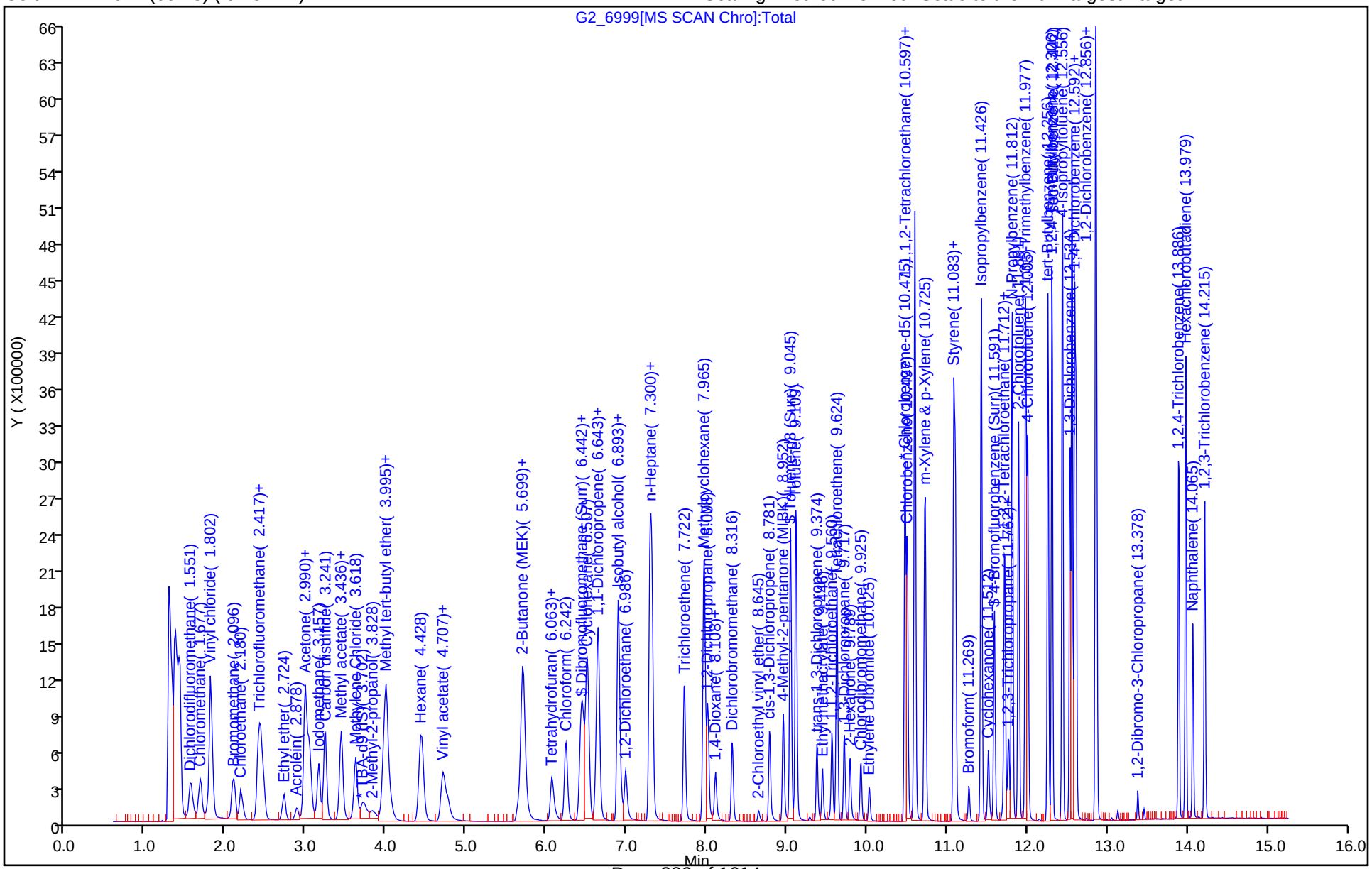
Report Date: 18-Sep-2018 08:49:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6999.D

Injection Date:	17-Sep-2018 10:18:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7000.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 17-Sep-2018 10:39:30 ALS Bottle#: 17 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 11:18:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	440272	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2145099	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	480426	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	827751	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	1110888	30.0	30.5	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.886	6.893	-0.007	98	1084804	30.0	29.4	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	4579150	30.0	30.5	
$ 9 4-Bromofluorobenzene (Surr	95	11.590	11.591	-0.001	92	1522623	30.0	31.7	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	1940318	25.0	23.4	
14 Chloromethane	50	1.677	1.677	0.000	99	1518035	25.0	23.4	
15 Vinyl chloride	62	1.802	1.802	0.000	98	1604773	25.0	24.4	
17 Bromomethane	94	2.096	2.096	0.000	92	1061359	25.0	22.7	
18 Chloroethane	64	2.179	2.180	-0.001	100	880098	25.0	25.3	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	2313089	25.0	22.4	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	98	2527046	25.0	22.7	
22 Ethyl ether	59	2.724	2.724	0.000	91	485736	25.0	23.1	
24 Acrolein	56	2.878	2.878	0.000	99	362458	148.1	139.7	
25 1,1-Dichloroethene	96	2.975	2.990	-0.015	98	1159263	25.0	23.0	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	91	1347104	25.0	23.4	
27 Acetone	43	3.045	3.045	0.000	98	480073	100.0	94.0	
28 Iodomethane	142	3.157	3.157	0.000	99	1985633	25.0	23.3	
30 Carbon disulfide	76	3.227	3.241	-0.014	100	4000211	25.0	24.1	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	87	1615965	25.0	25.0	
32 Methyl acetate	43	3.436	3.436	0.000	42	532462	50.0	52.8	
35 Methylene Chloride	84	3.618	3.618	0.000	91	979355	25.0	23.0	
37 2-Methyl-2-propanol	59	3.841	3.828	0.013	95	445317	250.0	233.1	
39 Acrylonitrile	53	3.967	3.967	0.000	97	1378264	250.0	228.5	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	1176060	25.0	23.6	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	98	1931245	25.0	25.0	
42 Hexane	57	4.428	4.442	-0.014	94	1735142	25.0	25.1	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	1964015	25.0	23.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.763	4.763	0.000	98	1722560	50.0	48.6	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	89	2285668	25.0	25.2	
51 cis-1,2-Dichloroethene	96	5.699	5.699	0.000	85	1141084	25.0	25.1	
52 2-Butanone (MEK)	43	5.727	5.741	-0.014	100	587766	100.0	102.9	
56 Chlorobromomethane	128	6.063	6.071	-0.008	96	390327	25.0	24.3	
57 Tetrahydrofuran	42	6.099	6.099	0.000	86	164754	50.0	51.5	
59 Chloroform	83	6.235	6.242	-0.007	95	1867902	25.0	23.6	
60 1,1,1-Trichloroethane	97	6.428	6.435	-0.007	98	2195959	25.0	24.3	
61 Cyclohexane	56	6.507	6.507	0.000	92	2294872	25.0	27.2	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	2033389	25.0	24.7	
63 1,1-Dichloropropene	75	6.643	6.643	-0.001	92	1594707	25.0	26.4	
64 Benzene	78	6.893	6.893	0.000	97	4180821	25.0	24.9	
66 Isobutyl alcohol	41	6.929	6.929	0.000	88	355468	625.0	731.7	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	99	1076012	25.0	24.4	
67 n-Heptane	43	7.315	7.315	0.000	91	1957380	25.0	24.1	
69 Trichloroethene	95	7.715	7.722	-0.007	97	1111402	25.0	24.3	
71 Methylcyclohexane	55	7.965	7.965	0.000	92	1974658	25.0	26.5	
72 1,2-Dichloropropane	63	8.015	8.016	0.000	87	892196	25.0	24.0	
75 Dibromomethane	93	8.108	8.108	0.000	93	389908	25.0	24.8	
74 1,4-Dioxane	88	8.115	8.116	-0.001	35	70238	500.0	458.6	
76 Dichlorobromomethane	83	8.316	8.316	0.000	98	1151016	25.0	25.9	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	94	128200	25.0	25.4	
79 cis-1,3-Dichloropropene	75	8.780	8.781	-0.001	92	1152484	25.0	27.3	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	1622710	100.0	114.2	
82 Toluene	91	9.109	9.109	0.000	98	4549693	25.0	25.7	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	927379	25.0	28.9	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	89	598514	25.0	23.7	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	95	522258	25.0	23.7	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	1099872	25.0	22.9	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	924864	25.0	24.2	
88 2-Hexanone	43	9.789	9.789	0.000	97	949950	100.0	111.8	
89 Chlorodibromomethane	129	9.924	9.925	-0.001	91	655497	25.0	26.2	
90 Ethylene Dibromide	107	10.025	10.025	0.000	98	471502	25.0	24.7	
92 Chlorobenzene	112	10.504	10.504	0.000	93	2779584	25.0	22.4	
93 1,1,1,2-Tetrachloroethane	131	10.597	10.590	0.007	93	1099200	25.0	25.6	
94 Ethylbenzene	106	10.597	10.597	0.000	99	1773951	25.0	25.9	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	2147168	25.0	25.7	
96 o-Xylene	106	11.083	11.083	0.000	97	2083996	25.0	27.4	
97 Styrene	104	11.104	11.104	0.000	95	3090872	25.0	27.3	
98 Bromoform	173	11.276	11.269	0.007	98	349281	25.0	27.0	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	6188364	25.0	28.3	
100 Cyclohexanone	55	11.512	11.512	0.000	94	624635	1000.0	991.5	
103 Bromobenzene	156	11.719	11.712	0.007	94	1199632	25.0	24.7	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	97	635458	25.0	24.4	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	85	166597	25.0	23.9	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	198248	25.0	24.7	
106 N-Propylbenzene	120	11.812	11.812	0.000	98	1742328	25.0	27.2	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	1394392	25.0	25.9	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	95	5084585	25.0	27.6	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	1329315	25.0	24.8	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	93	4501953	25.0	29.2	
111 1,2,4-Trimethylbenzene	105	12.305	12.306	-0.001	98	5083634	25.0	27.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.442	-0.001	95	1538542	25.0	27.8	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	2563149	25.0	24.0	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	96	6054797	25.0	27.7	
115 1,4-Dichlorobenzene	146	12.613	12.606	0.007	95	2510284	25.0	22.9	
117 n-Butylbenzene	91	12.849	12.849	0.000	97	5505544	25.0	26.8	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	2317581	25.0	23.4	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.378	0.000	85	115590	25.0	26.9	
121 1,2,4-Trichlorobenzene	180	13.886	13.893	-0.007	94	1987805	25.0	26.3	
122 Hexachlorobutadiene	225	13.972	13.979	-0.007	96	1494836	25.0	24.3	
123 Naphthalene	128	14.057	14.065	-0.008	97	2694685	25.0	26.0	
124 1,2,3-Trichlorobenzene	180	14.207	14.215	-0.008	95	1692972	25.0	26.1	
S 137 1,2-Dichloroethene, Total	96				0		50.0	48.7	
S 143 Xylenes, Total	106				0		50.0	53.1	
S 142 Trihalomethanes, Total	1				0		100.0	102.6	
S 140 1,3-Dichloropropene, Total	1				0		50.0	56.1	
S 144 1,2-Dichloroethene, Total	1				0		50.0	48.7	
S 138 Xylenes, Total (URS)	1				0		50.0	53.1	
S 139 Total BTEX	1				0			129.6	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	2.40	Units: uL
MV-MegaMainA_00001	Amount Added:	10.00	Units: uL

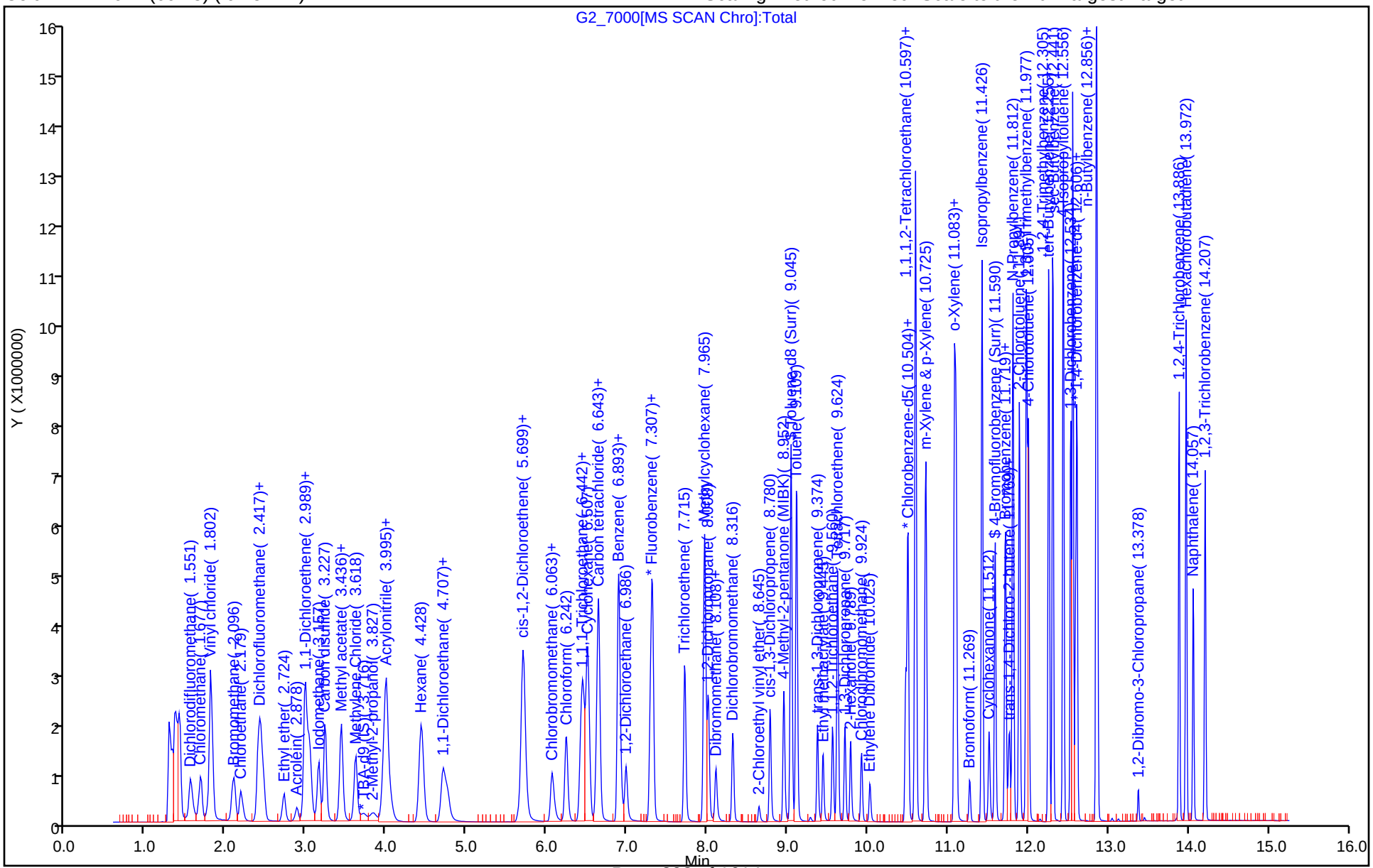
Report Date: 18-Sep-2018 08:49:41 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7000.D

Injection Date:	17-Sep-2018 10:39:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 17-Sep-2018 11:00:30 ALS Bottle#: 18 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:44 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 17-Sep-2018 11:32:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.730	3.702	0.028	0	415133	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	99	2267980	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	85	482106	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.591	12.592	-0.001	93	789412	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	2278361	60.0	59.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	98	2222214	60.0	57.0	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	9061951	60.0	60.2	
$ 9 4-Bromofluorobenzene (Surr	95	11.590	11.591	-0.001	93	3009394	60.0	65.7	
12 Dichlorodifluoromethane	85	1.565	1.551	0.014	99	4652827	60.0	53.1	
14 Chloromethane	50	1.691	1.677	0.014	99	3590770	60.0	52.4	
15 Vinyl chloride	62	1.802	1.802	0.000	98	3854737	60.0	55.5	
17 Bromomethane	94	2.096	2.096	0.000	91	2601130	60.0	52.6	
18 Chloroethane	64	2.179	2.180	-0.001	100	2130351	60.0	58.2	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	5580715	60.0	51.1	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	98	6076951	60.0	51.5	
22 Ethyl ether	59	2.724	2.724	0.000	91	1202064	60.0	54.0	
24 Acrolein	56	2.892	2.878	0.014	98	883474	355.5	322.1	
25 1,1-Dichloroethene	96	2.989	2.990	-0.001	98	2862923	60.0	53.8	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	90	3195214	60.0	52.5	
27 Acetone	43	3.059	3.045	0.014	98	1103295	240.0	204.4	
28 Iodomethane	142	3.157	3.157	0.000	99	4875589	60.0	54.1	
30 Carbon disulfide	76	3.241	3.241	0.000	100	9663687	60.0	55.1	
32 Methyl acetate	43	3.450	3.436	0.014	97	1230725	120.0	116.2	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	87	3985516	60.0	58.7	
35 Methylene Chloride	84	3.618	3.618	0.000	91	2342057	60.0	52.1	
37 2-Methyl-2-propanol	59	3.841	3.828	0.013	97	1035613	600.0	512.6	
39 Acrylonitrile	53	3.967	3.967	0.000	97	3621033	600.0	567.7	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	2914783	60.0	55.3	
41 Methyl tert-butyl ether	73	4.023	4.009	0.014	97	4892600	60.0	59.9	
42 Hexane	57	4.442	4.442	0.000	94	4474080	60.0	64.5	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	4837903	60.0	54.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.763	4.763	0.000	98	4789512	120.0	125.7	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	84	2884624	60.0	60.0	
50 2,2-Dichloropropane	77	5.713	5.699	0.014	79	5497809	60.0	58.4	
52 2-Butanone (MEK)	43	5.727	5.741	-0.014	100	1437876	240.0	238.4	
56 Chlorobromomethane	128	6.063	6.071	-0.008	95	988240	60.0	58.1	
57 Tetrahydrofuran	42	6.099	6.099	0.000	84	461322	120.0	119.8	
59 Chloroform	83	6.242	6.242	0.000	95	4560282	60.0	54.4	
60 1,1,1-Trichloroethane	97	6.435	6.435	0.000	98	5384371	60.0	56.4	
61 Cyclohexane	56	6.507	6.507	0.000	92	5670597	60.0	63.5	
62 Carbon tetrachloride	117	6.635	6.628	0.007	96	4980071	60.0	57.3	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	94	4086173	60.0	63.9	
64 Benzene	78	6.900	6.893	0.007	98	10142983	60.0	57.2	
66 Isobutyl alcohol	41	6.928	6.929	-0.001	91	811015	1500.0	1579.1	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	99	2659999	60.0	57.1	
67 n-Heptane	43	7.315	7.315	0.000	90	4786439	60.0	55.7	
69 Trichloroethene	95	7.722	7.722	0.000	97	2807616	60.0	58.0	
71 Methylcyclohexane	55	7.965	7.965	0.000	91	4806638	60.0	61.1	
72 1,2-Dichloropropane	63	8.015	8.016	0.000	93	2243872	60.0	57.2	
75 Dibromomethane	93	8.108	8.108	0.000	93	969854	60.0	58.4	
74 1,4-Dioxane	88	8.115	8.116	-0.001	94	207043	1200.0	1254.6	
76 Dichlorobromomethane	83	8.316	8.316	0.000	99	2957406	60.0	62.8	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	95	402075	60.0	60.0	
79 cis-1,3-Dichloropropene	75	8.780	8.781	-0.001	93	3051157	60.0	71.9	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	4003049	240.0	266.6	
82 Toluene	91	9.116	9.109	0.007	98	10650983	60.0	56.9	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	2481537	60.0	73.1	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	89	1634134	60.0	63.4	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	94	1313456	60.0	56.3	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	2688798	60.0	55.7	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	94	2364876	60.0	61.7	
88 2-Hexanone	43	9.789	9.789	0.000	97	2436437	240.0	285.6	
89 Chlorodibromomethane	129	9.924	9.925	-0.001	90	1753124	60.0	69.8	
90 Ethylene Dibromide	107	10.025	10.025	0.000	99	1220112	60.0	63.8	
92 Chlorobenzene	112	10.504	10.504	0.000	93	6723586	60.0	54.0	
93 1,1,1,2-Tetrachloroethane	131	10.597	10.590	0.007	94	2738111	60.0	63.5	
94 Ethylbenzene	106	10.597	10.597	0.000	98	4277872	60.0	62.2	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	98	5223196	60.0	62.3	
96 o-Xylene	106	11.083	11.083	0.000	96	5057709	60.0	66.1	
97 Styrene	104	11.104	11.104	0.000	95	7396286	60.0	65.2	
98 Bromoform	173	11.269	11.269	0.000	97	959051	60.0	73.9	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	13353588	60.0	64.1	e
100 Cyclohexanone	55	11.512	11.512	0.000	93	1572854	2400.0	2458.2	
103 Bromobenzene	156	11.712	11.712	0.000	95	2889204	60.0	62.3	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	96	1531253	60.0	61.8	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	88	424328	60.0	62.9	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	87	480041	60.0	62.8	
106 N-Propylbenzene	120	11.812	11.812	0.000	95	4006963	60.0	65.5	e
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	3285530	60.0	63.9	a
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	96	11218387	60.0	64.0	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	3147679	60.0	61.7	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	93	10125171	60.0	68.9	
111 1,2,4-Trimethylbenzene	105	12.305	12.306	-0.001	97	10812881	60.0	61.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.434	12.442	-0.008	95	3590324	60.0	68.0	e
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	97	5791427	60.0	56.9	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	93	11826662	60.0	56.7	e
115 1,4-Dichlorobenzene	146	12.613	12.606	0.007	94	5640624	60.0	53.9	
117 n-Butylbenzene	91	12.849	12.849	0.000	93	10510997	60.0	53.6	e
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	96	5175291	60.0	54.7	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.378	0.000	86	299321	60.0	73.1	
121 1,2,4-Trichlorobenzene	180	13.886	13.893	-0.007	94	4393771	60.0	60.9	
122 Hexachlorobutadiene	225	13.971	13.979	-0.008	96	3280237	60.0	56.0	
123 Naphthalene	128	14.064	14.065	-0.001	97	6038642	60.0	60.7	
124 1,2,3-Trichlorobenzene	180	14.207	14.215	-0.008	96	3679467	60.0	59.4	
S 137 1,2-Dichloroethene, Total	96				0		120.0	115.3	
S 144 1,2-Dichloroethene, Total	1				0		120.0	115.3	
S 138 Xylenes, Total (URS)	1				0		120.0	128.5	
S 139 Total BTEX	1				0			304.8	
S 140 1,3-Dichloropropene, Total	1				0		120.0	145.0	
S 143 Xylenes, Total	106				0		120.0	128.5	
S 142 Trihalomethanes, Total	1				0		240.0	261.0	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Review Flags

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	4.80	Units: uL
MV-MegaMainA_00001	Amount Added:	24.00	Units: uL

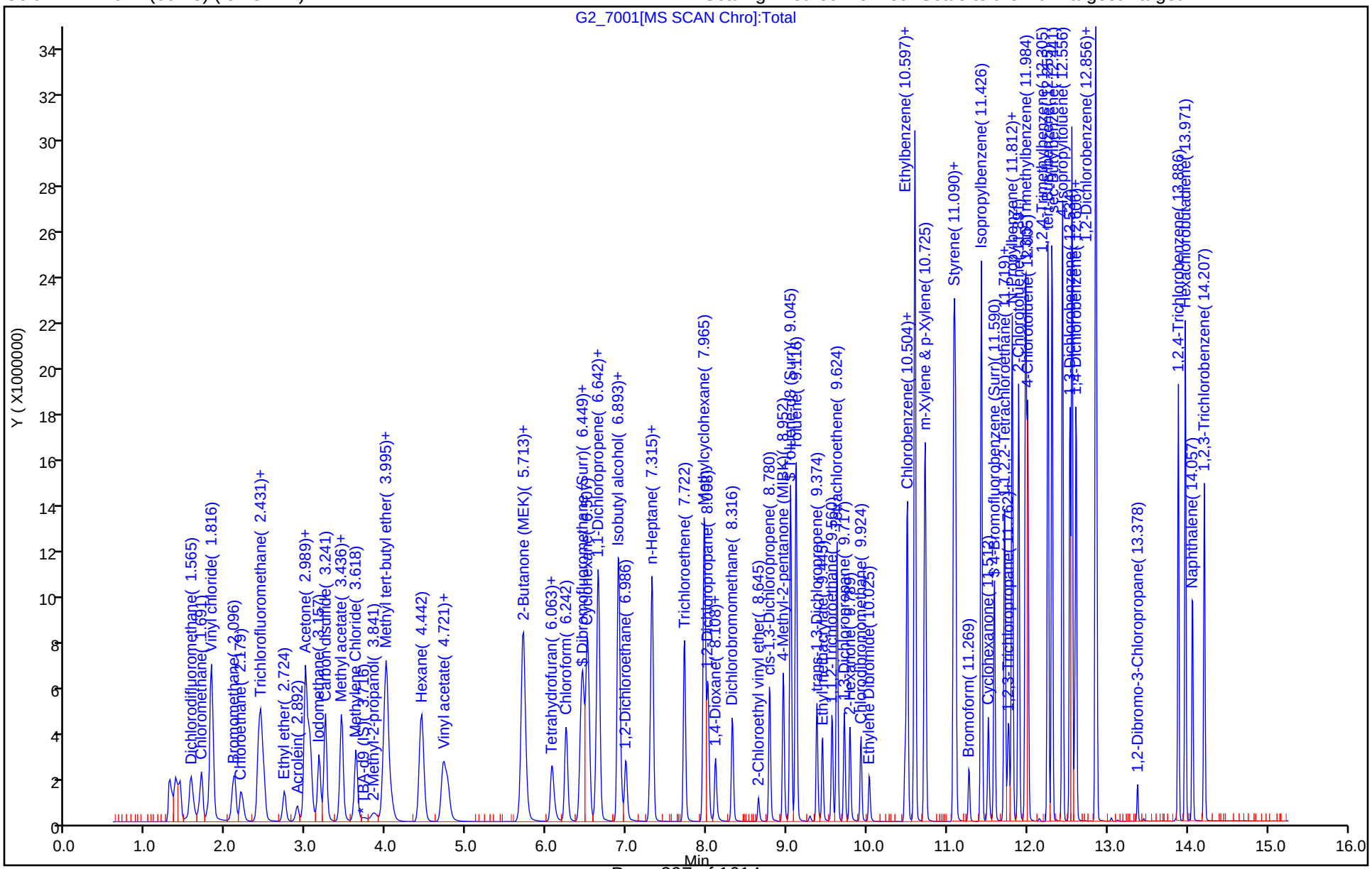
Report Date: 18-Sep-2018 08:49:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Injection Date:	17-Sep-2018 11:00:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

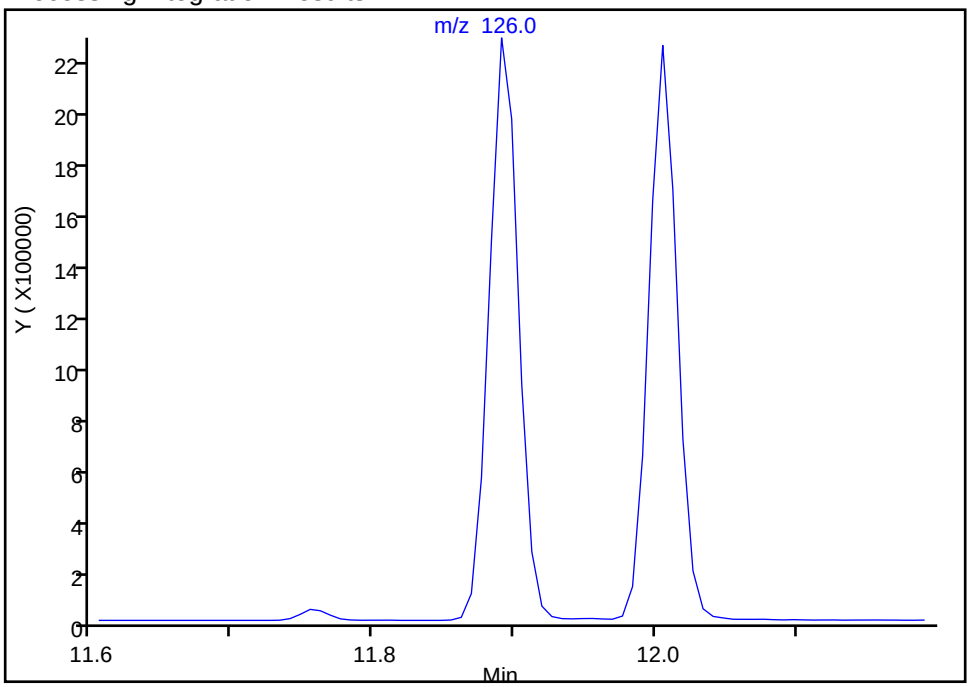
Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D
Injection Date: 17-Sep-2018 11:00:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 18 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

107 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

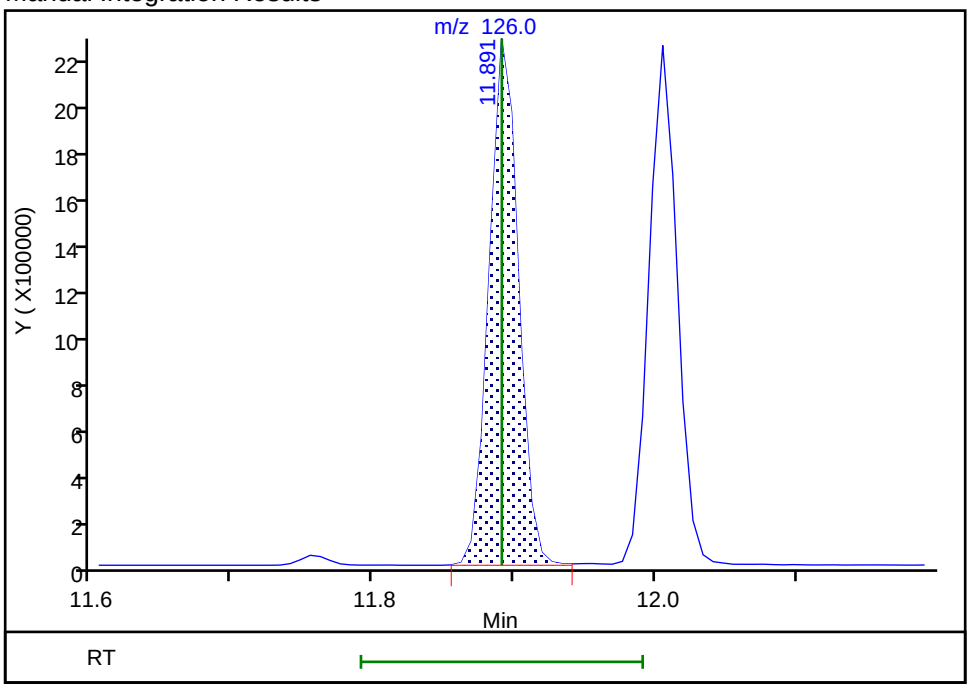
Not Detected
Expected RT: 11.89

Processing Integration Results



Manual Integration Results

RT: 11.89
Area: 3285530
Amount: 63.867351
Amount Units: ug/l



Reviewer: ilczyszynd, 17-Sep-2018 11:31:53
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428698/10	Z1188.D
Level 2	IC 280-428698/11	Z1189.D
Level 3	IC 280-428698/12	Z1190.D
Level 4	IC 280-428698/13	Z1191.D
Level 5	IC 280-428698/14	Z1192.D
Level 6	IC 280-428698/15	Z1193.D
Level 7	IC 280-428698/16	Z1194.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4684 0.4452	0.4508 0.4457	0.4366	0.4334	0.4894	Ave		0.4528				4.4		15.0			
Chloromethane	0.3618 0.2849	0.2943 0.2923	0.3078	0.2723	0.2898	Ave		0.3004			0.1000	9.7		15.0			
Vinyl chloride	0.2489 0.2354	0.2417 0.2371	0.2444	0.2354	0.2471	Ave		0.2414				2.3		30.0			
Bromomethane	0.3391 0.3121	0.3132 0.3110	0.3234	0.2988	0.3134	Ave		0.3158				4.0		15.0			
Chloroethane	0.2015 0.1600	0.1896 0.1591	0.1534	0.1534	0.1637	Ave		0.1687				11.3		15.0			
Dichlorofluoromethane	0.6474 0.6046	0.5971 0.5968	0.6239	0.5809	0.6225	Ave		0.6105				3.6		15.0			
Trichlorofluoromethane	0.7467 0.6567	0.6933 0.6647	0.7029	0.6668	0.7011	Ave		0.6903				4.5		15.0			
Ethyl ether	0.1682 0.1128	0.1420 0.1185	0.1308	0.1166	0.1251	Ave		0.1306				14.8		15.0			
Acrolein	0.0111 0.0095	0.0120 0.0104	0.0112	0.0094	0.0101	Ave		0.0105				9.0		15.0			
1,1-Dichloroethene	0.3675 0.3078	0.3242 0.3118	0.3228	0.3012	0.3205	Ave		0.3223				6.7		30.0			
Acetone	+++++ 0.0157	0.0210 0.0165	0.0202	0.0163	0.0171	Ave		0.0178				12.6		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.4742 0.4270	0.4484 0.4335	0.4484	0.4315	0.4582	Ave		0.4459				3.8		15.0			
Iodomethane	0.8024 0.7840	0.7846 0.7815	0.7793	0.7376	0.7924	Ave		0.7803				2.6		15.0			
Carbon disulfide	1.1756 1.0085	1.0536 1.0053	1.0394	0.9721	1.0304	Ave		1.0407				6.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl acetate	0.0689 0.0620	0.0716 0.0699	0.0673	0.0626	0.0714	Ave		0.0677				5.9		15.0			
3-Chloro-1-propene	0.4943 0.4571	0.4725 0.4576	0.4670	0.4195	0.4675	Ave		0.4622				4.9		15.0			
Methylene Chloride	+++++ 0.2628	0.2703 0.2642	0.2930	0.2544	0.2681	Ave		0.2688				4.9		15.0			
t-Butyl alcohol	+++++ 1.0998	1.9522 1.0182	1.0977	1.0365	1.0496	Lin1	6.2285	1.0163							0.9960		0.9900
Acrylonitrile	0.0202 0.0205	0.0250 0.0222	0.0226	0.0196	0.0222	Ave		0.0218				8.4		15.0			
trans-1,2-Dichloroethene	0.3715 0.3522	0.3752 0.3539	0.3544	0.3373	0.3582	Ave		0.3575				3.6		15.0			
Methyl tert-butyl ether	0.4818 0.4108	0.4549 0.4381	0.4352	0.4030	0.4392	Ave		0.4376				6.0		15.0			
Hexane	1.9013 1.8991	1.9933 1.9332	1.9886	1.8849	1.9973	Ave		1.9426				2.5		15.0			
1,1-Dichloroethane	0.5686 0.5289	0.5538 0.5216	0.5606	0.4951	0.5374	Ave		0.5380			0.1000	4.7		15.0			
Vinyl acetate	0.3773 0.3095	0.3539 0.3371	0.3366	0.3173	0.3269	Ave		0.3369				6.8		15.0			
2-Butanone (MEK)	+++++ 0.0341	0.0362 0.0374	0.0401	0.0340	0.0384	Ave		0.0367				6.6		15.0			
cis-1,2-Dichloroethene	0.4362 0.3775	0.4372 0.3784	0.3849	0.3494	0.3797	Ave		0.3919				8.3		15.0			
2,2-Dichloropropane	+++++ 0.5210	0.9496 0.5108	0.7480	0.5798	0.5719	Lin2	0.4471	0.5085							0.9990		0.9900
Bromochloromethane	0.1738 0.1635	0.1655 0.1660	0.1637	0.1540	0.1675	Ave		0.1649				3.6		15.0			
Tetrahydrofuran	+++++ 0.0227	0.0214 0.0254	0.0220	0.0227	0.0247	Ave		0.0231				6.8		15.0			
Chloroform	0.6326 0.6266	0.6095 0.6222	0.6257	0.5719	0.6348	Ave		0.6176				3.5		30.0			
1,1,1-Trichloroethane	0.7664 0.6389	0.6389 0.6311	0.6413	0.6319	0.6506	Ave		0.6570				7.4		15.0			
Cyclohexane	0.4950 0.4652	0.4841 0.4760	0.4772	0.4549	0.4637	Ave		0.4737				2.9		15.0			
1,1-Dichloropropene	0.5429 0.4765	0.5077 0.4969	0.4982	0.4760	0.4427	Ave		0.4916				6.3		15.0			
Carbon tetrachloride	0.6216 0.5673	0.5955 0.5907	0.5909	0.5636	0.6076	Ave		0.5910				3.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	+++++ 0.4336	0.5879 0.4277	0.4751	0.3748	0.3965	Lin1	2.3128	0.4207							0.9970		0.9900
1,2-Dichloroethane	0.2574 0.2415	0.2530 0.2564	0.2491	0.2369	0.2533	Ave		0.2497				3.1		15.0			
Benzene	1.0334 0.9171	0.9414 0.9327	0.9290	0.8788	0.9202	Ave		0.9361				5.1		15.0			
Trichloroethene	0.4702 0.4587	0.4292 0.4584	0.4626	0.4328	0.4690	Ave		0.4544				3.7		15.0			
1,2-Dichloropropane	0.3467 0.3113	0.3311 0.3225	0.3154	0.3015	0.3230	Ave		0.3216				4.5		30.0			
Methylcyclohexane	0.4947 0.4185	0.4432 0.4414	0.4433	0.4309	0.4432	Ave		0.4450				5.3		15.0			
Dibromomethane	0.2782 0.2272	0.2594 0.2358	0.2441	0.2211	0.2409	Ave		0.2438				8.0		15.0			
Bromodichloromethane	0.5893 0.5965	0.5445 0.5902	0.5586	0.5307	0.5824	Ave		0.5703				4.5		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0928	0.1038 0.1000	0.0986	0.0882	0.0986	Ave		0.0970				5.7		15.0			
cis-1,3-Dichloropropene	2.2214 2.1763	2.1193 2.2311	2.1715	2.0262	2.2296	Ave		2.1679				3.4		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.1109	0.1132 0.1244	0.1141	0.1094	0.1232	Ave		0.1159				5.5		15.0			
Toluene	1.2874 1.1458	1.2323 1.1487	1.2044	1.1180	1.1603	Ave		1.1853				5.0		30.0			
trans-1,3-Dichloropropene	0.3488 0.3210	0.3407 0.3341	0.3470	0.3170	0.3329	Ave		0.3345				3.6		15.0			
Ethyl methacrylate	1.1072 1.0448	1.0343 1.1715	1.0982	0.9388	1.1022	Ave		1.0710				6.9		15.0			
1,1,2-Trichloroethane	0.2408 0.2165	0.2242 0.2243	0.2213	0.2078	0.2256	Ave		0.2229				4.5		15.0			
1,3-Dichloropropane	1.6360 1.6607	1.6912 1.6895	1.6269	1.4917	1.7078	Ave		1.6434				4.5		15.0			
Tetrachloroethene	2.1028 2.1802	2.1324 2.2133	2.1959	1.9765	2.2191	Ave		2.1457				4.0		15.0			
2-Hexanone	+++++ 0.3441	0.3243 0.4087	0.3802	0.3314	0.3862	Ave		0.3625				9.4		15.0			
Dibromochloromethane	2.2445 2.0171	1.9647 2.1333	2.2460	1.8564	2.0834	Ave		2.0779				6.9		15.0			
1,2-Dibromoethane (EDB)	1.4584 1.4118	1.4322 1.5103	1.4039	1.3278	1.5006	Ave		1.4350				4.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorobenzene	3.9909 3.8792	3.7682 3.9714	3.9032	3.5366	3.9055	Ave		3.8507			0.3000	4.1		15.0			
1,1,1,2-Tetrachloroethane	1.8500 1.8824	1.7896 1.9202	1.8539	1.6667	1.9078	Ave		1.8386				4.7		15.0			
Ethylbenzene	2.1115 1.9516	1.9172 1.9659	1.9607	1.7961	1.9421	Ave		1.9493				4.7		30.0			
m-Xylene & p-Xylene	3.3678 2.6608	2.8652 2.6993	2.7908	2.4261	2.6312	Ave		2.7773				10.6		15.0			
o-Xylene	2.6730 2.3420	2.3958 2.3621	2.4518	2.1095	2.3328	Ave		2.3810				7.0		15.0			
Styrene	3.9524 3.8247	3.6951 3.8931	3.6575	3.4085	3.7991	Ave		3.7472				4.8		15.0			
Bromoform	1.3588 1.3547	1.3172 1.4385	1.3404	1.2531	1.4319	Ave		1.3564			0.1000	4.8		15.0			
Isopropylbenzene	4.3500 3.7181	3.3772 3.7982	3.8947	3.5811	3.7034	Ave		3.7747				8.0		15.0			
Cyclohexanone	+++++ 0.0137	0.0144 0.0155	0.0162	0.0135	0.0146	Ave		0.0147				7.1		15.0			
Bromobenzene	1.0689 1.0606	1.0600 1.0927	1.0765	1.0104	1.0622	Ave		1.0616				2.4		15.0			
1,1,2,2-Tetrachloroethane	0.7434 0.6604	0.7224 0.7286	0.7148	0.6566	0.6963	Ave		0.7032			0.3000	4.8		15.0			
1,2,3-Trichloropropane	0.1939 0.1620	0.1885 0.1759	0.1731	0.1692	0.1743	Ave		0.1767				6.2		15.0			
trans-1,4-Dichloro-2-butene	0.1670 0.1276	0.1697 0.1397	0.1458	0.1522	0.1281	Ave		0.1472				11.5		15.0			
N-Propylbenzene	0.9972 0.8595	0.8666 0.8723	0.9272	0.8473	0.8609	Ave		0.8901				6.0		15.0			
2-Chlorotoluene	0.8367 0.7426	0.7928 0.7609	0.7767	0.7193	0.7346	Ave		0.7662				5.2		15.0			
4-Chlorotoluene	1.0465 0.8561	0.9048 0.8777	0.8514	0.7715	0.8661	Ave		0.8820				9.4		15.0			
1,3,5-Trimethylbenzene	3.0794 2.8689	2.8976 2.8738	2.8993	2.7409	2.6792	Ave		2.8627				4.5		15.0			
tert-Butylbenzene	3.0720 2.9302	3.1232 2.9301	3.0714	2.8699	2.9281	Ave		2.9893				3.2		15.0			
1,2,4-Trimethylbenzene	3.0316 2.8306	2.9126 2.8038	2.8972	2.7005	2.7830	Ave		2.8513				3.7		15.0			
sec-Butylbenzene	0.9561 0.7652	0.8464 0.7609	0.8171	0.7738	0.7719	Ave		0.8130				8.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3-Dichlorobenzene	1.8513 1.6352	1.6688 1.6796	1.6932	1.5789	1.6156	Ave		1.6747				5.2		15.0			
4-Isopropyltoluene	3.7319 3.3450	3.5345 3.2932	3.2658	3.2110	3.3573	Ave		3.3912				5.4		15.0			
1,4-Dichlorobenzene	2.3691 1.9336	2.1529 1.8911	2.0423	1.8801	1.9638	Ave		2.0333				8.7		15.0			
1,2-Dichlorobenzene	1.9850 1.4750	1.4719 1.5036	1.4662	1.4233	1.4378	Ave		1.5375				12.9		15.0			
n-Butylbenzene	4.4462 3.5340	3.7129 3.4179	3.6477	3.4407	3.3501	Ave		3.6499				10.2		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1451	0.1694 0.1563	0.1567	0.1450	0.1547	Ave		0.1545				5.8		15.0			
1,2,4-Trichlorobenzene	1.8770 1.1017	1.4326 1.0612	1.2622	1.1257	1.1514	Lin2	0.3949	1.0698							0.9990		0.9900
Hexachlorobutadiene	1.5605 0.9326	1.1377 0.8387	1.0083	0.9304	0.9542	Lin2	0.3271	0.8716							0.9960		0.9900
Naphthalene	1.9769 0.8946	1.3211 0.9649	1.1247	0.9379	0.9696	Lin2	0.5230	0.8818							0.9940		0.9900
1,2,3-Trichlorobenzene	1.5471 0.8595	1.1191 0.8500	0.9349	0.8344	0.9051	Lin2	0.3470	0.8160							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428698/10	Z1188.D
Level 2	IC 280-428698/11	Z1189.D
Level 3	IC 280-428698/12	Z1190.D
Level 4	IC 280-428698/13	Z1191.D
Level 5	IC 280-428698/14	Z1192.D
Level 6	IC 280-428698/15	Z1193.D
Level 7	IC 280-428698/16	Z1194.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	19608 937927	38001 2385240	71914	179691	411156	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	15143 600217	24806 1564305	50696	112894	243461	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	10419 495889	20378 1268610	40257	97589	207579	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	14193 657523	26403 1663997	53266	123864	263278	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	8436 337037	15985 851377	25272	63578	137561	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	27100 1273611	50335 3193784	102778	240816	522985	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	31256 1383401	58444 3556962	115791	276450	589022	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	7041 237586	11970 634253	21547	48346	105091	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	2742 118897	5994 330911	10914	23010	50371	2.96 148	5.93 356	11.9	29.6	59.3
1,1-Dichloroethene	FB	Ave	15383 648445	27329 1668474	53173	124886	269234	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	+++++ 132124	7080 353733	13337	27004	57561	+++++ 100	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	19851 899469	37802 2319575	73865	178870	384913	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	33587 1651630	66143 4182078	128375	305797	665700	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	49212 2124411	88819 5379468	171224	403028	865701	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	5770 261068	12074 748355	22175	51938	120001	1.00 50.0	2.00 120	4.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	20691 963028	39831 2448711	76927	173905	392735	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylene Chloride	FB	Ave	+++++ 553526	22783 1413733	48270	105467	225214	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Lin1	+++++ 138407	8309 378986	11545	30849	60902	+++++ 250	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Ave	8466 430932	21066 1189021	37179	81357	186829	5.00 250	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	15553 741962	31631 1893627	58379	139840	300958	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	20170 865400	38349 2344050	71688	167087	369000	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	16545 813528	34681 2077070	66679	164354	341607	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	23802 1114152	46685 2791339	92343	205253	451468	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	31586 1304176	59660 3608081	110890	263059	549323	1.00 50.0	2.00 120	4.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	+++++ 287376	12201 800633	26445	56450	128975	+++++ 100	4.00 240	8.00	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	18259 795217	36854 2024834	63410	144834	319022	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Lin2	+++++ 1097566	80052 2733199	123222	240381	480455	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	7274 344534	13951 888162	26958	63861	140727	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 95839	3600 271981	7244	18835	41464	+++++ 50.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	26482 1320023	51379 3329265	103063	237105	533317	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	32083 1345940	53861 3377040	105642	261966	546556	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	20721 979927	40812 2547164	78611	188599	389604	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	22724 1003881	42799 2658983	82072	197329	371957	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	26019 1195162	50198 3161022	97343	233667	510440	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Lin1	+++++ 136423	6255 398028	12493	27889	57516	+++++ 625	25.0 1500	50.0	125	250
1,2-Dichloroethane	FB	Ave	10773 508834	21331 1371931	41028	98197	212821	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	43257 1931996	79355 4991148	153025	364322	773104	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	19683 966350	36178 2453065	76208	179447	393986	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	14511 655835	27907 1725785	51962	124984	271369	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	20708 881533	37359 2361716	73030	178661	372319	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	11644 478595	21868 1261872	40207	91649	202364	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	24666 1256495	45903 3158463	92016	220027	489321	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 195447	8747 535204	16241	36561	82864	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	19330 932294	36873 2397103	72811	176673	381341	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 934449	38181 2662227	75185	181495	414148	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	53892 2413671	103881 6146837	198390	463495	974825	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	14601 676156	28717 1787755	57166	131424	279649	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	9635 447564	17995 1258665	36824	81854	188516	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	10078 456004	18897 1200391	36451	86134	189551	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	14236 711414	29424 1815138	54550	130071	292093	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	18298 933926	37101 2377927	73629	172338	379539	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	+++++ 589605	22571 1756437	50994	115583	264205	+++++ 100	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	19531 864078	34183 2291977	75308	161866	356332	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	12691 604793	24919 1622676	47072	115780	256655	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	34728 1661758	65562 4266883	130877	308365	667966	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	16098 806369	31137 2063028	62162	145322	326290	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	18374 836022	33357 2112187	65744	156607	332155	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m-Xylene & p-Xylene	CBNZ d5	Ave	29306 1139815	49851 2900163	93576	211538	450027	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	23260 1003263	41684 2537871	82209	183933	398978	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	34393 1638390	64289 4182746	122638	297196	649768	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	11824 580312	22918 1545539	44943	109259	244904	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	72674 3108339	112921 7848903	251448	578427	1251567	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	+++++ 235353	9996 667074	21790	47255	99985	+++++ 1000	40.0 2400	80.0	200	400
Bromobenzene	DCBd 4	Ave	17858 886686	35443 2257972	69500	163194	358965	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	12420 552068	24155 1505720	46146	106048	235322	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	3240 135471	6304 363420	11176	27325	58894	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	2790 106653	5675 288787	9415	24578	43299	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	16659 718508	28975 1802690	59861	136863	290954	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	13979 620842	26507 1572453	50147	116175	248255	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	17484 715734	30252 1813762	54969	124619	292690	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	51446 2398385	96886 5938664	187185	442705	905451	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	51323 2449657	104429 6055096	198291	463550	989552	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	50647 2366409	97388 5793977	187044	436183	940529	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	15973 639725	28299 1572358	52753	124981	260851	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	30929 1367007	55798 3470804	109316	255028	546003	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	62347 2796445	118180 6805353	210846	518641	1134614	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	39580 1616463	71986 3907980	131850	303682	663678	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	33163 1233115	49214 3107105	94662	229894	485901	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 12:35 Calibration End Date: 09/07/2018 14:49 Calibration ID: 33627

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	74280 2954392	124144 7063102	235498	555742	1132167	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 121281	5663 323022	10119	23422	52267	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Lin2	31358 921011	47900 2193067	81487	181829	389105	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Lin2	26070 779661	38041 1733120	65099	150281	322484	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Lin2	33028 747877	44173 1993909	72613	151497	327694	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Lin2	25847 718548	37418 1756570	60356	134777	305886	0.500 25.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Sep-2018 12:35:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:07 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: waldorfj Date: 07-Sep-2018 14:53:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.333	3.347	-0.014	0	142457	250.0	250.0	
* 2 Fluorobenzene	96	6.118	6.115	0.003	99	1046495	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.696	10.693	0.003	87	217544	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.766	0.003	95	417664	12.5	12.5	
27 Dichlorodifluoromethane	85	1.818	1.832	-0.014	99	19608	0.5000	0.5173	
30 Chloromethane	50	1.993	1.989	0.003	78	15143	0.5000	0.6020	
32 Vinyl chloride	62	2.045	2.059	-0.014	97	10419	0.5000	0.5155	
35 Bromomethane	94	2.271	2.285	-0.014	89	14193	0.5000	0.5368	
36 Chloroethane	64	2.306	2.320	-0.014	97	8436	0.5000	0.5974	
37 Dichlorofluoromethane	67	2.445	2.459	-0.014	99	27100	0.5000	0.5303	
38 Trichlorofluoromethane	101	2.497	2.529	-0.032	99	31256	0.5000	0.5408	
40 Ethyl ether	59	2.689	2.685	0.004	91	7041	0.5000	0.6441	
44 Acrolein	56	2.776	2.790	-0.014	21	2742	2.96	3.11	
45 1,1-Dichloroethene	96	2.898	2.912	-0.014	97	15383	0.5000	0.5702	
48 Acetone	43		2.929				ND	ND	
46 1,1,2-Trichloro-1,2,2-trif	151	2.950	2.946	0.004	96	19851	0.5000	0.5318	
49 Iodomethane	142	3.037	3.051	-0.014	99	33587	0.5000	0.5142	
50 Carbon disulfide	76	3.124	3.138	-0.014	100	49212	0.5000	0.5648	
52 3-Chloro-1-propene	41	3.194	3.208	-0.014	83	20691	0.5000	0.5347	
51 Methyl acetate	43	3.211	3.208	0.003	38	5770	1.00	1.02	
54 Methylene Chloride	84		3.312				ND	ND	U
55 2-Methyl-2-propanol	59		3.434				ND	ND	U
58 Acrylonitrile	53	3.524	3.538	-0.014	95	8466	5.00	4.65	
57 trans-1,2-Dichloroethene	96	3.594	3.591	0.003	98	15553	0.5000	0.5196	
56 Methyl tert-butyl ether	73	3.611	3.608	0.003	79	20170	0.5000	0.5506	
59 Hexane	57	3.872	3.869	0.003	95	16545	0.5000	0.4894	
62 1,1-Dichloroethane	63	3.994	4.008	-0.014	96	23802	0.5000	0.5285	
61 Vinyl acetate	43	4.047	4.043	0.004	96	31586	1.00	1.12	
65 cis-1,2-Dichloroethene	96	4.656	4.652	0.004	81	18259	0.5000	0.5565	
67 2-Butanone (MEK)	43		4.652				ND	ND	
66 2,2-Dichloropropane	77		4.687				ND	ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.934	4.948	-0.014	93	7274	0.5000	0.5270	
74 Chloroform	83	5.021	5.035	-0.014	95	26482	0.5000	0.5122	
72 Tetrahydrofuran	42		5.035				ND	ND	
75 1,1,1-Trichloroethane	97	5.300	5.314	-0.014	98	32083	0.5000	0.5833	
76 Cyclohexane	56	5.387	5.401	-0.014	89	20721	0.5000	0.5224	
78 1,1-Dichloropropene	75	5.491	5.488	0.003	97	22724	0.5000	0.5522	
77 Carbon tetrachloride	117	5.526	5.523	0.003	96	26019	0.5000	0.5258	
80 Isobutyl alcohol	41		5.645				ND	ND	U
82 1,2-Dichloroethane	62	5.752	5.749	0.003	56	10773	0.5000	0.5154	
81 Benzene	78	5.752	5.749	0.003	97	43257	0.5000	0.5520	
84 n-Heptane	43	6.135	6.132	0.003	38	27510	0.5000	0.5770	
85 Trichloroethene	95	6.623	6.619	0.004	95	19683	0.5000	0.5174	
90 1,2-Dichloropropane	63	6.901	6.915	-0.014	75	14511	0.5000	0.5389	
87 Methylcyclohexane	55	6.919	6.915	0.004	88	20708	0.5000	0.5558	
92 Dibromomethane	93	7.075	7.072	0.003	96	11644	0.5000	0.5705	
93 1,4-Dioxane	88		7.142				ND	ND	
94 Dichlorobromomethane	83	7.302	7.298	0.004	98	24666	0.5000	0.5166	
96 2-Chloroethyl vinyl ether	63		7.768				ND	ND	U
97 cis-1,3-Dichloropropene	75	7.963	7.960	0.003	95	19330	0.5000	0.5123	
98 4-Methyl-2-pentanone (MIBK	43		8.221				ND	ND	U
99 Toluene	91	8.503	8.499	0.004	98	53892	0.5000	0.5431	
100 trans-1,3-Dichloropropene	75	8.816	8.813	0.003	92	14601	0.5000	0.5214	
101 Ethyl methacrylate	69	9.025	9.022	0.003	67	9635	0.5000	0.5169	
102 1,1,2-Trichloroethane	97	9.112	9.109	0.003	85	10078	0.5000	0.5400	
103 Tetrachloroethene	164	9.373	9.370	0.003	96	18298	0.5000	0.4900	
104 1,3-Dichloropropane	76	9.373	9.370	0.003	70	14236	0.5000	0.4977	
105 2-Hexanone	43		9.544				ND	ND	U
107 Chlorodibromomethane	129	9.721	9.735	-0.014	90	19531	0.5000	0.5401	
109 Ethylene Dibromide	107	9.913	9.909	0.004	99	12691	0.5000	0.5082	
111 Chlorobenzene	112	10.748	10.745	0.003	94	34728	0.5000	0.5182	
113 1,1,1,2-Tetrachloroethane	131	10.887	10.884	0.003	77	16098	0.5000	0.5031	
112 Ethylbenzene	106	10.957	10.954	0.003	99	18374	0.5000	0.5416	
114 m-Xylene & p-Xylene	106	11.166	11.145	0.021	0	29306	0.5000	0.6063	
115 o-Xylene	106	11.827	11.824	0.003	97	23260	0.5000	0.5613	
116 Styrene	104	11.845	11.841	0.004	94	34393	0.5000	0.5274	
117 Bromoform	173	12.123	12.120	0.003	94	11824	0.5000	0.5009	
118 Isopropylbenzene	105	12.472	12.485	-0.013	95	72674	0.5000	0.5762	
119 Cyclohexanone	55		12.590				ND	ND	U
121 Bromobenzene	156	12.959	12.955	0.004	91	17858	0.5000	0.5034	
122 1,1,2,2-Tetrachloroethane	83	12.976	12.990	-0.014	76	12420	0.5000	0.5286	
124 1,2,3-Trichloropropane	110	13.046	13.043	0.003	78	3240	0.5000	0.5488	
125 trans-1,4-Dichloro-2-buten	53	13.098	13.095	0.003	58	2790	0.5000	0.5674	
123 N-Propylbenzene	120	13.203	13.199	0.004	99	16659	0.5000	0.5601	
126 2-Chlorotoluene	126	13.324	13.321	0.003	95	13979	0.5000	0.5460	
128 4-Chlorotoluene	126	13.533	13.513	0.021	97	17484	0.5000	0.5933	
127 1,3,5-Trimethylbenzene	105	13.533	13.547	-0.014	93	51446	0.5000	0.5378	
129 tert-Butylbenzene	119	14.090	14.104	-0.014	91	51323	0.5000	0.5138	
130 1,2,4-Trimethylbenzene	105	14.195	14.191	0.004	94	50647	0.5000	0.5316	
131 sec-Butylbenzene	134	14.491	14.505	-0.014	94	15973	0.5000	0.5880	
132 1,3-Dichlorobenzene	146	14.647	14.644	0.003	95	30929	0.5000	0.5527	
133 4-Isopropyltoluene	119	14.769	14.783	-0.014	94	62347	0.5000	0.5502	
134 1,4-Dichlorobenzene	146	14.804	14.818	-0.014	92	39580	0.5000	0.5826	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.466	15.462	0.004	97	33163	0.5000	0.6455	
137 n-Butylbenzene	91	15.535	15.532	0.003	98	74280	0.5000	0.6091	
139 1,2-Dibromo-3-Chloropropan	157		16.646				ND	ND	U
141 1,2,4-Trichlorobenzene	180	17.624	17.621	0.003	94	31358	0.5000	0.5081	
142 Hexachlorobutadiene	225	17.815	17.812	0.003	97	26070	0.5000	0.5199	
143 Naphthalene	128	17.868	17.847	0.021	98	33028	0.5000	0.5279	
144 1,2,3-Trichlorobenzene	180	18.094	18.091	0.003	96	25847	0.5000	0.5228	
S 146 Xylenes, Total	106				0		1.00	1.17	
S 147 1,2-Dichloroethene, Total	96				0		1.00	1.08	
S 145 1,2-Dichloroethene, Total	1				0		1.00	1.08	
S 148 1,3-Dichloropropene, Total	1				0		1.00	1.03	
S 149 Trihalomethanes, Total	1				0		2.00	2.07	
S 150 Xylenes, Total (URS)	1				0		1.00	1.17	
S 151 Total BTEX	1				0			2.80	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.20	Units: uL

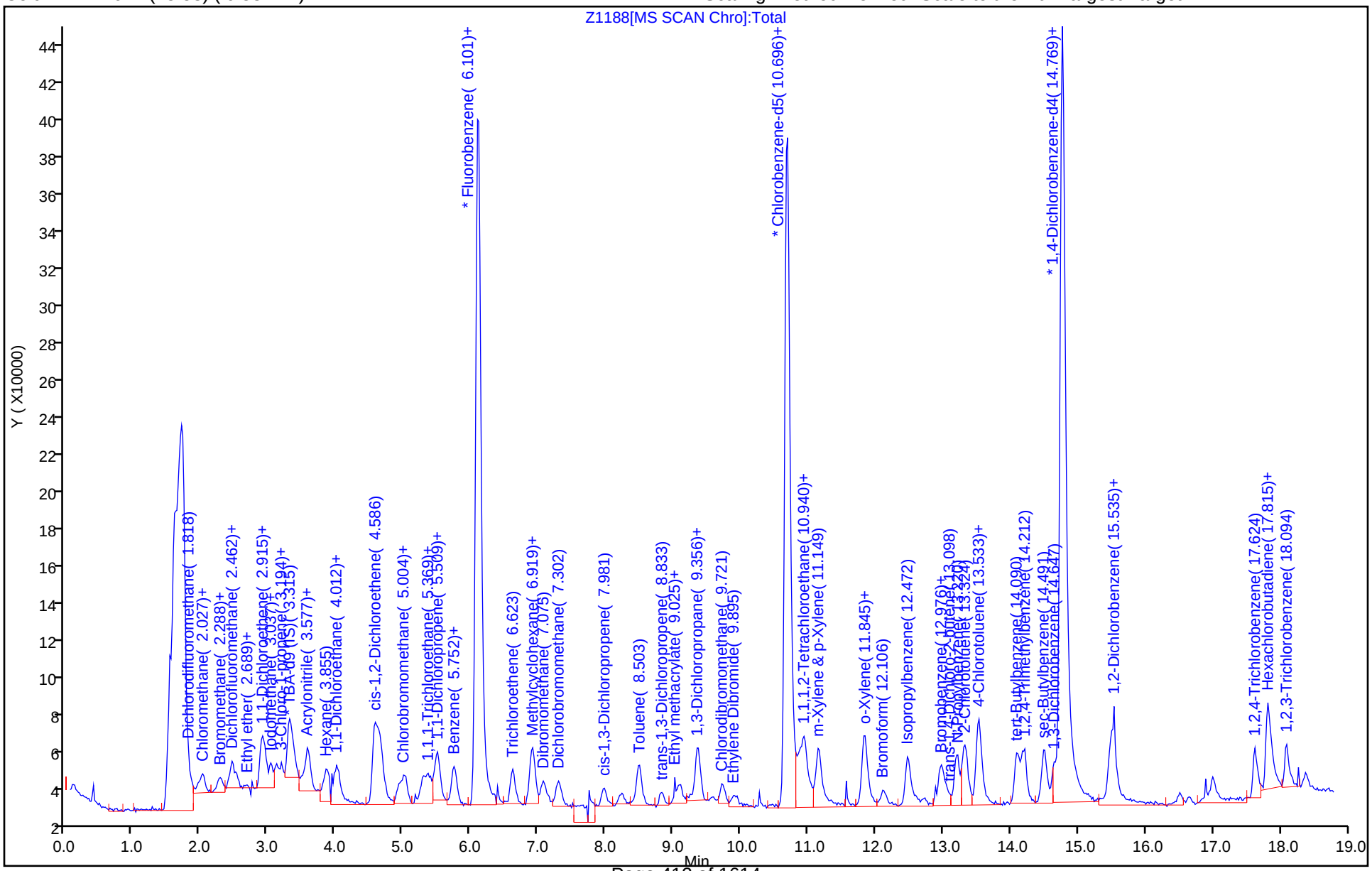
Report Date: 08-Sep-2018 09:12:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D

Injection Date:	07-Sep-2018 12:35:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



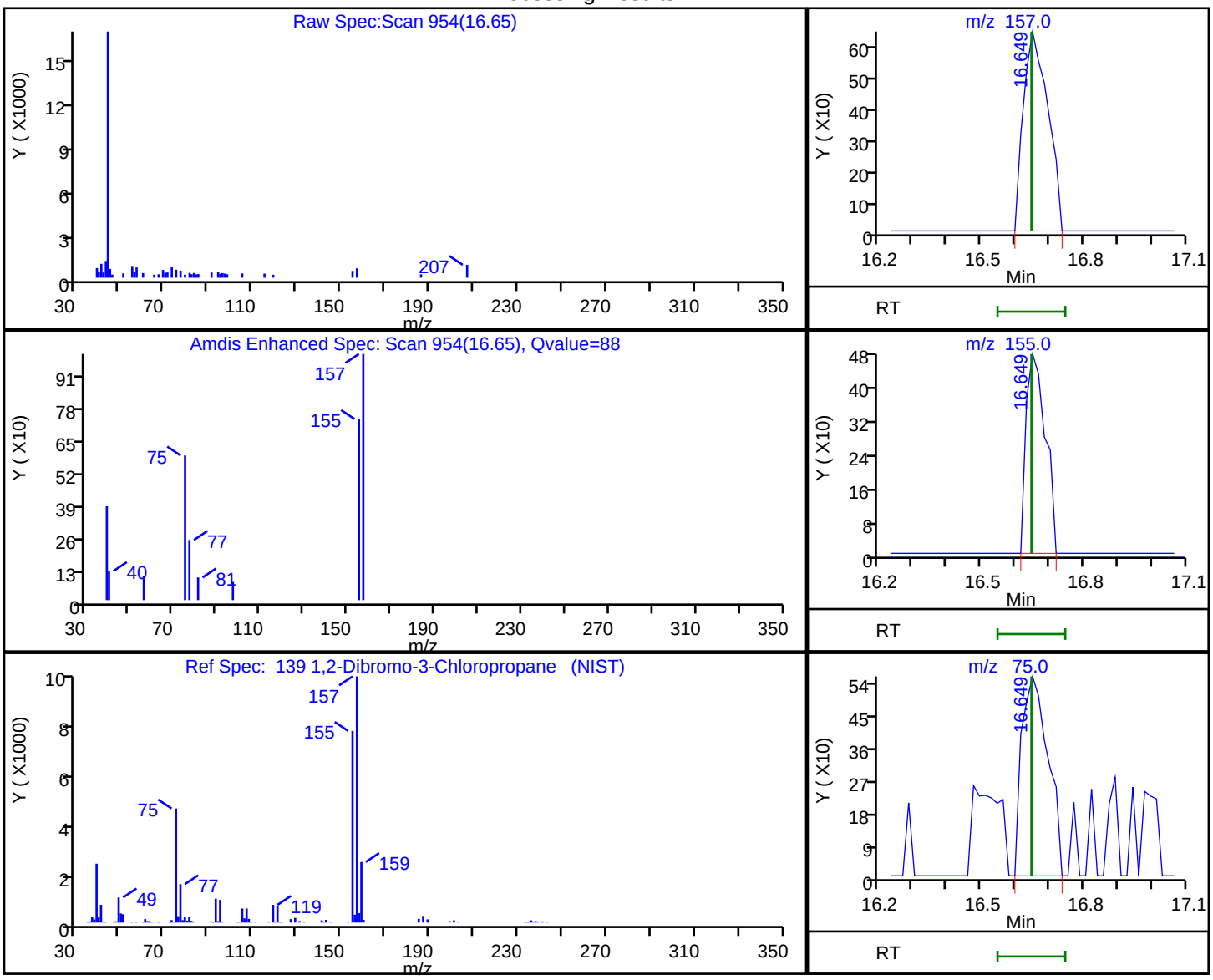
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D
Injection Date: 07-Sep-2018 12:35:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

139 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Processing Results



RT	Mass	Response	Amount
16.65	157.00	3250	0.607005
16.65	155.00	1861	
16.65	75.00	2985	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

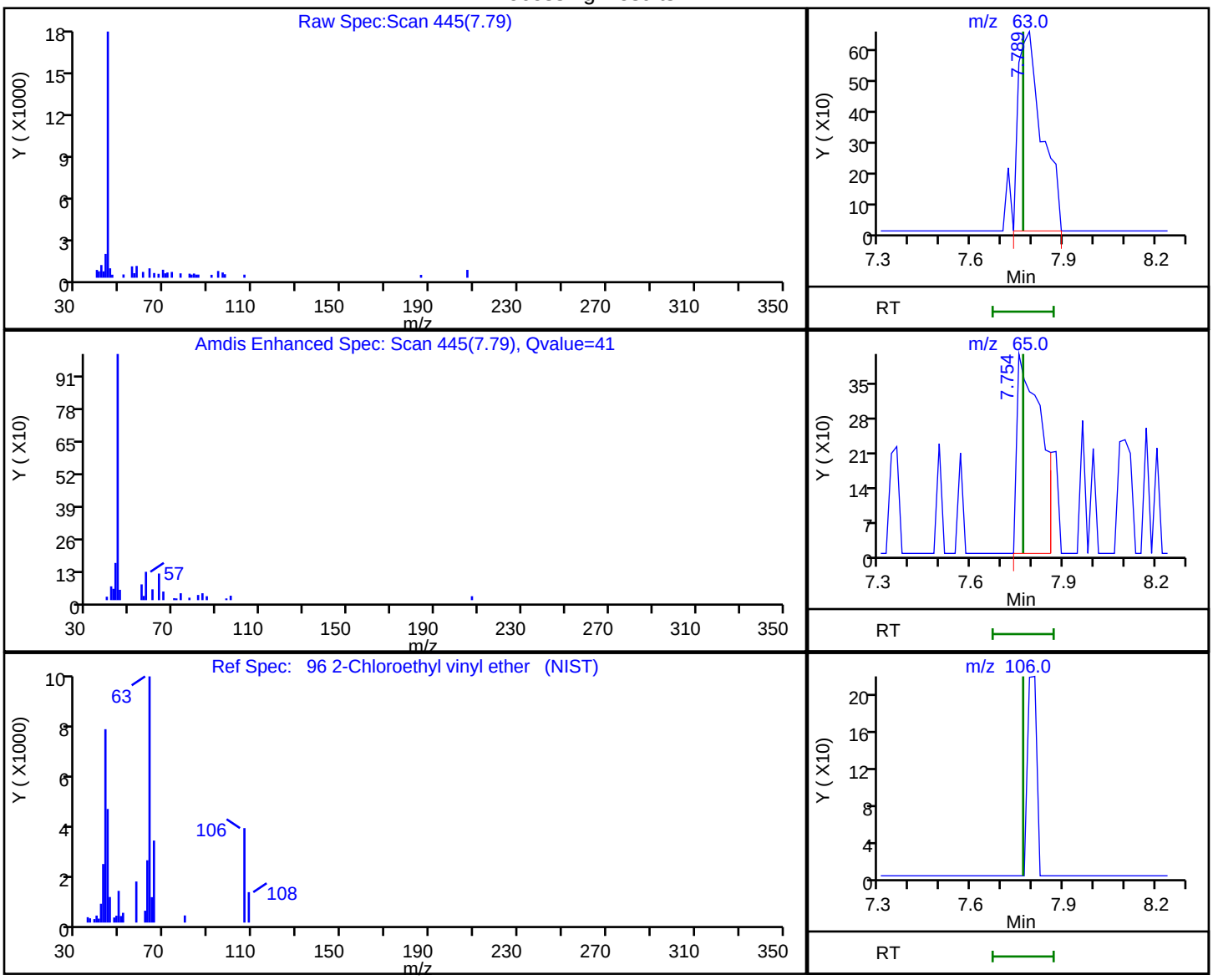
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D				
Injection Date:	07-Sep-2018 12:35:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

96 2-Chloroethyl vinyl ether, CAS: 110-75-8

Processing Results



RT	Mass	Response	Amount
7.79	63.00	3529	0.442860
7.75	65.00	2229	
7.77	106.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

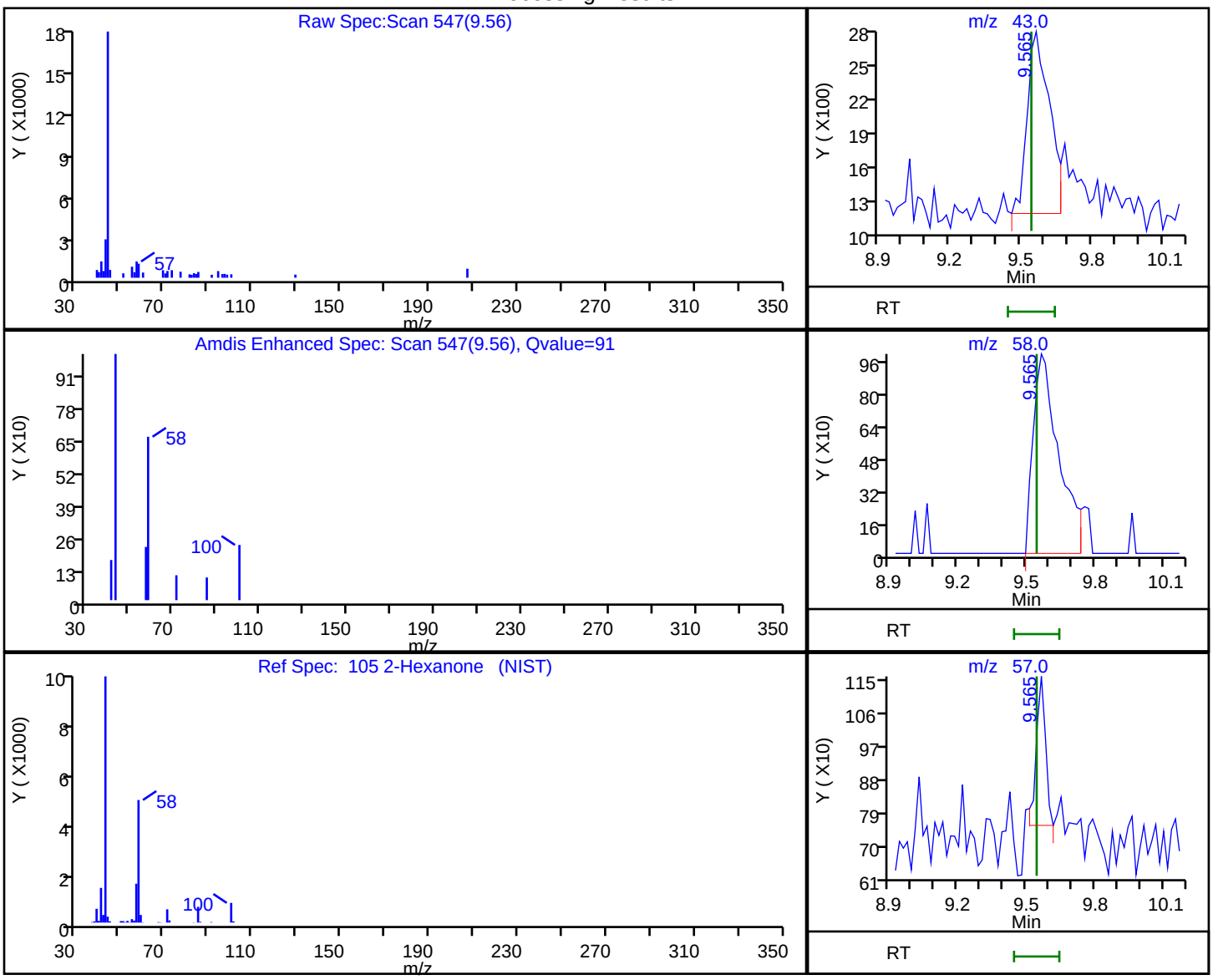
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D
Injection Date: 07-Sep-2018 12:35:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

105 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.56	43.00	9858	1.613036
9.56	58.00	7846	
9.56	57.00	1129	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:18
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

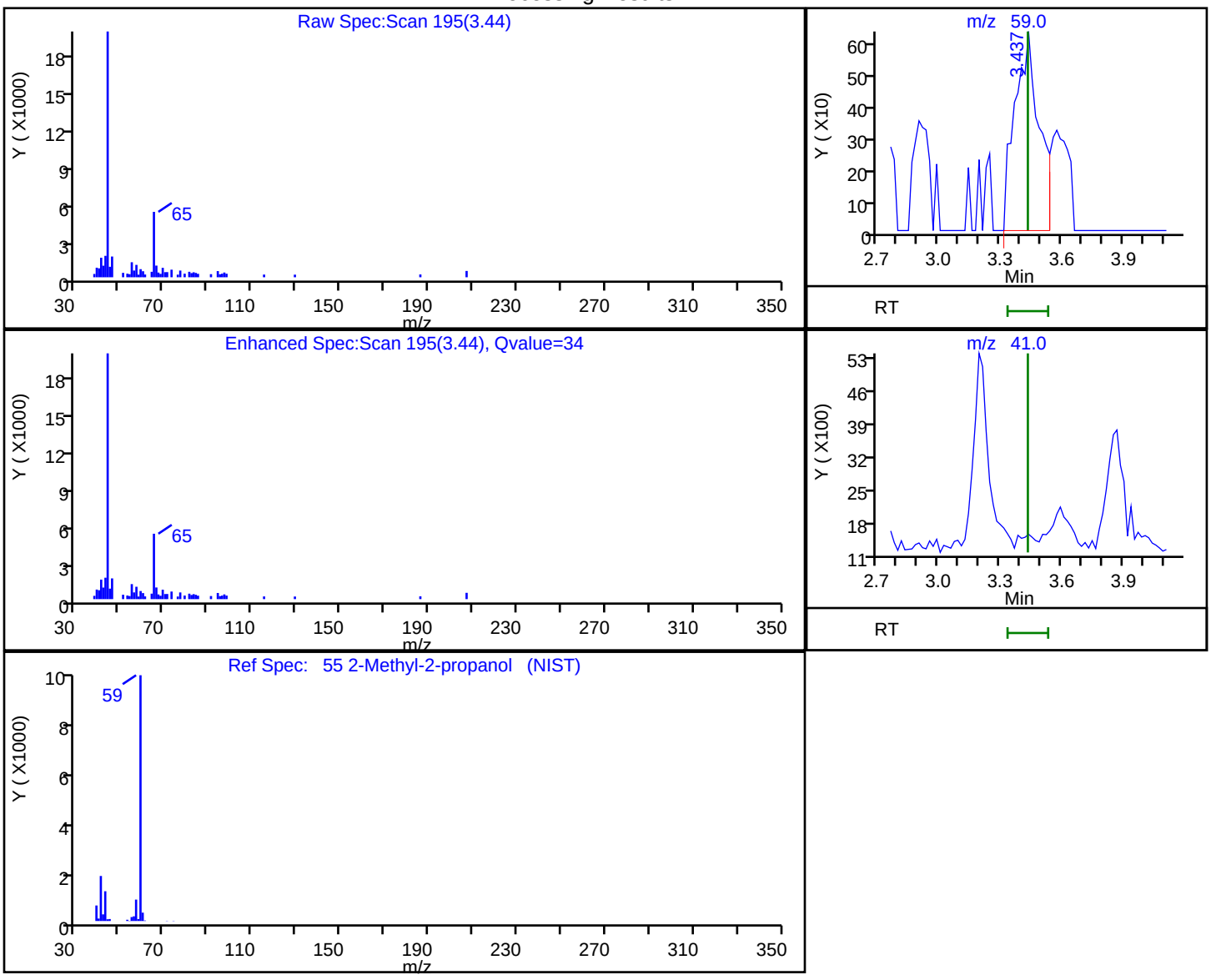
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D
Injection Date: 07-Sep-2018 12:35:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

55 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
3.44	59.00	5284	4.116599
3.43	41.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 08:20:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

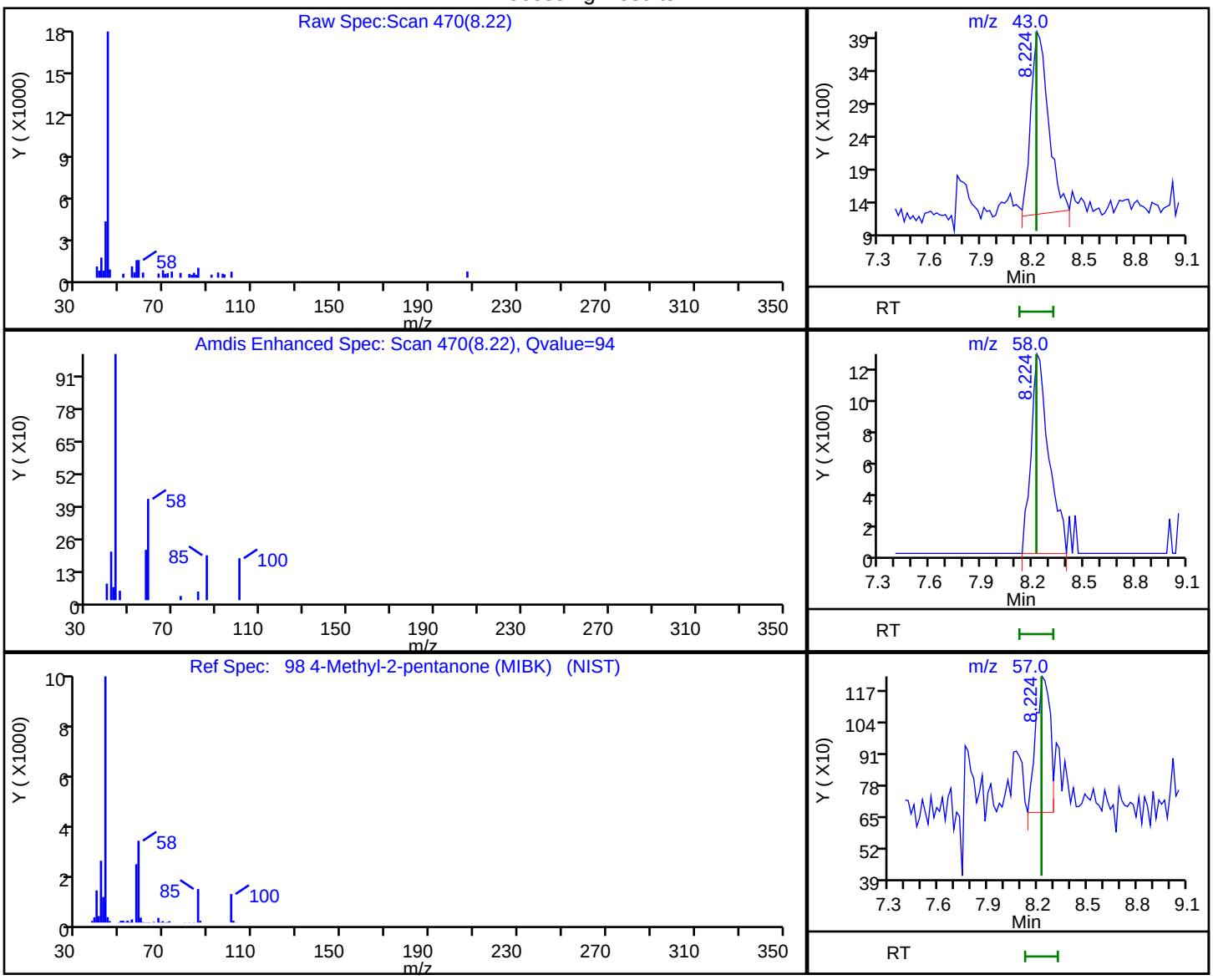
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D
Injection Date: 07-Sep-2018 12:35:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

98 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.22	43.00	19575	2.015151
8.22	58.00	8954	
8.22	57.00	3445	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

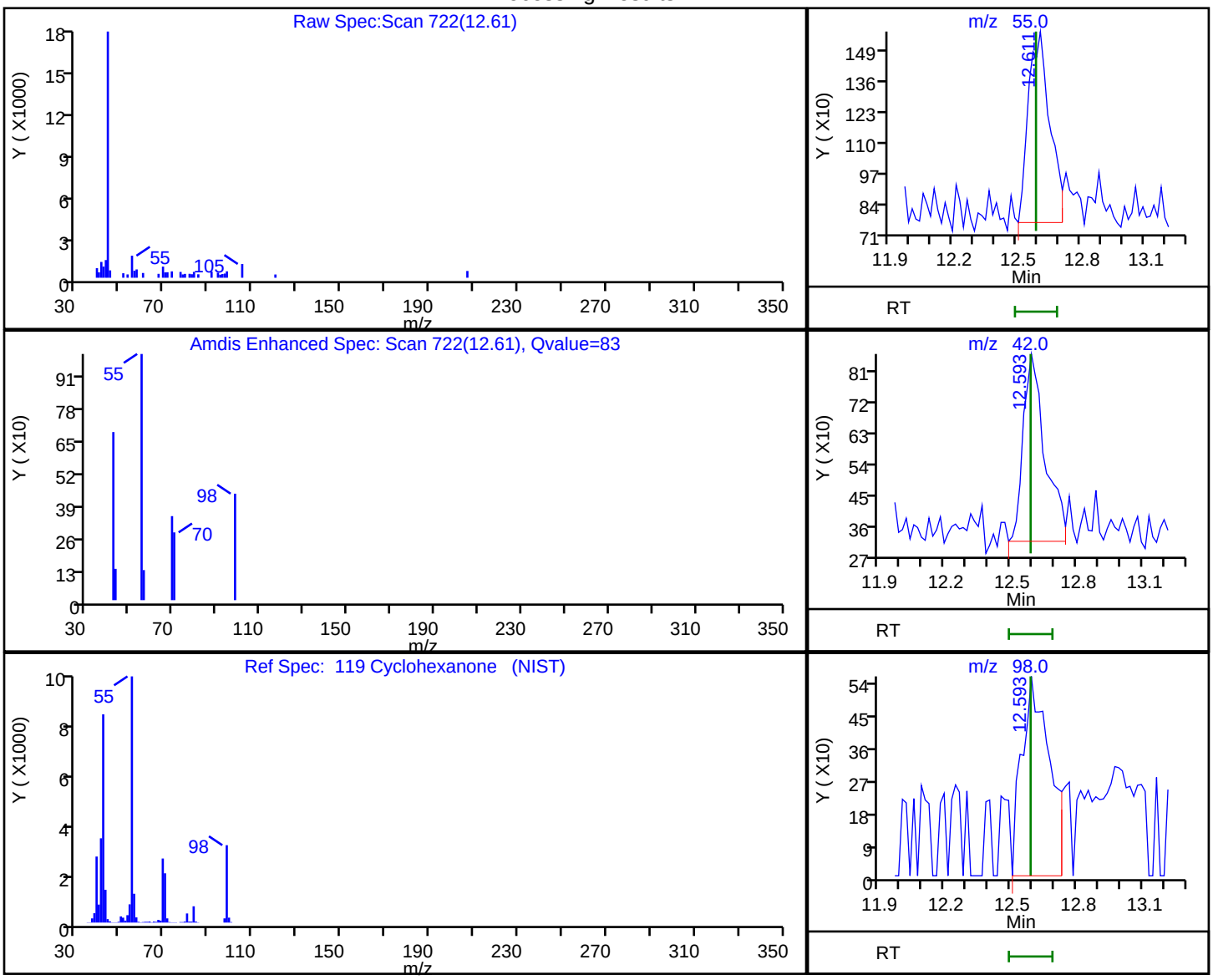
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D				
Injection Date:	07-Sep-2018 12:35:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

119 Cyclohexanone, CAS: 108-94-1

Processing Results



RT	Mass	Response	Amount
12.61	55.00	5789	22.247111
12.59	42.00	3786	
12.59	98.00	4911	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

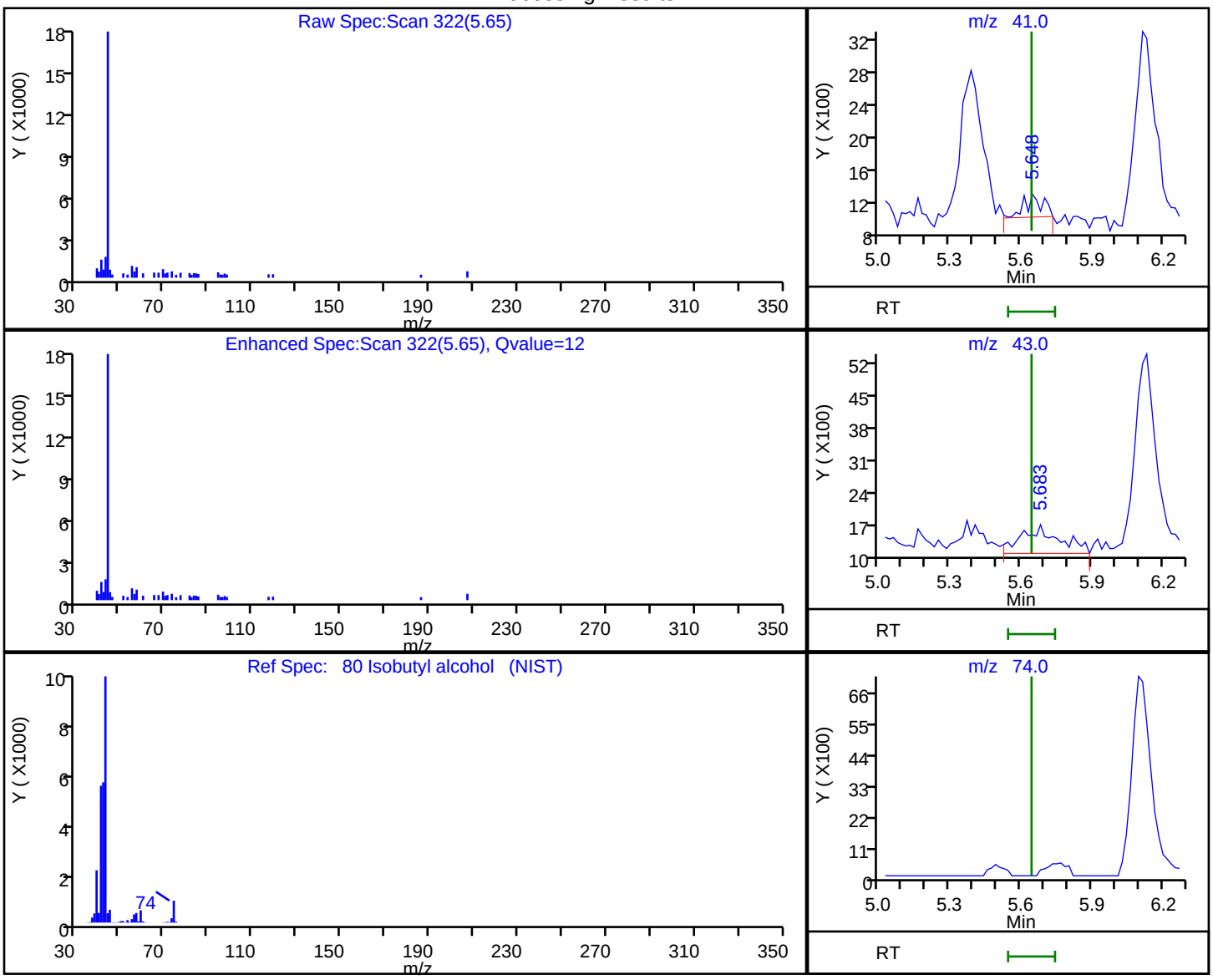
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D				
Injection Date:	07-Sep-2018 12:35:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

80 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
5.65	41.00	1457	7.287720
5.68	43.00	6814	
5.64	74.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 08:21:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

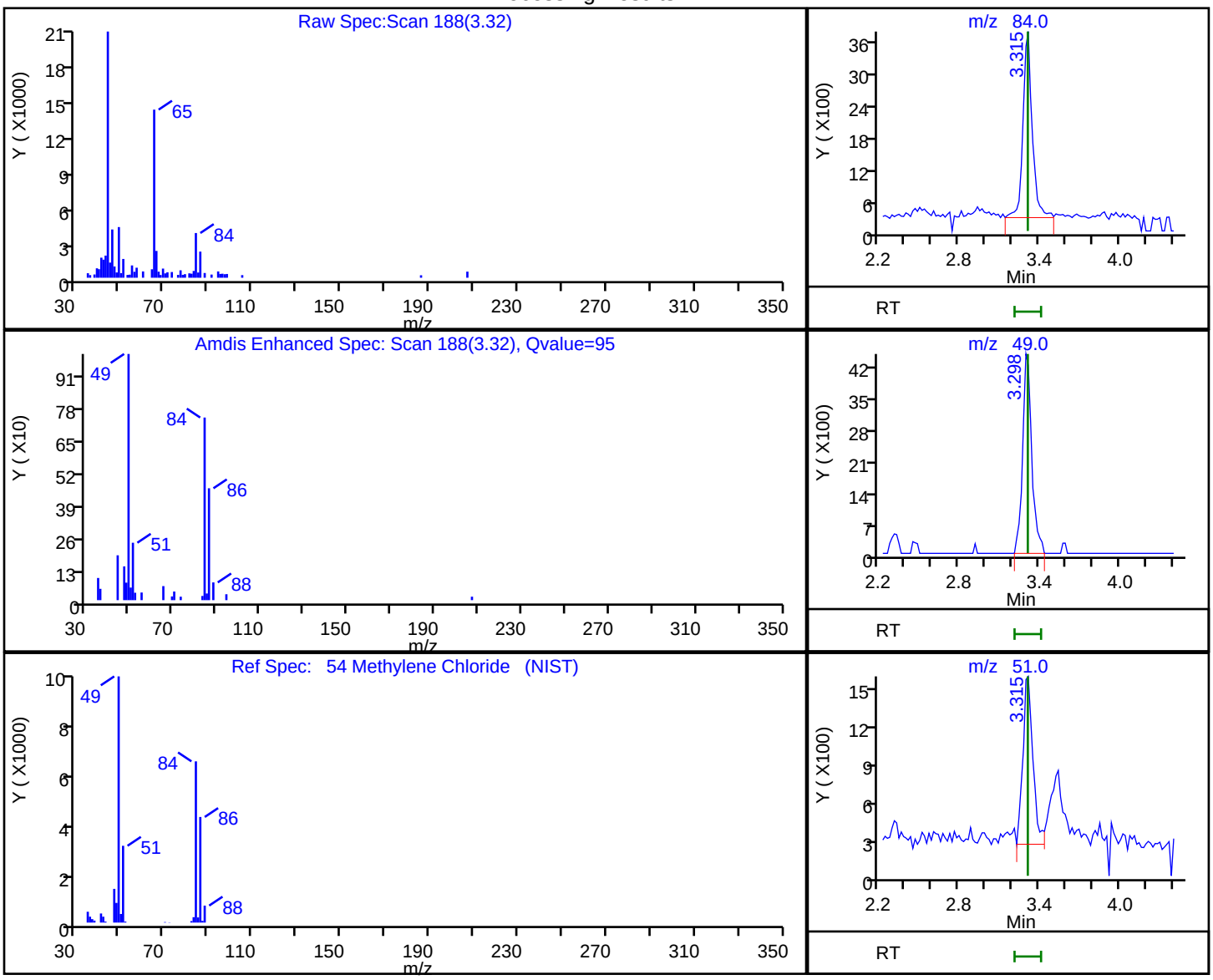
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1188.D				
Injection Date:	07-Sep-2018 12:35:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.32	84.00	16698	0.711293
3.30	49.00	21408	
3.32	51.00	6898	

Reviewer: ilczyszynd, 08-Sep-2018 08:20:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1189.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Sep-2018 12:57:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:10 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 07-Sep-2018 13:29:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.330	3.347	-0.017	0	106404	250.0	250.0	
* 2 Fluorobenzene	96	6.115	6.115	0.000	99	1053717	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.693	10.693	0.000	87	217482	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.766	14.766	0.000	96	417953	12.5	12.5	
27 Dichlorodifluoromethane	85	1.816	1.832	-0.016	98	38001	1.00	1.00	
30 Chloromethane	50	1.972	1.989	-0.017	97	24806	1.00	0.9794	
32 Vinyl chloride	62	2.042	2.059	-0.017	97	20378	1.00	1.00	
35 Bromomethane	94	2.268	2.285	-0.017	89	26403	1.00	0.99	
36 Chloroethane	64	2.320	2.320	0.000	99	15985	1.00	1.12	
37 Dichlorofluoromethane	67	2.460	2.459	0.001	98	50335	1.00	0.9781	
38 Trichlorofluoromethane	101	2.512	2.529	-0.017	98	58444	1.00	1.00	
40 Ethyl ether	59	2.669	2.685	-0.016	93	11970	1.00	1.09	
44 Acrolein	56	2.790	2.790	0.000	92	5994	5.93	6.75	
45 1,1-Dichloroethene	96	2.895	2.912	-0.017	97	27329	1.00	1.01	
48 Acetone	43	2.912	2.929	-0.017	31	7080	4.00	4.72	
46 1,1,2-Trichloro-1,2,2-trif	151	2.947	2.946	0.001	97	37802	1.00	1.01	
49 Iodomethane	142	3.052	3.051	0.001	99	66143	1.00	1.01	
50 Carbon disulfide	76	3.121	3.138	-0.017	99	88819	1.00	1.01	
51 Methyl acetate	43	3.191	3.208	-0.017	42	12074	2.00	2.12	
52 3-Chloro-1-propene	41	3.208	3.208	0.000	87	39831	1.00	1.02	
54 Methylene Chloride	84	3.330	3.312	0.018	95	22783	1.00	1.01	M
55 2-Methyl-2-propanol	59	3.434	3.434	0.000	91	8309	10.0	13.1	
58 Acrylonitrile	53	3.522	3.538	-0.016	98	21066	10.0	11.5	
57 trans-1,2-Dichloroethene	96	3.591	3.591	0.000	96	31631	1.00	1.05	
56 Methyl tert-butyl ether	73	3.591	3.608	-0.017	95	38349	1.00	1.04	
59 Hexane	57	3.870	3.869	0.001	94	34681	1.00	1.03	
62 1,1-Dichloroethane	63	4.009	4.008	0.001	96	46685	1.00	1.03	
61 Vinyl acetate	43	4.044	4.043	0.001	97	59660	2.00	2.10	
67 2-Butanone (MEK)	43	4.653	4.652	0.001	41	12201	4.00	3.94	
65 cis-1,2-Dichloroethene	96	4.653	4.652	0.001	81	36854	1.00	1.12	
66 2,2-Dichloropropane	77	4.653	4.687	-0.034	86	80052	1.00	0.9883	M

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.949	4.948	0.001	95	13951	1.00	1.00	
72 Tetrahydrofuran	42	5.019	5.035	-0.016	38	3600	2.00	1.84	
74 Chloroform	83	5.019	5.035	-0.016	93	51379	1.00	0.9869	
75 1,1,1-Trichloroethane	97	5.297	5.314	-0.017	97	53861	1.00	0.9725	
76 Cyclohexane	56	5.401	5.401	0.000	94	40812	1.00	1.02	
78 1,1-Dichloropropene	75	5.489	5.488	0.000	96	42799	1.00	1.03	
77 Carbon tetrachloride	117	5.523	5.523	0.000	97	50198	1.00	1.01	
80 Isobutyl alcohol	41	5.645	5.645	0.000	86	6255	25.0	29.4	
81 Benzene	78	5.750	5.749	0.001	97	79355	1.00	1.01	
82 1,2-Dichloroethane	62	5.750	5.749	0.001	56	21331	1.00	1.01	
84 n-Heptane	43	6.133	6.132	0.001	92	48780	1.00	1.02	
85 Trichloroethene	95	6.620	6.619	0.001	97	36178	1.00	0.9444	
87 Methylcyclohexane	55	6.916	6.915	0.001	88	37359	1.00	1.00	
90 1,2-Dichloropropane	63	6.916	6.915	0.001	75	27907	1.00	1.03	
92 Dibromomethane	93	7.073	7.072	0.001	98	21868	1.00	1.06	
93 1,4-Dioxane	88		7.142				ND	ND	
94 Dichlorobromomethane	83	7.299	7.298	0.001	99	45903	1.00	0.9548	
96 2-Chloroethyl vinyl ether	63	7.769	7.768	0.001	86	8747	1.00	1.07	
97 cis-1,3-Dichloropropene	75	7.978	7.960	0.018	96	36873	1.00	0.9776	
98 4-Methyl-2-pentanone (MIBK	43	8.239	8.221	0.018	98	38181	4.00	3.91	
99 Toluene	91	8.500	8.499	0.001	99	103881	1.00	1.04	
100 trans-1,3-Dichloropropene	75	8.831	8.813	0.018	92	28717	1.00	1.02	
101 Ethyl methacrylate	69	9.022	9.022	0.000	89	17995	1.00	0.9657	
102 1,1,2-Trichloroethane	97	9.109	9.109	0.000	88	18897	1.00	1.01	
104 1,3-Dichloropropane	76	9.370	9.370	0.000	71	29424	1.00	1.03	
103 Tetrachloroethene	164	9.370	9.370	0.000	98	37101	1.00	0.99	
105 2-Hexanone	43	9.544	9.544	0.000	99	22571	4.00	3.58	
107 Chlorodibromomethane	129	9.736	9.735	0.001	90	34183	1.00	0.9455	
109 Ethylene Dibromide	107	9.910	9.909	0.001	97	24919	1.00	1.00	
111 Chlorobenzene	112	10.728	10.745	-0.017	95	65562	1.00	0.9786	
113 1,1,1,2-Tetrachloroethane	131	10.885	10.884	0.001	85	31137	1.00	0.9733	
112 Ethylbenzene	106	10.954	10.954	0.000	99	33357	1.00	0.9835	
114 m-Xylene & p-Xylene	106	11.163	11.145	0.018	0	49851	1.00	1.03	
115 o-Xylene	106	11.825	11.824	0.001	97	41684	1.00	1.01	
116 Styrene	104	11.859	11.841	0.018	94	64289	1.00	0.9861	
117 Bromoform	173	12.121	12.120	0.001	95	22918	1.00	0.9711	
118 Isopropylbenzene	105	12.486	12.485	0.001	95	112921	1.00	0.8947	M
119 Cyclohexanone	55	12.591	12.590	0.001	87	9996	40.0	39.2	
121 Bromobenzene	156	12.956	12.955	0.001	92	35443	1.00	1.00	
122 1,1,2,2-Tetrachloroethane	83	12.991	12.990	0.001	94	24155	1.00	1.03	
124 1,2,3-Trichloropropane	110	13.026	13.043	-0.017	80	6304	1.00	1.07	
125 trans-1,4-Dichloro-2-buten	53	13.113	13.095	0.018	78	5675	1.00	1.15	
123 N-Propylbenzene	120	13.200	13.199	0.001	99	28975	1.00	0.9735	
126 2-Chlorotoluene	126	13.322	13.321	0.001	97	26507	1.00	1.03	
128 4-Chlorotoluene	126	13.513	13.513	0.001	97	30252	1.00	1.03	
127 1,3,5-Trimethylbenzene	105	13.531	13.547	-0.016	92	96886	1.00	1.01	
129 tert-Butylbenzene	119	14.105	14.104	0.001	91	104429	1.00	1.04	
130 1,2,4-Trimethylbenzene	105	14.192	14.191	0.001	96	97388	1.00	1.02	
131 sec-Butylbenzene	134	14.505	14.505	0.000	94	28299	1.00	1.04	
132 1,3-Dichlorobenzene	146	14.645	14.644	0.001	95	55798	1.00	1.00	
133 4-Isopropyltoluene	119	14.784	14.783	0.001	95	118180	1.00	1.04	
134 1,4-Dichlorobenzene	146	14.819	14.818	0.001	94	71986	1.00	1.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.463	15.462	0.001	96	49214	1.00	0.9573	
137 n-Butylbenzene	91	15.515	15.532	-0.017	98	124144	1.00	1.02	
139 1,2-Dibromo-3-Chloropropan	157	16.664	16.646	0.018	87	5663	1.00	1.10	
141 1,2,4-Trichlorobenzene	180	17.621	17.621	0.000	94	47900	1.00	0.9700	
142 Hexachlorobutadiene	225	17.813	17.812	0.001	98	38041	1.00	0.9301	
143 Naphthalene	128	17.847	17.847	0.000	98	44173	1.00	0.9051	
144 1,2,3-Trichlorobenzene	180	18.091	18.091	0.000	96	37418	1.00	0.9462	
S 149 Trihalomethanes, Total	1				0		4.00	3.86	
S 151 Total BTEX	1				0			5.07	
S 150 Xylenes, Total (URS)	1				0		2.00	2.04	
S 147 1,2-Dichloroethene, Total	96				0		2.00	2.17	
S 146 Xylenes, Total	106				0		2.00	2.04	
S 148 1,3-Dichloropropene, Total	1				0		2.00	2.00	
S 145 1,2-Dichloroethene, Total	1				0		2.00	2.17	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.40	Units: uL

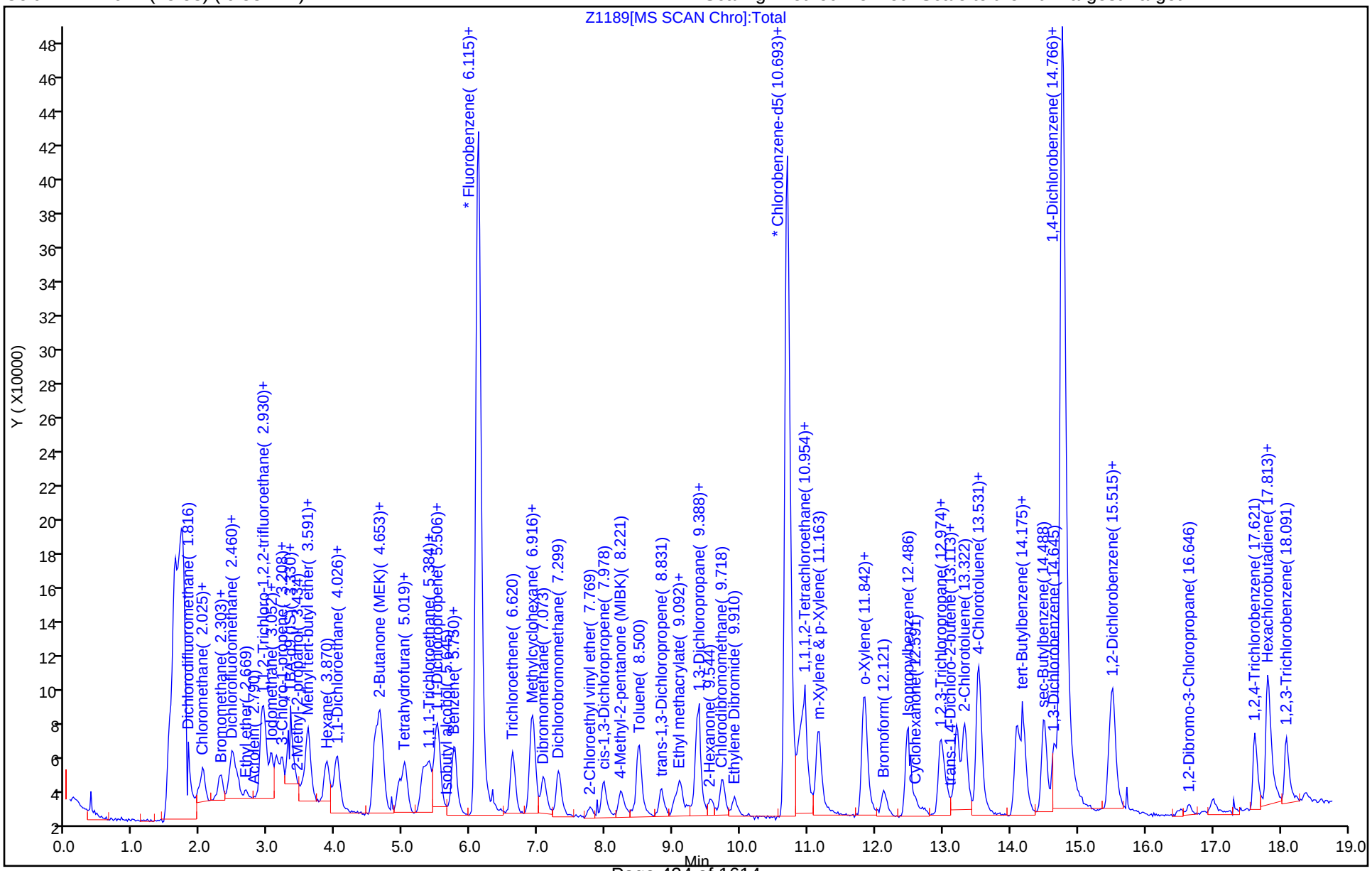
Report Date: 08-Sep-2018 09:12:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1189.D

Injection Date:	07-Sep-2018 12:57:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

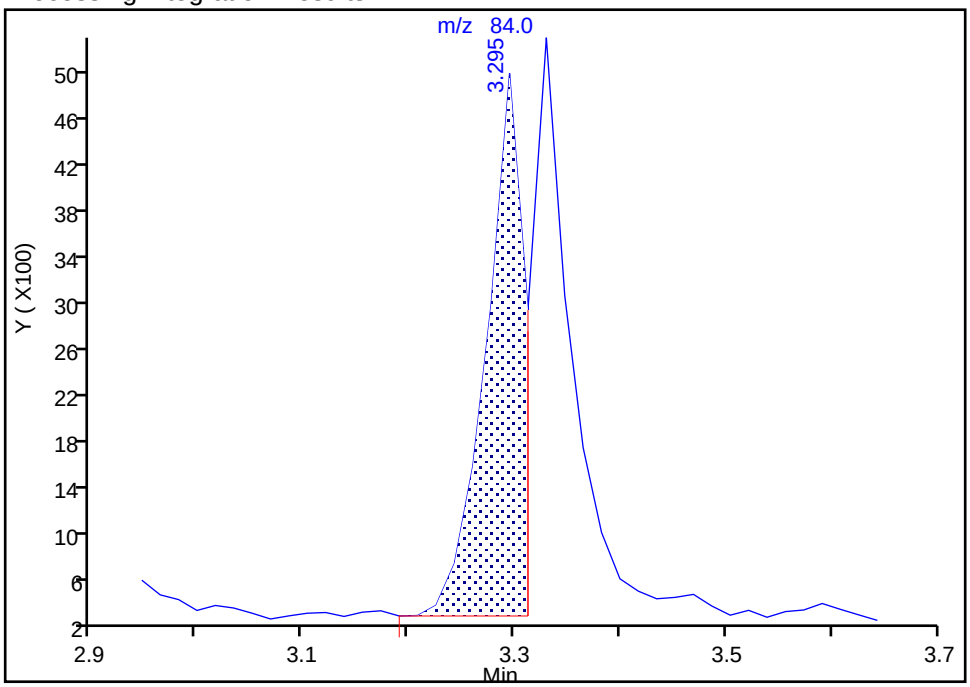
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Injection Date:	07-Sep-2018 12:57:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

54 Methylene Chloride, CAS: 75-09-2

Signal: 1

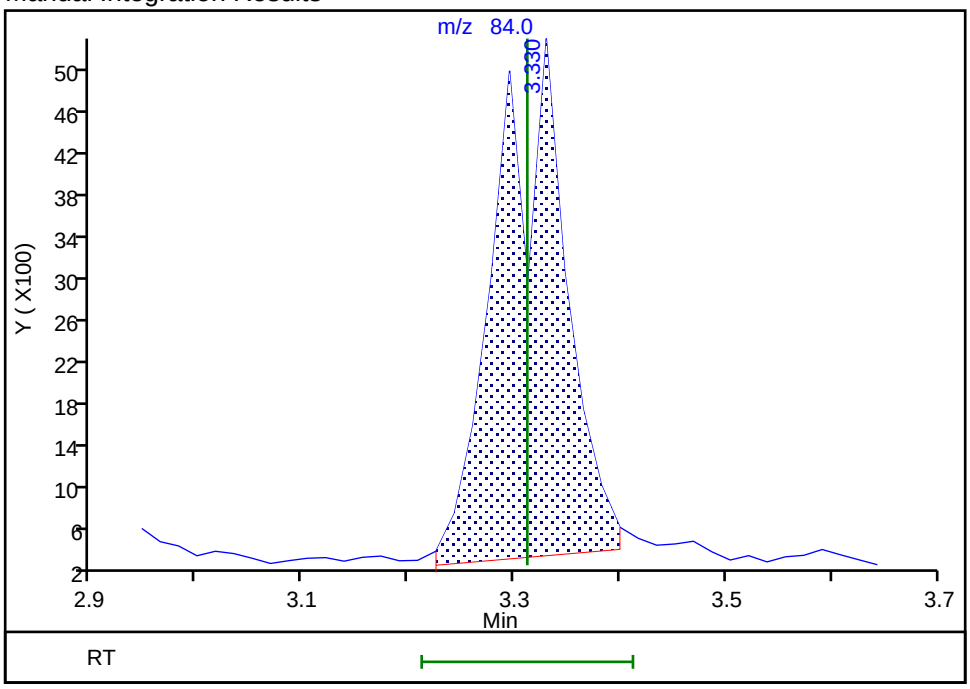
Processing Integration Results

RT: 3.30
Area: 12422
Amount: 0.774740
Amount Units: ug/l



Manual Integration Results

RT: 3.33
Area: 22783
Amount: 1.005518
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:22:18

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

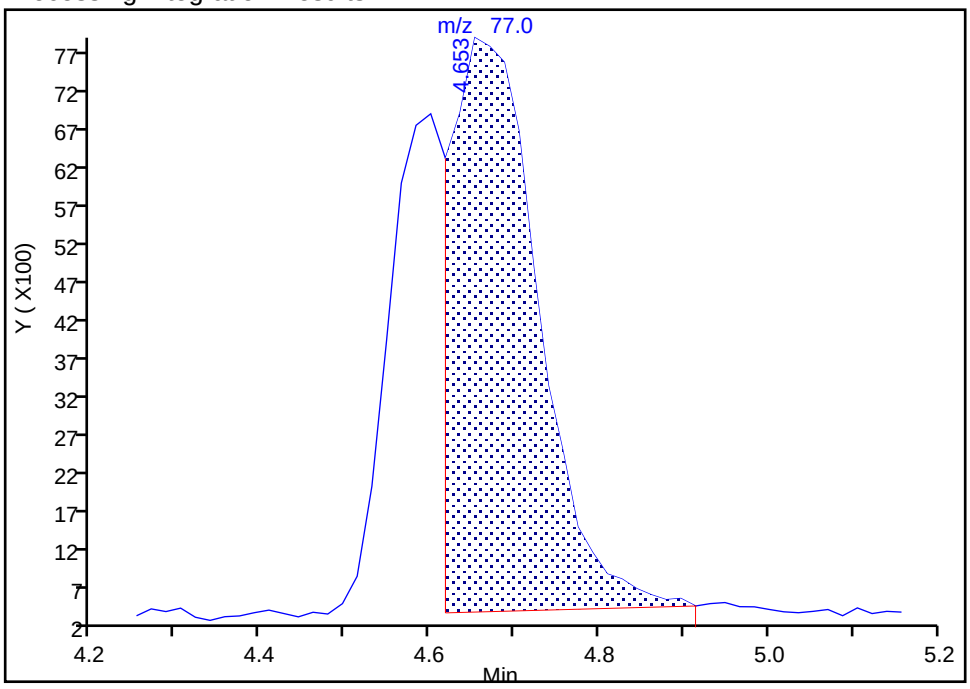
Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1189.D
Injection Date: 07-Sep-2018 12:57:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

66 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

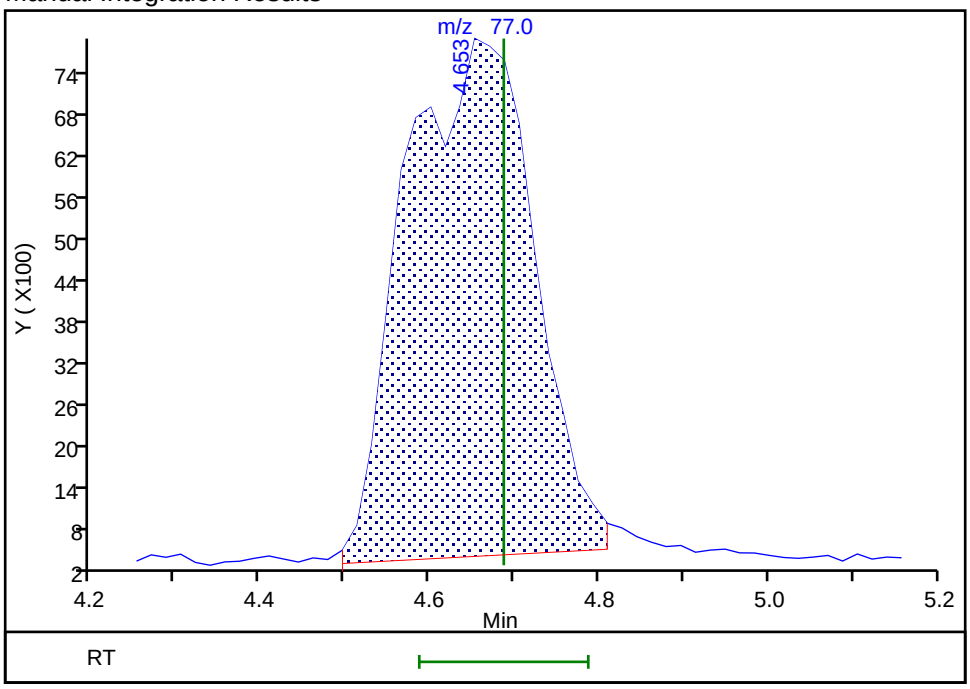
Processing Integration Results

RT: 4.65
Area: 55898
Amount: 0.746736
Amount Units: ug/l



Manual Integration Results

RT: 4.65
Area: 80052
Amount: 0.988328
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:22:39
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

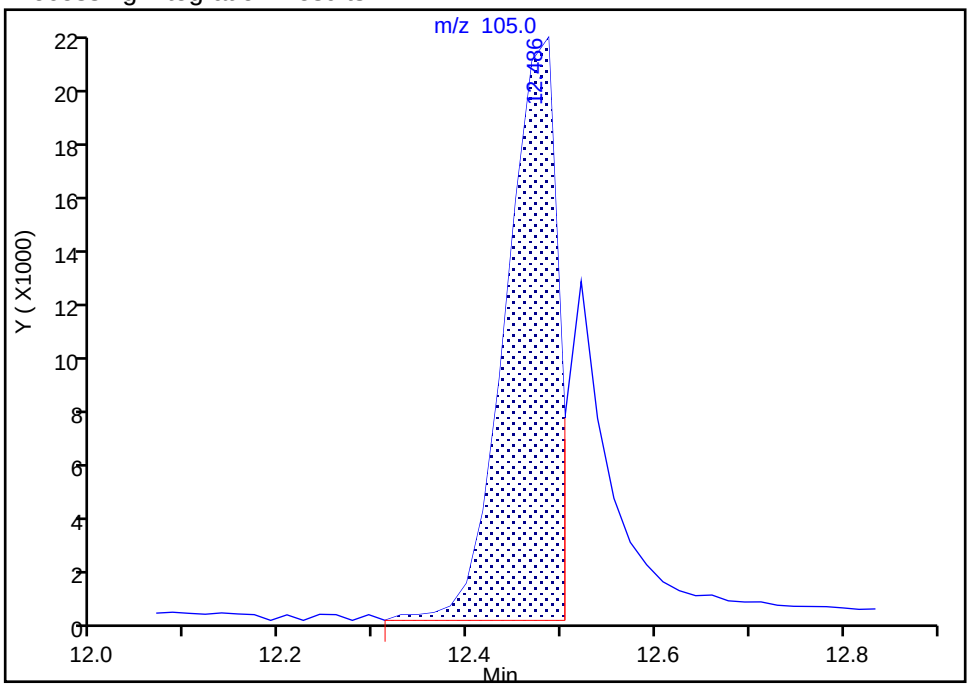
Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1189.D
Injection Date: 07-Sep-2018 12:57:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

118 Isopropylbenzene, CAS: 98-82-8

Signal: 1

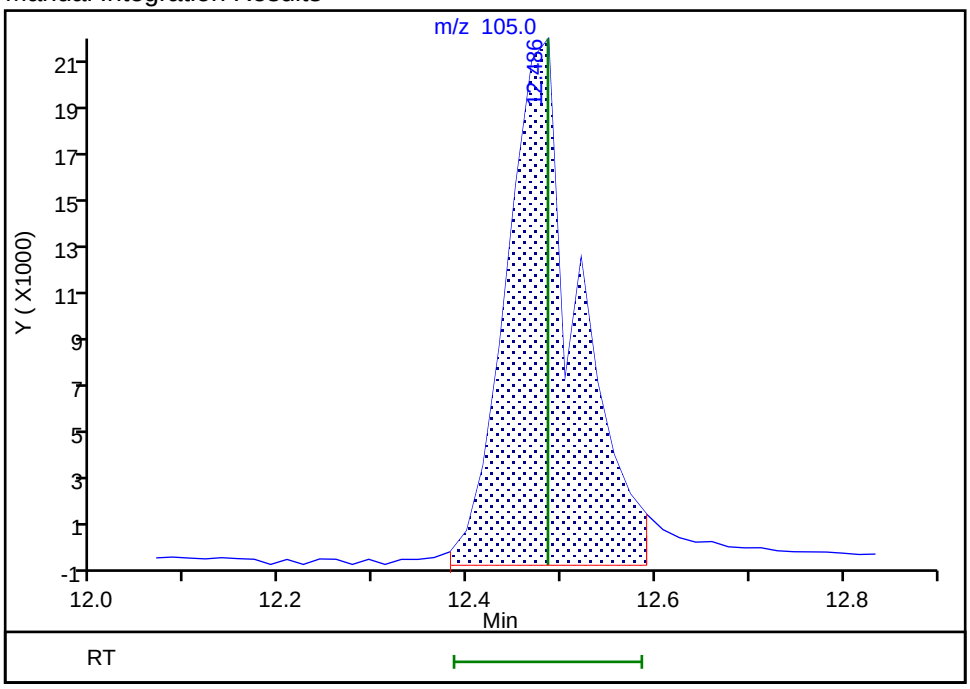
Processing Integration Results

RT: 12.49
Area: 82964
Amount: 0.716241
Amount Units: ug/l



Manual Integration Results

RT: 12.49
Area: 112921
Amount: 0.894701
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:23:19
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1190.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Sep-2018 13:20:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:13 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:25:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.353	3.347	0.006	0	131468	250.0	250.0	
* 2 Fluorobenzene	96	6.103	6.115	-0.012	99	1029543	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.699	10.693	0.006	87	209566	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.772	14.766	0.006	95	403507	12.5	12.5	
27 Dichlorodifluoromethane	85	1.821	1.832	-0.011	100	71914	2.00	1.93	
30 Chloromethane	50	1.978	1.989	-0.011	98	50696	2.00	2.05	
32 Vinyl chloride	62	2.048	2.059	-0.011	98	40257	2.00	2.02	
35 Bromomethane	94	2.274	2.285	-0.011	90	53266	2.00	2.05	
36 Chloroethane	64	2.326	2.320	0.006	99	25272	2.00	1.82	
37 Dichlorofluoromethane	67	2.448	2.459	-0.011	98	102778	2.00	2.04	
38 Trichlorofluoromethane	101	2.518	2.529	-0.011	99	115791	2.00	2.04	
40 Ethyl ether	59	2.674	2.685	-0.011	95	21547	2.00	2.00	
44 Acrolein	56	2.796	2.790	0.006	98	10914	11.9	12.6	
45 1,1-Dichloroethene	96	2.901	2.912	-0.011	98	53173	2.00	2.00	
48 Acetone	43	2.918	2.929	-0.011	29	13337	8.00	9.09	
46 1,1,2-Trichloro-1,2,2-trif	151	2.953	2.946	0.007	97	73865	2.00	2.01	
49 Iodomethane	142	3.040	3.051	-0.011	99	128375	2.00	2.00	
50 Carbon disulfide	76	3.127	3.138	-0.011	99	171224	2.00	2.00	
52 3-Chloro-1-propene	41	3.196	3.208	-0.012	87	76927	2.00	2.02	
51 Methyl acetate	43	3.196	3.208	-0.012	39	22175	4.00	3.98	
54 Methylene Chloride	84	3.301	3.312	-0.011	93	48270	2.00	2.18	
55 2-Methyl-2-propanol	59	3.423	3.434	-0.011	91	11545	20.0	15.5	
58 Acrylonitrile	53	3.527	3.538	-0.011	98	37179	20.0	20.7	
57 trans-1,2-Dichloroethene	96	3.597	3.591	0.006	97	58379	2.00	1.98	
56 Methyl tert-butyl ether	73	3.597	3.608	-0.011	95	71688	2.00	1.99	
59 Hexane	57	3.875	3.869	0.006	94	66679	2.00	2.05	
62 1,1-Dichloroethane	63	3.997	4.008	-0.011	96	92343	2.00	2.08	
61 Vinyl acetate	43	4.032	4.043	-0.011	96	110890	4.00	4.00	
65 cis-1,2-Dichloroethene	96	4.659	4.652	0.007	81	63410	2.00	1.96	
67 2-Butanone (MEK)	43	4.659	4.652	0.007	40	26445	8.00	8.75	
66 2,2-Dichloropropane	77	4.676	4.687	-0.011	88	123222	2.00	2.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.955	4.948	0.007	94	26958	2.00	1.99	
74 Chloroform	83	5.024	5.035	-0.011	94	103063	2.00	2.03	
72 Tetrahydrofuran	42	5.024	5.035	-0.011	39	7244	4.00	3.80	
75 1,1,1-Trichloroethane	97	5.303	5.314	-0.011	98	105642	2.00	1.95	
76 Cyclohexane	56	5.390	5.401	-0.011	93	78611	2.00	2.01	
78 1,1-Dichloropropene	75	5.494	5.488	0.006	97	82072	2.00	2.03	
77 Carbon tetrachloride	117	5.529	5.523	0.006	97	97343	2.00	2.00	
80 Isobutyl alcohol	41	5.633	5.645	-0.012	90	12493	50.0	51.0	
82 1,2-Dichloroethane	62	5.755	5.749	0.006	56	41028	2.00	2.00	
81 Benzene	78	5.755	5.749	0.006	97	153025	2.00	1.98	
84 n-Heptane	43	6.121	6.132	-0.011	95	89457	2.00	1.91	
85 Trichloroethene	95	6.608	6.619	-0.011	96	76208	2.00	2.04	
90 1,2-Dichloropropane	63	6.904	6.915	-0.011	88	51962	2.00	1.96	
87 Methylcyclohexane	55	6.922	6.915	0.007	88	73030	2.00	1.99	
92 Dibromomethane	93	7.078	7.072	0.006	97	40207	2.00	2.00	
93 1,4-Dioxane	88		7.142				ND	ND	
94 Dichlorobromomethane	83	7.305	7.298	0.007	98	92016	2.00	1.96	
96 2-Chloroethyl vinyl ether	63	7.757	7.768	-0.011	91	16241	2.00	2.03	
97 cis-1,3-Dichloropropene	75	7.966	7.960	0.006	96	72811	2.00	2.00	
98 4-Methyl-2-pentanone (MIBK	43	8.227	8.221	0.006	97	75185	8.00	7.88	
99 Toluene	91	8.488	8.499	-0.011	99	198390	2.00	2.03	
100 trans-1,3-Dichloropropene	75	8.819	8.813	0.006	93	57166	2.00	2.08	
101 Ethyl methacrylate	69	9.028	9.022	0.006	91	36824	2.00	2.05	
102 1,1,2-Trichloroethane	97	9.097	9.109	-0.012	91	36451	2.00	1.99	
103 Tetrachloroethene	164	9.359	9.370	-0.011	97	73629	2.00	2.05	
104 1,3-Dichloropropane	76	9.359	9.370	-0.011	67	54550	2.00	1.98	
105 2-Hexanone	43	9.550	9.544	0.006	99	50994	8.00	8.39	
107 Chlorodibromomethane	129	9.724	9.735	-0.011	90	75308	2.00	2.16	
109 Ethylene Dibromide	107	9.898	9.909	-0.011	99	47072	2.00	1.96	
111 Chlorobenzene	112	10.734	10.745	-0.011	93	130877	2.00	2.03	
113 1,1,1,2-Tetrachloroethane	131	10.890	10.884	0.006	92	62162	2.00	2.02	
112 Ethylbenzene	106	10.960	10.954	0.006	98	65744	2.00	2.01	
114 m-Xylene & p-Xylene	106	11.151	11.145	0.006	0	93576	2.00	2.01	
115 o-Xylene	106	11.830	11.824	0.006	98	82209	2.00	2.06	
116 Styrene	104	11.848	11.841	0.007	94	122638	2.00	1.95	
117 Bromoform	173	12.126	12.120	0.006	96	44943	2.00	1.98	
118 Isopropylbenzene	105	12.474	12.485	-0.011	95	251448	2.00	2.06	
119 Cyclohexanone	55	12.579	12.590	-0.011	93	21790	80.0	88.6	
121 Bromobenzene	156	12.962	12.955	0.007	92	69500	2.00	2.03	
122 1,1,2,2-Tetrachloroethane	83	12.979	12.990	-0.011	95	46146	2.00	2.03	
124 1,2,3-Trichloropropane	110	13.031	13.043	-0.012	80	11176	2.00	1.96	
125 trans-1,4-Dichloro-2-buten	53	13.101	13.095	0.006	69	9415	2.00	1.98	
123 N-Propylbenzene	120	13.206	13.199	0.007	99	59861	2.00	2.08	
126 2-Chlorotoluene	126	13.327	13.321	0.006	96	50147	2.00	2.03	
128 4-Chlorotoluene	126	13.519	13.513	0.007	98	54969	2.00	1.93	
127 1,3,5-Trimethylbenzene	105	13.536	13.547	-0.011	93	187185	2.00	2.03	
129 tert-Butylbenzene	119	14.111	14.104	0.007	92	198291	2.00	2.05	
130 1,2,4-Trimethylbenzene	105	14.198	14.191	0.007	96	187044	2.00	2.03	
131 sec-Butylbenzene	134	14.494	14.505	-0.011	94	52753	2.00	2.01	
132 1,3-Dichlorobenzene	146	14.650	14.644	0.006	97	109316	2.00	2.02	
133 4-Isopropyltoluene	119	14.790	14.783	0.007	96	210846	2.00	1.93	
134 1,4-Dichlorobenzene	146	14.807	14.818	-0.011	92	131850	2.00	2.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.468	15.462	0.006	96	94662	2.00	1.91	
137 n-Butylbenzene	91	15.521	15.532	-0.011	98	235498	2.00	2.00	
139 1,2-Dibromo-3-Chloropropan	157	16.652	16.646	0.006	80	10119	2.00	2.03	
141 1,2,4-Trichlorobenzene	180	17.627	17.621	0.006	95	81487	2.00	1.99	
142 Hexachlorobutadiene	225	17.818	17.812	0.006	98	65099	2.00	1.94	
143 Naphthalene	128	17.853	17.847	0.006	97	72613	2.00	1.96	
144 1,2,3-Trichlorobenzene	180	18.097	18.091	0.006	97	60356	2.00	1.87	
S 146 Xylenes, Total	106				0		4.00	4.07	
S 147 1,2-Dichloroethene, Total	96				0		4.00	3.95	
S 145 1,2-Dichloroethene, Total	1				0		4.00	3.95	
S 148 1,3-Dichloropropene, Total	1				0		4.00	4.08	
S 149 Trihalomethanes, Total	1				0		8.00	8.12	
S 150 Xylenes, Total (URS)	1				0		4.00	4.07	
S 151 Total BTEX	1				0			10.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.80	Units: uL

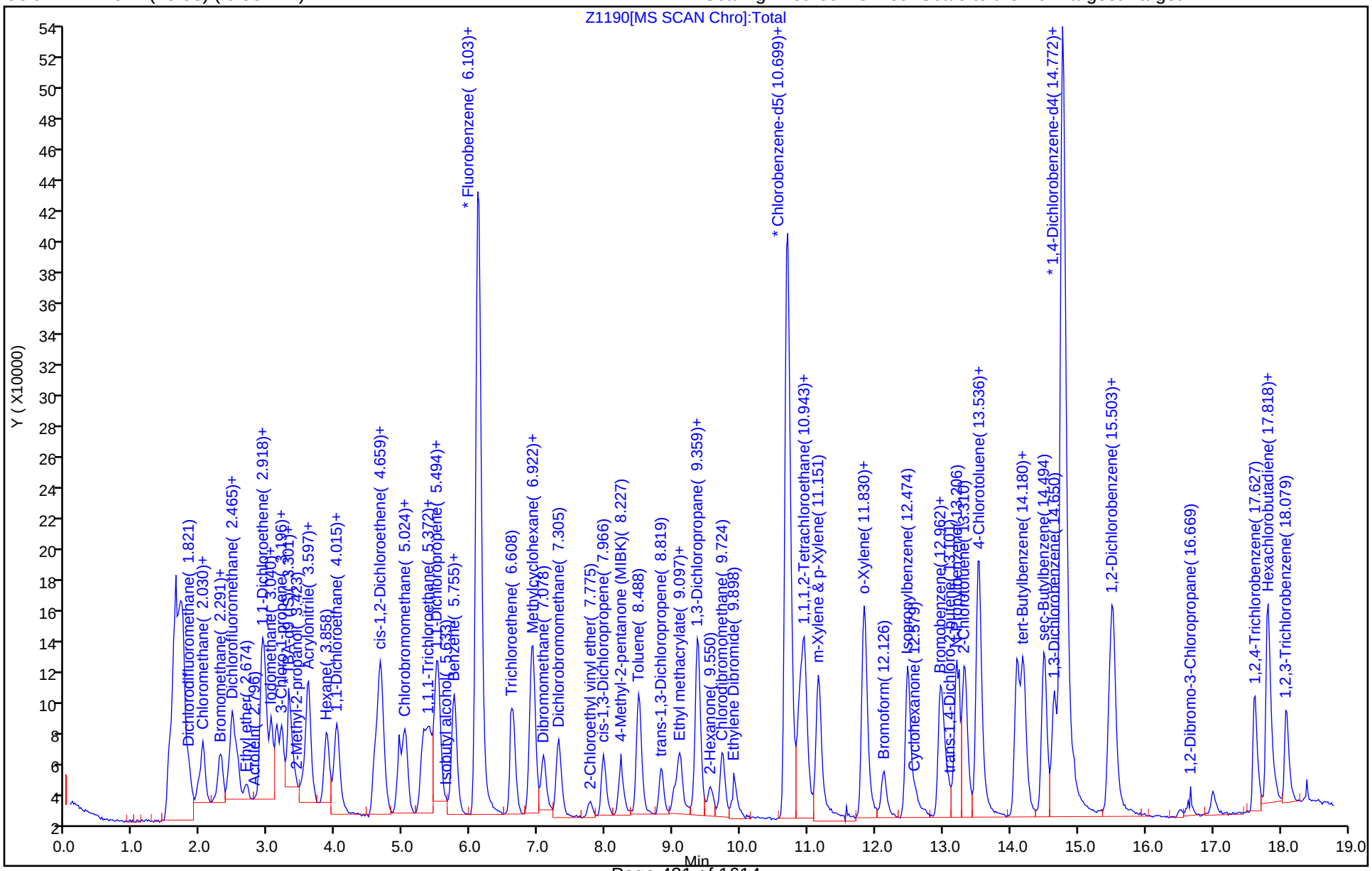
Report Date: 08-Sep-2018 09:12:13 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1190.D

Injection Date:	07-Sep-2018 13:20:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1191.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Sep-2018 13:42:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:15 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:48:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.353	3.347	0.006	0	148810	250.0	250.0	
* 2 Fluorobenzene	96	6.121	6.115	0.006	99	1036441	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.681	10.693	-0.012	90	217984	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.772	14.766	0.006	96	403801	12.5	12.5	
27 Dichlorodifluoromethane	85	1.821	1.832	-0.011	99	179691	5.00	4.79	
30 Chloromethane	50	1.978	1.989	-0.011	98	112894	5.00	4.53	
32 Vinyl chloride	62	2.065	2.059	0.006	98	97589	5.00	4.88	
35 Bromomethane	94	2.291	2.285	0.006	90	123864	5.00	4.73	
36 Chloroethane	64	2.326	2.320	0.006	99	63578	5.00	4.55	
37 Dichlorofluoromethane	67	2.465	2.459	0.006	98	240816	5.00	4.76	
38 Trichlorofluoromethane	101	2.500	2.529	-0.029	100	276450	5.00	4.83	
40 Ethyl ether	59	2.691	2.685	0.006	94	48346	5.00	4.47	
44 Acrolein	56	2.796	2.790	0.006	98	23010	29.6	26.4	
45 1,1-Dichloroethene	96	2.900	2.912	-0.012	98	124886	5.00	4.67	
48 Acetone	43	2.918	2.929	-0.011	30	27004	20.0	18.3	
46 1,1,2-Trichloro-1,2,2-trif	151	2.952	2.946	0.006	97	178870	5.00	4.84	
49 Iodomethane	142	3.057	3.051	0.006	99	305797	5.00	4.73	
50 Carbon disulfide	76	3.127	3.138	-0.011	99	403028	5.00	4.67	
51 Methyl acetate	43	3.196	3.208	-0.012	41	51938	10.0	9.25	
52 3-Chloro-1-propene	41	3.214	3.208	0.006	92	173905	5.00	4.54	
54 Methylene Chloride	84	3.318	3.312	0.006	94	105467	5.00	4.73	
55 2-Methyl-2-propanol	59	3.422	3.434	-0.012	91	30849	50.0	44.9	
58 Acrylonitrile	53	3.527	3.538	-0.011	98	81357	50.0	45.1	
57 trans-1,2-Dichloroethene	96	3.597	3.591	0.006	98	139840	5.00	4.72	
56 Methyl tert-butyl ether	73	3.614	3.608	0.006	96	167087	5.00	4.61	
59 Hexane	57	3.875	3.869	0.006	94	164354	5.00	4.85	
62 1,1-Dichloroethane	63	4.014	4.008	0.006	96	205253	5.00	4.60	
61 Vinyl acetate	43	4.032	4.043	-0.011	96	263059	10.0	9.42	
67 2-Butanone (MEK)	43	4.658	4.652	0.006	40	56450	20.0	18.5	
65 cis-1,2-Dichloroethene	96	4.658	4.652	0.006	82	144834	5.00	4.46	
66 2,2-Dichloropropane	77	4.693	4.687	0.006	90	240381	5.00	4.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.937	4.948	-0.011	96	63861	5.00	4.67	
72 Tetrahydrofuran	42	5.024	5.035	-0.011	37	18835	10.0	9.81	
74 Chloroform	83	5.024	5.035	-0.011	95	237105	5.00	4.63	
75 1,1,1-Trichloroethane	97	5.302	5.314	-0.012	98	261966	5.00	4.81	
76 Cyclohexane	56	5.389	5.401	-0.012	93	188599	5.00	4.80	
78 1,1-Dichloropropene	75	5.494	5.488	0.006	97	197329	5.00	4.84	
77 Carbon tetrachloride	117	5.529	5.523	0.006	97	233667	5.00	4.77	
80 Isobutyl alcohol	41	5.651	5.645	0.006	91	27889	125.0	105.9	
81 Benzene	78	5.755	5.749	0.006	97	364322	5.00	4.69	
82 1,2-Dichloroethane	62	5.755	5.749	0.006	56	98197	5.00	4.74	
84 n-Heptane	43	6.138	6.132	0.006	95	224083	5.00	4.75	
85 Trichloroethene	95	6.625	6.619	0.006	97	179447	5.00	4.76	
87 Methylcyclohexane	55	6.921	6.915	0.006	88	178661	5.00	4.84	
90 1,2-Dichloropropane	63	6.921	6.915	0.006	83	124984	5.00	4.69	
92 Dibromomethane	93	7.078	7.072	0.006	97	91649	5.00	4.53	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.304	7.298	0.006	99	220027	5.00	4.65	
96 2-Chloroethyl vinyl ether	63	7.774	7.768	0.006	93	36561	5.00	4.55	
97 cis-1,3-Dichloropropene	75	7.966	7.960	0.006	96	176673	5.00	4.67	
98 4-Methyl-2-pentanone (MIBK	43	8.227	8.221	0.006	96	181495	20.0	18.9	
99 Toluene	91	8.488	8.499	-0.011	99	463495	5.00	4.72	
100 trans-1,3-Dichloropropene	75	8.836	8.813	0.023	96	131424	5.00	4.74	
101 Ethyl methacrylate	69	9.028	9.022	0.006	92	81854	5.00	4.38	
102 1,1,2-Trichloroethane	97	9.097	9.109	-0.012	90	86134	5.00	4.66	
104 1,3-Dichloropropane	76	9.358	9.370	-0.012	70	130071	5.00	4.54	
103 Tetrachloroethene	164	9.358	9.370	-0.012	98	172338	5.00	4.61	
105 2-Hexanone	43	9.550	9.544	0.006	99	115583	20.0	18.3	
107 Chlorodibromomethane	129	9.724	9.735	-0.011	89	161866	5.00	4.47	
109 Ethylene Dibromide	107	9.898	9.909	-0.011	98	115780	5.00	4.63	
111 Chlorobenzene	112	10.733	10.745	-0.012	95	308365	5.00	4.59	
113 1,1,1,2-Tetrachloroethane	131	10.873	10.884	-0.011	96	145322	5.00	4.53	
112 Ethylbenzene	106	10.942	10.954	-0.012	99	156607	5.00	4.61	
114 m-Xylene & p-Xylene	106	11.151	11.145	0.006	0	211538	5.00	4.37	
115 o-Xylene	106	11.813	11.824	-0.011	98	183933	5.00	4.43	
116 Styrene	104	11.847	11.841	0.006	94	297196	5.00	4.55	
117 Bromoform	173	12.126	12.120	0.006	96	109259	5.00	4.62	
118 Isopropylbenzene	105	12.474	12.485	-0.011	95	578427	5.00	4.74	
119 Cyclohexanone	55	12.579	12.590	-0.011	90	47255	200.0	184.7	
121 Bromobenzene	156	12.962	12.955	0.007	92	163194	5.00	4.76	
122 1,1,2,2-Tetrachloroethane	83	12.979	12.990	-0.011	95	106048	5.00	4.67	
124 1,2,3-Trichloropropane	110	13.031	13.043	-0.012	79	27325	5.00	4.79	
125 trans-1,4-Dichloro-2-buten	53	13.083	13.095	-0.012	82	24578	5.00	5.17	
123 N-Propylbenzene	120	13.205	13.199	0.006	99	136863	5.00	4.76	
126 2-Chlorotoluene	126	13.327	13.321	0.006	96	116175	5.00	4.69	
128 4-Chlorotoluene	126	13.519	13.513	0.007	97	124619	5.00	4.37	
127 1,3,5-Trimethylbenzene	105	13.536	13.547	-0.011	93	442705	5.00	4.79	
129 tert-Butylbenzene	119	14.093	14.104	-0.011	92	463550	5.00	4.80	
130 1,2,4-Trimethylbenzene	105	14.197	14.191	0.006	97	436183	5.00	4.74	
131 sec-Butylbenzene	134	14.493	14.505	-0.012	94	124981	5.00	4.76	
132 1,3-Dichlorobenzene	146	14.650	14.644	0.006	98	255028	5.00	4.71	
133 4-Isopropyltoluene	119	14.772	14.783	-0.011	96	518641	5.00	4.73	
134 1,4-Dichlorobenzene	146	14.807	14.818	-0.011	96	303682	5.00	4.62	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.468	15.462	0.006	97	229894	5.00	4.63	
137 n-Butylbenzene	91	15.520	15.532	-0.012	98	555742	5.00	4.71	
139 1,2-Dibromo-3-Chloropropan	157	16.652	16.646	0.006	90	23422	5.00	4.69	
141 1,2,4-Trichlorobenzene	180	17.627	17.621	0.006	95	181829	5.00	4.89	
142 Hexachlorobutadiene	225	17.818	17.812	0.006	98	150281	5.00	4.96	
143 Naphthalene	128	17.853	17.847	0.006	97	151497	5.00	4.73	
144 1,2,3-Trichlorobenzene	180	18.097	18.091	0.006	96	134777	5.00	4.69	
S 149 Trihalomethanes, Total	1				0		20.0	18.4	
S 151 Total BTEX	1				0			22.8	
S 150 Xylenes, Total (URS)	1				0		10.0	8.80	
S 147 1,2-Dichloroethene, Total	96				0		10.0	9.17	
S 146 Xylenes, Total	106				0		10.0	8.80	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.41	
S 145 1,2-Dichloroethene, Total	1				0		10.0	9.17	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	2.00	Units: uL

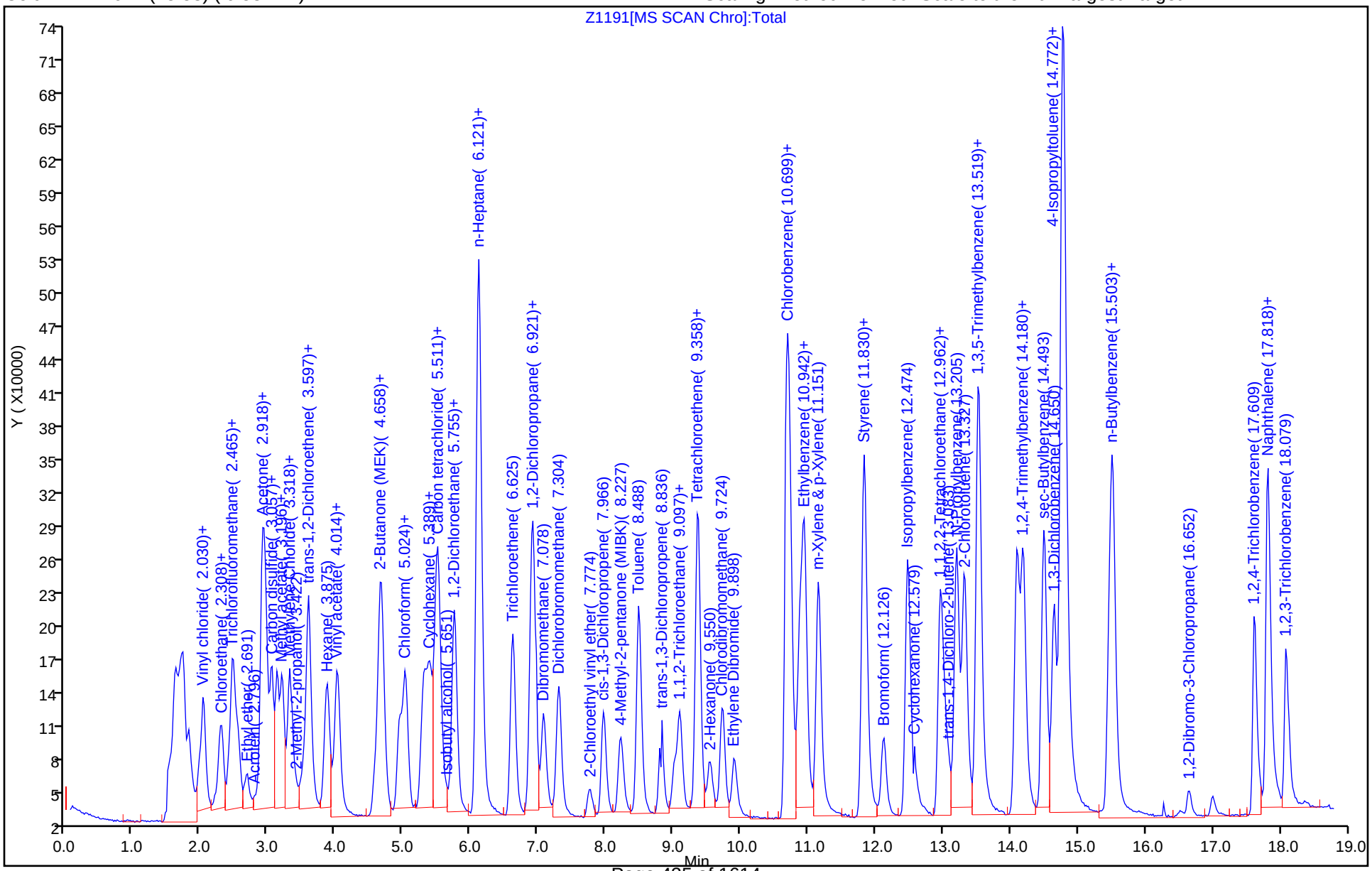
Report Date: 08-Sep-2018 09:12:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1191.D

Injection Date:	07-Sep-2018 13:42:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1192.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Sep-2018 14:04:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:17 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:17:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.347	3.347	0.000	0	145061	250.0	250.0	
* 2 Fluorobenzene	96	6.115	6.115	0.000	99	1050175	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.693	10.693	0.000	88	213790	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.766	14.766	0.000	94	422443	12.5	12.5	
27 Dichlorodifluoromethane	85	1.832	1.832	0.000	99	411156	10.0	10.8	
30 Chloromethane	50	1.989	1.989	0.000	98	243461	10.0	9.65	
32 Vinyl chloride	62	2.059	2.059	0.000	98	207579	10.0	10.2	
35 Bromomethane	94	2.285	2.285	0.000	90	263278	10.0	9.92	
36 Chloroethane	64	2.320	2.320	0.000	99	137561	10.0	9.71	
37 Dichlorofluoromethane	67	2.459	2.459	0.000	98	522985	10.0	10.2	
38 Trichlorofluoromethane	101	2.529	2.529	0.000	100	589022	10.0	10.2	
40 Ethyl ether	59	2.685	2.685	0.000	95	105091	10.0	9.58	
44 Acrolein	56	2.790	2.790	0.000	99	50371	59.3	57.0	
45 1,1-Dichloroethene	96	2.912	2.912	0.000	97	269234	10.0	9.94	
48 Acetone	43	2.929	2.929	0.000	63	57561	40.0	38.5	
46 1,1,2-Trichloro-1,2,2-trif	151	2.946	2.946	0.000	97	384913	10.0	10.3	
49 Iodomethane	142	3.051	3.051	0.000	99	665700	10.0	10.2	
50 Carbon disulfide	76	3.138	3.138	0.000	99	865701	10.0	9.90	
52 3-Chloro-1-propene	41	3.208	3.208	0.000	92	392735	10.0	10.1	
51 Methyl acetate	43	3.208	3.208	0.000	40	120001	20.0	21.1	
54 Methylene Chloride	84	3.312	3.312	0.000	93	225214	10.0	9.97	
55 2-Methyl-2-propanol	59	3.434	3.434	0.000	96	60902	100.0	97.1	
58 Acrylonitrile	53	3.538	3.538	0.000	99	186829	100.0	102.2	
57 trans-1,2-Dichloroethene	96	3.591	3.591	0.000	99	300958	10.0	10.0	
56 Methyl tert-butyl ether	73	3.608	3.608	0.000	96	369000	10.0	10.0	
59 Hexane	57	3.869	3.869	0.000	95	341607	10.0	10.3	
62 1,1-Dichloroethane	63	4.008	4.008	0.000	96	451468	10.0	9.99	
61 Vinyl acetate	43	4.043	4.043	0.000	97	549323	20.0	19.4	
65 cis-1,2-Dichloroethene	96	4.652	4.652	0.000	82	319022	10.0	9.69	
67 2-Butanone (MEK)	43	4.652	4.652	0.000	43	128975	40.0	41.8	
66 2,2-Dichloropropane	77	4.687	4.687	0.000	89	480455	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.948	4.948	0.000	96	140727	10.0	10.2	
74 Chloroform	83	5.035	5.035	0.000	95	533317	10.0	10.3	
72 Tetrahydrofuran	42	5.035	5.035	0.000	37	41464	20.0	21.3	
75 1,1,1-Trichloroethane	97	5.314	5.314	0.000	98	546556	10.0	9.90	
76 Cyclohexane	56	5.401	5.401	0.000	92	389604	10.0	9.79	
78 1,1-Dichloropropene	75	5.488	5.488	0.000	92	371957	10.0	9.01	M
77 Carbon tetrachloride	117	5.523	5.523	0.000	94	510440	10.0	10.3	
80 Isobutyl alcohol	41	5.645	5.645	0.000	93	57516	250.0	230.1	
82 1,2-Dichloroethane	62	5.749	5.749	0.000	57	212821	10.0	10.1	
81 Benzene	78	5.749	5.749	0.000	97	773104	10.0	9.83	
84 n-Heptane	43	6.132	6.132	0.000	94	477786	10.0	9.99	
85 Trichloroethene	95	6.619	6.619	0.000	97	393986	10.0	10.3	
90 1,2-Dichloropropane	63	6.915	6.915	0.000	90	271369	10.0	10.0	
87 Methylcyclohexane	55	6.915	6.915	0.000	88	372319	10.0	9.96	
92 Dibromomethane	93	7.072	7.072	0.000	97	202364	10.0	9.88	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.298	7.298	0.000	99	489321	10.0	10.2	
96 2-Chloroethyl vinyl ether	63	7.768	7.768	0.000	94	82864	10.0	10.2	
97 cis-1,3-Dichloropropene	75	7.960	7.960	0.000	97	381341	10.0	10.3	
98 4-Methyl-2-pentanone (MIBK	43	8.221	8.221	0.000	96	414148	40.0	42.5	
99 Toluene	91	8.499	8.499	0.000	99	974825	10.0	9.79	
100 trans-1,3-Dichloropropene	75	8.813	8.813	0.000	94	279649	10.0	9.95	
101 Ethyl methacrylate	69	9.022	9.022	0.000	91	188516	10.0	10.3	
102 1,1,2-Trichloroethane	97	9.109	9.109	0.000	90	189551	10.0	10.1	
103 Tetrachloroethene	164	9.370	9.370	0.000	97	379539	10.0	10.3	
104 1,3-Dichloropropane	76	9.370	9.370	0.000	68	292093	10.0	10.4	
105 2-Hexanone	43	9.544	9.544	0.000	99	264205	40.0	42.6	
107 Chlorodibromomethane	129	9.735	9.735	0.000	90	356332	10.0	10.0	
109 Ethylene Dibromide	107	9.909	9.909	0.000	99	256655	10.0	10.5	
111 Chlorobenzene	112	10.745	10.745	0.000	94	667966	10.0	10.1	
113 1,1,1,2-Tetrachloroethane	131	10.884	10.884	0.000	97	326290	10.0	10.4	
112 Ethylbenzene	106	10.954	10.954	0.000	98	332155	10.0	9.96	
114 m-Xylene & p-Xylene	106	11.145	11.145	0.000	0	450027	10.0	9.47	
115 o-Xylene	106	11.824	11.824	0.000	98	398978	10.0	9.80	
116 Styrene	104	11.841	11.841	0.000	94	649768	10.0	10.1	
117 Bromoform	173	12.120	12.120	0.000	96	244904	10.0	10.6	
118 Isopropylbenzene	105	12.485	12.485	0.000	95	1251567	10.0	9.81	
119 Cyclohexanone	55	12.590	12.590	0.000	93	99985	400.0	398.5	
121 Bromobenzene	156	12.955	12.955	0.000	92	358965	10.0	10.0	
122 1,1,2,2-Tetrachloroethane	83	12.990	12.990	0.000	95	235322	10.0	9.90	
124 1,2,3-Trichloropropane	110	13.043	13.043	0.000	79	58894	10.0	9.86	
125 trans-1,4-Dichloro-2-buten	53	13.095	13.095	0.000	81	43299	10.0	8.71	
123 N-Propylbenzene	120	13.199	13.199	0.000	99	290954	10.0	9.67	
126 2-Chlorotoluene	126	13.321	13.321	0.000	96	248255	10.0	9.59	
128 4-Chlorotoluene	126	13.513	13.513	0.000	97	292690	10.0	9.82	
127 1,3,5-Trimethylbenzene	105	13.547	13.547	0.000	95	905451	10.0	9.36	M
129 tert-Butylbenzene	119	14.104	14.104	0.000	91	989552	10.0	9.80	
130 1,2,4-Trimethylbenzene	105	14.191	14.191	0.000	97	940529	10.0	9.76	
131 sec-Butylbenzene	134	14.505	14.505	0.000	94	260851	10.0	9.49	
132 1,3-Dichlorobenzene	146	14.644	14.644	0.000	98	546003	10.0	9.65	
133 4-Isopropyltoluene	119	14.783	14.783	0.000	97	1134614	10.0	9.90	
134 1,4-Dichlorobenzene	146	14.818	14.818	0.000	94	663678	10.0	9.66	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.462	15.462	0.000	97	485901	10.0	9.35	
137 n-Butylbenzene	91	15.532	15.532	0.000	98	1132167	10.0	9.18	M
139 1,2-Dibromo-3-Chloropropan	157	16.646	16.646	0.000	91	52267	10.0	10.0	
141 1,2,4-Trichlorobenzene	180	17.621	17.621	0.000	95	389105	10.0	10.4	
142 Hexachlorobutadiene	225	17.812	17.812	0.000	98	322484	10.0	10.6	
143 Naphthalene	128	17.847	17.847	0.000	98	327694	10.0	10.4	
144 1,2,3-Trichlorobenzene	180	18.091	18.091	0.000	96	305886	10.0	10.7	
S 146 Xylenes, Total	106				0		20.0	19.3	
S 147 1,2-Dichloroethene, Total	96				0		20.0	19.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	19.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.2	
S 149 Trihalomethanes, Total	1				0		40.0	41.1	
S 150 Xylenes, Total (URS)	1				0		20.0	19.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	4.00	Units: uL

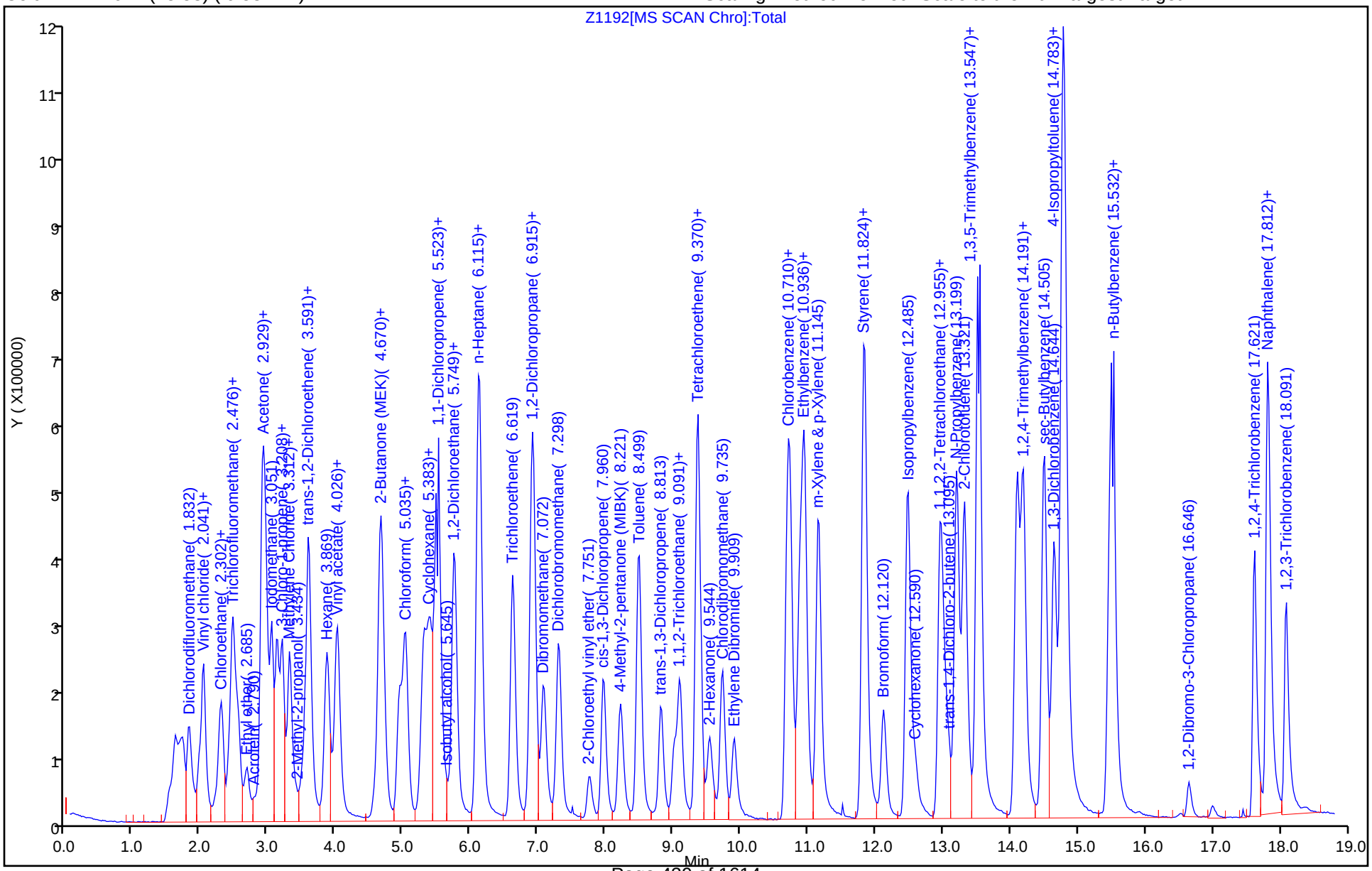
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1192.D

Injection Date:	07-Sep-2018 14:04:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

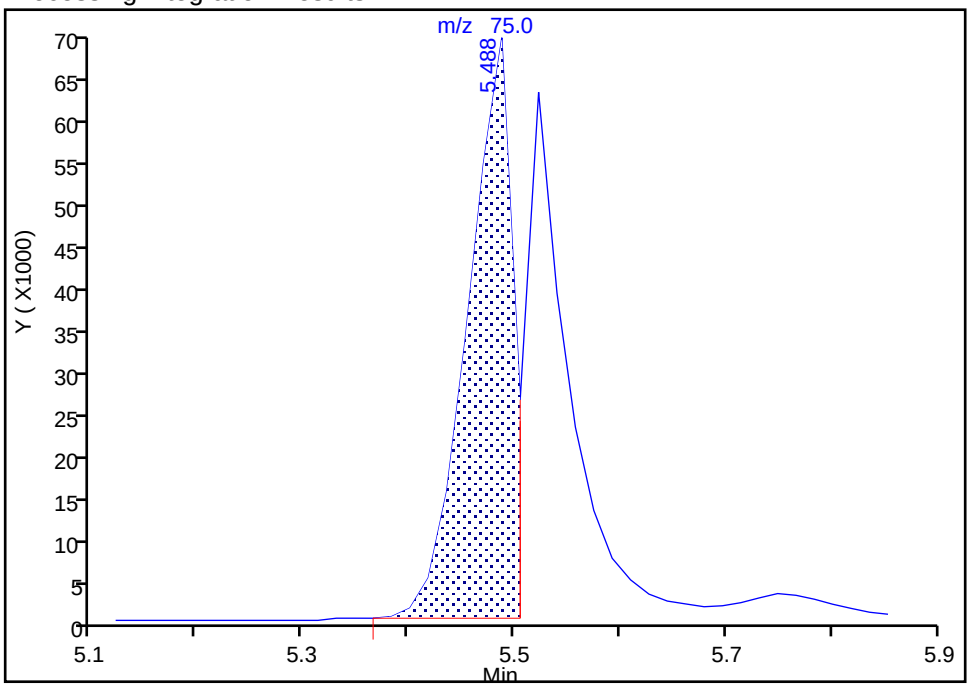
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Injection Date: 07-Sep-2018 14:04:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

78 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

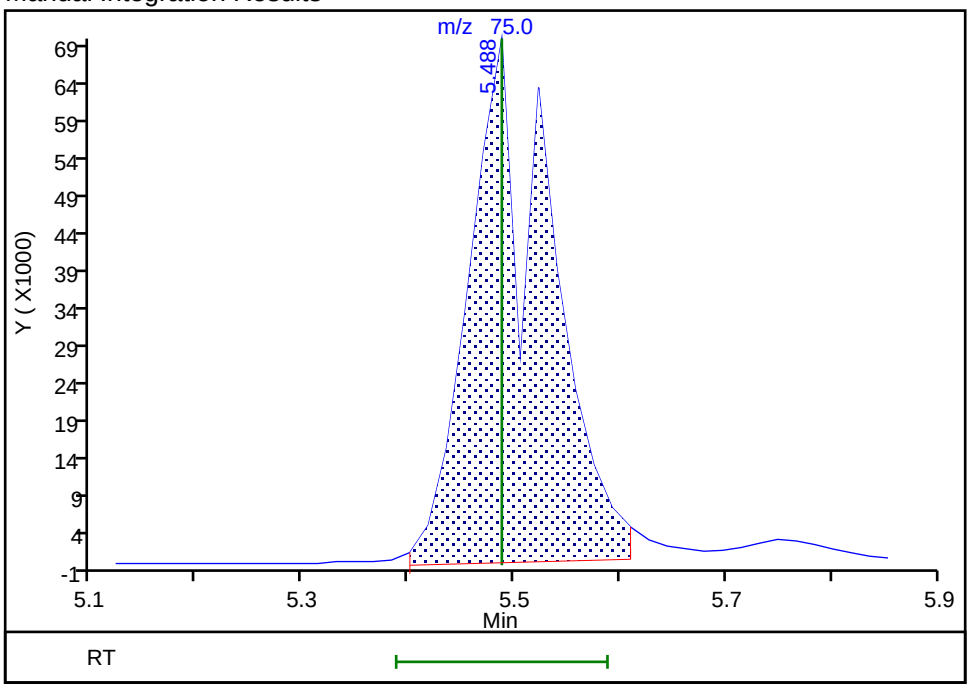
Processing Integration Results

RT: 5.49
Area: 214358
Amount: 6.038602
Amount Units: ug/l



Manual Integration Results

RT: 5.49
Area: 371957
Amount: 9.006570
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:48:58
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

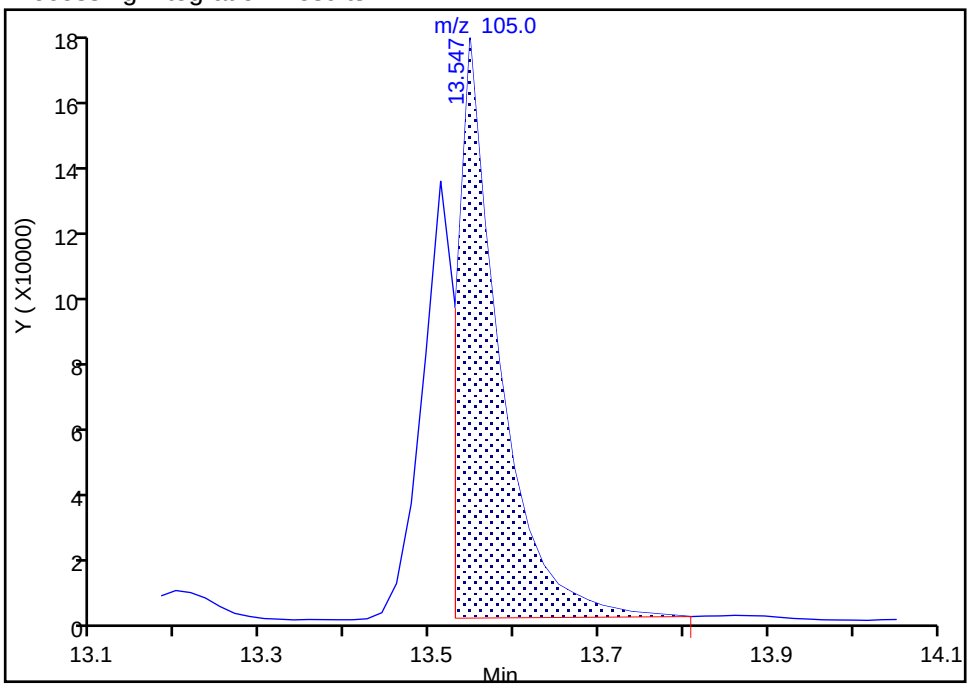
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Injection Date:	07-Sep-2018 14:04:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

127 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

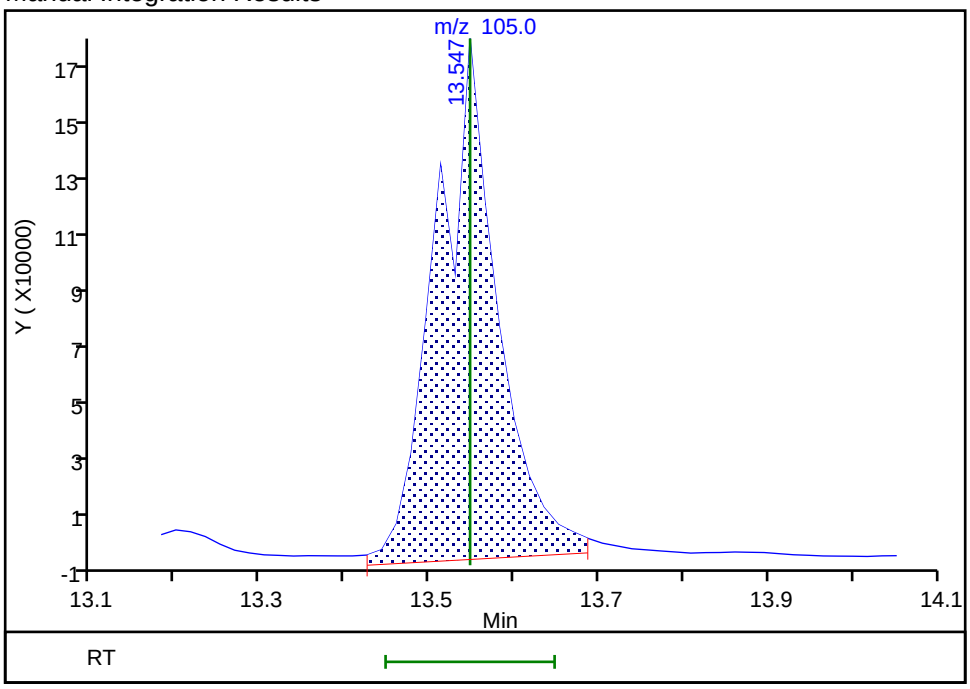
Processing Integration Results

RT: 13.55
Area: 616876
Amount: 6.954242
Amount Units: ug/l



Manual Integration Results

RT: 13.55
Area: 905451
Amount: 9.358946
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:49:24

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

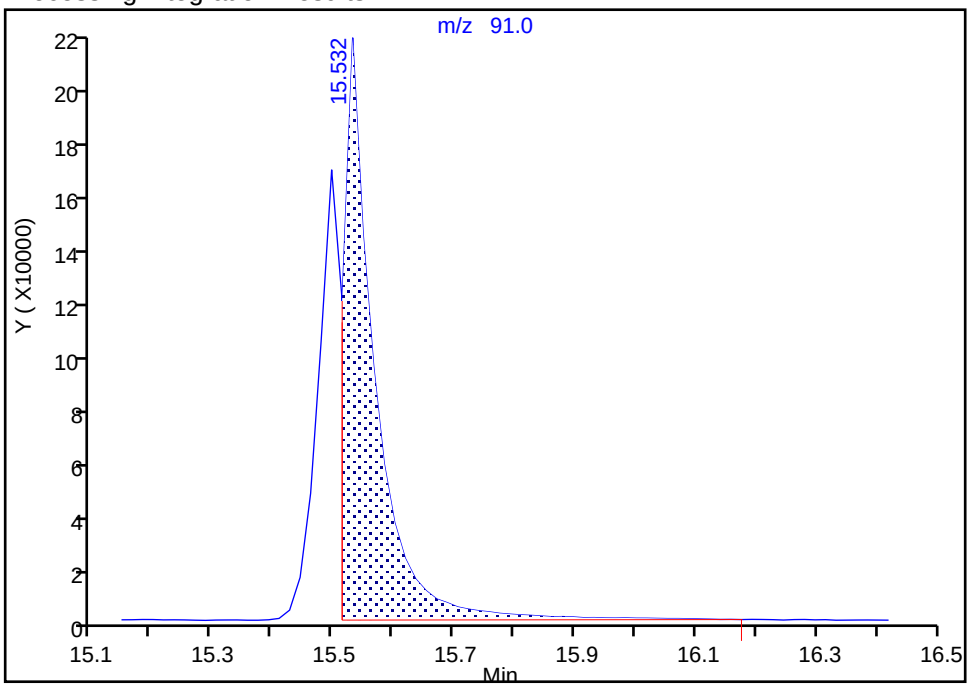
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Injection Date: 07-Sep-2018 14:04:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

137 n-Butylbenzene, CAS: 104-51-8

Signal: 1

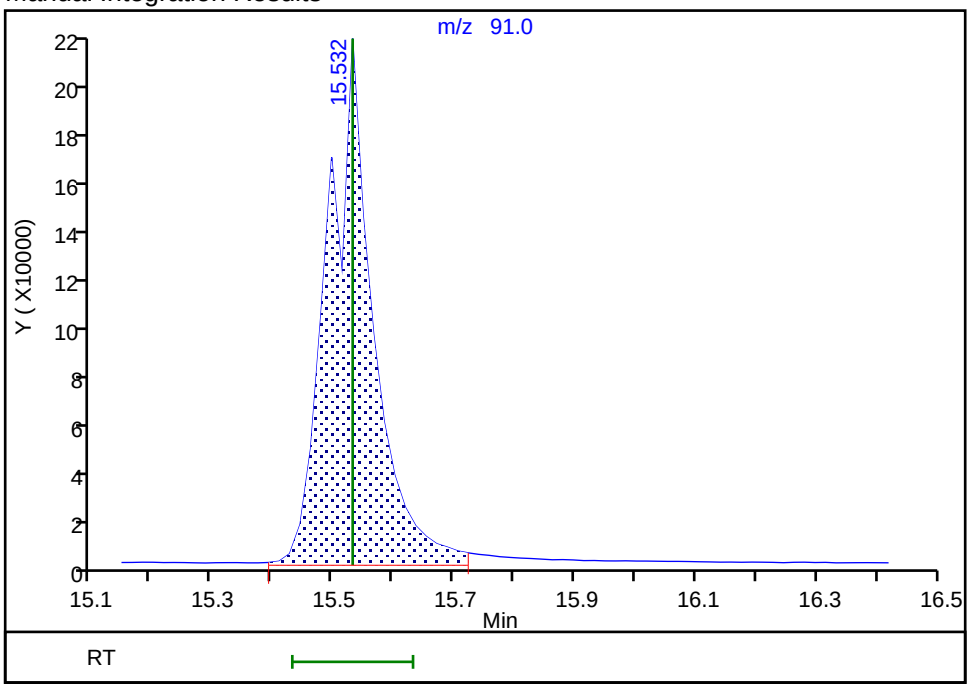
Processing Integration Results

RT: 15.53
Area: 788408
Amount: 7.149884
Amount Units: ug/l



Manual Integration Results

RT: 15.53
Area: 1132167
Amount: 9.178497
Amount Units: ug/l



Reviewer: ilczyszynd, 08-Sep-2018 08:49:35
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1193.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 07-Sep-2018 14:26:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:20 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:20:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.347	0.001	0	125842	250.0	250.0	
* 2 Fluorobenzene	96	6.116	6.115	0.001	90	1053302	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.694	10.693	0.001	85	214188	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.767	14.766	0.001	59	418001	12.5	12.5	
27 Dichlorodifluoromethane	85	1.816	1.832	-0.016	100	937927	25.0	24.6	
30 Chloromethane	50	1.973	1.989	-0.016	99	600217	25.0	23.7	
32 Vinyl chloride	62	2.060	2.059	0.001	98	495889	25.0	24.4	
35 Bromomethane	94	2.286	2.285	0.001	90	657523	25.0	24.7	
36 Chloroethane	64	2.321	2.320	0.001	99	337037	25.0	23.7	
37 Dichlorofluoromethane	67	2.460	2.459	0.001	97	1273611	25.0	24.8	
38 Trichlorofluoromethane	101	2.495	2.529	-0.034	99	1383401	25.0	23.8	
40 Ethyl ether	59	2.687	2.685	0.002	91	237586	25.0	21.6	
44 Acrolein	56	2.791	2.790	0.001	96	118897	148.1	134.0	
45 1,1-Dichloroethene	96	2.913	2.912	0.001	96	648445	25.0	23.9	
48 Acetone	43	2.913	2.929	-0.016	29	132124	100.0	88.0	
46 1,1,2-Trichloro-1,2,2-trif	151	2.948	2.946	0.002	96	899469	25.0	23.9	
49 Iodomethane	142	3.052	3.051	0.001	99	1651630	25.0	25.1	
50 Carbon disulfide	76	3.122	3.138	-0.016	100	2124411	25.0	24.2	
51 Methyl acetate	43	3.209	3.208	0.001	40	261068	50.0	45.8	
52 3-Chloro-1-propene	41	3.209	3.208	0.001	92	963028	25.0	24.7	
54 Methylene Chloride	84	3.313	3.312	0.001	93	553526	25.0	24.4	
55 2-Methyl-2-propanol	59	3.418	3.434	-0.016	80	138407	250.0	264.4	
58 Acrylonitrile	53	3.522	3.538	-0.016	98	430932	250.0	235.0	
57 trans-1,2-Dichloroethene	96	3.592	3.591	0.001	97	741962	25.0	24.6	
56 Methyl tert-butyl ether	73	3.609	3.608	0.001	87	865400	25.0	23.5	
59 Hexane	57	3.870	3.869	0.001	95	813528	25.0	24.4	
62 1,1-Dichloroethane	63	4.010	4.008	0.002	96	1114152	25.0	24.6	
61 Vinyl acetate	43	4.044	4.043	0.001	96	1304176	50.0	45.9	
67 2-Butanone (MEK)	43	4.654	4.652	0.002	40	287376	100.0	92.9	
65 cis-1,2-Dichloroethene	96	4.654	4.652	0.002	81	795217	25.0	24.1	
66 2,2-Dichloropropane	77	4.688	4.687	0.001	81	1097566	25.0	24.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.950	4.948	0.002	96	344534	25.0	24.8	
72 Tetrahydrofuran	42	5.019	5.035	-0.016	37	95839	50.0	49.1	
74 Chloroform	83	5.037	5.035	0.002	95	1320023	25.0	25.4	
75 1,1,1-Trichloroethane	97	5.298	5.314	-0.016	94	1345940	25.0	24.3	
76 Cyclohexane	56	5.402	5.401	0.001	91	979927	25.0	24.5	
78 1,1-Dichloropropene	75	5.489	5.488	0.001	93	1003881	25.0	24.2	
77 Carbon tetrachloride	117	5.524	5.523	0.001	96	1195162	25.0	24.0	
80 Isobutyl alcohol	41	5.628	5.645	-0.017	86	136423	625.0	638.8	
81 Benzene	78	5.750	5.749	0.001	97	1931996	25.0	24.5	
82 1,2-Dichloroethane	62	5.750	5.749	0.001	56	508834	25.0	24.2	
84 n-Heptane	43	6.133	6.132	0.001	93	1140168	25.0	23.8	
85 Trichloroethene	95	6.621	6.619	0.002	97	966350	25.0	25.2	
87 Methylcyclohexane	55	6.916	6.915	0.001	88	881533	25.0	23.5	
90 1,2-Dichloropropane	63	6.916	6.915	0.001	77	655835	25.0	24.2	
92 Dibromomethane	93	7.073	7.072	0.001	97	478595	25.0	23.3	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.299	7.298	0.001	99	1256495	25.0	26.1	
96 2-Chloroethyl vinyl ether	63	7.752	7.768	-0.016	84	195447	25.0	23.9	
97 cis-1,3-Dichloropropene	75	7.961	7.960	0.001	94	932294	25.0	25.1	
98 4-Methyl-2-pentanone (MIBK	43	8.222	8.221	0.001	97	934449	100.0	95.7	
99 Toluene	91	8.501	8.499	0.002	93	2413671	25.0	24.2	
100 trans-1,3-Dichloropropene	75	8.814	8.813	0.001	94	676156	25.0	24.0	
101 Ethyl methacrylate	69	9.023	9.022	0.001	90	447564	25.0	24.4	
102 1,1,2-Trichloroethane	97	9.092	9.109	-0.017	90	456004	25.0	24.3	
104 1,3-Dichloropropane	76	9.371	9.370	0.001	73	711414	25.0	25.3	
103 Tetrachloroethene	164	9.371	9.370	0.001	98	933926	25.0	25.4	
105 2-Hexanone	43	9.545	9.544	0.001	97	589605	100.0	94.9	
107 Chlorodibromomethane	129	9.736	9.735	0.001	89	864078	25.0	24.3	
109 Ethylene Dibromide	107	9.910	9.909	0.001	97	604793	25.0	24.6	
111 Chlorobenzene	112	10.746	10.745	0.001	94	1661758	25.0	25.2	
113 1,1,1,2-Tetrachloroethane	131	10.885	10.884	0.001	98	806369	25.0	25.6	
112 Ethylbenzene	106	10.955	10.954	0.001	98	836022	25.0	25.0	
114 m-Xylene & p-Xylene	106	11.146	11.145	0.001	0	1139815	25.0	24.0	
115 o-Xylene	106	11.825	11.824	0.001	90	1003263	25.0	24.6	
116 Styrene	104	11.843	11.841	0.002	89	1638390	25.0	25.5	
117 Bromoform	173	12.121	12.120	0.001	94	580312	25.0	25.0	
118 Isopropylbenzene	105	12.487	12.485	0.002	95	3108339	25.0	24.6	
119 Cyclohexanone	55	12.574	12.590	-0.016	75	235353	1000.0	936.2	
121 Bromobenzene	156	12.957	12.955	0.002	92	886686	25.0	25.0	
122 1,1,2,2-Tetrachloroethane	83	12.974	12.990	-0.016	70	552068	25.0	23.5	
124 1,2,3-Trichloropropane	110	13.026	13.043	-0.017	73	135471	25.0	22.9	
125 trans-1,4-Dichloro-2-buten	53	13.079	13.095	-0.016	74	106653	25.0	21.7	
123 N-Propylbenzene	120	13.200	13.199	0.001	98	718508	25.0	24.1	
126 2-Chlorotoluene	126	13.322	13.321	0.001	94	620842	25.0	24.2	
128 4-Chlorotoluene	126	13.514	13.513	0.002	97	715734	25.0	24.3	
127 1,3,5-Trimethylbenzene	105	13.531	13.547	-0.016	85	2398385	25.0	25.1	
129 tert-Butylbenzene	119	14.106	14.104	0.002	91	2449657	25.0	24.5	
130 1,2,4-Trimethylbenzene	105	14.193	14.191	0.002	97	2366409	25.0	24.8	
131 sec-Butylbenzene	134	14.506	14.505	0.001	94	639725	25.0	23.5	
132 1,3-Dichlorobenzene	146	14.645	14.644	0.001	98	1367007	25.0	24.4	
133 4-Isopropyltoluene	119	14.784	14.783	0.001	94	2796445	25.0	24.7	
134 1,4-Dichlorobenzene	146	14.819	14.818	0.001	90	1616463	25.0	23.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.463	15.462	0.001	96	1233115	25.0	24.0	
137 n-Butylbenzene	91	15.516	15.532	-0.016	95	2954392	25.0	24.2	
139 1,2-Dibromo-3-Chloropropan	157	16.647	16.646	0.001	86	121281	25.0	23.5	
141 1,2,4-Trichlorobenzene	180	17.622	17.621	0.001	94	921011	25.0	25.4	
142 Hexachlorobutadiene	225	17.813	17.812	0.001	97	779661	25.0	26.4	
143 Naphthalene	128	17.848	17.847	0.001	98	747877	25.0	24.8	
144 1,2,3-Trichlorobenzene	180	18.092	18.091	0.001	96	718548	25.0	25.9	
S 149 Trihalomethanes, Total	1				0		100.0	100.7	
S 151 Total BTEX	1				0			122.2	
S 150 Xylenes, Total (URS)	1				0		50.0	48.5	
S 147 1,2-Dichloroethene, Total	96				0		50.0	48.7	
S 146 Xylenes, Total	106				0		50.0	48.5	
S 148 1,3-Dichloropropene, Total	1				0		50.0	49.1	
S 145 1,2-Dichloroethene, Total	1				0		50.0	48.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	10.00	Units: uL

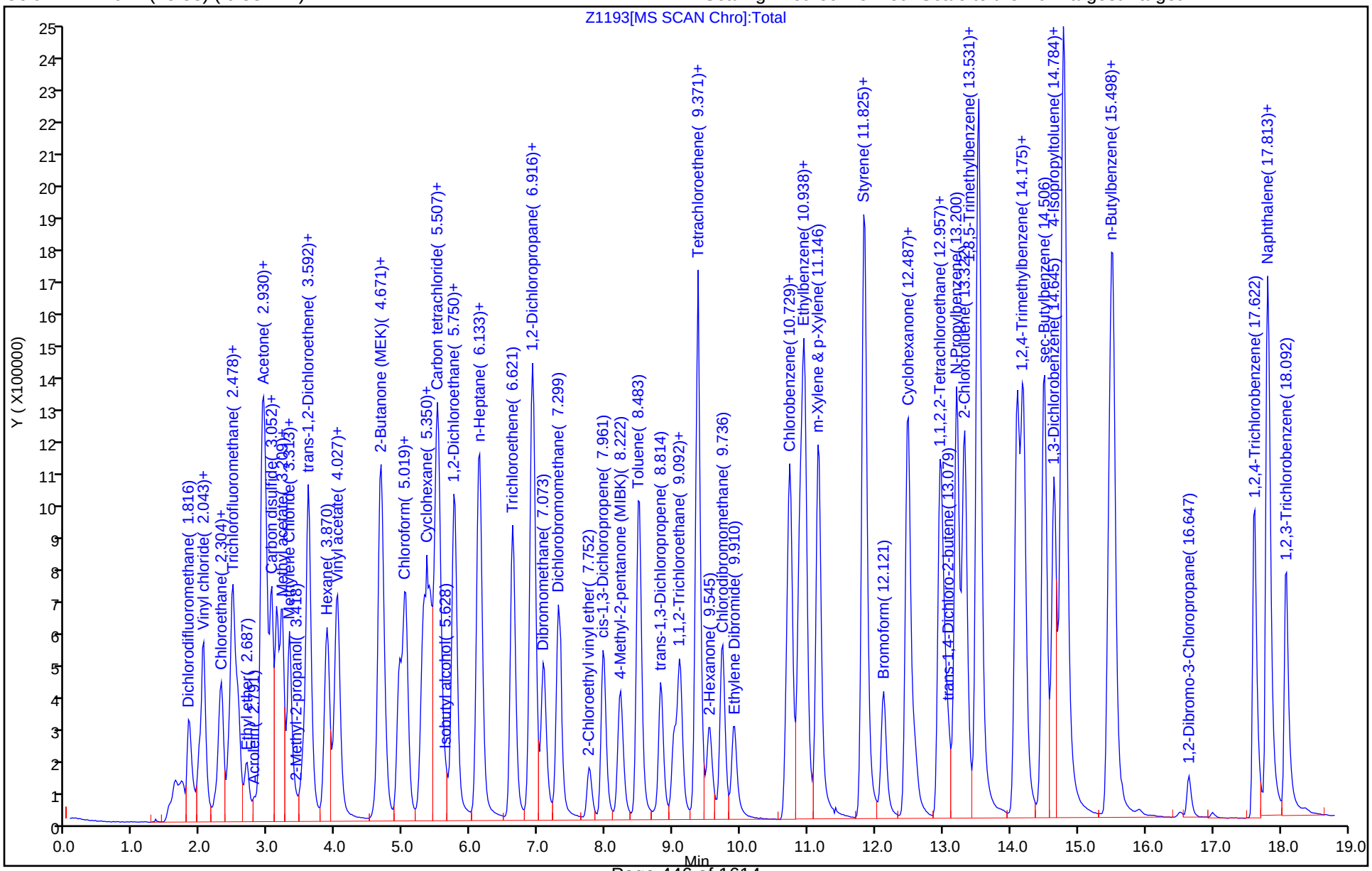
Report Date: 08-Sep-2018 09:12:21 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1193.D

Injection Date:	07-Sep-2018 14:26:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1194.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Sep-2018 14:49:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:23 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:02:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.347	3.347	0.000	0	155090	250.0	250.0	
* 2 Fluorobenzene	96	6.115	6.115	0.000	99	1114808	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.693	10.693	0.000	88	223832	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.783	14.766	0.017	72	430522	12.5	12.5	
27 Dichlorodifluoromethane	85	1.832	1.832	0.000	100	2385240	60.0	59.1	
30 Chloromethane	50	1.989	1.989	0.000	99	1564305	60.0	58.4	
32 Vinyl chloride	62	2.059	2.059	0.000	98	1268610	60.0	58.9	
35 Bromomethane	94	2.285	2.285	0.000	90	1663997	60.0	59.1	
36 Chloroethane	64	2.320	2.320	0.000	99	851377	60.0	56.6	
37 Dichlorofluoromethane	67	2.459	2.459	0.000	99	3193784	60.0	58.7	
38 Trichlorofluoromethane	101	2.546	2.529	0.017	100	3556962	60.0	57.8	
40 Ethyl ether	59	2.685	2.685	0.000	95	634253	60.0	54.5	
44 Acrolein	56	2.790	2.790	0.000	99	330911	355.5	352.5	
45 1,1-Dichloroethene	96	2.912	2.912	0.000	97	1668474	60.0	58.1	
48 Acetone	43	2.912	2.929	-0.017	98	353733	240.0	222.7	
46 1,1,2-Trichloro-1,2,2-trif	151	2.946	2.946	0.000	97	2319575	60.0	58.3	
49 Iodomethane	142	3.051	3.051	0.000	99	4182078	60.0	60.1	
50 Carbon disulfide	76	3.121	3.138	-0.017	99	5379468	60.0	58.0	
52 3-Chloro-1-propene	41	3.208	3.208	0.000	91	2448711	60.0	59.4	
51 Methyl acetate	43	3.208	3.208	0.000	42	748355	120.0	124.0	
54 Methylene Chloride	84	3.312	3.312	0.000	93	1413733	60.0	59.0	
55 2-Methyl-2-propanol	59	3.434	3.434	0.000	93	378986	600.0	595.0	
58 Acrylonitrile	53	3.521	3.538	-0.017	98	1189021	600.0	612.7	
57 trans-1,2-Dichloroethene	96	3.591	3.591	0.000	98	1893627	60.0	59.4	
56 Methyl tert-butyl ether	73	3.608	3.608	0.000	95	2344050	60.0	60.1	
59 Hexane	57	3.869	3.869	0.000	95	2077070	60.0	59.7	
62 1,1-Dichloroethane	63	4.008	4.008	0.000	96	2791339	60.0	58.2	
61 Vinyl acetate	43	4.043	4.043	0.000	97	3608081	120.0	120.1	
65 cis-1,2-Dichloroethene	96	4.670	4.652	0.018	83	2024834	60.0	57.9	
67 2-Butanone (MEK)	43	4.652	4.652	0.000	99	800633	240.0	244.6	
66 2,2-Dichloropropane	77	4.687	4.687	0.000	88	2733199	60.0	59.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.948	4.948	0.000	97	888162	60.0	60.4	
74 Chloroform	83	5.035	5.035	0.000	95	3329265	60.0	60.4	
72 Tetrahydrofuran	42	5.018	5.035	-0.017	38	271981	120.0	131.7	
75 1,1,1-Trichloroethane	97	5.314	5.314	0.000	97	3377040	60.0	57.6	
76 Cyclohexane	56	5.401	5.401	0.000	93	2547164	60.0	60.3	
78 1,1-Dichloropropene	75	5.505	5.488	0.017	97	2658983	60.0	60.7	
77 Carbon tetrachloride	117	5.540	5.523	0.017	99	3161022	60.0	60.0	
80 Isobutyl alcohol	41	5.627	5.645	-0.018	92	398028	1500.0	1519.8	
82 1,2-Dichloroethane	62	5.749	5.749	0.000	57	1371931	60.0	61.6	
81 Benzene	78	5.766	5.749	0.017	97	4991148	60.0	59.8	
84 n-Heptane	43	6.132	6.132	0.000	95	2982807	60.0	58.7	
85 Trichloroethene	95	6.619	6.619	0.000	97	2453065	60.0	60.5	
90 1,2-Dichloropropane	63	6.915	6.915	0.000	90	1725785	60.0	60.2	
87 Methylcyclohexane	55	6.933	6.915	0.018	90	2361716	60.0	59.5	
92 Dibromomethane	93	7.072	7.072	0.000	97	1261872	60.0	58.0	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.298	7.298	0.000	99	3158463	60.0	62.1	
96 2-Chloroethyl vinyl ether	63	7.751	7.768	-0.017	93	535204	60.0	61.9	
97 cis-1,3-Dichloropropene	75	7.977	7.960	0.017	96	2397103	60.0	61.7	
98 4-Methyl-2-pentanone (MIBK	43	8.221	8.221	0.000	97	2662227	240.0	257.6	
99 Toluene	91	8.499	8.499	0.000	99	6146837	60.0	58.1	
100 trans-1,3-Dichloropropene	75	8.813	8.813	0.000	94	1787755	60.0	59.9	
101 Ethyl methacrylate	69	9.022	9.022	0.000	92	1258665	60.0	65.6	
102 1,1,2-Trichloroethane	97	9.109	9.109	0.000	90	1200391	60.0	60.4	
103 Tetrachloroethene	164	9.370	9.370	0.000	98	2377927	60.0	61.9	
104 1,3-Dichloropropane	76	9.370	9.370	0.000	70	1815138	60.0	61.7	
105 2-Hexanone	43	9.544	9.544	0.000	99	1756437	240.0	270.6	
107 Chlorodibromomethane	129	9.735	9.735	0.000	90	2291977	60.0	61.6	
109 Ethylene Dibromide	107	9.909	9.909	0.000	98	1622676	60.0	63.1	
111 Chlorobenzene	112	10.745	10.745	0.000	94	4266883	60.0	61.9	
113 1,1,1,2-Tetrachloroethane	131	10.884	10.884	0.000	98	2063028	60.0	62.7	
112 Ethylbenzene	106	10.954	10.954	0.000	98	2112187	60.0	60.5	
114 m-Xylene & p-Xylene	106	11.163	11.145	0.018	0	2900163	60.0	58.3	
115 o-Xylene	106	11.824	11.824	0.000	97	2537871	60.0	59.5	
116 Styrene	104	11.841	11.841	0.000	94	4182746	60.0	62.3	
117 Bromoform	173	12.120	12.120	0.000	96	1545539	60.0	63.6	
118 Isopropylbenzene	105	12.486	12.485	0.001	95	7848903	60.0	60.4	
119 Cyclohexanone	55	12.590	12.590	0.000	92	667074	2400.0	2539.1	
121 Bromobenzene	156	12.956	12.955	0.001	92	2257972	60.0	61.8	
122 1,1,2,2-Tetrachloroethane	83	12.990	12.990	0.000	95	1505720	60.0	62.2	
124 1,2,3-Trichloropropane	110	13.043	13.043	0.000	85	363420	60.0	59.7	
125 trans-1,4-Dichloro-2-buten	53	13.095	13.095	0.000	78	288787	60.0	57.0	
123 N-Propylbenzene	120	13.217	13.199	0.018	99	1802690	60.0	58.8	
126 2-Chlorotoluene	126	13.321	13.321	0.000	97	1572453	60.0	59.6	
128 4-Chlorotoluene	126	13.513	13.513	0.001	97	1813762	60.0	59.7	
127 1,3,5-Trimethylbenzene	105	13.547	13.547	0.000	93	5938664	60.0	60.2	
129 tert-Butylbenzene	119	14.104	14.104	0.000	91	6055096	60.0	58.8	
130 1,2,4-Trimethylbenzene	105	14.191	14.191	0.000	96	5793977	60.0	59.0	
131 sec-Butylbenzene	134	14.505	14.505	0.000	94	1572358	60.0	56.2	
132 1,3-Dichlorobenzene	146	14.661	14.644	0.017	98	3470804	60.0	60.2	
133 4-Isopropyltoluene	119	14.783	14.783	0.000	97	6805353	60.0	58.3	
134 1,4-Dichlorobenzene	146	14.818	14.818	0.000	95	3907980	60.0	55.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.480	15.462	0.018	97	3107105	60.0	58.7	
137 n-Butylbenzene	91	15.514	15.532	-0.018	98	7063102	60.0	56.2	
139 1,2-Dibromo-3-Chloropropan	157	16.646	16.646	0.000	91	323022	60.0	60.7	
141 1,2,4-Trichlorobenzene	180	17.621	17.621	0.000	94	2193067	60.0	59.1	
142 Hexachlorobutadiene	225	17.812	17.812	0.000	98	1733120	60.0	57.4	
143 Naphthalene	128	17.847	17.847	0.000	98	1993909	60.0	65.1	
144 1,2,3-Trichlorobenzene	180	18.091	18.091	0.000	96	1756570	60.0	62.1	
S 146 Xylenes, Total	106				0		120.0	117.8	
S 147 1,2-Dichloroethene, Total	96				0		120.0	117.3	
S 145 1,2-Dichloroethene, Total	1				0		120.0	117.3	
S 148 1,3-Dichloropropene, Total	1				0		120.0	121.7	
S 149 Trihalomethanes, Total	1				0		240.0	247.8	
S 150 Xylenes, Total (URS)	1				0		120.0	117.8	
S 151 Total BTEX	1				0			296.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added: 1.00	Units: uL
MV-MegaMainA_00001	Amount Added: 24.00	Units: uL

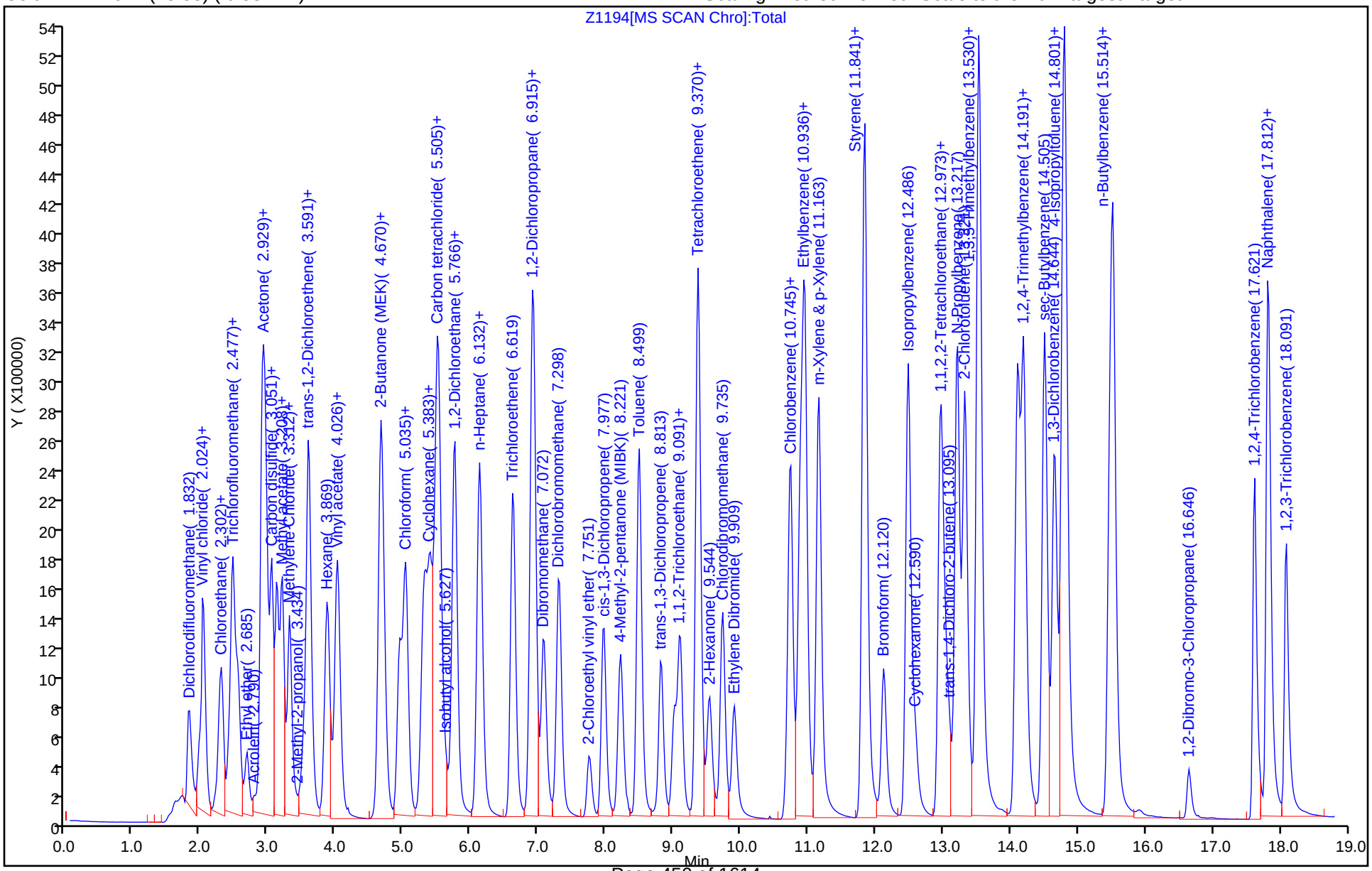
Report Date: 08-Sep-2018 09:12:23 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1194.D

Injection Date:	07-Sep-2018 14:49:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 15:56 Calibration End Date: 09/07/2018 17:47 Calibration ID: 33628

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428698/18	Z1197.D
Level 2	IC 280-428698/19	Z1198.D
Level 3	IC 280-428698/20	Z1199.D
Level 4	ICIS 280-428698/21	Z1200.D
Level 5	IC 280-428698/22	Z1201.D
Level 6	IC 280-428698/23	Z1202.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethylene oxide	0.0014 0.0013	0.0014	0.0016	0.0014	0.0014	Ave		0.0014				7.3		15.0			
Acetonitrile	+++++ 0.0047	0.0046	0.0052	0.0048	0.0046	Ave		0.0048				5.2		15.0			
Diisopropyl ether	0.2407 0.2034	0.2356	0.2205	0.2164	0.2140	Ave		0.2218				6.3		15.0			
2-Chloro-1,3-butadiene	0.4553 0.3624	0.4351	0.3934	0.3912	0.3851	Ave		0.4037				8.6		15.0			
Tert-butyl ethyl ether	0.8192 0.6001	0.7502	0.7100	0.6628	0.6319	Ave		0.6957				11.6		15.0			
Propionitrile	+++++ 0.0068	0.0076	0.0066	0.0069	0.0065	Ave		0.0069				6.5		15.0			
Ethyl acetate	+++++ 0.0882	0.0828	0.0869	0.0874	0.0830	Ave		0.0857				3.0		15.0			
Methacrylonitrile	0.0474 0.0477	0.0474	0.0486	0.0494	0.0478	Ave		0.0481				1.7		15.0			
Tert-amyl methyl ether	0.5428 0.5145	0.5254	0.5909	0.5501	0.5238	Ave		0.5413				5.1		15.0			
Methyl methacrylate	0.0343 0.0380	0.0367	0.0399	0.0406	0.0394	Ave		0.0381				6.2		15.0			
2-Nitropropane	+++++ 0.0166	0.0149	0.0187	0.0171	0.0151	Ave		0.0165				9.4		15.0			
cis-1,4-Dichloro-2-butene	0.0796 0.0580	0.0634	0.0617	0.0594	0.0571	Ave		0.0632				13.2		15.0			
1,2,3-Trimethylbenzene	2.5667 2.2437	2.4749	2.3313	2.2528	2.3493	Ave		2.3698				5.4		15.0			
Dibromofluoromethane (Surr)	0.6267 0.5393	0.5539	0.5609	0.5438	0.5463	Ave		0.5618				5.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2526 0.1972	0.2194	0.2237	0.2217	0.2087	Ave		0.2205				8.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 15:56 Calibration End Date: 09/07/2018 17:47 Calibration ID: 33628

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toluene-d8 (Surr)	5.7329 4.6096	5.0049	4.8392	4.6592	4.7992	Ave		4.9408				8.3		15.0			
4-Bromofluorobenzene (Surr)	1.9472 1.4585	1.6373	1.5792	1.4913	1.5129	Ave		1.6044				11.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 15:56 Calibration End Date: 09/07/2018 17:47 Calibration ID: 33628

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-428698/18	Z1197.D
Level 2	IC 280-428698/19	Z1198.D
Level 3	IC 280-428698/20	Z1199.D
Level 4	ICIS 280-428698/21	Z1200.D
Level 5	IC 280-428698/22	Z1201.D
Level 6	IC 280-428698/23	Z1202.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene oxide	FB	Ave	11348 698059	22393	66960	119523	356152	100 6000	200	500	1000	3000
Acetonitrile	FB	Ave	+++++ 246036	7511	21400	41120	118156	+++++ 600	20.0	50.0	100	300
Diisopropyl ether	FB	Ave	18966 1073057	38696	91282	184686	549798	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	35867 1912138	71469	162840	333887	989327	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	64543 3166347	123223	293916	565732	1623054	1.00 60.0	2.00	5.00	10.0	30.0
Propionitrile	FB	Ave	+++++ 358159	12534	27269	59001	167240	+++++ 600	20.0	50.0	100	300
Ethyl acetate	FB	Ave	+++++ 931241	27209	71946	149152	426521	+++++ 120	4.00	10.0	20.0	60.0
Methacrylonitrile	FB	Ave	37381 2516674	77873	201191	421890	1226965	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	42764 2714965	86294	244637	469549	1345587	1.00 60.0	2.00	5.00	10.0	30.0
Methyl methacrylate	FB	Ave	5398 400849	12052	33002	69268	202263	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	+++++ 175378	4908	15507	29107	77668	+++++ 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Ave	4807 233272	8048	20050	39597	113881	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	77501 4510343	157068	378571	751332	2344607	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	49373 2845385	90983	232198	464178	1403266	1.00 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	19900 1040439	36036	92602	189201	536016	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	97809 5260869	178846	432875	864751	2675940	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 428698

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/07/2018 15:56 Calibration End Date: 09/07/2018 17:47 Calibration ID: 33628

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	58795 2932005	103908	256439	497359	1509857	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1197.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Sep-2018 15:56:30 ALS Bottle#: 19 Worklist Smp#: 18
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:27 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:06:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.347	0.001	0	111672	250.0	250.0	
* 2 Fluorobenzene	96	6.116	6.115	0.001	99	984789	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.694	10.693	0.001	87	213263	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.767	14.766	0.001	95	377434	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.228	5.230	-0.002	93	49373	1.00	1.12	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.646	5.648	-0.002	0	19900	1.00	1.15	
$ 10 Toluene-d8 (Surr)	98	8.396	8.381	0.015	92	97809	1.00	1.16	
$ 11 4-Bromofluorobenzene (Surr	95	12.731	12.715	0.016	89	58795	1.00	1.21	
34 Ethylene oxide	43	2.217	2.218	-0.001	98	11348	100.0	101.3	
42 Propene oxide	58	2.739	2.741	-0.002	96	72062	100.0	104.1	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41		3.176				ND	ND	U
60 Isopropyl ether	87	4.097	4.098	-0.001	97	18966	1.00	1.09	
63 2-Chloro-1,3-butadiene	53	4.114	4.116	-0.002	87	35867	1.00	1.13	
64 Tert-butyl ethyl ether	59	4.497	4.499	-0.002	97	64543	1.00	1.18	
69 Propionitrile	54		4.708				ND	ND	U
68 Ethyl acetate	43		4.725				ND	ND	U
73 Methacrylonitrile	41	4.898	4.899	-0.001	94	37381	10.0	9.87	
83 Tert-amyl methyl ether	73	5.925	5.926	-0.001	96	42764	1.00	1.00	
86 n-Butanol	56		6.553				ND	ND	
91 Methyl methacrylate	100	7.108	7.110	-0.002	95	5398	2.00	1.80	
95 2-Nitropropane	41		7.597				ND	ND	
106 Tetrahydrothiophene	60		9.721				ND	ND	
120 cis-1,4-Dichloro-2-butene	53	12.592	12.576	0.016	0	4807	2.00	2.52	
135 1,2,3-Trimethylbenzene	105	14.941	14.926	0.015	97	77501	1.00	1.08	
140 1,3,5-Trichlorobenzene	180	16.943	16.945	-0.002	97	45685	1.00	1.11	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.08	Units: uL
MV-Supp A_00032	Amount Added:	0.50	Units: uL

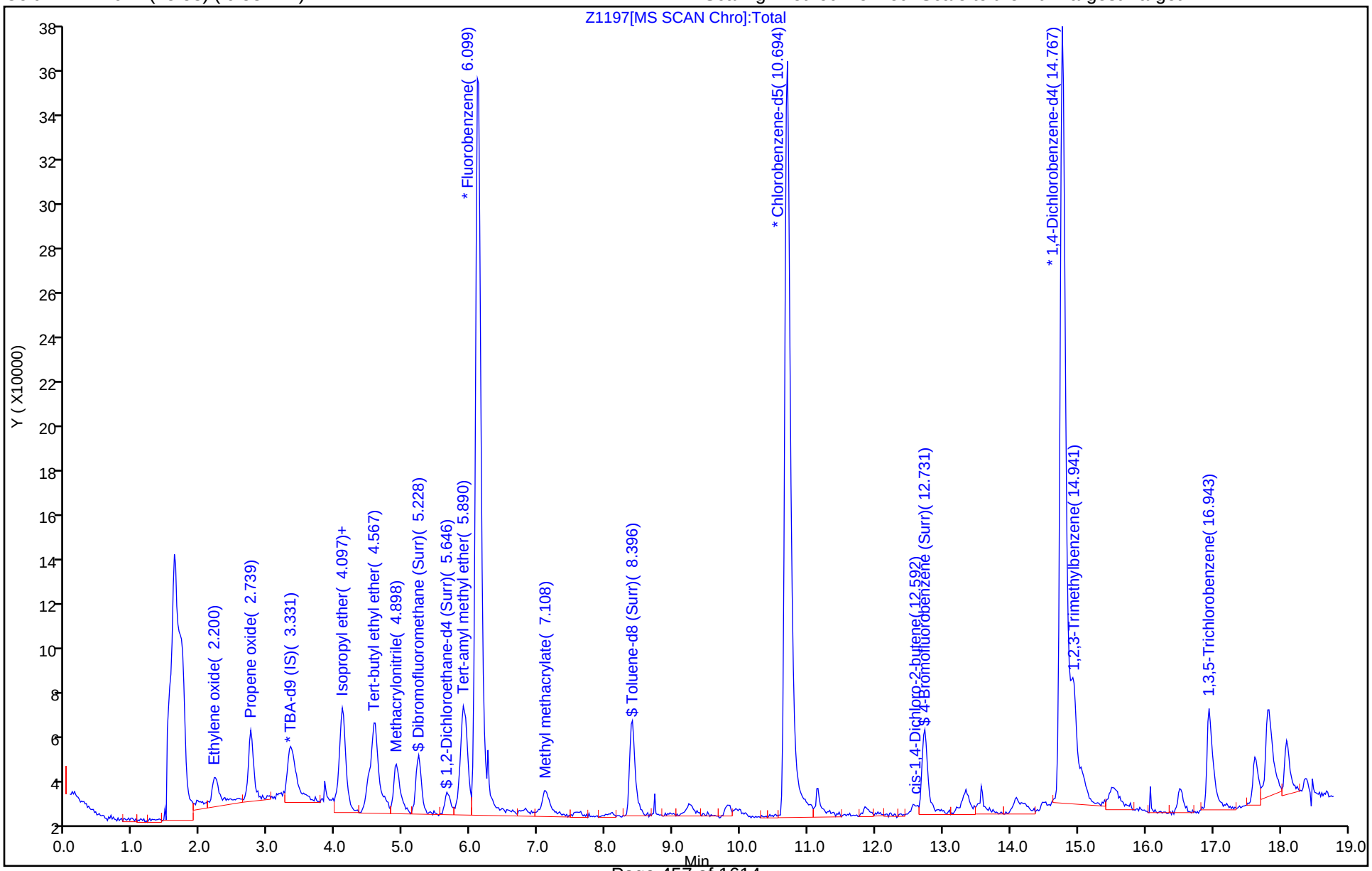
Report Date: 08-Sep-2018 09:12:28 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1197.D

Injection Date:	07-Sep-2018 15:56:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



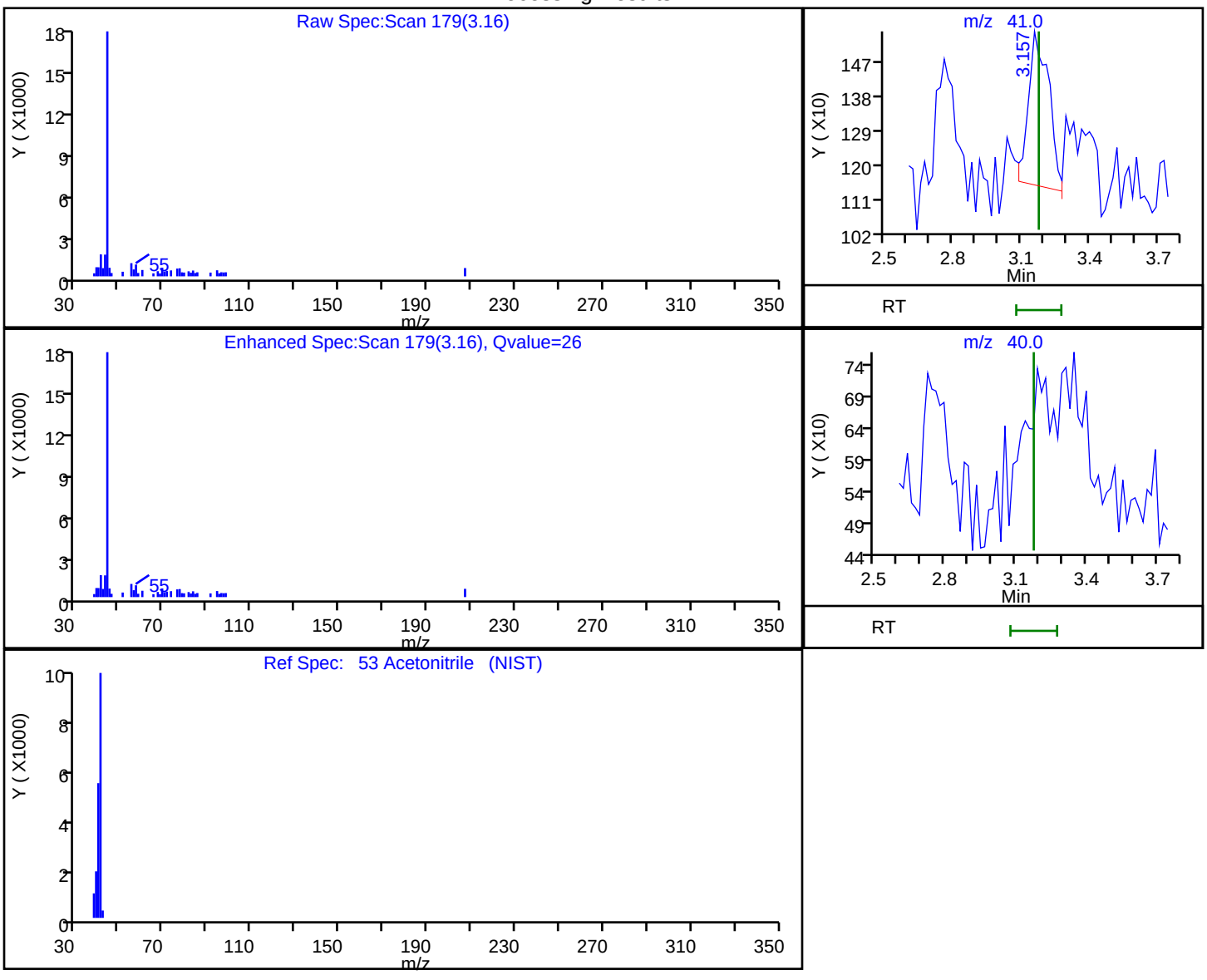
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1197.D				
Injection Date:	07-Sep-2018 15:56:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	19	Worklist Smp#:	18
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

53 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
3.16	41.00	2553	7.184382
3.18	40.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 09:06:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

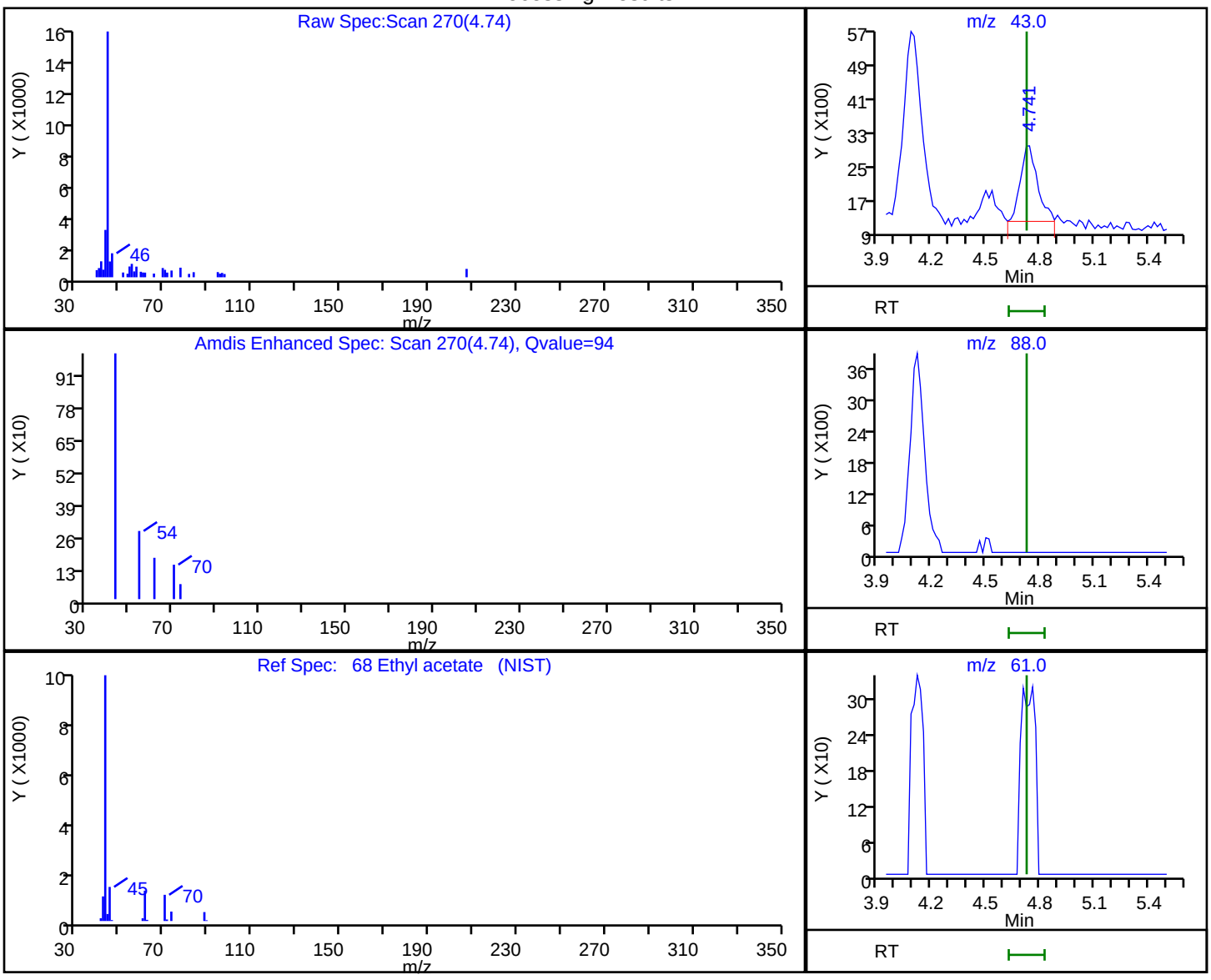
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1197.D				
Injection Date:	07-Sep-2018 15:56:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	19	Worklist Smp#:	18
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

68 Ethyl acetate, CAS: 141-78-6

Processing Results



RT	Mass	Response	Amount
4.74	43.00	11862	1.793695
4.73	88.00	0	
4.73	61.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 09:06:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

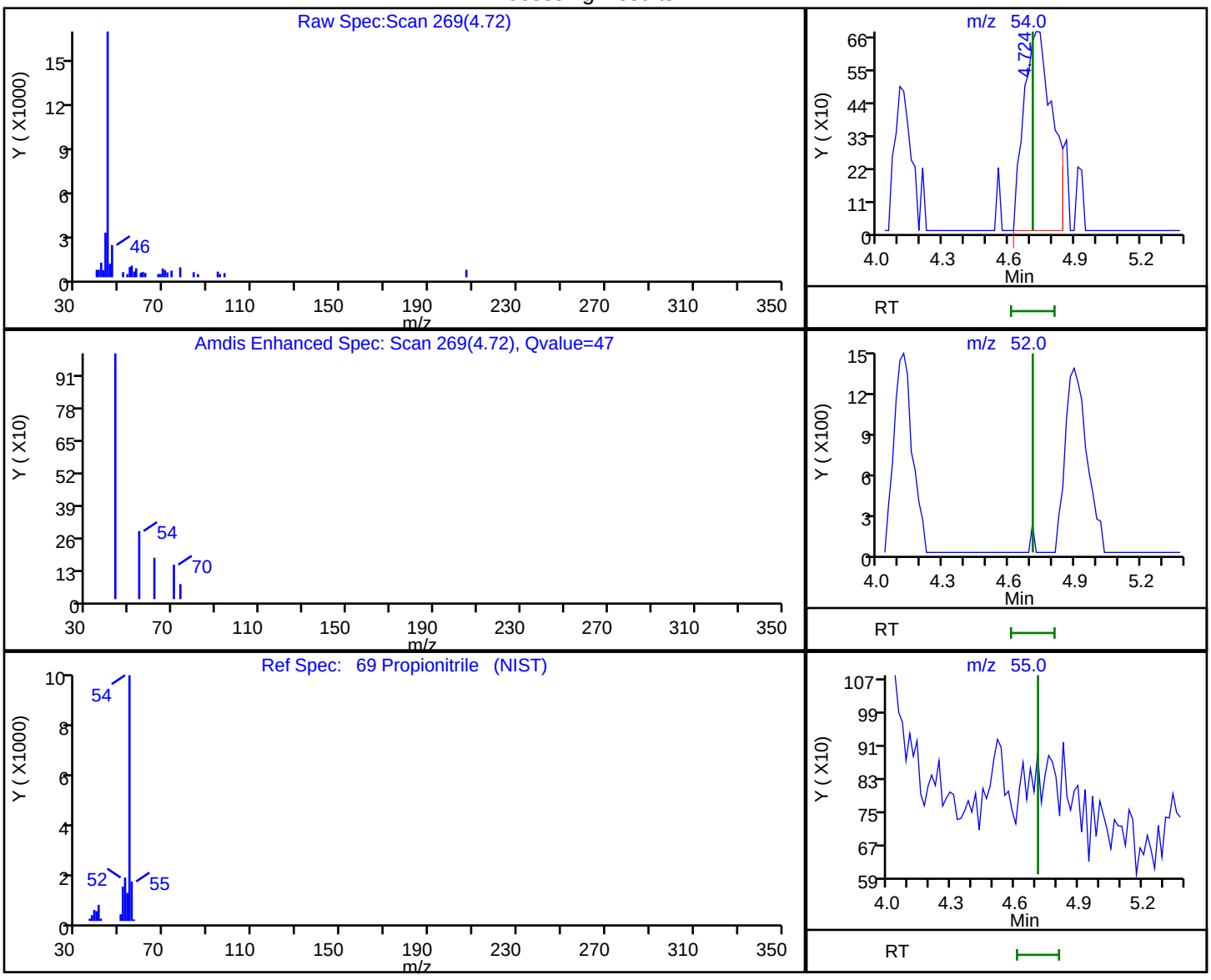
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1197.D				
Injection Date:	07-Sep-2018 15:56:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	19	Worklist Smp#:	18
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

69 Propionitrile, CAS: 107-12-0

Processing Results



RT	Mass	Response	Amount
4.72	54.00	6137	11.070462
4.71	52.00	0	
4.71	55.00	0	

Reviewer: ilczyszynd, 08-Sep-2018 09:06:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1198.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Sep-2018 16:18:30 ALS Bottle#: 20 Worklist Smp#: 19
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:30 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:07:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.347	0.001	0	115533	250.0	250.0	
* 2 Fluorobenzene	96	6.115	6.115	0.000	99	1026555	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.693	10.693	0.000	87	223340	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.767	14.766	0.001	95	396655	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.228	5.230	-0.002	93	90983	2.00	1.97	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.663	5.648	0.015	0	36036	2.00	1.99	
$ 10 Toluene-d8 (Surr)	98	8.396	8.381	0.015	92	178846	2.00	2.03	
$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.715	0.015	89	103908	2.00	2.04	
34 Ethylene oxide	43	2.216	2.218	-0.002	99	22393	200.0	191.8	
42 Propene oxide	58	2.738	2.741	-0.003	96	148968	200.0	206.4	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41	3.174	3.176	-0.002	78	7511	20.0	19.2	
60 Isopropyl ether	87	4.096	4.098	-0.002	97	38696	2.00	2.12	
63 2-Chloro-1,3-butadiene	53	4.114	4.116	-0.002	89	71469	2.00	2.16	
64 Tert-butyl ethyl ether	59	4.514	4.499	0.015	98	123223	2.00	2.16	
69 Propionitrile	54	4.740	4.708	0.032	48	12534	20.0	22.2	
68 Ethyl acetate	43	4.740	4.725	0.015	96	27209	4.00	3.87	
73 Methacrylonitrile	41	4.897	4.899	-0.002	94	77873	20.0	19.7	
83 Tert-amyl methyl ether	73	5.924	5.926	-0.002	97	86294	2.00	1.94	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.108	7.110	-0.002	94	12052	4.00	3.85	
95 2-Nitropropane	41	7.612	7.597	0.015	95	4908	4.00	3.62	
106 Tetrahydrothiophene	60		9.721				ND	ND	
120 cis-1,4-Dichloro-2-butene	53	12.573	12.576	-0.003	0	8048	4.00	4.01	
135 1,2,3-Trimethylbenzene	105	14.941	14.926	0.015	98	157068	2.00	2.09	
140 1,3,5-Trichlorobenzene	180	16.942	16.945	-0.003	98	92515	2.00	2.13	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.16	Units: uL
MV-Supp A_00032	Amount Added:	1.00	Units: uL

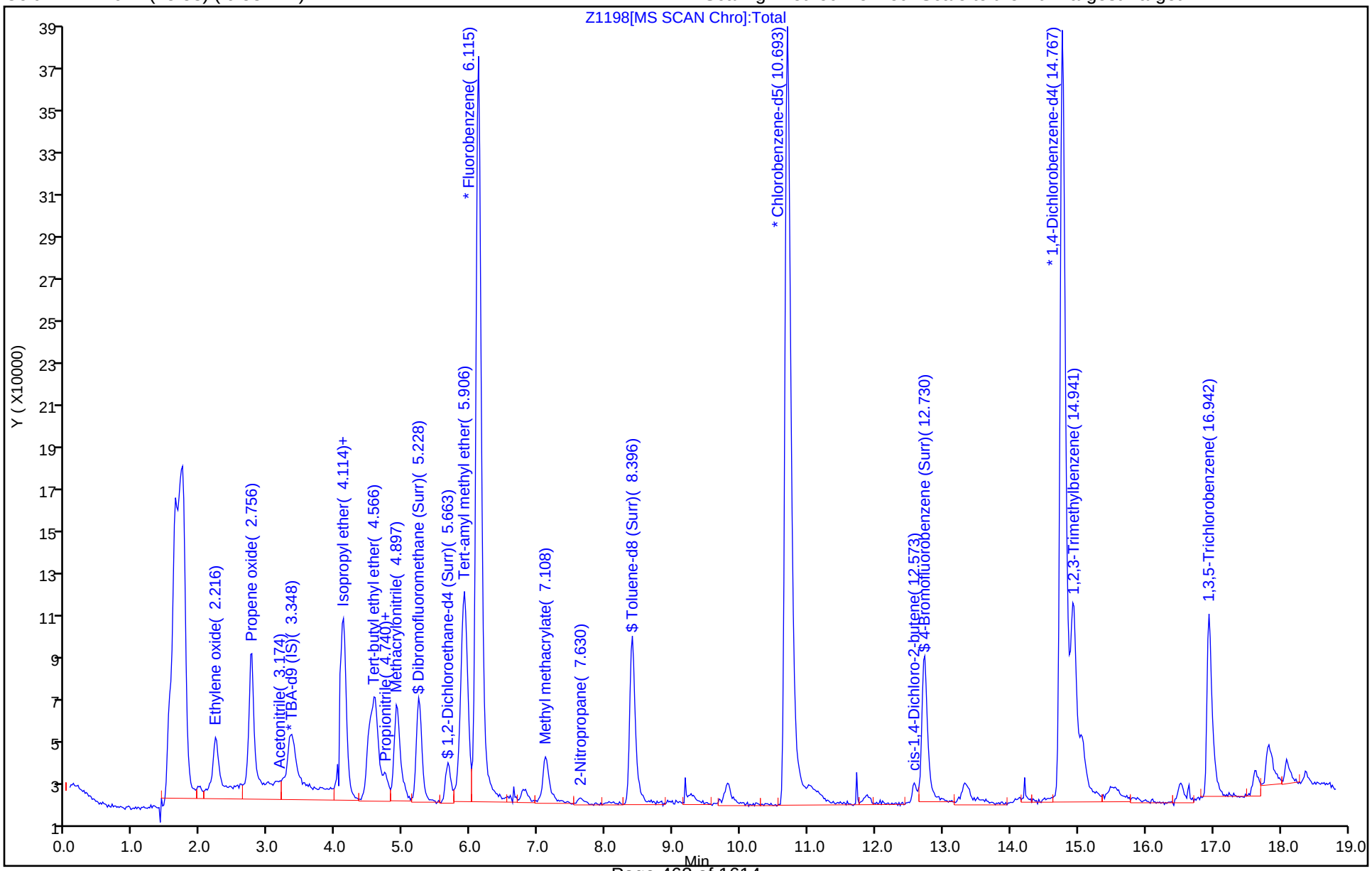
Report Date: 08-Sep-2018 09:12:31 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1198.D

Injection Date:	07-Sep-2018 16:18:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1199.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Sep-2018 16:40:30 ALS Bottle#: 22 Worklist Smp#: 20
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:33 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:07:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.347	0.003	0	152895	250.0	250.0	
* 2 Fluorobenzene	96	6.118	6.115	0.003	99	1034939	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.696	10.693	0.003	87	223628	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.766	0.003	95	405965	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	232198	5.00	4.99	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.665	5.648	0.017	0	92602	5.00	5.07	
$ 10 Toluene-d8 (Surr)	98	8.398	8.381	0.017	92	432875	5.00	4.90	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	88	256439	5.00	4.92	
34 Ethylene oxide	43	2.219	2.218	0.000	99	66960	500.0	568.8	
42 Propene oxide	58	2.741	2.741	0.000	96	365904	500.0	502.9	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41	3.193	3.176	0.017	92	21400	50.0	54.2	
60 Isopropyl ether	87	4.098	4.098	0.000	97	91282	5.00	4.97	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	88	162840	5.00	4.87	
64 Tert-butyl ethyl ether	59	4.516	4.499	0.017	98	293916	5.00	5.10	
69 Propionitrile	54	4.725	4.708	0.017	46	27269	50.0	47.8	
68 Ethyl acetate	43	4.743	4.725	0.018	99	71946	10.0	10.1	
73 Methacrylonitrile	41	4.899	4.899	0.000	95	201191	50.0	50.6	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	97	244637	5.00	5.46	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.110	7.110	0.000	96	33002	10.0	10.5	
95 2-Nitropropane	41	7.615	7.597	0.018	97	15507	10.0	11.4	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.576	12.576	0.000	0	20050	10.0	9.77	
135 1,2,3-Trimethylbenzene	105	14.926	14.926	0.000	99	378571	5.00	4.92	
140 1,3,5-Trichlorobenzene	180	16.945	16.945	0.000	98	219811	5.00	4.95	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.40	Units: uL
MV-Supp A_00032	Amount Added:	2.50	Units: uL

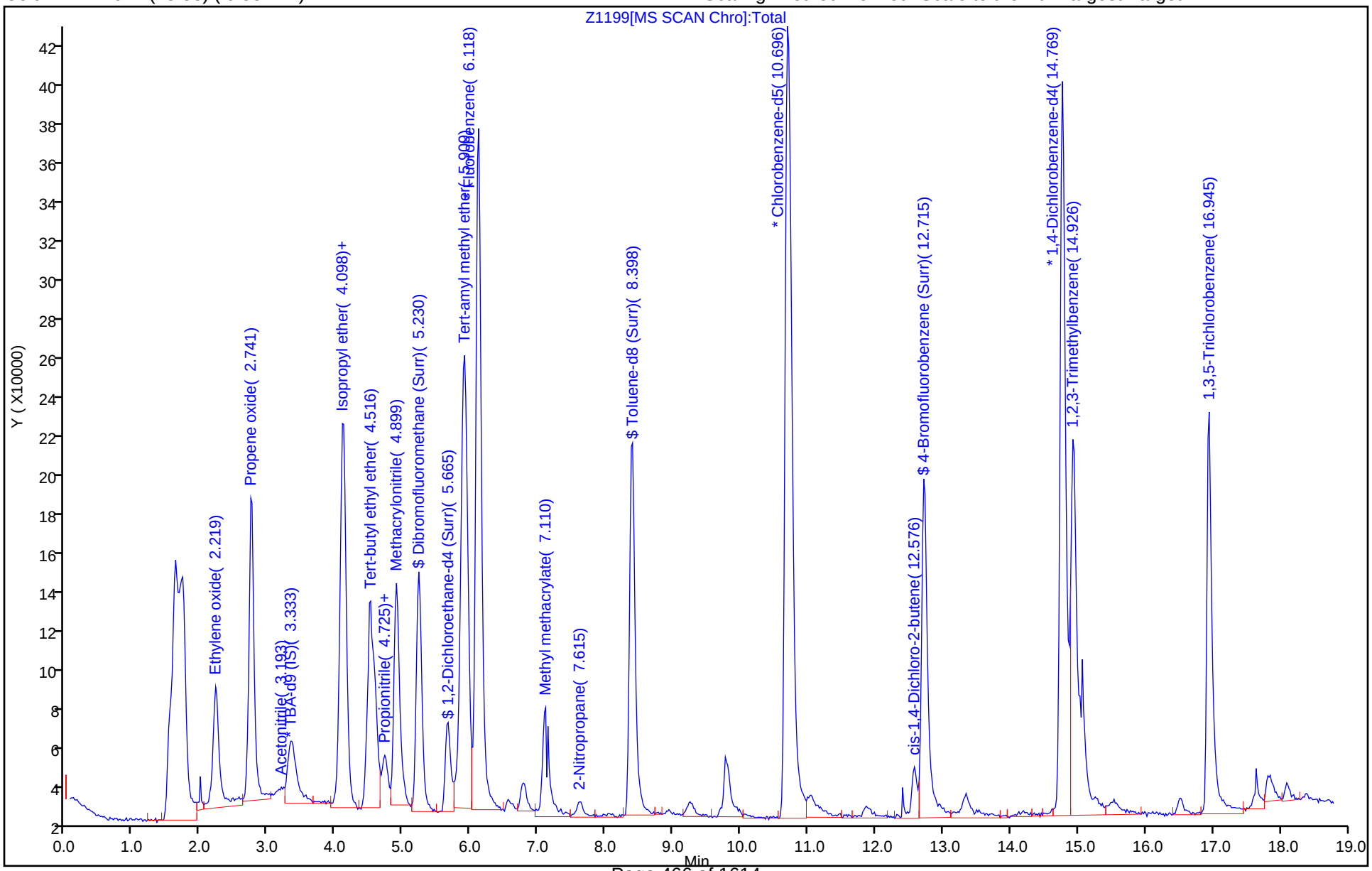
Report Date: 08-Sep-2018 09:12:34 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1199.D

Injection Date:	07-Sep-2018 16:40:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1200.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 07-Sep-2018 17:02:30 ALS Bottle#: 23 Worklist Smp#: 21
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:36 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:07:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.332	3.332	0.000	0	138842	250.0	250.0	
* 2 Fluorobenzene	96	6.118	6.118	0.000	99	1066922	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.696	10.696	0.000	87	232000	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.769	0.000	95	416882	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	464178	10.0	9.68	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.648	5.648	0.000	0	189201	10.0	10.1	
$ 10 Toluene-d8 (Surr)	98	8.381	8.381	0.000	92	864751	10.0	9.43	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	88	497359	10.0	9.30	
34 Ethylene oxide	43	2.218	2.218	0.000	99	119523	1000.0	984.9	
42 Propene oxide	58	2.741	2.741	0.000	96	761942	1000.0	1015.7	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41	3.176	3.176	0.000	99	41120	100.0	101.1	
60 Isopropyl ether	87	4.098	4.098	0.000	98	184686	10.0	9.76	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	89	333887	10.0	9.69	
64 Tert-butyl ethyl ether	59	4.499	4.499	0.000	97	565732	10.0	9.53	
69 Propionitrile	54	4.708	4.708	0.000	99	59001	100.0	100.4	
68 Ethyl acetate	43	4.725	4.725	0.000	100	149152	20.0	20.4	
73 Methacrylonitrile	41	4.899	4.899	0.000	95	421890	100.0	102.9	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	98	469549	10.0	10.2	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.110	7.110	0.000	94	69268	20.0	21.3	
95 2-Nitropropane	41	7.597	7.597	0.000	95	29107	20.0	20.7	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.576	12.576	0.000	0	39597	20.0	18.8	
135 1,2,3-Trimethylbenzene	105	14.926	14.926	0.000	98	751332	10.0	9.51	
140 1,3,5-Trichlorobenzene	180	16.945	16.945	0.000	98	430437	10.0	9.44	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL

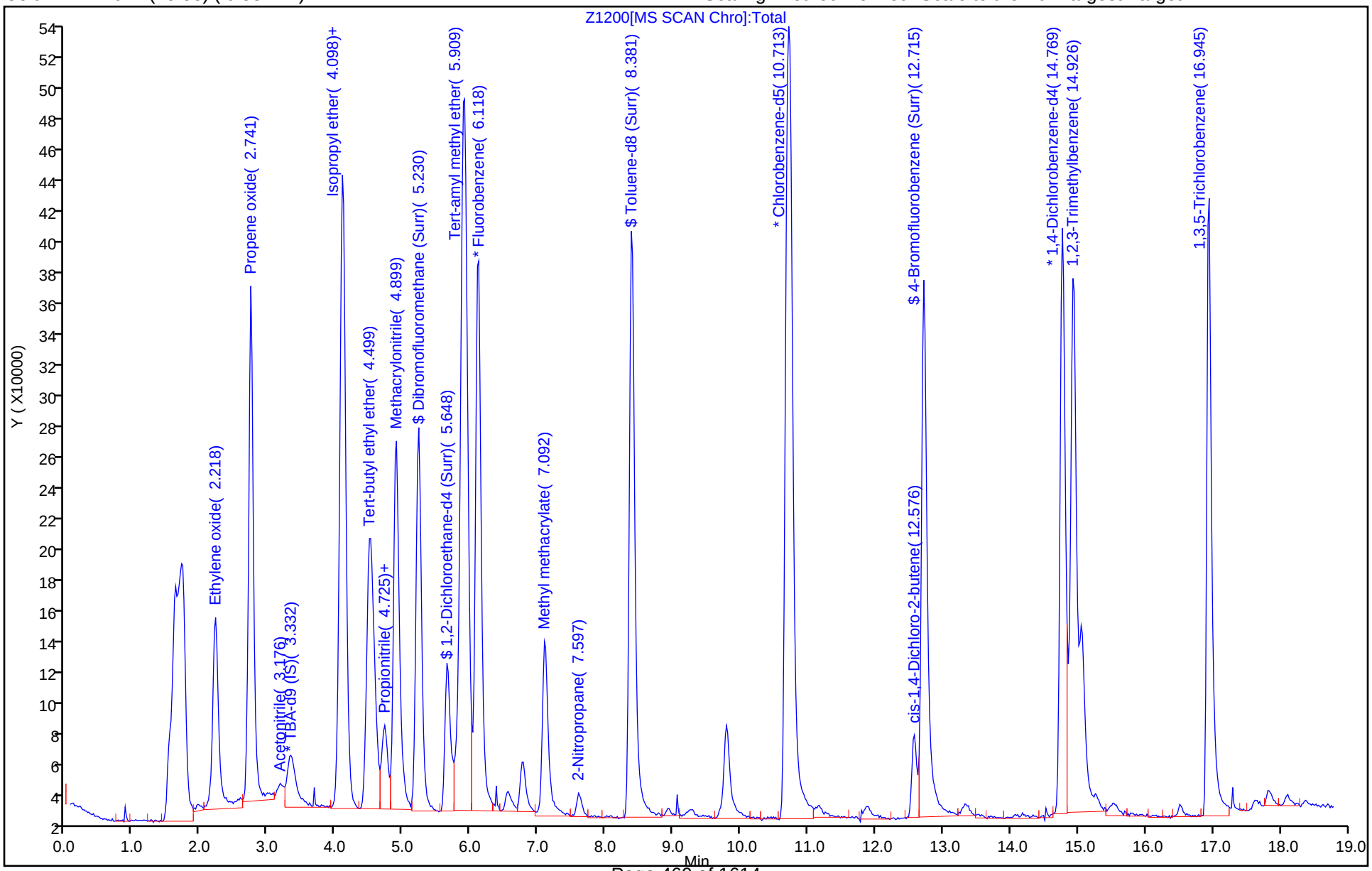
Report Date: 08-Sep-2018 09:12:36 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1200.D

Injection Date:	07-Sep-2018 17:02:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icis			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1201.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 07-Sep-2018 17:24:30 ALS Bottle#: 24 Worklist Smp#: 22
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:38 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.337	3.332	0.005	0	126870	250.0	250.0	
* 2 Fluorobenzene	96	6.104	6.118	-0.014	99	1070292	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.682	10.696	-0.014	87	232325	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.773	14.769	0.004	95	415836	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.216	5.230	-0.014	93	1403266	30.0	29.2	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.652	5.648	0.004	0	536016	30.0	28.4	
$ 10 Toluene-d8 (Surr)	98	8.385	8.381	0.004	92	2675940	30.0	29.1	
$ 11 4-Bromofluorobenzene (Surr	95	12.719	12.715	0.004	89	1509857	30.0	28.3	
34 Ethylene oxide	43	2.205	2.218	-0.013	99	356152	3000.0	2925.4	
42 Propene oxide	58	2.745	2.741	0.004	97	2188833	3000.0	2908.8	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41	3.180	3.176	0.004	99	118156	300.0	289.6	
60 Isopropyl ether	87	4.085	4.098	-0.013	98	549798	30.0	29.0	
63 2-Chloro-1,3-butadiene	53	4.102	4.116	-0.014	88	989327	30.0	28.6	
64 Tert-butyl ethyl ether	59	4.503	4.499	0.004	97	1623054	30.0	27.2	
69 Propionitrile	54	4.694	4.708	-0.014	97	167240	300.0	283.7	
68 Ethyl acetate	43	4.729	4.725	0.004	99	426521	60.0	58.1	
73 Methacrylonitrile	41	4.886	4.899	-0.013	95	1226965	300.0	298.2	
83 Tert-amyl methyl ether	73	5.913	5.926	-0.013	98	1345587	30.0	29.0	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.096	7.110	-0.014	95	202263	60.0	62.0	
95 2-Nitropropane	41	7.601	7.597	0.004	95	77668	60.0	55.0	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.562	12.576	-0.014	0	113881	60.0	54.2	
135 1,2,3-Trimethylbenzene	105	14.930	14.926	0.004	99	2344607	30.0	29.7	
140 1,3,5-Trichlorobenzene	180	16.931	16.945	-0.014	98	1333129	30.0	29.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	2.40	Units: uL
MV-Supp A_00032	Amount Added:	15.00	Units: uL

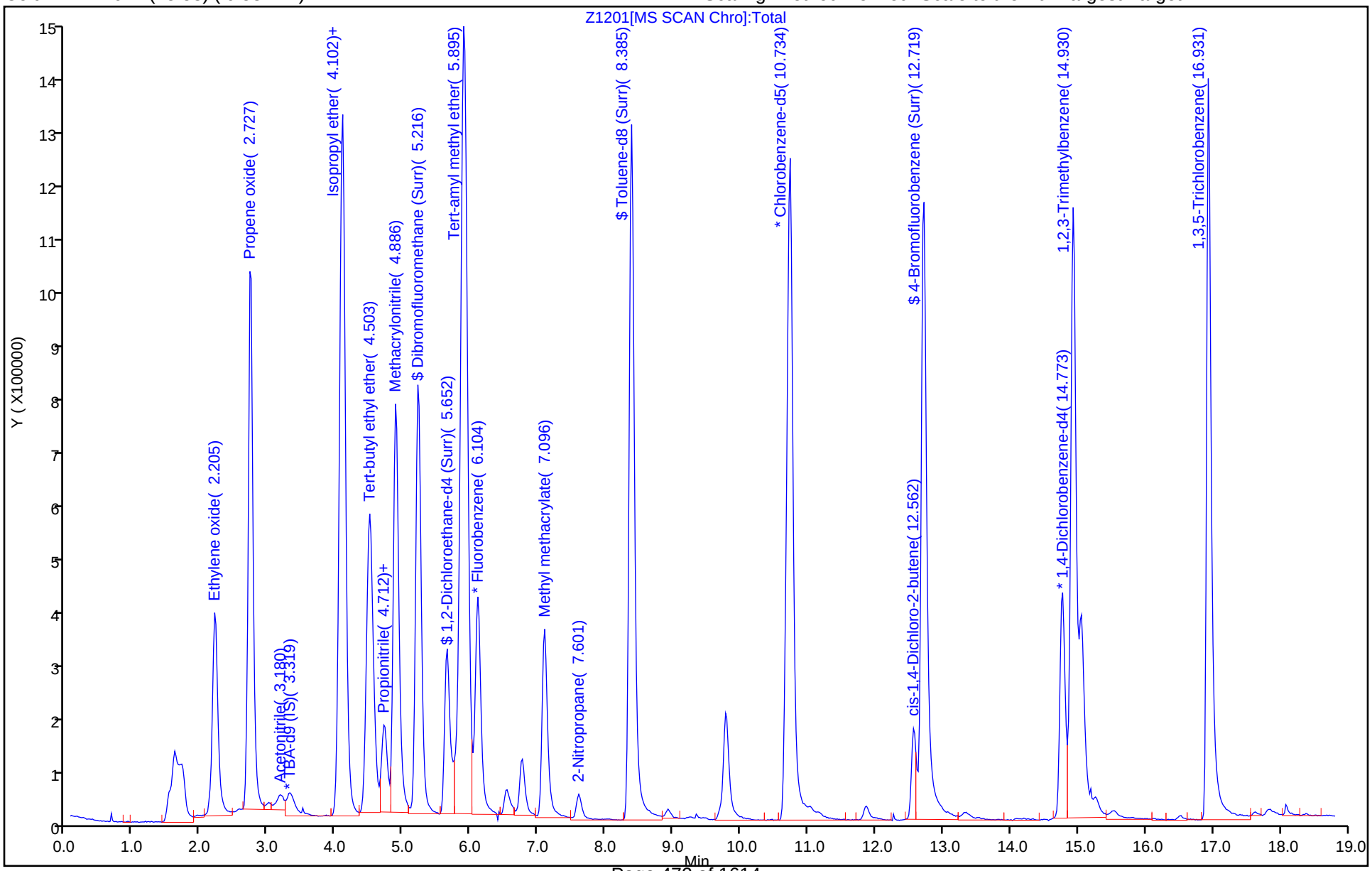
Report Date: 08-Sep-2018 09:12:38 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1201.D

Injection Date:	07-Sep-2018 17:24:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Sep-2018 17:47:30 ALS Bottle#: 25 Worklist Smp#: 23
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:40 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.332	0.016	0	127268	250.0	250.0	
* 2 Fluorobenzene	96	6.116	6.118	-0.002	99	1099258	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.694	10.696	-0.002	89	237766	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.767	14.769	-0.002	96	418802	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.228	5.230	-0.002	93	2845385	60.0	57.6	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.646	5.648	-0.002	0	1040439	60.0	53.6	
$ 10 Toluene-d8 (Surr)	98	8.379	8.381	-0.002	92	5260869	60.0	56.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.713	12.715	-0.002	88	2932005	60.0	54.5	
34 Ethylene oxide	43	2.217	2.218	-0.001	99	698059	6000.0	5582.8	
42 Propene oxide	58	2.739	2.741	-0.002	98	4341169	6000.0	5617.0	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.071				ND	ND	
53 Acetonitrile	41	3.174	3.176	-0.002	99	246036	600.0	587.2	
60 Isopropyl ether	87	4.097	4.098	-0.001	98	1073057	60.0	55.0	
63 2-Chloro-1,3-butadiene	53	4.114	4.116	-0.002	89	1912138	60.0	53.9	
64 Tert-butyl ethyl ether	59	4.515	4.499	0.016	98	3166347	60.0	51.8	
69 Propionitrile	54	4.706	4.708	-0.002	97	358159	600.0	591.5	
68 Ethyl acetate	43	4.706	4.725	-0.019	100	931241	120.0	123.6	
73 Methacrylonitrile	41	4.898	4.899	-0.001	94	2516674	600.0	595.5	
83 Tert-amyl methyl ether	73	5.925	5.926	-0.001	98	2714965	60.0	57.0	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.091	7.110	-0.019	94	400849	120.0	119.6	
95 2-Nitropropane	41	7.596	7.597	-0.001	96	175378	120.0	120.9	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.557	12.576	-0.019	0	233272	120.0	110.2	
135 1,2,3-Trimethylbenzene	105	14.924	14.926	-0.002	99	4510343	60.0	56.8	
140 1,3,5-Trichlorobenzene	180	16.943	16.945	-0.002	98	2511665	60.0	54.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	4.80	Units: uL
MV-Supp A_00032	Amount Added:	30.00	Units: uL

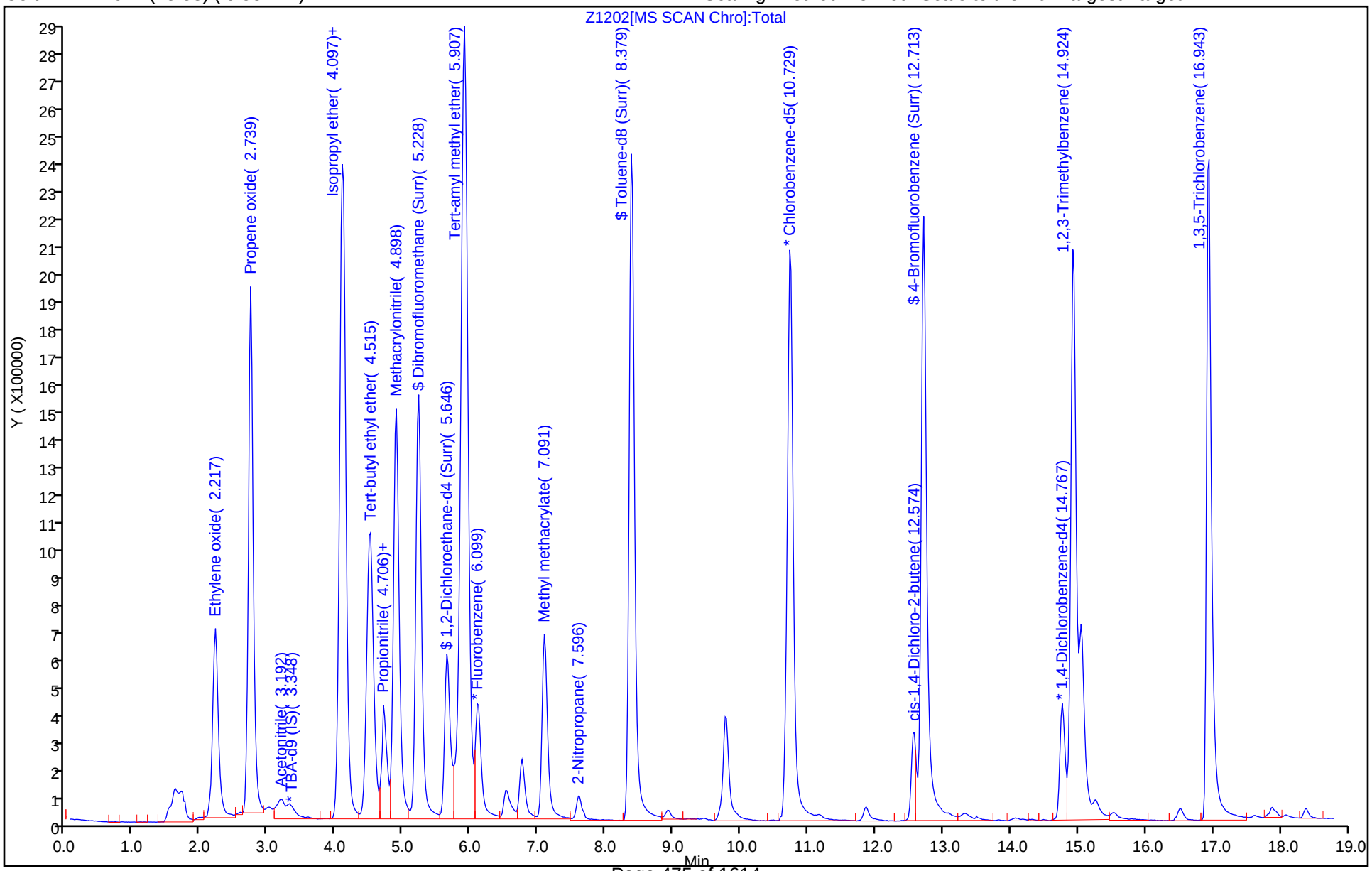
Report Date: 08-Sep-2018 09:12:41 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Injection Date:	07-Sep-2018 17:47:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-429676/10	Z1437.D
Level 2	IC 280-429676/11	Z1438.D
Level 3	IC 280-429676/12	Z1439.D
Level 4	IC 280-429676/13	Z1432.D
Level 5	IC 280-429676/14	Z1433.D
Level 6	IC 280-429676/15	Z1434.D
Level 7	IC 280-429676/16	Z1435.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4041 0.4604	0.4024 0.4578	0.3846	0.5051	0.4898	Ave		0.4435				10.6		15.0			
Chloromethane	0.2930 0.2972	0.2985 0.3017	0.2846	0.3097	0.2997	Ave		0.2978			0.1000	2.6		15.0			
Vinyl chloride	0.2294 0.2454	0.2402 0.2500	0.2396	0.2653	0.2581	Ave		0.2469				4.9		30.0			
Bromomethane	0.2975 0.3270	0.3651 0.3298	0.3168	0.3428	0.3332	Ave		0.3303				6.4		15.0			
Chloroethane	0.1783 0.1631	0.1678 0.1642	0.1700	0.1776	0.1705	Ave		0.1702				3.5		15.0			
Dichlorofluoromethane	0.6298 0.6162	0.6370 0.6152	0.6492	0.6538	0.6304	Ave		0.6331				2.4		15.0			
Trichlorofluoromethane	0.6767 0.6822	0.6976 0.6801	0.7093	0.7406	0.7217	Ave		0.7012				3.4		15.0			
Ethyl ether	0.1195 0.1174	0.1158 0.1113	0.1174	0.1235	0.1145	Ave		0.1171				3.3		15.0			
Acrolein	0.0151 0.0100	0.0133 0.0093	0.0132	0.0112	0.0098	Lin1	0.0239	0.0095							0.9970		0.9900
1,1-Dichloroethene	0.3551 0.3278	0.3390 0.3270	0.3556	0.3569	0.3498	Ave		0.3445				3.8		30.0			
Acetone	+++++ 0.0149	0.0221 0.0144	0.0180	0.0178	0.0146	Lin2	0.0297	0.0147							0.9950		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	0.4656 0.4624	0.4682 0.4650	0.4787	0.4968	0.4849	Ave		0.4745				2.7		15.0			
Methyl iodide	0.8132 0.8268	0.8193 0.8255	0.8333	0.8511	0.8357	Ave		0.8293				1.5		15.0			
Carbon disulfide	1.2486 1.0777	1.1417 1.0806	1.1355	1.1525	1.1113	Ave		1.1354				5.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.4566 0.4780	0.4659 0.4485	0.4530	0.4845	0.4640	Ave		0.4644				2.8		15.0			
Methyl acetate	0.1020 0.0711	0.0899 0.0583	0.0748	0.0700	0.0669	Lin2	0.0392	0.0653							0.9940		0.9900
Methylene Chloride	+++++ 0.2760	0.3304 0.2685	0.3037	0.2951	0.2760	Ave		0.2916				7.9		15.0			
t-Butyl alcohol	+++++ 1.1382	1.0912 +++++	1.0178	1.0483	1.1234	Ave		1.0838				4.7		15.0			
Acrylonitrile	0.0231 0.0212	0.0213 0.0205	0.0209	0.0224	0.0201	Ave		0.0213				4.9		15.0			
trans-1,2-Dichloroethene	0.4062 0.3699	0.3974 0.3725	0.3984	0.3910	0.3794	Ave		0.3878				3.6		15.0			
Methyl tert-butyl ether	0.4719 0.4328	0.4271 0.4043	0.4234	0.4459	0.4120	Ave		0.4311				5.2		15.0			
Hexane	2.5332 2.0979	2.0762 2.1109	2.0877	2.2128	2.2461	Ave		2.1950				7.4		15.0			
1,1-Dichloroethane	0.5463 0.5356	0.5524 0.5479	0.5581	0.5568	0.5480	Ave		0.5493			0.1000	1.4		15.0			
Vinyl acetate	0.3002 0.3237	0.2985 0.3236	0.3203	0.3364	0.3117	Ave		0.3164				4.3		15.0			
cis-1,2-Dichloroethene	0.4093 0.3839	0.3845 0.3964	0.3999	0.4055	0.3837	Ave		0.3947				2.7		15.0			
2-Butanone (MEK)	+++++ 0.0358	0.0377 0.0340	0.0338	0.0355	0.0322	Ave		0.0348				5.5		15.0			
2,2-Dichloropropane	1.3944 0.5299	0.9491 0.5297	0.7792	0.6092	0.5664	Lin2	0.4356	0.5254							0.9990		0.9900
Bromochloromethane	0.1507 0.1702	0.1697 0.1722	0.1651	0.1646	0.1681	Ave		0.1658				4.3		15.0			
Tetrahydrofuran	+++++ 0.0241	0.0269 0.0232	0.0267	0.0280	0.0221	Ave		0.0252				9.4		15.0			
Chloroform	0.6231 0.6245	0.6296 0.6419	0.6371	0.6608	0.6280	Ave		0.6350				2.1		30.0			
1,1,1-Trichloroethane	0.6579 0.6364	0.6564 0.6623	0.6617	0.6726	0.6553	Ave		0.6575				1.7		15.0			
Cyclohexane	0.5158 0.4998	0.5325 0.5112	0.5142	0.5314	0.5146	Ave		0.5171				2.2		15.0			
1,1-Dichloropropene	0.5107 0.5074	0.5263 0.5189	0.5241	0.5284	0.5116	Ave		0.5182				1.6		15.0			
Carbon tetrachloride	0.5873 0.5955	0.5921 0.6053	0.5934	0.5915	0.5924	Ave		0.5939				0.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	+++++ 0.5207	0.3442 0.4457	0.3797	0.4346	0.5322	Lin2	-4.117	0.4938							0.9900		0.9900
1,2-Dichloroethane	0.2369 0.2506	0.2434 0.2460	0.2502	0.2504	0.2391	Ave		0.2452				2.3		15.0			
Benzene	0.9804 0.9636	0.9606 0.9789	0.9487	0.9559	0.9600	Ave		0.9640				1.2		15.0			
Trichloroethene	0.4998 0.4804	0.5179 0.4809	0.4892	0.4881	0.4835	Ave		0.4914				2.7		15.0			
1,2-Dichloropropane	0.3312 0.3270	0.3242 0.3254	0.3178	0.3296	0.3182	Ave		0.3248				1.6		30.0			
Methylcyclohexane	0.5222 0.4656	0.5178 0.4660	0.4876	0.4772	0.4641	Ave		0.4858				5.1		15.0			
Dibromomethane	0.2313 0.2390	0.2317 0.2306	0.2301	0.2415	0.2278	Ave		0.2331				2.2		15.0			
Bromodichloromethane	0.5507 0.5921	0.5597 0.5830	0.5477	0.5796	0.5649	Ave		0.5682				3.0		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0901	0.0552 0.0908	0.0673	0.0801	0.0877	Lin2	-0.037	0.0900							0.9990		0.9900
cis-1,3-Dichloropropene	2.1005 2.2400	2.0937 2.2305	2.1037	2.2147	2.1508	Ave		2.1620				3.0		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.1193	0.1216 0.1108	0.1179	0.1248	0.1077	Ave		0.1170				5.6		15.0			
Toluene	1.3925 1.1989	1.2840 1.1971	1.2671	1.2220	1.2214	Ave		1.2547				5.5		30.0			
trans-1,3-Dichloropropene	0.3192 0.3355	0.3136 0.3204	0.3269	0.3343	0.3181	Ave		0.3240				2.6		15.0			
Ethyl methacrylate	1.0782 1.1147	0.9661 1.0575	1.0086	1.0951	1.0001	Ave		1.0457				5.3		15.0			
1,1,2-Trichloroethane	0.2372 0.2267	0.2454 0.2147	0.2363	0.2430	0.2218	Ave		0.2322				4.9		15.0			
1,3-Dichloropropane	1.5589 1.6871	1.5792 1.6065	1.5804	1.6434	1.5500	Ave		1.6008				3.1		15.0			
Tetrachloroethene	2.2154 2.3068	2.2604 2.3528	2.2758	2.3492	2.3226	Ave		2.2976				2.2		15.0			
2-Hexanone	+++++ 0.3828	0.3019 0.3528	0.3298	0.3564	0.3256	Ave		0.3416				8.3		15.0			
Dibromochloromethane	1.9402 2.1092	1.9224 2.0669	1.8929	1.9381	1.9604	Ave		1.9757				4.1		15.0			
1,2-Dibromoethane	1.3260 1.4959	1.3331 1.4443	1.3398	1.4644	1.3796	Ave		1.3976				5.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorobenzene	3.9645 3.9429	3.8066 4.0100	3.8823	3.9393	3.8995	Ave		3.9207			0.3000	1.7		15.0			
1,1,1,2-Tetrachloroethane	1.8251 1.9393	1.7412 1.9040	1.8160	1.8584	1.8866	Ave		1.8529				3.5		15.0			
Ethylbenzene	2.1006 1.9768	1.9805 1.9969	1.9778	1.9640	1.9716	Ave		1.9955				2.4		30.0			
m,p-Xylene	2.6845 2.7307	2.5471 2.7401	2.5747	2.5900	2.7508	Ave		2.6597				3.3		15.0			
o-Xylene	2.5546 2.3818	2.3399 2.3687	2.4337	2.3368	2.3426	Ave		2.3940				3.3		15.0			
Styrene	4.4984 3.8058	3.6070 3.7821	3.6228	3.6412	3.7048	Ave		3.8089				8.2		15.0			
Bromoform	1.2416 1.4048	1.2157 1.3381	1.2683	1.3747	1.3215	Ave		1.3092			0.1000	5.3		15.0			
Isopropylbenzene	4.0855 3.7794	3.8120 4.0079	3.4021	3.6836	3.8294	Ave		3.8000				5.9		15.0			
Cyclohexanone	+++++ 0.0160	0.0199 0.0144	0.0151	0.0147	0.0148	Ave		0.0158				13.1		15.0			
Bromobenzene	1.1306 1.0865	1.1043 1.1450	1.0659	1.0512	1.0713	Ave		1.0935				3.2		15.0			
1,1,2,2-Tetrachloroethane	0.7582 0.7050	0.7031 0.6877	0.6928	0.6967	0.6634	Ave		0.7010			0.3000	4.1		15.0			
1,2,3-Trichloropropane	0.1524 0.1706	0.1516 0.1663	0.1630	0.1623	0.1610	Ave		0.1610				4.3		15.0			
trans-1,4-Dichloro-2-butene	0.0936 0.1331	0.1076 0.1276	0.0946	0.1234	0.1264	Ave		0.1152				14.2		15.0			
N-Propylbenzene	1.1674 0.8536	0.9401 0.9070	0.9064	0.8656	0.8759	Ave		0.9309				11.6		15.0			
2-Chlorotoluene	0.9193 0.7477	0.7852 0.7796	0.7725	0.7709	0.7622	Ave		0.7911				7.3		15.0			
4-Chlorotoluene	1.0985 0.8740	0.6729 0.9182	0.8965	0.8679	0.8591	Ave		0.8839				14.1		15.0			
1,3,5-Trimethylbenzene	3.1625 2.8339	2.8997 2.9585	2.8712	2.8018	2.8908	Ave		2.9169				4.1		15.0			
tert-Butylbenzene	3.7547 2.8938	3.2492 3.0132	3.0734	2.9063	3.0127	Ave		3.1291				9.6		15.0			
1,2,4-Trimethylbenzene	3.4413 2.7348	2.9003 2.8162	2.8059	2.7236	2.8107	Ave		2.8904				8.6		15.0			
sec-Butylbenzene	1.0554 0.7669	0.8917 0.7839	0.7778	0.7642	0.8101	Ave		0.8357				12.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3-Dichlorobenzene	2.0947 1.6275	1.7147 1.6460	1.6647	1.6250	1.6626	Ave		1.7193				9.8		15.0			
4-Isopropyltoluene	4.1911 3.2589	3.5263 3.3210	3.3793	3.2797	3.3970	Ave		3.4790				9.4		15.0			
1,4-Dichlorobenzene	2.7160 1.8960	2.2842 1.9347	1.9939	1.9146	1.9321	Ave		2.0959				14.5		15.0			
1,2-Dichlorobenzene	2.0759 1.4406	1.5962 1.4868	1.4469	1.4591	1.4570	Ave		1.5661				14.8		15.0			
n-Butylbenzene	5.3419 3.3809	3.8437 3.3874	3.5587	3.4464	3.5224	Lin2	0.9285	3.2715							0.9950		0.9900
1,2-Dibromo-3-Chloropropane	0.1914 0.1440	0.1510 0.1401	0.1313	0.1380	0.1353	Ave		0.1473				13.9		15.0			
1,2,4-Trichlorobenzene	+++++ 1.0700	1.6759 +++++	1.1992	1.0769	1.0618	Lin2	0.6422	0.9804							0.9920		0.9900
Hexachlorobutadiene	2.7238 0.8991	1.4338 0.8309	1.1261	0.9324	0.9467	Lin1	0.7991	0.8301							0.9970		0.9900
Naphthalene	+++++ 0.9146	1.4625 +++++	1.0851	0.8938	0.8646	Lin2	0.6176	0.8169							0.9940		0.9900
1,2,3-Trichlorobenzene	+++++ 0.8245	1.2416 +++++	1.0530	0.8262	0.8099	Lin2	0.4762	0.7758							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-429676/10	Z1437.D
Level 2	IC 280-429676/11	Z1438.D
Level 3	IC 280-429676/12	Z1439.D
Level 4	IC 280-429676/13	Z1432.D
Level 5	IC 280-429676/14	Z1433.D
Level 6	IC 280-429676/15	Z1434.D
Level 7	IC 280-429676/16	Z1435.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	18561 1066408	36080 2533558	68268	225127	440706	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	13460 688540	26767 1669560	50512	138045	269652	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	10538 568429	21540 1383418	42521	118241	232255	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	13665 757410	32738 1825157	56238	152763	299775	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	8189 377752	15047 908758	30178	79156	153392	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	28926 1427308	57119 3404350	115226	291372	567156	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	31081 1580255	62546 3763353	125894	330073	649323	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	5491 272058	10387 615731	20832	55053	103001	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Lin1	4109 137647	7062 305100	13934	29643	52231	2.96 148	5.93 356	11.9	29.6	59.3
1,1-Dichloroethene	FB	Ave	16310 759224	30399 1809716	63116	159050	314694	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Lin2	+++++ 138313	7912 319735	12753	31695	52641	+++++ 100	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	21388 1071131	41980 2573063	84965	221418	436299	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl iodide	FB	Ave	37353 1915119	73458 4568186	147899	379304	751856	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	57350 2496475	102365 5979785	201545	513636	999830	0.500 25.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Ave	20973 1107343	41775 2481770	80410	215930	417473	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Lin2	9374 329433	16123 645310	26536	62354	120359	1.00 50.0	2.00 120	4.00	10.0	20.0
Methylene Chloride	FB	Ave	+++++ 639222	29624 1485849	53909	131500	248293	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	+++++ 136485	6215 +++++	11529	28308	45895	+++++ 250	10.0 +++++	20.0	50.0	100
Acrylonitrile	FB	Ave	10589 490378	19063 1133831	37116	99971	181044	5.00 250	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	18658 856935	35632 2061444	70706	174276	341338	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	21675 1002594	38299 2237459	75149	198703	370665	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	24010 985183	38928 2348053	76631	202527	416080	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	25094 1240632	49527 3032018	99057	248149	493062	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	27574 1499559	53531 3581967	113698	299892	560950	1.00 50.0	2.00 120	4.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	18799 889305	34475 2193387	70984	180718	345186	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 331545	13508 753646	23967	63300	115757	+++++ 100	4.00 240	8.00	20.0	40.0
2,2-Dichloropropane	FB	Lin2	64046 1227413	85099 2931284	138313	271518	509606	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	6922 394193	15215 952748	29298	73348	151275	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 111785	4825 256821	9471	25002	39728	+++++ 50.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	28622 1446502	56447 3552087	113075	294491	565026	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	30219 1474061	58854 3665087	117455	299768	589561	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	23690 1157749	47742 2829072	91262	236841	463037	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	23456 1175328	47193 2871759	93033	235504	460265	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	26976 1379342	53093 3349562	105318	263612	532984	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Lin2	+++++ 156085	4901 357735	10752	29337	54358	+++++ 625	25.0 1500	50.0	125	250
1,2-Dichloroethane	FB	Ave	10883 580381	21820 1361204	44412	111618	215087	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	45032 2232112	86125 5417346	168388	426019	863764	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	22958 1112831	46440 2660983	86829	217521	435031	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	15214 757564	29066 1800707	56401	146905	286317	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	23985 1078476	46428 2578712	86550	212668	417582	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	10622 553536	20772 1276011	40846	107630	204978	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	25293 1371597	50180 3226427	97211	258316	508219	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin2	+++++ 208699	4946 502406	11943	35708	78899	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	19909 1051932	39256 2481086	77216	202695	398434	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1105832	43613 2453119	83704	222519	387682	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	63962 2777059	115126 6624679	224897	544620	1098885	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	14662 777213	28122 1772946	58016	149005	286235	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	10219 523485	18113 1176326	37022	100224	185262	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	10897 525161	22007 1188297	41935	108309	199532	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	14776 792289	29609 1786973	58010	150406	287137	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	20998 1083303	42382 2617047	83532	215010	430264	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	+++++ 719029	22645 1569711	48419	130493	241235	+++++ 100	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	18390 990494	36045 2299070	69479	177381	363159	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	12568 702499	24995 1606503	49176	134028	255565	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	37576 1851641	71371 4460480	142501	360534	722365	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	17299 910720	32646 2117853	66655	170085	349494	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	19910 928329	37133 2221170	72596	179755	365233	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m,p-Xylene	CBNZ d5	Ave	25444 1282376	47757 3047863	94503	237045	509574	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	24213 1118519	43872 2634814	89328	213868	433967	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	42637 1787274	67630 4206932	132977	333258	686302	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	11768 659722	22793 1488418	46552	125821	244807	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	73759 3473016	137075 8163241	241171	678417	1384477	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	+++++ 299699	14923 640147	22141	53997	109404	+++++ 1000	40.0 2400	80.0	200	400
Bromobenzene	DCBd 4	Ave	20411 998417	39710 2332128	75561	193610	387299	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	13688 647868	25282 1400762	49114	128310	239855	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	2751 156812	5451 338769	11554	29883	58218	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	1689 122277	3868 259907	6707	22725	45691	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	21076 784434	33806 1847324	64256	159425	316671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	16597 687083	28235 1587945	54765	141982	275549	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	19832 803104	24196 1870281	63552	159852	310602	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	57095 2604113	104270 6025803	203536	516018	1045110	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	67787 2659219	116839 6137361	217872	535260	1089182	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	62128 2513134	104293 5736105	198907	501606	1016163	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	19054 704697	32066 1596606	55140	140743	292868	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	37817 1495585	61660 3352495	118007	299280	601087	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	75666 2994693	126804 6764098	239555	604035	1228118	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	49035 1742247	82139 3940641	141346	352611	698521	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	37478 1323809	57399 3028247	102569	268734	526771	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-114110-1 Analy Batch No.: 429676

SDG No.:

Instrument ID: VMS_Z GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/14/2018 09:41 Calibration End Date: 09/14/2018 12:17 Calibration ID: 33681

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Lin2	96441 3106794	138214 6899448	252276	634737	1273486	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	3455 132341	5431 285404	9305	25425	48929	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Lin2	+++++ 983257	60263 +++++	85013	198329	383875	+++++ 25.0	1.00 +++++	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Lin1	49175 826210	51558 1692458	79826	171717	342272	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Lin2	+++++ 840498	52590 +++++	76924	164617	312584	+++++ 25.0	1.00 +++++	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Lin2	+++++ 757661	44645 +++++	74644	152161	292811	+++++ 25.0	1.00 +++++	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-Sep-2018 11:32:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:20 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:23:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.347	3.353	-0.006	0	131853	250.0	250.0	
* 2 Fluorobenzene	96	6.132	6.138	-0.006	99	1148298	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.710	10.716	-0.006	86	236955	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.807	-0.006	95	451346	12.5	12.5	
27 Dichlorodifluoromethane	85	1.833	1.821	0.012	96	18561	0.5000	0.4556	
30 Chloromethane	50	1.972	1.978	-0.006	94	13460	0.5000	0.4920	
32 Vinyl chloride	62	2.059	2.065	-0.006	96	10538	0.5000	0.4647	
35 Bromomethane	94	2.303	2.291	0.012	92	13665	0.5000	0.4503	
36 Chloroethane	64	2.320	2.326	-0.006	96	8189	0.5000	0.5237	
37 Dichlorofluoromethane	67	2.459	2.465	-0.006	97	28926	0.5000	0.4974	
38 Trichlorofluoromethane	101	2.494	2.517	-0.023	98	31081	0.5000	0.4825	
40 Ethyl ether	59	2.703	2.691	0.012	94	5491	0.5000	0.5106	
44 Acrolein	56	2.807	2.796	0.011	87	4109	2.96	2.19	
45 1,1-Dichloroethene	96	2.912	2.918	-0.006	96	16310	0.5000	0.5154	
48 Acetone	43		2.935				ND	ND	
46 1,1,2-Trichloro-1,2,2-trif	151	2.964	2.952	0.012	96	21388	0.5000	0.4906	
49 Iodomethane	142	3.068	3.057	0.011	99	37353	0.5000	0.4903	
50 Carbon disulfide	76	3.138	3.144	-0.006	98	57350	0.5000	0.5498	
52 3-Chloro-1-propene	41	3.225	3.214	0.011	86	20973	0.5000	0.4916	
51 Methyl acetate	43	3.225	3.214	0.011	48	9374	1.00	0.9621	
54 Methylene Chloride	84		3.318				ND	ND	U
55 2-Methyl-2-propanol	59		3.440				ND	ND	U
58 Acrylonitrile	53	3.538	3.544	-0.006	96	10589	5.00	5.40	
56 Methyl tert-butyl ether	73	3.591	3.614	-0.023	77	21675	0.5000	0.5474	
57 trans-1,2-Dichloroethene	96	3.591	3.614	-0.023	97	18658	0.5000	0.5237	
59 Hexane	57	3.887	3.875	0.012	93	24010	0.5000	0.5770	
62 1,1-Dichloroethane	63	4.008	4.014	-0.006	95	25094	0.5000	0.4973	
61 Vinyl acetate	43	4.043	4.049	-0.006	97	27574	1.00	0.9488	
67 2-Butanone (MEK)	43		4.676				ND	ND	U
65 cis-1,2-Dichloroethene	96	4.670	4.676	-0.006	79	18799	0.5000	0.5184	
66 2,2-Dichloropropane	77	4.618	4.693	-0.075	88	64046	0.5000	0.4978	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.966	4.954	0.012	89	6922	0.5000	0.4545	
74 Chloroform	83	5.053	5.041	0.012	94	28622	0.5000	0.4907	
72 Tetrahydrofuran	42		5.041				ND	ND	
75 1,1,1-Trichloroethane	97	5.314	5.320	-0.006	97	30219	0.5000	0.5003	
76 Cyclohexane	56	5.418	5.407	0.011	93	23690	0.5000	0.4987	
78 1,1-Dichloropropene	75	5.523	5.511	0.012	96	23456	0.5000	0.4927	
77 Carbon tetrachloride	117	5.540	5.546	-0.006	97	26976	0.5000	0.4944	
80 Isobutyl alcohol	41		5.650				ND	ND	U
81 Benzene	78	5.767	5.772	-0.005	94	45032	0.5000	0.5085	
82 1,2-Dichloroethane	62	5.767	5.772	-0.005	55	10883	0.5000	0.4831	
84 n-Heptane	43	6.150	6.155	-0.005	88	27909	0.5000	0.5032	
85 Trichloroethene	95	6.637	6.643	-0.006	98	22958	0.5000	0.5086	
87 Methylcyclohexane	55	6.933	6.939	-0.006	89	23985	0.5000	0.5375	
90 1,2-Dichloropropane	63	6.933	6.939	-0.006	72	15214	0.5000	0.5099	
92 Dibromomethane	93	7.107	7.095	0.012	97	10622	0.5000	0.4960	
93 1,4-Dioxane	88		7.147				ND	ND	
94 Dichlorobromomethane	83	7.316	7.322	-0.006	97	25293	0.5000	0.4845	
96 2-Chloroethyl vinyl ether	63		7.774				ND	ND	U
97 cis-1,3-Dichloropropene	75	7.995	7.983	0.012	96	19909	0.5000	0.4858	
98 4-Methyl-2-pentanone (MIBK	43		8.244				ND	ND	U
99 Toluene	91	8.517	8.505	0.012	100	63962	0.5000	0.5549	
100 trans-1,3-Dichloropropene	75	8.848	8.836	0.012	92	14662	0.5000	0.4926	
101 Ethyl methacrylate	69	9.056	9.045	0.011	86	10219	0.5000	0.5155	
102 1,1,2-Trichloroethane	97	9.144	9.132	0.012	85	10897	0.5000	0.5109	
104 1,3-Dichloropropane	76	9.387	9.393	-0.006	76	14776	0.5000	0.4869	
103 Tetrachloroethene	164	9.387	9.393	-0.006	95	20998	0.5000	0.4821	
105 2-Hexanone	43		9.567				ND	ND	U
107 Chlorodibromomethane	129	9.753	9.759	-0.006	89	18390	0.5000	0.4910	
109 Ethylene Dibromide	107	9.944	9.933	0.011	96	12568	0.5000	0.4744	
111 Chlorobenzene	112	10.762	10.768	-0.006	94	37576	0.5000	0.5056	
113 1,1,1,2-Tetrachloroethane	131	10.902	10.907	-0.005	79	17299	0.5000	0.4925	
112 Ethylbenzene	106	10.971	10.977	-0.006	99	19910	0.5000	0.5263	
114 m-Xylene & p-Xylene	106	11.180	11.186	-0.006	0	25444	0.5000	0.5047	
115 o-Xylene	106	11.842	11.847	-0.005	98	24213	0.5000	0.5335	
116 Styrene	104	11.876	11.865	0.011	93	42637	0.5000	0.5905	
117 Bromoform	173	12.155	12.143	0.012	93	11768	0.5000	0.4742	
118 Isopropylbenzene	105	12.503	12.509	-0.006	94	73759	0.5000	0.5376	
119 Cyclohexanone	55		12.613				ND	ND	U
121 Bromobenzene	156	12.990	12.979	0.011	91	20411	0.5000	0.5169	
122 1,1,2,2-Tetrachloroethane	83	13.025	13.014	0.011	65	13688	0.5000	0.5408	
124 1,2,3-Trichloropropane	110	13.060	13.066	-0.006	59	2751	0.5000	0.4731	
125 trans-1,4-Dichloro-2-buten	53	13.130	13.118	0.012	63	1689	0.5000	0.4062	
123 N-Propylbenzene	120	13.234	13.240	-0.006	99	21076	0.5000	0.6270	
126 2-Chlorotoluene	126	13.356	13.344	0.012	92	16597	0.5000	0.5811	
128 4-Chlorotoluene	126	13.547	13.536	0.011	97	19832	0.5000	0.6214	
127 1,3,5-Trimethylbenzene	105	13.565	13.553	0.012	95	57095	0.5000	0.5421	
129 tert-Butylbenzene	119	14.122	14.128	-0.006	93	67787	0.5000	0.6000	
130 1,2,4-Trimethylbenzene	105	14.226	14.215	0.011	95	62128	0.5000	0.5953	
131 sec-Butylbenzene	134	14.540	14.528	0.012	94	19054	0.5000	0.6314	
132 1,3-Dichlorobenzene	146	14.679	14.685	-0.006	94	37817	0.5000	0.6092	
133 4-Isopropyltoluene	119	14.818	14.807	0.011	95	75666	0.5000	0.6023	
134 1,4-Dichlorobenzene	146	14.836	14.841	-0.005	95	49035	0.5000	0.6479	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.514	15.503	0.011	96	37478	0.5000	0.6628	
137 n-Butylbenzene	91	15.549	15.555	-0.006	97	96441	0.5000	0.5326	
139 1,2-Dibromo-3-Chloropropan	157	16.681	16.669	0.012	89	3455	0.5000	0.6495	
141 1,2,4-Trichlorobenzene	180	17.656	17.644	0.012	93	60005	0.5000	1.04	
142 Hexachlorobutadiene	225	17.847	17.835	0.012	98	49175	0.5000	0.6779	
143 Naphthalene	128	17.882	17.870	0.012	98	57736	0.5000	1.20	
144 1,2,3-Trichlorobenzene	180	18.126	18.114	0.012	95	52425	0.5000	1.26	
S 145 1,2-Dichloroethene, Total	1				0		1.00	1.04	
S 148 1,3-Dichloropropene, Total	1				0		1.00	0.9784	
S 149 Trihalomethanes, Total	1				0		2.00	1.94	
S 147 1,2-Dichloroethene, Total	96				0		1.00	1.04	
S 150 Xylenes, Total (URS)	1				0		1.00	1.04	
S 146 Xylenes, Total	106				0		1.00	1.04	
S 151 Total BTEX	1				0			2.63	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.20	Units: uL

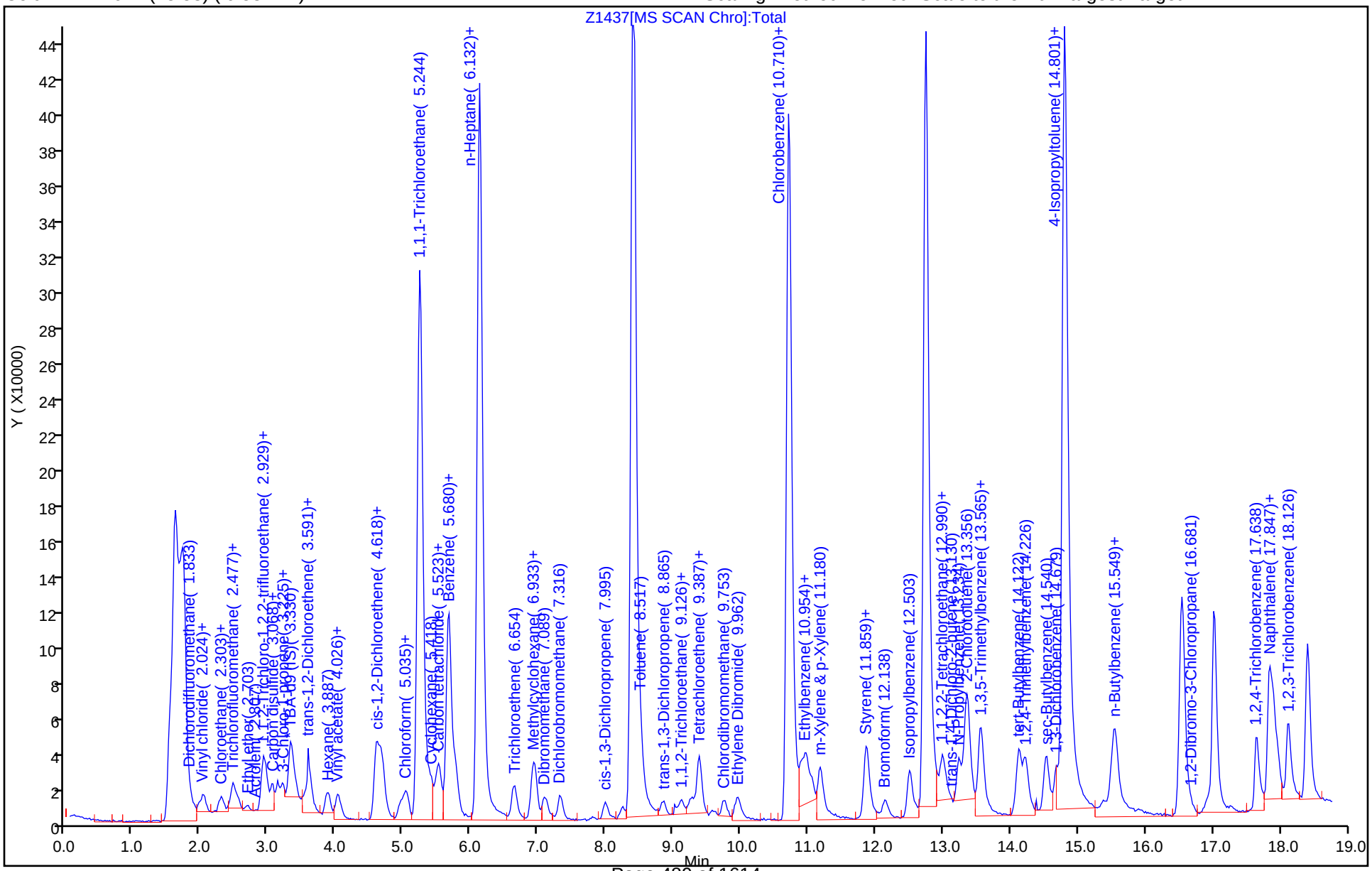
Report Date: 14-Sep-2018 13:04:21 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D

Injection Date:	14-Sep-2018 11:32:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



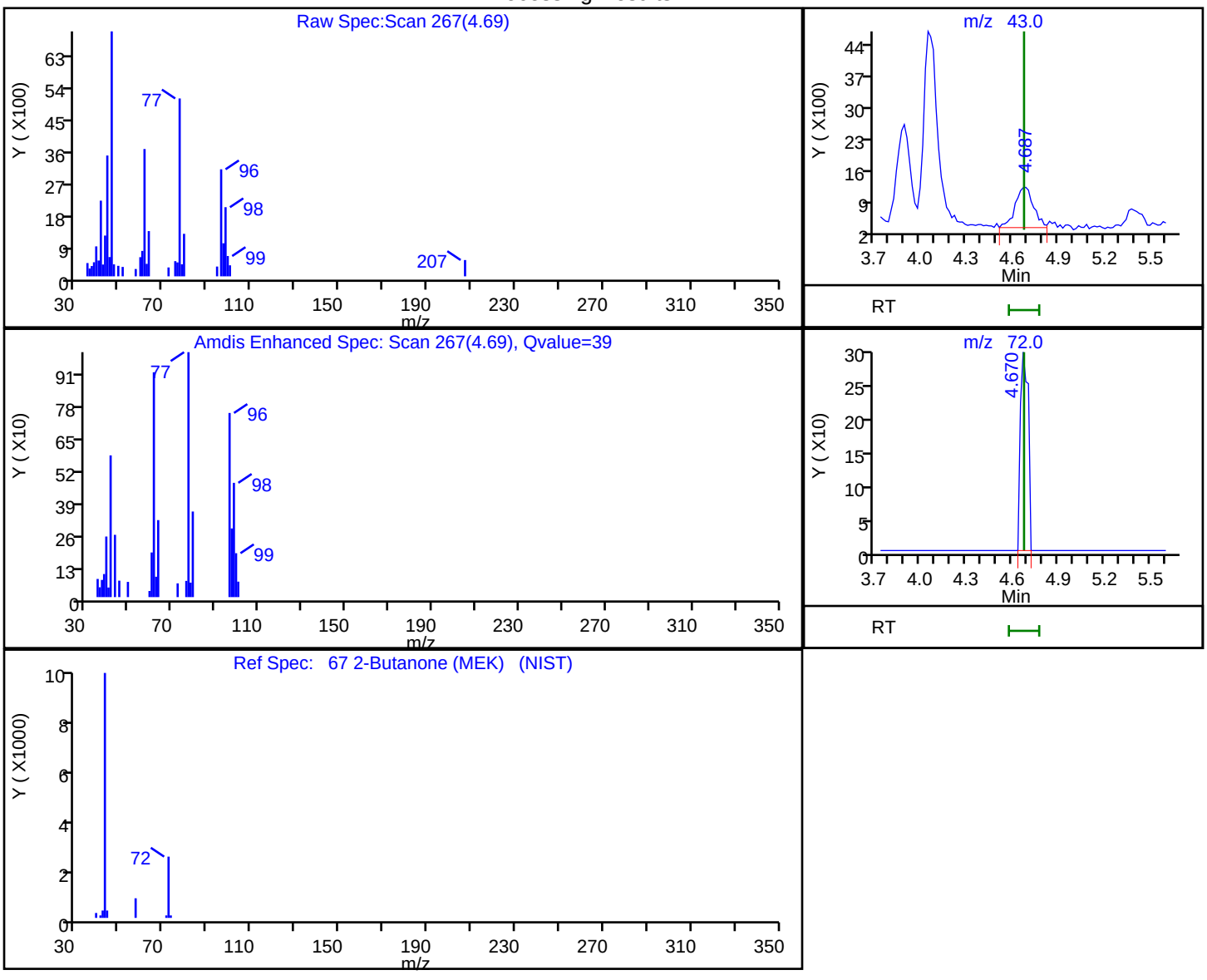
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D				
Injection Date:	14-Sep-2018 11:32:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	9	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

67 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
4.69	43.00	7532	2.296492
4.67	72.00	1062	

Reviewer: ilczyszynd, 14-Sep-2018 12:40:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

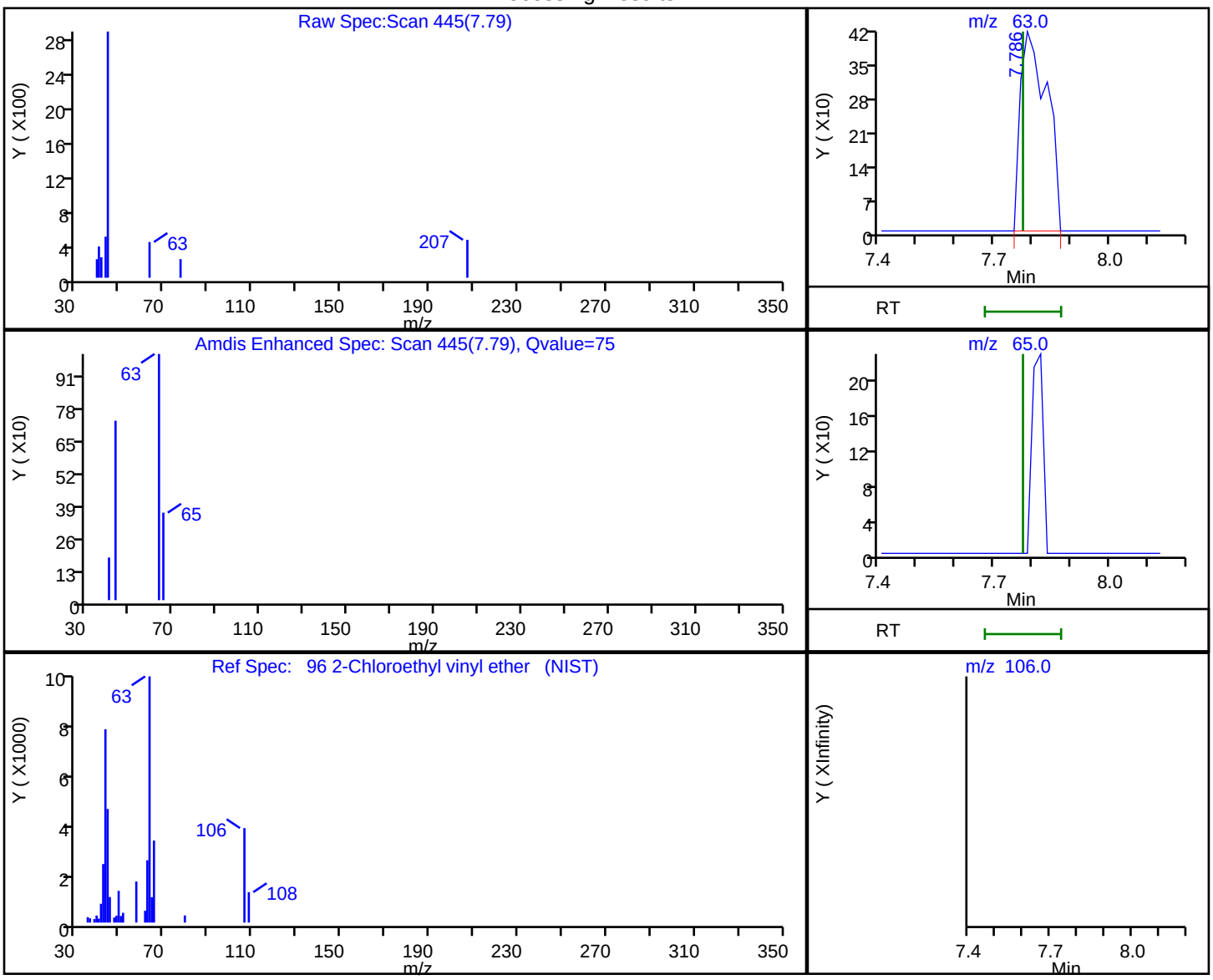
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

96 2-Chloroethyl vinyl ether, CAS: 110-75-8

Processing Results



RT	Mass	Response	Amount
7.79	63.00	2029	0.532258
7.77	65.00	0	
7.77	106.00	0	

Reviewer: ilczyszynd, 14-Sep-2018 12:41:15
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

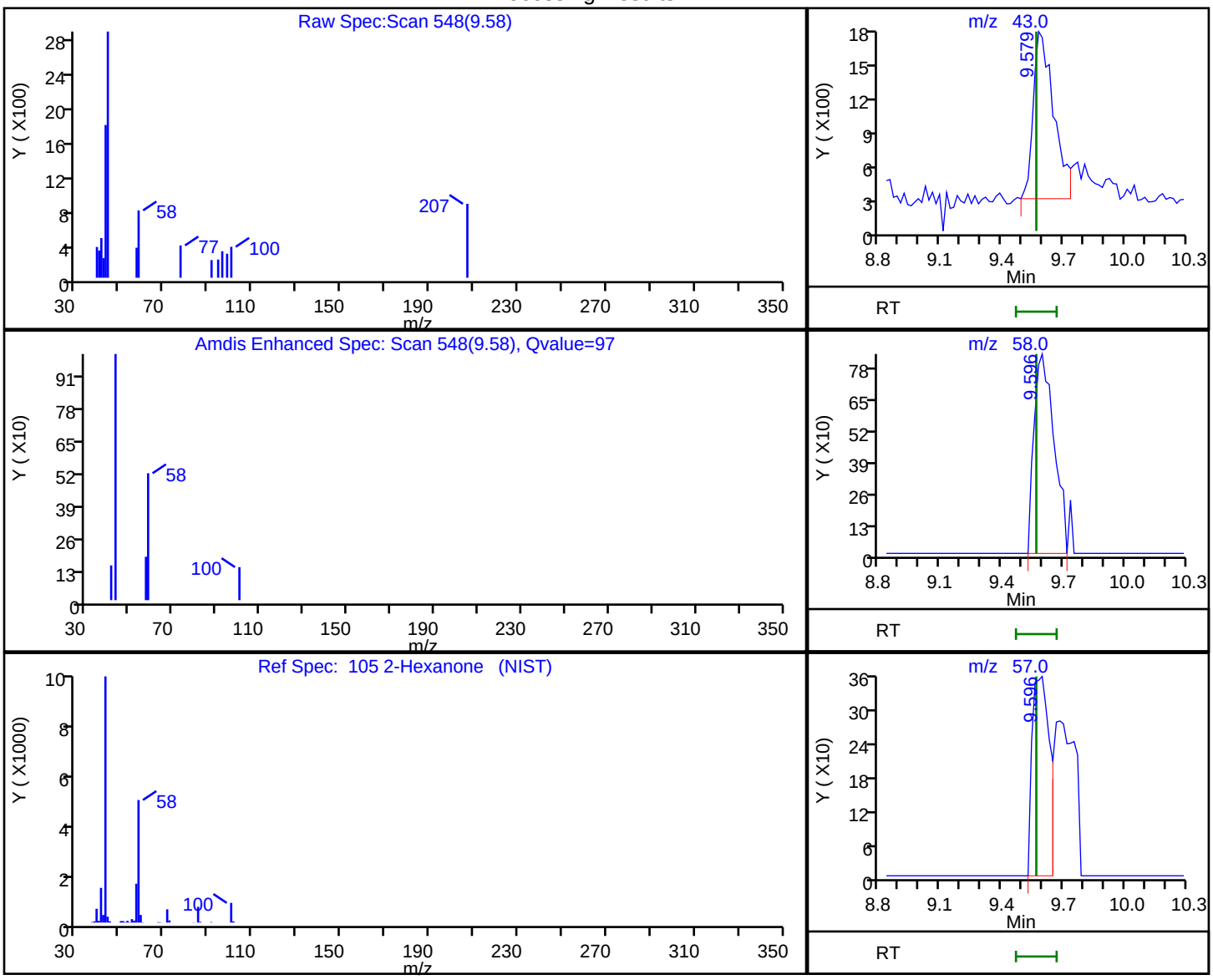
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

105 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.58	43.00	10541	1.672493
9.60	58.00	5689	
9.60	57.00	2145	

Reviewer: ilczyszynd, 14-Sep-2018 12:41:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

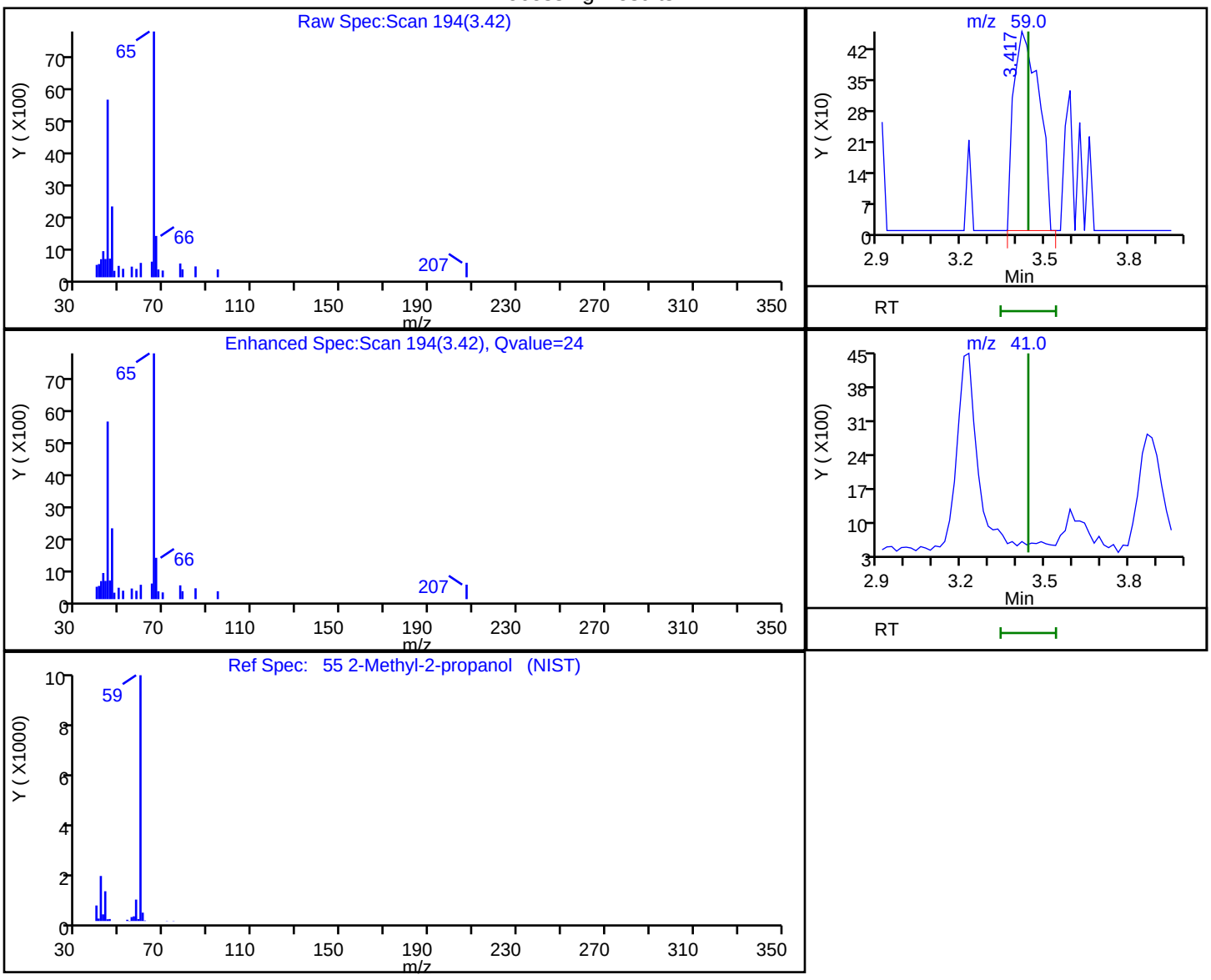
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

55 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
3.42	59.00	2903	10.244011
3.44	41.00	0	

Reviewer: ilczyszynd, 14-Sep-2018 12:40:51
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

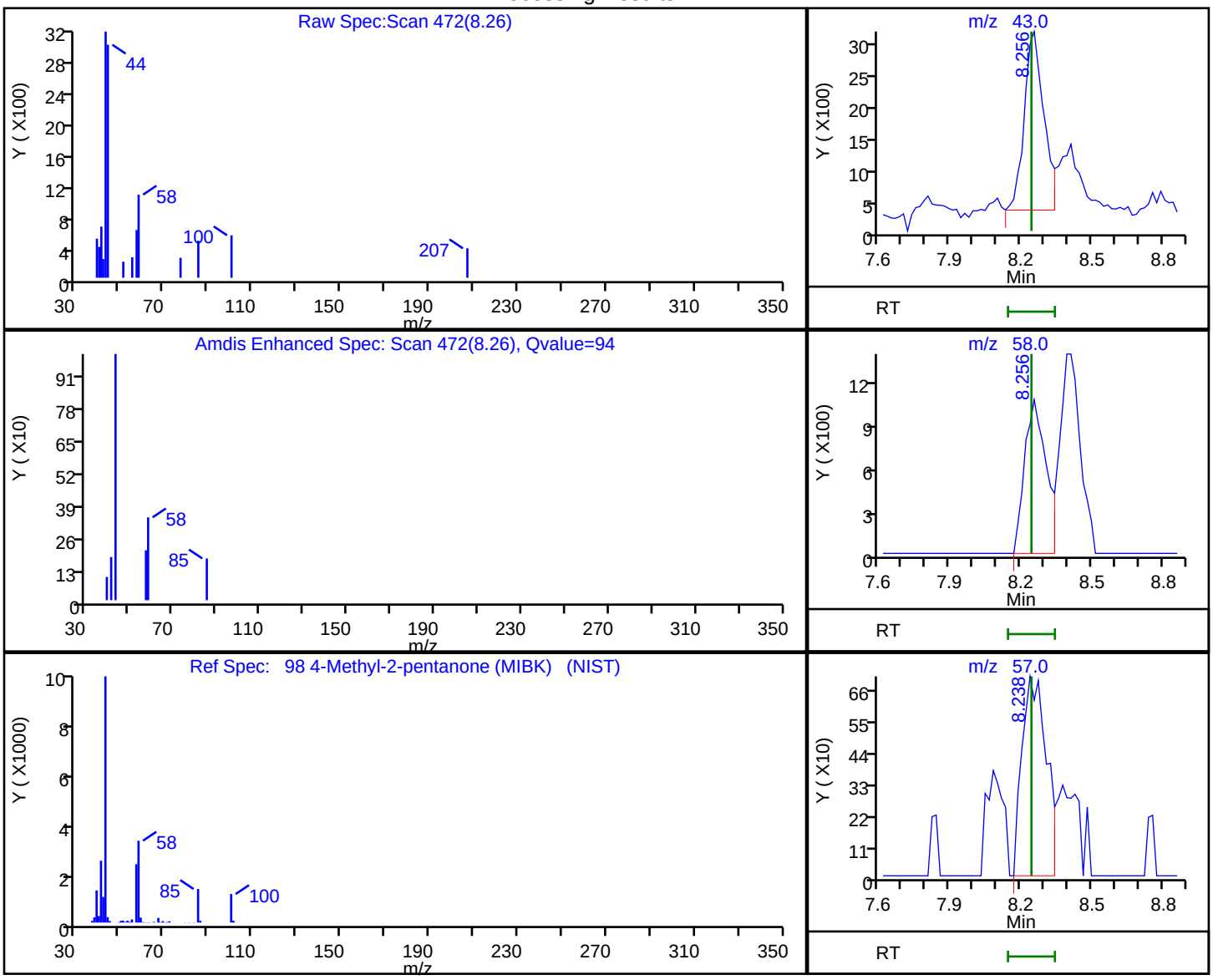
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

98 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.26	43.00	16643	1.599633
8.26	58.00	6919	
8.24	57.00	5096	

Reviewer: ilczyszynd, 14-Sep-2018 12:41:17
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

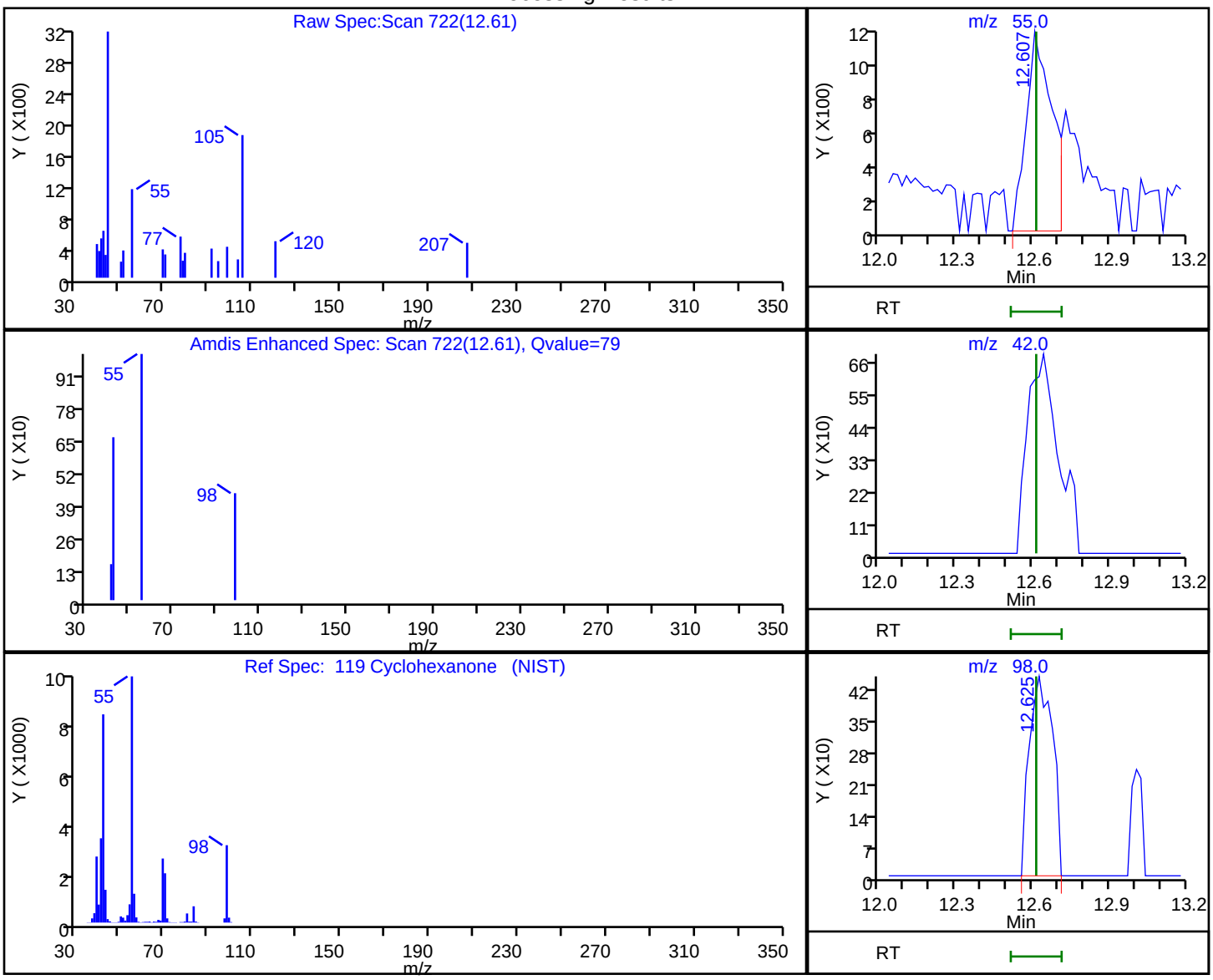
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

119 Cyclohexanone, CAS: 108-94-1

Processing Results



RT	Mass	Response	Amount
12.61	55.00	7982	19.290961
12.61	42.00	0	
12.62	98.00	2863	

Reviewer: ilczyszynd, 14-Sep-2018 12:41:32
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

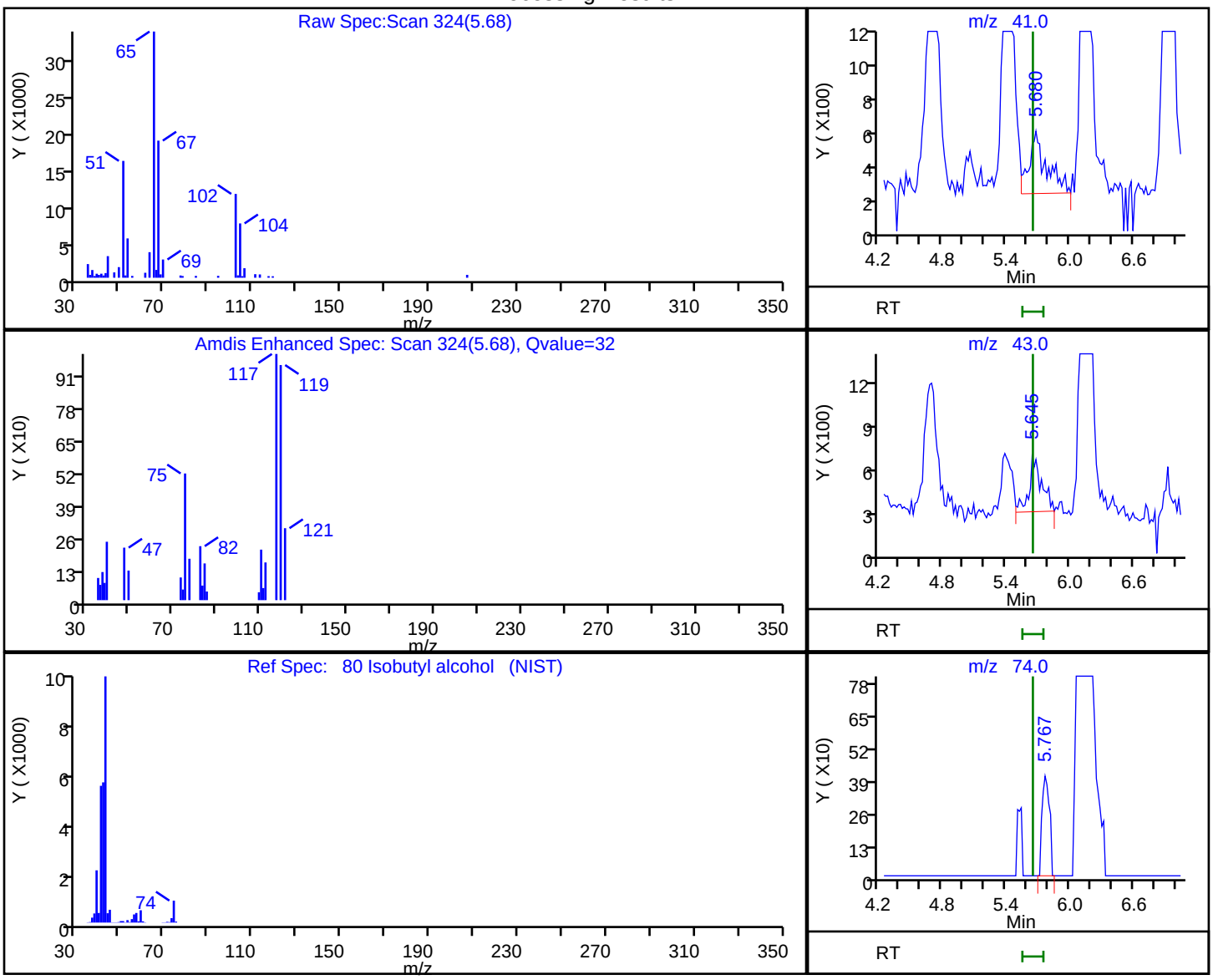
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

80 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
5.68	41.00	3958	16.465536
5.64	43.00	3172	
5.77	74.00	1977	

Reviewer: ilczyszynd, 14-Sep-2018 12:41:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

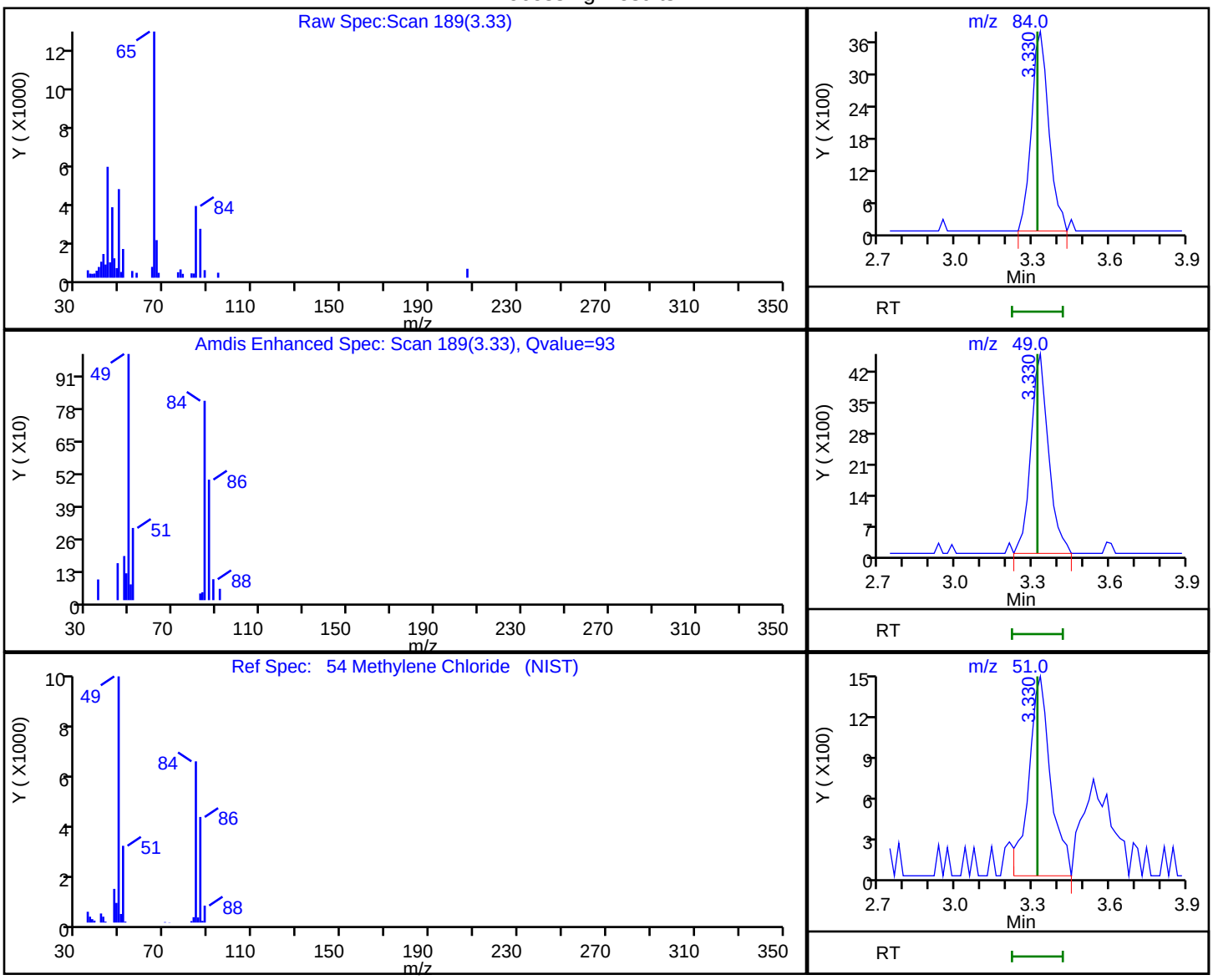
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1437.D
Injection Date: 14-Sep-2018 11:32:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.33	84.00	17555	0.627492
3.33	49.00	22062	
3.33	51.00	8861	

Reviewer: ilczyszynd, 14-Sep-2018 12:40:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1438.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Sep-2018 11:55:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:23 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:42:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.351	3.353	-0.002	0	142385	250.0	250.0	
* 2 Fluorobenzene	96	6.136	6.138	-0.002	99	1120772	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.714	10.716	-0.002	86	234369	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.804	14.807	-0.003	95	449488	12.5	12.5	
27 Dichlorodifluoromethane	85	1.836	1.821	0.015	98	36080	1.00	0.9074	
30 Chloromethane	50	1.993	1.978	0.015	97	26767	1.00	1.00	
32 Vinyl chloride	62	2.062	2.065	-0.003	97	21540	1.00	0.9731	
35 Bromomethane	94	2.306	2.291	0.015	91	32738	1.00	1.11	
36 Chloroethane	64	2.324	2.326	-0.002	99	15047	1.00	0.9859	
37 Dichlorofluoromethane	67	2.463	2.465	-0.002	98	57119	1.00	1.01	
38 Trichlorofluoromethane	101	2.515	2.517	-0.002	99	62546	1.00	0.99	
40 Ethyl ether	59	2.689	2.691	-0.002	94	10387	1.00	0.9896	
44 Acrolein	56	2.811	2.796	0.015	93	7062	5.93	5.78	
45 1,1-Dichloroethene	96	2.915	2.918	-0.003	96	30399	1.00	0.9843	
48 Acetone	43	2.933	2.935	-0.002	34	7912	4.00	3.99	
46 1,1,2-Trichloro-1,2,2-trif	151	2.968	2.952	0.016	97	41980	1.00	0.9867	
49 Iodomethane	142	3.072	3.057	0.015	98	73458	1.00	0.9880	
50 Carbon disulfide	76	3.142	3.144	-0.002	99	102365	1.00	1.01	
51 Methyl acetate	43	3.229	3.214	0.015	47	16123	2.00	2.15	
52 3-Chloro-1-propene	41	3.211	3.214	-0.003	86	41775	1.00	1.00	
54 Methylene Chloride	84	3.333	3.318	0.015	92	29624	1.00	1.13	
55 2-Methyl-2-propanol	59	3.455	3.440	0.015	89	6215	10.0	10.1	
58 Acrylonitrile	53	3.542	3.544	-0.002	97	19063	10.0	9.96	
57 trans-1,2-Dichloroethene	96	3.612	3.614	-0.002	96	35632	1.00	1.02	
56 Methyl tert-butyl ether	73	3.612	3.614	-0.002	78	38299	1.00	0.99	
59 Hexane	57	3.890	3.875	0.015	94	38928	1.00	0.9459	
62 1,1-Dichloroethane	63	4.029	4.014	0.015	95	49527	1.00	1.01	
61 Vinyl acetate	43	4.064	4.049	0.015	97	53531	2.00	1.89	
65 cis-1,2-Dichloroethene	96	4.674	4.676	-0.002	80	34475	1.00	0.9741	
67 2-Butanone (MEK)	43	4.691	4.676	0.015	38	13508	4.00	4.33	
66 2,2-Dichloropropane	77	4.691	4.693	-0.002	88	85099	1.00	0.9773	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.969	4.954	0.015	91	15215	1.00	1.02	
72 Tetrahydrofuran	42	5.074	5.041	0.033	34	4825	2.00	2.14	
74 Chloroform	83	5.056	5.041	0.015	95	56447	1.00	0.99	
75 1,1,1-Trichloroethane	97	5.318	5.320	-0.002	98	58854	1.00	1.00	
76 Cyclohexane	56	5.405	5.407	-0.002	90	47742	1.00	1.03	
78 1,1-Dichloropropene	75	5.526	5.511	0.015	97	47193	1.00	1.02	
77 Carbon tetrachloride	117	5.544	5.546	-0.002	94	53093	1.00	1.00	
80 Isobutyl alcohol	41	5.683	5.650	0.033	31	4901	25.0	25.8	
82 1,2-Dichloroethane	62	5.770	5.772	-0.002	53	21820	1.00	0.99	
81 Benzene	78	5.788	5.772	0.016	96	86125	1.00	1.00	
84 n-Heptane	43	6.153	6.155	-0.002	77	52369	1.00	0.9674	
85 Trichloroethene	95	6.641	6.643	-0.002	97	46440	1.00	1.05	
90 1,2-Dichloropropane	63	6.936	6.939	-0.003	74	29066	1.00	1.00	
87 Methylcyclohexane	55	6.936	6.939	-0.003	89	46428	1.00	1.07	
92 Dibromomethane	93	7.093	7.095	-0.002	95	20772	1.00	0.99	
93 1,4-Dioxane	88		7.147				ND	ND	
94 Dichlorobromomethane	83	7.319	7.322	-0.003	98	50180	1.00	0.9849	
96 2-Chloroethyl vinyl ether	63	7.807	7.774	0.033	85	4946	1.00	1.03	
97 cis-1,3-Dichloropropene	75	7.998	7.983	0.015	96	39256	1.00	0.9684	
98 4-Methyl-2-pentanone (MIBK	43	8.259	8.244	0.015	97	43613	4.00	4.16	
99 Toluene	91	8.520	8.505	0.015	100	115126	1.00	1.02	
100 trans-1,3-Dichloropropene	75	8.851	8.836	0.015	92	28122	1.00	0.9680	
101 Ethyl methacrylate	69	9.043	9.045	-0.002	90	18113	1.00	0.9238	
102 1,1,2-Trichloroethane	97	9.130	9.132	-0.002	88	22007	1.00	1.06	
103 Tetrachloroethene	164	9.391	9.393	-0.002	96	42382	1.00	0.9838	
104 1,3-Dichloropropane	76	9.391	9.393	-0.002	64	29609	1.00	0.9865	
105 2-Hexanone	43	9.582	9.567	0.015	99	22645	4.00	3.54	
107 Chlorodibromomethane	129	9.756	9.759	-0.003	88	36045	1.00	0.9730	
109 Ethylene Dibromide	107	9.930	9.933	-0.003	99	24995	1.00	0.9539	
111 Chlorobenzene	112	10.766	10.768	-0.002	91	71371	1.00	0.9709	
113 1,1,1,2-Tetrachloroethane	131	10.905	10.907	-0.002	84	32646	1.00	0.9397	
112 Ethylbenzene	106	10.975	10.977	-0.002	98	37133	1.00	0.99	
114 m-Xylene & p-Xylene	106	11.184	11.186	-0.002	0	47757	1.00	0.9577	
115 o-Xylene	106	11.845	11.847	-0.002	97	43872	1.00	0.9774	
116 Styrene	104	11.880	11.865	0.015	94	67630	1.00	0.9470	
117 Bromoform	173	12.159	12.143	0.016	96	22793	1.00	0.9285	
118 Isopropylbenzene	105	12.507	12.509	-0.002	95	137075	1.00	1.00	
119 Cyclohexanone	55	12.611	12.613	-0.002	82	14923	40.0	50.4	
121 Bromobenzene	156	12.994	12.979	0.015	91	39710	1.00	1.01	
122 1,1,2,2-Tetrachloroethane	83	13.011	13.014	-0.003	93	25282	1.00	1.00	
124 1,2,3-Trichloropropane	110	13.064	13.066	-0.002	75	5451	1.00	0.9414	
125 trans-1,4-Dichloro-2-buten	53	13.116	13.118	-0.002	56	3868	1.00	0.9340	
123 N-Propylbenzene	120	13.238	13.240	-0.002	99	33806	1.00	1.01	
126 2-Chlorotoluene	126	13.360	13.344	0.016	92	28235	1.00	0.99	
128 4-Chlorotoluene	126	13.551	13.536	0.015	97	24196	1.00	0.7613	
127 1,3,5-Trimethylbenzene	105	13.568	13.553	0.015	93	104270	1.00	0.99	
129 tert-Butylbenzene	119	14.126	14.128	-0.002	92	116839	1.00	1.04	
130 1,2,4-Trimethylbenzene	105	14.230	14.215	0.015	95	104293	1.00	1.00	
131 sec-Butylbenzene	134	14.543	14.528	0.015	94	32066	1.00	1.07	
132 1,3-Dichlorobenzene	146	14.683	14.685	-0.002	97	61660	1.00	1.00	
133 4-Isopropyltoluene	119	14.822	14.807	0.015	97	126804	1.00	1.01	
134 1,4-Dichlorobenzene	146	14.839	14.841	-0.002	95	82139	1.00	1.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.518	15.503	0.015	97	57399	1.00	1.02	
137 n-Butylbenzene	91	15.553	15.555	-0.002	98	138214	1.00	0.8911	
139 1,2-Dibromo-3-Chloropropan	157	16.667	16.669	-0.002	84	5431	1.00	1.03	
141 1,2,4-Trichlorobenzene	180	17.642	17.644	-0.002	94	60263	1.00	1.05	
142 Hexachlorobutadiene	225	17.833	17.835	-0.002	98	51558	1.00	0.7646	
143 Naphthalene	128	17.885	17.870	0.015	97	52590	1.00	1.03	
144 1,2,3-Trichlorobenzene	180	18.112	18.114	-0.002	96	44645	1.00	0.9866	
S 150 Xylenes, Total (URS)	1				0		2.00	1.94	
S 151 Total BTEX	1				0			4.95	
S 146 Xylenes, Total	106				0		2.00	1.94	
S 148 1,3-Dichloropropene, Total	1				0		2.00	1.94	
S 145 1,2-Dichloroethene, Total	1				0		2.00	2.00	
S 147 1,2-Dichloroethene, Total	96				0		2.00	2.00	
S 149 Trihalomethanes, Total	1				0		4.00	3.88	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.40	Units: uL

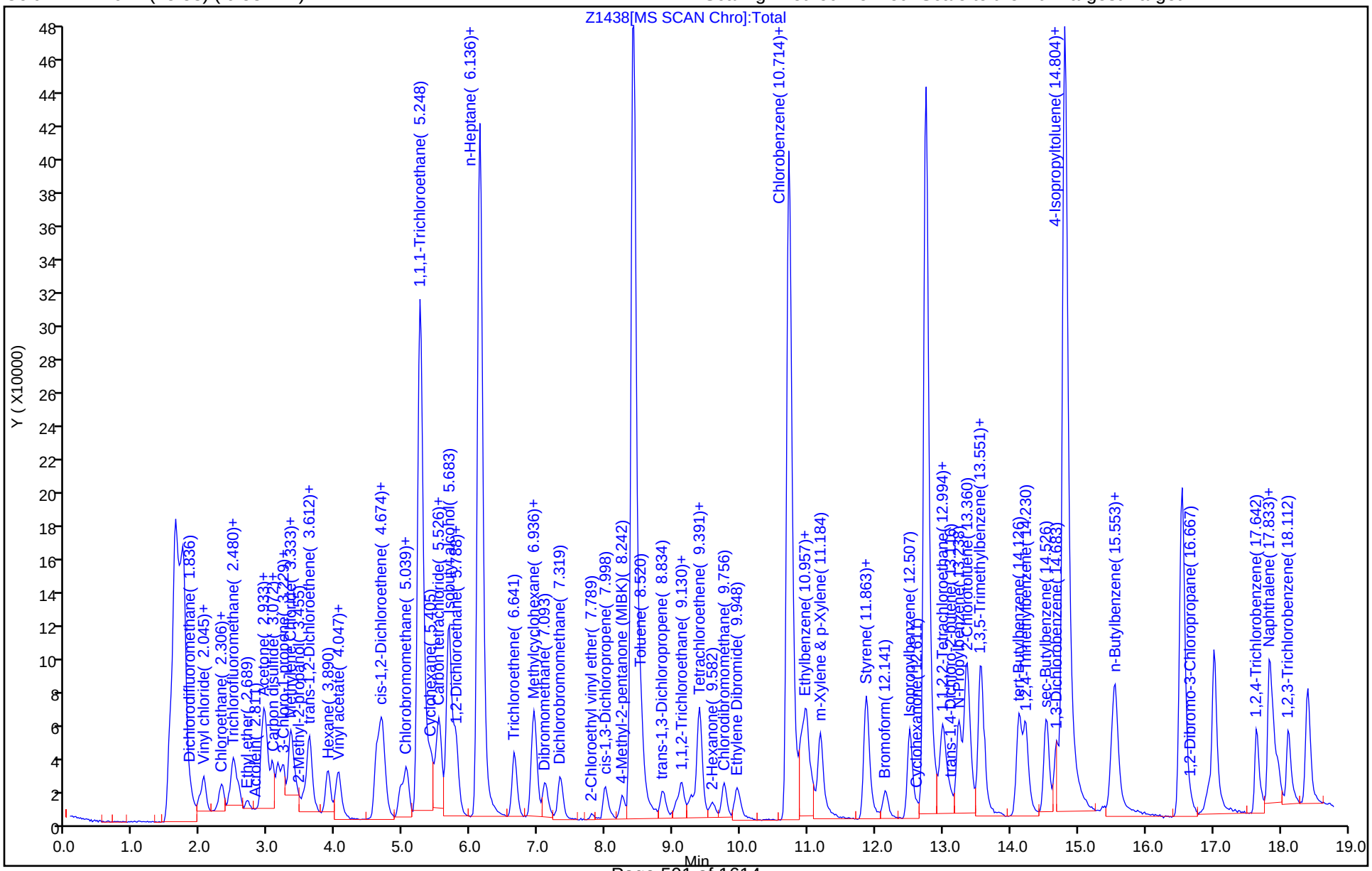
Report Date: 14-Sep-2018 13:04:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1438.D

Injection Date:	14-Sep-2018 11:55:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Sep-2018 12:17:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:25 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:44:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.353	-0.003	0	141596	250.0	250.0	
* 2 Fluorobenzene	96	6.135	6.138	-0.003	99	1109344	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.695	10.716	-0.021	87	229407	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.803	14.807	-0.004	95	443057	12.5	12.5	
27 Dichlorodifluoromethane	85	1.818	1.821	-0.003	99	68268	2.00	1.73	
30 Chloromethane	50	1.974	1.978	-0.004	98	50512	2.00	1.91	
32 Vinyl chloride	62	2.061	2.065	-0.004	98	42521	2.00	1.94	
35 Bromomethane	94	2.288	2.291	-0.003	88	56238	2.00	1.92	
36 Chloroethane	64	2.323	2.326	-0.003	99	30178	2.00	2.00	
37 Dichlorofluoromethane	67	2.462	2.465	-0.003	98	115226	2.00	2.05	
38 Trichlorofluoromethane	101	2.497	2.517	-0.020	100	125894	2.00	2.02	
40 Ethyl ether	59	2.688	2.691	-0.003	94	20832	2.00	2.01	
44 Acrolein	56	2.793	2.796	-0.003	97	13934	11.9	14.0	
45 1,1-Dichloroethene	96	2.914	2.918	-0.004	96	63116	2.00	2.06	
48 Acetone	43	2.932	2.935	-0.003	30	12753	8.00	7.77	
46 1,1,2-Trichloro-1,2,2-trif	151	2.949	2.952	-0.003	97	84965	2.00	2.02	
49 Iodomethane	142	3.054	3.057	-0.003	99	147899	2.00	2.01	
50 Carbon disulfide	76	3.141	3.144	-0.003	99	201545	2.00	2.00	
52 3-Chloro-1-propene	41	3.210	3.214	-0.004	87	80410	2.00	1.95	
51 Methyl acetate	43	3.210	3.214	-0.004	44	26536	4.00	3.98	
54 Methylene Chloride	84	3.315	3.318	-0.003	91	53909	2.00	2.08	
55 2-Methyl-2-propanol	59	3.419	3.440	-0.021	93	11529	20.0	18.8	
58 Acrylonitrile	53	3.524	3.544	-0.020	99	37116	20.0	19.6	
56 Methyl tert-butyl ether	73	3.611	3.614	-0.003	96	75149	2.00	1.96	
57 trans-1,2-Dichloroethene	96	3.593	3.614	-0.021	98	70706	2.00	2.05	
59 Hexane	57	3.872	3.875	-0.003	94	76631	2.00	1.90	
62 1,1-Dichloroethane	63	4.011	4.014	-0.003	95	99057	2.00	2.03	
61 Vinyl acetate	43	4.046	4.049	-0.003	96	113698	4.00	4.05	
67 2-Butanone (MEK)	43	4.672	4.676	-0.004	39	23967	8.00	7.76	
65 cis-1,2-Dichloroethene	96	4.672	4.676	-0.004	82	70984	2.00	2.03	
66 2,2-Dichloropropane	77	4.690	4.693	-0.003	88	138313	2.00	2.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.951	4.954	-0.003	94	29298	2.00	1.99	
74 Chloroform	83	5.038	5.041	-0.003	94	113075	2.00	2.01	
72 Tetrahydrofuran	42	5.055	5.041	0.014	36	9471	4.00	4.24	
75 1,1,1-Trichloroethane	97	5.317	5.320	-0.003	97	117455	2.00	2.01	
76 Cyclohexane	56	5.404	5.407	-0.003	89	91262	2.00	1.99	
78 1,1-Dichloropropene	75	5.508	5.511	-0.003	98	93033	2.00	2.02	
77 Carbon tetrachloride	117	5.543	5.546	-0.003	96	105318	2.00	2.00	
80 Isobutyl alcohol	41	5.665	5.650	0.015	31	10752	50.0	46.8	
81 Benzene	78	5.769	5.772	-0.003	97	168388	2.00	1.97	
82 1,2-Dichloroethane	62	5.769	5.772	-0.003	56	44412	2.00	2.04	
84 n-Heptane	43	6.152	6.155	-0.003	95	108655	2.00	2.03	
85 Trichloroethene	95	6.639	6.643	-0.004	97	86829	2.00	1.99	
87 Methylcyclohexane	55	6.935	6.939	-0.004	89	86550	2.00	2.01	
90 1,2-Dichloropropane	63	6.935	6.939	-0.004	75	56401	2.00	1.96	
92 Dibromomethane	93	7.109	7.095	0.014	97	40846	2.00	1.97	
93 1,4-Dioxane	88		7.147				ND	ND	
94 Dichlorobromomethane	83	7.318	7.322	-0.004	99	97211	2.00	1.93	
96 2-Chloroethyl vinyl ether	63	7.806	7.774	0.032	89	11943	2.00	1.91	
97 cis-1,3-Dichloropropene	75	7.997	7.983	0.014	96	77216	2.00	1.95	
98 4-Methyl-2-pentanone (MIBK	43	8.241	8.244	-0.003	96	83704	8.00	8.06	
99 Toluene	91	8.519	8.505	0.014	99	224897	2.00	2.02	
100 trans-1,3-Dichloropropene	75	8.833	8.836	-0.003	93	58016	2.00	2.02	
101 Ethyl methacrylate	69	9.042	9.045	-0.003	91	37022	2.00	1.93	
102 1,1,2-Trichloroethane	97	9.129	9.132	-0.003	87	41935	2.00	2.04	
104 1,3-Dichloropropane	76	9.390	9.393	-0.003	63	58010	2.00	1.97	
103 Tetrachloroethene	164	9.372	9.393	-0.021	96	83532	2.00	1.98	
105 2-Hexanone	43	9.564	9.567	-0.003	99	48419	8.00	7.72	
107 Chlorodibromomethane	129	9.738	9.759	-0.021	90	69479	2.00	1.92	
109 Ethylene Dibromide	107	9.912	9.933	-0.021	98	49176	2.00	1.92	
111 Chlorobenzene	112	10.748	10.768	-0.020	94	142501	2.00	1.98	
113 1,1,1,2-Tetrachloroethane	131	10.887	10.907	-0.020	91	66655	2.00	1.96	
112 Ethylbenzene	106	10.956	10.977	-0.021	98	72596	2.00	1.98	
114 m-Xylene & p-Xylene	106	11.165	11.186	-0.021	0	94503	2.00	1.94	
115 o-Xylene	106	11.844	11.847	-0.003	98	89328	2.00	2.03	
116 Styrene	104	11.862	11.865	-0.003	94	132977	2.00	1.90	
117 Bromoform	173	12.140	12.143	-0.003	96	46552	2.00	1.94	
118 Isopropylbenzene	105	12.488	12.509	-0.021	95	241171	2.00	1.79	
119 Cyclohexanone	55	12.610	12.613	-0.003	71	22141	80.0	76.3	
121 Bromobenzene	156	12.976	12.979	-0.003	92	75561	2.00	1.95	
122 1,1,2,2-Tetrachloroethane	83	12.993	13.014	-0.021	94	49114	2.00	1.98	
124 1,2,3-Trichloropropane	110	13.063	13.066	-0.003	79	11554	2.00	2.02	
125 trans-1,4-Dichloro-2-buten	53	13.115	13.118	-0.003	78	6707	2.00	1.64	
123 N-Propylbenzene	120	13.237	13.240	-0.003	99	64256	2.00	1.95	
126 2-Chlorotoluene	126	13.341	13.344	-0.003	97	54765	2.00	1.95	
128 4-Chlorotoluene	126	13.533	13.536	-0.003	97	63552	2.00	2.03	
127 1,3,5-Trimethylbenzene	105	13.550	13.553	-0.003	93	203536	2.00	1.97	
129 tert-Butylbenzene	119	14.124	14.128	-0.004	92	217872	2.00	1.96	
130 1,2,4-Trimethylbenzene	105	14.212	14.215	-0.003	96	198907	2.00	1.94	
131 sec-Butylbenzene	134	14.525	14.528	-0.003	94	55140	2.00	1.86	
132 1,3-Dichlorobenzene	146	14.682	14.685	-0.003	97	118007	2.00	1.94	
133 4-Isopropyltoluene	119	14.803	14.807	-0.004	96	239555	2.00	1.94	
134 1,4-Dichlorobenzene	146	14.838	14.841	-0.003	93	141346	2.00	1.90	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.500	15.503	-0.003	97	102569	2.00	1.85	
137 n-Butylbenzene	91	15.552	15.555	-0.003	98	252276	2.00	1.89	
139 1,2-Dibromo-3-Chloropropan	157	16.666	16.669	-0.003	94	9305	2.00	1.78	
141 1,2,4-Trichlorobenzene	180	17.641	17.644	-0.003	94	85013	2.00	1.79	
142 Hexachlorobutadiene	225	17.850	17.835	0.015	95	79826	2.00	1.75	
143 Naphthalene	128	17.884	17.870	0.014	98	76924	2.00	1.90	
144 1,2,3-Trichlorobenzene	180	18.111	18.114	-0.003	95	74644	2.00	2.10	
S 145 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 148 1,3-Dichloropropene, Total	1				0		4.00	3.96	
S 149 Trihalomethanes, Total	1				0		8.00	7.79	
S 147 1,2-Dichloroethene, Total	96				0		4.00	4.08	
S 150 Xylenes, Total (URS)	1				0		4.00	3.97	
S 146 Xylenes, Total	106				0		4.00	3.97	
S 151 Total BTEX	1				0			9.94	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	0.80	Units: uL

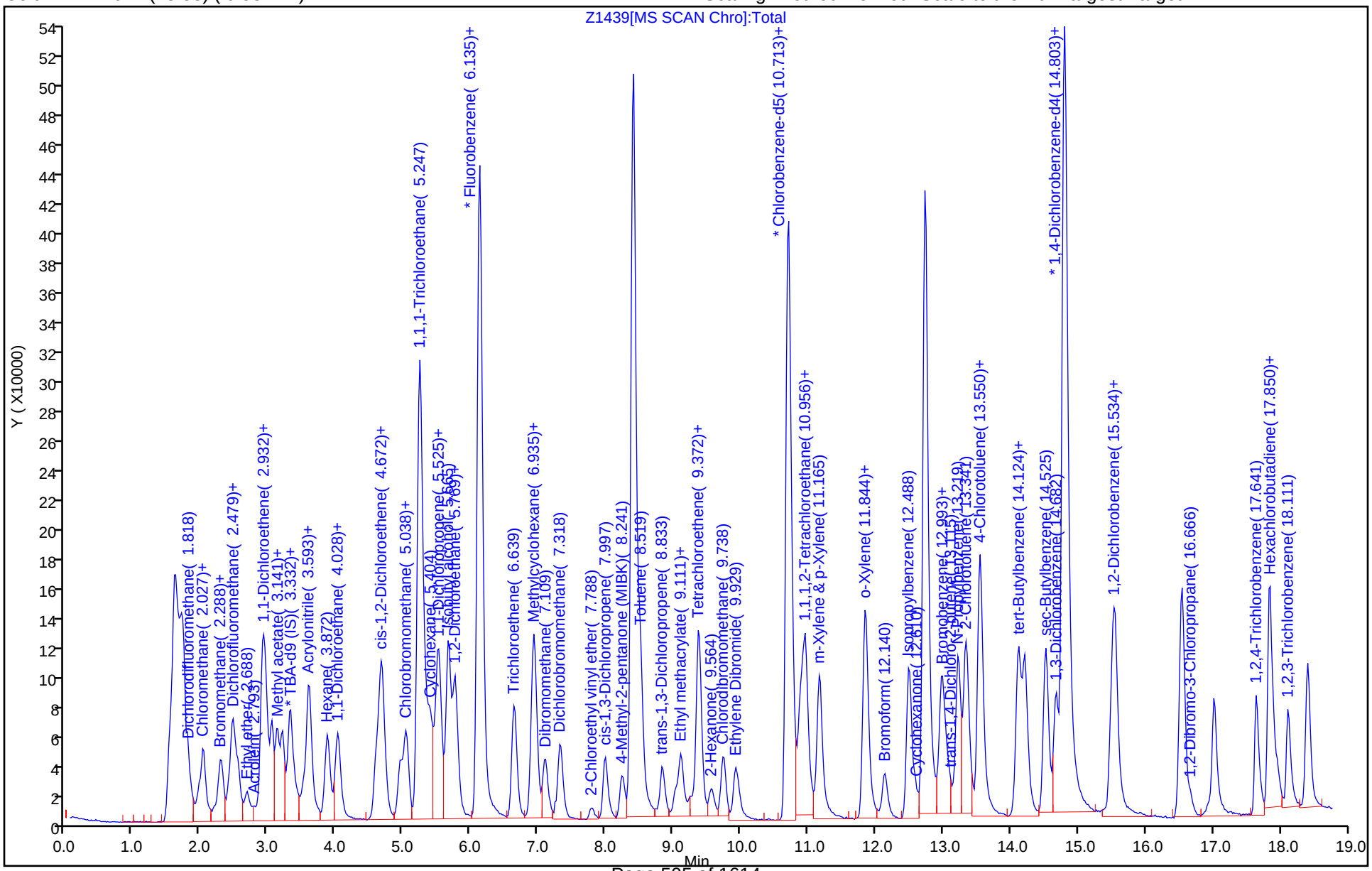
Report Date: 14-Sep-2018 13:04:25 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Injection Date:	14-Sep-2018 12:17:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1432.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Sep-2018 09:41:30 ALS Bottle#: 4 Worklist Smp#: 13
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:26 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:44:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.353	3.353	0.000	0	135017	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1114178	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.716	10.716	0.000	87	228808	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	95	460432	12.5	12.5	
27 Dichlorodifluoromethane	85	1.839	1.821	0.018	99	225127	5.00	5.70	
30 Chloromethane	50	1.995	1.978	0.017	98	138045	5.00	5.20	
32 Vinyl chloride	62	2.065	2.065	0.000	98	118241	5.00	5.37	
35 Bromomethane	94	2.291	2.291	0.000	90	152763	5.00	5.19	
36 Chloroethane	64	2.326	2.326	0.000	99	79156	5.00	5.22	
37 Dichlorofluoromethane	67	2.465	2.465	0.000	98	291372	5.00	5.16	
38 Trichlorofluoromethane	101	2.518	2.517	0.001	100	330073	5.00	5.28	
40 Ethyl ether	59	2.692	2.691	0.001	94	55053	5.00	5.28	
44 Acrolein	56	2.796	2.796	0.000	97	29643	29.6	32.5	
45 1,1-Dichloroethene	96	2.918	2.918	0.000	97	159050	5.00	5.18	
48 Acetone	43	2.918	2.935	-0.017	40	31695	20.0	22.2	
46 1,1,2-Trichloro-1,2,2-trif	151	2.953	2.952	0.001	97	221418	5.00	5.23	
49 Iodomethane	142	3.057	3.057	0.000	99	379304	5.00	5.13	
50 Carbon disulfide	76	3.144	3.144	0.000	100	513636	5.00	5.08	
51 Methyl acetate	43	3.214	3.214	0.000	42	62354	10.0	10.1	
52 3-Chloro-1-propene	41	3.214	3.214	0.000	89	215930	5.00	5.22	
54 Methylene Chloride	84	3.336	3.318	0.018	91	131500	5.00	5.06	
55 2-Methyl-2-propanol	59	3.423	3.440	-0.017	91	28308	50.0	48.4	
58 Acrylonitrile	53	3.545	3.544	0.001	99	99971	50.0	52.5	
57 trans-1,2-Dichloroethene	96	3.614	3.614	0.000	98	174276	5.00	5.04	
56 Methyl tert-butyl ether	73	3.614	3.614	0.000	95	198703	5.00	5.17	
59 Hexane	57	3.875	3.875	0.000	95	202527	5.00	5.04	
62 1,1-Dichloroethane	63	4.015	4.014	0.001	96	248149	5.00	5.07	
61 Vinyl acetate	43	4.050	4.049	0.001	96	299892	10.0	10.6	
65 cis-1,2-Dichloroethene	96	4.676	4.676	0.000	81	180718	5.00	5.14	
67 2-Butanone (MEK)	43	4.676	4.676	0.000	39	63300	20.0	20.4	
66 2,2-Dichloropropane	77	4.694	4.693	0.001	89	271518	5.00	4.97	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.955	4.954	0.001	96	73348	5.00	4.96	
72 Tetrahydrofuran	42	5.024	5.041	-0.017	49	25002	10.0	11.1	
74 Chloroform	83	5.042	5.041	0.001	95	294491	5.00	5.20	
75 1,1,1-Trichloroethane	97	5.320	5.320	0.000	97	299768	5.00	5.11	
76 Cyclohexane	56	5.407	5.407	0.000	92	236841	5.00	5.14	
78 1,1-Dichloropropene	75	5.512	5.511	0.001	98	235504	5.00	5.10	
77 Carbon tetrachloride	117	5.547	5.546	0.001	97	263612	5.00	4.98	
80 Isobutyl alcohol	41	5.651	5.650	0.001	41	29337	125.0	118.3	
82 1,2-Dichloroethane	62	5.773	5.772	0.001	55	111618	5.00	5.11	
81 Benzene	78	5.773	5.772	0.001	97	426019	5.00	4.96	
84 n-Heptane	43	6.156	6.155	0.001	94	270853	5.00	5.03	
85 Trichloroethene	95	6.643	6.643	0.000	97	217521	5.00	4.97	
90 1,2-Dichloropropane	63	6.939	6.939	0.000	75	146905	5.00	5.07	
87 Methylcyclohexane	55	6.939	6.939	0.000	88	212668	5.00	4.91	
92 Dibromomethane	93	7.096	7.095	0.001	97	107630	5.00	5.18	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.322	7.322	0.000	99	258316	5.00	5.10	
96 2-Chloroethyl vinyl ether	63	7.792	7.774	0.018	93	35708	5.00	4.86	
97 cis-1,3-Dichloropropene	75	7.983	7.983	0.000	97	202695	5.00	5.12	
98 4-Methyl-2-pentanone (MIBK	43	8.245	8.244	0.001	97	222519	20.0	21.3	
99 Toluene	91	8.506	8.505	0.001	99	544620	5.00	4.87	
100 trans-1,3-Dichloropropene	75	8.836	8.836	0.000	93	149005	5.00	5.16	
101 Ethyl methacrylate	69	9.045	9.045	0.000	92	100224	5.00	5.24	
102 1,1,2-Trichloroethane	97	9.115	9.132	-0.017	90	108309	5.00	5.23	
103 Tetrachloroethene	164	9.393	9.393	0.000	97	215010	5.00	5.11	
104 1,3-Dichloropropane	76	9.393	9.393	0.000	65	150406	5.00	5.13	
105 2-Hexanone	43	9.568	9.567	0.001	98	130493	20.0	20.9	
107 Chlorodibromomethane	129	9.759	9.759	0.000	90	177381	5.00	4.90	
109 Ethylene Dibromide	107	9.933	9.933	0.000	99	134028	5.00	5.24	
111 Chlorobenzene	112	10.769	10.768	0.001	94	360534	5.00	5.02	
113 1,1,1,2-Tetrachloroethane	131	10.908	10.907	0.001	96	170085	5.00	5.01	
112 Ethylbenzene	106	10.977	10.977	0.000	98	179755	5.00	4.92	
114 m-Xylene & p-Xylene	106	11.186	11.186	0.000	0	237045	5.00	4.87	
115 o-Xylene	106	11.848	11.847	0.001	97	213868	5.00	4.88	
116 Styrene	104	11.865	11.865	0.000	94	333258	5.00	4.78	
117 Bromoform	173	12.144	12.143	0.001	97	125821	5.00	5.25	
118 Isopropylbenzene	105	12.509	12.509	0.000	95	678417	5.00	4.85	
119 Cyclohexanone	55	12.614	12.613	0.001	91	53997	200.0	186.6	
121 Bromobenzene	156	12.979	12.979	0.000	92	193610	5.00	4.81	
122 1,1,2,2-Tetrachloroethane	83	13.014	13.014	0.000	95	128310	5.00	4.97	
124 1,2,3-Trichloropropane	110	13.066	13.066	0.000	77	29883	5.00	5.04	
125 trans-1,4-Dichloro-2-buten	53	13.119	13.118	0.001	82	22725	5.00	5.36	
123 N-Propylbenzene	120	13.240	13.240	0.000	99	159425	5.00	4.65	
126 2-Chlorotoluene	126	13.345	13.344	0.001	94	141982	5.00	4.87	
128 4-Chlorotoluene	126	13.554	13.536	0.018	97	159852	5.00	4.91	
127 1,3,5-Trimethylbenzene	105	13.571	13.553	0.018	93	516018	5.00	4.80	
129 tert-Butylbenzene	119	14.128	14.128	0.000	92	535260	5.00	4.64	
130 1,2,4-Trimethylbenzene	105	14.215	14.215	0.000	96	501606	5.00	4.71	
131 sec-Butylbenzene	134	14.529	14.528	0.001	94	140743	5.00	4.57	
132 1,3-Dichlorobenzene	146	14.685	14.685	0.000	98	299280	5.00	4.73	
133 4-Isopropyltoluene	119	14.807	14.807	0.000	96	604035	5.00	4.71	
134 1,4-Dichlorobenzene	146	14.842	14.841	0.001	95	352611	5.00	4.57	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.503	15.503	0.000	97	268734	5.00	4.66	
137 n-Butylbenzene	91	15.556	15.555	0.001	98	634737	5.00	4.98	
139 1,2-Dibromo-3-Chloropropan	157	16.670	16.669	0.001	94	25425	5.00	4.69	
141 1,2,4-Trichlorobenzene	180	17.644	17.644	0.000	94	198329	5.00	4.84	
142 Hexachlorobutadiene	225	17.836	17.835	0.001	98	171717	5.00	4.65	
143 Naphthalene	128	17.871	17.870	0.001	97	164617	5.00	4.71	
144 1,2,3-Trichlorobenzene	180	18.114	18.114	0.000	96	152161	5.00	4.71	
S 150 Xylenes, Total (URS)	1				0		10.0	9.75	
S 151 Total BTEX	1				0			24.5	
S 146 Xylenes, Total	106				0		10.0	9.75	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.3	
S 145 1,2-Dichloroethene, Total	1				0		10.0	10.2	
S 147 1,2-Dichloroethene, Total	96				0		10.0	10.2	
S 149 Trihalomethanes, Total	1				0		20.0	20.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	2.00	Units: uL

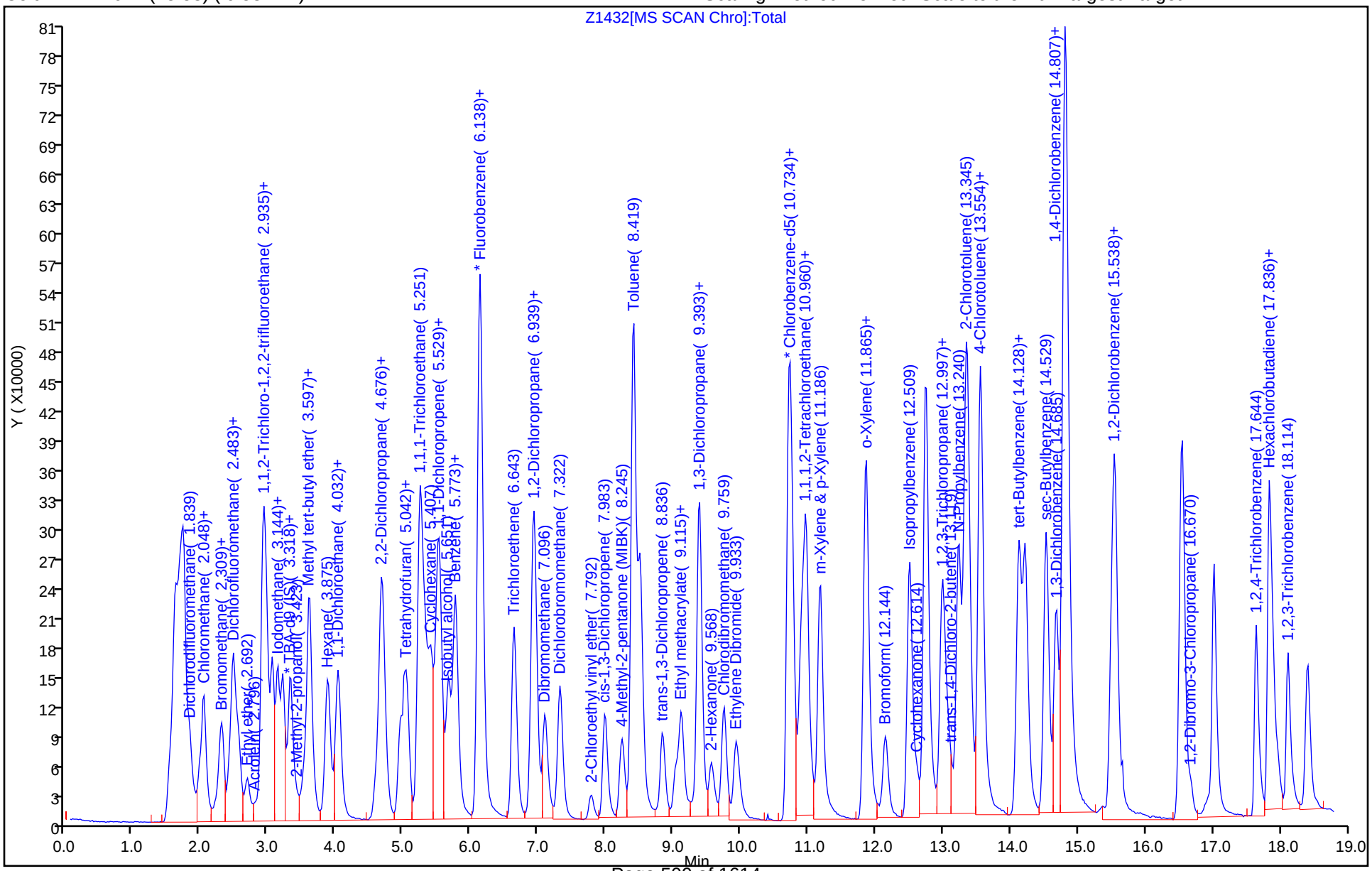
Report Date: 14-Sep-2018 13:04:27 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1432.D

Injection Date:	14-Sep-2018 09:41:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1433.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Sep-2018 10:03:30 ALS Bottle#: 5 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:29 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 10:51:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.353	3.353	0.000	0	102134	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1124641	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.716	10.716	0.000	87	231559	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	96	451918	12.5	12.5	
27 Dichlorodifluoromethane	85	1.821	1.821	0.000	100	440706	10.0	11.0	
30 Chloromethane	50	1.978	1.978	0.000	99	269652	10.0	10.1	
32 Vinyl chloride	62	2.065	2.065	0.000	98	232255	10.0	10.5	
35 Bromomethane	94	2.291	2.291	0.000	90	299775	10.0	10.1	
36 Chloroethane	64	2.326	2.326	0.000	99	153392	10.0	10.0	
37 Dichlorofluoromethane	67	2.465	2.465	0.000	99	567156	10.0	9.96	
38 Trichlorofluoromethane	101	2.517	2.517	0.000	100	649323	10.0	10.3	
40 Ethyl ether	59	2.691	2.691	0.000	94	103001	10.0	9.78	
44 Acrolein	56	2.796	2.796	0.000	98	52231	59.3	58.7	
45 1,1-Dichloroethene	96	2.918	2.918	0.000	97	314694	10.0	10.2	
48 Acetone	43	2.935	2.935	0.000	96	52641	40.0	37.9	
46 1,1,2-Trichloro-1,2,2-trif	151	2.952	2.952	0.000	97	436299	10.0	10.2	
49 Iodomethane	142	3.057	3.057	0.000	99	751856	10.0	10.1	
50 Carbon disulfide	76	3.144	3.144	0.000	99	999830	10.0	9.79	
52 3-Chloro-1-propene	41	3.214	3.214	0.000	90	417473	10.0	10.0	
51 Methyl acetate	43	3.214	3.214	0.000	41	120359	20.0	19.9	
54 Methylene Chloride	84	3.318	3.318	0.000	92	248293	10.0	9.46	
55 2-Methyl-2-propanol	59	3.440	3.440	0.000	93	45895	100.0	103.7	
58 Acrylonitrile	53	3.544	3.544	0.000	99	181044	100.0	94.3	
56 Methyl tert-butyl ether	73	3.614	3.614	0.000	96	370665	10.0	9.56	
57 trans-1,2-Dichloroethene	96	3.614	3.614	0.000	98	341338	10.0	9.78	
59 Hexane	57	3.875	3.875	0.000	95	416080	10.0	10.2	
62 1,1-Dichloroethane	63	4.014	4.014	0.000	96	493062	10.0	9.98	
61 Vinyl acetate	43	4.049	4.049	0.000	97	560950	20.0	19.7	
67 2-Butanone (MEK)	43	4.676	4.676	0.000	39	115757	40.0	36.9	
65 cis-1,2-Dichloroethene	96	4.676	4.676	0.000	81	345186	10.0	9.72	
66 2,2-Dichloropropane	77	4.693	4.693	0.000	88	509606	10.0	9.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.954	4.954	0.000	97	151275	10.0	10.1	
74 Chloroform	83	5.041	5.041	0.000	94	565026	10.0	9.89	
72 Tetrahydrofuran	42	5.041	5.041	0.000	37	39728	20.0	17.5	
75 1,1,1-Trichloroethane	97	5.320	5.320	0.000	98	589561	10.0	9.97	
76 Cyclohexane	56	5.407	5.407	0.000	92	463037	10.0	9.95	
78 1,1-Dichloropropene	75	5.511	5.511	0.000	98	460265	10.0	9.87	
77 Carbon tetrachloride	117	5.546	5.546	0.000	98	532984	10.0	9.97	
80 Isobutyl alcohol	41	5.650	5.650	0.000	94	54358	250.0	277.8	
81 Benzene	78	5.772	5.772	0.000	97	863764	10.0	9.96	
82 1,2-Dichloroethane	62	5.772	5.772	0.000	55	215087	10.0	9.75	
84 n-Heptane	43	6.155	6.155	0.000	94	550574	10.0	10.1	
85 Trichloroethene	95	6.643	6.643	0.000	97	435031	10.0	9.84	
87 Methylcyclohexane	55	6.939	6.939	0.000	89	417582	10.0	9.55	
90 1,2-Dichloropropane	63	6.939	6.939	0.000	75	286317	10.0	9.80	
92 Dibromomethane	93	7.095	7.095	0.000	97	204978	10.0	9.77	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.322	7.322	0.000	99	508219	10.0	9.94	
96 2-Chloroethyl vinyl ether	63	7.774	7.774	0.000	93	78899	10.0	10.2	
97 cis-1,3-Dichloropropene	75	7.983	7.983	0.000	97	398434	10.0	9.95	
98 4-Methyl-2-pentanone (MIBK	43	8.244	8.244	0.000	97	387682	40.0	36.8	
99 Toluene	91	8.505	8.505	0.000	99	1098885	10.0	9.73	
100 trans-1,3-Dichloropropene	75	8.836	8.836	0.000	93	286235	10.0	9.82	
101 Ethyl methacrylate	69	9.045	9.045	0.000	91	185262	10.0	9.56	
102 1,1,2-Trichloroethane	97	9.132	9.132	0.000	90	199532	10.0	9.55	
104 1,3-Dichloropropane	76	9.393	9.393	0.000	64	287137	10.0	9.68	
103 Tetrachloroethene	164	9.393	9.393	0.000	97	430264	10.0	10.1	
105 2-Hexanone	43	9.567	9.567	0.000	99	241235	40.0	38.1	
107 Chlorodibromomethane	129	9.759	9.759	0.000	90	363159	10.0	9.92	
109 Ethylene Dibromide	107	9.933	9.933	0.000	98	255565	10.0	9.87	
111 Chlorobenzene	112	10.768	10.768	0.000	96	722365	10.0	9.95	
113 1,1,1,2-Tetrachloroethane	131	10.907	10.907	0.000	98	349494	10.0	10.2	
112 Ethylbenzene	106	10.977	10.977	0.000	99	365233	10.0	9.88	
114 m-Xylene & p-Xylene	106	11.186	11.186	0.000	0	509574	10.0	10.3	
115 o-Xylene	106	11.847	11.847	0.000	98	433967	10.0	9.79	
116 Styrene	104	11.865	11.865	0.000	94	686302	10.0	9.73	
117 Bromoform	173	12.143	12.143	0.000	97	244807	10.0	10.1	
118 Isopropylbenzene	105	12.509	12.509	0.000	95	1384477	10.0	10.1	
119 Cyclohexanone	55	12.613	12.613	0.000	91	109404	400.0	373.7	
121 Bromobenzene	156	12.979	12.979	0.000	92	387299	10.0	9.80	
122 1,1,2,2-Tetrachloroethane	83	13.014	13.014	0.000	95	239855	10.0	9.46	
124 1,2,3-Trichloropropane	110	13.066	13.066	0.000	83	58218	10.0	10.0	
125 trans-1,4-Dichloro-2-buten	53	13.118	13.118	0.000	80	45691	10.0	11.0	
123 N-Propylbenzene	120	13.240	13.240	0.000	99	316671	10.0	9.41	
126 2-Chlorotoluene	126	13.344	13.344	0.000	96	275549	10.0	9.63	
128 4-Chlorotoluene	126	13.536	13.536	0.000	98	310602	10.0	9.72	
127 1,3,5-Trimethylbenzene	105	13.553	13.553	0.000	93	1045110	10.0	9.91	
129 tert-Butylbenzene	119	14.128	14.128	0.000	91	1089182	10.0	9.63	
130 1,2,4-Trimethylbenzene	105	14.215	14.215	0.000	96	1016163	10.0	9.72	
131 sec-Butylbenzene	134	14.528	14.528	0.000	94	292868	10.0	9.69	
132 1,3-Dichlorobenzene	146	14.685	14.685	0.000	98	601087	10.0	9.67	
133 4-Isopropyltoluene	119	14.807	14.807	0.000	97	1228118	10.0	9.76	
134 1,4-Dichlorobenzene	146	14.841	14.841	0.000	94	698521	10.0	9.22	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.503	15.503	0.000	97	526771	10.0	9.30	
137 n-Butylbenzene	91	15.555	15.555	0.000	98	1273486	10.0	10.5	
139 1,2-Dibromo-3-Chloropropan	157	16.669	16.669	0.000	91	48929	10.0	9.19	
141 1,2,4-Trichlorobenzene	180	17.644	17.644	0.000	94	383875	10.0	10.2	
142 Hexachlorobutadiene	225	17.835	17.835	0.000	98	342272	10.0	10.4	
143 Naphthalene	128	17.870	17.870	0.000	97	312584	10.0	9.83	
144 1,2,3-Trichlorobenzene	180	18.114	18.114	0.000	96	292811	10.0	9.83	
S 145 1,2-Dichloroethene, Total	1				0		20.0	19.5	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 149 Trihalomethanes, Total	1				0		40.0	39.8	
S 147 1,2-Dichloroethene, Total	96				0		20.0	19.5	
S 150 Xylenes, Total (URS)	1				0		20.0	20.1	
S 146 Xylenes, Total	106				0		20.0	20.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	4.00	Units: uL

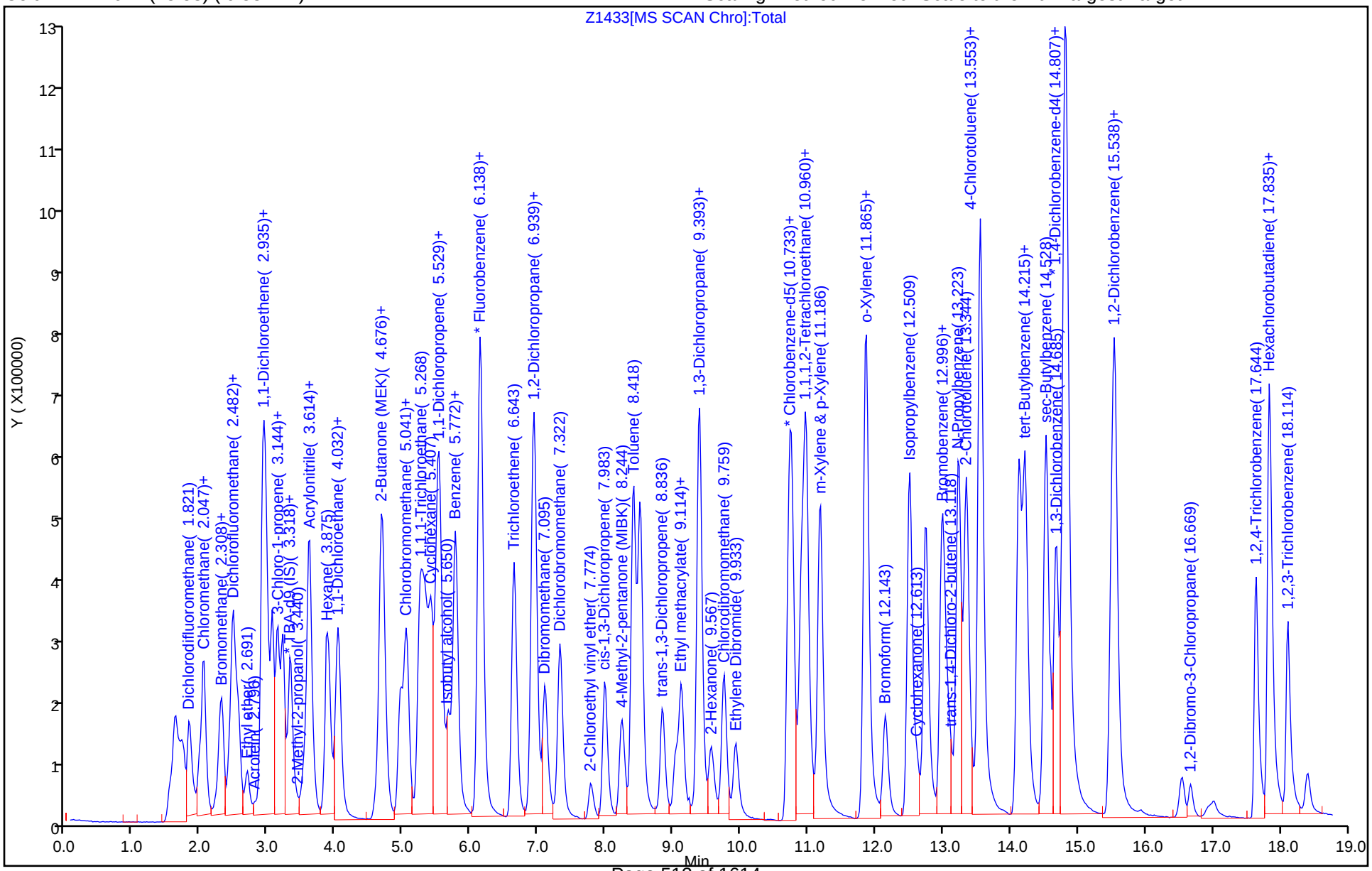
Report Date: 14-Sep-2018 13:04:30 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1433.D

Injection Date:	14-Sep-2018 10:03:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1434.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Sep-2018 10:25:30 ALS Bottle#: 6 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:32 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:48:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.351	3.353	-0.002	0	119911	250.0	250.0	
* 2 Fluorobenzene	96	6.136	6.138	-0.002	99	1158205	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.714	10.716	-0.002	88	234807	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.805	14.807	-0.002	96	459465	12.5	12.5	
27 Dichlorodifluoromethane	85	1.837	1.821	0.016	100	1066408	25.0	26.0	
30 Chloromethane	50	1.994	1.978	0.016	99	688540	25.0	25.0	
32 Vinyl chloride	62	2.063	2.065	-0.002	98	568429	25.0	24.9	
35 Bromomethane	94	2.289	2.291	-0.002	89	757410	25.0	24.7	
36 Chloroethane	64	2.324	2.326	-0.002	99	377752	25.0	24.0	
37 Dichlorofluoromethane	67	2.464	2.465	-0.001	99	1427308	25.0	24.3	
38 Trichlorofluoromethane	101	2.516	2.517	-0.001	100	1580255	25.0	24.3	
40 Ethyl ether	59	2.690	2.691	-0.001	94	272058	25.0	25.1	
44 Acrolein	56	2.794	2.796	-0.002	99	137647	148.1	154.0	
45 1,1-Dichloroethene	96	2.916	2.918	-0.002	96	759224	25.0	23.8	
48 Acetone	43	2.916	2.935	-0.019	99	138313	100.0	99.7	
46 1,1,2-Trichloro-1,2,2-trif	151	2.951	2.952	-0.001	97	1071131	25.0	24.4	
49 Iodomethane	142	3.055	3.057	-0.002	99	1915119	25.0	24.9	
50 Carbon disulfide	76	3.142	3.144	-0.002	99	2496475	25.0	23.7	
51 Methyl acetate	43	3.212	3.214	-0.002	41	329433	50.0	53.8	
52 3-Chloro-1-propene	41	3.212	3.214	-0.002	90	1107343	25.0	25.7	
54 Methylene Chloride	84	3.334	3.318	0.016	91	639222	25.0	23.7	
55 2-Methyl-2-propanol	59	3.421	3.440	-0.019	92	136485	250.0	262.6	
58 Acrylonitrile	53	3.543	3.544	-0.001	98	490378	250.0	247.9	
57 trans-1,2-Dichloroethene	96	3.612	3.614	-0.002	98	856935	25.0	23.8	
56 Methyl tert-butyl ether	73	3.612	3.614	-0.002	96	1002594	25.0	25.1	
59 Hexane	57	3.874	3.875	-0.001	95	985183	25.0	23.9	
62 1,1-Dichloroethane	63	4.013	4.014	-0.001	96	1240632	25.0	24.4	
61 Vinyl acetate	43	4.048	4.049	-0.001	97	1499559	50.0	51.2	
65 cis-1,2-Dichloroethene	96	4.674	4.676	-0.002	81	889305	25.0	24.3	
67 2-Butanone (MEK)	43	4.674	4.676	-0.002	97	331545	100.0	102.8	
66 2,2-Dichloropropane	77	4.709	4.693	0.016	88	1227413	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.953	4.954	-0.001	97	394193	25.0	25.7	
72 Tetrahydrofuran	42	5.040	5.041	-0.001	38	111785	50.0	47.9	
74 Chloroform	83	5.057	5.041	0.016	95	1446502	25.0	24.6	
75 1,1,1-Trichloroethane	97	5.318	5.320	-0.002	98	1474061	25.0	24.2	
76 Cyclohexane	56	5.423	5.407	0.016	92	1157749	25.0	24.2	
78 1,1-Dichloropropene	75	5.510	5.511	-0.001	97	1175328	25.0	24.5	
77 Carbon tetrachloride	117	5.545	5.546	-0.001	98	1379342	25.0	25.1	
80 Isobutyl alcohol	41	5.649	5.650	-0.001	91	156085	625.0	667.3	
82 1,2-Dichloroethane	62	5.771	5.772	-0.001	56	580381	25.0	25.5	
81 Benzene	78	5.771	5.772	-0.001	97	2232112	25.0	25.0	
84 n-Heptane	43	6.154	6.155	-0.001	94	1383621	25.0	24.7	
85 Trichloroethene	95	6.641	6.643	-0.002	97	1112831	25.0	24.4	
90 1,2-Dichloropropane	63	6.937	6.939	-0.002	94	757564	25.0	25.2	
87 Methylcyclohexane	55	6.937	6.939	-0.002	89	1078476	25.0	24.0	
92 Dibromomethane	93	7.094	7.095	-0.001	98	553536	25.0	25.6	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.320	7.322	-0.002	99	1371597	25.0	26.1	
96 2-Chloroethyl vinyl ether	63	7.773	7.774	-0.001	94	208699	25.0	25.4	
97 cis-1,3-Dichloropropene	75	7.982	7.983	-0.001	97	1051932	25.0	25.9	
98 4-Methyl-2-pentanone (MIBK	43	8.243	8.244	-0.001	97	1105832	100.0	102.0	
99 Toluene	91	8.504	8.505	-0.001	99	2777059	25.0	23.9	
100 trans-1,3-Dichloropropene	75	8.835	8.836	-0.002	93	777213	25.0	25.9	
101 Ethyl methacrylate	69	9.043	9.045	-0.002	91	523485	25.0	26.6	
102 1,1,2-Trichloroethane	97	9.113	9.132	-0.019	90	525161	25.0	24.4	
103 Tetrachloroethene	164	9.392	9.393	-0.001	97	1083303	25.0	25.1	
104 1,3-Dichloropropane	76	9.392	9.393	-0.001	67	792289	25.0	26.3	
105 2-Hexanone	43	9.566	9.567	-0.001	99	719029	100.0	112.1	
107 Chlorodibromomethane	129	9.757	9.759	-0.002	90	990494	25.0	26.7	
109 Ethylene Dibromide	107	9.931	9.933	-0.002	99	702499	25.0	26.8	
111 Chlorobenzene	112	10.767	10.768	-0.001	95	1851641	25.0	25.1	
113 1,1,1,2-Tetrachloroethane	131	10.906	10.907	-0.001	98	910720	25.0	26.2	
112 Ethylbenzene	106	10.976	10.977	-0.001	98	928329	25.0	24.8	
114 m-Xylene & p-Xylene	106	11.184	11.186	-0.002	0	1282376	25.0	25.7	
115 o-Xylene	106	11.846	11.847	-0.001	97	1118519	25.0	24.9	
116 Styrene	104	11.863	11.865	-0.002	94	1787274	25.0	25.0	
117 Bromoform	173	12.142	12.143	-0.001	97	659722	25.0	26.8	
118 Isopropylbenzene	105	12.507	12.509	-0.002	95	3473016	25.0	24.9	
119 Cyclohexanone	55	12.612	12.613	-0.001	91	299699	1000.0	1009.4	
121 Bromobenzene	156	12.977	12.979	-0.002	92	998417	25.0	24.8	
122 1,1,2,2-Tetrachloroethane	83	13.012	13.014	-0.002	95	647868	25.0	25.1	
124 1,2,3-Trichloropropane	110	13.064	13.066	-0.002	82	156812	25.0	26.5	
125 trans-1,4-Dichloro-2-buten	53	13.117	13.118	-0.001	80	122277	25.0	28.9	
123 N-Propylbenzene	120	13.238	13.240	-0.002	99	784434	25.0	22.9	
126 2-Chlorotoluene	126	13.343	13.344	-0.001	96	687083	25.0	23.6	
128 4-Chlorotoluene	126	13.552	13.536	0.016	97	803104	25.0	24.7	
127 1,3,5-Trimethylbenzene	105	13.569	13.553	0.016	93	2604113	25.0	24.3	
129 tert-Butylbenzene	119	14.126	14.128	-0.002	92	2659219	25.0	23.1	
130 1,2,4-Trimethylbenzene	105	14.213	14.215	-0.002	96	2513134	25.0	23.7	
131 sec-Butylbenzene	134	14.527	14.528	-0.001	94	704697	25.0	22.9	
132 1,3-Dichlorobenzene	146	14.683	14.685	-0.002	98	1495585	25.0	23.7	
133 4-Isopropyltoluene	119	14.805	14.807	-0.002	97	2994693	25.0	23.4	
134 1,4-Dichlorobenzene	146	14.840	14.841	-0.001	96	1742247	25.0	22.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.501	15.503	-0.002	97	1323809	25.0	23.0	
137 n-Butylbenzene	91	15.554	15.555	-0.001	98	3106794	25.0	25.6	
139 1,2-Dibromo-3-Chloropropan	157	16.668	16.669	-0.001	92	132341	25.0	24.4	
141 1,2,4-Trichlorobenzene	180	17.642	17.644	-0.002	94	983257	25.0	26.6	
142 Hexachlorobutadiene	225	17.834	17.835	-0.001	98	826210	25.0	26.1	
143 Naphthalene	128	17.869	17.870	-0.001	97	840498	25.0	27.2	
144 1,2,3-Trichlorobenzene	180	18.112	18.114	-0.002	96	757661	25.0	26.0	
S 150 Xylenes, Total (URS)	1				0		50.0	50.5	
S 151 Total BTEX	1				0			124.2	
S 146 Xylenes, Total	106				0		50.0	50.5	
S 148 1,3-Dichloropropene, Total	1				0		50.0	51.8	
S 145 1,2-Dichloroethene, Total	1				0		50.0	48.2	
S 147 1,2-Dichloroethene, Total	96				0		50.0	48.2	
S 149 Trihalomethanes, Total	1				0		100.0	104.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	10.00	Units: uL

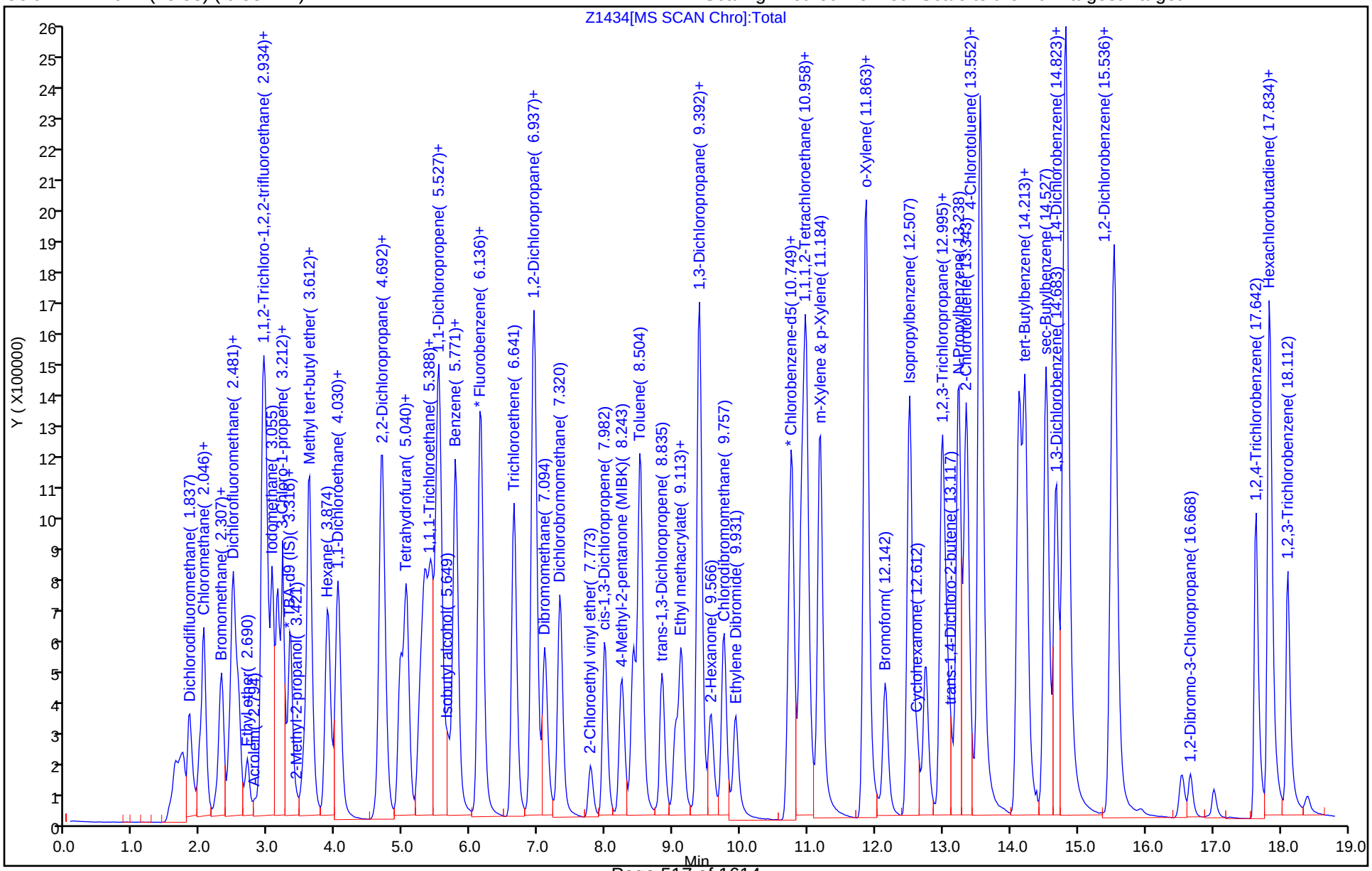
Report Date: 14-Sep-2018 13:04:32 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1434.D

Injection Date:	14-Sep-2018 10:25:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1435.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 14-Sep-2018 10:48:30 ALS Bottle#: 7 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:33 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 12:49:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.330	3.353	-0.023	0	133770	250.0	250.0	
* 2 Fluorobenzene	96	6.115	6.138	-0.023	99	1152897	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.711	10.716	-0.005	87	231735	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.807	-0.006	93	424332	12.5	12.5	
27 Dichlorodifluoromethane	85	1.798	1.821	-0.023	100	2533558	60.0	61.9	
30 Chloromethane	50	1.955	1.978	-0.023	99	1669560	60.0	60.8	
32 Vinyl chloride	62	2.042	2.065	-0.023	98	1383418	60.0	60.8	
35 Bromomethane	94	2.268	2.291	-0.023	90	1825157	60.0	59.9	
36 Chloroethane	64	2.303	2.326	-0.023	99	908758	60.0	57.9	
37 Dichlorofluoromethane	67	2.442	2.465	-0.023	99	3404350	60.0	58.3	
38 Trichlorofluoromethane	101	2.512	2.517	-0.005	100	3763353	60.0	58.2	
40 Ethyl ether	59	2.669	2.691	-0.022	94	615731	60.0	57.0	
44 Acrolein	56	2.773	2.796	-0.023	100	305100	355.5	346.0	
45 1,1-Dichloroethene	96	2.895	2.918	-0.023	96	1809716	60.0	57.0	
48 Acetone	43	2.895	2.935	-0.040	99	319735	240.0	234.3	
46 1,1,2-Trichloro-1,2,2-trif	151	2.930	2.952	-0.022	97	2573063	60.0	58.8	
49 Iodomethane	142	3.034	3.057	-0.023	98	4568186	60.0	59.7	
50 Carbon disulfide	76	3.104	3.144	-0.040	99	5979785	60.0	57.1	
52 3-Chloro-1-propene	41	3.191	3.214	-0.023	91	2481770	60.0	57.9	
51 Methyl acetate	43	3.191	3.214	-0.023	40	645310	120.0	106.5	
54 Methylene Chloride	84	3.295	3.318	-0.023	92	1485849	60.0	55.2	
55 2-Methyl-2-propanol	59	3.417	3.440	-0.023	96	196044	600.0	338.1	
58 Acrylonitrile	53	3.522	3.544	-0.022	98	1133831	600.0	575.8	
56 Methyl tert-butyl ether	73	3.591	3.614	-0.023	96	2237459	60.0	56.3	
57 trans-1,2-Dichloroethene	96	3.574	3.614	-0.040	98	2061444	60.0	57.6	
59 Hexane	57	3.852	3.875	-0.023	95	2348053	60.0	57.7	
62 1,1-Dichloroethane	63	4.009	4.014	-0.005	96	3032018	60.0	59.8	
61 Vinyl acetate	43	4.026	4.049	-0.023	97	3581967	120.0	122.8	
67 2-Butanone (MEK)	43	4.653	4.676	-0.023	99	753646	240.0	234.7	
65 cis-1,2-Dichloroethene	96	4.653	4.676	-0.023	81	2193387	60.0	60.2	
66 2,2-Dichloropropane	77	4.688	4.693	-0.005	88	2931284	60.0	59.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.949	4.954	-0.005	97	952748	60.0	62.3	
74 Chloroform	83	5.036	5.041	-0.005	94	3552087	60.0	60.7	
72 Tetrahydrofuran	42	5.019	5.041	-0.022	37	256821	120.0	110.6	
75 1,1,1-Trichloroethane	97	5.297	5.320	-0.023	97	3665087	60.0	60.4	
76 Cyclohexane	56	5.402	5.407	-0.005	92	2829072	60.0	59.3	
78 1,1-Dichloropropene	75	5.506	5.511	-0.005	98	2871759	60.0	60.1	
77 Carbon tetrachloride	117	5.523	5.546	-0.023	98	3349562	60.0	61.1	
80 Isobutyl alcohol	41	5.628	5.650	-0.022	92	357735	1500.0	1362.3	
81 Benzene	78	5.767	5.772	-0.005	96	5417346	60.0	60.9	
82 1,2-Dichloroethane	62	5.750	5.772	-0.022	55	1361204	60.0	60.2	
84 n-Heptane	43	6.133	6.155	-0.022	95	3350825	60.0	60.2	
85 Trichloroethene	95	6.620	6.643	-0.023	97	2660983	60.0	58.7	
87 Methylcyclohexane	55	6.933	6.939	-0.006	88	2578712	60.0	57.6	
90 1,2-Dichloropropane	63	6.916	6.939	-0.023	91	1800707	60.0	60.1	
92 Dibromomethane	93	7.090	7.095	-0.005	97	1276011	60.0	59.3	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.316	7.322	-0.006	99	3226427	60.0	61.6	
96 2-Chloroethyl vinyl ether	63	7.769	7.774	-0.005	94	502406	60.0	60.9	
97 cis-1,3-Dichloropropene	75	7.978	7.983	-0.005	97	2481086	60.0	61.9	
98 4-Methyl-2-pentanone (MIBK	43	8.222	8.244	-0.022	97	2453119	240.0	227.3	
99 Toluene	91	8.500	8.505	-0.005	99	6624679	60.0	57.2	
100 trans-1,3-Dichloropropene	75	8.831	8.836	-0.005	93	1772946	60.0	59.3	
101 Ethyl methacrylate	69	9.022	9.045	-0.023	91	1176326	60.0	60.7	
102 1,1,2-Trichloroethane	97	9.109	9.132	-0.023	90	1188297	60.0	55.5	
104 1,3-Dichloropropane	76	9.370	9.393	-0.023	67	1786973	60.0	60.2	
103 Tetrachloroethene	164	9.388	9.393	-0.005	97	2617047	60.0	61.4	
105 2-Hexanone	43	9.544	9.567	-0.023	99	1569711	240.0	247.9	
107 Chlorodibromomethane	129	9.753	9.759	-0.006	90	2299070	60.0	62.8	
109 Ethylene Dibromide	107	9.927	9.933	-0.006	98	1606503	60.0	62.0	
111 Chlorobenzene	112	10.763	10.768	-0.005	94	4460480	60.0	61.4	
113 1,1,1,2-Tetrachloroethane	131	10.902	10.907	-0.005	98	2117853	60.0	61.7	
112 Ethylbenzene	106	10.972	10.977	-0.005	98	2221170	60.0	60.0	
114 m-Xylene & p-Xylene	106	11.181	11.186	-0.005	0	3047863	60.0	61.8	
115 o-Xylene	106	11.842	11.847	-0.005	95	2634814	60.0	59.4	
116 Styrene	104	11.860	11.865	-0.005	94	4206932	60.0	59.6	
117 Bromoform	173	12.138	12.143	-0.005	97	1488418	60.0	61.3	
118 Isopropylbenzene	105	12.504	12.509	-0.005	95	8163241	60.0	63.3	
119 Cyclohexanone	55	12.608	12.613	-0.005	92	640147	2400.0	2184.7	
121 Bromobenzene	156	12.974	12.979	-0.005	91	2332128	60.0	62.8	
122 1,1,2,2-Tetrachloroethane	83	13.008	13.014	-0.006	95	1400762	60.0	58.9	
124 1,2,3-Trichloropropane	110	13.061	13.066	-0.005	84	338769	60.0	62.0	
125 trans-1,4-Dichloro-2-buten	53	13.113	13.118	-0.005	82	259907	60.0	66.5	
123 N-Propylbenzene	120	13.235	13.240	-0.005	99	1847324	60.0	58.5	
126 2-Chlorotoluene	126	13.357	13.344	0.013	97	1587945	60.0	59.1	
128 4-Chlorotoluene	126	13.548	13.536	0.012	97	1870281	60.0	62.3	
127 1,3,5-Trimethylbenzene	105	13.565	13.553	0.012	93	6025803	60.0	60.9	
129 tert-Butylbenzene	119	14.123	14.128	-0.005	91	6137361	60.0	57.8	
130 1,2,4-Trimethylbenzene	105	14.227	14.215	0.012	96	5736105	60.0	58.5	
131 sec-Butylbenzene	134	14.540	14.528	0.012	94	1596606	60.0	56.3	
132 1,3-Dichlorobenzene	146	14.680	14.685	-0.005	98	3352495	60.0	57.4	
133 4-Isopropyltoluene	119	14.819	14.807	0.012	97	6764098	60.0	57.3	
134 1,4-Dichlorobenzene	146	14.836	14.841	-0.005	95	3940641	60.0	55.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.498	15.503	-0.005	97	3028247	60.0	57.0	
137 n-Butylbenzene	91	15.550	15.555	-0.005	98	6899448	60.0	61.8	
139 1,2-Dibromo-3-Chloropropan	157	16.664	16.669	-0.005	92	285404	60.0	57.1	
141 1,2,4-Trichlorobenzene	180		17.644				ND	ND	U
142 Hexachlorobutadiene	225	17.830	17.835	-0.005	98	1692458	60.0	59.1	
143 Naphthalene	128		17.870				ND	ND	U
144 1,2,3-Trichlorobenzene	180		18.114				ND	ND	U
S 145 1,2-Dichloroethene, Total	1				0		120.0	117.9	
S 148 1,3-Dichloropropene, Total	1				0		120.0	121.2	
S 149 Trihalomethanes, Total	1				0		240.0	246.3	
S 147 1,2-Dichloroethene, Total	96				0		120.0	117.9	
S 150 Xylenes, Total (URS)	1				0		120.0	121.2	
S 146 Xylenes, Total	106				0		120.0	121.2	
S 151 Total BTEX	1				0			299.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMainA_00001	Amount Added:	24.00	Units: uL

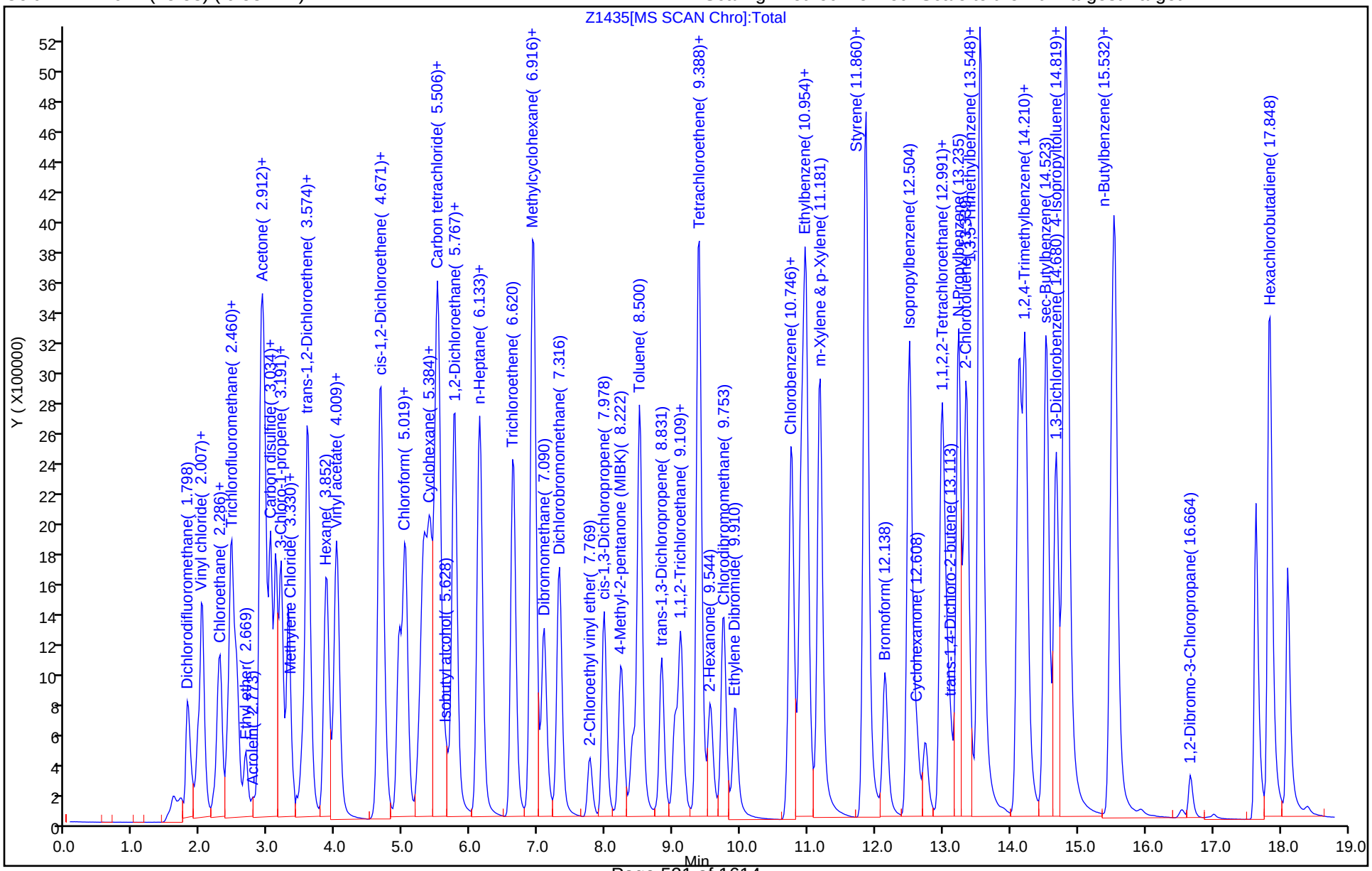
Report Date: 14-Sep-2018 13:04:34 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1435.D

Injection Date:	14-Sep-2018 10:48:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ic			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



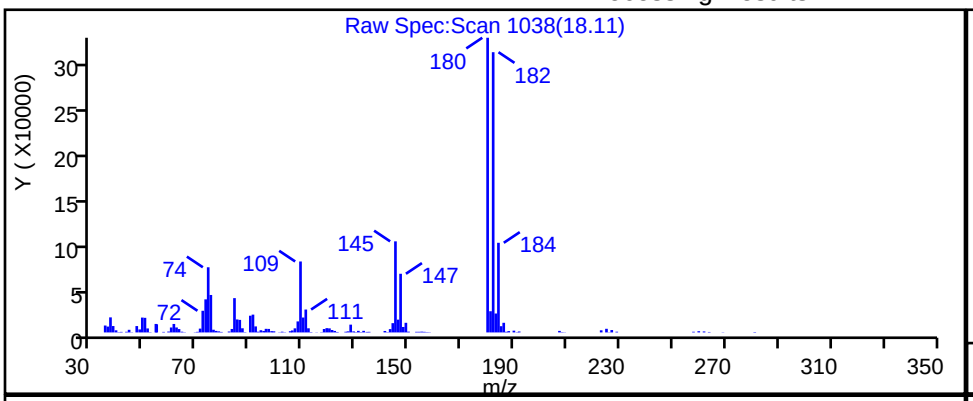
User Disabled Compound Report

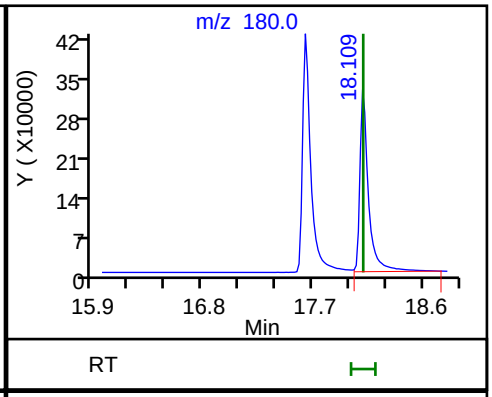
TestAmerica Denver

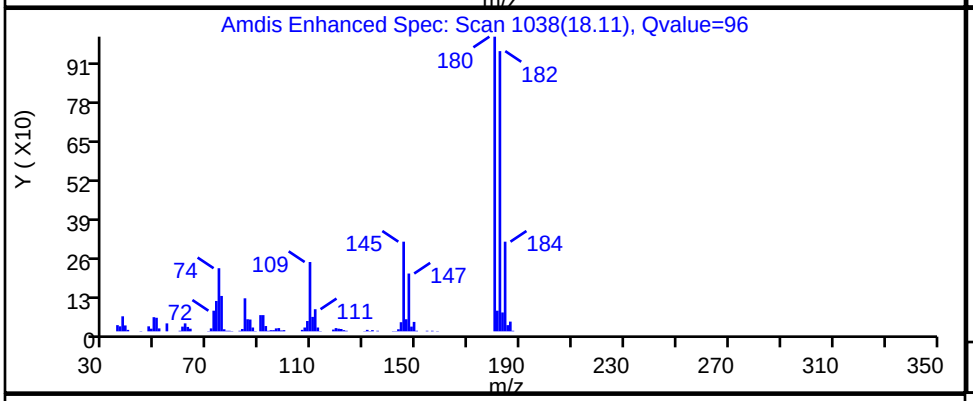
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Injection Date:	14-Sep-2018 10:48:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	16
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

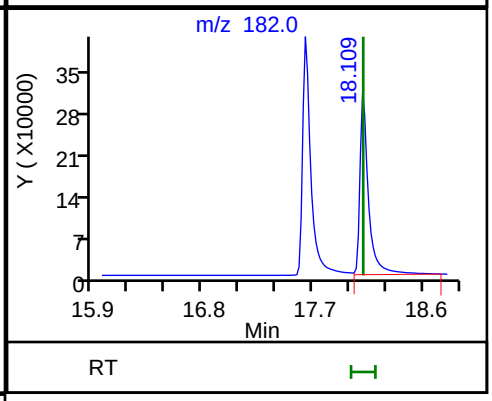
144 1,2,3-Trichlorobenzene, CAS: 87-61-6

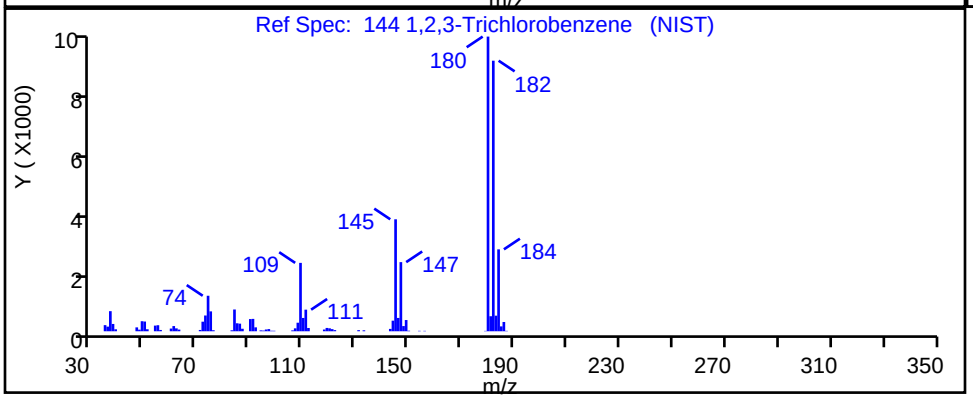
Processing Results











RT	Mass	Response	Amount
18.11	180.00	1584323	60.349333
18.11	182.00	1512734	

Reviewer: ilczyszynd, 14-Sep-2018 12:50:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

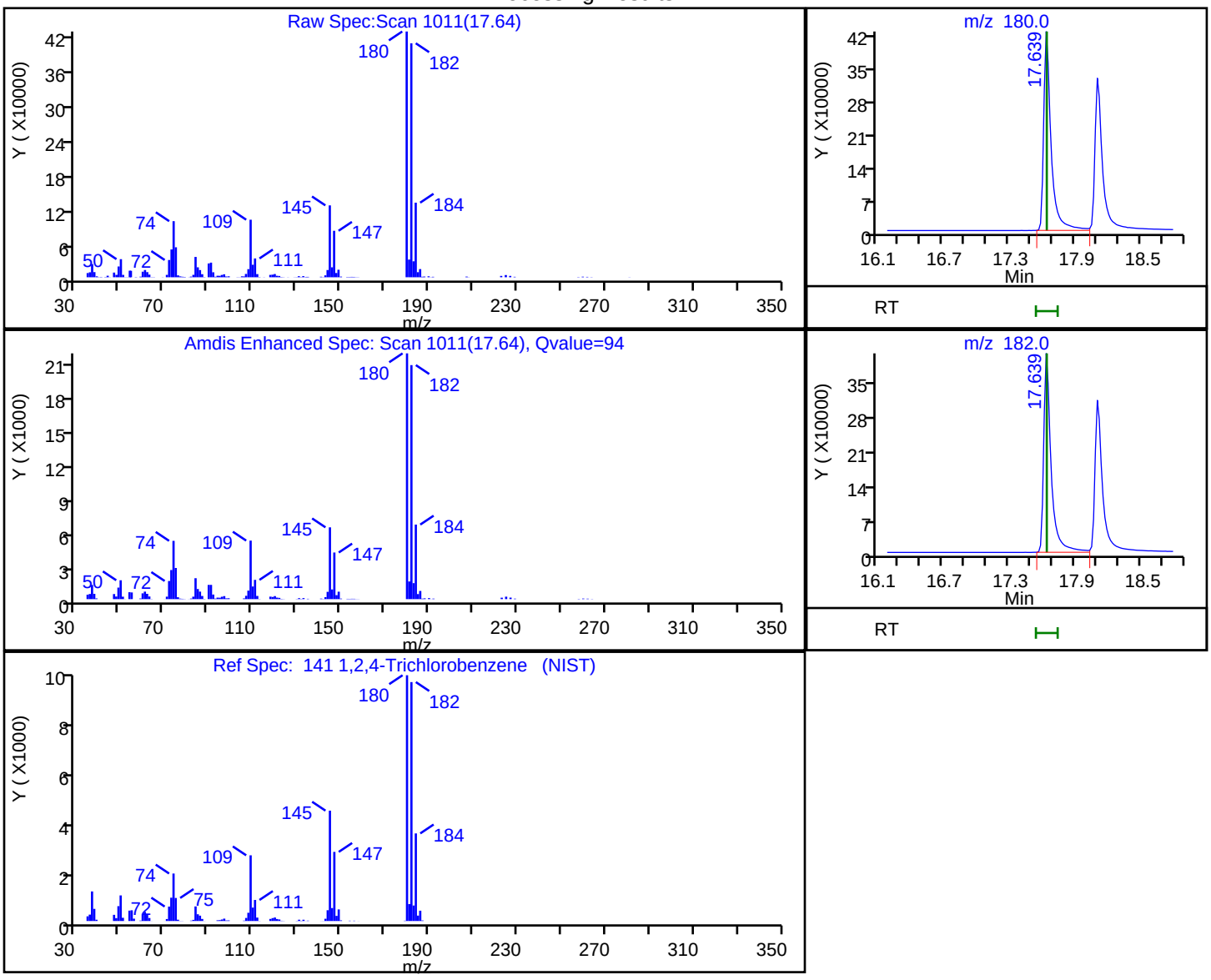
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1435.D
Injection Date: 14-Sep-2018 10:48:30 Instrument ID: VMS_Z
Lims ID: ic
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 7 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

141 1,2,4-Trichlorobenzene, CAS: 120-82-1

Processing Results



RT	Mass	Response	Amount
17.64	180.00	2018880	59.679513
17.64	182.00	1926334	

Reviewer: ilczyszynd, 14-Sep-2018 12:50:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

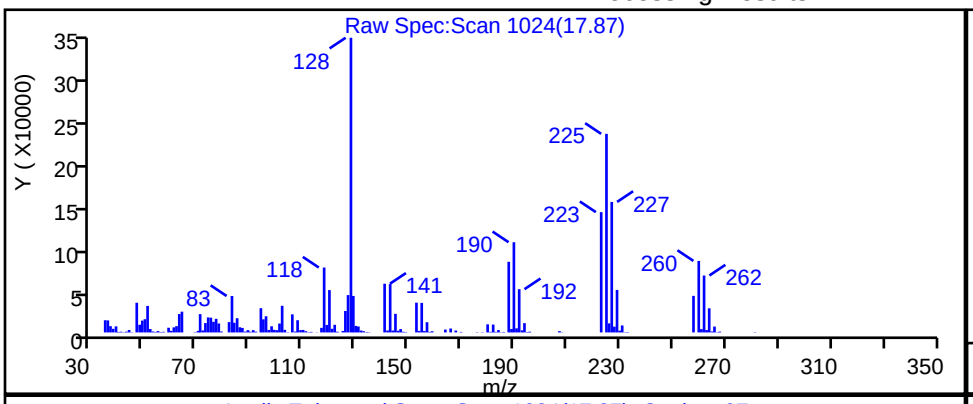
User Disabled Compound Report

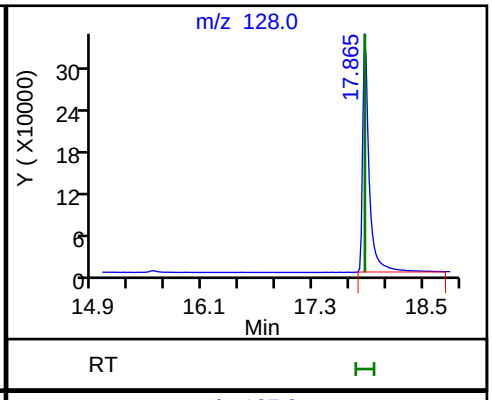
TestAmerica Denver

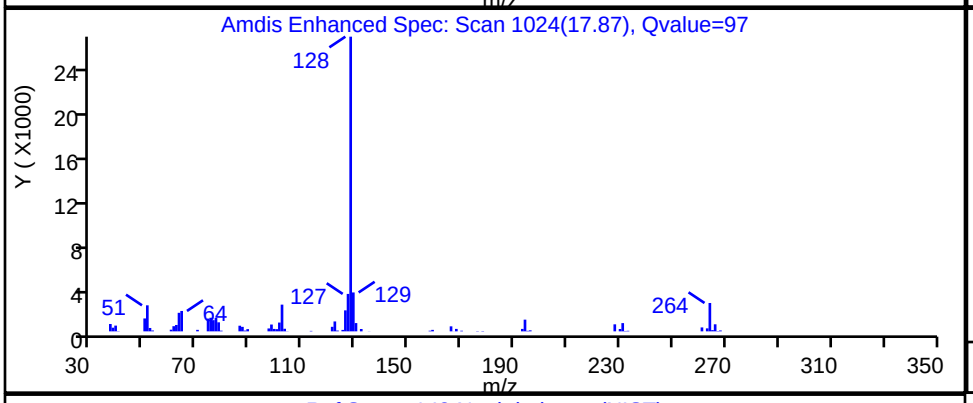
Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1435.D				
Injection Date:	14-Sep-2018 10:48:30	Instrument ID:	VMS_Z		
Lims ID:	ic				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	7	Worklist Smp#:	16
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

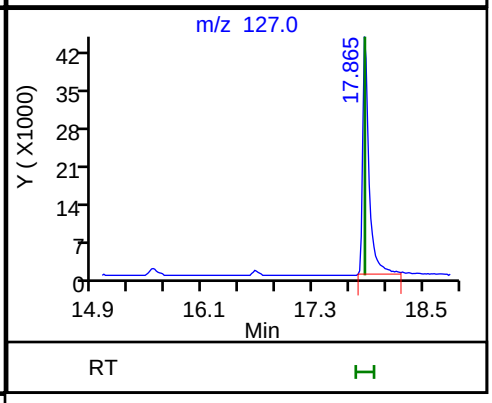
143 Naphthalene, CAS: 91-20-3

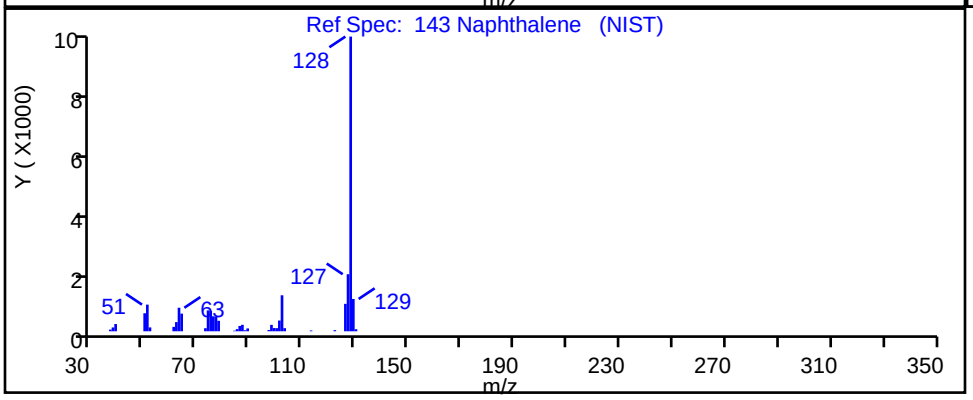
Processing Results











RT	Mass	Response	Amount
17.87	128.00	1735151	60.392538
17.87	127.00	213387	

Reviewer: ilczyszynd, 14-Sep-2018 12:50:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428900/24 Calibration Date: 09/07/2018 18:18

Instrument ID: VMS_G2 Calib Start Date: 07/21/2018 16:15

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 07/21/2018 17:57

Lab File ID: G2_6783.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Lin				40.0	250	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6783.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:18:30 ALS Bottle#: 25 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:15 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:13:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	368929	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2036813	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	440498	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	708003	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	325399	10.0	10.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	304291	10.0	10.1	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	1461024	10.0	10.3	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.001	92	477294	10.0	10.4	
16 Ethylene oxide	43	2.054	2.040	0.014	100	358899	1000.0	1056.5	
21 Ethanol	45	2.640	2.640	0.000	98	101819	600.0	627.1	
23 Propene oxide	58	2.780	2.780	0.000	96	1730960	1000.0	991.7	
29 Isopropyl alcohol	45	3.255	3.255	0.000	96	75253	100.0	88.9	
31 Acetonitrile	41	3.408	3.408	0.000	99	137161	100.0	90.5	
47 Isopropyl ether	87	4.833	4.833	0.000	92	293327	10.0	9.72	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	86	709628	10.0	9.86	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	97	824143	10.0	9.64	
53 Ethyl acetate	43	5.825	5.825	0.000	99	168326	20.0	19.1	
54 Propionitrile	54	5.839	5.839	0.000	98	151113	100.0	109.1	
58 Methacrylonitrile	41	6.042	6.042	0.000	94	825294	100.0	107.7	
68 Tert-amyl methyl ether	73	7.114	7.114	0.000	95	632824	10.0	9.62	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.130	8.130	0.000	91	75139	20.0	19.5	
80 2-Nitropropane	41	8.559	8.566	-0.007	96	28474	20.0	17.0	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	92	20550	20.0	20.2	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	94	46130	20.0	18.7	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	1467310	10.0	10.2	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	721297	10.0	9.81	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

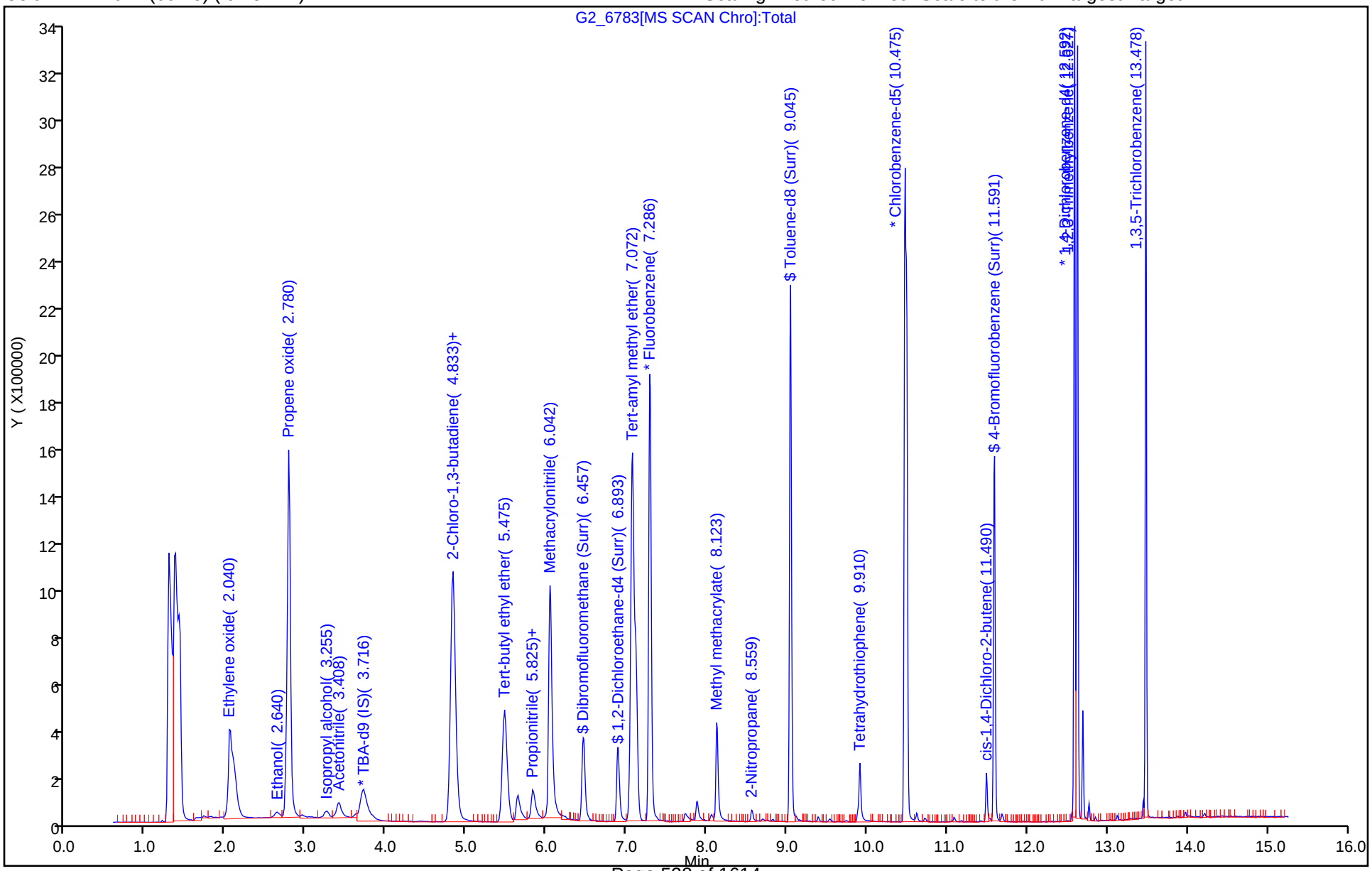
Report Date: 08-Sep-2018 11:27:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6783.D

Injection Date:	07-Sep-2018 18:18:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



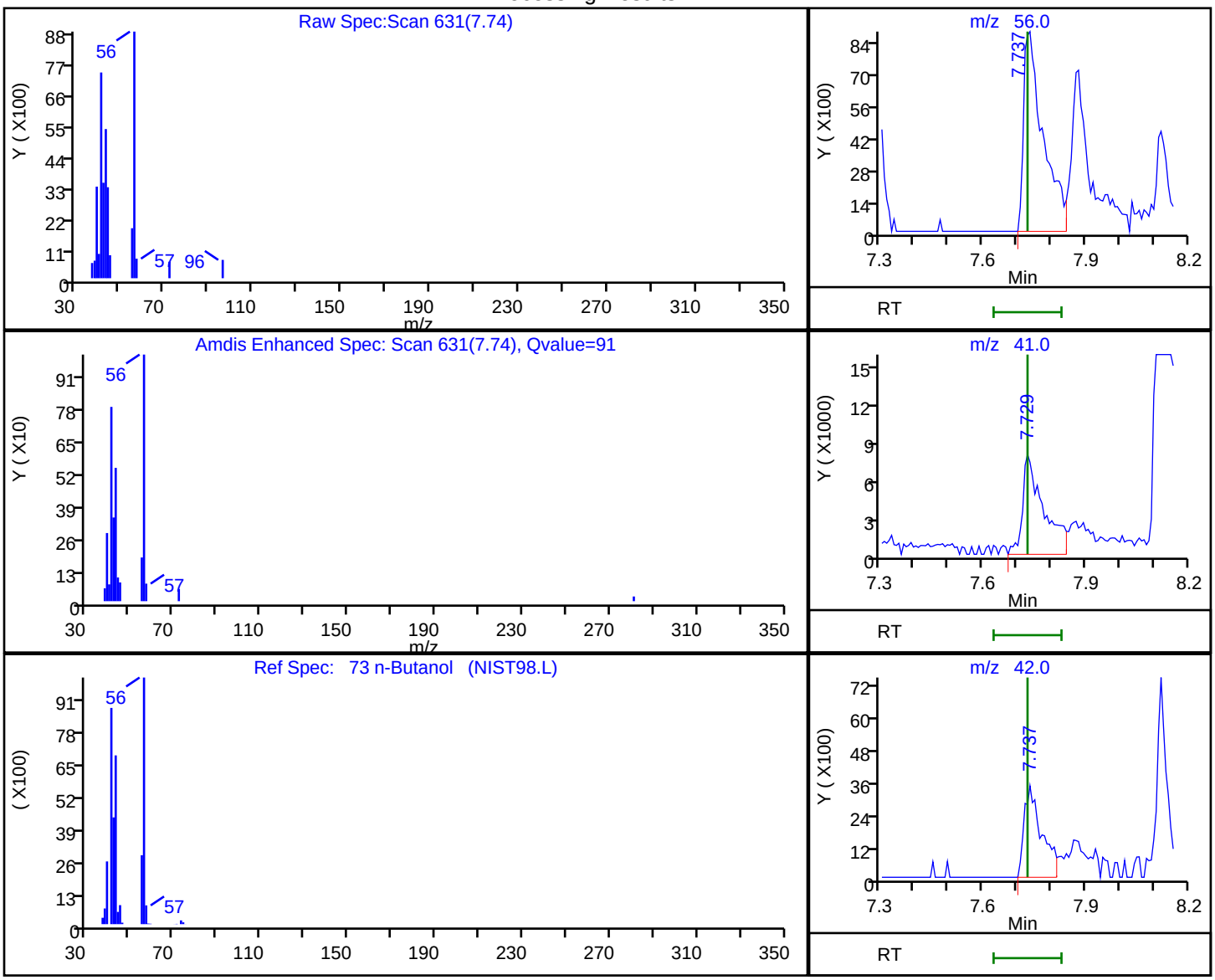
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6783.D
Injection Date: 07-Sep-2018 18:18:30 Instrument ID: VMS_G2
Lims ID: icv
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 25 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

73 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
7.74	56.00	35533	142.3565
7.73	41.00	34426	
7.74	42.00	12284	

Reviewer: ilczyszynd, 08-Sep-2018 08:13:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428900/24 Calibration Date: 09/07/2018 18:18

Instrument ID: VMS_G2 Calib Start Date: 09/07/2018 16:13

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/07/2018 17:57

Lab File ID: G2_6783.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Lin2		0.0022		1060	1000	5.7	20.0
Ethanol	Lin2		0.0010		627	600	4.5	20.0
Isopropyl alcohol	Lin1		0.0046		88.9	100	-11.1	20.0
Acetonitrile	Lin2		0.0084		90.5	100	-9.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4416	0.4355		9.86	10.0	-1.4	20.0
Diisopropyl ether	Ave	0.1853	0.1800		9.72	10.0	-2.8	20.0
Tert-butyl ethyl ether	Ave	0.5245	0.5058		9.64	10.0	-3.6	20.0
Ethyl acetate	Ave	0.0541	0.0517		19.1	20.0	-4.6	20.0
Propionitrile	Lin		0.0093		109	100	9.1	20.0
Methacrylonitrile	Ave	0.0470	0.0507		108	100	7.7	20.0
Tert-amyl methyl ether	Ave	0.4036	0.3884		9.62	10.0	-3.8	20.0
Methyl methacrylate	Lin2		0.0231		19.5	20.0	-2.3	20.0
2-Nitropropane	Ave	0.0103	0.0087		17.0	20.0	-14.8	20.0
cis-1,4-Dichloro-2-butene	Lin2		0.0407		18.7	20.0	-6.3	20.0
1,2,3-Trimethylbenzene	Ave	2.545	2.591		10.2	10.0	1.8	20.0
Dibromofluoromethane (Surr)	Ave	0.1968	0.1997		10.1	10.0	1.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1858	0.1867		10.1	10.0	0.5	20.0
Toluene-d8 (Surr)	Ave	4.021	4.146		10.3	10.0	3.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8140	0.8427		10.4	10.0	3.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6783.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:18:30 ALS Bottle#: 25 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:27:15 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 08:13:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	368929	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2036813	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	440498	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	708003	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	325399	10.0	10.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	99	304291	10.0	10.1	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	93	1461024	10.0	10.3	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.001	92	477294	10.0	10.4	
16 Ethylene oxide	43	2.054	2.040	0.014	100	358899	1000.0	1056.5	
21 Ethanol	45	2.640	2.640	0.000	98	101819	600.0	627.1	
23 Propene oxide	58	2.780	2.780	0.000	96	1730960	1000.0	991.7	
29 Isopropyl alcohol	45	3.255	3.255	0.000	96	75253	100.0	88.9	
31 Acetonitrile	41	3.408	3.408	0.000	99	137161	100.0	90.5	
47 Isopropyl ether	87	4.833	4.833	0.000	92	293327	10.0	9.72	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	86	709628	10.0	9.86	
49 Tert-butyl ethyl ether	59	5.475	5.475	0.000	97	824143	10.0	9.64	
53 Ethyl acetate	43	5.825	5.825	0.000	99	168326	20.0	19.1	
54 Propionitrile	54	5.839	5.839	0.000	98	151113	100.0	109.1	
58 Methacrylonitrile	41	6.042	6.042	0.000	94	825294	100.0	107.7	
68 Tert-amyl methyl ether	73	7.114	7.114	0.000	95	632824	10.0	9.62	
73 n-Butanol	56		7.729				ND	ND	U
77 Methyl methacrylate	100	8.130	8.130	0.000	91	75139	20.0	19.5	
80 2-Nitropropane	41	8.559	8.566	-0.007	96	28474	20.0	17.0	
13 Tetrahydrothiophene	60	9.889	9.889	0.000	92	20550	20.0	20.2	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.490	0.000	94	46130	20.0	18.7	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	98	1467310	10.0	10.2	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	97	721297	10.0	9.81	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

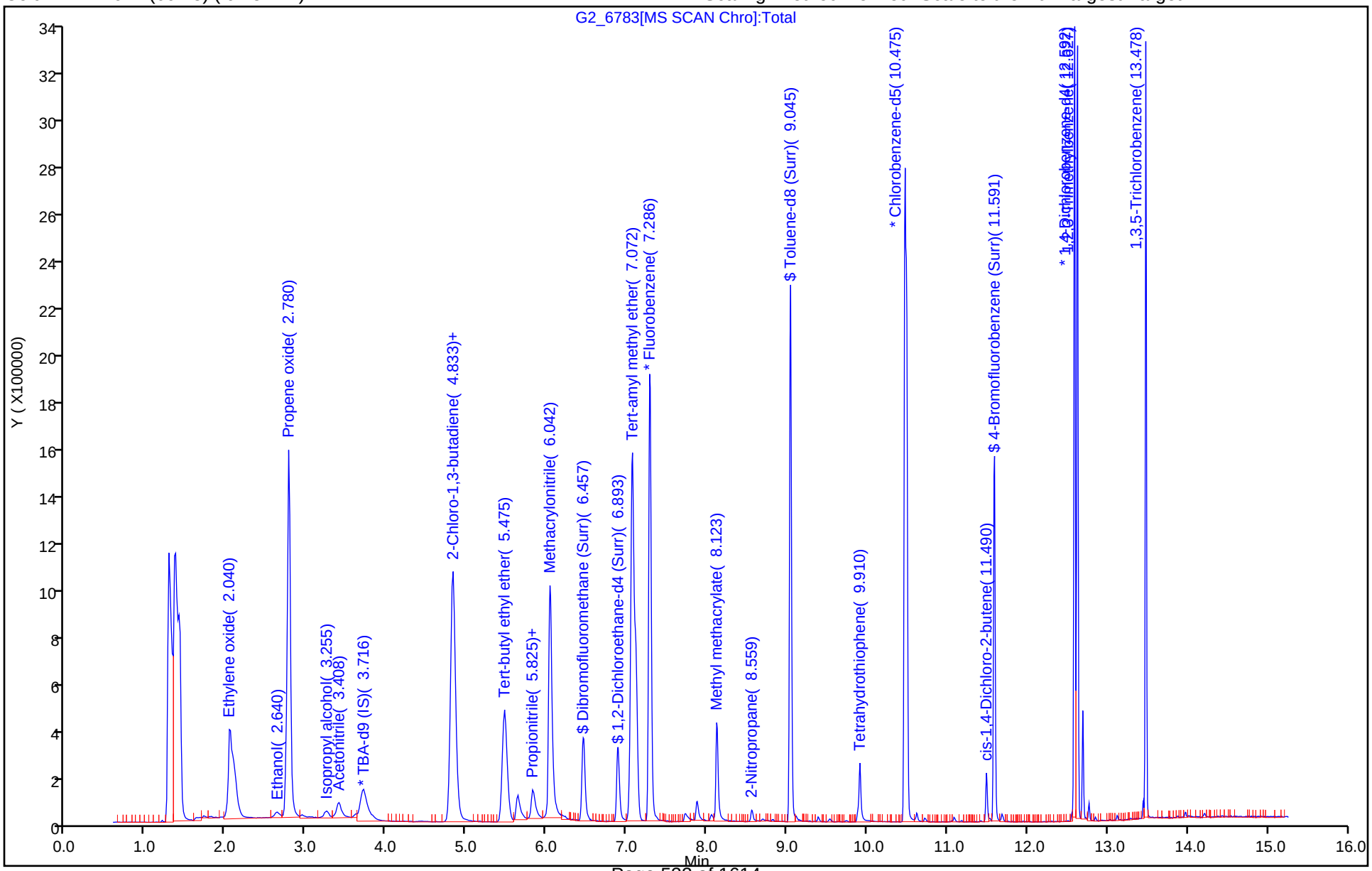
Report Date: 08-Sep-2018 11:27:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6783.D

Injection Date:	07-Sep-2018 18:18:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429808/17 Calibration Date: 09/17/2018 13:28

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7008.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4834	0.4560		9.43	10.0	-5.7	20.0
Chloromethane	Ave	0.3780	0.3735	0.1000	9.88	10.0	-1.2	20.0
Vinyl chloride	Ave	0.3831	0.4037		10.5	10.0	5.4	20.0
Bromomethane	Ave	0.2725	0.2699		9.90	10.0	-1.0	20.0
Chloroethane	Lin2		0.2238		10.9	10.0	8.9	20.0
Dichlorofluoromethane	Ave	0.6014	0.6071		10.1	10.0	0.9	20.0
Trichlorofluoromethane	Ave	0.6499	0.6311		9.71	10.0	-2.9	20.0
Ethyl ether	Ave	0.1227	0.1151		9.38	10.0	-6.2	20.0
Acrolein	Ave	0.0151	0.0129		50.7	59.3	-14.4	20.0
1,1-Dichloroethene	Ave	0.2932	0.2762		9.42	10.0	-5.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3352	0.3044		9.08	10.0	-9.2	20.0
Acetone	Ave	0.0297	0.0338		45.5	40.0	13.6	20.0
Methyl iodide	Ave	0.4964	0.4701		9.47	10.0	-5.3	20.0
Carbon disulfide	Ave	0.9666	0.8879		9.19	10.0	-8.1	20.0
3-Chloro-1-propene	Lin2		0.3738		9.79	10.0	-2.1	20.0
Methyl acetate	Lin1		0.0643		21.4	20.0	7.2	20.0
Methylene Chloride	Ave	0.2480	0.2249		9.07	10.0	-9.3	20.0
t-Butyl alcohol	Ave	0.0111	0.0092		82.8	100	-17.2	20.0
Acrylonitrile	Ave	0.0352	0.0321		91.2	100	-8.8	20.0
trans-1,2-Dichloroethene	Ave	0.2904	0.2822		9.72	10.0	-2.8	20.0
Methyl tert-butyl ether	Ave	0.4499	0.4348		9.67	10.0	-3.3	20.0
Hexane	Ave	1.799	1.715		9.53	10.0	-4.7	20.0
1,1-Dichloroethane	Ave	0.4865	0.4541	0.1000	9.33	10.0	-6.7	20.0
Vinyl acetate	Lin1		0.1636		16.7	20.0	-16.3	20.0
2,2-Dichloropropane	Lin2		0.5357		9.67	10.0	-3.3	20.0
cis-1,2-Dichloroethene	Ave	0.2651	0.2598		9.80	10.0	-2.0	20.0
2-Butanone (MEK)	Lin1		0.0314		37.6	40.0	-6.0	20.0
Bromochloromethane	Ave	0.0938	0.0881		9.40	10.0	-6.0	20.0
Tetrahydrofuran	Qua		0.0154		18.5	20.0	-7.5	20.0
Chloroform	Ave	0.4616	0.4146		8.98	10.0	-10.2	20.0
1,1,1-Trichloroethane	Ave	0.5264	0.4861		9.24	10.0	-7.6	20.0
Cyclohexane	Ave	0.4919	0.5042		10.2	10.0	2.5	20.0
Carbon tetrachloride	Ave	0.4793	0.4354		9.08	10.0	-9.2	20.0
1,1-Dichloropropene	Ave	0.3525	0.3526		10.0	10.0	0.0	20.0
Benzene	Ave	0.9778	0.9330		9.54	10.0	-4.6	20.0
Isobutyl alcohol	Ave	0.0028	0.0024		215	250	-13.9	20.0
1,2-Dichloroethane	Ave	0.2569	0.2314		9.00	10.0	-10.0	20.0
Trichloroethene	Ave	0.2670	0.2430		9.10	10.0	-9.0	20.0
Methylcyclohexane	Ave	0.4336	0.4134		9.53	10.0	-4.7	20.0
1,2-Dichloropropane	Ave	0.2163	0.2047		9.47	10.0	-5.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429808/17 Calibration Date: 09/17/2018 13:28

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7008.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.0915	0.0803		8.77	10.0	-12.3	20.0
1,4-Dioxane	Lin1		0.0008		177	200	-11.6	20.0
Bromodichloromethane	Ave	0.2595	0.2376		9.16	10.0	-8.4	20.0
2-Chloroethyl vinyl ether	Qua		0.0225		9.02	10.0	-9.8	20.0
cis-1,3-Dichloropropene	Ave	1.100	1.102		10.0	10.0	0.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0828	0.0804		38.8	40.0	-2.9	20.0
Toluene	Ave	1.031	1.003		9.73	10.0	-2.7	20.0
trans-1,3-Dichloropropene	Ave	0.1871	0.1766		9.44	10.0	-5.6	20.0
Ethyl methacrylate	Lin1		0.4800		7.78	10.0	-22.2*	20.0
1,1,2-Trichloroethane	Ave	0.1285	0.1139		8.86	10.0	-11.4	20.0
Tetrachloroethene	Ave	1.251	1.090		8.71	10.0	-12.9	20.0
1,3-Dichloropropane	Ave	0.9944	0.8889		8.94	10.0	-10.6	20.0
2-Hexanone	Ave	0.2212	0.2283		41.3	40.0	3.2	20.0
Dibromochloromethane	Ave	0.6510	0.5868		9.01	10.0	-9.9	20.0
1,2-Dibromoethane	Ave	0.4957	0.4359		8.79	10.0	-12.1	20.0
Chlorobenzene	Ave	3.227	2.786	0.3000	8.63	10.0	-13.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.118	1.023		9.15	10.0	-8.5	20.0
Ethylbenzene	Ave	1.783	1.729		9.69	10.0	-3.1	20.0
m,p-Xylene	Ave	2.173	2.089		9.62	10.0	-3.8	20.0
o-Xylene	Ave	1.982	1.991		10.0	10.0	0.4	20.0
Styrene	Ave	2.942	2.932		9.97	10.0	-0.3	20.0
Bromoform	Ave	0.3365	0.2961	0.1000	8.80	10.0	-12.0	20.0
Isopropylbenzene	Ave	3.300	3.411		10.3	10.0	3.3	20.0
Cyclohexanone	Lin1		0.0138		350	400	-12.6	20.0
Bromobenzene	Ave	0.7340	0.6562		8.94	10.0	-10.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.3926	0.3202	0.3000	8.16	10.0	-18.4	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0812		8.09	10.0	-19.1	20.0
1,2,3-Trichloropropane	Ave	0.1210	0.1014		8.38	10.0	-16.2	20.0
N-Propylbenzene	Ave	0.9688	0.9503		9.81	10.0	-1.9	20.0
2-Chlorotoluene	Ave	0.8146	0.7621		9.36	10.0	-6.4	20.0
1,3,5-Trimethylbenzene	Ave	2.777	2.804		10.1	10.0	1.0	20.0
4-Chlorotoluene	Ave	0.8081	0.7320		9.06	10.0	-9.4	20.0
tert-Butylbenzene	Ave	2.327	2.390		10.3	10.0	2.7	20.0
1,2,4-Trimethylbenzene	Ave	2.786	2.779		9.97	10.0	-0.3	20.0
sec-Butylbenzene	Ave	0.8365	0.8453		10.1	10.0	1.1	20.0
1,3-Dichlorobenzene	Ave	1.612	1.420		8.81	10.0	-11.9	20.0
4-Isopropyltoluene	Ave	3.301	3.443		10.4	10.0	4.3	20.0
1,4-Dichlorobenzene	Ave	1.657	1.414		8.53	10.0	-14.7	20.0
n-Butylbenzene	Ave	3.108	3.136		10.1	10.0	0.9	20.0
1,2-Dichlorobenzene	Ave	1.498	1.284		8.57	10.0	-14.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0649	0.0552		8.51	10.0	-14.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429808/17 Calibration Date: 09/17/2018 13:28

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7008.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.143	1.063		9.30	10.0	-7.0	20.0
Hexachlorobutadiene	Ave	0.9277	0.8517		9.18	10.0	-8.2	20.0
Naphthalene	Lin1		1.300		8.49	10.0	-15.1	20.0
1,2,3-Trichlorobenzene	Ave	0.9813	0.9234		9.41	10.0	-5.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2119	0.2091		9.87	10.0	-1.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2148	0.2040		9.49	10.0	-5.1	20.0
Toluene-d8 (Surr)	Ave	3.900	4.008		10.3	10.0	2.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.7259	0.7562		10.4	10.0	4.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7008.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 17-Sep-2018 13:28:30 ALS Bottle#: 25 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:49:44 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 18-Sep-2018 08:44:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	461210	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2348642	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	512671	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	900482	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	93	392889	10.0	9.87	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.893	0.000	94	383257	10.0	9.49	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1643628	10.0	10.3	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	93	544779	10.0	10.4	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	856714	10.0	9.43	
14 Chloromethane	50	1.677	1.677	0.000	99	701691	10.0	9.88	
15 Vinyl chloride	62	1.802	1.802	0.000	98	758485	10.0	10.5	
17 Bromomethane	94	2.096	2.096	0.000	93	507025	10.0	9.90	
18 Chloroethane	64	2.180	2.180	0.000	99	420534	10.0	10.9	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	1140688	10.0	10.1	
20 Trichlorofluoromethane	101	2.431	2.431	0.000	98	1185815	10.0	9.71	
22 Ethyl ether	59	2.724	2.724	0.000	90	216250	10.0	9.38	
24 Acrolein	56	2.878	2.878	0.000	98	144094	59.3	50.7	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	98	519009	10.0	9.42	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	91	571934	10.0	9.08	
27 Acetone	43	3.045	3.045	0.000	98	254079	40.0	45.5	
28 Iodomethane	142	3.157	3.157	0.000	99	883307	10.0	9.47	
30 Carbon disulfide	76	3.241	3.241	0.000	99	1668336	10.0	9.19	
33 3-Chloro-1-propene	41	3.437	3.436	0.000	87	702292	10.0	9.79	
32 Methyl acetate	43	3.437	3.436	0.000	42	241748	20.0	21.4	
35 Methylene Chloride	84	3.618	3.618	0.000	91	422528	10.0	9.07	
37 2-Methyl-2-propanol	59	3.828	3.828	0.000	96	173156	100.0	82.8	
39 Acrylonitrile	53	3.967	3.967	0.000	98	602242	100.0	91.2	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	530143	10.0	9.72	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	98	817023	10.0	9.67	
42 Hexane	57	4.442	4.442	0.000	94	703365	10.0	9.53	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	853181	10.0	9.33	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.763	4.763	0.000	98	614851	20.0	16.7	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	90	1006562	10.0	9.67	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	84	488150	10.0	9.80	
52 2-Butanone (MEK)	43	5.741	5.741	0.000	100	235956	40.0	37.6	
56 Chlorobromomethane	128	6.064	6.071	-0.007	95	165593	10.0	9.40	
57 Tetrahydrofuran	42	6.099	6.099	0.000	86	57824	20.0	18.5	
59 Chloroform	83	6.242	6.242	0.000	94	778930	10.0	8.98	
60 1,1,1-Trichloroethane	97	6.435	6.435	0.000	98	913395	10.0	9.24	
61 Cyclohexane	56	6.507	6.507	0.000	93	947351	10.0	10.2	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	818115	10.0	9.08	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	94	662538	10.0	10.0	
64 Benzene	78	6.893	6.893	0.000	97	1753051	10.0	9.54	
66 Isobutyl alcohol	41	6.929	6.929	0.000	92	114456	250.0	215.2	
65 1,2-Dichloroethane	62	6.993	6.986	0.007	99	434715	10.0	9.00	
67 n-Heptane	43	7.315	7.315	0.000	91	805262	10.0	9.05	
69 Trichloroethene	95	7.715	7.722	-0.007	97	456635	10.0	9.10	
71 Methylcyclohexane	55	7.965	7.965	0.000	90	776707	10.0	9.53	
72 1,2-Dichloropropane	63	8.016	8.016	0.001	92	384672	10.0	9.47	
75 Dibromomethane	93	8.108	8.108	0.000	94	150807	10.0	8.77	
74 1,4-Dioxane	88	8.116	8.116	0.000	30	28222	200.0	176.8	M
76 Dichlorobromomethane	83	8.316	8.316	0.000	99	446378	10.0	9.16	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	91	42359	10.0	9.02	
79 cis-1,3-Dichloropropene	75	8.781	8.781	0.000	92	452039	10.0	10.0	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	604141	40.0	38.8	
82 Toluene	91	9.110	9.109	0.001	98	1885298	10.0	9.73	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	331775	10.0	9.44	
84 Ethyl methacrylate	69	9.446	9.446	0.000	89	196867	10.0	7.78	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	94	214026	10.0	8.86	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	446845	10.0	8.71	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	364553	10.0	8.94	
88 2-Hexanone	43	9.789	9.789	0.000	97	374603	40.0	41.3	
89 Chlorodibromomethane	129	9.925	9.925	0.000	90	240686	10.0	9.01	
90 Ethylene Dibromide	107	10.025	10.025	0.000	99	178787	10.0	8.79	
92 Chlorobenzene	112	10.504	10.504	0.000	93	1142737	10.0	8.63	
93 1,1,1,2-Tetrachloroethane	131	10.590	10.590	0.000	91	419722	10.0	9.15	
94 Ethylbenzene	106	10.597	10.597	0.000	99	708982	10.0	9.69	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	856934	10.0	9.62	
96 o-Xylene	106	11.083	11.083	0.000	97	816385	10.0	10.0	
97 Styrene	104	11.104	11.104	0.000	95	1202514	10.0	9.97	
98 Bromoform	173	11.269	11.269	0.000	96	121454	10.0	8.80	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	2456957	10.0	10.3	
100 Cyclohexanone	55	11.512	11.512	0.000	93	226383	400.0	349.7	
103 Bromobenzene	156	11.712	11.712	0.000	94	472694	10.0	8.94	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	97	230633	10.0	8.16	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	80	58497	10.0	8.09	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	73051	10.0	8.38	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	684548	10.0	9.81	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	548985	10.0	9.36	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	94	2020004	10.0	10.1	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	527354	10.0	9.06	
110 tert-Butylbenzene	119	12.256	12.256	0.000	94	1721812	10.0	10.3	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	98	2001731	10.0	9.97	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.442	12.442	0.000	95	608969	10.0	10.1	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	1023231	10.0	8.81	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	2479978	10.0	10.4	
115 1,4-Dichlorobenzene	146	12.613	12.606	0.007	94	1018343	10.0	8.53	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	2259137	10.0	10.1	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	924981	10.0	8.57	
119 1,2-Dibromo-3-Chloropropan	157	13.385	13.378	0.007	83	39772	10.0	8.51	
121 1,2,4-Trichlorobenzene	180	13.893	13.893	0.000	94	765545	10.0	9.30	
122 Hexachlorobutadiene	225	13.979	13.979	0.000	96	613540	10.0	9.18	
123 Naphthalene	128	14.072	14.065	0.007	97	936258	10.0	8.49	
124 1,2,3-Trichlorobenzene	180	14.215	14.215	0.000	95	665193	10.0	9.41	
S 137 1,2-Dichloroethene, Total	96				0		20.0	19.5	
S 143 Xylenes, Total	106				0		20.0	19.7	
S 142 Trihalomethanes, Total	1				0		40.0	36.0	
S 140 1,3-Dichloropropene, Total	1				0		20.0	19.5	
S 144 1,2-Dichloroethene, Total	1				0		20.0	19.5	
S 138 Xylenes, Total (URS)	1				0		20.0	19.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-MegaMain B_00001	Amount Added:	4.00	Units: uL

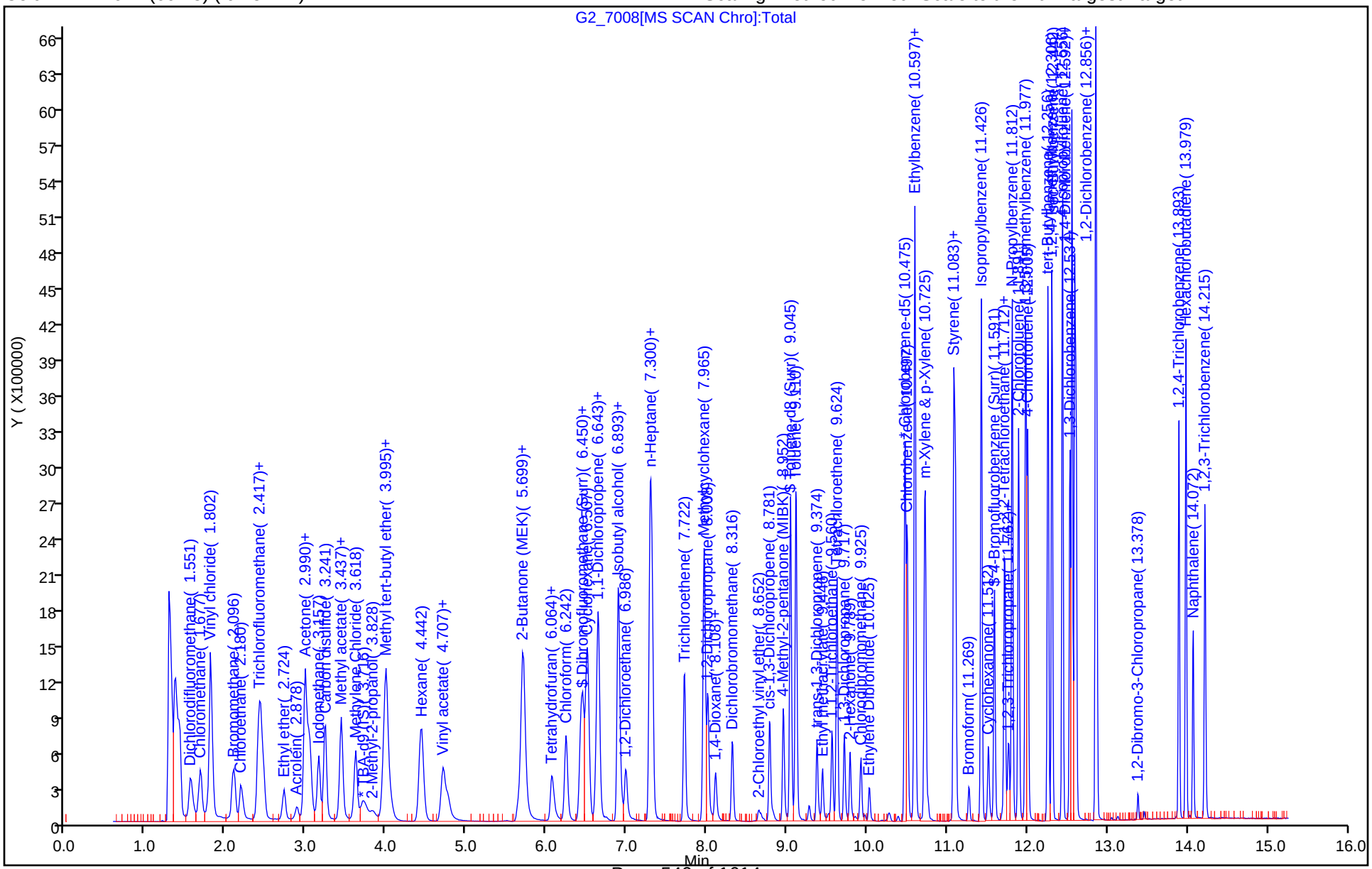
Report Date: 18-Sep-2018 08:49:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7008.D

Injection Date:	17-Sep-2018 13:28:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

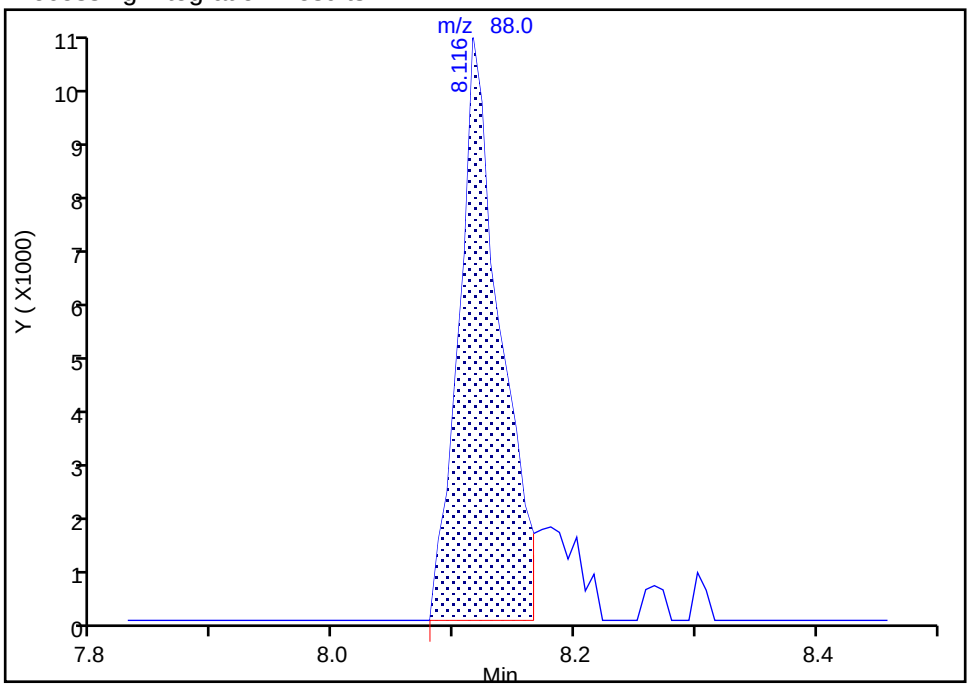
Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7008.D
Injection Date: 17-Sep-2018 13:28:30 Instrument ID: VMS_G2
Lims ID: icv
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 25 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

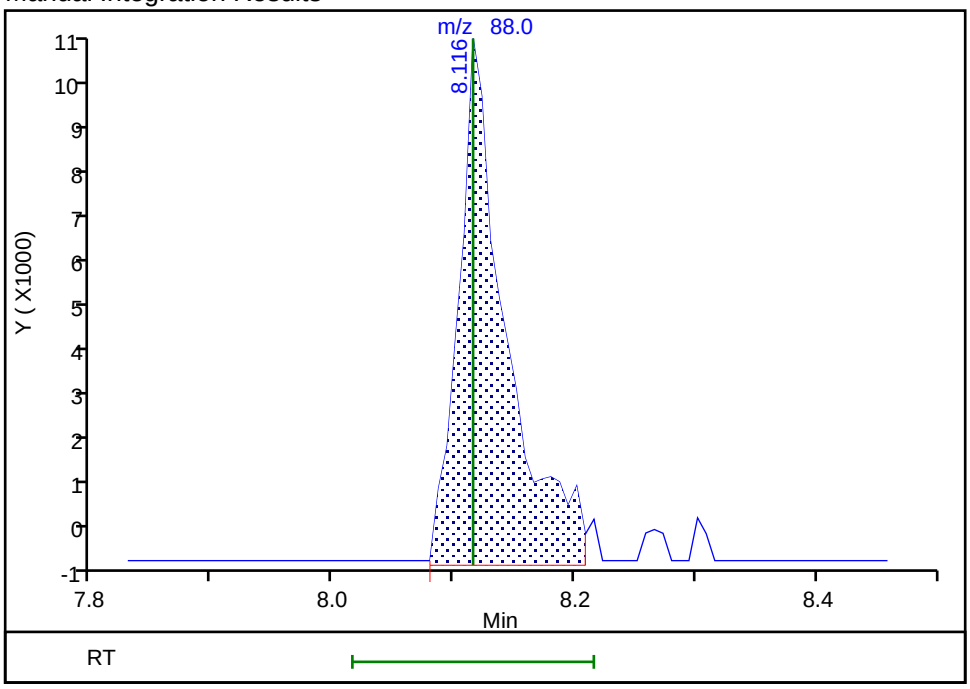
Processing Integration Results

RT: 8.12
Area: 24138
Amount: 153.1913
Amount Units: ug/l



Manual Integration Results

RT: 8.12
Area: 28222
Amount: 176.8332
Amount Units: ug/l



Reviewer: ilczyszynd, 18-Sep-2018 08:44:33
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430312/2 Calibration Date: 09/20/2018 10:05

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7085.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4834	0.5197		10.8	10.0	7.5	20.0
Chloromethane	Ave	0.3780	0.3949	0.1000	10.4	10.0	4.5	20.0
Vinyl chloride	Ave	0.3831	0.4200		11.0	10.0	9.6	20.0
Bromomethane	Ave	0.2725	0.2724		10.0	10.0	-0.0	20.0
Chloroethane	Lin2		0.2309		11.2	10.0	12.4	20.0
Dichlorofluoromethane	Ave	0.6014	0.5812		9.66	10.0	-3.4	20.0
Trichlorofluoromethane	Ave	0.6499	0.6222		9.57	10.0	-4.3	20.0
Ethyl ether	Ave	0.1227	0.1216		9.92	10.0	-0.8	20.0
Acrolein	Ave	0.0151	0.0137		53.7	59.3	-9.3	20.0
1,1-Dichloroethene	Ave	0.2932	0.2883		9.83	10.0	-1.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3352	0.3222		9.61	10.0	-3.9	20.0
Acetone	Ave	0.0297	0.0302		40.6	40.0	1.4	20.0
Methyl iodide	Ave	0.4964	0.5035		10.1	10.0	1.4	20.0
Carbon disulfide	Ave	0.9666	1.011		10.5	10.0	4.6	20.0
3-Chloro-1-propene	Lin2		0.4111		10.8	10.0	7.9	20.0
Methyl acetate	Lin1		0.0773		25.9	20.0	29.6*	20.0
Methylene Chloride	Ave	0.2480	0.2422		9.77	10.0	-2.3	20.0
t-Butyl alcohol	Ave	0.0111	0.0094		84.5	100	-15.5	20.0
Acrylonitrile	Ave	0.0352	0.0326		92.8	100	-7.2	20.0
trans-1,2-Dichloroethene	Ave	0.2904	0.2884		9.93	10.0	-0.7	20.0
Methyl tert-butyl ether	Ave	0.4499	0.4625		10.3	10.0	2.8	20.0
Hexane	Ave	1.799	1.964		10.9	10.0	9.2	20.0
1,1-Dichloroethane	Ave	0.4865	0.4809	0.1000	9.89	10.0	-1.1	20.0
Vinyl acetate	Lin1		0.1802		18.3	20.0	-8.4	20.0
2,2-Dichloropropane	Lin2		0.5702		10.3	10.0	3.5	20.0
cis-1,2-Dichloroethene	Ave	0.2651	0.2715		10.2	10.0	2.4	20.0
2-Butanone (MEK)	Lin1		0.0307		36.8	40.0	-8.1	20.0
Bromochloromethane	Ave	0.0938	0.0940		10.0	10.0	0.2	20.0
Tetrahydrofuran	Qua		0.0178		21.0	20.0	5.1	20.0
Chloroform	Ave	0.4616	0.4493		9.73	10.0	-2.7	20.0
1,1,1-Trichloroethane	Ave	0.5264	0.5129		9.74	10.0	-2.6	20.0
Cyclohexane	Ave	0.4919	0.5287		10.7	10.0	7.5	20.0
Carbon tetrachloride	Ave	0.4793	0.4599		9.60	10.0	-4.0	20.0
1,1-Dichloropropene	Ave	0.3525	0.3786		10.7	10.0	7.4	20.0
Benzene	Ave	0.9778	1.003		10.3	10.0	2.5	20.0
Isobutyl alcohol	Ave	0.0028	0.0024		211	250	-15.7	20.0
1,2-Dichloroethane	Ave	0.2569	0.2515		9.79	10.0	-2.1	20.0
Trichloroethene	Ave	0.2670	0.2641		9.89	10.0	-1.1	20.0
Methylcyclohexane	Ave	0.4336	0.4520		10.4	10.0	4.3	20.0
1,2-Dichloropropane	Ave	0.2163	0.2099		9.71	10.0	-2.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430312/2 Calibration Date: 09/20/2018 10:05

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7085.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin1		0.0007		163	200	-18.5	20.0
Dibromomethane	Ave	0.0915	0.0838		9.16	10.0	-8.4	20.0
Bromodichloromethane	Ave	0.2595	0.2547		9.82	10.0	-1.8	20.0
2-Chloroethyl vinyl ether	Qua		0.0235		9.34	10.0	-6.6	20.0
cis-1,3-Dichloropropene	Ave	1.100	1.167		10.6	10.0	6.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0828	0.0774		37.4	40.0	-6.5	20.0
Toluene	Ave	1.031	1.070		10.4	10.0	3.7	20.0
trans-1,3-Dichloropropene	Ave	0.1871	0.1947		10.4	10.0	4.0	20.0
Ethyl methacrylate	Lin1		0.5402		8.67	10.0	-13.3	20.0
1,1,2-Trichloroethane	Ave	0.1285	0.1174		9.14	10.0	-8.6	20.0
Tetrachloroethene	Ave	1.251	1.195		9.55	10.0	-4.5	20.0
1,3-Dichloropropane	Ave	0.9944	0.9471		9.52	10.0	-4.8	20.0
2-Hexanone	Ave	0.2212	0.2039		36.9	40.0	-7.8	20.0
Dibromochloromethane	Ave	0.6510	0.6302		9.68	10.0	-3.2	20.0
1,2-Dibromoethane	Ave	0.4957	0.4675		9.43	10.0	-5.7	20.0
Chlorobenzene	Ave	3.227	3.226	0.3000	10.0	10.0	-0.0	20.0
1,1,1,2-Tetrachloroethane	Ave	1.118	1.090		9.74	10.0	-2.6	20.0
Ethylbenzene	Ave	1.783	1.847		10.4	10.0	3.6	20.0
m,p-Xylene	Ave	2.173	2.237		10.3	10.0	2.9	20.0
o-Xylene	Ave	1.982	2.131		10.7	10.0	7.5	20.0
Styrene	Ave	2.942	3.147		10.7	10.0	7.0	20.0
Bromoform	Ave	0.3365	0.3036	0.1000	9.02	10.0	-9.8	20.0
Isopropylbenzene	Ave	3.300	3.649		11.1	10.0	10.6	20.0
Cyclohexanone	Lin1		0.0128		326	400	-18.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.3926	0.3386	0.3000	8.63	10.0	-13.7	20.0
Bromobenzene	Ave	0.7340	0.7107		9.68	10.0	-3.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0783		7.81	10.0	-21.9*	20.0
1,2,3-Trichloropropane	Ave	0.1210	0.1119		9.24	10.0	-7.6	20.0
N-Propylbenzene	Ave	0.9688	1.018		10.5	10.0	5.0	20.0
2-Chlorotoluene	Ave	0.8146	0.8368		10.3	10.0	2.7	20.0
1,3,5-Trimethylbenzene	Ave	2.777	3.003		10.8	10.0	8.1	20.0
4-Chlorotoluene	Ave	0.8081	0.8126		10.1	10.0	0.5	20.0
tert-Butylbenzene	Ave	2.327	2.576		11.1	10.0	10.7	20.0
1,2,4-Trimethylbenzene	Ave	2.786	3.015		10.8	10.0	8.2	20.0
sec-Butylbenzene	Ave	0.8365	0.8676		10.4	10.0	3.7	20.0
1,3-Dichlorobenzene	Ave	1.612	1.545		9.58	10.0	-4.2	20.0
4-Isopropyltoluene	Ave	3.301	3.587		10.9	10.0	8.7	20.0
1,4-Dichlorobenzene	Ave	1.657	1.519		9.17	10.0	-8.3	20.0
n-Butylbenzene	Ave	3.108	3.297		10.6	10.0	6.1	20.0
1,2-Dichlorobenzene	Ave	1.498	1.373		9.17	10.0	-8.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0649	0.0549		8.46	10.0	-15.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430312/2 Calibration Date: 09/20/2018 10:05

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7085.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.143	1.105		9.67	10.0	-3.3	20.0
Hexachlorobutadiene	Ave	0.9277	0.8743		9.42	10.0	-5.8	20.0
Naphthalene	Lin1		1.325		8.65	10.0	-13.5	20.0
1,2,3-Trichlorobenzene	Ave	0.9813	0.9316		9.49	10.0	-5.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2119	0.2040		9.62	10.0	-3.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2148	0.1988		9.25	10.0	-7.5	20.0
Toluene-d8 (Surr)	Ave	3.900	3.998		10.3	10.0	2.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.7259	0.7411		10.2	10.0	2.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7085.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Sep-2018 10:05:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:48 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:14:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.702	0.000	0	440283	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.286	0.000	98	2422395	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	521324	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	94	910843	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	94	395327	10.0	9.62	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.886	6.886	0.000	97	385210	10.0	9.25	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1667558	10.0	10.3	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	93	539995	10.0	10.2	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	1007109	10.0	10.8	
14 Chloromethane	50	1.677	1.677	0.000	99	765224	10.0	10.4	
15 Vinyl chloride	62	1.802	1.802	0.000	98	813830	10.0	11.0	
17 Bromomethane	94	2.096	2.096	0.000	92	527851	10.0	10.0	
18 Chloroethane	64	2.180	2.180	0.000	99	447492	10.0	11.2	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	1126314	10.0	9.66	
20 Trichlorofluoromethane	101	2.445	2.445	0.000	99	1205667	10.0	9.57	
22 Ethyl ether	59	2.724	2.724	0.000	91	235706	10.0	9.92	
24 Acrolein	56	2.878	2.878	0.000	98	157393	59.3	53.7	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	98	558726	10.0	9.83	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	92	624409	10.0	9.61	
27 Acetone	43	3.045	3.045	0.000	98	233818	40.0	40.6	
28 Iodomethane	142	3.157	3.157	0.000	99	975660	10.0	10.1	
30 Carbon disulfide	76	3.227	3.227	0.000	100	1959622	10.0	10.5	
32 Methyl acetate	43	3.436	3.436	0.000	45	299688	20.0	25.9	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	86	796666	10.0	10.8	
35 Methylene Chloride	84	3.618	3.618	0.000	92	469427	10.0	9.77	
37 2-Methyl-2-propanol	59	3.828	3.828	0.000	96	182339	100.0	84.5	
39 Acrylonitrile	53	3.953	3.953	0.000	96	632062	100.0	92.8	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	558912	10.0	9.93	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	98	896335	10.0	10.3	
42 Hexane	57	4.428	4.428	0.000	94	819295	10.0	10.9	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	931962	10.0	9.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
46 Vinyl acetate	43	4.763	4.763	0.000	98	698584	20.0	18.3	
50 2,2-Dichloropropane	77	5.699	5.699	0.000	91	1104990	10.0	10.3	
51 cis-1,2-Dichloroethene	96	5.699	5.699	0.000	85	526075	10.0	10.2	
52 2-Butanone (MEK)	43	5.727	5.727	0.000	100	237879	40.0	36.8	
56 Chlorobromomethane	128	6.056	6.056	0.000	95	182115	10.0	10.0	
57 Tetrahydrofuran	42	6.092	6.092	0.000	83	68780	20.0	21.0	
59 Chloroform	83	6.242	6.242	0.000	94	870788	10.0	9.73	
60 1,1,1-Trichloroethane	97	6.428	6.428	0.000	98	994009	10.0	9.74	
61 Cyclohexane	56	6.507	6.507	0.000	93	1024480	10.0	10.7	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	891327	10.0	9.60	
63 1,1-Dichloropropene	75	6.643	6.643	0.000	92	733621	10.0	10.7	
64 Benzene	78	6.893	6.893	0.000	98	1942967	10.0	10.3	
66 Isobutyl alcohol	41	6.929	6.929	0.000	91	115589	250.0	210.7	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	99	487333	10.0	9.79	
67 n-Heptane	43	7.315	7.315	0.000	90	893324	10.0	9.74	
69 Trichloroethene	95	7.722	7.722	0.000	97	511886	10.0	9.89	
71 Methylcyclohexane	55	7.965	7.965	0.000	92	875998	10.0	10.4	
72 1,2-Dichloropropane	63	8.008	8.008	0.000	94	406834	10.0	9.71	
75 Dibromomethane	93	8.108	8.108	0.000	92	162473	10.0	9.16	
74 1,4-Dioxane	88	8.108	8.108	0.000	31	26649	200.0	163.0	
76 Dichlorobromomethane	83	8.316	8.316	0.000	99	493669	10.0	9.82	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	94	45462	10.0	9.34	
79 cis-1,3-Dichloropropene	75	8.781	8.781	0.000	92	486726	10.0	10.6	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	599780	40.0	37.4	
82 Toluene	91	9.109	9.109	0.000	98	2073256	10.0	10.4	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	99	377325	10.0	10.4	
84 Ethyl methacrylate	69	9.446	9.446	0.000	89	225307	10.0	8.67	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	94	227570	10.0	9.14	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	498328	10.0	9.55	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	94	394986	10.0	9.52	
88 2-Hexanone	43	9.789	9.789	0.000	97	340099	40.0	36.9	
89 Chlorodibromomethane	129	9.925	9.925	0.000	90	262838	10.0	9.68	
90 Ethylene Dibromide	107	10.025	10.025	0.000	99	194984	10.0	9.43	
92 Chlorobenzene	112	10.504	10.504	0.000	94	1345625	10.0	10.0	
93 1,1,1,2-Tetrachloroethane	131	10.590	10.590	0.000	91	454519	10.0	9.74	
94 Ethylbenzene	106	10.597	10.597	0.000	99	770321	10.0	10.4	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	932966	10.0	10.3	
96 o-Xylene	106	11.083	11.083	0.000	97	888706	10.0	10.7	
97 Styrene	104	11.104	11.104	0.000	95	1312679	10.0	10.7	
98 Bromoform	173	11.276	11.276	0.000	96	126612	10.0	9.02	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	2658862	10.0	11.1	
100 Cyclohexanone	55	11.512	11.512	0.000	93	213567	400.0	325.9	
103 Bromobenzene	156	11.719	11.719	0.000	94	517831	10.0	9.68	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	97	246727	10.0	8.63	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	81	57042	10.0	7.81	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	87	81518	10.0	9.24	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	741501	10.0	10.5	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	609740	10.0	10.3	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	94	2188539	10.0	10.8	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	592101	10.0	10.1	
110 tert-Butylbenzene	119	12.256	12.256	0.000	94	1876739	10.0	11.1	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	98	2196733	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
112 sec-Butylbenzene	134	12.441	12.441	0.000	95	632195	10.0	10.4	
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	1125559	10.0	9.58	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	2613746	10.0	10.9	
115 1,4-Dichlorobenzene	146	12.613	12.613	0.000	95	1106788	10.0	9.17	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	2402591	10.0	10.6	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	1000759	10.0	9.17	
119 1,2-Dibromo-3-Chloropropan	157	13.371	13.371	0.000	83	40000	10.0	8.46	
121 1,2,4-Trichlorobenzene	180	13.879	13.879	0.000	94	804976	10.0	9.67	
122 Hexachlorobutadiene	225	13.964	13.964	0.000	96	637080	10.0	9.42	
123 Naphthalene	128	14.057	14.057	0.000	97	965331	10.0	8.65	
124 1,2,3-Trichlorobenzene	180	14.200	14.200	0.000	95	678860	10.0	9.49	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.2	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.2	
S 138 Xylenes, Total (URS)	1				0		20.0	21.0	
S 140 1,3-Dichloropropene, Total	1				0		20.0	21.0	
S 143 Xylenes, Total	106				0		20.0	21.0	
S 142 Trihalomethanes, Total	1				0		40.0	38.3	

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

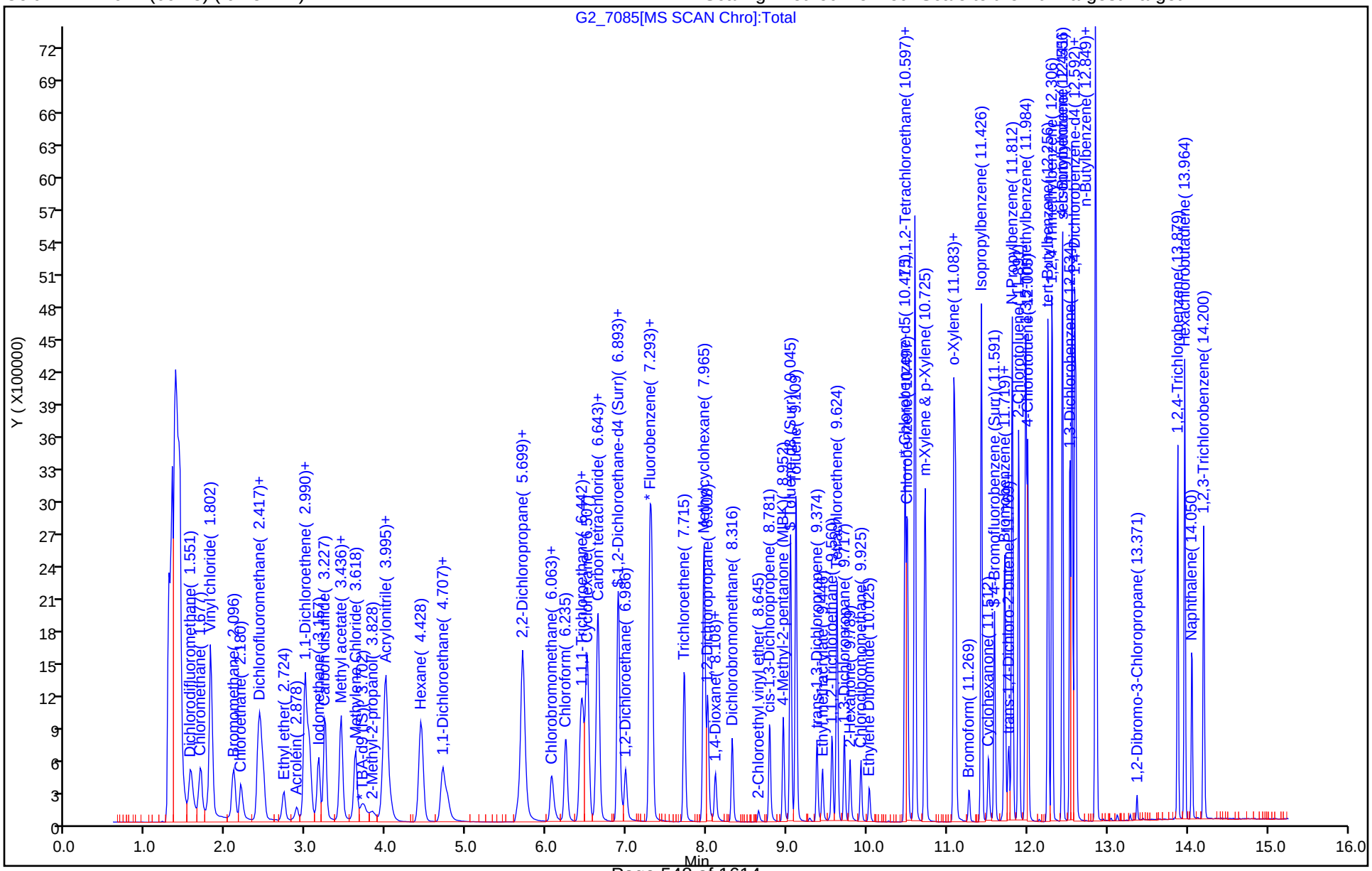
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7085.D

Injection Date:	20-Sep-2018 10:05:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430312/3 Calibration Date: 09/20/2018 10:26

Instrument ID: VMS_G2 Calib Start Date: 07/21/2018 16:15

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 07/21/2018 17:57

Lab File ID: G2_7086.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Lin		0.0007		111	250	-55.7*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7086.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Sep-2018 10:26:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub130

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:50 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:29:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	533344	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	2440959	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	537026	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	860002	12.5	12.5	
16 Ethylene oxide	43	2.054	2.054	0.000	100	492092	1000.0	1218.3	
21 Ethanol	45	2.640	2.640	0.000	95	125090	600.0	643.5	
23 Propene oxide	58	2.794	2.794	0.000	95	2358183	1000.0	1127.3	
29 Isopropyl alcohol	45	3.269	3.269	0.000	95	114872	100.0	115.2	
31 Acetonitrile	41	3.409	3.409	0.000	98	178667	100.0	98.8	
47 Isopropyl ether	87	4.833	4.833	0.000	90	332624	10.0	9.19	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	87	801305	10.0	9.29	
49 Tert-butyl ethyl ether	59	5.476	5.476	0.000	96	940399	10.0	9.18	
53 Ethyl acetate	43	5.825	5.825	0.000	99	193165	20.0	18.3	
54 Propionitrile	54	5.839	5.839	0.000	81	151476	100.0	94.9	
58 Methacrylonitrile	41	6.049	6.049	0.000	93	962565	100.0	104.8	
68 Tert-amyl methyl ether	73	7.115	7.115	0.000	97	819644	10.0	10.4	
73 n-Butanol	56	7.737	7.737	0.000	94	33125	250.0	110.7	
77 Methyl methacrylate	100	8.130	8.130	0.000	92	79816	20.0	17.4	
80 2-Nitropropane	41	8.559	8.559	0.000	94	55615	20.0	27.8	
13 Tetrahydrothiophene	60	9.882	9.882	0.000	90	15513	20.0	13.3	
101 cis-1,4-Dichloro-2-butene	53	11.491	11.491	0.000	95	49899	20.0	16.8	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	99	1659543	10.0	9.48	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	98	884036	10.0	9.90	

Reagents:

MV-Supp A_00032 Amount Added: 5.00 Units: uL
MV-568718-D_00010 Amount Added: 1.00 Units: uL

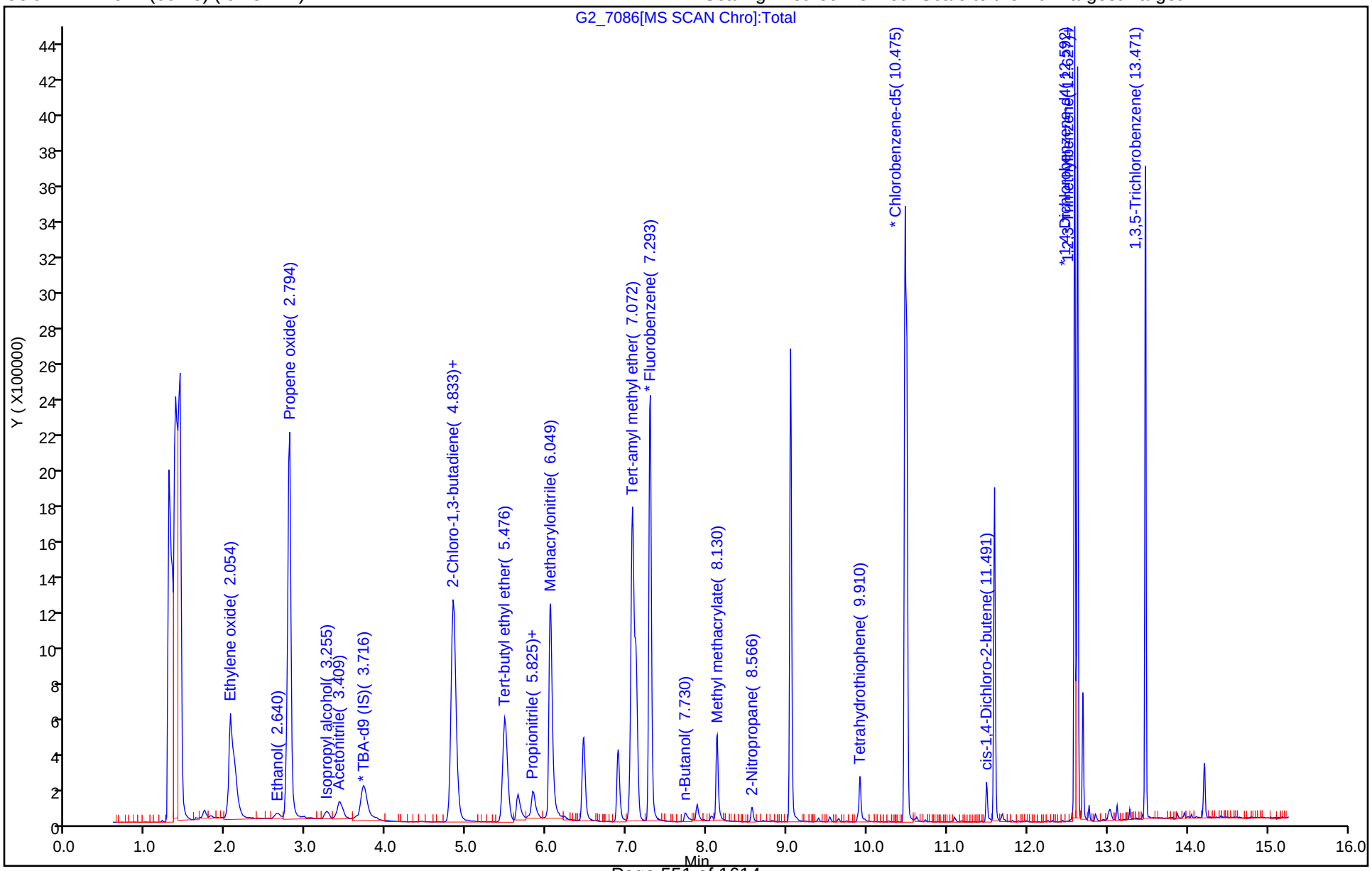
Report Date: 21-Sep-2018 07:06:51 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7086.D

Injection Date:	20-Sep-2018 10:26:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430312/3 Calibration Date: 09/20/2018 10:26

Instrument ID: VMS_G2 Calib Start Date: 09/07/2018 16:13

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/07/2018 17:57

Lab File ID: G2_7086.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Lin2		0.0025		1220	1000	21.8*	20.0
Ethanol	Lin2		0.0011		644	600	7.3	20.0
Isopropyl alcohol	Lin1		0.0059		115	100	15.2	20.0
Acetonitrile	Lin2		0.0092		98.8	100	-1.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4416	0.4103		9.29	10.0	-7.1	20.0
Diisopropyl ether	Ave	0.1853	0.1703		9.19	10.0	-8.1	20.0
Tert-butyl ethyl ether	Ave	0.5245	0.4816		9.18	10.0	-8.2	20.0
Ethyl acetate	Ave	0.0541	0.0495		18.3	20.0	-8.6	20.0
Propionitrile	Lin		0.0078		94.9	100	-5.1	20.0
Methacrylonitrile	Ave	0.0470	0.0493		105	100	4.8	20.0
Tert-amyl methyl ether	Ave	0.4036	0.4197		10.4	10.0	4.0	20.0
Methyl methacrylate	Lin2		0.0204		17.4	20.0	-12.9	20.0
2-Nitropropane	Ave	0.0103	0.0142		27.8	20.0	38.8*	20.0
cis-1,4-Dichloro-2-butene	Lin2		0.0363		16.8	20.0	-16.2	20.0
1,2,3-Trimethylbenzene	Ave	2.545	2.412		9.48	10.0	-5.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7086.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Sep-2018 10:26:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub130

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:50 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:29:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	533344	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	2440959	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	537026	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	860002	12.5	12.5	
16 Ethylene oxide	43	2.054	2.054	0.000	100	492092	1000.0	1218.3	
21 Ethanol	45	2.640	2.640	0.000	95	125090	600.0	643.5	
23 Propene oxide	58	2.794	2.794	0.000	95	2358183	1000.0	1127.3	
29 Isopropyl alcohol	45	3.269	3.269	0.000	95	114872	100.0	115.2	
31 Acetonitrile	41	3.409	3.409	0.000	98	178667	100.0	98.8	
47 Isopropyl ether	87	4.833	4.833	0.000	90	332624	10.0	9.19	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	87	801305	10.0	9.29	
49 Tert-butyl ethyl ether	59	5.476	5.476	0.000	96	940399	10.0	9.18	
53 Ethyl acetate	43	5.825	5.825	0.000	99	193165	20.0	18.3	
54 Propionitrile	54	5.839	5.839	0.000	81	151476	100.0	94.9	
58 Methacrylonitrile	41	6.049	6.049	0.000	93	962565	100.0	104.8	
68 Tert-amyl methyl ether	73	7.115	7.115	0.000	97	819644	10.0	10.4	
73 n-Butanol	56	7.737	7.737	0.000	94	33125	250.0	110.7	
77 Methyl methacrylate	100	8.130	8.130	0.000	92	79816	20.0	17.4	
80 2-Nitropropane	41	8.559	8.559	0.000	94	55615	20.0	27.8	
13 Tetrahydrothiophene	60	9.882	9.882	0.000	90	15513	20.0	13.3	
101 cis-1,4-Dichloro-2-butene	53	11.491	11.491	0.000	95	49899	20.0	16.8	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	99	1659543	10.0	9.48	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	98	884036	10.0	9.90	

Reagents:

MV-Supp A_00032 Amount Added: 5.00 Units: uL
MV-568718-D_00010 Amount Added: 1.00 Units: uL

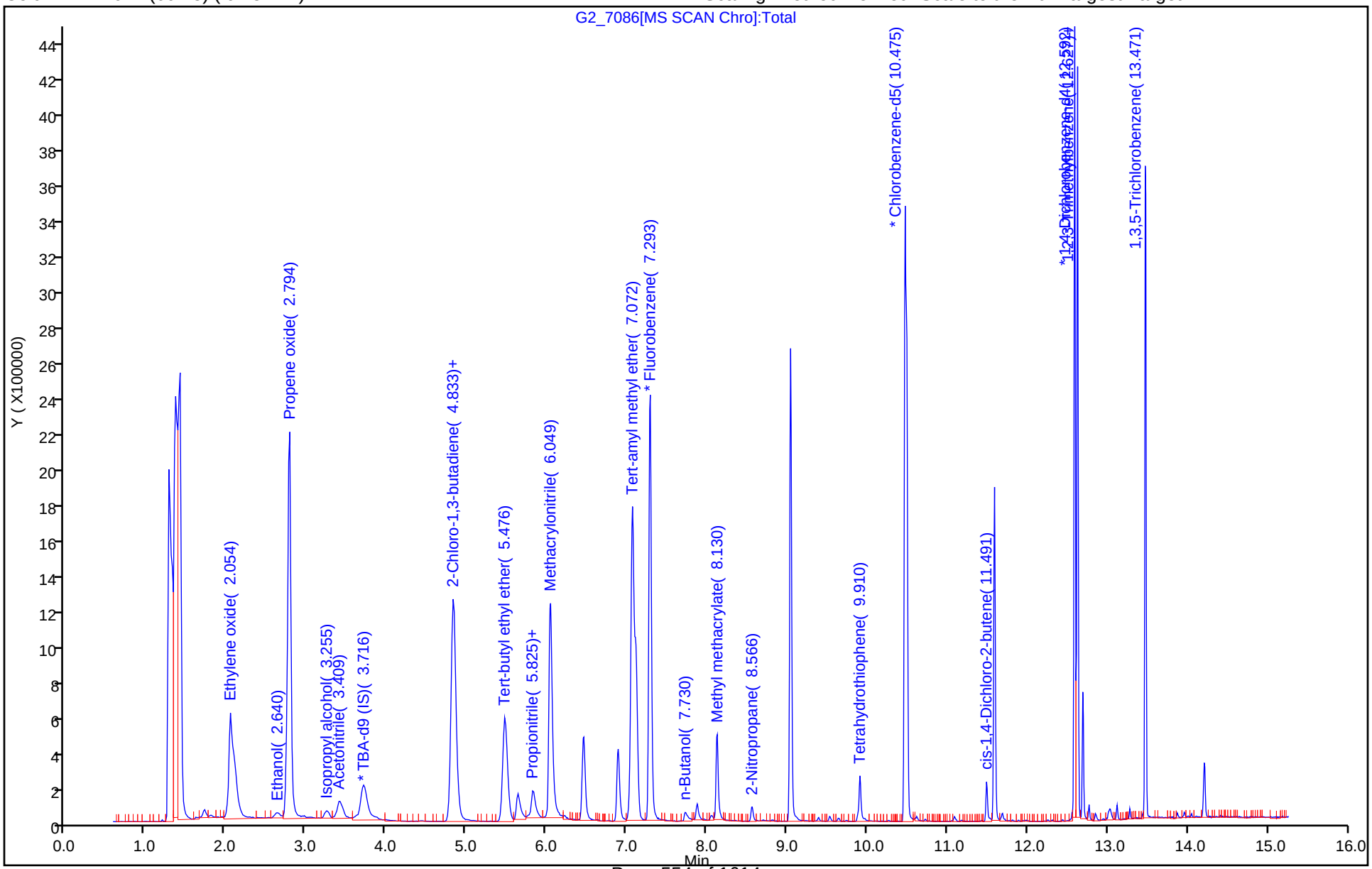
Report Date: 21-Sep-2018 07:06:51 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7086.D

Injection Date:	20-Sep-2018 10:26:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430312/33 Calibration Date: 09/20/2018 20:26

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7114.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4834	0.5616		11.6	10.0	16.2	50.0
Chloromethane	Ave	0.3780	0.4165	0.1000	11.0	10.0	10.2	50.0
Vinyl chloride	Ave	0.3831	0.4320		11.3	10.0	12.8	50.0
Bromomethane	Ave	0.2725	0.2957		10.9	10.0	8.5	50.0
Chloroethane	Lin2		0.2529		12.3	10.0	23.4	50.0
Dichlorofluoromethane	Ave	0.6014	0.6406		10.7	10.0	6.5	50.0
Trichlorofluoromethane	Ave	0.6499	0.7130		11.0	10.0	9.7	50.0
Ethyl ether	Ave	0.1227	0.1110		9.05	10.0	-9.5	50.0
Acrolein	Ave	0.0151	0.0122		47.9	59.3	-19.1	50.0
1,1-Dichloroethene	Ave	0.2932	0.3004		10.2	10.0	2.5	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3352	0.3663		10.9	10.0	9.3	50.0
Acetone	Ave	0.0297	0.0309		41.6	40.0	3.9	50.0
Methyl iodide	Ave	0.4964	0.5354		10.8	10.0	7.9	50.0
Carbon disulfide	Ave	0.9666	1.095		11.3	10.0	13.3	50.0
3-Chloro-1-propene	Lin2		0.4143		10.9	10.0	8.7	50.0
Methyl acetate	Lin1		0.0739		24.8	20.0	23.8	50.0
Methylene Chloride	Ave	0.2480	0.2613		10.5	10.0	5.4	50.0
t-Butyl alcohol	Ave	0.0111	0.0091		81.7	100	-18.3	50.0
Acrylonitrile	Ave	0.0352	0.0318		90.3	100	-9.7	50.0
trans-1,2-Dichloroethene	Ave	0.2904	0.3037		10.5	10.0	4.6	50.0
Methyl tert-butyl ether	Ave	0.4499	0.4270		9.49	10.0	-5.1	50.0
Hexane	Ave	1.799	1.753		9.74	10.0	-2.6	50.0
1,1-Dichloroethane	Ave	0.4865	0.4970	0.1000	10.2	10.0	2.2	50.0
Vinyl acetate	Lin1		0.1293		13.5	20.0	-32.4	50.0
2,2-Dichloropropane	Lin2		0.5425		9.80	10.0	-2.0	50.0
cis-1,2-Dichloroethene	Ave	0.2651	0.2630		9.92	10.0	-0.8	50.0
2-Butanone (MEK)	Lin1		0.0266		31.8	40.0	-20.4	50.0
Bromochloromethane	Ave	0.0938	0.0961		10.3	10.0	2.5	50.0
Tetrahydrofuran	Qua		0.0125		15.4	20.0	-22.8	50.0
Chloroform	Ave	0.4616	0.4688		10.2	10.0	1.6	50.0
1,1,1-Trichloroethane	Ave	0.5264	0.5574		10.6	10.0	5.9	50.0
Cyclohexane	Ave	0.4919	0.5246		10.7	10.0	6.6	50.0
Carbon tetrachloride	Ave	0.4793	0.5229		10.9	10.0	9.1	50.0
1,1-Dichloropropene	Ave	0.3525	0.3614		10.3	10.0	2.5	50.0
Benzene	Ave	0.9778	1.023		10.5	10.0	4.6	50.0
Isobutyl alcohol	Ave	0.0028	0.0023		199	250	-20.3	50.0
1,2-Dichloroethane	Ave	0.2569	0.2527		9.83	10.0	-1.7	50.0
Trichloroethene	Ave	0.2670	0.2579		9.66	10.0	-3.4	50.0
Methylcyclohexane	Ave	0.4336	0.4672		10.8	10.0	7.8	50.0
1,2-Dichloropropane	Ave	0.2163	0.2170		10.0	10.0	0.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430312/33 Calibration Date: 09/20/2018 20:26

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7114.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.0915	0.0865		9.46	10.0	-5.4	50.0
1,4-Dioxane	Lin1		0.0006		154	200	-23.1	50.0
Bromodichloromethane	Ave	0.2595	0.2619		10.1	10.0	0.9	50.0
2-Chloroethyl vinyl ether	Qua		0.0181		7.43	10.0	-25.7	50.0
cis-1,3-Dichloropropene	Ave	1.100	1.013		9.21	10.0	-7.9	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0828	0.0700		33.8	40.0	-15.4	50.0
Toluene	Ave	1.031	1.084		10.5	10.0	5.1	50.0
trans-1,3-Dichloropropene	Ave	0.1871	0.1685		9.00	10.0	-10.0	50.0
Ethyl methacrylate	Lin1		0.4423		7.22	10.0	-27.8	50.0
1,1,2-Trichloroethane	Ave	0.1285	0.1162		9.04	10.0	-9.6	50.0
Tetrachloroethene	Ave	1.251	1.232		9.85	10.0	-1.5	50.0
1,3-Dichloropropane	Ave	0.9944	0.9132		9.18	10.0	-8.2	50.0
2-Hexanone	Ave	0.2212	0.1765		31.9	40.0	-20.2	50.0
Dibromochloromethane	Ave	0.6510	0.6519		10.0	10.0	0.1	50.0
1,2-Dibromoethane	Ave	0.4957	0.4530		9.14	10.0	-8.6	50.0
Chlorobenzene	Ave	3.227	3.056	0.3000	9.47	10.0	-5.3	50.0
1,1,1,2-Tetrachloroethane	Ave	1.118	1.183		10.6	10.0	5.8	50.0
Ethylbenzene	Ave	1.783	1.861		10.4	10.0	4.4	50.0
m,p-Xylene	Ave	2.173	2.248		10.3	10.0	3.5	50.0
o-Xylene	Ave	1.982	2.207		11.1	10.0	11.3	50.0
Styrene	Ave	2.942	3.277		11.1	10.0	11.4	50.0
Bromoform	Ave	0.3365	0.3273	0.1000	9.73	10.0	-2.7	50.0
Isopropylbenzene	Ave	3.300	3.461		10.5	10.0	4.8	50.0
Cyclohexanone	Lin1		0.0126		320	400	-19.9	50.0
Bromobenzene	Ave	0.7340	0.6738		9.18	10.0	-8.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.3926	0.3312	0.3000	8.44	10.0	-15.6	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.0660		6.68	10.0	-33.2	50.0
1,2,3-Trichloropropane	Ave	0.1210	0.1075		8.88	10.0	-11.2	50.0
N-Propylbenzene	Ave	0.9688	0.9790		10.1	10.0	1.0	50.0
2-Chlorotoluene	Ave	0.8146	0.7996		9.82	10.0	-1.8	50.0
1,3,5-Trimethylbenzene	Ave	2.777	2.975		10.7	10.0	7.1	50.0
4-Chlorotoluene	Ave	0.8081	0.7781		9.63	10.0	-3.7	50.0
tert-Butylbenzene	Ave	2.327	2.442		10.5	10.0	5.0	50.0
1,2,4-Trimethylbenzene	Ave	2.786	2.987		10.7	10.0	7.2	50.0
sec-Butylbenzene	Ave	0.8365	0.8821		10.5	10.0	5.4	50.0
1,3-Dichlorobenzene	Ave	1.612	1.524		9.45	10.0	-5.5	50.0
4-Isopropyltoluene	Ave	3.301	3.528		10.7	10.0	6.9	50.0
1,4-Dichlorobenzene	Ave	1.657	1.478		8.92	10.0	-10.8	50.0
n-Butylbenzene	Ave	3.108	3.223		10.4	10.0	3.7	50.0
1,2-Dichlorobenzene	Ave	1.498	1.392		9.29	10.0	-7.1	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0649	0.0493		7.60	10.0	-24.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430312/33 Calibration Date: 09/20/2018 20:26

Instrument ID: VMS_G2 Calib Start Date: 09/17/2018 08:54

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 09/17/2018 11:00

Lab File ID: G2_7114.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.143	1.066		9.33	10.0	-6.7	50.0
Hexachlorobutadiene	Ave	0.9277	0.8788		9.47	10.0	-5.3	50.0
Naphthalene	Lin1		1.264		8.26	10.0	-17.4	50.0
1,2,3-Trichlorobenzene	Ave	0.9813	0.9690		9.88	10.0	-1.2	50.0
Dibromofluoromethane (Surr)	Ave	0.2119	0.2199		10.4	10.0	3.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2148	0.2105		9.80	10.0	-2.0	50.0
Toluene-d8 (Surr)	Ave	3.900	4.057		10.4	10.0	4.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7259	0.7145		9.84	10.0	-1.6	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7114.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 20-Sep-2018 20:26:30 ALS Bottle#: 39 Worklist Smp#: 33
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: ilczyszynd Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub159

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.716	-0.014	0	332035	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.293	-0.007	98	1791493	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	86	383699	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.591	12.592	-0.001	95	725726	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	93	315163	10.0	10.4	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.886	6.886	0.000	97	301642	10.0	9.80	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1245426	10.0	10.4	
$ 9 4-Bromofluorobenzene (Surr	95	11.590	11.591	-0.001	93	414798	10.0	9.84	
12 Dichlorodifluoromethane	85	1.551	1.551	0.000	99	804816	10.0	11.6	
14 Chloromethane	50	1.677	1.677	0.000	99	596938	10.0	11.0	
15 Vinyl chloride	62	1.788	1.802	-0.014	98	619198	10.0	11.3	
17 Bromomethane	94	2.096	2.096	0.000	92	423719	10.0	10.9	
18 Chloroethane	64	2.179	2.180	-0.001	100	362482	10.0	12.3	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	98	918133	10.0	10.7	
20 Trichlorofluoromethane	101	2.431	2.445	-0.014	98	1021789	10.0	11.0	
22 Ethyl ether	59	2.724	2.724	0.000	90	159087	10.0	9.05	
24 Acrolein	56	2.878	2.878	0.000	97	103871	59.3	47.9	
25 1,1-Dichloroethene	96	2.975	2.990	-0.015	98	430515	10.0	10.2	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	92	525033	10.0	10.9	
27 Acetone	43	3.045	3.045	0.000	98	177214	40.0	41.6	
28 Iodomethane	142	3.157	3.157	0.000	99	767382	10.0	10.8	
30 Carbon disulfide	76	3.227	3.227	0.000	100	1569816	10.0	11.3	
32 Methyl acetate	43	3.436	3.436	0.000	44	211856	20.0	24.8	
33 3-Chloro-1-propene	41	3.436	3.436	0.000	86	593733	10.0	10.9	
35 Methylene Chloride	84	3.618	3.618	0.000	92	374501	10.0	10.5	
37 2-Methyl-2-propanol	59	3.841	3.828	0.013	95	130312	100.0	81.7	
39 Acrylonitrile	53	3.967	3.953	0.014	98	455093	100.0	90.3	
40 trans-1,2-Dichloroethene	96	3.995	3.995	0.000	97	435188	10.0	10.5	
41 Methyl tert-butyl ether	73	4.009	4.009	0.000	98	612027	10.0	9.49	
42 Hexane	57	4.428	4.428	0.000	90	537993	10.0	9.74	
45 1,1-Dichloroethane	63	4.707	4.707	0.000	97	712319	10.0	10.2	
46 Vinyl acetate	43	4.763	4.763	0.000	98	370469	20.0	13.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
50 2,2-Dichloropropane	77	5.699	5.699	0.000	90	777455	10.0	9.80	
51 cis-1,2-Dichloroethene	96	5.699	5.699	0.000	85	376870	10.0	9.92	
52 2-Butanone (MEK)	43	5.741	5.727	0.014	100	152567	40.0	31.8	
56 Chlorobromomethane	128	6.056	6.056	0.000	94	137786	10.0	10.3	
57 Tetrahydrofuran	42	6.092	6.092	0.000	78	35921	20.0	15.4	
59 Chloroform	83	6.235	6.242	-0.007	95	671887	10.0	10.2	
60 1,1,1-Trichloroethane	97	6.428	6.428	0.000	98	798820	10.0	10.6	
61 Cyclohexane	56	6.507	6.507	0.000	92	751827	10.0	10.7	
62 Carbon tetrachloride	117	6.628	6.628	0.000	96	749378	10.0	10.9	
63 1,1-Dichloropropene	75	6.642	6.643	-0.001	92	517879	10.0	10.3	
64 Benzene	78	6.893	6.893	0.000	97	1466259	10.0	10.5	
66 Isobutyl alcohol	41	6.928	6.929	-0.001	85	80831	250.0	199.2	
65 1,2-Dichloroethane	62	6.986	6.986	0.000	98	362156	10.0	9.83	
67 n-Heptane	43	7.315	7.315	0.000	88	651929	10.0	9.61	
69 Trichloroethene	95	7.715	7.722	-0.007	96	369678	10.0	9.66	
71 Methylcyclohexane	55	7.965	7.965	0.000	92	669602	10.0	10.8	
72 1,2-Dichloropropane	63	8.008	8.008	0.000	92	311035	10.0	10.0	
75 Dibromomethane	93	8.108	8.108	0.000	93	124011	10.0	9.46	
74 1,4-Dioxane	88	8.115	8.108	0.007	30	18486	200.0	153.8	
76 Dichlorobromomethane	83	8.316	8.316	0.000	99	375275	10.0	10.1	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	-0.001	95	25869	10.0	7.43	
79 cis-1,3-Dichloropropene	75	8.780	8.781	-0.001	91	310964	10.0	9.21	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	401404	40.0	33.8	
82 Toluene	91	9.109	9.109	0.000	98	1554034	10.0	10.5	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	98	241517	10.0	9.00	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	89	135765	10.0	7.22	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	95	166542	10.0	9.04	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	378146	10.0	9.85	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	280309	10.0	9.18	
88 2-Hexanone	43	9.789	9.789	0.000	97	216728	40.0	31.9	
89 Chlorodibromomethane	129	9.924	9.925	-0.001	90	200108	10.0	10.0	
90 Ethylene Dibromide	107	10.024	10.025	-0.001	97	139058	10.0	9.14	
92 Chlorobenzene	112	10.504	10.504	0.000	93	938065	10.0	9.47	
93 1,1,1,2-Tetrachloroethane	131	10.589	10.590	-0.001	91	363158	10.0	10.6	
94 Ethylbenzene	106	10.597	10.597	0.000	99	571374	10.0	10.4	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	690074	10.0	10.3	
96 o-Xylene	106	11.083	11.083	0.000	97	677337	10.0	11.1	
97 Styrene	104	11.104	11.104	0.000	95	1005937	10.0	11.1	
98 Bromoform	173	11.269	11.276	-0.007	97	100466	10.0	9.73	
99 Isopropylbenzene	105	11.426	11.426	0.000	97	2009098	10.0	10.5	
100 Cyclohexanone	55	11.512	11.512	0.000	93	154407	400.0	320.4	
103 Bromobenzene	156	11.712	11.719	-0.007	95	391169	10.0	9.18	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	97	192274	10.0	8.44	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	80	38338	10.0	6.68	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	62392	10.0	8.88	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	568368	10.0	10.1	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	464251	10.0	9.82	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	-0.001	94	1727047	10.0	10.7	
109 4-Chlorotoluene	126	12.005	12.005	0.000	99	451719	10.0	9.63	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	94	1417918	10.0	10.5	
111 1,2,4-Trimethylbenzene	105	12.305	12.306	-0.001	98	1734342	10.0	10.7	
112 sec-Butylbenzene	134	12.441	12.441	0.000	95	512107	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	884523	10.0	9.45	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	2048099	10.0	10.7	
115 1,4-Dichlorobenzene	146	12.606	12.613	-0.007	94	858060	10.0	8.92	
117 n-Butylbenzene	91	12.849	12.849	0.000	97	1871364	10.0	10.4	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	98	808086	10.0	9.29	
119 1,2-Dibromo-3-Chloropropan	157	13.364	13.371	-0.007	77	28625	10.0	7.60	
121 1,2,4-Trichlorobenzene	180	13.871	13.879	-0.008	94	619068	10.0	9.33	
122 Hexachlorobutadiene	225	13.957	13.964	-0.007	95	510201	10.0	9.47	
123 Naphthalene	128	14.050	14.057	-0.007	97	733679	10.0	8.26	
124 1,2,3-Trichlorobenzene	180	14.193	14.200	-0.007	96	562588	10.0	9.88	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.4	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.4	
S 138 Xylenes, Total (URS)	1				0		20.0	21.5	
S 139 Total BTEX	1				0			52.9	
S 140 1,3-Dichloropropene, Total	1				0		20.0	18.2	
S 143 Xylenes, Total	106				0		20.0	21.5	
S 142 Trihalomethanes, Total	1				0		40.0	40.0	

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

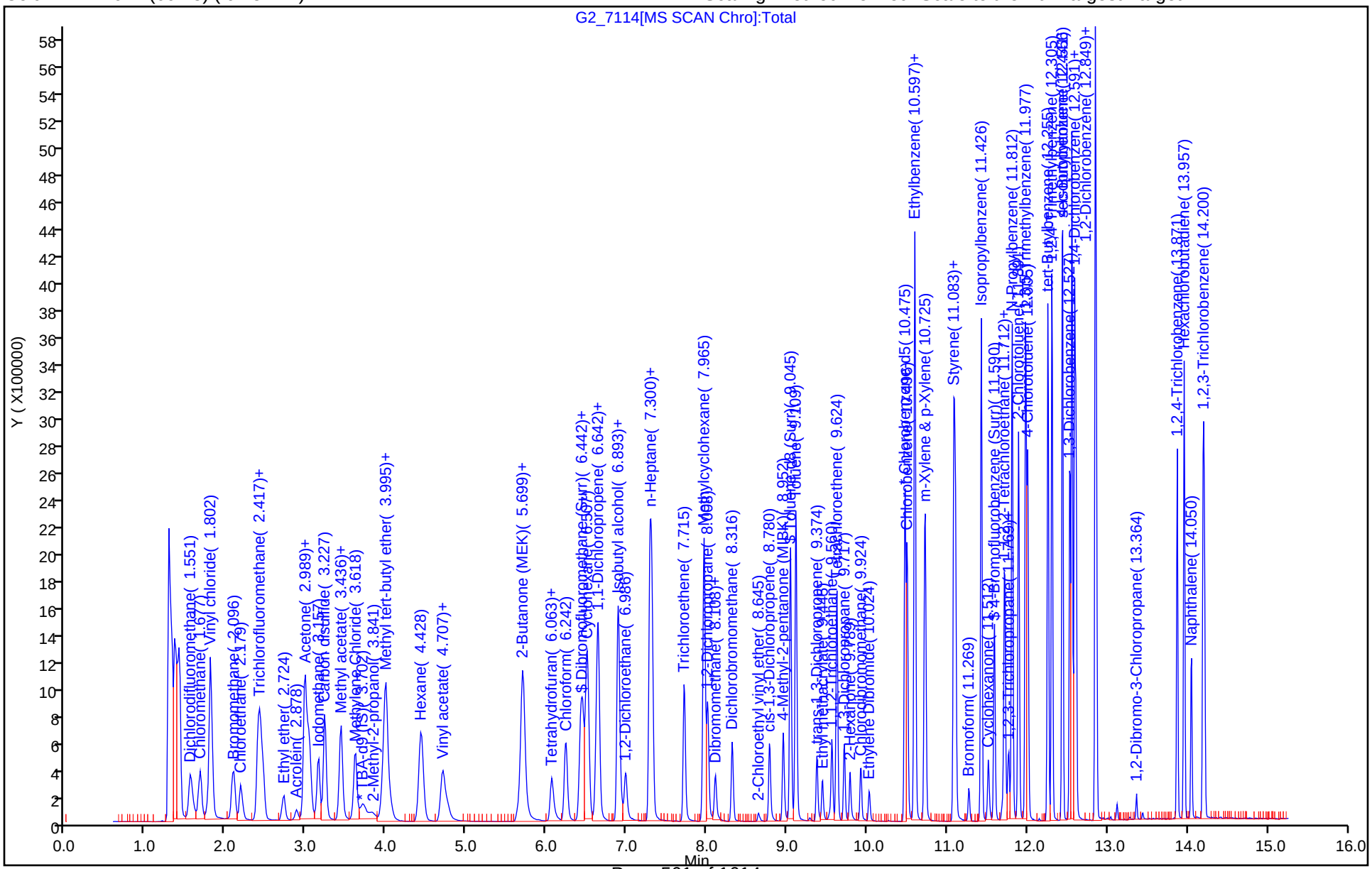
Report Date: 21-Sep-2018 07:06:41 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7114.D

Injection Date:	20-Sep-2018 20:26:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	ccvc			Worklist Smp#:	33
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/17 Calibration Date: 09/07/2018 15:33

Instrument ID: VMS_Z Calib Start Date: 07/04/2018 08:02

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 07/04/2018 10:14

Lab File ID: Z1196.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2				160	200	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1196.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 15:33:30 ALS Bottle#: 18 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:23 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: meierg Date: 07-Sep-2018 15:57:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.347	-0.011	0	125774	250.0	250.0	
* 2 Fluorobenzene	96	6.121	6.115	0.006	99	1049288	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.699	10.693	0.006	87	212238	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.772	14.766	0.006	96	413376	12.5	12.5	
27 Dichlorodifluoromethane	85	1.821	1.832	-0.011	99	341160	10.0	8.98	
30 Chloromethane	50	1.978	1.989	-0.011	99	234350	10.0	9.29	
32 Vinyl chloride	62	2.048	2.059	-0.011	98	202608	10.0	10.0	
35 Bromomethane	94	2.291	2.285	0.006	90	268317	10.0	10.1	
36 Chloroethane	64	2.309	2.320	-0.011	99	135850	10.0	9.59	
37 Dichlorofluoromethane	67	2.448	2.459	-0.011	98	539601	10.0	10.5	
38 Trichlorofluoromethane	101	2.500	2.529	-0.029	100	582255	10.0	10.0	
40 Ethyl ether	59	2.674	2.685	-0.011	95	97596	10.0	8.90	
44 Acrolein	56	2.796	2.790	0.006	98	45394	59.3	51.4	
45 1,1-Dichloroethene	96	2.900	2.912	-0.012	97	252827	10.0	9.35	
48 Acetone	43	2.918	2.929	-0.011	95	60770	40.0	40.6	
46 1,1,2-Trichloro-1,2,2-trif	151	2.953	2.946	0.007	97	348264	10.0	9.30	
49 Iodomethane	142	3.057	3.051	0.006	100	644078	10.0	9.83	
50 Carbon disulfide	76	3.127	3.138	-0.011	99	799567	10.0	9.15	
51 Methyl acetate	43	3.196	3.208	-0.012	41	103949	20.0	18.3	
52 3-Chloro-1-propene	41	3.196	3.208	-0.012	90	355036	10.0	9.15	
54 Methylene Chloride	84	3.318	3.312	0.006	92	212090	10.0	9.40	
55 2-Methyl-2-propanol	59	3.423	3.434	-0.011	93	55809	100.0	103.0	
58 Acrylonitrile	53	3.527	3.538	-0.011	99	167045	100.0	91.4	
57 trans-1,2-Dichloroethene	96	3.597	3.591	0.006	98	288048	10.0	9.60	
56 Methyl tert-butyl ether	73	3.597	3.608	-0.011	96	329801	10.0	8.98	
59 Hexane	57	3.875	3.869	0.006	95	307676	10.0	9.33	
62 1,1-Dichloroethane	63	3.997	4.008	-0.011	96	422933	10.0	9.36	
61 Vinyl acetate	43	4.032	4.043	-0.011	97	530133	20.0	18.7	
67 2-Butanone (MEK)	43	4.659	4.652	0.007	98	122639	40.0	39.8	
65 cis-1,2-Dichloroethene	96	4.659	4.652	0.007	81	296851	10.0	9.02	
66 2,2-Dichloropropane	77	4.676	4.687	-0.011	92	429954	10.0	9.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.937	4.948	-0.011	97	131705	10.0	9.52	
72 Tetrahydrofuran	42	5.024	5.035	-0.011	37	37623	20.0	19.4	
74 Chloroform	83	5.024	5.035	-0.011	95	490936	10.0	9.47	
75 1,1,1-Trichloroethane	97	5.303	5.314	-0.011	97	505351	10.0	9.16	
76 Cyclohexane	56	5.390	5.401	-0.011	94	333350	10.0	8.38	
78 1,1-Dichloropropene	75	5.494	5.488	0.006	97	379029	10.0	9.19	
77 Carbon tetrachloride	117	5.529	5.523	0.006	97	438842	10.0	8.85	
80 Isobutyl alcohol	41	5.633	5.645	-0.012	92	52691	250.0	243.5	
81 Benzene	78	5.755	5.749	0.006	97	703141	10.0	8.95	
82 1,2-Dichloroethane	62	5.755	5.749	0.006	56	191430	10.0	9.13	
84 n-Heptane	43	6.121	6.132	-0.011	94	422466	10.0	8.84	
85 Trichloroethene	95	6.626	6.619	0.007	97	355886	10.0	9.33	
87 Methylcyclohexane	55	6.921	6.915	0.006	90	321568	10.0	8.61	
90 1,2-Dichloropropane	63	6.904	6.915	-0.011	90	253630	10.0	9.39	
92 Dibromomethane	93	7.078	7.072	0.006	97	180365	10.0	8.81	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.304	7.298	0.006	99	449927	10.0	9.40	
96 2-Chloroethyl vinyl ether	63	7.757	7.768	-0.011	94	72968	10.0	8.96	
97 cis-1,3-Dichloropropene	75	7.966	7.960	0.006	96	362511	10.0	9.85	
98 4-Methyl-2-pentanone (MIBK	43	8.210	8.221	-0.011	97	379420	40.0	39.0	
99 Toluene	91	8.488	8.499	-0.011	99	889676	10.0	8.94	
100 trans-1,3-Dichloropropene	75	8.819	8.813	0.006	93	249484	10.0	8.89	
101 Ethyl methacrylate	69	9.028	9.022	0.006	91	161734	10.0	8.89	
102 1,1,2-Trichloroethane	97	9.097	9.109	-0.012	90	177674	10.0	9.50	
104 1,3-Dichloropropane	76	9.358	9.370	-0.012	69	253649	10.0	9.09	
103 Tetrachloroethene	164	9.358	9.370	-0.012	98	337407	10.0	9.26	
105 2-Hexanone	43	9.550	9.544	0.006	99	246342	40.0	40.0	
107 Chlorodibromomethane	129	9.724	9.735	-0.011	90	317082	10.0	8.99	
109 Ethylene Dibromide	107	9.898	9.909	-0.011	98	232477	10.0	9.54	
111 Chlorobenzene	112	10.734	10.745	-0.011	95	619376	10.0	9.47	
113 1,1,1,2-Tetrachloroethane	131	10.890	10.884	0.006	97	301225	10.0	9.65	
112 Ethylbenzene	106	10.943	10.954	-0.012	99	304554	10.0	9.20	
114 m-Xylene & p-Xylene	106	11.151	11.145	0.006	0	412446	10.0	8.75	
115 o-Xylene	106	11.813	11.824	-0.011	97	372949	10.0	9.23	
116 Styrene	104	11.848	11.841	0.007	94	585063	10.0	9.20	
117 Bromoform	173	12.126	12.120	0.006	96	224657	10.0	9.76	
118 Isopropylbenzene	105	12.474	12.485	-0.011	95	1149662	10.0	9.21	
119 Cyclohexanone	55	12.579	12.590	-0.011	92	93710	400.0	376.2	
121 Bromobenzene	156	12.962	12.955	0.007	92	328696	10.0	9.36	
122 1,1,2,2-Tetrachloroethane	83	12.979	12.990	-0.011	95	214129	10.0	9.21	
124 1,2,3-Trichloropropane	110	13.031	13.043	-0.012	77	55167	10.0	9.44	
125 trans-1,4-Dichloro-2-buten	53	13.084	13.095	-0.011	81	45743	10.0	9.40	
123 N-Propylbenzene	120	13.205	13.199	0.006	99	262982	10.0	8.93	
126 2-Chlorotoluene	126	13.327	13.321	0.006	96	228422	10.0	9.01	
128 4-Chlorotoluene	126	13.519	13.513	0.007	98	265587	10.0	9.11	
127 1,3,5-Trimethylbenzene	105	13.536	13.547	-0.011	93	888581	10.0	9.39	
129 tert-Butylbenzene	119	14.093	14.104	-0.011	91	904328	10.0	9.15	
130 1,2,4-Trimethylbenzene	105	14.198	14.191	0.007	97	847451	10.0	8.99	
131 sec-Butylbenzene	134	14.494	14.505	-0.011	95	239730	10.0	8.92	
132 1,3-Dichlorobenzene	146	14.650	14.644	0.006	98	506925	10.0	9.15	
133 4-Isopropyltoluene	119	14.789	14.783	0.006	97	1020448	10.0	9.10	
134 1,4-Dichlorobenzene	146	14.807	14.818	-0.011	94	607497	10.0	9.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.468	15.462	0.006	97	470082	10.0	9.25	
137 n-Butylbenzene	91	15.521	15.532	-0.011	98	1078062	10.0	8.93	
139 1,2-Dibromo-3-Chloropropan	157	16.652	16.646	0.006	91	49182	10.0	9.62	
141 1,2,4-Trichlorobenzene	180	17.627	17.621	0.006	94	367840	10.0	10.0	
142 Hexachlorobutadiene	225	17.818	17.812	0.006	98	309679	10.0	10.4	
143 Naphthalene	128	17.853	17.847	0.006	98	314680	10.0	10.2	
144 1,2,3-Trichlorobenzene	180	18.097	18.091	0.006	96	300316	10.0	10.7	
S 149 Trihalomethanes, Total	1				0		40.0	37.6	
S 150 Xylenes, Total (URS)	1				0		20.0	18.0	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.6	
S 146 Xylenes, Total	106				0		20.0	18.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMain B_00001	Amount Added:	4.00	Units: uL

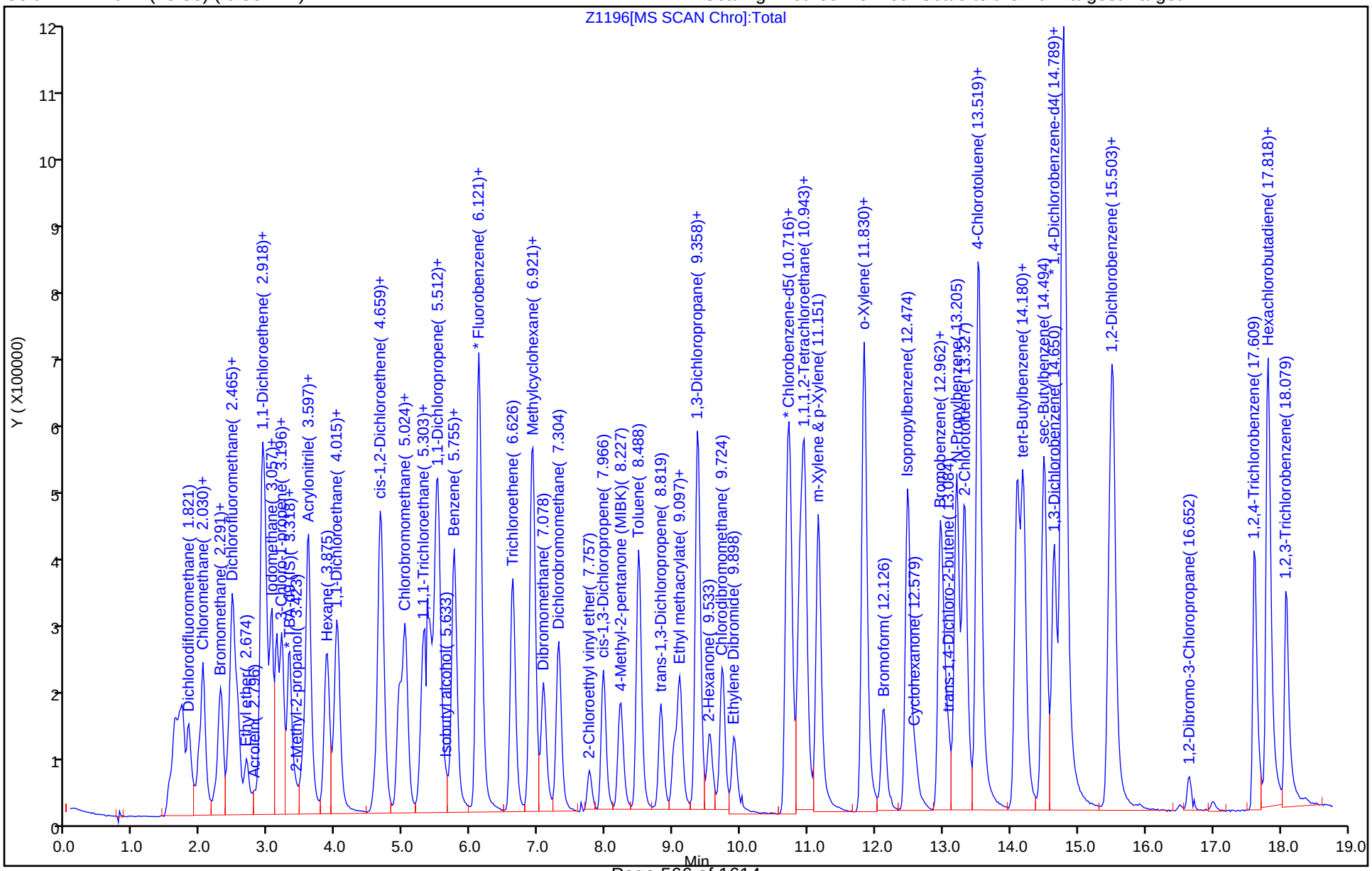
Report Date: 08-Sep-2018 09:12:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1196.D

Injection Date:	07-Sep-2018 15:33:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



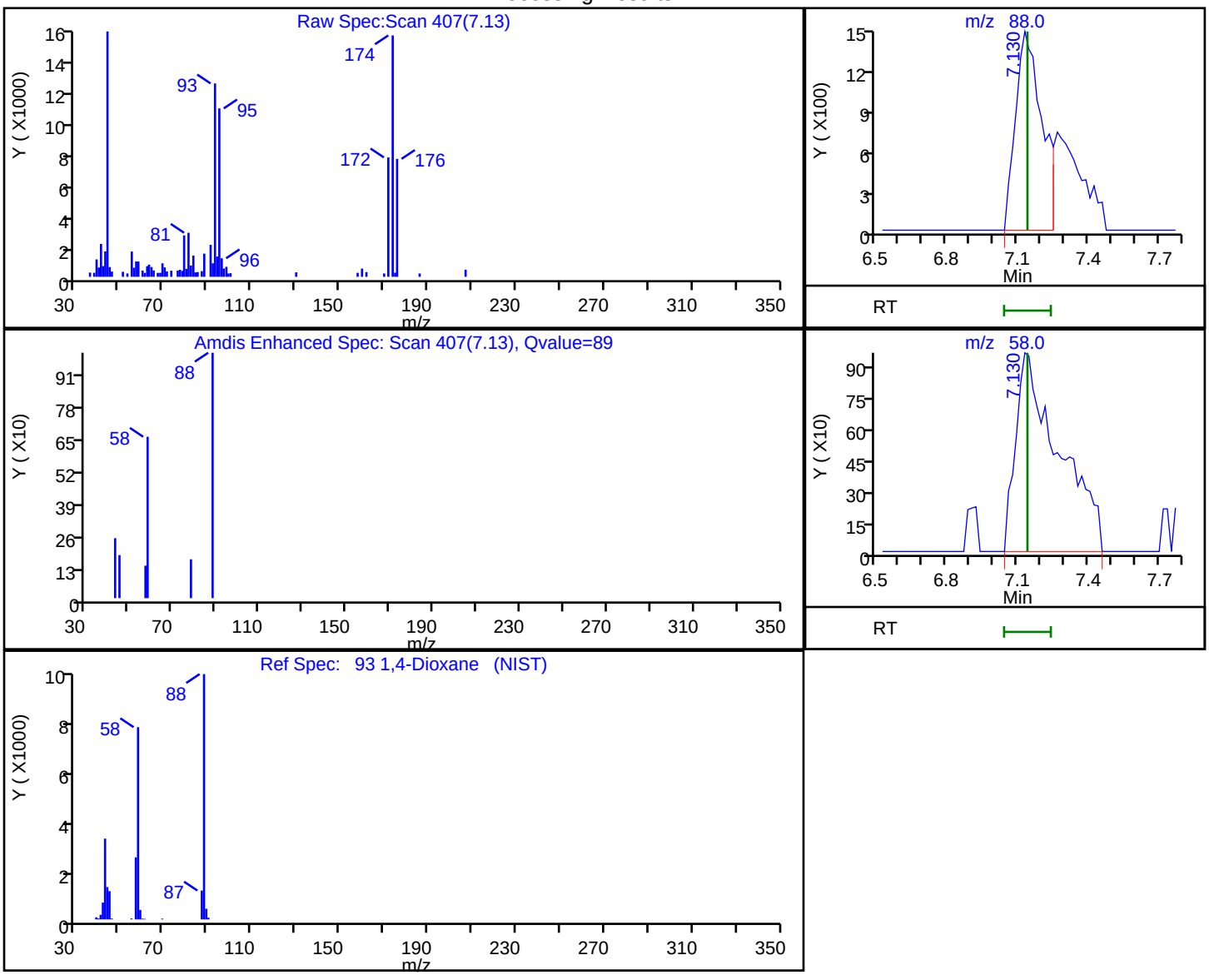
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1196.D				
Injection Date:	07-Sep-2018 15:33:30	Instrument ID:	VMS_Z		
Lims ID:	icv				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	18	Worklist Smp#:	17
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

93 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
7.13	88.00	11476	194.8014
7.13	58.00	12334	

Reviewer: ilczyszynd, 08-Sep-2018 09:11:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/17 Calibration Date: 09/07/2018 15:33

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 12:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 14:49

Lab File ID: Z1196.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4528	0.4064		8.98	10.0	-10.2	20.0
Chloromethane	Ave	0.3004	0.2792	0.1000	9.29	10.0	-7.1	20.0
Vinyl chloride	Ave	0.2414	0.2414		10.0	10.0	-0.0	20.0
Bromomethane	Ave	0.3158	0.3196		10.1	10.0	1.2	20.0
Chloroethane	Ave	0.1687	0.1618		9.59	10.0	-4.1	20.0
Dichlorofluoromethane	Ave	0.6105	0.6428		10.5	10.0	5.3	20.0
Trichlorofluoromethane	Ave	0.6903	0.6936		10.0	10.0	0.5	20.0
Ethyl ether	Ave	0.1306	0.1163		8.90	10.0	-11.0	20.0
Acrolein	Ave	0.0105	0.0091		51.4	59.3	-13.3	20.0
1,1-Dichloroethene	Ave	0.3223	0.3012		9.35	10.0	-6.5	20.0
Acetone	Ave	0.0178	0.0181		40.6	40.0	1.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4459	0.4149		9.30	10.0	-7.0	20.0
Iodomethane	Ave	0.7803	0.7673		9.83	10.0	-1.7	20.0
Carbon disulfide	Ave	1.041	0.9525		9.15	10.0	-8.5	20.0
3-Chloro-1-propene	Ave	0.4622	0.4230		9.15	10.0	-8.5	20.0
Methyl acetate	Ave	0.0677	0.0619		18.3	20.0	-8.5	20.0
Methylene Chloride	Ave	0.2688	0.2527		9.40	10.0	-6.0	20.0
t-Butyl alcohol	Lin1		1.109		103	100	3.0	20.0
Acrylonitrile	Ave	0.0218	0.0199		91.4	100	-8.6	20.0
Methyl tert-butyl ether	Ave	0.4376	0.3929		8.98	10.0	-10.2	20.0
trans-1,2-Dichloroethene	Ave	0.3575	0.3432		9.60	10.0	-4.0	20.0
Hexane	Ave	1.943	1.812		9.33	10.0	-6.7	20.0
1,1-Dichloroethane	Ave	0.5380	0.5038	0.1000	9.36	10.0	-6.4	20.0
Vinyl acetate	Ave	0.3369	0.3158		18.7	20.0	-6.3	20.0
2-Butanone (MEK)	Ave	0.0367	0.0365		39.8	40.0	-0.5	20.0
cis-1,2-Dichloroethene	Ave	0.3919	0.3536		9.02	10.0	-9.8	20.0
2,2-Dichloropropane	Lin2		0.5122		9.19	10.0	-8.1	20.0
Bromochloromethane	Ave	0.1649	0.1569		9.52	10.0	-4.8	20.0
Chloroform	Ave	0.6176	0.5848		9.47	10.0	-5.3	20.0
Tetrahydrofuran	Ave	0.0231	0.0224		19.4	20.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.6570	0.6020		9.16	10.0	-8.4	20.0
Cyclohexane	Ave	0.4737	0.3971		8.38	10.0	-16.2	20.0
1,1-Dichloropropene	Ave	0.4916	0.4515		9.19	10.0	-8.1	20.0
Carbon tetrachloride	Ave	0.5910	0.5228		8.85	10.0	-11.5	20.0
Isobutyl alcohol	Lin1		0.4189		243	250	-2.6	20.0
1,2-Dichloroethane	Ave	0.2497	0.2281		9.13	10.0	-8.7	20.0
Benzene	Ave	0.9361	0.8376		8.95	10.0	-10.5	20.0
Trichloroethene	Ave	0.4544	0.4240		9.33	10.0	-6.7	20.0
1,2-Dichloropropane	Ave	0.3216	0.3022		9.39	10.0	-6.1	20.0
Methylcyclohexane	Ave	0.4450	0.3831		8.61	10.0	-13.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/17 Calibration Date: 09/07/2018 15:33

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 12:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 14:49

Lab File ID: Z1196.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.2438	0.2149		8.81	10.0	-11.9	20.0
Bromodichloromethane	Ave	0.5703	0.5360		9.40	10.0	-6.0	20.0
2-Chloroethyl vinyl ether	Ave	0.0970	0.0869		8.96	10.0	-10.4	20.0
cis-1,3-Dichloropropene	Ave	2.168	2.135		9.85	10.0	-1.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1159	0.1130		39.0	40.0	-2.5	20.0
Toluene	Ave	1.185	1.060		8.94	10.0	-10.6	20.0
trans-1,3-Dichloropropene	Ave	0.3345	0.2972		8.89	10.0	-11.1	20.0
Ethyl methacrylate	Ave	1.071	0.9526		8.89	10.0	-11.1	20.0
1,1,2-Trichloroethane	Ave	0.2229	0.2117		9.50	10.0	-5.0	20.0
1,3-Dichloropropane	Ave	1.643	1.494		9.09	10.0	-9.1	20.0
Tetrachloroethene	Ave	2.146	1.987		9.26	10.0	-7.4	20.0
2-Hexanone	Ave	0.3625	0.3627		40.0	40.0	0.0	20.0
Dibromochloromethane	Ave	2.078	1.867		8.99	10.0	-10.1	20.0
1,2-Dibromoethane (EDB)	Ave	1.435	1.369		9.54	10.0	-4.6	20.0
Chlorobenzene	Ave	3.851	3.648	0.3000	9.47	10.0	-5.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.839	1.774		9.65	10.0	-3.5	20.0
Ethylbenzene	Ave	1.949	1.794		9.20	10.0	-8.0	20.0
m-Xylene & p-Xylene	Ave	2.777	2.429		8.75	10.0	-12.5	20.0
o-Xylene	Ave	2.381	2.197		9.23	10.0	-7.7	20.0
Styrene	Ave	3.747	3.446		9.20	10.0	-8.0	20.0
Bromoform	Ave	1.356	1.323	0.1000	9.76	10.0	-2.4	20.0
Isopropylbenzene	Ave	3.775	3.476		9.21	10.0	-7.9	20.0
Cyclohexanone	Ave	0.0147	0.0138		376	400	-6.0	20.0
Bromobenzene	Ave	1.062	0.9939		9.36	10.0	-6.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7032	0.6475	0.3000	9.21	10.0	-7.9	20.0
1,2,3-Trichloropropane	Ave	0.1767	0.1668		9.44	10.0	-5.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1472	0.1383		9.40	10.0	-6.0	20.0
N-Propylbenzene	Ave	0.8901	0.7952		8.93	10.0	-10.7	20.0
2-Chlorotoluene	Ave	0.7662	0.6907		9.01	10.0	-9.9	20.0
4-Chlorotoluene	Ave	0.8820	0.8031		9.11	10.0	-8.9	20.0
1,3,5-Trimethylbenzene	Ave	2.863	2.687		9.39	10.0	-6.1	20.0
tert-Butylbenzene	Ave	2.989	2.735		9.15	10.0	-8.5	20.0
1,2,4-Trimethylbenzene	Ave	2.851	2.563		8.99	10.0	-10.1	20.0
sec-Butylbenzene	Ave	0.8130	0.7249		8.92	10.0	-10.8	20.0
1,3-Dichlorobenzene	Ave	1.675	1.533		9.15	10.0	-8.5	20.0
4-Isopropyltoluene	Ave	3.391	3.086		9.10	10.0	-9.0	20.0
1,4-Dichlorobenzene	Ave	2.033	1.837		9.03	10.0	-9.7	20.0
1,2-Dichlorobenzene	Ave	1.538	1.421		9.25	10.0	-7.5	20.0
n-Butylbenzene	Ave	3.650	3.260		8.93	10.0	-10.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1545	0.1487		9.62	10.0	-3.8	20.0
1,2,4-Trichlorobenzene	Lin2		1.112		10.0	10.0	0.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/17 Calibration Date: 09/07/2018 15:33

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 12:35

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 14:49

Lab File ID: Z1196.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Lin2		0.9364		10.4	10.0	3.7	20.0
Naphthalene	Lin2		0.9516		10.2	10.0	2.0	20.0
1,2,3-Trichlorobenzene	Lin2		0.9081		10.7	10.0	7.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1196.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 15:33:30 ALS Bottle#: 18 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:23 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: meierg Date: 07-Sep-2018 15:57:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.347	-0.011	0	125774	250.0	250.0	
* 2 Fluorobenzene	96	6.121	6.115	0.006	99	1049288	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.699	10.693	0.006	87	212238	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.772	14.766	0.006	96	413376	12.5	12.5	
27 Dichlorodifluoromethane	85	1.821	1.832	-0.011	99	341160	10.0	8.98	
30 Chloromethane	50	1.978	1.989	-0.011	99	234350	10.0	9.29	
32 Vinyl chloride	62	2.048	2.059	-0.011	98	202608	10.0	10.0	
35 Bromomethane	94	2.291	2.285	0.006	90	268317	10.0	10.1	
36 Chloroethane	64	2.309	2.320	-0.011	99	135850	10.0	9.59	
37 Dichlorofluoromethane	67	2.448	2.459	-0.011	98	539601	10.0	10.5	
38 Trichlorofluoromethane	101	2.500	2.529	-0.029	100	582255	10.0	10.0	
40 Ethyl ether	59	2.674	2.685	-0.011	95	97596	10.0	8.90	
44 Acrolein	56	2.796	2.790	0.006	98	45394	59.3	51.4	
45 1,1-Dichloroethene	96	2.900	2.912	-0.012	97	252827	10.0	9.35	
48 Acetone	43	2.918	2.929	-0.011	95	60770	40.0	40.6	
46 1,1,2-Trichloro-1,2,2-trif	151	2.953	2.946	0.007	97	348264	10.0	9.30	
49 Iodomethane	142	3.057	3.051	0.006	100	644078	10.0	9.83	
50 Carbon disulfide	76	3.127	3.138	-0.011	99	799567	10.0	9.15	
51 Methyl acetate	43	3.196	3.208	-0.012	41	103949	20.0	18.3	
52 3-Chloro-1-propene	41	3.196	3.208	-0.012	90	355036	10.0	9.15	
54 Methylene Chloride	84	3.318	3.312	0.006	92	212090	10.0	9.40	
55 2-Methyl-2-propanol	59	3.423	3.434	-0.011	93	55809	100.0	103.0	
58 Acrylonitrile	53	3.527	3.538	-0.011	99	167045	100.0	91.4	
57 trans-1,2-Dichloroethene	96	3.597	3.591	0.006	98	288048	10.0	9.60	
56 Methyl tert-butyl ether	73	3.597	3.608	-0.011	96	329801	10.0	8.98	
59 Hexane	57	3.875	3.869	0.006	95	307676	10.0	9.33	
62 1,1-Dichloroethane	63	3.997	4.008	-0.011	96	422933	10.0	9.36	
61 Vinyl acetate	43	4.032	4.043	-0.011	97	530133	20.0	18.7	
67 2-Butanone (MEK)	43	4.659	4.652	0.007	98	122639	40.0	39.8	
65 cis-1,2-Dichloroethene	96	4.659	4.652	0.007	81	296851	10.0	9.02	
66 2,2-Dichloropropane	77	4.676	4.687	-0.011	92	429954	10.0	9.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.937	4.948	-0.011	97	131705	10.0	9.52	
72 Tetrahydrofuran	42	5.024	5.035	-0.011	37	37623	20.0	19.4	
74 Chloroform	83	5.024	5.035	-0.011	95	490936	10.0	9.47	
75 1,1,1-Trichloroethane	97	5.303	5.314	-0.011	97	505351	10.0	9.16	
76 Cyclohexane	56	5.390	5.401	-0.011	94	333350	10.0	8.38	
78 1,1-Dichloropropene	75	5.494	5.488	0.006	97	379029	10.0	9.19	
77 Carbon tetrachloride	117	5.529	5.523	0.006	97	438842	10.0	8.85	
80 Isobutyl alcohol	41	5.633	5.645	-0.012	92	52691	250.0	243.5	
81 Benzene	78	5.755	5.749	0.006	97	703141	10.0	8.95	
82 1,2-Dichloroethane	62	5.755	5.749	0.006	56	191430	10.0	9.13	
84 n-Heptane	43	6.121	6.132	-0.011	94	422466	10.0	8.84	
85 Trichloroethene	95	6.626	6.619	0.007	97	355886	10.0	9.33	
87 Methylcyclohexane	55	6.921	6.915	0.006	90	321568	10.0	8.61	
90 1,2-Dichloropropane	63	6.904	6.915	-0.011	90	253630	10.0	9.39	
92 Dibromomethane	93	7.078	7.072	0.006	97	180365	10.0	8.81	
93 1,4-Dioxane	88		7.142				ND	ND	U
94 Dichlorobromomethane	83	7.304	7.298	0.006	99	449927	10.0	9.40	
96 2-Chloroethyl vinyl ether	63	7.757	7.768	-0.011	94	72968	10.0	8.96	
97 cis-1,3-Dichloropropene	75	7.966	7.960	0.006	96	362511	10.0	9.85	
98 4-Methyl-2-pentanone (MIBK	43	8.210	8.221	-0.011	97	379420	40.0	39.0	
99 Toluene	91	8.488	8.499	-0.011	99	889676	10.0	8.94	
100 trans-1,3-Dichloropropene	75	8.819	8.813	0.006	93	249484	10.0	8.89	
101 Ethyl methacrylate	69	9.028	9.022	0.006	91	161734	10.0	8.89	
102 1,1,2-Trichloroethane	97	9.097	9.109	-0.012	90	177674	10.0	9.50	
104 1,3-Dichloropropane	76	9.358	9.370	-0.012	69	253649	10.0	9.09	
103 Tetrachloroethene	164	9.358	9.370	-0.012	98	337407	10.0	9.26	
105 2-Hexanone	43	9.550	9.544	0.006	99	246342	40.0	40.0	
107 Chlorodibromomethane	129	9.724	9.735	-0.011	90	317082	10.0	8.99	
109 Ethylene Dibromide	107	9.898	9.909	-0.011	98	232477	10.0	9.54	
111 Chlorobenzene	112	10.734	10.745	-0.011	95	619376	10.0	9.47	
113 1,1,1,2-Tetrachloroethane	131	10.890	10.884	0.006	97	301225	10.0	9.65	
112 Ethylbenzene	106	10.943	10.954	-0.012	99	304554	10.0	9.20	
114 m-Xylene & p-Xylene	106	11.151	11.145	0.006	0	412446	10.0	8.75	
115 o-Xylene	106	11.813	11.824	-0.011	97	372949	10.0	9.23	
116 Styrene	104	11.848	11.841	0.007	94	585063	10.0	9.20	
117 Bromoform	173	12.126	12.120	0.006	96	224657	10.0	9.76	
118 Isopropylbenzene	105	12.474	12.485	-0.011	95	1149662	10.0	9.21	
119 Cyclohexanone	55	12.579	12.590	-0.011	92	93710	400.0	376.2	
121 Bromobenzene	156	12.962	12.955	0.007	92	328696	10.0	9.36	
122 1,1,2,2-Tetrachloroethane	83	12.979	12.990	-0.011	95	214129	10.0	9.21	
124 1,2,3-Trichloropropane	110	13.031	13.043	-0.012	77	55167	10.0	9.44	
125 trans-1,4-Dichloro-2-buten	53	13.084	13.095	-0.011	81	45743	10.0	9.40	
123 N-Propylbenzene	120	13.205	13.199	0.006	99	262982	10.0	8.93	
126 2-Chlorotoluene	126	13.327	13.321	0.006	96	228422	10.0	9.01	
128 4-Chlorotoluene	126	13.519	13.513	0.007	98	265587	10.0	9.11	
127 1,3,5-Trimethylbenzene	105	13.536	13.547	-0.011	93	888581	10.0	9.39	
129 tert-Butylbenzene	119	14.093	14.104	-0.011	91	904328	10.0	9.15	
130 1,2,4-Trimethylbenzene	105	14.198	14.191	0.007	97	847451	10.0	8.99	
131 sec-Butylbenzene	134	14.494	14.505	-0.011	95	239730	10.0	8.92	
132 1,3-Dichlorobenzene	146	14.650	14.644	0.006	98	506925	10.0	9.15	
133 4-Isopropyltoluene	119	14.789	14.783	0.006	97	1020448	10.0	9.10	
134 1,4-Dichlorobenzene	146	14.807	14.818	-0.011	94	607497	10.0	9.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.468	15.462	0.006	97	470082	10.0	9.25	
137 n-Butylbenzene	91	15.521	15.532	-0.011	98	1078062	10.0	8.93	
139 1,2-Dibromo-3-Chloropropan	157	16.652	16.646	0.006	91	49182	10.0	9.62	
141 1,2,4-Trichlorobenzene	180	17.627	17.621	0.006	94	367840	10.0	10.0	
142 Hexachlorobutadiene	225	17.818	17.812	0.006	98	309679	10.0	10.4	
143 Naphthalene	128	17.853	17.847	0.006	98	314680	10.0	10.2	
144 1,2,3-Trichlorobenzene	180	18.097	18.091	0.006	96	300316	10.0	10.7	
S 149 Trihalomethanes, Total	1				0		40.0	37.6	
S 150 Xylenes, Total (URS)	1				0		20.0	18.0	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.6	
S 146 Xylenes, Total	106				0		20.0	18.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMain B_00001	Amount Added:	4.00	Units: uL

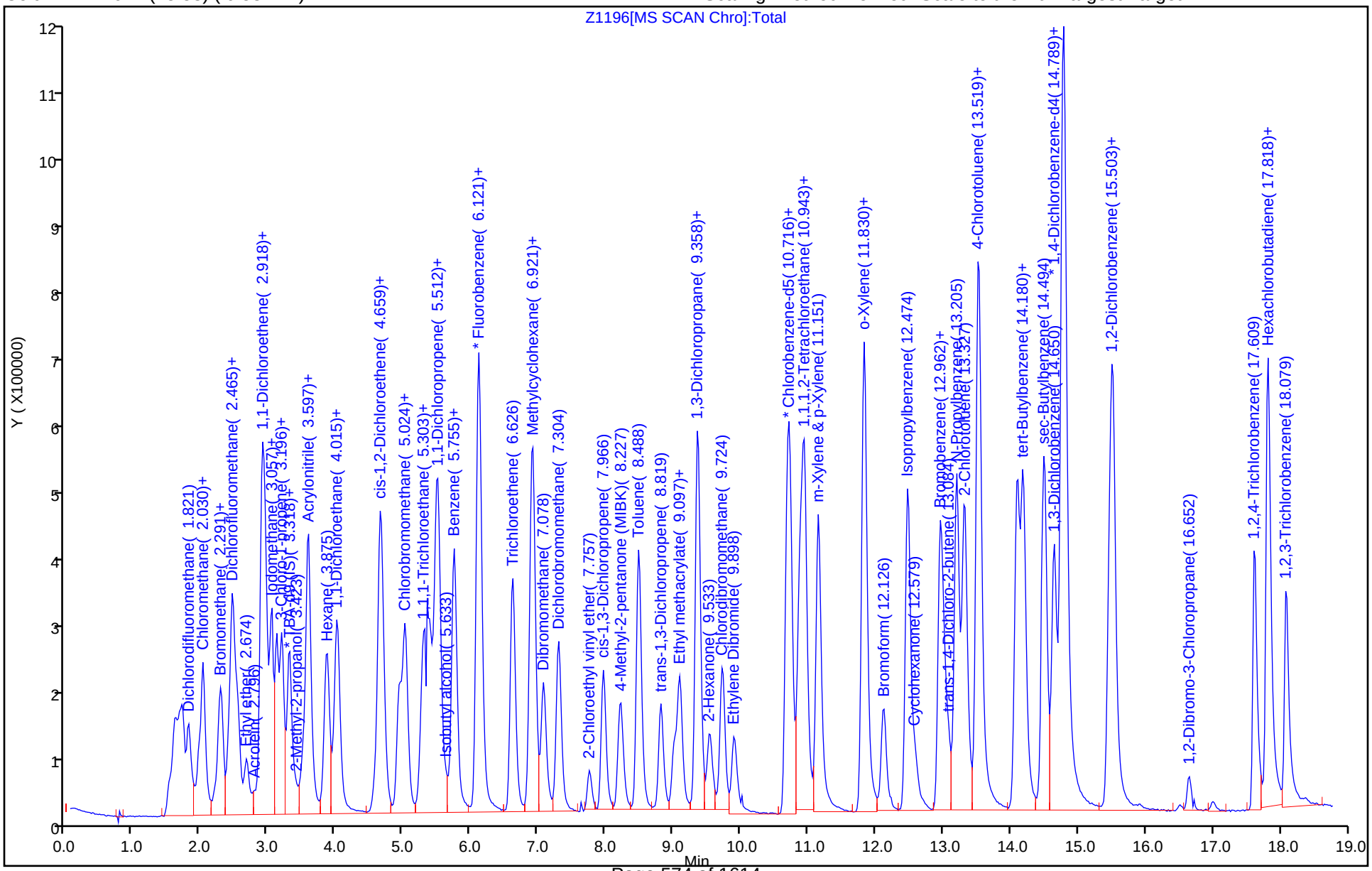
Report Date: 08-Sep-2018 09:12:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1196.D

Injection Date:	07-Sep-2018 15:33:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/24 Calibration Date: 09/07/2018 18:09

Instrument ID: VMS_Z Calib Start Date: 08/17/2017 09:44

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 08/17/2017 15:03

Lab File ID: Z1203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin2				250	600	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:09:30 ALS Bottle#: 26 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:40 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.332	0.018	0	153987	250.0	250.0	
* 2 Fluorobenzene	96	6.117	6.118	-0.001	99	1076041	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.678	10.696	-0.018	87	232978	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.769	0.000	97	416740	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	473299	10.0	9.79	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.647	5.648	-0.001	0	191031	10.0	10.1	
$ 10 Toluene-d8 (Surr)	98	8.380	8.381	-0.001	92	892650	10.0	9.69	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	89	519206	10.0	9.71	
34 Ethylene oxide	43	2.218	2.218	0.000	99	117823	1000.0	962.6	
42 Propene oxide	58	2.740	2.741	-0.001	96	716473	1000.0	947.0	
39 Ethanol	45		2.857				ND	ND	U
47 Isopropyl alcohol	45		3.071				ND	ND	U
53 Acetonitrile	41	3.176	3.176	0.000	99	36558	100.0	89.1	
60 Isopropyl ether	87	4.098	4.098	0.000	97	179436	10.0	9.40	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	88	308609	10.0	8.88	
64 Tert-butyl ethyl ether	59	4.499	4.499	0.000	97	526255	10.0	8.79	
69 Propionitrile	54	4.707	4.708	-0.001	98	59132	100.0	99.8	
68 Ethyl acetate	43	4.725	4.725	0.000	99	151550	20.0	20.5	
73 Methacrylonitrile	41	4.899	4.899	0.000	94	396932	100.0	95.9	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	97	464842	10.0	9.98	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.092	7.110	-0.018	95	65856	20.0	20.1	
95 2-Nitropropane	41	7.614	7.597	0.017	96	29334	20.0	20.7	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.558	12.576	-0.018	0	39846	20.0	18.9	
135 1,2,3-Trimethylbenzene	105	14.925	14.926	-0.001	99	768212	10.0	9.72	
140 1,3,5-Trichlorobenzene	180	16.927	16.945	-0.018	98	480518	10.0	10.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

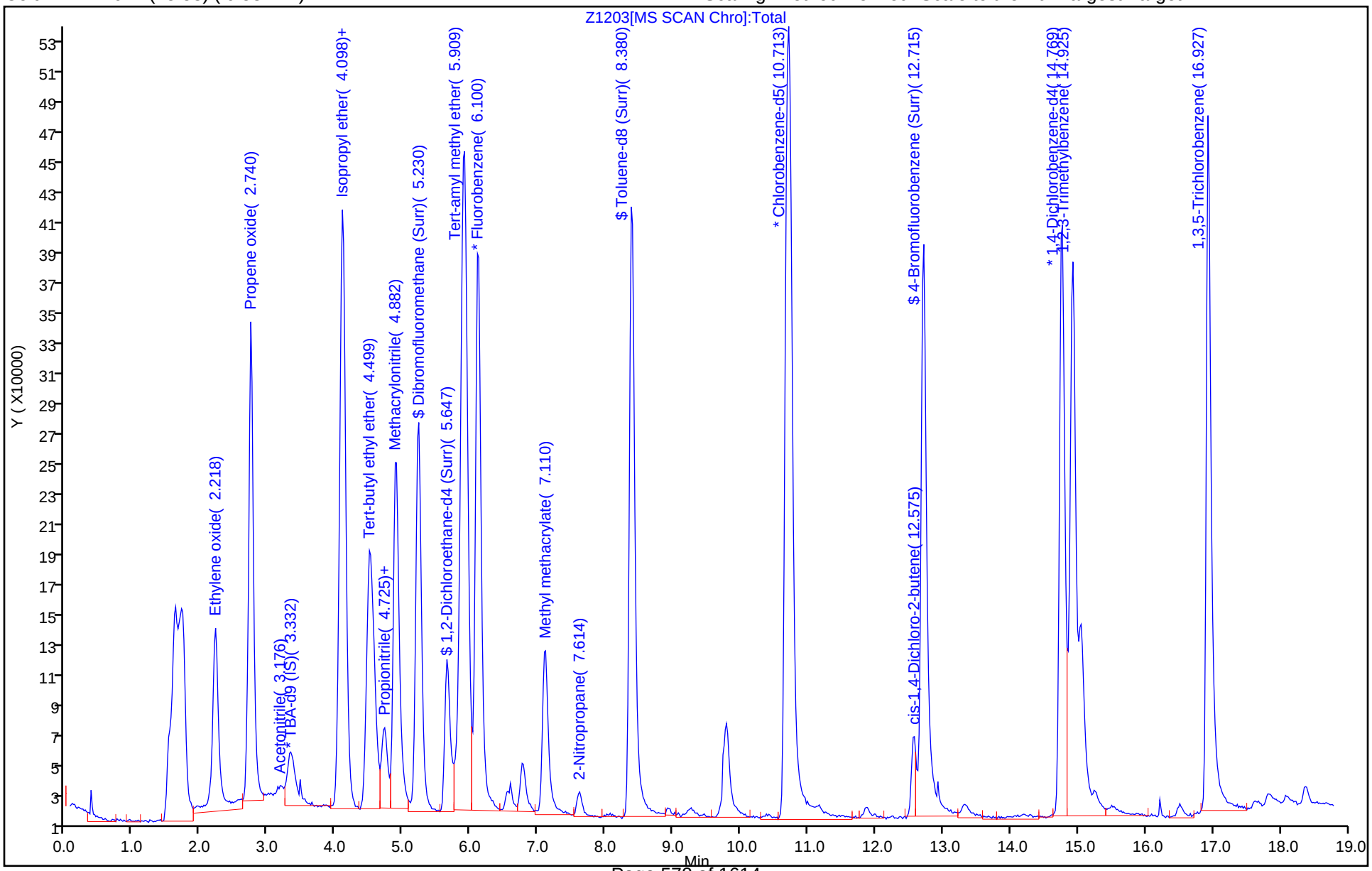
Report Date: 08-Sep-2018 09:12:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D

Injection Date:	07-Sep-2018 18:09:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/24 Calibration Date: 09/07/2018 18:09

Instrument ID: VMS_Z Calib Start Date: 12/10/2017 09:55

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 12/10/2017 15:45

Lab File ID: Z1203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Ave	0.0049			32.0	100		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:09:30 ALS Bottle#: 26 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:40 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.332	0.018	0	153987	250.0	250.0	
* 2 Fluorobenzene	96	6.117	6.118	-0.001	99	1076041	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.678	10.696	-0.018	87	232978	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.769	0.000	97	416740	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	473299	10.0	9.79	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.647	5.648	-0.001	0	191031	10.0	10.1	
$ 10 Toluene-d8 (Surr)	98	8.380	8.381	-0.001	92	892650	10.0	9.69	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	89	519206	10.0	9.71	
34 Ethylene oxide	43	2.218	2.218	0.000	99	117823	1000.0	962.6	
42 Propene oxide	58	2.740	2.741	-0.001	96	716473	1000.0	947.0	
39 Ethanol	45		2.857				ND	ND	U
47 Isopropyl alcohol	45		3.071				ND	ND	U
53 Acetonitrile	41	3.176	3.176	0.000	99	36558	100.0	89.1	
60 Isopropyl ether	87	4.098	4.098	0.000	97	179436	10.0	9.40	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	88	308609	10.0	8.88	
64 Tert-butyl ethyl ether	59	4.499	4.499	0.000	97	526255	10.0	8.79	
69 Propionitrile	54	4.707	4.708	-0.001	98	59132	100.0	99.8	
68 Ethyl acetate	43	4.725	4.725	0.000	99	151550	20.0	20.5	
73 Methacrylonitrile	41	4.899	4.899	0.000	94	396932	100.0	95.9	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	97	464842	10.0	9.98	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.092	7.110	-0.018	95	65856	20.0	20.1	
95 2-Nitropropane	41	7.614	7.597	0.017	96	29334	20.0	20.7	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.558	12.576	-0.018	0	39846	20.0	18.9	
135 1,2,3-Trimethylbenzene	105	14.925	14.926	-0.001	99	768212	10.0	9.72	
140 1,3,5-Trichlorobenzene	180	16.927	16.945	-0.018	98	480518	10.0	10.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

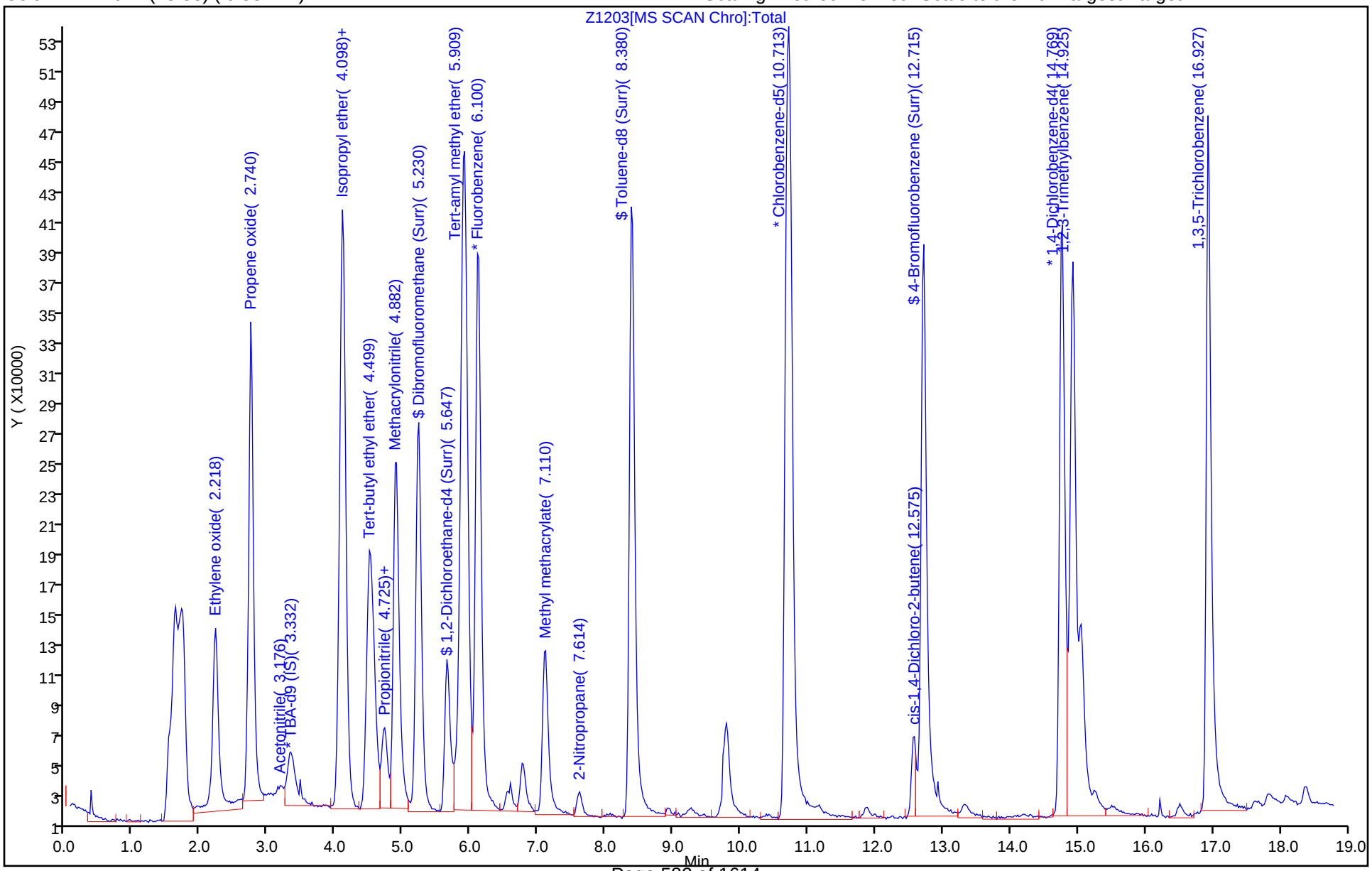
Report Date: 08-Sep-2018 09:12:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D

Injection Date:	07-Sep-2018 18:09:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/24 Calibration Date: 09/07/2018 18:09

Instrument ID: VMS_Z Calib Start Date: 05/20/2018 23:14

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 05/21/2018 23:58

Lab File ID: Z1203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Lin2				40.0	250	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:09:30 ALS Bottle#: 26 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:40 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.332	0.018	0	153987	250.0	250.0	
* 2 Fluorobenzene	96	6.117	6.118	-0.001	99	1076041	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.678	10.696	-0.018	87	232978	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.769	0.000	97	416740	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	473299	10.0	9.79	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.647	5.648	-0.001	0	191031	10.0	10.1	
$ 10 Toluene-d8 (Surr)	98	8.380	8.381	-0.001	92	892650	10.0	9.69	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	89	519206	10.0	9.71	
34 Ethylene oxide	43	2.218	2.218	0.000	99	117823	1000.0	962.6	
42 Propene oxide	58	2.740	2.741	-0.001	96	716473	1000.0	947.0	
39 Ethanol	45		2.857				ND	ND	U
47 Isopropyl alcohol	45		3.071				ND	ND	U
53 Acetonitrile	41	3.176	3.176	0.000	99	36558	100.0	89.1	
60 Isopropyl ether	87	4.098	4.098	0.000	97	179436	10.0	9.40	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	88	308609	10.0	8.88	
64 Tert-butyl ethyl ether	59	4.499	4.499	0.000	97	526255	10.0	8.79	
69 Propionitrile	54	4.707	4.708	-0.001	98	59132	100.0	99.8	
68 Ethyl acetate	43	4.725	4.725	0.000	99	151550	20.0	20.5	
73 Methacrylonitrile	41	4.899	4.899	0.000	94	396932	100.0	95.9	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	97	464842	10.0	9.98	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.092	7.110	-0.018	95	65856	20.0	20.1	
95 2-Nitropropane	41	7.614	7.597	0.017	96	29334	20.0	20.7	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.558	12.576	-0.018	0	39846	20.0	18.9	
135 1,2,3-Trimethylbenzene	105	14.925	14.926	-0.001	99	768212	10.0	9.72	
140 1,3,5-Trichlorobenzene	180	16.927	16.945	-0.018	98	480518	10.0	10.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

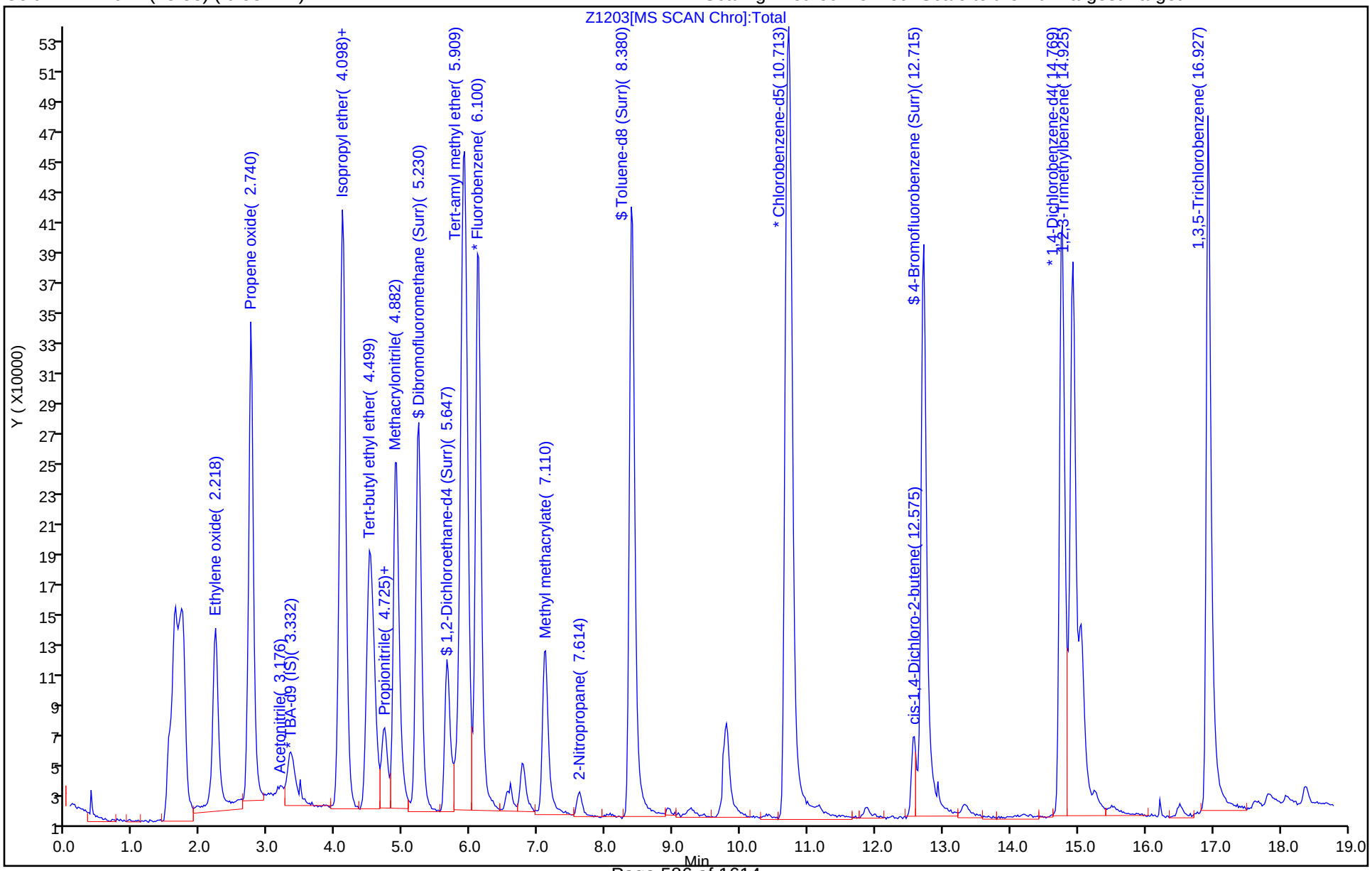
Report Date: 08-Sep-2018 09:12:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D

Injection Date:	07-Sep-2018 18:09:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



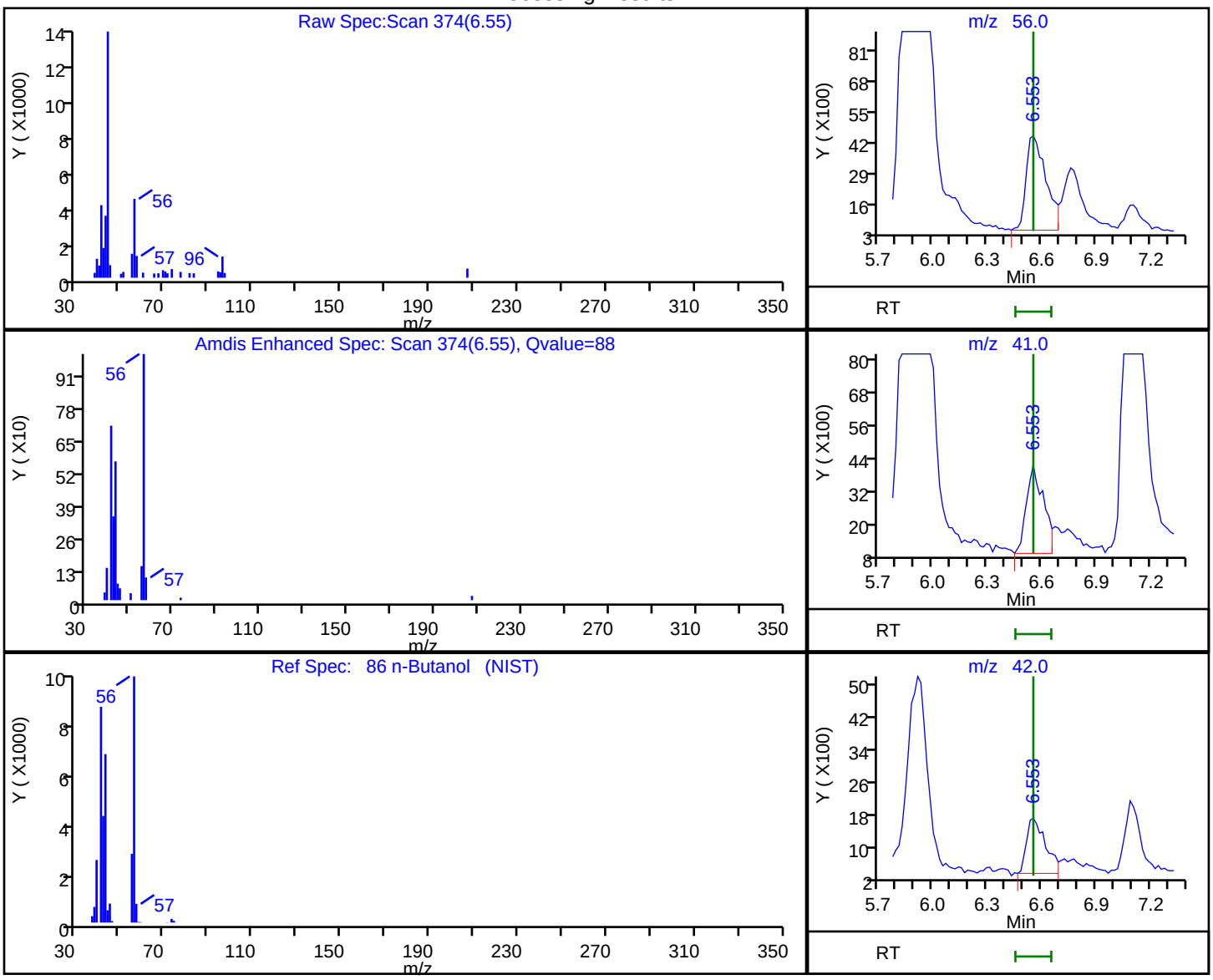
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D
Injection Date: 07-Sep-2018 18:09:30 Instrument ID: VMS_Z
Lims ID: icv
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 26 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

86 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
6.55	56.00	30908	217.7588
6.55	41.00	21606	
6.55	42.00	10078	

Reviewer: ilczyszynd, 08-Sep-2018 09:08:46
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-428698/24 Calibration Date: 09/07/2018 18:09

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 15:56

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 17:47

Lab File ID: Z1203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0014	0.0014		963	1000	-3.7	20.0
Acetonitrile	Ave	0.0048	0.0043		89.1	100	-10.9	20.0
Diisopropyl ether	Ave	0.2218	0.2084		9.40	10.0	-6.0	20.0
2-Chloro-1,3-butadiene	Ave	0.4037	0.3585		8.88	10.0	-11.2	20.0
Tert-butyl ethyl ether	Ave	0.6957	0.6113		8.79	10.0	-12.1	20.0
Propionitrile	Ave	0.0069	0.0069		99.8	100	-0.2	20.0
Ethyl acetate	Ave	0.0857	0.0880		20.5	20.0	2.7	20.0
Methacrylonitrile	Ave	0.0481	0.0461		95.9	100	-4.1	20.0
Tert-amyl methyl ether	Ave	0.5413	0.5400		9.98	10.0	-0.2	20.0
Methyl methacrylate	Ave	0.0381	0.0383		20.1	20.0	0.3	20.0
2-Nitropropane	Ave	0.0165	0.0170		20.7	20.0	3.3	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0632	0.0598		18.9	20.0	-5.4	20.0
1,2,3-Trimethylbenzene	Ave	2.370	2.304		9.72	10.0	-2.8	20.0
Dibromofluoromethane (Surr)	Ave	0.5618	0.5498		9.79	10.0	-2.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2205	0.2219		10.1	10.0	0.6	20.0
Toluene-d8 (Surr)	Ave	4.941	4.789		9.69	10.0	-3.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.604	1.557		9.71	10.0	-2.9	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 07-Sep-2018 18:09:30 ALS Bottle#: 26 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 09:12:40 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 09:08:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.332	0.018	0	153987	250.0	250.0	
* 2 Fluorobenzene	96	6.117	6.118	-0.001	99	1076041	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.678	10.696	-0.018	87	232978	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.769	14.769	0.000	97	416740	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.230	5.230	0.000	93	473299	10.0	9.79	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.647	5.648	-0.001	0	191031	10.0	10.1	
$ 10 Toluene-d8 (Surr)	98	8.380	8.381	-0.001	92	892650	10.0	9.69	
$ 11 4-Bromofluorobenzene (Surr	95	12.715	12.715	0.000	89	519206	10.0	9.71	
34 Ethylene oxide	43	2.218	2.218	0.000	99	117823	1000.0	962.6	
42 Propene oxide	58	2.740	2.741	-0.001	96	716473	1000.0	947.0	
39 Ethanol	45		2.857				ND	ND	U
47 Isopropyl alcohol	45		3.071				ND	ND	U
53 Acetonitrile	41	3.176	3.176	0.000	99	36558	100.0	89.1	
60 Isopropyl ether	87	4.098	4.098	0.000	97	179436	10.0	9.40	
63 2-Chloro-1,3-butadiene	53	4.116	4.116	0.000	88	308609	10.0	8.88	
64 Tert-butyl ethyl ether	59	4.499	4.499	0.000	97	526255	10.0	8.79	
69 Propionitrile	54	4.707	4.708	-0.001	98	59132	100.0	99.8	
68 Ethyl acetate	43	4.725	4.725	0.000	99	151550	20.0	20.5	
73 Methacrylonitrile	41	4.899	4.899	0.000	94	396932	100.0	95.9	
83 Tert-amyl methyl ether	73	5.926	5.926	0.000	97	464842	10.0	9.98	
86 n-Butanol	56		6.553				ND	ND	U
91 Methyl methacrylate	100	7.092	7.110	-0.018	95	65856	20.0	20.1	
95 2-Nitropropane	41	7.614	7.597	0.017	96	29334	20.0	20.7	
106 Tetrahydrothiophene	60		9.721				ND	ND	U
120 cis-1,4-Dichloro-2-butene	53	12.558	12.576	-0.018	0	39846	20.0	18.9	
135 1,2,3-Trimethylbenzene	105	14.925	14.926	-0.001	99	768212	10.0	9.72	
140 1,3,5-Trichlorobenzene	180	16.927	16.945	-0.018	98	480518	10.0	10.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL
MV-Supp B_00021	Amount Added:	5.00	Units: uL

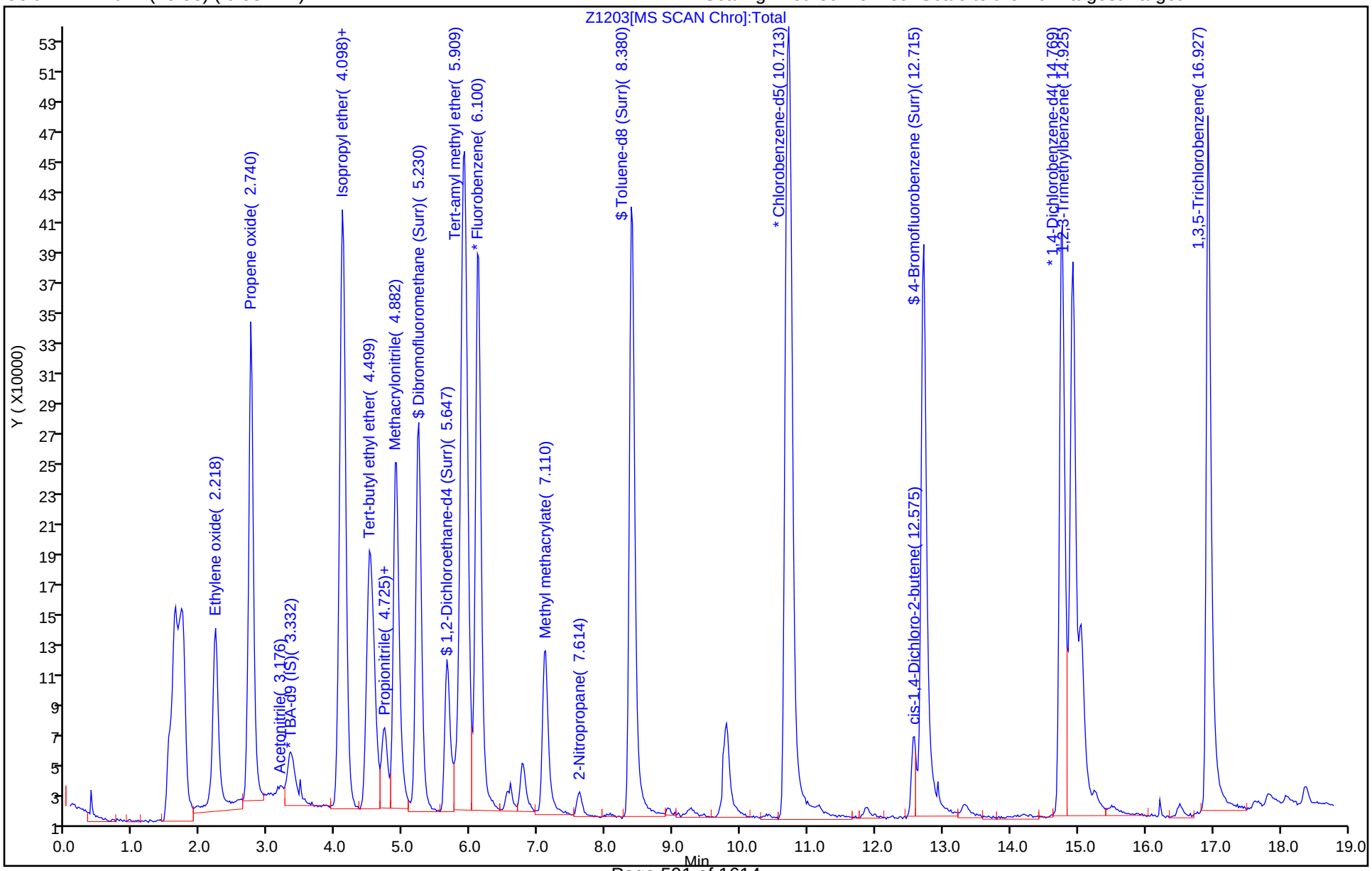
Report Date: 08-Sep-2018 09:12:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1203.D

Injection Date:	07-Sep-2018 18:09:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429676/17 Calibration Date: 09/14/2018 12:39

Instrument ID: VMS_Z Calib Start Date: 07/04/2018 08:02

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 07/04/2018 10:14

Lab File ID: Z1440.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2				160	200	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1440.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 14-Sep-2018 12:39:30 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:12:38 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: newcomer Date: 14-Sep-2018 19:44:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.330	3.353	-0.023	0	111454	250.0	250.0	
* 2 Fluorobenzene	96	6.133	6.138	-0.005	99	1119675	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.711	10.716	-0.005	87	230602	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.807	-0.006	96	462407	12.5	12.5	
27 Dichlorodifluoromethane	85	1.816	1.821	-0.005	100	404454	10.0	10.2	
30 Chloromethane	50	1.972	1.978	-0.006	99	260375	10.0	9.76	
32 Vinyl chloride	62	2.042	2.065	-0.023	98	216793	10.0	9.80	
35 Bromomethane	94	2.286	2.291	-0.005	90	289160	10.0	9.77	
36 Chloroethane	64	2.321	2.326	-0.005	99	146525	10.0	9.61	
37 Dichlorofluoromethane	67	2.460	2.465	-0.005	99	532712	10.0	9.39	
38 Trichlorofluoromethane	101	2.530	2.517	0.013	100	603205	10.0	9.60	
40 Ethyl ether	59	2.686	2.691	-0.005	94	99373	10.0	9.48	
44 Acrolein	56	2.791	2.796	-0.005	98	44991	59.3	50.4	
45 1,1-Dichloroethene	96	2.895	2.918	-0.023	97	281319	10.0	9.12	
48 Acetone	43	2.912	2.935	-0.023	29	51993	40.0	37.5	
46 1,1,2-Trichloro-1,2,2-trif	151	2.947	2.952	-0.005	97	405648	10.0	9.54	
49 Iodomethane	142	3.052	3.057	-0.005	98	721660	10.0	9.72	
50 Carbon disulfide	76	3.121	3.144	-0.023	99	933697	10.0	9.18	
51 Methyl acetate	43	3.208	3.214	-0.006	40	113339	20.0	18.8	
52 3-Chloro-1-propene	41	3.208	3.214	-0.006	92	395043	10.0	9.50	
54 Methylene Chloride	84	3.313	3.318	-0.005	91	240213	10.0	9.20	
55 2-Methyl-2-propanol	59	3.400	3.440	-0.040	93	49133	100.0	101.7	
58 Acrylonitrile	53	3.522	3.544	-0.022	99	173265	100.0	90.6	
57 trans-1,2-Dichloroethene	96	3.591	3.614	-0.023	99	320888	10.0	9.24	
56 Methyl tert-butyl ether	73	3.609	3.614	-0.005	96	353980	10.0	9.17	
59 Hexane	57	3.870	3.875	-0.005	95	365265	10.0	9.02	
62 1,1-Dichloroethane	63	4.009	4.014	-0.005	96	470998	10.0	9.57	
61 Vinyl acetate	43	4.044	4.049	-0.005	97	536027	20.0	18.9	
65 cis-1,2-Dichloroethene	96	4.671	4.676	-0.005	81	328509	10.0	9.29	
67 2-Butanone (MEK)	43	4.653	4.676	-0.023	39	108659	40.0	34.8	
66 2,2-Dichloropropane	77	4.688	4.693	-0.005	88	486488	10.0	9.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.949	4.954	-0.005	96	144404	10.0	9.72	
72 Tetrahydrofuran	42	5.036	5.041	-0.005	37	41957	20.0	18.6	
74 Chloroform	83	5.036	5.041	-0.005	95	539422	10.0	9.48	
75 1,1,1-Trichloroethane	97	5.315	5.320	-0.005	97	550816	10.0	9.35	
76 Cyclohexane	56	5.402	5.407	-0.005	92	428743	10.0	9.26	
78 1,1-Dichloropropene	75	5.506	5.511	-0.005	98	430058	10.0	9.26	
77 Carbon tetrachloride	117	5.541	5.546	-0.005	97	491280	10.0	9.23	
80 Isobutyl alcohol	41	5.663	5.650	0.013	48	48242	250.0	227.5	
82 1,2-Dichloroethane	62	5.767	5.772	-0.005	54	202531	10.0	9.22	
81 Benzene	78	5.767	5.772	-0.005	97	794953	10.0	9.21	
84 n-Heptane	43	6.150	6.155	-0.005	94	502233	10.0	9.29	
85 Trichloroethene	95	6.638	6.643	-0.005	97	411851	10.0	9.36	
90 1,2-Dichloropropane	63	6.933	6.939	-0.006	89	272139	10.0	9.35	
87 Methylcyclohexane	55	6.933	6.939	-0.006	88	395599	10.0	9.09	
92 Dibromomethane	93	7.090	7.095	-0.005	98	194373	10.0	9.31	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.316	7.322	-0.006	99	483145	10.0	9.49	
96 2-Chloroethyl vinyl ether	63	7.786	7.774	0.012	93	72520	10.0	9.40	
97 cis-1,3-Dichloropropene	75	7.995	7.983	0.012	97	379477	10.0	9.51	
98 4-Methyl-2-pentanone (MIBK	43	8.239	8.244	-0.005	96	363201	40.0	34.6	
99 Toluene	91	8.518	8.505	0.013	99	1036650	10.0	9.22	
100 trans-1,3-Dichloropropene	75	8.848	8.836	0.012	93	273306	10.0	9.42	
101 Ethyl methacrylate	69	9.040	9.045	-0.005	91	172077	10.0	8.92	
102 1,1,2-Trichloroethane	97	9.127	9.132	-0.005	90	186054	10.0	8.95	
103 Tetrachloroethene	164	9.388	9.393	-0.005	97	396441	10.0	9.35	
104 1,3-Dichloropropane	76	9.388	9.393	-0.005	65	278084	10.0	9.42	
105 2-Hexanone	43	9.562	9.567	-0.005	98	238735	40.0	37.9	
107 Chlorodibromomethane	129	9.753	9.759	-0.006	90	341567	10.0	9.37	
109 Ethylene Dibromide	107	9.927	9.933	-0.006	99	243015	10.0	9.43	
111 Chlorobenzene	112	10.763	10.768	-0.005	94	691743	10.0	9.56	
113 1,1,1,2-Tetrachloroethane	131	10.902	10.907	-0.005	97	328946	10.0	9.62	
112 Ethylbenzene	106	10.972	10.977	-0.005	98	347543	10.0	9.44	
114 m-Xylene & p-Xylene	106	11.181	11.186	-0.005	0	496435	10.0	10.1	
115 o-Xylene	106	11.842	11.847	-0.005	97	413143	10.0	9.35	
116 Styrene	104	11.877	11.865	0.012	94	654828	10.0	9.32	
117 Bromoform	173	12.138	12.143	-0.005	96	231070	10.0	9.57	
118 Isopropylbenzene	105	12.504	12.509	-0.005	95	1296276	10.0	9.22	
119 Cyclohexanone	55	12.608	12.613	-0.005	93	93810	400.0	321.7	
121 Bromobenzene	156	12.991	12.979	0.012	90	368625	10.0	9.11	
122 1,1,2,2-Tetrachloroethane	83	13.009	13.014	-0.006	95	228577	10.0	8.81	
124 1,2,3-Trichloropropane	110	13.061	13.066	-0.005	77	54393	10.0	9.13	
125 trans-1,4-Dichloro-2-buten	53	13.113	13.118	-0.005	82	43836	10.0	10.3	
123 N-Propylbenzene	120	13.235	13.240	-0.005	99	302100	10.0	8.77	
126 2-Chlorotoluene	126	13.357	13.344	0.013	96	261522	10.0	8.94	
128 4-Chlorotoluene	126	13.548	13.536	0.012	97	292415	10.0	8.94	
127 1,3,5-Trimethylbenzene	105	13.566	13.553	0.013	93	992771	10.0	9.20	
129 tert-Butylbenzene	119	14.123	14.128	-0.005	93	1017931	10.0	8.79	
130 1,2,4-Trimethylbenzene	105	14.210	14.215	-0.005	96	973096	10.0	9.10	
131 sec-Butylbenzene	134	14.523	14.528	-0.005	94	266876	10.0	8.63	
132 1,3-Dichlorobenzene	146	14.680	14.685	-0.005	98	565808	10.0	8.90	
133 4-Isopropyltoluene	119	14.801	14.807	-0.006	97	1155763	10.0	8.98	
134 1,4-Dichlorobenzene	146	14.836	14.841	-0.005	95	672853	10.0	8.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.498	15.503	-0.005	97	508763	10.0	8.78	
137 n-Butylbenzene	91	15.550	15.555	-0.005	98	1213269	10.0	9.74	
139 1,2-Dibromo-3-Chloropropan	157	16.664	16.669	-0.005	93	46526	10.0	8.54	
141 1,2,4-Trichlorobenzene	180	17.639	17.644	-0.005	94	378881	10.0	9.79	
142 Hexachlorobutadiene	225	17.830	17.835	-0.005	98	326965	10.0	9.68	
143 Naphthalene	128	17.865	17.870	-0.005	98	311084	10.0	9.54	
144 1,2,3-Trichlorobenzene	180	18.109	18.114	-0.005	96	298177	10.0	9.78	
S 150 Xylenes, Total (URS)	1				0		20.0	19.5	
S 146 Xylenes, Total	106				0		20.0	19.5	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.9	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.5	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.5	
S 149 Trihalomethanes, Total	1				0		40.0	37.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMain B_00001	Amount Added:	4.00	Units: uL

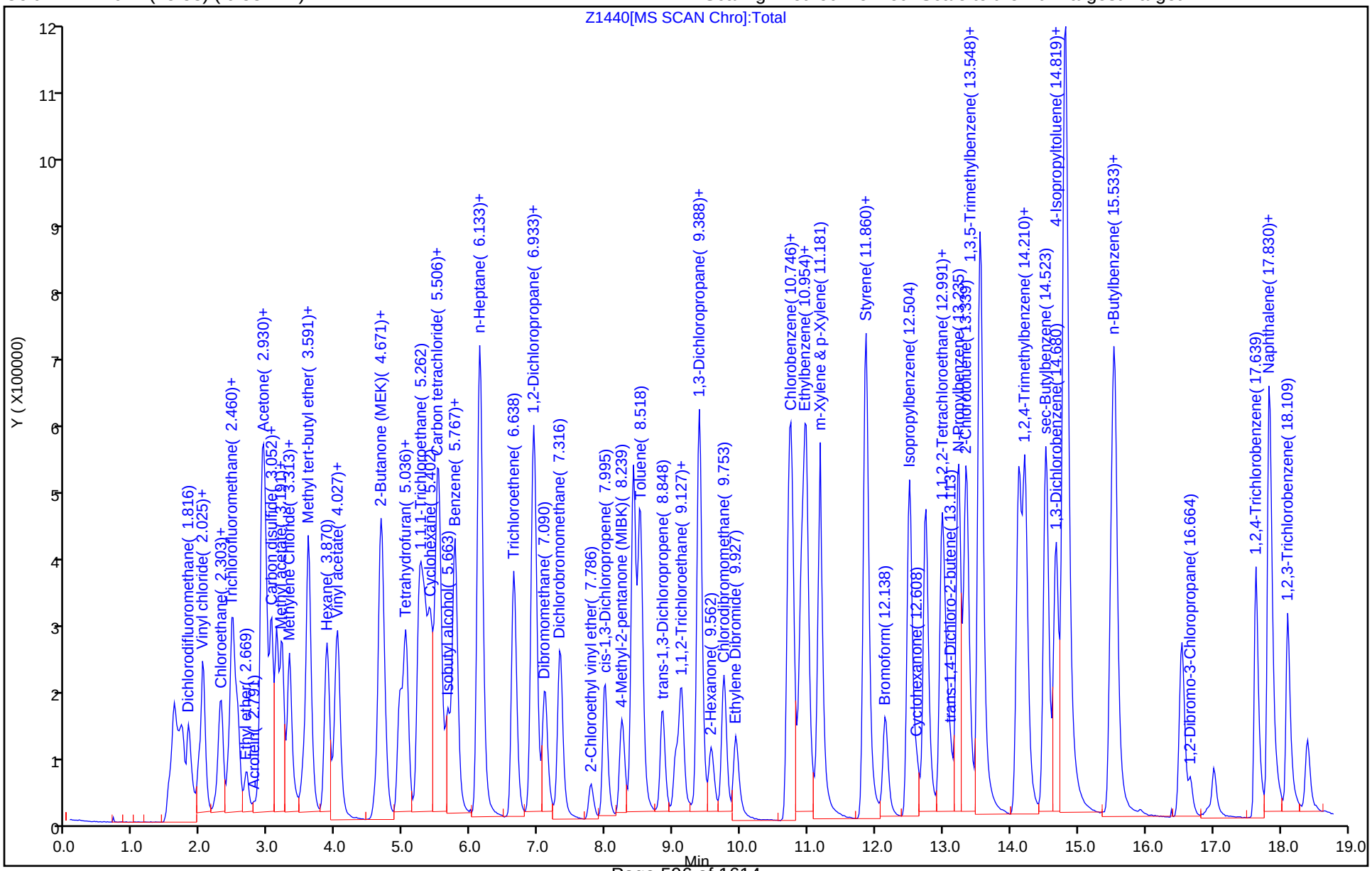
Report Date: 14-Sep-2018 19:44:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1440.D

Injection Date:	14-Sep-2018 12:39:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



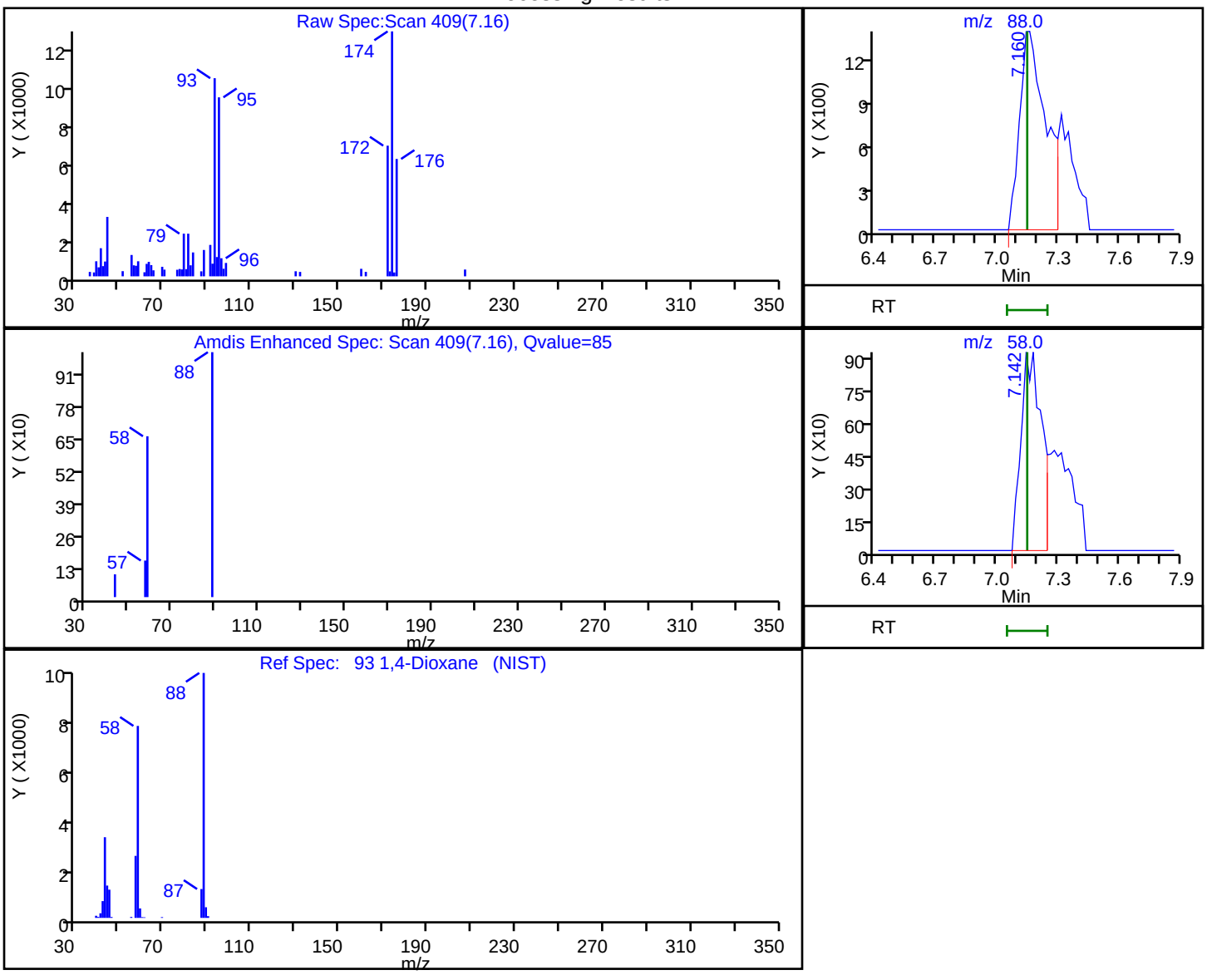
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1440.D
Injection Date: 14-Sep-2018 12:39:30 Instrument ID: VMS_Z
Lims ID: icv
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

93 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
7.16	88.00	12384	125.3347
7.14	58.00	6495	

Reviewer: ilczyszynd, 14-Sep-2018 13:03:40
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429676/17 Calibration Date: 09/14/2018 12:39

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1440.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4435	0.4515		10.2	10.0	1.8	20.0
Chloromethane	Ave	0.2978	0.2907	0.1000	9.76	10.0	-2.4	20.0
Vinyl chloride	Ave	0.2469	0.2420		9.80	10.0	-2.0	20.0
Bromomethane	Ave	0.3303	0.3228		9.77	10.0	-2.3	20.0
Chloroethane	Ave	0.1702	0.1636		9.61	10.0	-3.9	20.0
Dichlorofluoromethane	Ave	0.6331	0.5947		9.39	10.0	-6.1	20.0
Trichlorofluoromethane	Ave	0.7012	0.6734		9.60	10.0	-4.0	20.0
Ethyl ether	Ave	0.1171	0.1109		9.48	10.0	-5.2	20.0
Acrolein	Lin1		0.0085		50.4	59.3	-14.9	20.0
1,1-Dichloroethene	Ave	0.3445	0.3141		9.12	10.0	-8.8	20.0
Acetone	Lin2		0.0145		37.5	40.0	-6.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4745	0.4529		9.54	10.0	-4.6	20.0
Methyl iodide	Ave	0.8293	0.8057		9.72	10.0	-2.8	20.0
Carbon disulfide	Ave	1.135	1.042		9.18	10.0	-8.2	20.0
3-Chloro-1-propene	Ave	0.4644	0.4410		9.50	10.0	-5.0	20.0
Methyl acetate	Lin2		0.0633		18.8	20.0	-6.2	20.0
Methylene Chloride	Ave	0.2916	0.2682		9.20	10.0	-8.0	20.0
t-Butyl alcohol	Ave	1.084	1.102		102	100	1.7	20.0
Acrylonitrile	Ave	0.0213	0.0193		90.6	100	-9.4	20.0
trans-1,2-Dichloroethene	Ave	0.3878	0.3582		9.24	10.0	-7.6	20.0
Methyl tert-butyl ether	Ave	0.4311	0.3952		9.17	10.0	-8.3	20.0
Hexane	Ave	2.195	1.980		9.02	10.0	-9.8	20.0
1,1-Dichloroethane	Ave	0.5493	0.5258	0.1000	9.57	10.0	-4.3	20.0
Vinyl acetate	Ave	0.3164	0.2992		18.9	20.0	-5.4	20.0
2-Butanone (MEK)	Ave	0.0348	0.0303		34.8	40.0	-12.9	20.0
cis-1,2-Dichloroethene	Ave	0.3947	0.3668		9.29	10.0	-7.1	20.0
2,2-Dichloropropane	Lin2		0.5431		9.51	10.0	-4.9	20.0
Bromochloromethane	Ave	0.1658	0.1612		9.72	10.0	-2.8	20.0
Chloroform	Ave	0.6350	0.6022		9.48	10.0	-5.2	20.0
Tetrahydrofuran	Ave	0.0252	0.0234		18.6	20.0	-7.0	20.0
1,1,1-Trichloroethane	Ave	0.6575	0.6149		9.35	10.0	-6.5	20.0
Cyclohexane	Ave	0.5171	0.4787		9.26	10.0	-7.4	20.0
1,1-Dichloropropene	Ave	0.5182	0.4801		9.26	10.0	-7.4	20.0
Carbon tetrachloride	Ave	0.5939	0.5485		9.23	10.0	-7.7	20.0
Isobutyl alcohol	Lin2		0.4328		227	250	-9.0	20.0
1,2-Dichloroethane	Ave	0.2452	0.2261		9.22	10.0	-7.8	20.0
Benzene	Ave	0.9640	0.8875		9.21	10.0	-7.9	20.0
Trichloroethene	Ave	0.4914	0.4598		9.36	10.0	-6.4	20.0
1,2-Dichloropropane	Ave	0.3248	0.3038		9.35	10.0	-6.5	20.0
Methylcyclohexane	Ave	0.4858	0.4416		9.09	10.0	-9.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429676/17 Calibration Date: 09/14/2018 12:39

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1440.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.2331	0.2170		9.31	10.0	-6.9	20.0
Bromodichloromethane	Ave	0.5682	0.5394		9.49	10.0	-5.1	20.0
2-Chloroethyl vinyl ether	Lin2		0.0810		9.40	10.0	-6.0	20.0
cis-1,3-Dichloropropene	Ave	2.162	2.057		9.51	10.0	-4.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1170	0.1014		34.6	40.0	-13.4	20.0
Toluene	Ave	1.255	1.157		9.22	10.0	-7.8	20.0
trans-1,3-Dichloropropene	Ave	0.3240	0.3051		9.42	10.0	-5.8	20.0
Ethyl methacrylate	Ave	1.046	0.9328		8.92	10.0	-10.8	20.0
1,1,2-Trichloroethane	Ave	0.2322	0.2077		8.95	10.0	-10.5	20.0
1,3-Dichloropropane	Ave	1.601	1.507		9.42	10.0	-5.8	20.0
Tetrachloroethene	Ave	2.298	2.149		9.35	10.0	-6.5	20.0
2-Hexanone	Ave	0.3416	0.3235		37.9	40.0	-5.3	20.0
Dibromochloromethane	Ave	1.976	1.852		9.37	10.0	-6.3	20.0
1,2-Dibromoethane	Ave	1.398	1.317		9.43	10.0	-5.7	20.0
Chlorobenzene	Ave	3.921	3.750	0.3000	9.56	10.0	-4.4	20.0
1,1,1,2-Tetrachloroethane	Ave	1.853	1.783		9.62	10.0	-3.8	20.0
Ethylbenzene	Ave	1.995	1.884		9.44	10.0	-5.6	20.0
m,p-Xylene	Ave	2.660	2.691		10.1	10.0	1.2	20.0
o-Xylene	Ave	2.394	2.239		9.35	10.0	-6.5	20.0
Styrene	Ave	3.809	3.550		9.32	10.0	-6.8	20.0
Bromoform	Ave	1.309	1.253	0.1000	9.57	10.0	-4.3	20.0
Isopropylbenzene	Ave	3.800	3.504		9.22	10.0	-7.8	20.0
Cyclohexanone	Ave	0.0158	0.0127		322	400	-19.6	20.0
Bromobenzene	Ave	1.094	0.996		9.11	10.0	-8.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7010	0.6179	0.3000	8.81	10.0	-11.9	20.0
1,2,3-Trichloropropane	Ave	0.1610	0.1470		9.13	10.0	-8.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1152	0.1185		10.3	10.0	2.9	20.0
N-Propylbenzene	Ave	0.9309	0.8167		8.77	10.0	-12.3	20.0
2-Chlorotoluene	Ave	0.7911	0.7070		8.94	10.0	-10.6	20.0
4-Chlorotoluene	Ave	0.8839	0.7905		8.94	10.0	-10.6	20.0
1,3,5-Trimethylbenzene	Ave	2.917	2.684		9.20	10.0	-8.0	20.0
tert-Butylbenzene	Ave	3.129	2.752		8.79	10.0	-12.1	20.0
1,2,4-Trimethylbenzene	Ave	2.890	2.631		9.10	10.0	-9.0	20.0
sec-Butylbenzene	Ave	0.8357	0.7214		8.63	10.0	-13.7	20.0
1,3-Dichlorobenzene	Ave	1.719	1.530		8.90	10.0	-11.0	20.0
4-Isopropyltoluene	Ave	3.479	3.124		8.98	10.0	-10.2	20.0
1,4-Dichlorobenzene	Ave	2.096	1.819		8.68	10.0	-13.2	20.0
1,2-Dichlorobenzene	Ave	1.566	1.375		8.78	10.0	-12.2	20.0
n-Butylbenzene	Lin2		3.280		9.74	10.0	-2.6	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1473	0.1258		8.54	10.0	-14.6	20.0
1,2,4-Trichlorobenzene	Lin2		1.024		9.79	10.0	-2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICV 280-429676/17 Calibration Date: 09/14/2018 12:39

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1440.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Lin1		0.8839		9.68	10.0	-3.2	20.0
Naphthalene	Lin2		0.8409		9.54	10.0	-4.6	20.0
1,2,3-Trichlorobenzene	Lin2		0.8061		9.78	10.0	-2.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1440.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 14-Sep-2018 12:39:30 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:12:38 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: newcomer Date: 14-Sep-2018 19:44:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.330	3.353	-0.023	0	111454	250.0	250.0	
* 2 Fluorobenzene	96	6.133	6.138	-0.005	99	1119675	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.711	10.716	-0.005	87	230602	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.807	-0.006	96	462407	12.5	12.5	
27 Dichlorodifluoromethane	85	1.816	1.821	-0.005	100	404454	10.0	10.2	
30 Chloromethane	50	1.972	1.978	-0.006	99	260375	10.0	9.76	
32 Vinyl chloride	62	2.042	2.065	-0.023	98	216793	10.0	9.80	
35 Bromomethane	94	2.286	2.291	-0.005	90	289160	10.0	9.77	
36 Chloroethane	64	2.321	2.326	-0.005	99	146525	10.0	9.61	
37 Dichlorofluoromethane	67	2.460	2.465	-0.005	99	532712	10.0	9.39	
38 Trichlorofluoromethane	101	2.530	2.517	0.013	100	603205	10.0	9.60	
40 Ethyl ether	59	2.686	2.691	-0.005	94	99373	10.0	9.48	
44 Acrolein	56	2.791	2.796	-0.005	98	44991	59.3	50.4	
45 1,1-Dichloroethene	96	2.895	2.918	-0.023	97	281319	10.0	9.12	
48 Acetone	43	2.912	2.935	-0.023	29	51993	40.0	37.5	
46 1,1,2-Trichloro-1,2,2-trif	151	2.947	2.952	-0.005	97	405648	10.0	9.54	
49 Iodomethane	142	3.052	3.057	-0.005	98	721660	10.0	9.72	
50 Carbon disulfide	76	3.121	3.144	-0.023	99	933697	10.0	9.18	
51 Methyl acetate	43	3.208	3.214	-0.006	40	113339	20.0	18.8	
52 3-Chloro-1-propene	41	3.208	3.214	-0.006	92	395043	10.0	9.50	
54 Methylene Chloride	84	3.313	3.318	-0.005	91	240213	10.0	9.20	
55 2-Methyl-2-propanol	59	3.400	3.440	-0.040	93	49133	100.0	101.7	
58 Acrylonitrile	53	3.522	3.544	-0.022	99	173265	100.0	90.6	
57 trans-1,2-Dichloroethene	96	3.591	3.614	-0.023	99	320888	10.0	9.24	
56 Methyl tert-butyl ether	73	3.609	3.614	-0.005	96	353980	10.0	9.17	
59 Hexane	57	3.870	3.875	-0.005	95	365265	10.0	9.02	
62 1,1-Dichloroethane	63	4.009	4.014	-0.005	96	470998	10.0	9.57	
61 Vinyl acetate	43	4.044	4.049	-0.005	97	536027	20.0	18.9	
65 cis-1,2-Dichloroethene	96	4.671	4.676	-0.005	81	328509	10.0	9.29	
67 2-Butanone (MEK)	43	4.653	4.676	-0.023	39	108659	40.0	34.8	
66 2,2-Dichloropropane	77	4.688	4.693	-0.005	88	486488	10.0	9.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.949	4.954	-0.005	96	144404	10.0	9.72	
72 Tetrahydrofuran	42	5.036	5.041	-0.005	37	41957	20.0	18.6	
74 Chloroform	83	5.036	5.041	-0.005	95	539422	10.0	9.48	
75 1,1,1-Trichloroethane	97	5.315	5.320	-0.005	97	550816	10.0	9.35	
76 Cyclohexane	56	5.402	5.407	-0.005	92	428743	10.0	9.26	
78 1,1-Dichloropropene	75	5.506	5.511	-0.005	98	430058	10.0	9.26	
77 Carbon tetrachloride	117	5.541	5.546	-0.005	97	491280	10.0	9.23	
80 Isobutyl alcohol	41	5.663	5.650	0.013	48	48242	250.0	227.5	
82 1,2-Dichloroethane	62	5.767	5.772	-0.005	54	202531	10.0	9.22	
81 Benzene	78	5.767	5.772	-0.005	97	794953	10.0	9.21	
84 n-Heptane	43	6.150	6.155	-0.005	94	502233	10.0	9.29	
85 Trichloroethene	95	6.638	6.643	-0.005	97	411851	10.0	9.36	
90 1,2-Dichloropropane	63	6.933	6.939	-0.006	89	272139	10.0	9.35	
87 Methylcyclohexane	55	6.933	6.939	-0.006	88	395599	10.0	9.09	
92 Dibromomethane	93	7.090	7.095	-0.005	98	194373	10.0	9.31	
93 1,4-Dioxane	88		7.147				ND	ND	U
94 Dichlorobromomethane	83	7.316	7.322	-0.006	99	483145	10.0	9.49	
96 2-Chloroethyl vinyl ether	63	7.786	7.774	0.012	93	72520	10.0	9.40	
97 cis-1,3-Dichloropropene	75	7.995	7.983	0.012	97	379477	10.0	9.51	
98 4-Methyl-2-pentanone (MIBK	43	8.239	8.244	-0.005	96	363201	40.0	34.6	
99 Toluene	91	8.518	8.505	0.013	99	1036650	10.0	9.22	
100 trans-1,3-Dichloropropene	75	8.848	8.836	0.012	93	273306	10.0	9.42	
101 Ethyl methacrylate	69	9.040	9.045	-0.005	91	172077	10.0	8.92	
102 1,1,2-Trichloroethane	97	9.127	9.132	-0.005	90	186054	10.0	8.95	
103 Tetrachloroethene	164	9.388	9.393	-0.005	97	396441	10.0	9.35	
104 1,3-Dichloropropane	76	9.388	9.393	-0.005	65	278084	10.0	9.42	
105 2-Hexanone	43	9.562	9.567	-0.005	98	238735	40.0	37.9	
107 Chlorodibromomethane	129	9.753	9.759	-0.006	90	341567	10.0	9.37	
109 Ethylene Dibromide	107	9.927	9.933	-0.006	99	243015	10.0	9.43	
111 Chlorobenzene	112	10.763	10.768	-0.005	94	691743	10.0	9.56	
113 1,1,1,2-Tetrachloroethane	131	10.902	10.907	-0.005	97	328946	10.0	9.62	
112 Ethylbenzene	106	10.972	10.977	-0.005	98	347543	10.0	9.44	
114 m-Xylene & p-Xylene	106	11.181	11.186	-0.005	0	496435	10.0	10.1	
115 o-Xylene	106	11.842	11.847	-0.005	97	413143	10.0	9.35	
116 Styrene	104	11.877	11.865	0.012	94	654828	10.0	9.32	
117 Bromoform	173	12.138	12.143	-0.005	96	231070	10.0	9.57	
118 Isopropylbenzene	105	12.504	12.509	-0.005	95	1296276	10.0	9.22	
119 Cyclohexanone	55	12.608	12.613	-0.005	93	93810	400.0	321.7	
121 Bromobenzene	156	12.991	12.979	0.012	90	368625	10.0	9.11	
122 1,1,2,2-Tetrachloroethane	83	13.009	13.014	-0.006	95	228577	10.0	8.81	
124 1,2,3-Trichloropropane	110	13.061	13.066	-0.005	77	54393	10.0	9.13	
125 trans-1,4-Dichloro-2-buten	53	13.113	13.118	-0.005	82	43836	10.0	10.3	
123 N-Propylbenzene	120	13.235	13.240	-0.005	99	302100	10.0	8.77	
126 2-Chlorotoluene	126	13.357	13.344	0.013	96	261522	10.0	8.94	
128 4-Chlorotoluene	126	13.548	13.536	0.012	97	292415	10.0	8.94	
127 1,3,5-Trimethylbenzene	105	13.566	13.553	0.013	93	992771	10.0	9.20	
129 tert-Butylbenzene	119	14.123	14.128	-0.005	93	1017931	10.0	8.79	
130 1,2,4-Trimethylbenzene	105	14.210	14.215	-0.005	96	973096	10.0	9.10	
131 sec-Butylbenzene	134	14.523	14.528	-0.005	94	266876	10.0	8.63	
132 1,3-Dichlorobenzene	146	14.680	14.685	-0.005	98	565808	10.0	8.90	
133 4-Isopropyltoluene	119	14.801	14.807	-0.006	97	1155763	10.0	8.98	
134 1,4-Dichlorobenzene	146	14.836	14.841	-0.005	95	672853	10.0	8.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.498	15.503	-0.005	97	508763	10.0	8.78	
137 n-Butylbenzene	91	15.550	15.555	-0.005	98	1213269	10.0	9.74	
139 1,2-Dibromo-3-Chloropropan	157	16.664	16.669	-0.005	93	46526	10.0	8.54	
141 1,2,4-Trichlorobenzene	180	17.639	17.644	-0.005	94	378881	10.0	9.79	
142 Hexachlorobutadiene	225	17.830	17.835	-0.005	98	326965	10.0	9.68	
143 Naphthalene	128	17.865	17.870	-0.005	98	311084	10.0	9.54	
144 1,2,3-Trichlorobenzene	180	18.109	18.114	-0.005	96	298177	10.0	9.78	
S 150 Xylenes, Total (URS)	1				0		20.0	19.5	
S 146 Xylenes, Total	106				0		20.0	19.5	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.9	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.5	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.5	
S 149 Trihalomethanes, Total	1				0		40.0	37.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-MegaMain B_00001	Amount Added:	4.00	Units: uL

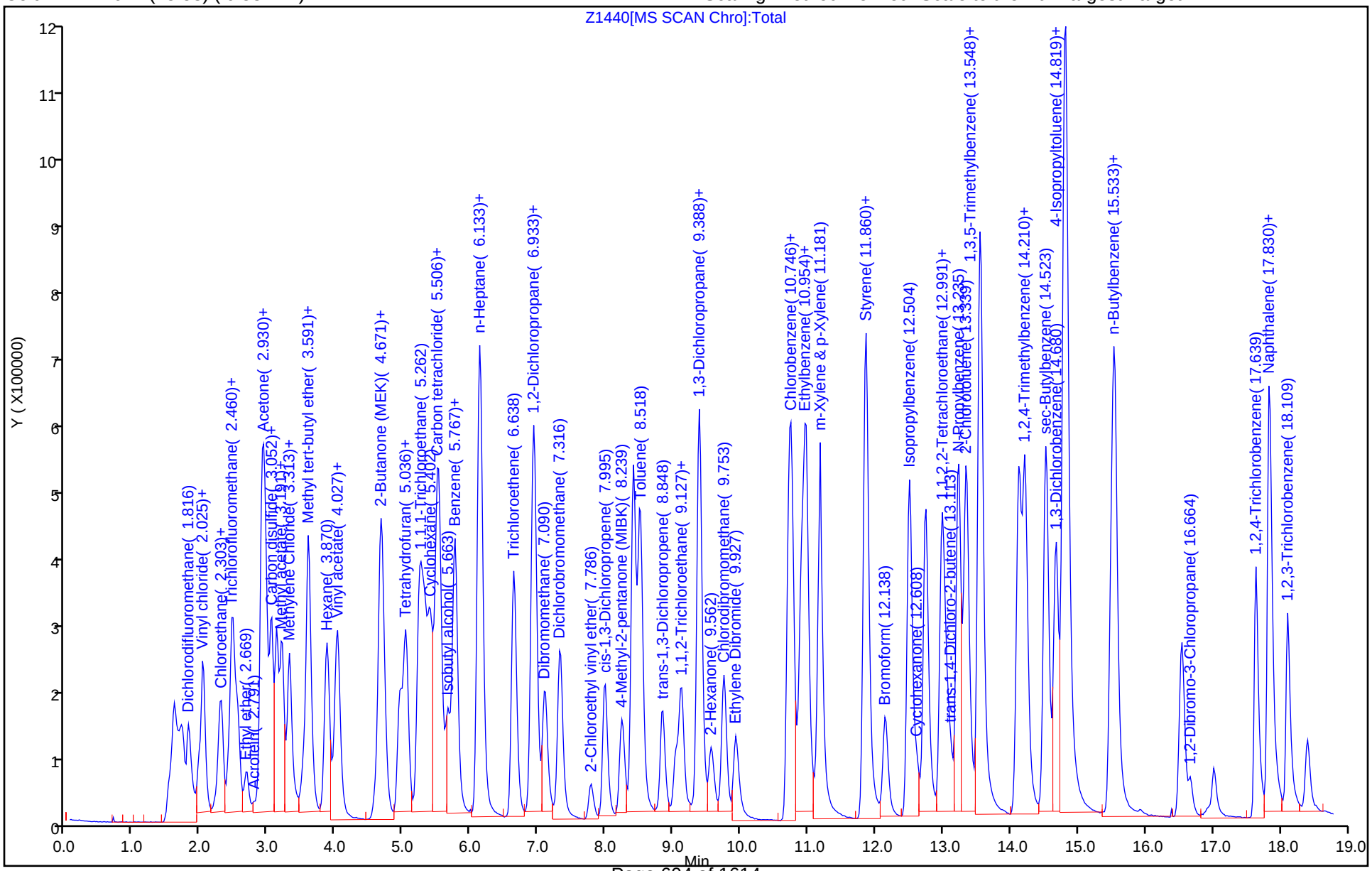
Report Date: 14-Sep-2018 19:44:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1440.D

Injection Date:	14-Sep-2018 12:39:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	icv			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/2 Calibration Date: 09/19/2018 09:51

Instrument ID: VMS_Z Calib Start Date: 07/04/2018 08:02

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 07/04/2018 10:14

Lab File ID: Z1623.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0007		118	200	-41.2*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1623.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 09:51:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:10 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 10:29:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.349	3.349	0.000	0	163028	250.0	250.0	
* 2 Fluorobenzene	96	6.134	6.134	0.000	99	1342226	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.712	10.712	0.000	90	278153	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.803	14.803	0.000	94	559807	12.5	12.5	
27 Dichlorodifluoromethane	85	1.835	1.835	0.000	100	494316	10.0	10.4	
30 Chloromethane	50	1.991	1.991	0.000	98	322824	10.0	10.1	
32 Vinyl chloride	62	2.061	2.061	0.000	98	269251	10.0	10.2	
35 Bromomethane	94	2.287	2.287	0.000	89	340942	10.0	9.61	
36 Chloroethane	64	2.322	2.322	0.000	99	177491	10.0	9.71	
37 Dichlorofluoromethane	67	2.461	2.461	0.000	98	680464	10.0	10.0	
38 Trichlorofluoromethane	101	2.496	2.496	0.000	99	771380	10.0	10.2	
40 Ethyl ether	59	2.688	2.688	0.000	94	125540	10.0	9.99	
44 Acrolein	56	2.792	2.792	0.000	99	64445	59.3	60.7	
45 1,1-Dichloroethene	96	2.914	2.914	0.000	97	350535	10.0	9.48	
48 Acetone	43	2.931	2.931	0.000	44	72886	40.0	44.2	
46 1,1,2-Trichloro-1,2,2-trif	151	2.949	2.949	0.000	97	405841	10.0	7.96	M
49 Iodomethane	142	3.053	3.053	0.000	99	843124	10.0	9.47	
50 Carbon disulfide	76	3.140	3.140	0.000	99	1157906	10.0	9.50	
52 3-Chloro-1-propene	41	3.210	3.210	0.000	91	499027	10.0	10.0	
51 Methyl acetate	43	3.210	3.210	0.000	43	157407	20.0	21.8	
54 Methylene Chloride	84	3.314	3.314	0.000	93	288558	10.0	9.22	
55 2-Methyl-2-propanol	59	3.419	3.419	0.000	96	67450	100.0	95.4	
58 Acrylonitrile	53	3.523	3.523	0.000	99	231444	100.0	101.0	
57 trans-1,2-Dichloroethene	96	3.593	3.593	0.000	99	390631	10.0	9.38	
56 Methyl tert-butyl ether	73	3.610	3.610	0.000	96	471575	10.0	10.2	
59 Hexane	57	3.871	3.871	0.000	95	470121	10.0	9.63	
62 1,1-Dichloroethane	63	4.010	4.010	0.000	96	589430	10.0	10.0	
61 Vinyl acetate	43	4.045	4.045	0.000	97	721183	20.0	21.2	
65 cis-1,2-Dichloroethene	96	4.672	4.672	0.000	82	416894	10.0	9.84	
67 2-Butanone (MEK)	43	4.672	4.672	0.000	42	152417	40.0	40.8	
66 2,2-Dichloropropane	77	4.689	4.689	0.000	89	625283	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.950	4.950	0.000	97	178074	10.0	10.0	
72 Tetrahydrofuran	42	5.037	5.037	0.000	71	51029	20.0	18.9	
74 Chloroform	83	5.037	5.037	0.000	95	683519	10.0	10.0	
75 1,1,1-Trichloroethane	97	5.316	5.316	0.000	98	706350	10.0	10.0	
76 Cyclohexane	56	5.403	5.403	0.000	92	541945	10.0	9.76	
78 1,1-Dichloropropene	75	5.507	5.507	0.000	98	539055	10.0	9.69	
77 Carbon tetrachloride	117	5.542	5.542	0.000	97	647613	10.0	10.2	
80 Isobutyl alcohol	41	5.647	5.647	0.000	92	63938	250.0	206.9	
82 1,2-Dichloroethane	62	5.769	5.769	0.000	56	276309	10.0	10.5	
81 Benzene	78	5.769	5.769	0.000	97	1018358	10.0	9.84	
84 n-Heptane	43	6.152	6.152	0.000	94	658693	10.0	10.2	
85 Trichloroethene	95	6.639	6.639	0.000	97	505411	10.0	9.58	
87 Methylcyclohexane	55	6.935	6.935	0.000	88	495155	10.0	9.49	
90 1,2-Dichloropropane	63	6.935	6.935	0.000	76	345847	10.0	9.92	
92 Dibromomethane	93	7.092	7.092	0.000	98	250859	10.0	10.0	
93 1,4-Dioxane	88	7.144	7.144	0.000	94	13938	200.0	117.7	
94 Dichlorobromomethane	83	7.318	7.318	0.000	99	637382	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	7.788	7.788	0.000	93	93552	10.0	10.1	
97 cis-1,3-Dichloropropene	75	7.979	7.979	0.000	96	478448	10.0	9.95	
98 4-Methyl-2-pentanone (MIBK	43	8.240	8.240	0.000	97	492839	40.0	39.2	
99 Toluene	91	8.519	8.519	0.000	99	1271876	10.0	9.44	
100 trans-1,3-Dichloropropene	75	8.850	8.850	0.000	93	350794	10.0	10.1	
101 Ethyl methacrylate	69	9.041	9.041	0.000	91	229988	10.0	9.88	
102 1,1,2-Trichloroethane	97	9.128	9.128	0.000	91	245924	10.0	9.86	
104 1,3-Dichloropropane	76	9.389	9.389	0.000	68	359141	10.0	10.1	
103 Tetrachloroethene	164	9.389	9.389	0.000	98	490944	10.0	9.60	
105 2-Hexanone	43	9.563	9.563	0.000	98	318133	40.0	41.9	
107 Chlorodibromomethane	129	9.755	9.755	0.000	90	440265	10.0	10.0	
109 Ethylene Dibromide	107	9.929	9.929	0.000	98	310976	10.0	10.0	
111 Chlorobenzene	112	10.764	10.764	0.000	93	842015	10.0	9.65	
113 1,1,1,2-Tetrachloroethane	131	10.904	10.904	0.000	97	400646	10.0	9.72	
112 Ethylbenzene	106	10.973	10.973	0.000	99	416602	10.0	9.38	
114 m-Xylene & p-Xylene	106	11.182	11.182	0.000	0	570402	10.0	9.64	
115 o-Xylene	106	11.844	11.844	0.000	98	498050	10.0	9.35	
116 Styrene	104	11.861	11.861	0.000	94	786008	10.0	9.27	
117 Bromoform	173	12.140	12.140	0.000	96	294356	10.0	10.1	
118 Isopropylbenzene	105	12.505	12.505	0.000	95	1581401	10.0	9.29	
119 Cyclohexanone	55	12.610	12.610	0.000	93	136659	400.0	388.6	
121 Bromobenzene	156	12.992	12.992	0.000	92	447934	10.0	9.15	
122 1,1,2,2-Tetrachloroethane	83	13.010	13.010	0.000	95	302916	10.0	9.65	
124 1,2,3-Trichloropropane	110	13.062	13.062	0.000	85	71413	10.0	9.90	
125 trans-1,4-Dichloro-2-buten	53	13.114	13.114	0.000	86	57931	10.0	11.2	
123 N-Propylbenzene	120	13.236	13.236	0.000	99	361323	10.0	8.67	
126 2-Chlorotoluene	126	13.341	13.341	0.000	95	311156	10.0	8.78	
128 4-Chlorotoluene	126	13.549	13.549	0.000	97	364106	10.0	9.20	
127 1,3,5-Trimethylbenzene	105	13.567	13.567	0.000	93	1178670	10.0	9.02	
129 tert-Butylbenzene	119	14.124	14.124	0.000	93	1232388	10.0	8.79	
130 1,2,4-Trimethylbenzene	105	14.211	14.211	0.000	96	1147760	10.0	8.87	
131 sec-Butylbenzene	134	14.524	14.524	0.000	94	323380	10.0	8.64	
132 1,3-Dichlorobenzene	146	14.681	14.681	0.000	98	674198	10.0	8.76	
133 4-Isopropyltoluene	119	14.803	14.803	0.000	96	1368164	10.0	8.78	
134 1,4-Dichlorobenzene	146	14.838	14.838	0.000	95	806286	10.0	8.59	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.499	15.499	0.000	97	595294	10.0	8.49	
137 n-Butylbenzene	91	15.551	15.551	0.000	98	1457430	10.0	9.66	
139 1,2-Dibromo-3-Chloropropan	157	16.665	16.665	0.000	91	59507	10.0	9.02	
141 1,2,4-Trichlorobenzene	180	17.640	17.640	0.000	94	439539	10.0	9.36	
142 Hexachlorobutadiene	225	17.832	17.832	0.000	98	375593	10.0	9.14	
143 Naphthalene	128	17.866	17.866	0.000	98	381200	10.0	9.66	
144 1,2,3-Trichlorobenzene	180	18.110	18.110	0.000	96	324153	10.0	8.72	
S 150 Xylenes, Total (URS)	1				0		20.0	19.0	
S 146 Xylenes, Total	106				0		20.0	19.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.0	
S 145 1,2-Dichloroethene, Total	1				0		20.0	19.2	
S 147 1,2-Dichloroethene, Total	96				0		20.0	19.2	
S 149 Trihalomethanes, Total	1				0		40.0	40.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL
MV-568718-D_00014	Amount Added:	1.00	Units: uL

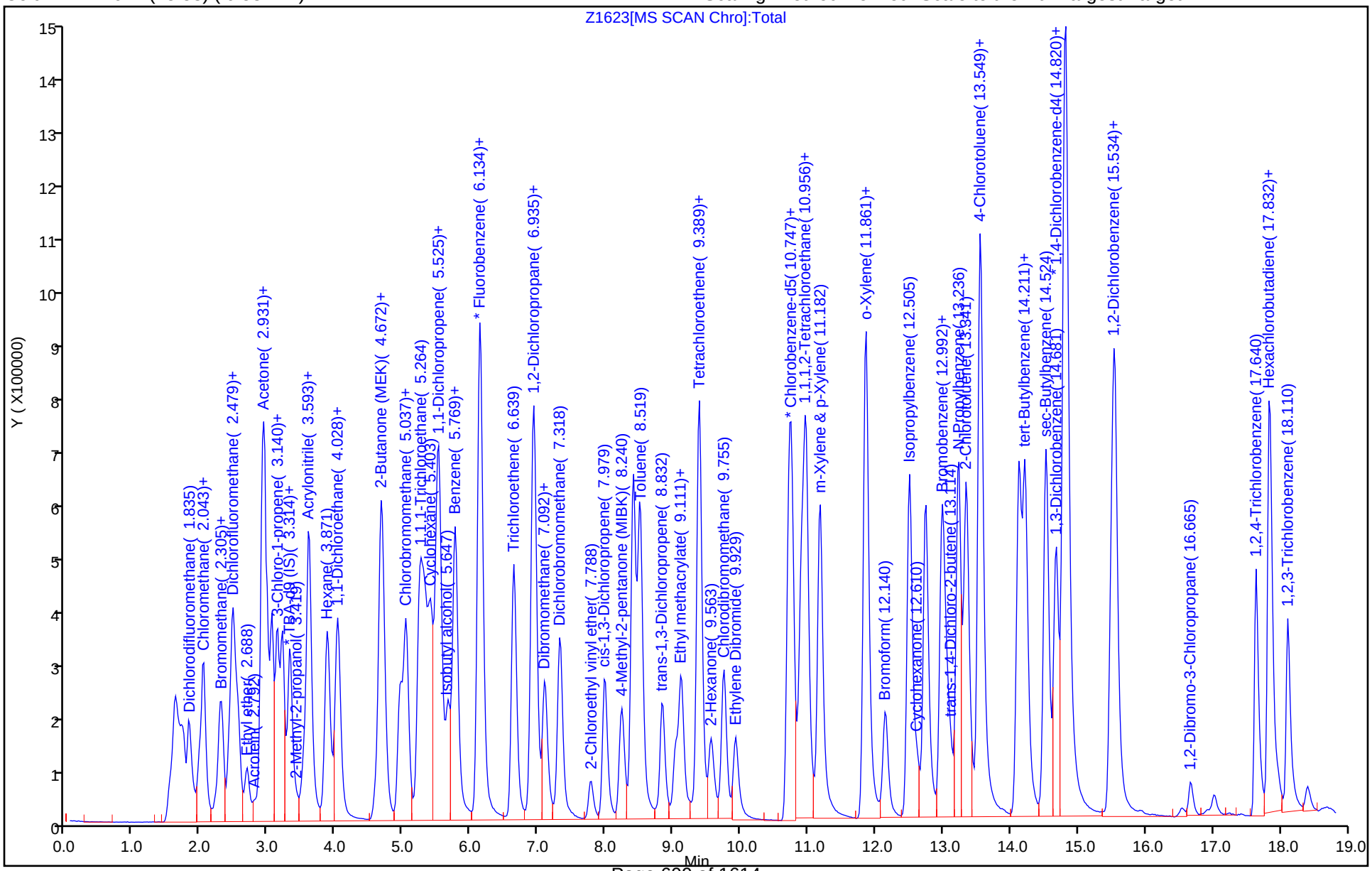
Report Date: 20-Sep-2018 07:34:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1623.D

Injection Date:	19-Sep-2018 09:51:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/2 Calibration Date: 09/19/2018 09:51

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1623.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4435	0.4604		10.4	10.0	3.8	20.0
Chloromethane	Ave	0.2978	0.3006	0.1000	10.1	10.0	1.0	20.0
Vinyl chloride	Ave	0.2469	0.2508		10.2	10.0	1.6	20.0
Bromomethane	Ave	0.3303	0.3175		9.61	10.0	-3.9	20.0
Chloroethane	Ave	0.1702	0.1653		9.71	10.0	-2.9	20.0
Dichlorofluoromethane	Ave	0.6331	0.6337		10.0	10.0	0.1	20.0
Trichlorofluoromethane	Ave	0.7012	0.7184		10.2	10.0	2.5	20.0
Ethyl ether	Ave	0.1171	0.1169		9.99	10.0	-0.1	20.0
Acrolein	Lin1		0.0101		60.7	59.3	2.5	20.0
1,1-Dichloroethene	Ave	0.3445	0.3265		9.48	10.0	-5.2	20.0
Acetone	Lin2		0.0170		44.2	40.0	10.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4745	0.3780		7.96	10.0	-20.4*	20.0
Methyl iodide	Ave	0.8293	0.7852		9.47	10.0	-5.3	20.0
Carbon disulfide	Ave	1.135	1.078		9.50	10.0	-5.0	20.0
3-Chloro-1-propene	Ave	0.4644	0.4647		10.0	10.0	0.0	20.0
Methyl acetate	Lin2		0.0733		21.8	20.0	9.2	20.0
Methylene Chloride	Ave	0.2916	0.2687		9.22	10.0	-7.8	20.0
t-Butyl alcohol	Ave	1.084	1.034		95.4	100	-4.6	20.0
Acrylonitrile	Ave	0.0213	0.0216		101	100	1.0	20.0
trans-1,2-Dichloroethene	Ave	0.3878	0.3638		9.38	10.0	-6.2	20.0
Methyl tert-butyl ether	Ave	0.4311	0.4392		10.2	10.0	1.9	20.0
Hexane	Ave	2.195	2.113		9.63	10.0	-3.7	20.0
1,1-Dichloroethane	Ave	0.5493	0.5489	0.1000	9.99	10.0	-0.0	20.0
Vinyl acetate	Ave	0.3164	0.3358		21.2	20.0	6.2	20.0
2-Butanone (MEK)	Ave	0.0348	0.0355		40.8	40.0	1.9	20.0
cis-1,2-Dichloroethene	Ave	0.3947	0.3883		9.84	10.0	-1.6	20.0
2,2-Dichloropropane	Lin2		0.5823		10.3	10.0	2.5	20.0
Bromochloromethane	Ave	0.1658	0.1658		10.0	10.0	0.0	20.0
Chloroform	Ave	0.6350	0.6366		10.0	10.0	0.2	20.0
Tetrahydrofuran	Ave	0.0252	0.0238		18.9	20.0	-5.6	20.0
1,1,1-Trichloroethane	Ave	0.6575	0.6578		10.0	10.0	0.0	20.0
Cyclohexane	Ave	0.5171	0.5047		9.76	10.0	-2.4	20.0
1,1-Dichloropropene	Ave	0.5182	0.5020		9.69	10.0	-3.1	20.0
Carbon tetrachloride	Ave	0.5939	0.6031		10.2	10.0	1.5	20.0
Isobutyl alcohol	Lin2		0.3922		207	250	-17.2	20.0
1,2-Dichloroethane	Ave	0.2452	0.2573		10.5	10.0	4.9	20.0
Benzene	Ave	0.9640	0.9484		9.84	10.0	-1.6	20.0
Trichloroethene	Ave	0.4914	0.4707		9.58	10.0	-4.2	20.0
1,2-Dichloropropane	Ave	0.3248	0.3221		9.92	10.0	-0.8	20.0
Methylcyclohexane	Ave	0.4858	0.4611		9.49	10.0	-5.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/2 Calibration Date: 09/19/2018 09:51

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1623.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.2331	0.2336		10.0	10.0	0.2	20.0
Bromodichloromethane	Ave	0.5682	0.5936		10.4	10.0	4.5	20.0
2-Chloroethyl vinyl ether	Lin2		0.0871		10.1	10.0	0.9	20.0
cis-1,3-Dichloropropene	Ave	2.162	2.150		9.95	10.0	-0.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1170	0.1147		39.2	40.0	-2.0	20.0
Toluene	Ave	1.255	1.184		9.44	10.0	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.3240	0.3267		10.1	10.0	0.8	20.0
Ethyl methacrylate	Ave	1.046	1.034		9.88	10.0	-1.2	20.0
1,1,2-Trichloroethane	Ave	0.2322	0.2290		9.86	10.0	-1.4	20.0
1,3-Dichloropropane	Ave	1.601	1.614		10.1	10.0	0.8	20.0
Tetrachloroethene	Ave	2.298	2.206		9.60	10.0	-4.0	20.0
2-Hexanone	Ave	0.3416	0.3574		41.9	40.0	4.6	20.0
Dibromochloromethane	Ave	1.976	1.979		10.0	10.0	0.1	20.0
1,2-Dibromoethane	Ave	1.398	1.398		10.0	10.0	-0.0	20.0
Chlorobenzene	Ave	3.921	3.784	0.3000	9.65	10.0	-3.5	20.0
1,1,1,2-Tetrachloroethane	Ave	1.853	1.800		9.72	10.0	-2.8	20.0
Ethylbenzene	Ave	1.995	1.872		9.38	10.0	-6.2	20.0
m,p-Xylene	Ave	2.660	2.563		9.64	10.0	-3.6	20.0
o-Xylene	Ave	2.394	2.238		9.35	10.0	-6.5	20.0
Styrene	Ave	3.809	3.532		9.27	10.0	-7.3	20.0
Bromoform	Ave	1.309	1.323	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	3.800	3.531		9.29	10.0	-7.1	20.0
Cyclohexanone	Ave	0.0158	0.0154		389	400	-2.9	20.0
Bromobenzene	Ave	1.094	1.000		9.15	10.0	-8.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7010	0.6764	0.3000	9.65	10.0	-3.5	20.0
1,2,3-Trichloropropane	Ave	0.1610	0.1595		9.90	10.0	-1.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1152	0.1294		11.2	10.0	12.3	20.0
N-Propylbenzene	Ave	0.9309	0.8068		8.67	10.0	-13.3	20.0
2-Chlorotoluene	Ave	0.7911	0.6948		8.78	10.0	-12.2	20.0
4-Chlorotoluene	Ave	0.8839	0.8130		9.20	10.0	-8.0	20.0
1,3,5-Trimethylbenzene	Ave	2.917	2.632		9.02	10.0	-9.8	20.0
tert-Butylbenzene	Ave	3.129	2.752		8.79	10.0	-12.1	20.0
1,2,4-Trimethylbenzene	Ave	2.890	2.563		8.87	10.0	-11.3	20.0
sec-Butylbenzene	Ave	0.8357	0.7221		8.64	10.0	-13.6	20.0
1,3-Dichlorobenzene	Ave	1.719	1.505		8.76	10.0	-12.4	20.0
4-Isopropyltoluene	Ave	3.479	3.055		8.78	10.0	-12.2	20.0
1,4-Dichlorobenzene	Ave	2.096	1.800		8.59	10.0	-14.1	20.0
1,2-Dichlorobenzene	Ave	1.566	1.329		8.49	10.0	-15.1	20.0
n-Butylbenzene	Lin2		3.254		9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1473	0.1329		9.02	10.0	-9.8	20.0
1,2,4-Trichlorobenzene	Lin2		0.9815		9.36	10.0	-6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/2 Calibration Date: 09/19/2018 09:51

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1623.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Lin1		0.8387		9.14	10.0	-8.6	20.0
Naphthalene	Lin2		0.8512		9.66	10.0	-3.4	20.0
1,2,3-Trichlorobenzene	Lin2		0.7238		8.72	10.0	-12.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1623.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 09:51:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub144

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:10 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 10:29:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.349	3.349	0.000	0	163028	250.0	250.0	
* 2 Fluorobenzene	96	6.134	6.134	0.000	99	1342226	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.712	10.712	0.000	90	278153	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.803	14.803	0.000	94	559807	12.5	12.5	
27 Dichlorodifluoromethane	85	1.835	1.835	0.000	100	494316	10.0	10.4	
30 Chloromethane	50	1.991	1.991	0.000	98	322824	10.0	10.1	
32 Vinyl chloride	62	2.061	2.061	0.000	98	269251	10.0	10.2	
35 Bromomethane	94	2.287	2.287	0.000	89	340942	10.0	9.61	
36 Chloroethane	64	2.322	2.322	0.000	99	177491	10.0	9.71	
37 Dichlorofluoromethane	67	2.461	2.461	0.000	98	680464	10.0	10.0	
38 Trichlorofluoromethane	101	2.496	2.496	0.000	99	771380	10.0	10.2	
40 Ethyl ether	59	2.688	2.688	0.000	94	125540	10.0	9.99	
44 Acrolein	56	2.792	2.792	0.000	99	64445	59.3	60.7	
45 1,1-Dichloroethene	96	2.914	2.914	0.000	97	350535	10.0	9.48	
48 Acetone	43	2.931	2.931	0.000	44	72886	40.0	44.2	
46 1,1,2-Trichloro-1,2,2-trif	151	2.949	2.949	0.000	97	405841	10.0	7.96	M
49 Iodomethane	142	3.053	3.053	0.000	99	843124	10.0	9.47	
50 Carbon disulfide	76	3.140	3.140	0.000	99	1157906	10.0	9.50	
52 3-Chloro-1-propene	41	3.210	3.210	0.000	91	499027	10.0	10.0	
51 Methyl acetate	43	3.210	3.210	0.000	43	157407	20.0	21.8	
54 Methylene Chloride	84	3.314	3.314	0.000	93	288558	10.0	9.22	
55 2-Methyl-2-propanol	59	3.419	3.419	0.000	96	67450	100.0	95.4	
58 Acrylonitrile	53	3.523	3.523	0.000	99	231444	100.0	101.0	
57 trans-1,2-Dichloroethene	96	3.593	3.593	0.000	99	390631	10.0	9.38	
56 Methyl tert-butyl ether	73	3.610	3.610	0.000	96	471575	10.0	10.2	
59 Hexane	57	3.871	3.871	0.000	95	470121	10.0	9.63	
62 1,1-Dichloroethane	63	4.010	4.010	0.000	96	589430	10.0	10.0	
61 Vinyl acetate	43	4.045	4.045	0.000	97	721183	20.0	21.2	
65 cis-1,2-Dichloroethene	96	4.672	4.672	0.000	82	416894	10.0	9.84	
67 2-Butanone (MEK)	43	4.672	4.672	0.000	42	152417	40.0	40.8	
66 2,2-Dichloropropane	77	4.689	4.689	0.000	89	625283	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 Chlorobromomethane	128	4.950	4.950	0.000	97	178074	10.0	10.0	
72 Tetrahydrofuran	42	5.037	5.037	0.000	71	51029	20.0	18.9	
74 Chloroform	83	5.037	5.037	0.000	95	683519	10.0	10.0	
75 1,1,1-Trichloroethane	97	5.316	5.316	0.000	98	706350	10.0	10.0	
76 Cyclohexane	56	5.403	5.403	0.000	92	541945	10.0	9.76	
78 1,1-Dichloropropene	75	5.507	5.507	0.000	98	539055	10.0	9.69	
77 Carbon tetrachloride	117	5.542	5.542	0.000	97	647613	10.0	10.2	
80 Isobutyl alcohol	41	5.647	5.647	0.000	92	63938	250.0	206.9	
82 1,2-Dichloroethane	62	5.769	5.769	0.000	56	276309	10.0	10.5	
81 Benzene	78	5.769	5.769	0.000	97	1018358	10.0	9.84	
84 n-Heptane	43	6.152	6.152	0.000	94	658693	10.0	10.2	
85 Trichloroethene	95	6.639	6.639	0.000	97	505411	10.0	9.58	
87 Methylcyclohexane	55	6.935	6.935	0.000	88	495155	10.0	9.49	
90 1,2-Dichloropropane	63	6.935	6.935	0.000	76	345847	10.0	9.92	
92 Dibromomethane	93	7.092	7.092	0.000	98	250859	10.0	10.0	
93 1,4-Dioxane	88	7.144	7.144	0.000	94	13938	200.0	117.7	
94 Dichlorobromomethane	83	7.318	7.318	0.000	99	637382	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	7.788	7.788	0.000	93	93552	10.0	10.1	
97 cis-1,3-Dichloropropene	75	7.979	7.979	0.000	96	478448	10.0	9.95	
98 4-Methyl-2-pentanone (MIBK	43	8.240	8.240	0.000	97	492839	40.0	39.2	
99 Toluene	91	8.519	8.519	0.000	99	1271876	10.0	9.44	
100 trans-1,3-Dichloropropene	75	8.850	8.850	0.000	93	350794	10.0	10.1	
101 Ethyl methacrylate	69	9.041	9.041	0.000	91	229988	10.0	9.88	
102 1,1,2-Trichloroethane	97	9.128	9.128	0.000	91	245924	10.0	9.86	
104 1,3-Dichloropropane	76	9.389	9.389	0.000	68	359141	10.0	10.1	
103 Tetrachloroethene	164	9.389	9.389	0.000	98	490944	10.0	9.60	
105 2-Hexanone	43	9.563	9.563	0.000	98	318133	40.0	41.9	
107 Chlorodibromomethane	129	9.755	9.755	0.000	90	440265	10.0	10.0	
109 Ethylene Dibromide	107	9.929	9.929	0.000	98	310976	10.0	10.0	
111 Chlorobenzene	112	10.764	10.764	0.000	93	842015	10.0	9.65	
113 1,1,1,2-Tetrachloroethane	131	10.904	10.904	0.000	97	400646	10.0	9.72	
112 Ethylbenzene	106	10.973	10.973	0.000	99	416602	10.0	9.38	
114 m-Xylene & p-Xylene	106	11.182	11.182	0.000	0	570402	10.0	9.64	
115 o-Xylene	106	11.844	11.844	0.000	98	498050	10.0	9.35	
116 Styrene	104	11.861	11.861	0.000	94	786008	10.0	9.27	
117 Bromoform	173	12.140	12.140	0.000	96	294356	10.0	10.1	
118 Isopropylbenzene	105	12.505	12.505	0.000	95	1581401	10.0	9.29	
119 Cyclohexanone	55	12.610	12.610	0.000	93	136659	400.0	388.6	
121 Bromobenzene	156	12.992	12.992	0.000	92	447934	10.0	9.15	
122 1,1,2,2-Tetrachloroethane	83	13.010	13.010	0.000	95	302916	10.0	9.65	
124 1,2,3-Trichloropropane	110	13.062	13.062	0.000	85	71413	10.0	9.90	
125 trans-1,4-Dichloro-2-buten	53	13.114	13.114	0.000	86	57931	10.0	11.2	
123 N-Propylbenzene	120	13.236	13.236	0.000	99	361323	10.0	8.67	
126 2-Chlorotoluene	126	13.341	13.341	0.000	95	311156	10.0	8.78	
128 4-Chlorotoluene	126	13.549	13.549	0.000	97	364106	10.0	9.20	
127 1,3,5-Trimethylbenzene	105	13.567	13.567	0.000	93	1178670	10.0	9.02	
129 tert-Butylbenzene	119	14.124	14.124	0.000	93	1232388	10.0	8.79	
130 1,2,4-Trimethylbenzene	105	14.211	14.211	0.000	96	1147760	10.0	8.87	
131 sec-Butylbenzene	134	14.524	14.524	0.000	94	323380	10.0	8.64	
132 1,3-Dichlorobenzene	146	14.681	14.681	0.000	98	674198	10.0	8.76	
133 4-Isopropyltoluene	119	14.803	14.803	0.000	96	1368164	10.0	8.78	
134 1,4-Dichlorobenzene	146	14.838	14.838	0.000	95	806286	10.0	8.59	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
138 1,2-Dichlorobenzene	146	15.499	15.499	0.000	97	595294	10.0	8.49	
137 n-Butylbenzene	91	15.551	15.551	0.000	98	1457430	10.0	9.66	
139 1,2-Dibromo-3-Chloropropan	157	16.665	16.665	0.000	91	59507	10.0	9.02	
141 1,2,4-Trichlorobenzene	180	17.640	17.640	0.000	94	439539	10.0	9.36	
142 Hexachlorobutadiene	225	17.832	17.832	0.000	98	375593	10.0	9.14	
143 Naphthalene	128	17.866	17.866	0.000	98	381200	10.0	9.66	
144 1,2,3-Trichlorobenzene	180	18.110	18.110	0.000	96	324153	10.0	8.72	
S 150 Xylenes, Total (URS)	1				0		20.0	19.0	
S 146 Xylenes, Total	106				0		20.0	19.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.0	
S 145 1,2-Dichloroethene, Total	1				0		20.0	19.2	
S 147 1,2-Dichloroethene, Total	96				0		20.0	19.2	
S 149 Trihalomethanes, Total	1				0		40.0	40.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	

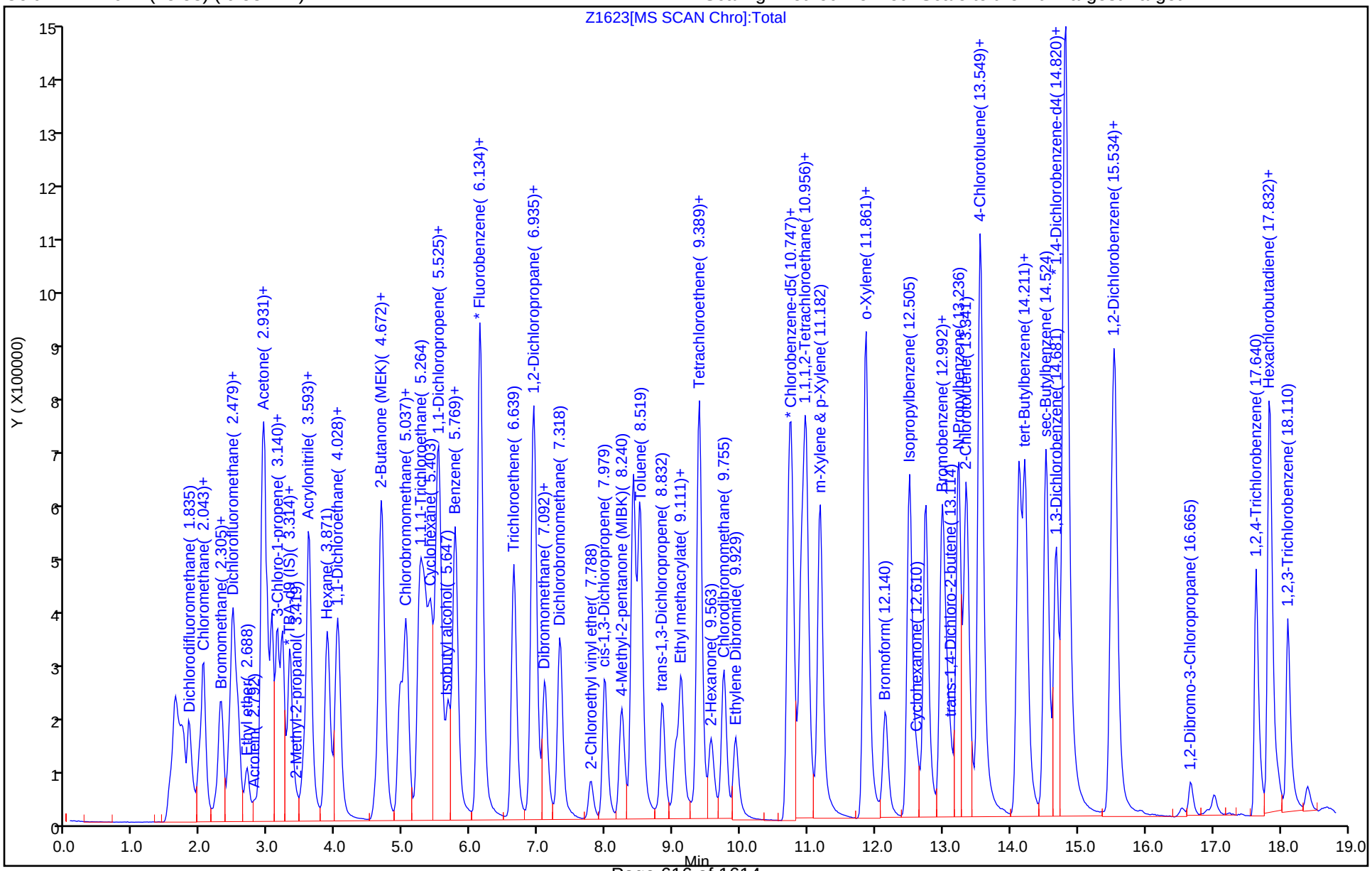
Report Date: 20-Sep-2018 07:34:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1623.D

Injection Date:	19-Sep-2018 09:51:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

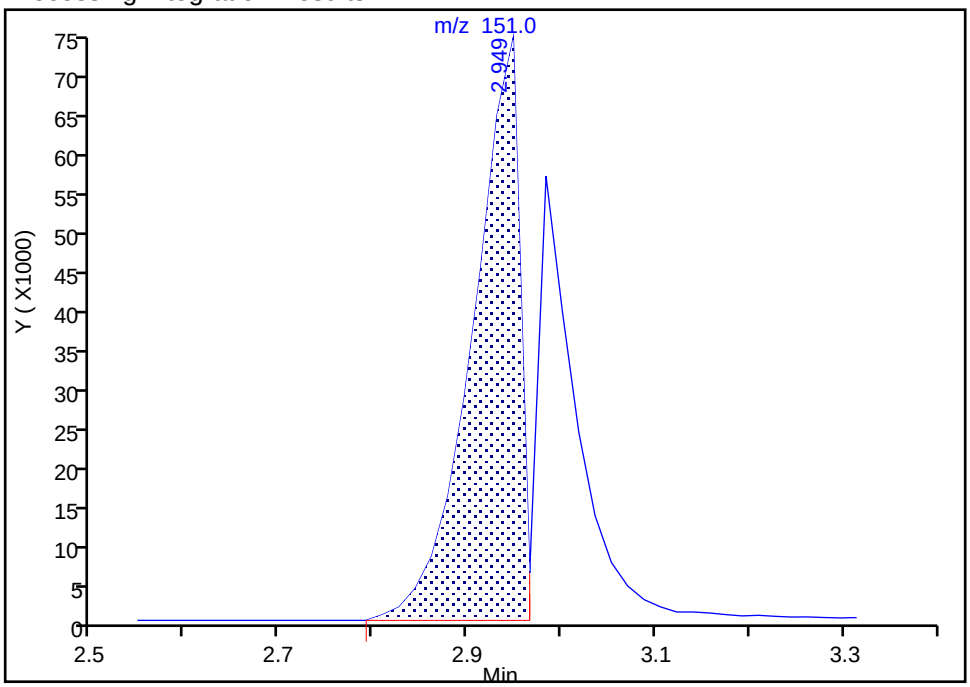
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Injection Date: 19-Sep-2018 09:51:30 Instrument ID: VMS_Z
Lims ID: CCV
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

46 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1

Signal: 1

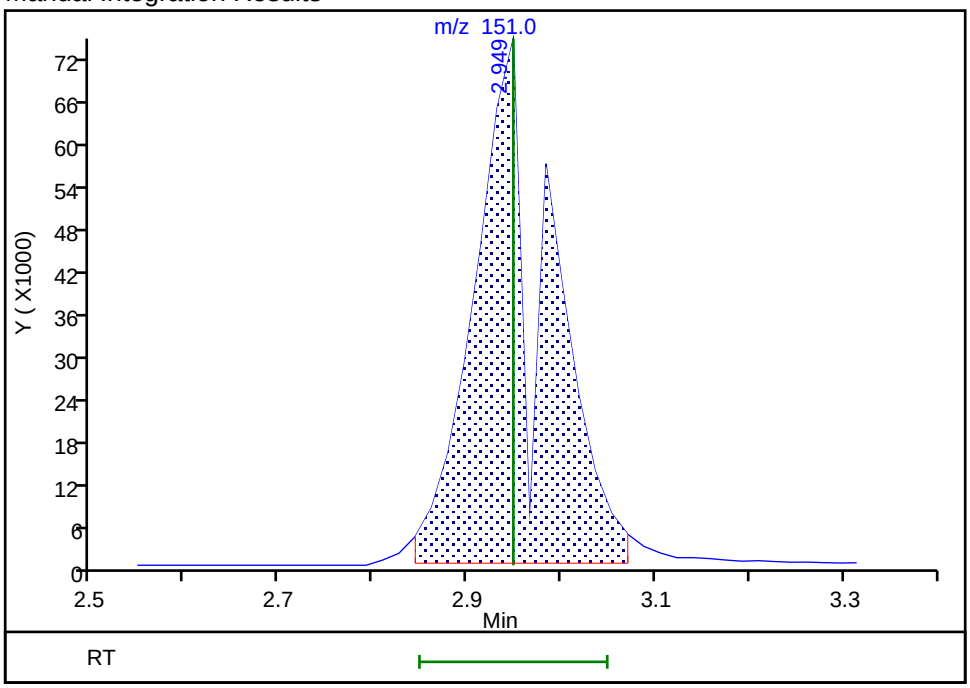
Processing Integration Results

RT: 2.95
Area: 260498
Amount: 5.112475
Amount Units: ug/l



Manual Integration Results

RT: 2.95
Area: 405841
Amount: 7.964945
Amount Units: ug/l



Reviewer: ilczyszynd, 19-Sep-2018 10:29:34
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/3 Calibration Date: 09/19/2018 10:14

Instrument ID: VMS_Z Calib Start Date: 08/17/2017 09:44

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 08/17/2017 15:03

Lab File ID: Z1624.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Lin2				250	600	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 10:14:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.336	0.000	0	193188	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1318480	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.717	10.717	0.000	87	299990	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	94	568244	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.233	5.233	0.000	93	695982	11.5	11.7	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.669	5.669	0.000	0	273919	11.5	11.8	
$ 10 Toluene-d8 (Surr)	98	8.401	8.401	0.000	92	1345110	11.5	11.3	
$ 11 4-Bromofluorobenzene (Surr	95	12.736	12.736	0.000	88	797861	11.5	10.9	
34 Ethylene oxide	43	2.222	2.222	0.000	99	138210	1000.0	921.6	
42 Propene oxide	58	2.744	2.744	0.000	96	848770	1000.0	915.6	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.022				ND	ND	
53 Acetonitrile	41	3.162	3.162	0.000	99	32155	100.0	64.0	
60 Isopropyl ether	87	4.102	4.102	0.000	98	198179	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.119	4.119	0.000	88	320691	10.0	7.53	
64 Tert-butyl ethyl ether	59	4.520	4.520	0.000	97	598745	10.0	8.16	
69 Propionitrile	54	4.729	4.729	0.000	98	66230	100.0	91.2	
68 Ethyl acetate	43	4.746	4.746	0.000	99	163641	20.0	18.1	
73 Methacrylonitrile	41	4.903	4.903	0.000	94	460854	100.0	90.9	
83 Tert-amyl methyl ether	73	5.947	5.947	0.000	98	451079	10.0	7.90	
86 n-Butanol	56	6.574	6.574	0.000	89	29677	250.0	170.6	
91 Methyl methacrylate	100	7.131	7.131	0.000	95	71968	20.0	17.9	
95 2-Nitropropane	41	7.618	7.618	0.000	96	29596	20.0	17.0	
106 Tetrahydrothiophene	60	9.742	9.742	0.000	90	10174	20.0	13.7	
120 cis-1,4-Dichloro-2-butene	53	12.596	12.596	0.000	0	43441	20.0	15.1	
135 1,2,3-Trimethylbenzene	105	14.964	14.964	0.000	97	798513	10.0	7.41	
140 1,3,5-Trichlorobenzene	180	16.966	16.966	0.000	98	450244	10.0	7.25	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

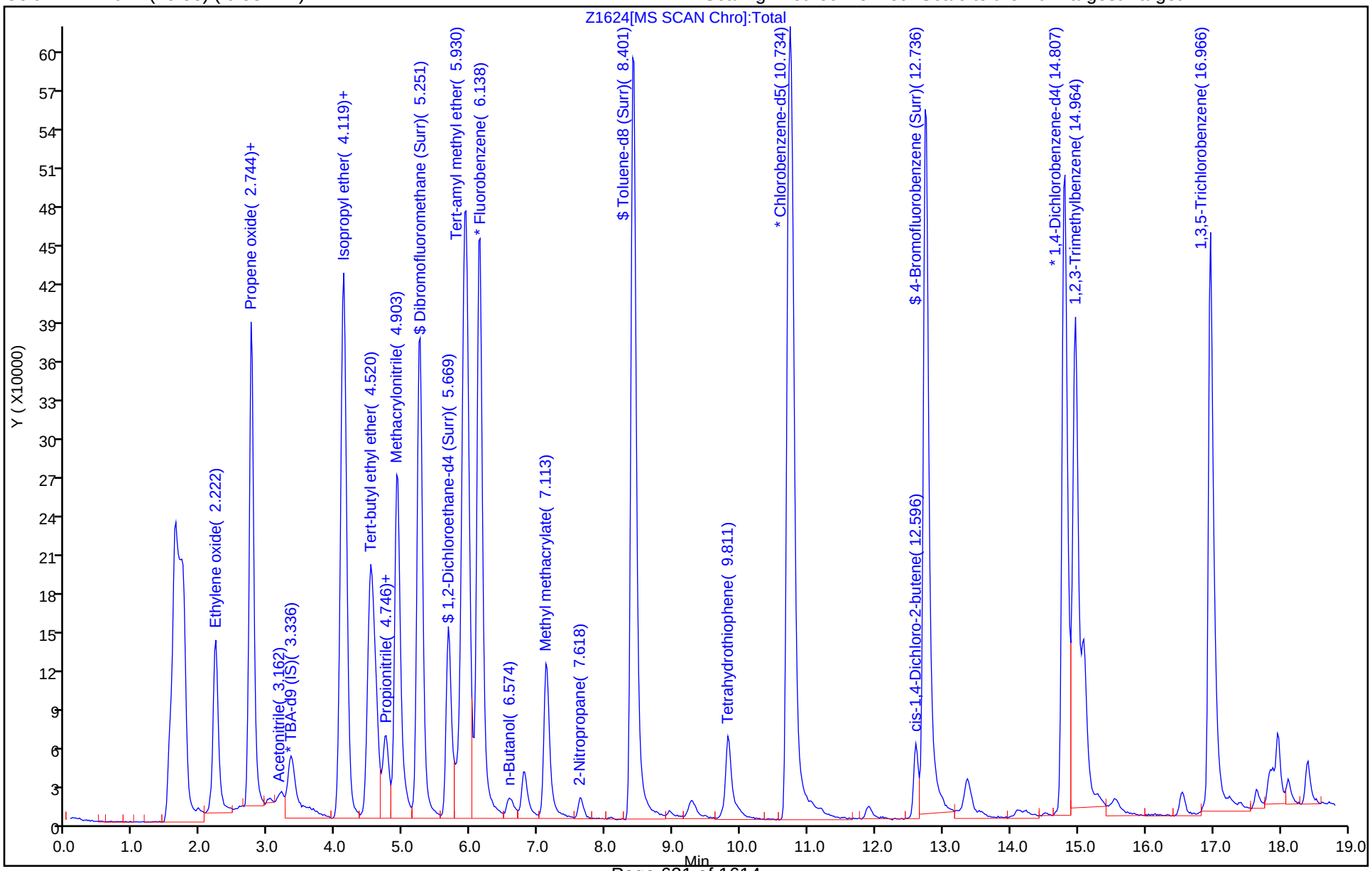
Report Date: 20-Sep-2018 07:34:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D

Injection Date:	19-Sep-2018 10:14:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/3 Calibration Date: 09/19/2018 10:14

Instrument ID: VMS_Z Calib Start Date: 12/10/2017 09:55

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 12/10/2017 15:45

Lab File ID: Z1624.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Ave	0.0049			32.0	100		

FORM VII 8260B

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 10:14:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.336	0.000	0	193188	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1318480	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.717	10.717	0.000	87	299990	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	94	568244	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.233	5.233	0.000	93	695982	11.5	11.7	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.669	5.669	0.000	0	273919	11.5	11.8	
$ 10 Toluene-d8 (Surr)	98	8.401	8.401	0.000	92	1345110	11.5	11.3	
$ 11 4-Bromofluorobenzene (Surr	95	12.736	12.736	0.000	88	797861	11.5	10.9	
34 Ethylene oxide	43	2.222	2.222	0.000	99	138210	1000.0	921.6	
42 Propene oxide	58	2.744	2.744	0.000	96	848770	1000.0	915.6	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.022				ND	ND	
53 Acetonitrile	41	3.162	3.162	0.000	99	32155	100.0	64.0	
60 Isopropyl ether	87	4.102	4.102	0.000	98	198179	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.119	4.119	0.000	88	320691	10.0	7.53	
64 Tert-butyl ethyl ether	59	4.520	4.520	0.000	97	598745	10.0	8.16	
69 Propionitrile	54	4.729	4.729	0.000	98	66230	100.0	91.2	
68 Ethyl acetate	43	4.746	4.746	0.000	99	163641	20.0	18.1	
73 Methacrylonitrile	41	4.903	4.903	0.000	94	460854	100.0	90.9	
83 Tert-amyl methyl ether	73	5.947	5.947	0.000	98	451079	10.0	7.90	
86 n-Butanol	56	6.574	6.574	0.000	89	29677	250.0	170.6	
91 Methyl methacrylate	100	7.131	7.131	0.000	95	71968	20.0	17.9	
95 2-Nitropropane	41	7.618	7.618	0.000	96	29596	20.0	17.0	
106 Tetrahydrothiophene	60	9.742	9.742	0.000	90	10174	20.0	13.7	
120 cis-1,4-Dichloro-2-butene	53	12.596	12.596	0.000	0	43441	20.0	15.1	
135 1,2,3-Trimethylbenzene	105	14.964	14.964	0.000	97	798513	10.0	7.41	
140 1,3,5-Trichlorobenzene	180	16.966	16.966	0.000	98	450244	10.0	7.25	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

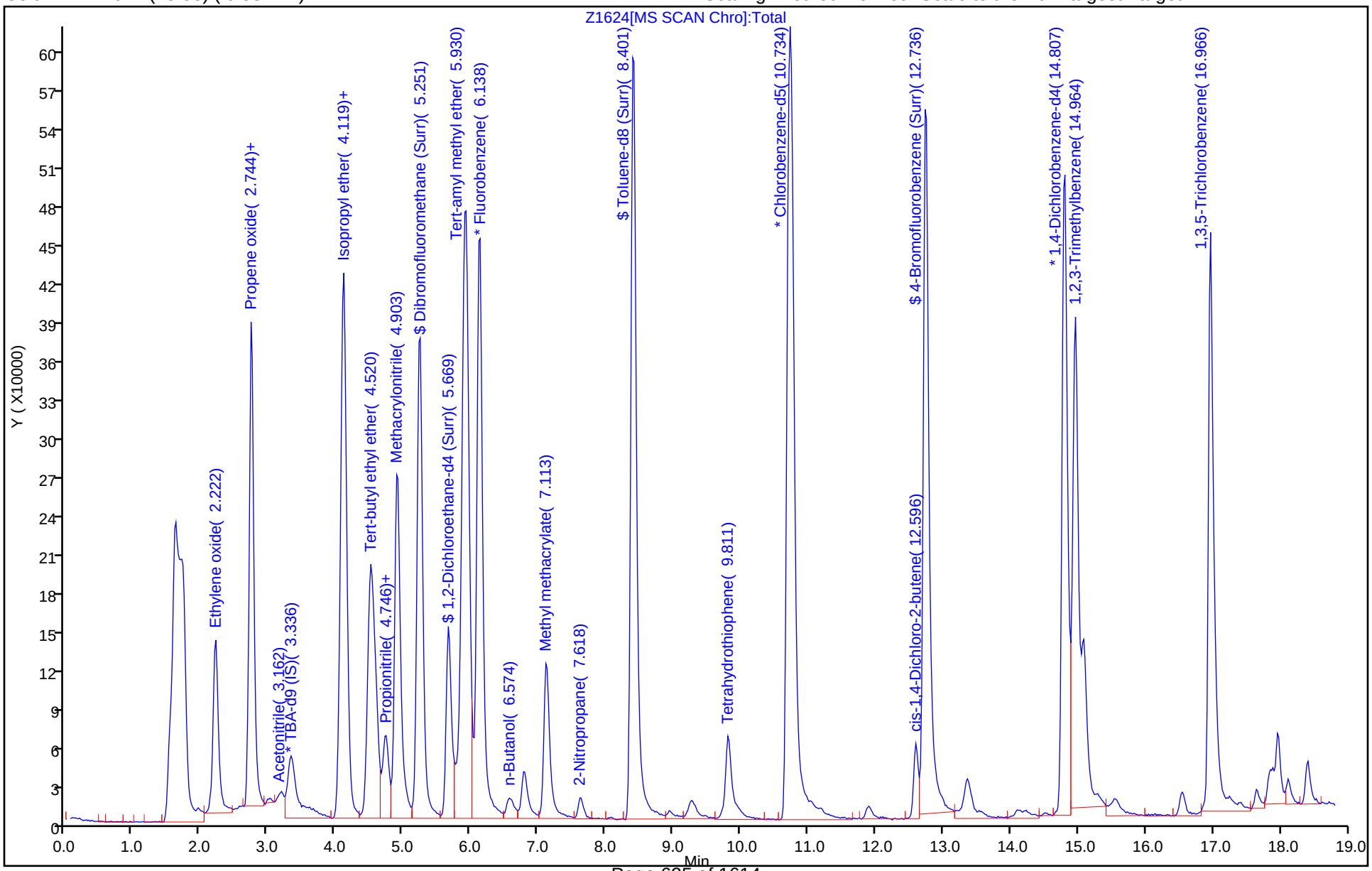
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D

Injection Date:	19-Sep-2018 10:14:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/3 Calibration Date: 09/19/2018 10:14

Instrument ID: VMS_Z Calib Start Date: 05/20/2018 23:14

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 05/21/2018 23:58

Lab File ID: Z1624.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Lin2		0.0011		171	250	-31.7*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 10:14:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.336	0.000	0	193188	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1318480	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.717	10.717	0.000	87	299990	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	94	568244	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.233	5.233	0.000	93	695982	11.5	11.7	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.669	5.669	0.000	0	273919	11.5	11.8	
$ 10 Toluene-d8 (Surr)	98	8.401	8.401	0.000	92	1345110	11.5	11.3	
$ 11 4-Bromofluorobenzene (Surr	95	12.736	12.736	0.000	88	797861	11.5	10.9	
34 Ethylene oxide	43	2.222	2.222	0.000	99	138210	1000.0	921.6	
42 Propene oxide	58	2.744	2.744	0.000	96	848770	1000.0	915.6	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.022				ND	ND	
53 Acetonitrile	41	3.162	3.162	0.000	99	32155	100.0	64.0	
60 Isopropyl ether	87	4.102	4.102	0.000	98	198179	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.119	4.119	0.000	88	320691	10.0	7.53	
64 Tert-butyl ethyl ether	59	4.520	4.520	0.000	97	598745	10.0	8.16	
69 Propionitrile	54	4.729	4.729	0.000	98	66230	100.0	91.2	
68 Ethyl acetate	43	4.746	4.746	0.000	99	163641	20.0	18.1	
73 Methacrylonitrile	41	4.903	4.903	0.000	94	460854	100.0	90.9	
83 Tert-amyl methyl ether	73	5.947	5.947	0.000	98	451079	10.0	7.90	
86 n-Butanol	56	6.574	6.574	0.000	89	29677	250.0	170.6	
91 Methyl methacrylate	100	7.131	7.131	0.000	95	71968	20.0	17.9	
95 2-Nitropropane	41	7.618	7.618	0.000	96	29596	20.0	17.0	
106 Tetrahydrothiophene	60	9.742	9.742	0.000	90	10174	20.0	13.7	
120 cis-1,4-Dichloro-2-butene	53	12.596	12.596	0.000	0	43441	20.0	15.1	
135 1,2,3-Trimethylbenzene	105	14.964	14.964	0.000	97	798513	10.0	7.41	
140 1,3,5-Trichlorobenzene	180	16.966	16.966	0.000	98	450244	10.0	7.25	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

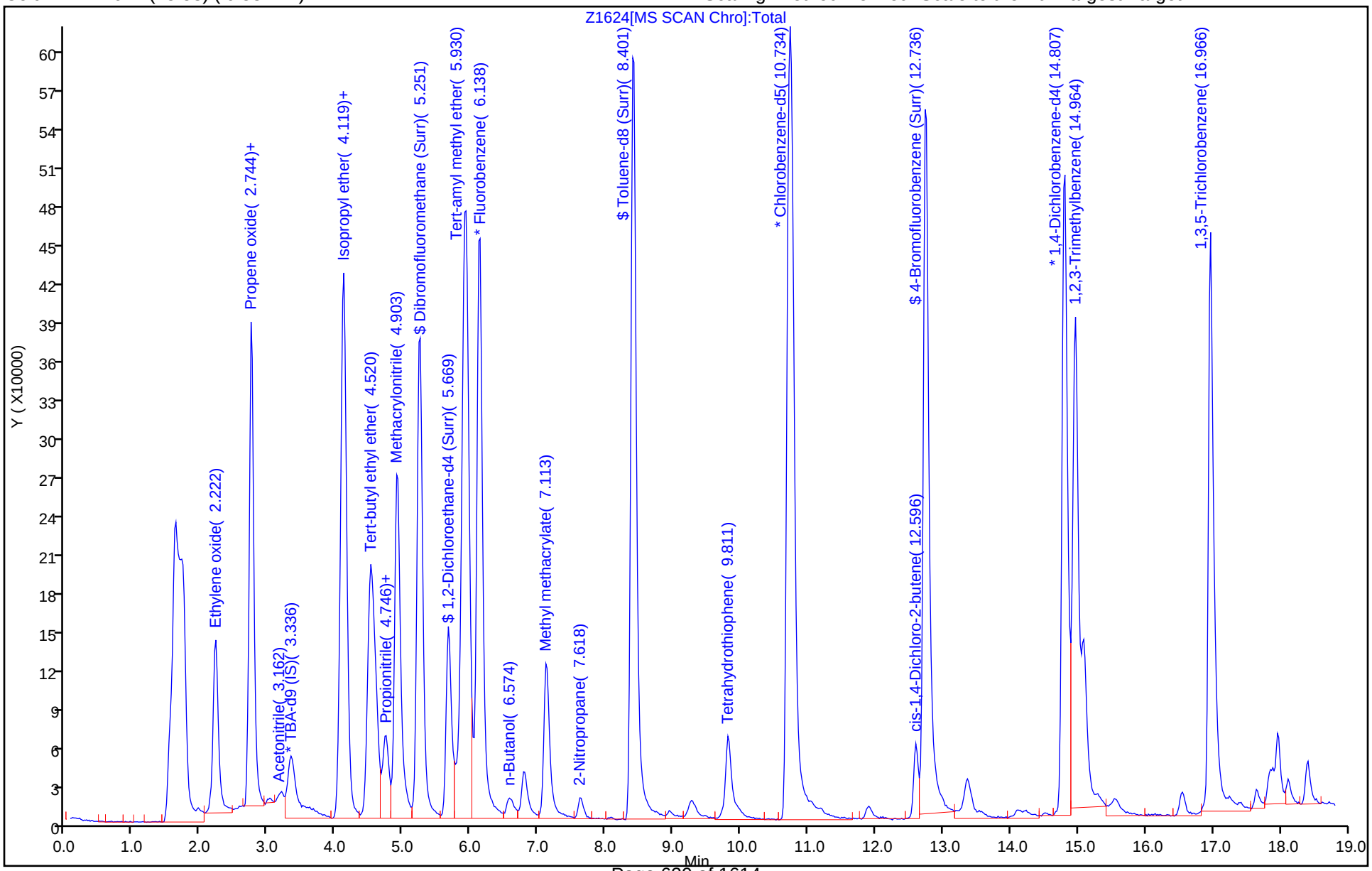
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D

Injection Date:	19-Sep-2018 10:14:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCV 280-430151/3 Calibration Date: 09/19/2018 10:14

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 15:56

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 17:47

Lab File ID: Z1624.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0014	0.0013		922	1000	-7.8	20.0
Acetonitrile	Ave	0.0048	0.0031		64.0	100	-36.0*	20.0
Diisopropyl ether	Ave	0.2218	0.1879		8.47	10.0	-15.3	20.0
2-Chloro-1,3-butadiene	Ave	0.4037	0.3040		7.53	10.0	-24.7*	20.0
Tert-butyl ethyl ether	Ave	0.6957	0.5677		8.16	10.0	-18.4	20.0
Propionitrile	Ave	0.0069	0.0063		91.2	100	-8.8	20.0
Ethyl acetate	Ave	0.0857	0.0776		18.1	20.0	-9.5	20.0
Methacrylonitrile	Ave	0.0481	0.0437		90.9	100	-9.1	20.0
Tert-amyl methyl ether	Ave	0.5413	0.4277		7.90	10.0	-21.0*	20.0
Methyl methacrylate	Ave	0.0381	0.0341		17.9	20.0	-10.5	20.0
2-Nitropropane	Ave	0.0165	0.0140		17.0	20.0	-14.9	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0632	0.0478		15.1	20.0	-24.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.370	1.757		7.41	10.0	-25.9*	20.0
Dibromofluoromethane (Surr)	Ave	0.5618	0.5738		11.7	11.5	2.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2205	0.2258		11.8	11.5	2.4	20.0
Toluene-d8 (Surr)	Ave	4.941	4.874		11.3	11.5	-1.4	20.0
4-Bromofluorobenzene (Surr)	Ave	1.604	1.526		10.9	11.5	-4.9	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2018 10:14:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub111

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.336	3.336	0.000	0	193188	250.0	250.0	
* 2 Fluorobenzene	96	6.138	6.138	0.000	99	1318480	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.717	10.717	0.000	87	299990	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.807	14.807	0.000	94	568244	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.233	5.233	0.000	93	695982	11.5	11.7	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.669	5.669	0.000	0	273919	11.5	11.8	
$ 10 Toluene-d8 (Surr)	98	8.401	8.401	0.000	92	1345110	11.5	11.3	
$ 11 4-Bromofluorobenzene (Surr	95	12.736	12.736	0.000	88	797861	11.5	10.9	
34 Ethylene oxide	43	2.222	2.222	0.000	99	138210	1000.0	921.6	
42 Propene oxide	58	2.744	2.744	0.000	96	848770	1000.0	915.6	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.022				ND	ND	
53 Acetonitrile	41	3.162	3.162	0.000	99	32155	100.0	64.0	
60 Isopropyl ether	87	4.102	4.102	0.000	98	198179	10.0	8.47	
63 2-Chloro-1,3-butadiene	53	4.119	4.119	0.000	88	320691	10.0	7.53	
64 Tert-butyl ethyl ether	59	4.520	4.520	0.000	97	598745	10.0	8.16	
69 Propionitrile	54	4.729	4.729	0.000	98	66230	100.0	91.2	
68 Ethyl acetate	43	4.746	4.746	0.000	99	163641	20.0	18.1	
73 Methacrylonitrile	41	4.903	4.903	0.000	94	460854	100.0	90.9	
83 Tert-amyl methyl ether	73	5.947	5.947	0.000	98	451079	10.0	7.90	
86 n-Butanol	56	6.574	6.574	0.000	89	29677	250.0	170.6	
91 Methyl methacrylate	100	7.131	7.131	0.000	95	71968	20.0	17.9	
95 2-Nitropropane	41	7.618	7.618	0.000	96	29596	20.0	17.0	
106 Tetrahydrothiophene	60	9.742	9.742	0.000	90	10174	20.0	13.7	
120 cis-1,4-Dichloro-2-butene	53	12.596	12.596	0.000	0	43441	20.0	15.1	
135 1,2,3-Trimethylbenzene	105	14.964	14.964	0.000	97	798513	10.0	7.41	
140 1,3,5-Trichlorobenzene	180	16.966	16.966	0.000	98	450244	10.0	7.25	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

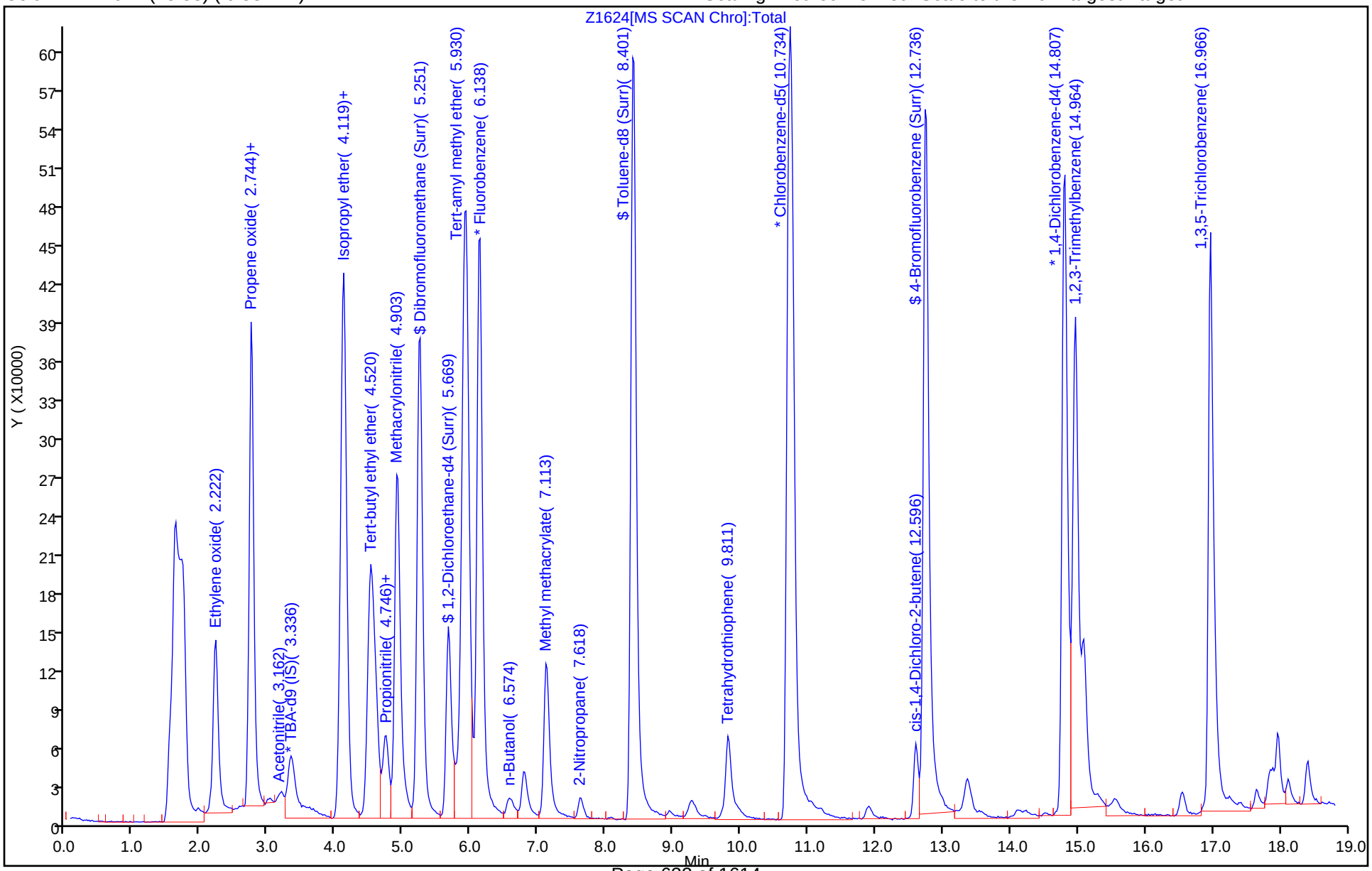
Report Date: 20-Sep-2018 07:34:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1624.D

Injection Date:	19-Sep-2018 10:14:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430151/34 Calibration Date: 09/19/2018 20:24

Instrument ID: VMS_Z Calib Start Date: 07/04/2018 08:02

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 07/04/2018 10:14

Lab File ID: Z1651.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0008		144	200	-27.8	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 19-Sep-2018 20:24:30 ALS Bottle#: 31 Worklist Smp#: 34
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub145

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.349	0.001	0	159042	250.0	250.0	
* 2 Fluorobenzene	96	6.135	6.134	0.001	99	1267712	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.713	10.712	0.001	89	272185	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.804	14.803	0.001	94	553638	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.247	5.233	0.014	93	649281	11.5	11.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.682	5.669	0.014	0	261697	11.5	11.7	
$ 10 Toluene-d8 (Surr)	98	8.415	8.401	0.014	92	1290261	11.5	12.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.750	12.736	0.014	90	728932	11.5	10.3	
27 Dichlorodifluoromethane	85	1.836	1.835	0.001	100	384848	10.0	8.56	
30 Chloromethane	50	1.992	1.991	0.001	99	275904	10.0	9.14	
32 Vinyl chloride	62	2.062	2.061	0.001	98	226452	10.0	9.04	
35 Bromomethane	94	2.288	2.287	0.001	90	314977	10.0	9.40	
36 Chloroethane	64	2.323	2.322	0.001	99	153937	10.0	8.92	
37 Dichlorofluoromethane	67	2.445	2.461	-0.016	99	619326	10.0	9.65	
38 Trichlorofluoromethane	101	2.514	2.496	0.018	100	642896	10.0	9.04	
40 Ethyl ether	59	2.688	2.688	0.000	95	126581	10.0	10.7	
44 Acrolein	56	2.810	2.792	0.018	98	68216	59.3	68.4	
45 1,1-Dichloroethene	96	2.915	2.914	0.001	96	309675	10.0	8.86	
48 Acetone	43	2.915	2.931	-0.016	31	69705	40.0	44.8	
46 1,1,2-Trichloro-1,2,2-trif	151	2.967	2.949	0.018	97	419944	10.0	8.73	
49 Iodomethane	142	3.054	3.053	0.001	99	794005	10.0	9.44	
50 Carbon disulfide	76	3.141	3.140	0.001	99	1013067	10.0	8.80	
52 3-Chloro-1-propene	41	3.211	3.210	0.001	89	435583	10.0	9.25	
51 Methyl acetate	43	3.211	3.210	0.001	45	154592	20.0	22.7	
54 Methylene Chloride	84	3.333	3.314	0.018	92	272966	10.0	9.23	
55 2-Methyl-2-propanol	59	3.420	3.419	0.001	98	68808	100.0	99.8	
58 Acrylonitrile	53	3.541	3.523	0.018	99	237055	100.0	109.5	
57 trans-1,2-Dichloroethene	96	3.611	3.593	0.018	97	351435	10.0	8.93	
56 Methyl tert-butyl ether	73	3.611	3.610	0.001	96	457602	10.0	10.5	
59 Hexane	57	3.890	3.871	0.019	95	378877	10.0	7.93	
62 1,1-Dichloroethane	63	4.029	4.010	0.019	96	522708	10.0	9.38	
61 Vinyl acetate	43	4.046	4.045	0.001	97	683684	20.0	21.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	4.673	4.672	0.001	80	389338	10.0	9.73	
67 2-Butanone (MEK)	43	4.673	4.672	0.001	44	156880	40.0	44.4	
66 2,2-Dichloropropane	77	4.708	4.689	0.019	88	513711	10.0	8.81	
71 Chlorobromomethane	128	4.969	4.950	0.019	96	179128	10.0	10.7	
72 Tetrahydrofuran	42	5.038	5.037	0.001	38	52907	20.0	20.7	
74 Chloroform	83	5.056	5.037	0.019	94	629427	10.0	9.77	
75 1,1,1-Trichloroethane	97	5.317	5.316	0.001	98	610129	10.0	9.15	
76 Cyclohexane	56	5.421	5.403	0.018	92	460937	10.0	8.79	
78 1,1-Dichloropropene	75	5.508	5.507	0.001	98	460283	10.0	8.76	
77 Carbon tetrachloride	117	5.543	5.542	0.001	99	530346	10.0	8.80	
80 Isobutyl alcohol	41	5.648	5.647	0.001	92	69739	250.0	230.3	
82 1,2-Dichloroethane	62	5.769	5.769	0.000	92	258231	10.0	10.4	
81 Benzene	78	5.769	5.769	0.000	97	926597	10.0	9.48	
84 n-Heptane	43	6.152	6.152	0.000	94	528986	10.0	8.64	
85 Trichloroethene	95	6.657	6.639	0.018	97	448208	10.0	8.99	
87 Methylcyclohexane	55	6.953	6.935	0.018	88	407875	10.0	8.28	
90 1,2-Dichloropropane	63	6.936	6.935	0.001	95	321460	10.0	9.76	
92 Dibromomethane	93	7.110	7.092	0.018	96	250705	10.0	10.6	
93 1,4-Dioxane	88	7.162	7.144	0.018	91	16155	200.0	144.4	
94 Dichlorobromomethane	83	7.336	7.318	0.018	99	597920	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	7.789	7.788	0.001	94	83875	10.0	9.60	
97 cis-1,3-Dichloropropene	75	7.998	7.979	0.019	97	451113	10.0	9.58	
98 4-Methyl-2-pentanone (MIBK	43	8.241	8.240	0.001	97	515058	40.0	43.4	
99 Toluene	91	8.520	8.519	0.001	99	1132360	10.0	8.90	
100 trans-1,3-Dichloropropene	75	8.851	8.850	0.001	93	333734	10.0	10.2	
101 Ethyl methacrylate	69	9.042	9.041	0.001	91	248755	10.0	10.9	
102 1,1,2-Trichloroethane	97	9.129	9.128	0.001	90	239128	10.0	10.2	
104 1,3-Dichloropropane	76	9.390	9.389	0.001	72	348084	10.0	9.99	
103 Tetrachloroethene	164	9.390	9.389	0.001	97	435090	10.0	8.70	
105 2-Hexanone	43	9.564	9.563	0.001	99	334150	40.0	44.9	
107 Chlorodibromomethane	129	9.756	9.755	0.001	90	442136	10.0	10.3	
109 Ethylene Dibromide	107	9.930	9.929	0.001	98	320741	10.0	10.5	
111 Chlorobenzene	112	10.765	10.764	0.001	95	791810	10.0	9.27	
113 1,1,1,2-Tetrachloroethane	131	10.905	10.904	0.001	97	388554	10.0	9.63	
112 Ethylbenzene	106	10.974	10.973	0.001	99	383593	10.0	8.83	
114 m-Xylene & p-Xylene	106	11.183	11.182	0.001	0	503634	10.0	8.70	
115 o-Xylene	106	11.845	11.844	0.000	98	467251	10.0	8.96	
116 Styrene	104	11.879	11.861	0.018	94	759913	10.0	9.16	
117 Bromoform	173	12.158	12.140	0.018	97	307260	10.0	10.8	
118 Isopropylbenzene	105	12.506	12.505	0.001	95	1401780	10.0	8.33	
119 Cyclohexanone	55	12.610	12.610	0.000	91	147084	400.0	427.4	
121 Bromobenzene	156	12.993	12.992	0.001	90	438815	10.0	9.06	
122 1,1,2,2-Tetrachloroethane	83	13.011	13.010	0.001	95	299077	10.0	9.63	
124 1,2,3-Trichloropropane	110	13.063	13.062	0.001	83	72618	10.0	10.2	
125 trans-1,4-Dichloro-2-buten	53	13.115	13.114	0.001	83	51537	10.0	10.1	
123 N-Propylbenzene	120	13.237	13.236	0.001	99	326091	10.0	7.91	
126 2-Chlorotoluene	126	13.342	13.341	0.001	96	285407	10.0	8.15	
128 4-Chlorotoluene	126	13.550	13.549	0.001	97	327180	10.0	8.36	
127 1,3,5-Trimethylbenzene	105	13.568	13.567	0.001	97	1068224	10.0	8.27	
129 tert-Butylbenzene	119	14.125	14.124	0.001	91	1095162	10.0	7.90	
130 1,2,4-Trimethylbenzene	105	14.212	14.211	0.001	96	1059434	10.0	8.28	
131 sec-Butylbenzene	134	14.525	14.524	0.001	94	282736	10.0	7.64	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.682	14.681	0.001	98	646801	10.0	8.49	
133 4-Isopropyltoluene	119	14.804	14.803	0.001	96	1202244	10.0	7.80	
134 1,4-Dichlorobenzene	146	14.839	14.838	0.001	94	760789	10.0	8.20	
138 1,2-Dichlorobenzene	146	15.500	15.499	0.001	97	575409	10.0	8.30	
137 n-Butylbenzene	91	15.552	15.551	0.001	98	1238317	10.0	8.26	
139 1,2-Dibromo-3-Chloropropan	157	16.666	16.665	0.001	91	61613	10.0	9.44	
141 1,2,4-Trichlorobenzene	180	17.641	17.640	0.001	94	438012	10.0	9.43	
142 Hexachlorobutadiene	225	17.833	17.832	0.001	98	339609	10.0	8.27	
143 Naphthalene	128	17.867	17.866	0.001	98	550489	10.0	14.5	
144 1,2,3-Trichlorobenzene	180	18.111	18.110	0.001	96	341436	10.0	9.32	
S 150 Xylenes, Total (URS)	1				0		20.0	17.7	
S 151 Total BTEX	1				0			44.9	
S 146 Xylenes, Total	106				0		20.0	17.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 149 Trihalomethanes, Total	1				0		40.0	41.2	

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

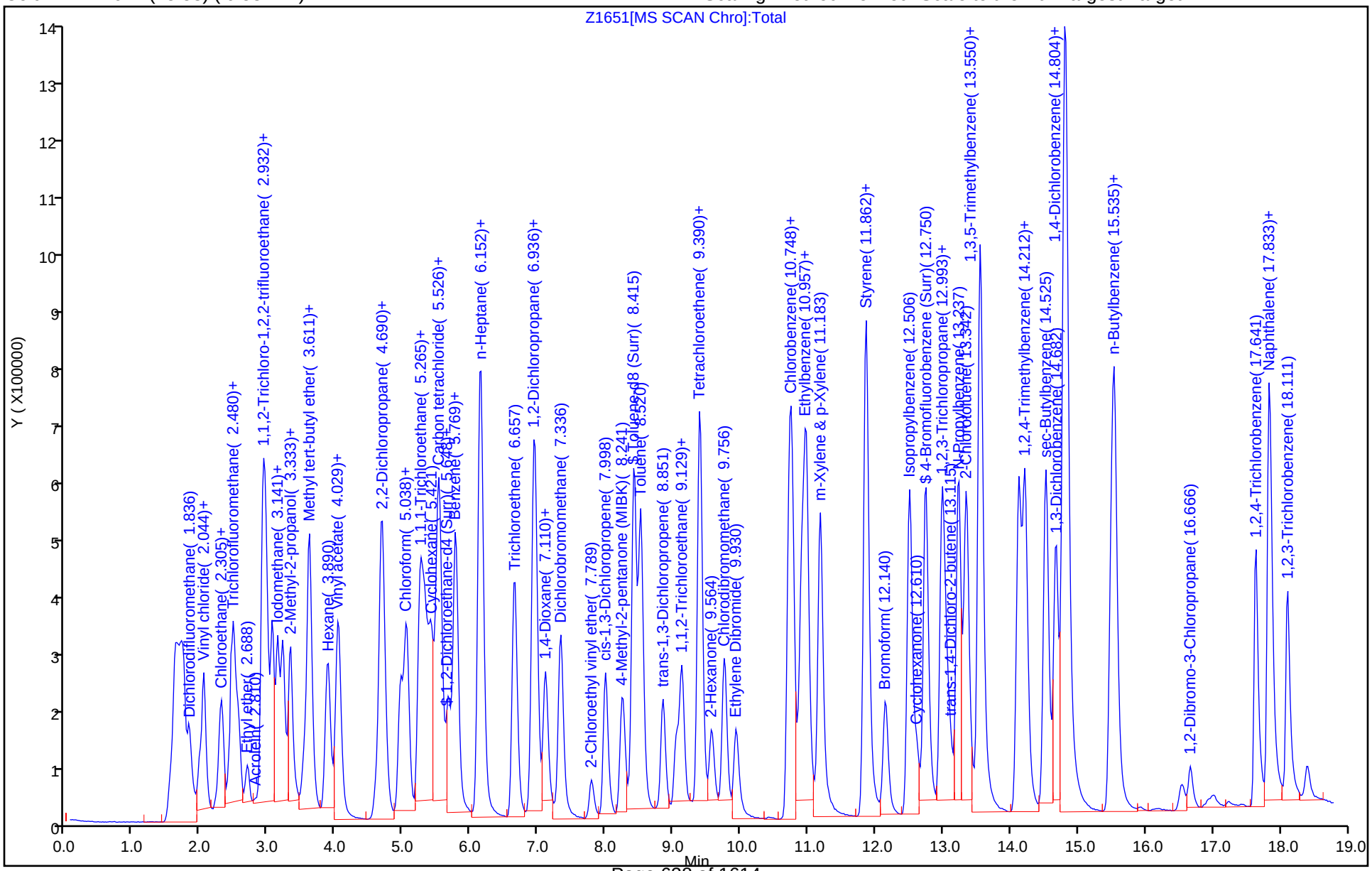
Report Date: 20-Sep-2018 07:34:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D

Injection Date:	19-Sep-2018 20:24:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ccvc			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430151/34 Calibration Date: 09/19/2018 20:24

Instrument ID: VMS_Z Calib Start Date: 09/07/2018 15:56

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/07/2018 17:47

Lab File ID: Z1651.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.5618	0.5567		11.4	11.5	-0.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2205	0.2244		11.7	11.5	1.7	50.0
Toluene-d8 (Surr)	Ave	4.941	5.153		12.0	11.5	4.3	50.0
4-Bromofluorobenzene (Surr)	Ave	1.604	1.431		10.3	11.5	-10.8	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 19-Sep-2018 20:24:30 ALS Bottle#: 31 Worklist Smp#: 34
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub145

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.349	0.001	0	159042	250.0	250.0	
* 2 Fluorobenzene	96	6.135	6.134	0.001	99	1267712	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.713	10.712	0.001	89	272185	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.804	14.803	0.001	94	553638	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.247	5.233	0.014	93	649281	11.5	11.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.682	5.669	0.014	0	261697	11.5	11.7	
$ 10 Toluene-d8 (Surr)	98	8.415	8.401	0.014	92	1290261	11.5	12.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.750	12.736	0.014	90	728932	11.5	10.3	
27 Dichlorodifluoromethane	85	1.836	1.835	0.001	100	384848	10.0	8.56	
30 Chloromethane	50	1.992	1.991	0.001	99	275904	10.0	9.14	
32 Vinyl chloride	62	2.062	2.061	0.001	98	226452	10.0	9.04	
35 Bromomethane	94	2.288	2.287	0.001	90	314977	10.0	9.40	
36 Chloroethane	64	2.323	2.322	0.001	99	153937	10.0	8.92	
37 Dichlorofluoromethane	67	2.445	2.461	-0.016	99	619326	10.0	9.65	
38 Trichlorofluoromethane	101	2.514	2.496	0.018	100	642896	10.0	9.04	
40 Ethyl ether	59	2.688	2.688	0.000	95	126581	10.0	10.7	
44 Acrolein	56	2.810	2.792	0.018	98	68216	59.3	68.4	
45 1,1-Dichloroethene	96	2.915	2.914	0.001	96	309675	10.0	8.86	
48 Acetone	43	2.915	2.931	-0.016	31	69705	40.0	44.8	
46 1,1,2-Trichloro-1,2,2-trif	151	2.967	2.949	0.018	97	419944	10.0	8.73	
49 Iodomethane	142	3.054	3.053	0.001	99	794005	10.0	9.44	
50 Carbon disulfide	76	3.141	3.140	0.001	99	1013067	10.0	8.80	
52 3-Chloro-1-propene	41	3.211	3.210	0.001	89	435583	10.0	9.25	
51 Methyl acetate	43	3.211	3.210	0.001	45	154592	20.0	22.7	
54 Methylene Chloride	84	3.333	3.314	0.018	92	272966	10.0	9.23	
55 2-Methyl-2-propanol	59	3.420	3.419	0.001	98	68808	100.0	99.8	
58 Acrylonitrile	53	3.541	3.523	0.018	99	237055	100.0	109.5	
57 trans-1,2-Dichloroethene	96	3.611	3.593	0.018	97	351435	10.0	8.93	
56 Methyl tert-butyl ether	73	3.611	3.610	0.001	96	457602	10.0	10.5	
59 Hexane	57	3.890	3.871	0.019	95	378877	10.0	7.93	
62 1,1-Dichloroethane	63	4.029	4.010	0.019	96	522708	10.0	9.38	
61 Vinyl acetate	43	4.046	4.045	0.001	97	683684	20.0	21.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	4.673	4.672	0.001	80	389338	10.0	9.73	
67 2-Butanone (MEK)	43	4.673	4.672	0.001	44	156880	40.0	44.4	
66 2,2-Dichloropropane	77	4.708	4.689	0.019	88	513711	10.0	8.81	
71 Chlorobromomethane	128	4.969	4.950	0.019	96	179128	10.0	10.7	
72 Tetrahydrofuran	42	5.038	5.037	0.001	38	52907	20.0	20.7	
74 Chloroform	83	5.056	5.037	0.019	94	629427	10.0	9.77	
75 1,1,1-Trichloroethane	97	5.317	5.316	0.001	98	610129	10.0	9.15	
76 Cyclohexane	56	5.421	5.403	0.018	92	460937	10.0	8.79	
78 1,1-Dichloropropene	75	5.508	5.507	0.001	98	460283	10.0	8.76	
77 Carbon tetrachloride	117	5.543	5.542	0.001	99	530346	10.0	8.80	
80 Isobutyl alcohol	41	5.648	5.647	0.001	92	69739	250.0	230.3	
82 1,2-Dichloroethane	62	5.769	5.769	0.000	92	258231	10.0	10.4	
81 Benzene	78	5.769	5.769	0.000	97	926597	10.0	9.48	
84 n-Heptane	43	6.152	6.152	0.000	94	528986	10.0	8.64	
85 Trichloroethene	95	6.657	6.639	0.018	97	448208	10.0	8.99	
87 Methylcyclohexane	55	6.953	6.935	0.018	88	407875	10.0	8.28	
90 1,2-Dichloropropane	63	6.936	6.935	0.001	95	321460	10.0	9.76	
92 Dibromomethane	93	7.110	7.092	0.018	96	250705	10.0	10.6	
93 1,4-Dioxane	88	7.162	7.144	0.018	91	16155	200.0	144.4	
94 Dichlorobromomethane	83	7.336	7.318	0.018	99	597920	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	7.789	7.788	0.001	94	83875	10.0	9.60	
97 cis-1,3-Dichloropropene	75	7.998	7.979	0.019	97	451113	10.0	9.58	
98 4-Methyl-2-pentanone (MIBK	43	8.241	8.240	0.001	97	515058	40.0	43.4	
99 Toluene	91	8.520	8.519	0.001	99	1132360	10.0	8.90	
100 trans-1,3-Dichloropropene	75	8.851	8.850	0.001	93	333734	10.0	10.2	
101 Ethyl methacrylate	69	9.042	9.041	0.001	91	248755	10.0	10.9	
102 1,1,2-Trichloroethane	97	9.129	9.128	0.001	90	239128	10.0	10.2	
104 1,3-Dichloropropane	76	9.390	9.389	0.001	72	348084	10.0	9.99	
103 Tetrachloroethene	164	9.390	9.389	0.001	97	435090	10.0	8.70	
105 2-Hexanone	43	9.564	9.563	0.001	99	334150	40.0	44.9	
107 Chlorodibromomethane	129	9.756	9.755	0.001	90	442136	10.0	10.3	
109 Ethylene Dibromide	107	9.930	9.929	0.001	98	320741	10.0	10.5	
111 Chlorobenzene	112	10.765	10.764	0.001	95	791810	10.0	9.27	
113 1,1,1,2-Tetrachloroethane	131	10.905	10.904	0.001	97	388554	10.0	9.63	
112 Ethylbenzene	106	10.974	10.973	0.001	99	383593	10.0	8.83	
114 m-Xylene & p-Xylene	106	11.183	11.182	0.001	0	503634	10.0	8.70	
115 o-Xylene	106	11.845	11.844	0.000	98	467251	10.0	8.96	
116 Styrene	104	11.879	11.861	0.018	94	759913	10.0	9.16	
117 Bromoform	173	12.158	12.140	0.018	97	307260	10.0	10.8	
118 Isopropylbenzene	105	12.506	12.505	0.001	95	1401780	10.0	8.33	
119 Cyclohexanone	55	12.610	12.610	0.000	91	147084	400.0	427.4	
121 Bromobenzene	156	12.993	12.992	0.001	90	438815	10.0	9.06	
122 1,1,2,2-Tetrachloroethane	83	13.011	13.010	0.001	95	299077	10.0	9.63	
124 1,2,3-Trichloropropane	110	13.063	13.062	0.001	83	72618	10.0	10.2	
125 trans-1,4-Dichloro-2-buten	53	13.115	13.114	0.001	83	51537	10.0	10.1	
123 N-Propylbenzene	120	13.237	13.236	0.001	99	326091	10.0	7.91	
126 2-Chlorotoluene	126	13.342	13.341	0.001	96	285407	10.0	8.15	
128 4-Chlorotoluene	126	13.550	13.549	0.001	97	327180	10.0	8.36	
127 1,3,5-Trimethylbenzene	105	13.568	13.567	0.001	97	1068224	10.0	8.27	
129 tert-Butylbenzene	119	14.125	14.124	0.001	91	1095162	10.0	7.90	
130 1,2,4-Trimethylbenzene	105	14.212	14.211	0.001	96	1059434	10.0	8.28	
131 sec-Butylbenzene	134	14.525	14.524	0.001	94	282736	10.0	7.64	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.682	14.681	0.001	98	646801	10.0	8.49	
133 4-Isopropyltoluene	119	14.804	14.803	0.001	96	1202244	10.0	7.80	
134 1,4-Dichlorobenzene	146	14.839	14.838	0.001	94	760789	10.0	8.20	
138 1,2-Dichlorobenzene	146	15.500	15.499	0.001	97	575409	10.0	8.30	
137 n-Butylbenzene	91	15.552	15.551	0.001	98	1238317	10.0	8.26	
139 1,2-Dibromo-3-Chloropropan	157	16.666	16.665	0.001	91	61613	10.0	9.44	
141 1,2,4-Trichlorobenzene	180	17.641	17.640	0.001	94	438012	10.0	9.43	
142 Hexachlorobutadiene	225	17.833	17.832	0.001	98	339609	10.0	8.27	
143 Naphthalene	128	17.867	17.866	0.001	98	550489	10.0	14.5	
144 1,2,3-Trichlorobenzene	180	18.111	18.110	0.001	96	341436	10.0	9.32	
S 150 Xylenes, Total (URS)	1				0		20.0	17.7	
S 151 Total BTEX	1				0			44.9	
S 146 Xylenes, Total	106				0		20.0	17.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 149 Trihalomethanes, Total	1				0		40.0	41.2	

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

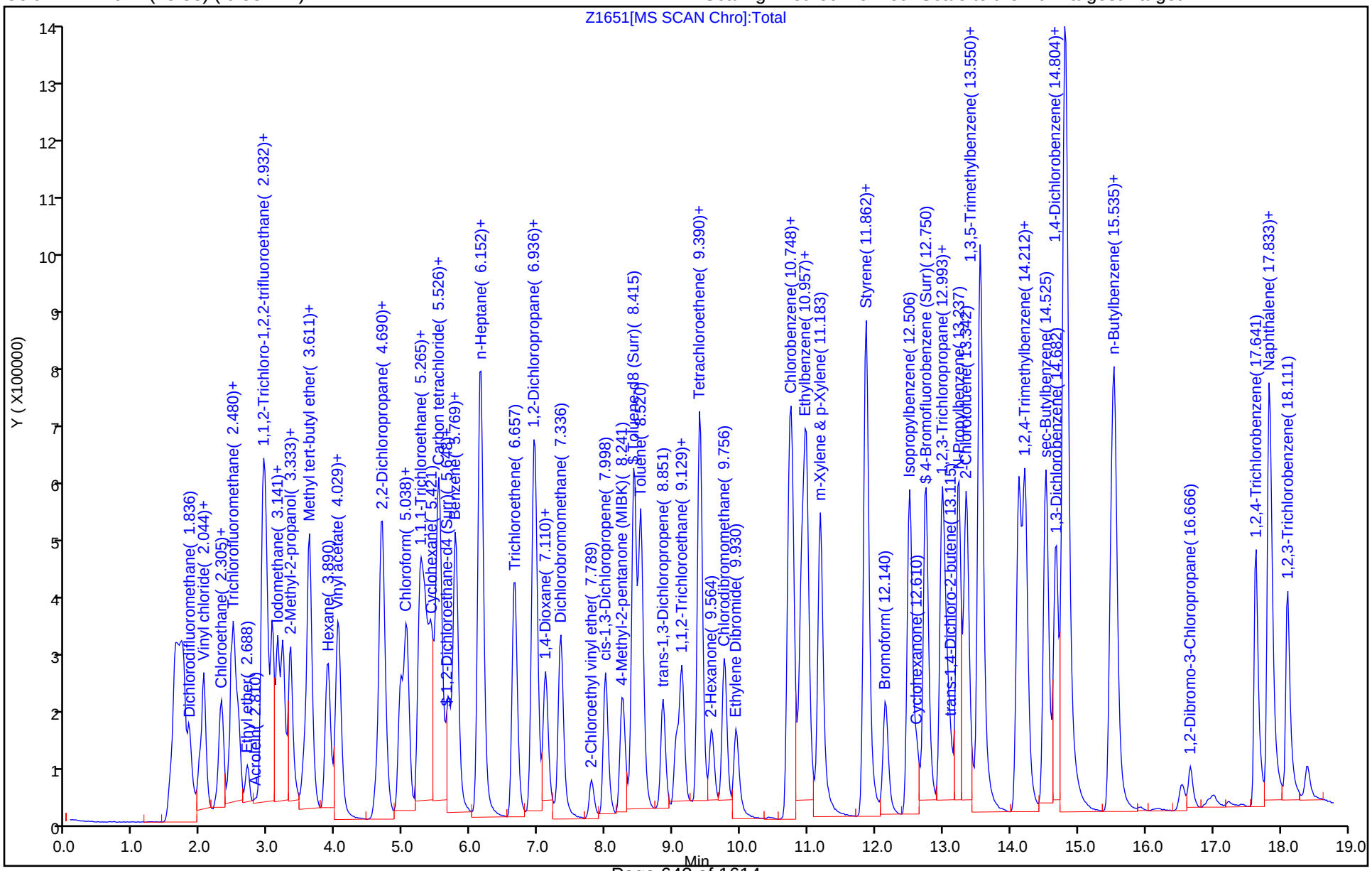
Report Date: 20-Sep-2018 07:34:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D

Injection Date:	19-Sep-2018 20:24:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ccvc			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430151/34 Calibration Date: 09/19/2018 20:24

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1651.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4435	0.3795		8.56	10.0	-14.4	50.0
Chloromethane	Ave	0.2978	0.2721	0.1000	9.14	10.0	-8.6	50.0
Vinyl chloride	Ave	0.2469	0.2233		9.04	10.0	-9.6	50.0
Bromomethane	Ave	0.3303	0.3106		9.40	10.0	-6.0	50.0
Chloroethane	Ave	0.1702	0.1518		8.92	10.0	-10.8	50.0
Dichlorofluoromethane	Ave	0.6331	0.6107		9.65	10.0	-3.5	50.0
Trichlorofluoromethane	Ave	0.7012	0.6339		9.04	10.0	-9.6	50.0
Ethyl ether	Ave	0.1171	0.1248		10.7	10.0	6.6	50.0
Acrolein	Lin1		0.0114		68.4	59.3	15.4	50.0
1,1-Dichloroethene	Ave	0.3445	0.3054		8.86	10.0	-11.4	50.0
Acetone	Lin2		0.0172		44.8	40.0	12.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4745	0.4141		8.73	10.0	-12.7	50.0
Methyl iodide	Ave	0.8293	0.7829		9.44	10.0	-5.6	50.0
Carbon disulfide	Ave	1.135	0.999		8.80	10.0	-12.0	50.0
3-Chloro-1-propene	Ave	0.4644	0.4295		9.25	10.0	-7.5	50.0
Methyl acetate	Lin2		0.0762		22.7	20.0	13.6	50.0
Methylene Chloride	Ave	0.2916	0.2692		9.23	10.0	-7.7	50.0
t-Butyl alcohol	Ave	1.084	1.082		99.8	100	-0.2	50.0
Acrylonitrile	Ave	0.0213	0.0234		109	100	9.5	50.0
Methyl tert-butyl ether	Ave	0.4311	0.4512		10.5	10.0	4.7	50.0
trans-1,2-Dichloroethene	Ave	0.3878	0.3465		8.93	10.0	-10.7	50.0
Hexane	Ave	2.195	1.740		7.93	10.0	-20.7	50.0
1,1-Dichloroethane	Ave	0.5493	0.5154	0.1000	9.38	10.0	-6.2	50.0
Vinyl acetate	Ave	0.3164	0.3371		21.3	20.0	6.5	50.0
2-Butanone (MEK)	Ave	0.0348	0.0387		44.4	40.0	11.1	50.0
cis-1,2-Dichloroethene	Ave	0.3947	0.3839		9.73	10.0	-2.7	50.0
2,2-Dichloropropane	Lin2		0.5065		8.81	10.0	-11.9	50.0
Bromochloromethane	Ave	0.1658	0.1766		10.7	10.0	6.5	50.0
Tetrahydrofuran	Ave	0.0252	0.0261		20.7	20.0	3.6	50.0
Chloroform	Ave	0.6350	0.6206		9.77	10.0	-2.3	50.0
1,1,1-Trichloroethane	Ave	0.6575	0.6016		9.15	10.0	-8.5	50.0
Cyclohexane	Ave	0.5171	0.4545		8.79	10.0	-12.1	50.0
1,1-Dichloropropene	Ave	0.5182	0.4539		8.76	10.0	-12.4	50.0
Carbon tetrachloride	Ave	0.5939	0.5229		8.80	10.0	-12.0	50.0
Isobutyl alcohol	Lin2		0.4385		230	250	-7.9	50.0
1,2-Dichloroethane	Ave	0.2452	0.2546		10.4	10.0	3.8	50.0
Benzene	Ave	0.9640	0.9137		9.48	10.0	-5.2	50.0
Trichloroethene	Ave	0.4914	0.4420		8.99	10.0	-10.1	50.0
1,2-Dichloropropane	Ave	0.3248	0.3170		9.76	10.0	-2.4	50.0
Methylcyclohexane	Ave	0.4858	0.4022		8.28	10.0	-17.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430151/34 Calibration Date: 09/19/2018 20:24

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1651.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.2331	0.2472		10.6	10.0	6.0	50.0
Bromodichloromethane	Ave	0.5682	0.5896		10.4	10.0	3.8	50.0
2-Chloroethyl vinyl ether	Lin2		0.0827		9.60	10.0	-4.0	50.0
cis-1,3-Dichloropropene	Ave	2.162	2.072		9.58	10.0	-4.2	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1170	0.1270		43.4	40.0	8.5	50.0
Toluene	Ave	1.255	1.117		8.90	10.0	-11.0	50.0
trans-1,3-Dichloropropene	Ave	0.3240	0.3291		10.2	10.0	1.6	50.0
Ethyl methacrylate	Ave	1.046	1.142		10.9	10.0	9.2	50.0
1,1,2-Trichloroethane	Ave	0.2322	0.2358		10.2	10.0	1.6	50.0
1,3-Dichloropropane	Ave	1.601	1.599		9.99	10.0	-0.1	50.0
Tetrachloroethene	Ave	2.298	1.998		8.70	10.0	-13.0	50.0
2-Hexanone	Ave	0.3416	0.3836		44.9	40.0	12.3	50.0
Dibromochloromethane	Ave	1.976	2.030		10.3	10.0	2.8	50.0
1,2-Dibromoethane	Ave	1.398	1.473		10.5	10.0	5.4	50.0
Chlorobenzene	Ave	3.921	3.636	0.3000	9.27	10.0	-7.3	50.0
1,1,1,2-Tetrachloroethane	Ave	1.853	1.784		9.63	10.0	-3.7	50.0
Ethylbenzene	Ave	1.995	1.762		8.83	10.0	-11.7	50.0
m,p-Xylene	Ave	2.660	2.313		8.70	10.0	-13.0	50.0
o-Xylene	Ave	2.394	2.146		8.96	10.0	-10.4	50.0
Styrene	Ave	3.809	3.490		9.16	10.0	-8.4	50.0
Bromoform	Ave	1.309	1.411	0.1000	10.8	10.0	7.8	50.0
Isopropylbenzene	Ave	3.800	3.165		8.33	10.0	-16.7	50.0
Cyclohexanone	Ave	0.0158	0.0169		427	400	6.8	50.0
Bromobenzene	Ave	1.094	0.9908		9.06	10.0	-9.4	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7010	0.6753	0.3000	9.63	10.0	-3.7	50.0
1,2,3-Trichloropropane	Ave	0.1610	0.1640		10.2	10.0	1.8	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1152	0.1164		10.1	10.0	1.0	50.0
N-Propylbenzene	Ave	0.9309	0.7363		7.91	10.0	-20.9	50.0
2-Chlorotoluene	Ave	0.7911	0.6444		8.15	10.0	-18.5	50.0
4-Chlorotoluene	Ave	0.8839	0.7387		8.36	10.0	-16.4	50.0
1,3,5-Trimethylbenzene	Ave	2.917	2.412		8.27	10.0	-17.3	50.0
tert-Butylbenzene	Ave	3.129	2.473		7.90	10.0	-21.0	50.0
1,2,4-Trimethylbenzene	Ave	2.890	2.392		8.28	10.0	-17.2	50.0
sec-Butylbenzene	Ave	0.8357	0.6384		7.64	10.0	-23.6	50.0
1,3-Dichlorobenzene	Ave	1.719	1.460		8.49	10.0	-15.1	50.0
4-Isopropyltoluene	Ave	3.479	2.714		7.80	10.0	-22.0	50.0
1,4-Dichlorobenzene	Ave	2.096	1.718		8.20	10.0	-18.0	50.0
1,2-Dichlorobenzene	Ave	1.566	1.299		8.30	10.0	-17.0	50.0
n-Butylbenzene	Lin2		2.796		8.26	10.0	-17.4	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1473	0.1391		9.44	10.0	-5.6	50.0
1,2,4-Trichlorobenzene	Lin2		0.9889		9.43	10.0	-5.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: CCVC 280-430151/34 Calibration Date: 09/19/2018 20:24

Instrument ID: VMS_Z Calib Start Date: 09/14/2018 09:41

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 09/14/2018 12:17

Lab File ID: Z1651.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Lin1		0.7668		8.27	10.0	-17.3	50.0
Naphthalene	Lin2		1.243		14.5	10.0	44.6	50.0
1,2,3-Trichlorobenzene	Lin2		0.7709		9.32	10.0	-6.8	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 19-Sep-2018 20:24:30 ALS Bottle#: 31 Worklist Smp#: 34
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: ilczyszynd Instrument ID: VMS_Z
Sublist: chrom-AQ_VMSZ_8260*sub145

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.350	3.349	0.001	0	159042	250.0	250.0	
* 2 Fluorobenzene	96	6.135	6.134	0.001	99	1267712	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.713	10.712	0.001	89	272185	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.804	14.803	0.001	94	553638	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.247	5.233	0.014	93	649281	11.5	11.4	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.682	5.669	0.014	0	261697	11.5	11.7	
$ 10 Toluene-d8 (Surr)	98	8.415	8.401	0.014	92	1290261	11.5	12.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.750	12.736	0.014	90	728932	11.5	10.3	
27 Dichlorodifluoromethane	85	1.836	1.835	0.001	100	384848	10.0	8.56	
30 Chloromethane	50	1.992	1.991	0.001	99	275904	10.0	9.14	
32 Vinyl chloride	62	2.062	2.061	0.001	98	226452	10.0	9.04	
35 Bromomethane	94	2.288	2.287	0.001	90	314977	10.0	9.40	
36 Chloroethane	64	2.323	2.322	0.001	99	153937	10.0	8.92	
37 Dichlorofluoromethane	67	2.445	2.461	-0.016	99	619326	10.0	9.65	
38 Trichlorofluoromethane	101	2.514	2.496	0.018	100	642896	10.0	9.04	
40 Ethyl ether	59	2.688	2.688	0.000	95	126581	10.0	10.7	
44 Acrolein	56	2.810	2.792	0.018	98	68216	59.3	68.4	
45 1,1-Dichloroethene	96	2.915	2.914	0.001	96	309675	10.0	8.86	
48 Acetone	43	2.915	2.931	-0.016	31	69705	40.0	44.8	
46 1,1,2-Trichloro-1,2,2-trif	151	2.967	2.949	0.018	97	419944	10.0	8.73	
49 Iodomethane	142	3.054	3.053	0.001	99	794005	10.0	9.44	
50 Carbon disulfide	76	3.141	3.140	0.001	99	1013067	10.0	8.80	
52 3-Chloro-1-propene	41	3.211	3.210	0.001	89	435583	10.0	9.25	
51 Methyl acetate	43	3.211	3.210	0.001	45	154592	20.0	22.7	
54 Methylene Chloride	84	3.333	3.314	0.018	92	272966	10.0	9.23	
55 2-Methyl-2-propanol	59	3.420	3.419	0.001	98	68808	100.0	99.8	
58 Acrylonitrile	53	3.541	3.523	0.018	99	237055	100.0	109.5	
57 trans-1,2-Dichloroethene	96	3.611	3.593	0.018	97	351435	10.0	8.93	
56 Methyl tert-butyl ether	73	3.611	3.610	0.001	96	457602	10.0	10.5	
59 Hexane	57	3.890	3.871	0.019	95	378877	10.0	7.93	
62 1,1-Dichloroethane	63	4.029	4.010	0.019	96	522708	10.0	9.38	
61 Vinyl acetate	43	4.046	4.045	0.001	97	683684	20.0	21.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	4.673	4.672	0.001	80	389338	10.0	9.73	
67 2-Butanone (MEK)	43	4.673	4.672	0.001	44	156880	40.0	44.4	
66 2,2-Dichloropropane	77	4.708	4.689	0.019	88	513711	10.0	8.81	
71 Chlorobromomethane	128	4.969	4.950	0.019	96	179128	10.0	10.7	
72 Tetrahydrofuran	42	5.038	5.037	0.001	38	52907	20.0	20.7	
74 Chloroform	83	5.056	5.037	0.019	94	629427	10.0	9.77	
75 1,1,1-Trichloroethane	97	5.317	5.316	0.001	98	610129	10.0	9.15	
76 Cyclohexane	56	5.421	5.403	0.018	92	460937	10.0	8.79	
78 1,1-Dichloropropene	75	5.508	5.507	0.001	98	460283	10.0	8.76	
77 Carbon tetrachloride	117	5.543	5.542	0.001	99	530346	10.0	8.80	
80 Isobutyl alcohol	41	5.648	5.647	0.001	92	69739	250.0	230.3	
82 1,2-Dichloroethane	62	5.769	5.769	0.000	92	258231	10.0	10.4	
81 Benzene	78	5.769	5.769	0.000	97	926597	10.0	9.48	
84 n-Heptane	43	6.152	6.152	0.000	94	528986	10.0	8.64	
85 Trichloroethene	95	6.657	6.639	0.018	97	448208	10.0	8.99	
87 Methylcyclohexane	55	6.953	6.935	0.018	88	407875	10.0	8.28	
90 1,2-Dichloropropane	63	6.936	6.935	0.001	95	321460	10.0	9.76	
92 Dibromomethane	93	7.110	7.092	0.018	96	250705	10.0	10.6	
93 1,4-Dioxane	88	7.162	7.144	0.018	91	16155	200.0	144.4	
94 Dichlorobromomethane	83	7.336	7.318	0.018	99	597920	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	7.789	7.788	0.001	94	83875	10.0	9.60	
97 cis-1,3-Dichloropropene	75	7.998	7.979	0.019	97	451113	10.0	9.58	
98 4-Methyl-2-pentanone (MIBK	43	8.241	8.240	0.001	97	515058	40.0	43.4	
99 Toluene	91	8.520	8.519	0.001	99	1132360	10.0	8.90	
100 trans-1,3-Dichloropropene	75	8.851	8.850	0.001	93	333734	10.0	10.2	
101 Ethyl methacrylate	69	9.042	9.041	0.001	91	248755	10.0	10.9	
102 1,1,2-Trichloroethane	97	9.129	9.128	0.001	90	239128	10.0	10.2	
104 1,3-Dichloropropane	76	9.390	9.389	0.001	72	348084	10.0	9.99	
103 Tetrachloroethene	164	9.390	9.389	0.001	97	435090	10.0	8.70	
105 2-Hexanone	43	9.564	9.563	0.001	99	334150	40.0	44.9	
107 Chlorodibromomethane	129	9.756	9.755	0.001	90	442136	10.0	10.3	
109 Ethylene Dibromide	107	9.930	9.929	0.001	98	320741	10.0	10.5	
111 Chlorobenzene	112	10.765	10.764	0.001	95	791810	10.0	9.27	
113 1,1,1,2-Tetrachloroethane	131	10.905	10.904	0.001	97	388554	10.0	9.63	
112 Ethylbenzene	106	10.974	10.973	0.001	99	383593	10.0	8.83	
114 m-Xylene & p-Xylene	106	11.183	11.182	0.001	0	503634	10.0	8.70	
115 o-Xylene	106	11.845	11.844	0.000	98	467251	10.0	8.96	
116 Styrene	104	11.879	11.861	0.018	94	759913	10.0	9.16	
117 Bromoform	173	12.158	12.140	0.018	97	307260	10.0	10.8	
118 Isopropylbenzene	105	12.506	12.505	0.001	95	1401780	10.0	8.33	
119 Cyclohexanone	55	12.610	12.610	0.000	91	147084	400.0	427.4	
121 Bromobenzene	156	12.993	12.992	0.001	90	438815	10.0	9.06	
122 1,1,2,2-Tetrachloroethane	83	13.011	13.010	0.001	95	299077	10.0	9.63	
124 1,2,3-Trichloropropane	110	13.063	13.062	0.001	83	72618	10.0	10.2	
125 trans-1,4-Dichloro-2-buten	53	13.115	13.114	0.001	83	51537	10.0	10.1	
123 N-Propylbenzene	120	13.237	13.236	0.001	99	326091	10.0	7.91	
126 2-Chlorotoluene	126	13.342	13.341	0.001	96	285407	10.0	8.15	
128 4-Chlorotoluene	126	13.550	13.549	0.001	97	327180	10.0	8.36	
127 1,3,5-Trimethylbenzene	105	13.568	13.567	0.001	97	1068224	10.0	8.27	
129 tert-Butylbenzene	119	14.125	14.124	0.001	91	1095162	10.0	7.90	
130 1,2,4-Trimethylbenzene	105	14.212	14.211	0.001	96	1059434	10.0	8.28	
131 sec-Butylbenzene	134	14.525	14.524	0.001	94	282736	10.0	7.64	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.682	14.681	0.001	98	646801	10.0	8.49	
133 4-Isopropyltoluene	119	14.804	14.803	0.001	96	1202244	10.0	7.80	
134 1,4-Dichlorobenzene	146	14.839	14.838	0.001	94	760789	10.0	8.20	
138 1,2-Dichlorobenzene	146	15.500	15.499	0.001	97	575409	10.0	8.30	
137 n-Butylbenzene	91	15.552	15.551	0.001	98	1238317	10.0	8.26	
139 1,2-Dibromo-3-Chloropropan	157	16.666	16.665	0.001	91	61613	10.0	9.44	
141 1,2,4-Trichlorobenzene	180	17.641	17.640	0.001	94	438012	10.0	9.43	
142 Hexachlorobutadiene	225	17.833	17.832	0.001	98	339609	10.0	8.27	
143 Naphthalene	128	17.867	17.866	0.001	98	550489	10.0	14.5	
144 1,2,3-Trichlorobenzene	180	18.111	18.110	0.001	96	341436	10.0	9.32	
S 150 Xylenes, Total (URS)	1				0		20.0	17.7	
S 151 Total BTEX	1				0			44.9	
S 146 Xylenes, Total	106				0		20.0	17.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 145 1,2-Dichloroethene, Total	1				0		20.0	18.7	
S 147 1,2-Dichloroethene, Total	96				0		20.0	18.7	
S 149 Trihalomethanes, Total	1				0		40.0	41.2	

Reagents:

MV-MegaMainA_00001	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

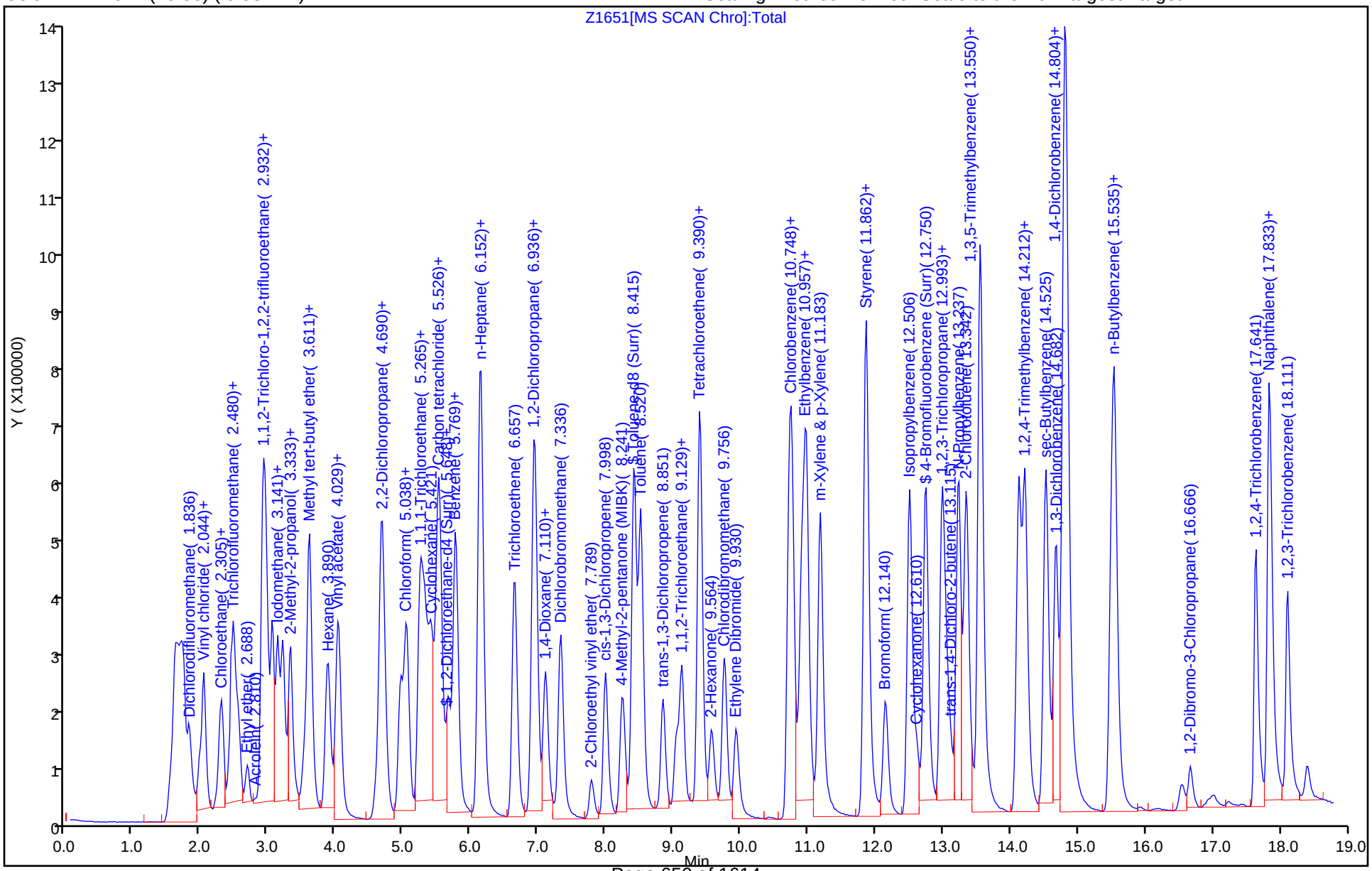
Report Date: 20-Sep-2018 07:34:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1651.D

Injection Date:	19-Sep-2018 20:24:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	ccvc			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6760.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Sep-2018 08:12:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 08-Sep-2018 11:31:11 Calib Date: 07-Sep-2018 17:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6782.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: ilczyszynd Date: 08-Sep-2018 11:31:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.091	2.091	0.000	85	390281	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

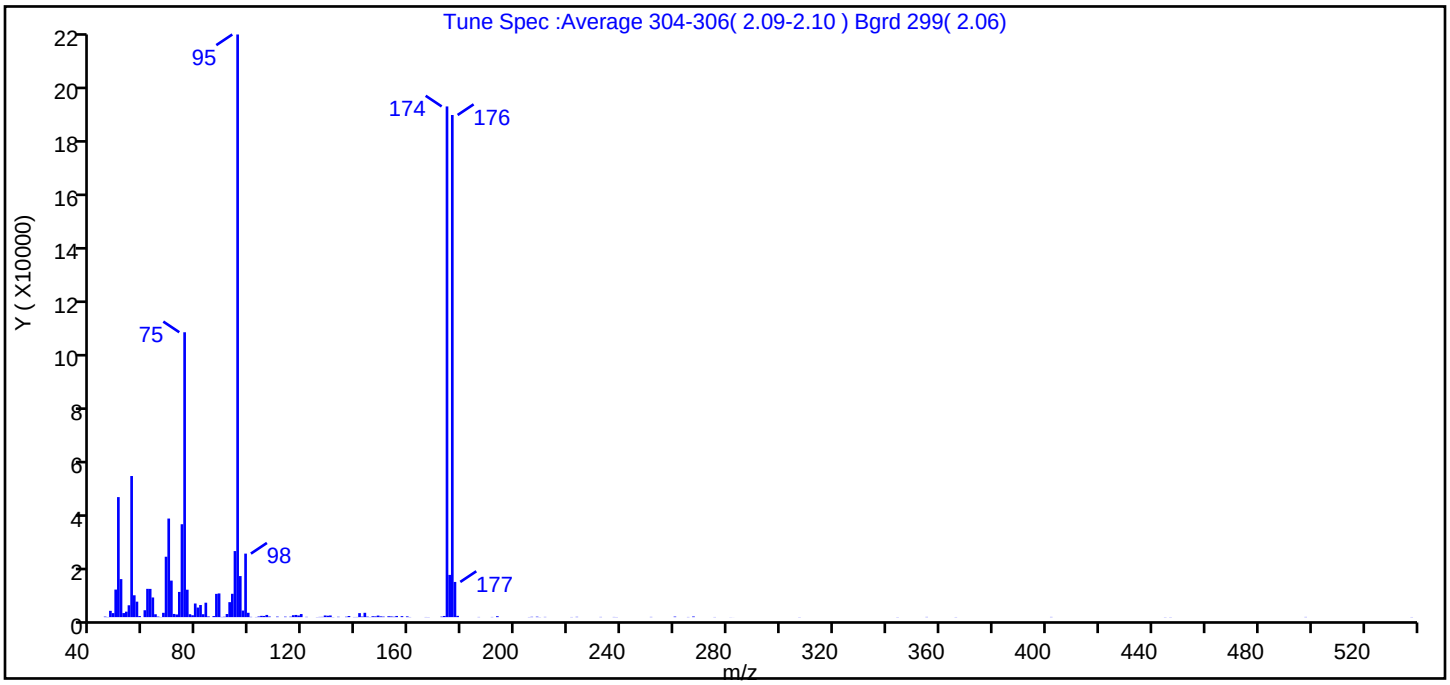
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6760.D
Injection Date: 07-Sep-2018 08:12:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.6
75	30 to 60% of m/z 95	48.9
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	87.6
175	5 to 9% of m/z 174	7.2 (8.3)
176	Greater than 95% but less than 101% of m/z 174	86.2 (98.3)
177	5 to 9% of m/z 176	6.0 (7.0)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6760.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 07-Sep-2018 08:12:30
Spectrum: Tune Spec :Average 304-306(2.09-2.10) Bgrd 299(2.06)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	191	80.00	3514	125.00	52	175.00	15478
46.00	65	81.00	4443	126.00	88	176.00	184000
47.00	2315	82.00	1078	127.00	101	177.00	12899
48.00	1475	83.00	5291	128.00	607	178.00	470
49.00	10103	84.00	252	129.00	513	186.00	73
50.00	43984	86.00	387	130.00	610	191.00	73
51.00	13933	87.00	8532	131.00	52	193.00	341
52.00	1490	88.00	8691	133.00	137	205.00	57
53.00	2006	89.00	81	136.00	151	206.00	127
54.00	4348	90.00	147	137.00	417	208.00	173
55.00	51712	91.00	1143	139.00	61	209.00	39
56.00	8006	92.00	5492	140.00	72	211.00	89
57.00	5673	93.00	8557	141.00	1472	221.00	61
58.00	400	94.00	24208	142.00	203	223.00	115
60.00	2530	95.00	213504	143.00	1592	232.00	80
61.00	10369	96.00	15052	144.00	190	237.00	71
62.00	10352	97.00	2415	145.00	43	238.00	55
63.00	7208	98.00	23280	146.00	328	251.00	86
64.00	1060	99.00	1598	147.00	275	260.00	203
65.00	204	100.00	101	148.00	573	265.00	68
66.00	56	102.00	61	149.00	280	267.00	236
67.00	1586	103.00	243	150.00	203	275.00	60
68.00	22136	104.00	475	152.00	330	281.00	32
69.00	36128	105.00	442	153.00	256	282.00	14
70.00	13389	106.00	810	154.00	156	307.00	50
71.00	1175	107.00	239	155.00	431	344.00	51
72.00	984	110.00	201	157.00	368	355.00	82
73.00	9239	113.00	181	159.00	281	366.00	55
74.00	34048	115.00	174	160.00	58	402.00	77
75.00	104392	116.00	709	166.00	60	445.00	50
76.00	10051	117.00	805	167.00	53	447.00	54
77.00	1070	118.00	601	172.00	195	498.00	77
78.00	693	119.00	1138	173.00	430	538.00	55

Report Date: 08-Sep-2018 11:31:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50
Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6760.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 07-Sep-2018 08:12:30
Spectrum: Tune Spec :Average 304-306(2.09-2.10) Bgrd 299(2.06)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	4996	121.00	105	174.00	187136		

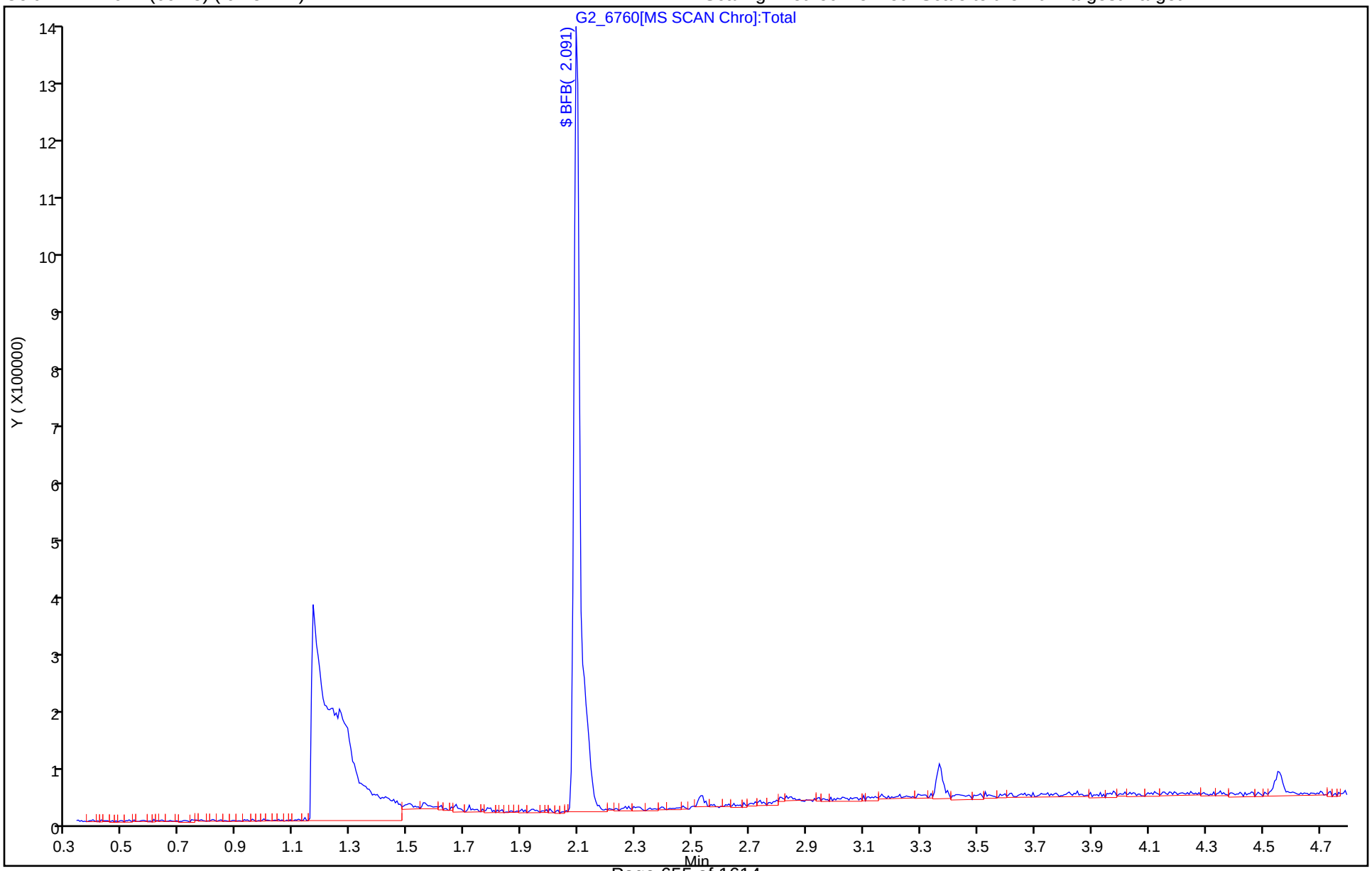
Report Date: 08-Sep-2018 11:31:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b\G2_6760.D

Injection Date:	07-Sep-2018 08:12:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6994b.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 17-Sep-2018 08:13:30 ALS Bottle#: 11 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 18-Sep-2018 08:50:33 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: ilczyszynd Date: 18-Sep-2018 08:30:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	11.591	11.591	0.000	92	481812	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

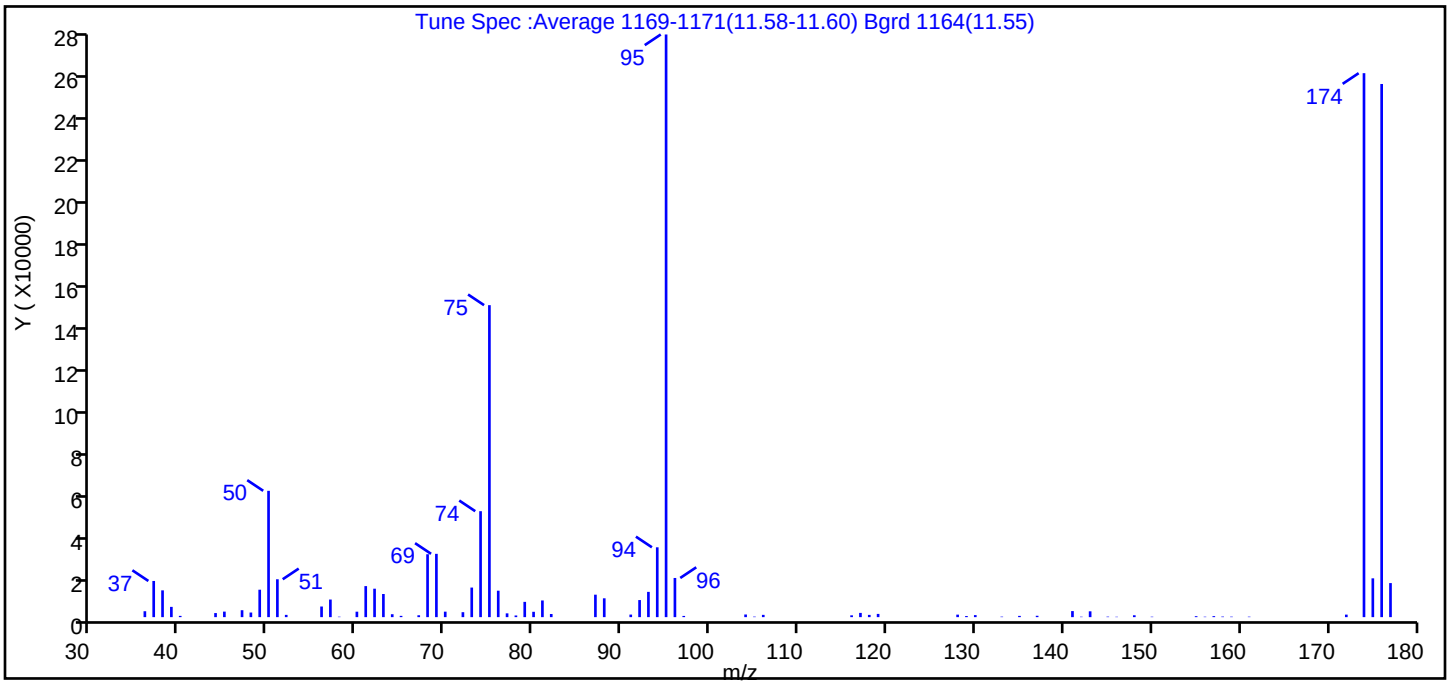
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6994b.D
Injection Date: 17-Sep-2018 08:13:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 11 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.7
75	30 to 60% of m/z 95	53.5
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	93.4
175	5 to 9% of m/z 174	6.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	91.5 (98.0)
177	5 to 9% of m/z 176	5.8 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6994b.D\AQ_VMSG2_8260.rslt\spectra.
Injection Date: 17-Sep-2018 08:13:30
Spectrum: Tune Spec :Average 1169-1171(11.58-11.60) Bgrd 1164(11.55)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 77

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2764	64.00	1370	92.00	7995	142.00	204
37.00	16928	65.00	604	93.00	11824	143.00	2728
38.00	12534	67.00	877	94.00	32680	145.00	238
39.00	4803	68.00	29432	95.00	272640	146.00	176
40.00	596	69.00	29624	96.00	18328	148.00	876
44.00	1910	70.00	2567	97.00	567	150.00	205
45.00	2589	72.00	2319	104.00	1242	155.00	445
47.00	3245	73.00	13843	105.00	240	156.00	204
48.00	2159	74.00	49576	106.00	1071	157.00	468
49.00	12838	75.00	145984	116.00	849	158.00	266
50.00	59112	76.00	12377	117.00	1984	159.00	226
51.00	17728	77.00	1774	118.00	1056	161.00	222
52.00	1061	78.00	780	119.00	1517	172.00	1182
56.00	4975	79.00	7150	128.00	1172	174.00	254528
57.00	8240	80.00	2505	129.00	516	175.00	18160
58.00	206	81.00	7805	130.00	947	176.00	249472
60.00	2556	82.00	1466	133.00	234	177.00	15937
61.00	14524	87.00	10512	135.00	589		
62.00	13310	88.00	8816	137.00	641		
63.00	10825	91.00	1201	141.00	2834		

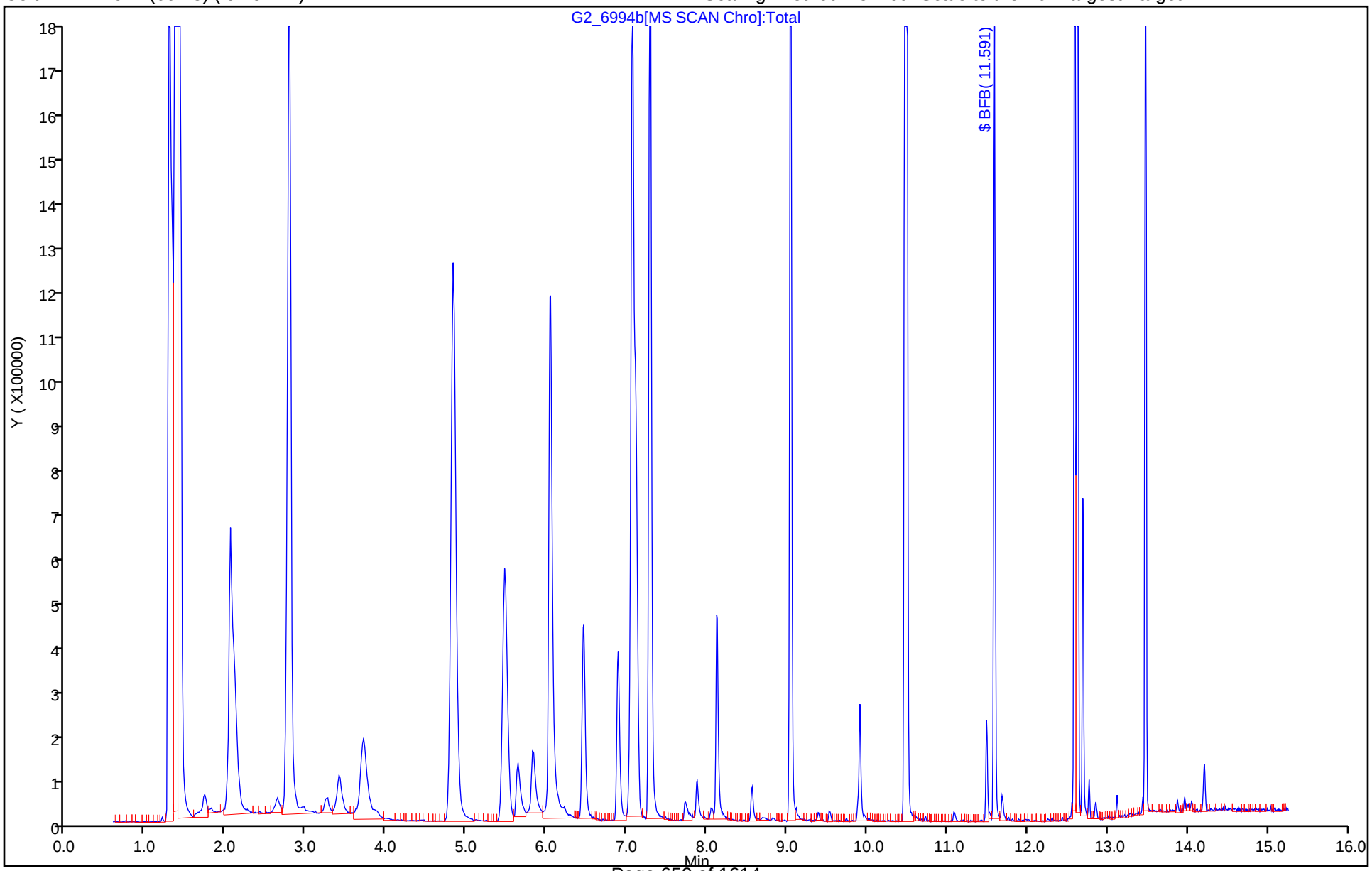
Report Date: 18-Sep-2018 08:50:34 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_6994b.D

Injection Date:	17-Sep-2018 08:13:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7084.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	20-Sep-2018 09:19:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	ilczyszynd	Instrument ID:	VMS_G2		
Method:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	21-Sep-2018 07:06:46	Calib Date:	17-Sep-2018 11:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0314				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	2.085	2.085	0.000	86	376017	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

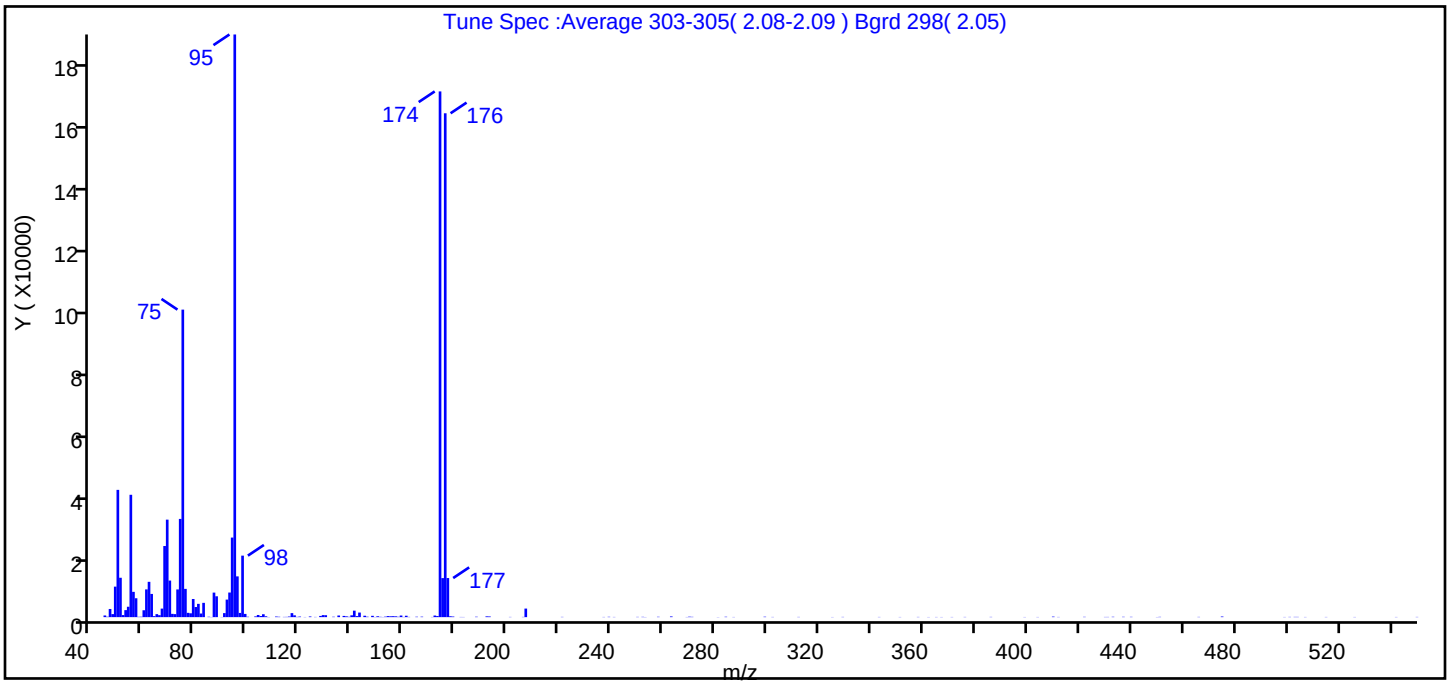
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7084.D
Injection Date: 20-Sep-2018 09:19:30 Instrument ID: VMS_G2
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.8
75	30 to 60% of m/z 95	52.8
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	90.2
175	5 to 9% of m/z 174	6.7 (7.4)
176	Greater than 95% but less than 101% of m/z 174	86.5 (95.8)
177	5 to 9% of m/z 176	6.7 (7.8)

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7084.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 20-Sep-2018 09:19:30
Spectrum: Tune Spec :Average 303-305(2.08-2.09) Bgrd 298(2.05)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 172

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	535	90.00	51	148.00	420	269.00	55
46.00	134	91.00	1287	149.00	58	270.00	146
47.00	2606	92.00	5600	150.00	276	271.00	98
48.00	970	93.00	7856	151.00	103	281.00	44
49.00	9739	94.00	25400	152.00	54	284.00	126
50.00	40624	95.00	185984	153.00	161	287.00	58
51.00	12570	96.00	13012	154.00	331	299.00	137
52.00	657	97.00	1344	155.00	270	302.00	65
53.00	2241	98.00	19632	156.00	307	312.00	72
54.00	3319	99.00	1031	157.00	260	325.00	51
55.00	39056	100.00	126	158.00	113	329.00	76
56.00	8073	103.00	246	159.00	511	343.00	64
57.00	6031	104.00	690	160.00	67	351.00	56
58.00	105	105.00	356	161.00	447	358.00	71
59.00	129	106.00	925	162.00	79	362.00	51
60.00	2199	107.00	274	165.00	133	365.00	60
61.00	8855	108.00	52	167.00	153	367.00	53
62.00	11274	111.00	194	171.00	60	371.00	59
63.00	7408	112.00	123	172.00	511	376.00	69
64.00	318	114.00	76	173.00	344	386.00	79
65.00	957	115.00	88	174.00	167808	399.00	53
66.00	626	116.00	190	175.00	12460	404.00	57
67.00	2729	117.00	1282	176.00	160832	410.00	169
68.00	22704	118.00	581	177.00	12479	412.00	64
69.00	31120	119.00	85	178.00	279	422.00	99
70.00	11676	120.00	183	179.00	193	430.00	67
71.00	1050	122.00	52	182.00	62	431.00	71
72.00	966	124.00	217	183.00	57	433.00	117
73.00	8841	126.00	67	188.00	135	437.00	108
74.00	31352	128.00	384	192.00	249	440.00	100
75.00	98160	129.00	648	193.00	216	450.00	50
76.00	9019	130.00	612	201.00	70	451.00	93
77.00	1373	133.00	129	206.00	73	466.00	78

Report Date: 21-Sep-2018 07:06:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50
Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7084.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 20-Sep-2018 09:19:30
Spectrum: Tune Spec :Average 303-305(2.08-2.09) Bgrd 298(2.05)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 172

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	1228	135.00	520	207.00	2733	475.00	198
79.00	5793	137.00	391	221.00	81	499.00	57
80.00	3228	138.00	254	237.00	63	501.00	80
81.00	4244	139.00	108	239.00	108	503.00	83
82.00	1158	140.00	576	241.00	64	504.00	80
83.00	4564	141.00	2069	250.00	82	507.00	60
85.00	124	142.00	336	252.00	94	515.00	62
86.00	51	143.00	1461	253.00	50	526.00	58
87.00	7832	145.00	449	258.00	114	542.00	59
88.00	6657	146.00	144	263.00	220	550.00	72

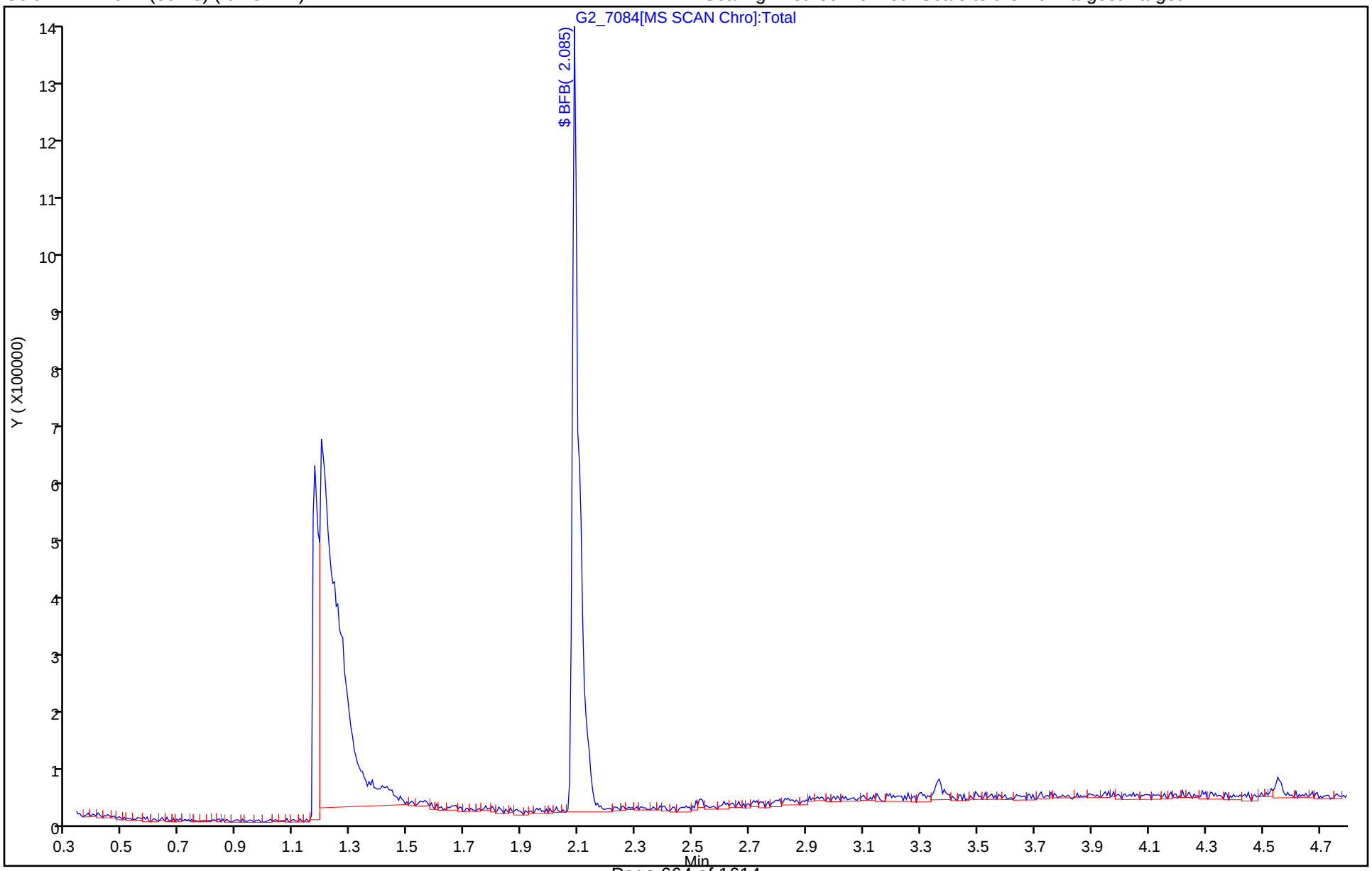
Report Date: 21-Sep-2018 07:06:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7084.D

Injection Date:	20-Sep-2018 09:19:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1178.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Sep-2018 08:41:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Sep-2018 12:01:39 Calib Date: 07-Sep-2018 17:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1202.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: ilczyszynd Date: 10-Sep-2018 12:01:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.392	2.392	0.000	82	236193	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

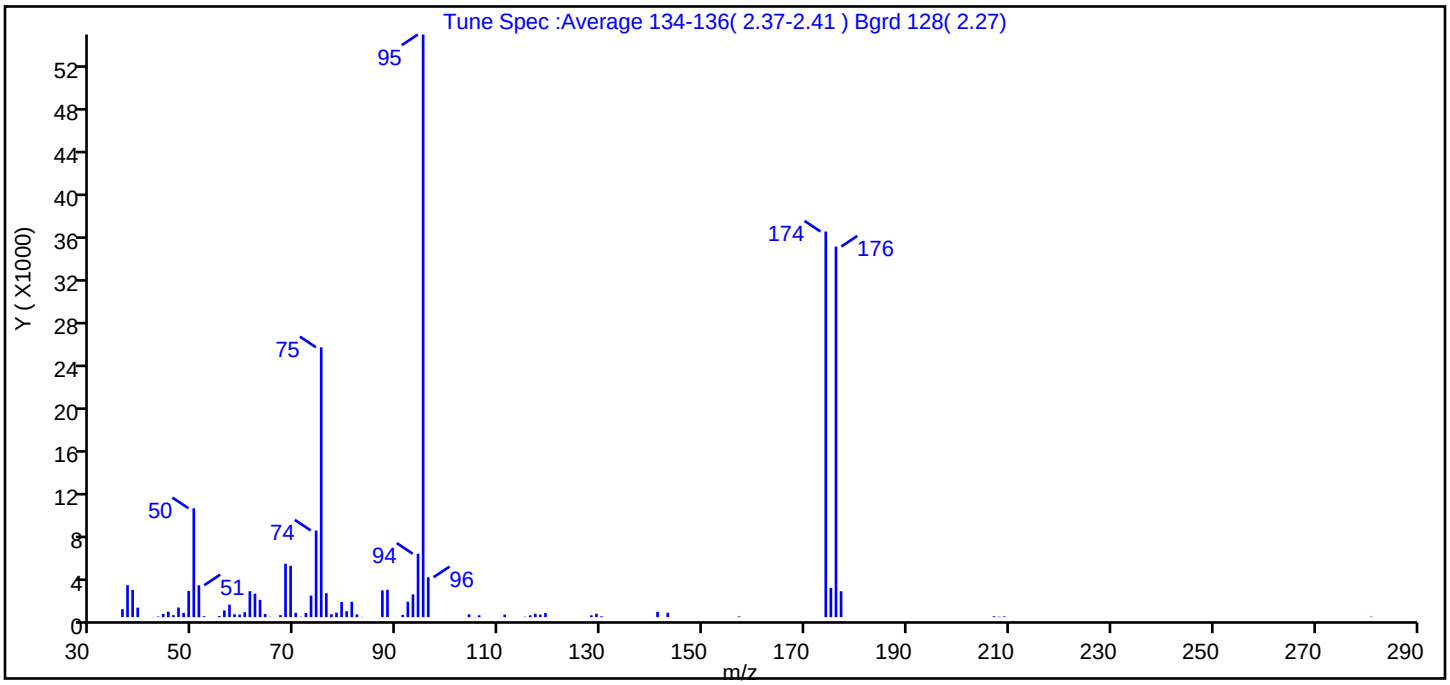
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1178.D
Injection Date: 07-Sep-2018 08:41:30 Instrument ID: VMS_Z
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.7
75	30 to 60% of m/z 95	46.3
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	66.2
175	5 to 9% of m/z 174	5.0 (7.6)
176	Greater than 95% but less than 101% of m/z 174	63.6 (96.1)
177	5 to 9% of m/z 176	4.5 (7.0)

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1178.D\AQ_VMSZ_8260.rslt\spectra.d
Injection Date: 07-Sep-2018 08:41:30
Spectrum: Tune Spec :Average 134-136(2.37-2.41) Bgrd 128(2.27)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	742	59.00	237	79.00	1416	116.00	172
37.00	2975	60.00	459	80.00	551	117.00	311
38.00	2525	61.00	2416	81.00	1428	118.00	234
39.00	885	62.00	2183	82.00	258	119.00	381
42.00	20	63.00	1610	83.00	22	128.00	170
43.00	56	64.00	289	85.00	4	129.00	317
44.00	298	65.00	30	87.00	2489	130.00	78
45.00	510	67.00	188	88.00	2540	141.00	498
46.00	186	68.00	4959	91.00	213	143.00	409
47.00	894	69.00	4772	92.00	1437	157.00	67
48.00	392	70.00	401	93.00	2117	174.00	35872
49.00	2439	71.00	38	94.00	5899	175.00	2714
50.00	10126	72.00	387	95.00	54200	176.00	34472
51.00	2964	73.00	2007	96.00	3712	177.00	2413
52.00	87	74.00	8061	104.00	261	207.00	83
55.00	102	75.00	25104	105.00	13	208.00	42
56.00	631	76.00	2225	106.00	173	209.00	68
57.00	1166	77.00	275	111.00	228	281.00	45
58.00	265	78.00	418	115.00	38		

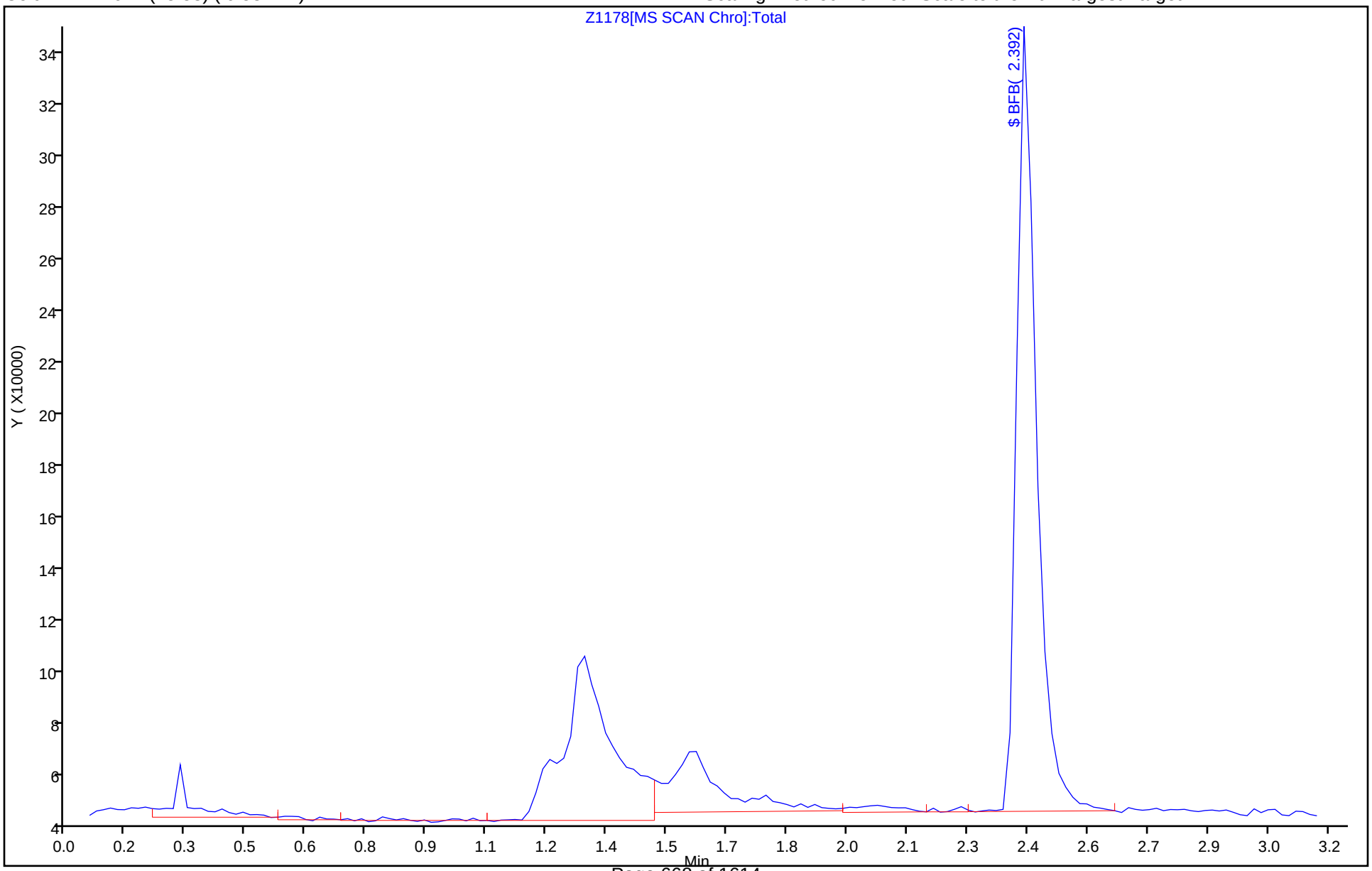
Report Date: 10-Sep-2018 12:01:41 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b\Z1178.D

Injection Date:	07-Sep-2018 08:41:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1428.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 14-Sep-2018 08:10:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2018 13:04:36 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: ilczyszynd Date: 14-Sep-2018 11:11:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.390	2.390	0.000	84	276127	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

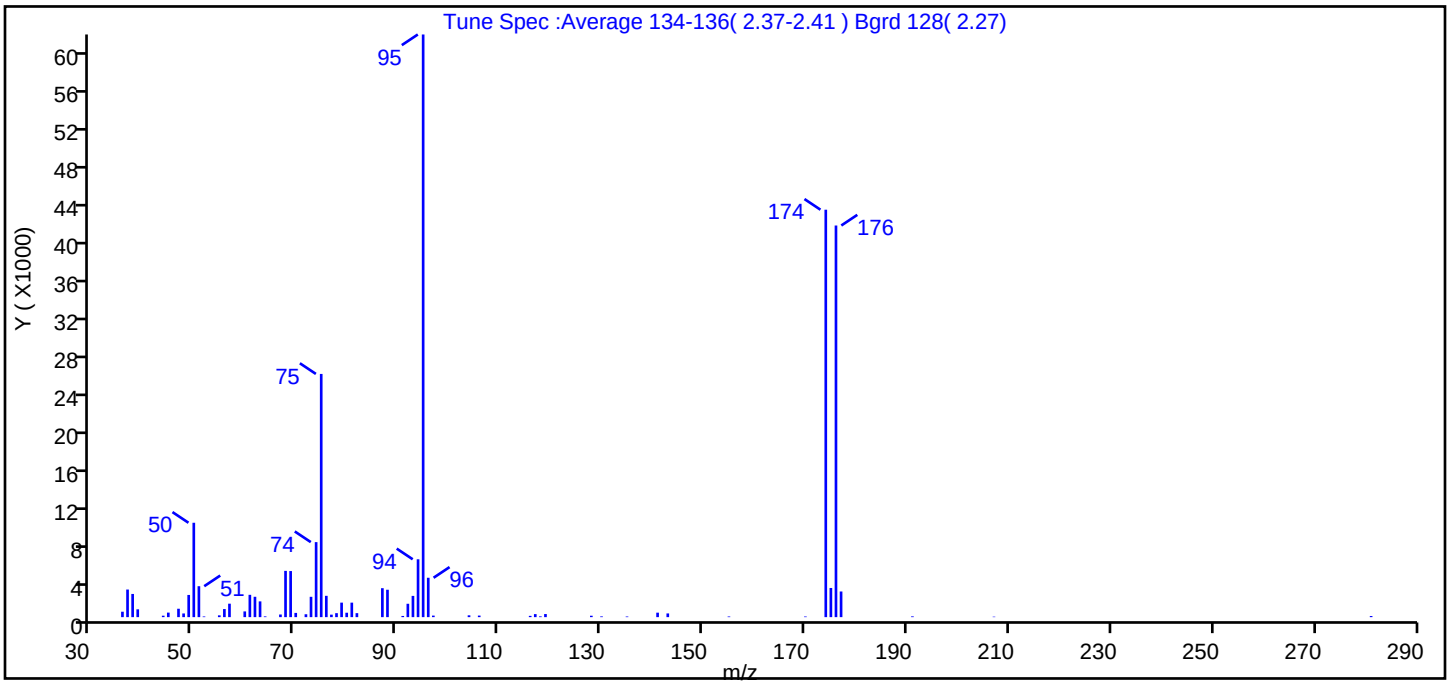
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1428.D
Injection Date: 14-Sep-2018 08:10:30 Instrument ID: VMS_Z
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.2
75	30 to 60% of m/z 95	41.7
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.9
175	5 to 9% of m/z 174	5.0 (7.2)
176	Greater than 95% but less than 101% of m/z 174	67.2 (96.1)
177	5 to 9% of m/z 176	4.4 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1428.D\AQ_VMSZ_8260.rslt\spectra.d
Injection Date: 14-Sep-2018 08:10:30
Spectrum: Tune Spec :Average 134-136(2.37-2.41) Bgrd 128(2.27)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	572	61.00	2351	80.00	464	118.00	81
37.00	2908	62.00	2145	81.00	1528	119.00	327
38.00	2443	63.00	1660	82.00	420	128.00	149
39.00	823	64.00	79	87.00	3050	130.00	78
44.00	152	67.00	278	88.00	2886	135.00	68
45.00	477	68.00	4873	91.00	125	141.00	471
47.00	885	69.00	4854	92.00	1409	143.00	391
48.00	389	70.00	446	93.00	2238	155.00	69
49.00	2338	72.00	305	94.00	6094	170.00	67
50.00	9941	73.00	2141	95.00	61368	174.00	42912
51.00	3258	74.00	7902	96.00	4148	175.00	3072
52.00	71	75.00	25616	97.00	162	176.00	41248
55.00	189	76.00	2245	104.00	192	177.00	2702
56.00	852	77.00	263	106.00	165	191.00	81
57.00	1418	78.00	420	116.00	135	207.00	49
60.00	604	79.00	1529	117.00	320	281.00	116

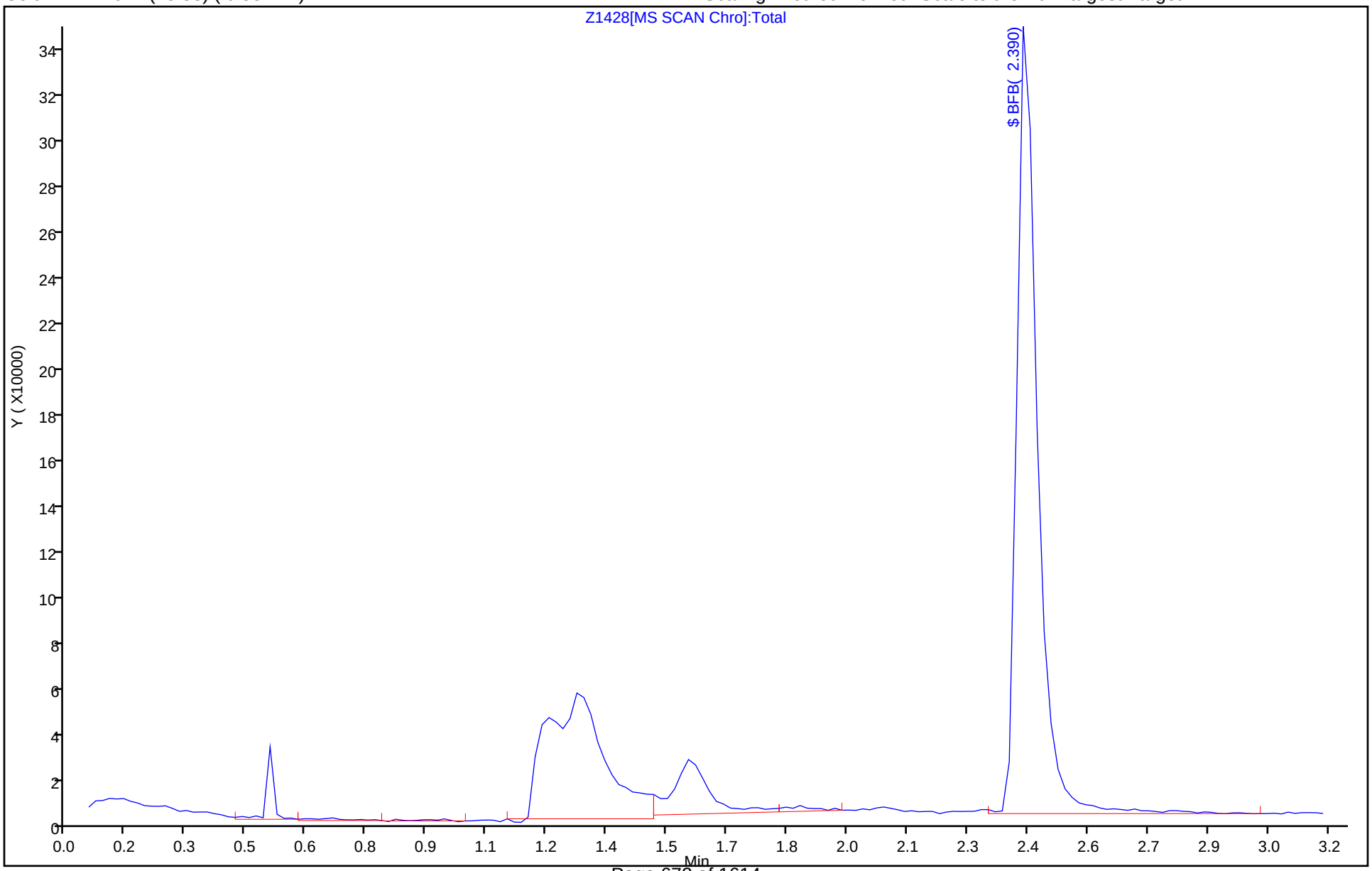
Report Date: 14-Sep-2018 13:04:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1428.D

Injection Date:	14-Sep-2018 08:10:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1621.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Sep-2018 09:00:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	ilczyszynd	Instrument ID:	VMS_Z		
Method:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	20-Sep-2018 07:34:09	Calib Date:	14-Sep-2018 12:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	CTX0305				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 7 BFB	95	2.391	2.391	0.000	85	286320	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

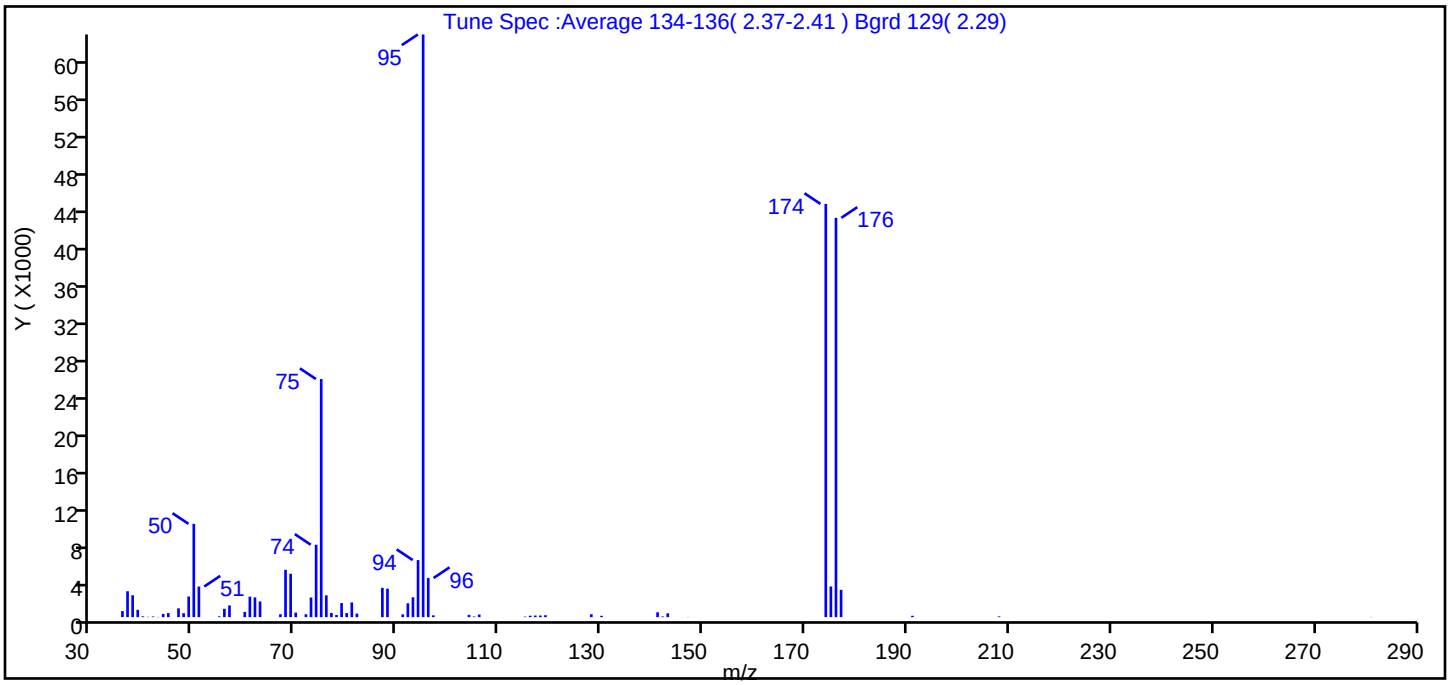
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1621.D
Injection Date: 19-Sep-2018 09:00:30 Instrument ID: VMS_Z
Lims ID: BFB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.0
75	30 to 60% of m/z 95	40.9
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.9
175	5 to 9% of m/z 174	5.3 (7.4)
176	Greater than 95% but less than 101% of m/z 174	68.5 (96.6)
177	5 to 9% of m/z 176	4.7 (6.8)

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1621.D\AQ_VMSZ_8260.rslt\spectra.d
Injection Date: 19-Sep-2018 09:00:30
Spectrum: Tune Spec :Average 134-136(2.37-2.41) Bgrd 129(2.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	651	57.00	1253	80.00	437	117.00	172
37.00	2770	60.00	559	81.00	1573	118.00	172
38.00	2337	61.00	2194	82.00	376	119.00	206
39.00	783	62.00	2113	87.00	3134	128.00	309
40.00	85	63.00	1677	88.00	3045	130.00	146
41.00	35	67.00	307	91.00	296	141.00	519
42.00	71	68.00	5060	92.00	1482	142.00	70
43.00	24	69.00	4639	93.00	2123	143.00	411
44.00	339	70.00	484	94.00	6101	147.00	18
45.00	430	72.00	311	95.00	62288	174.00	44176
47.00	939	73.00	2100	96.00	4183	175.00	3278
48.00	418	74.00	7738	97.00	193	176.00	42688
49.00	2206	75.00	25456	104.00	243	177.00	2917
50.00	9975	76.00	2329	105.00	67	191.00	146
51.00	3271	77.00	448	106.00	279	208.00	82
55.00	84	78.00	225	115.00	55	281.00	21
56.00	890	79.00	1500	116.00	152		

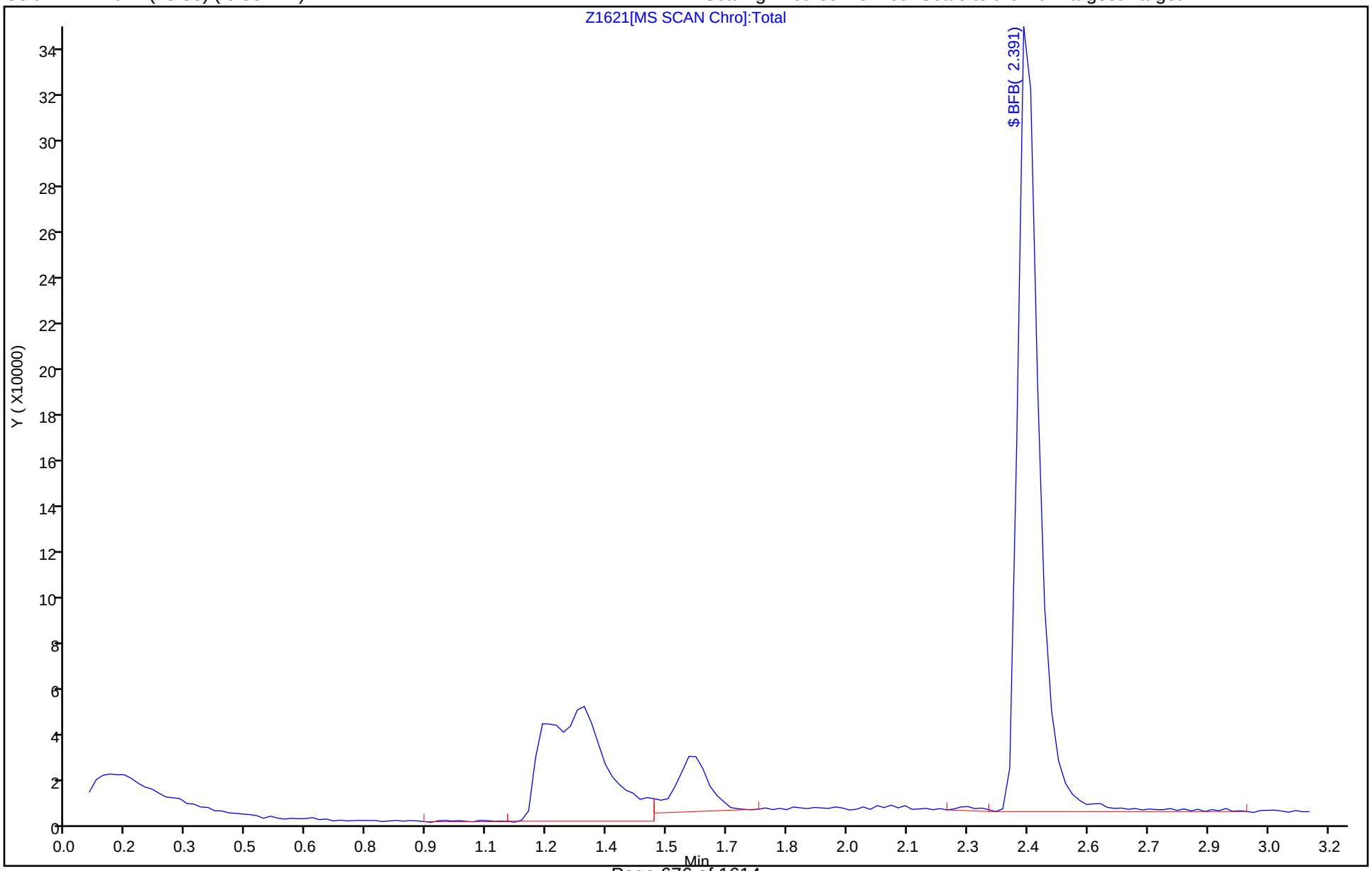
Report Date: 20-Sep-2018 07:34:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1621.D

Injection Date:	19-Sep-2018 09:00:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-430151/6

Matrix: Water | Lab File ID: Z1626.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-430151/6

Matrix: Water | Lab File ID: Z1626.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-430151/6

Matrix: Water | Lab File ID: Z1626.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	104		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1626.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Sep-2018 10:58:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: Blank
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:56:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.347	3.349	-0.002	0	140420	250.0	250.0	
* 2 Fluorobenzene	96	6.132	6.134	-0.002	99	1165681	12.5	12.5	
* 3 1,4-Dioxane-d8	96	7.107	7.184	-0.077	0	7486		0	
* 4 Chlorobenzene-d5	119	10.710	10.712	-0.002	87	266442	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.803	-0.002	94	480913	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.245	5.233	0.012	93	623670	11.5	11.9	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.680	5.669	0.012	0	235897	11.5	11.5	
$ 10 Toluene-d8 (Surr)	98	8.413	8.401	0.012	92	1229349	11.5	11.7	
$ 11 4-Bromofluorobenzene (Surr	95	12.747	12.736	0.011	93	702988	11.5	11.4	
$ 6 Trifluorotoluene (Surr)	1		0.000					ND	
$ 7 BFB	95		2.391					ND	
27 Dichlorodifluoromethane	85		1.835					ND	
26 Chlorotrifluoroethene	116		1.872					ND	
30 Chloromethane	50		1.991					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		1.994					ND	
32 Vinyl chloride	62		2.061					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.133					ND	
34 Ethylene oxide	43		2.222					ND	
35 Bromomethane	94		2.287					ND	
36 Chloroethane	64		2.322					ND	
37 Dichlorofluoromethane	67		2.461					ND	
38 Trichlorofluoromethane	101		2.496					ND	
40 Ethyl ether	59		2.688					ND	
42 Propene oxide	58		2.744					ND	
44 Acrolein	56		2.792					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		2.812					ND	
39 Ethanol	45		2.857					ND	
43 1,1,1-Trifluoro-2,2-dichlo	83		2.864					ND	
45 1,1-Dichloroethene	96		2.914					ND	
48 Acetone	43		2.931					ND	
46 1,1,2-Trichloro-1,2,2-trif	151		2.949					ND	
47 Isopropyl alcohol	45		3.022					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 Iodomethane	142		3.053					ND	
50 Carbon disulfide	76		3.140					ND	
53 Acetonitrile	41		3.162					ND	
52 3-Chloro-1-propene	41		3.210					ND	
51 Methyl acetate	43		3.210					ND	
54 Methylene Chloride	84		3.314					ND	U
55 2-Methyl-2-propanol	59		3.419					ND	
58 Acrylonitrile	53		3.523					ND	
57 trans-1,2-Dichloroethene	96		3.593					ND	
56 Methyl tert-butyl ether	73		3.610					ND	
59 Hexane	57		3.871					ND	
62 1,1-Dichloroethane	63		4.010					ND	
61 Vinyl acetate	43		4.045					ND	
60 Isopropyl ether	87		4.102					ND	
63 2-Chloro-1,3-butadiene	53		4.119					ND	
64 Tert-butyl ethyl ether	59		4.520					ND	
65 cis-1,2-Dichloroethene	96		4.672					ND	
67 2-Butanone (MEK)	43		4.672					ND	
66 2,2-Dichloropropane	77		4.689					ND	
69 Propionitrile	54		4.729					ND	
68 Ethyl acetate	43		4.746					ND	
70 sec-Butyl Alcohol	45		4.896					ND	
73 Methacrylonitrile	41		4.903					ND	
71 Chlorobromomethane	128		4.950					ND	
72 Tetrahydrofuran	42		5.037					ND	
74 Chloroform	83		5.037					ND	
75 1,1,1-Trichloroethane	97		5.316					ND	
76 Cyclohexane	56		5.403					ND	
78 1,1-Dichloropropene	75		5.507					ND	
77 Carbon tetrachloride	117		5.542					ND	
80 Isobutyl alcohol	41		5.647					ND	U
82 1,2-Dichloroethane	62		5.769					ND	
81 Benzene	78		5.769					ND	
83 Tert-amyl methyl ether	73		5.947					ND	
84 n-Heptane	43		6.152					ND	
86 n-Butanol	56		6.574					ND	
85 Trichloroethene	95		6.639					ND	
89 2-Pentanone	43		6.863					ND	
87 Methylcyclohexane	55		6.935					ND	
90 1,2-Dichloropropane	63		6.935					ND	
92 Dibromomethane	93		7.092					ND	
91 Methyl methacrylate	100		7.131					ND	
93 1,4-Dioxane	88		7.144					ND	
94 Dichlorobromomethane	83		7.318					ND	
95 2-Nitropropane	41		7.618					ND	
96 2-Chloroethyl vinyl ether	63		7.788					ND	
97 cis-1,3-Dichloropropene	75		7.979					ND	
98 4-Methyl-2-pentanone (MIBK	43		8.240					ND	
99 Toluene	91		8.519					ND	
100 trans-1,3-Dichloropropene	75		8.850					ND	
101 Ethyl methacrylate	69		9.041					ND	
102 1,1,2-Trichloroethane	97		9.128					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichloropropane	76		9.389					ND	
103 Tetrachloroethene	164		9.389					ND	
105 2-Hexanone	43		9.563					ND	
106 Tetrahydrothiophene	60		9.742					ND	
107 Chlorodibromomethane	129		9.755					ND	
109 Ethylene Dibromide	107		9.929					ND	
110 1-Chlorohexane	91	10.710	10.760	-0.050	33	2240		NC	
111 Chlorobenzene	112		10.764					ND	
113 1,1,1,2-Tetrachloroethane	131		10.904					ND	
112 Ethylbenzene	106		10.973					ND	
114 m-Xylene & p-Xylene	106		11.182					ND	
115 o-Xylene	106		11.844					ND	
116 Styrene	104		11.861					ND	
117 Bromoform	173		12.140					ND	
118 Isopropylbenzene	105		12.505					ND	
120 cis-1,4-Dichloro-2-butene	53		12.596					ND	
119 Cyclohexanone	55		12.610					ND	U
121 Bromobenzene	156		12.992					ND	
122 1,1,2,2-Tetrachloroethane	83		13.010					ND	
124 1,2,3-Trichloropropane	110		13.062					ND	
125 trans-1,4-Dichloro-2-buten	53		13.114					ND	
123 N-Propylbenzene	120		13.236					ND	
126 2-Chlorotoluene	126		13.341					ND	
128 4-Chlorotoluene	126		13.549					ND	
127 1,3,5-Trimethylbenzene	105		13.567					ND	
129 tert-Butylbenzene	119		14.124					ND	
130 1,2,4-Trimethylbenzene	105		14.211					ND	
131 sec-Butylbenzene	134		14.524					ND	
132 1,3-Dichlorobenzene	146		14.681					ND	
133 4-Isopropyltoluene	119		14.803					ND	
134 1,4-Dichlorobenzene	146		14.838					ND	
135 1,2,3-Trimethylbenzene	105		14.964					ND	
138 1,2-Dichlorobenzene	146		15.499					ND	
137 n-Butylbenzene	91		15.551					ND	
139 1,2-Dibromo-3-Chloropropan	157		16.665					ND	
140 1,3,5-Trichlorobenzene	180		16.966					ND	
141 1,2,4-Trichlorobenzene	180		17.640					ND	
142 Hexachlorobutadiene	225		17.832					ND	
143 Naphthalene	128		17.866					ND	
144 1,2,3-Trichlorobenzene	180		18.110					ND	
23 2,4-Dimethylpentane	1		0.000					ND	
16 2-Methylhexane	1		0.000					ND	
14 3-Methylhexane	1		0.000					ND	
13 2,3-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
21 2,2-Dimethylpentane	1		0.000					ND	
20 3,3-Dimethylpentane	1		0.000					ND	
18 Pentachloroethane	167		0.000					ND	
22 Dimethyl disulfide	1		0.000					ND	
157 n-Nonane TIC	1		0.000					ND	
17 n-Nonyl Aldehyde	1		0.000					ND	
28 3-Ethylpentane	1		1.795					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 156 TAH	1				0			0	7
S 150 Xylenes, Total (URS)	1		0.000				ND		
S 151 Total BTEX	1		0.000				ND		
S 146 Xylenes, Total	106		0.000				ND		
S 148 1,3-Dichloropropene, Total	1		0.000				ND		
S 145 1,2-Dichloroethene, Total	1		0.000				ND		
S 147 1,2-Dichloroethene, Total	96		0.000				ND		
S 149 Trihalomethanes, Total	1		0.000				ND		
T 158 1-Chlorohexane TIC	91		0.000				ND		
T 79 Propene oxide TIC	58		0.000				ND		
T 160 Cyclohexane TIC	56		0.000				ND		
T 154 4-Ethyltoluene TIC	105		0.000				ND		
T 155 1,3-Butadiene TIC	39		0.000				ND		
T 25 Dichloroacetonitrile TIC	74		0.000				ND		
T 19 2-Butoxyethanol TIC	1		0.000				ND		
T 24 2,3-dichloro-1-propene TIC	75		0.000				ND		
T 159 Methyl cyclohexane TIC	55		0.000				ND		
T 152 Propene TIC	41		0.000				ND		
T 153 Dicyclopentadiene TIC	66		0.000				ND		

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

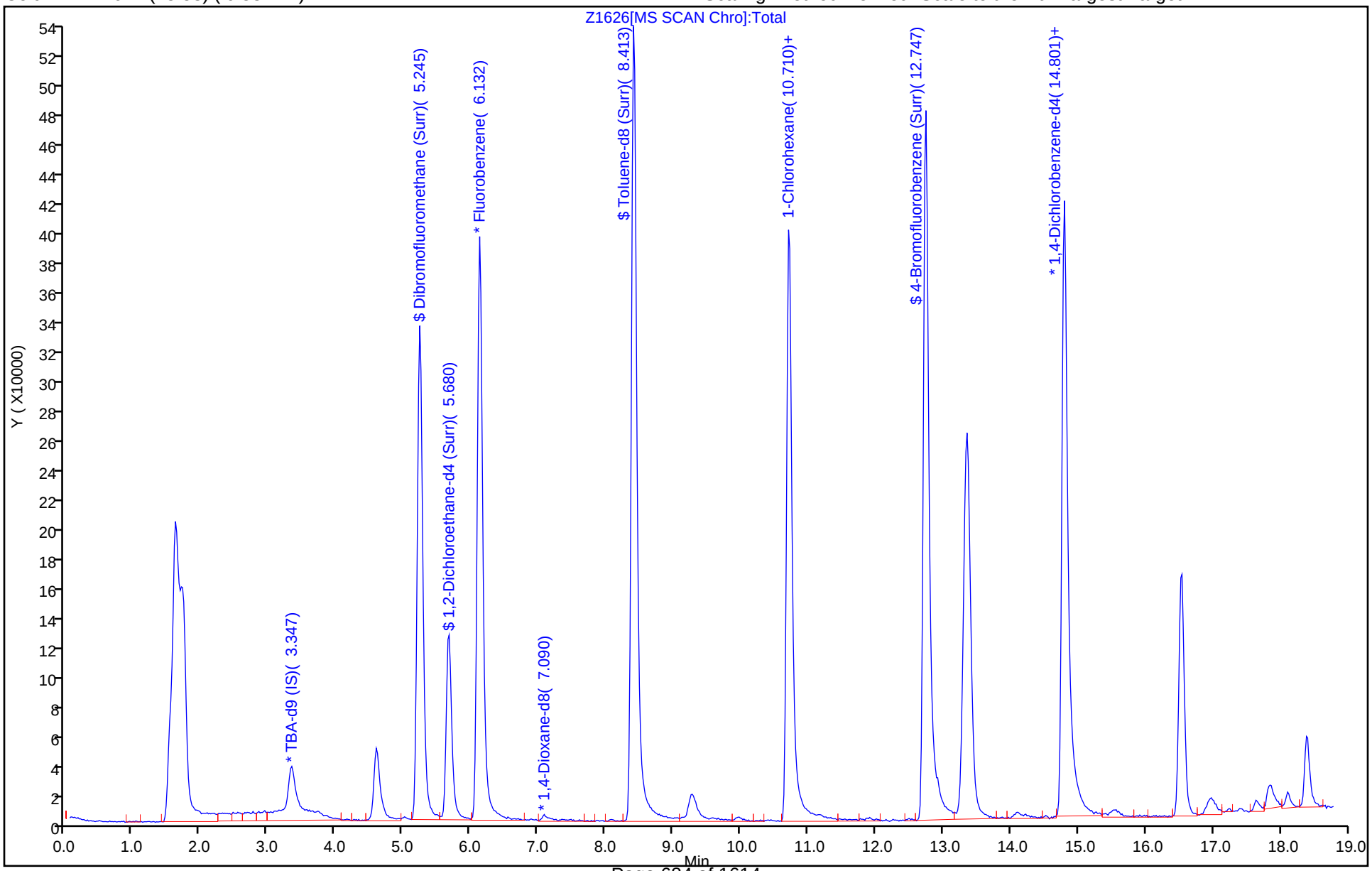
Report Date: 20-Sep-2018 07:34:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1626.D

Injection Date:	19-Sep-2018 10:58:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1626.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Sep-2018 10:58:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: Blank
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:56:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.9	103.51
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	11.5	99.74
$ 10 Toluene-d8 (Surr)	11.5	11.7	101.50
$ 11 4-Bromofluorobenzene (Surr)	11.5	11.4	99.03

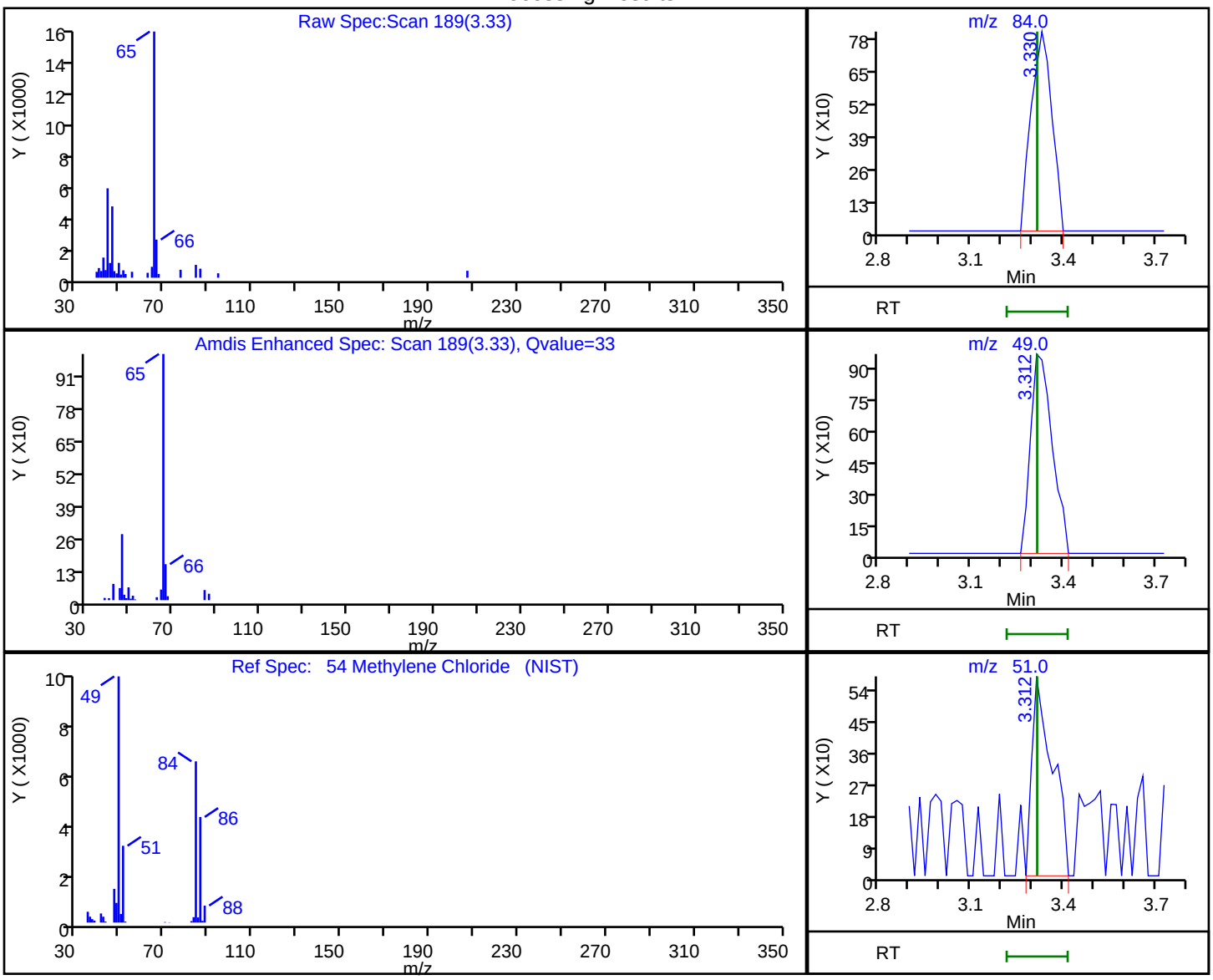
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1626.D
Injection Date: 19-Sep-2018 10:58:30 Instrument ID: VMS_Z
Lims ID: MB
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSZ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector MS SCAN

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.33	84.00	3794	0.139521
3.31	49.00	4740	
3.31	51.00	2686	

Reviewer: ilczyszynd, 19-Sep-2018 11:56:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-430312/6

Matrix: Water | Lab File ID: G2_7090.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U M	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-430312/6

Matrix: Water | Lab File ID: G2_7090.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-430312/6

Matrix: Water Lab File ID: G2_7090.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 09/20/2018 11:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 430312 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	99		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7090.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 20-Sep-2018 11:49:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:50 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:43:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	447504	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2161580	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	458745	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	728119	12.5	12.5	
* 5 1,4-Dioxane-d8	96		0.000					ND	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	94	364300	10.0	9.94	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.886	0.007	98	366798	10.0	9.87	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1386446	10.0	9.69	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	93	408683	10.0	9.67	
$ 10 Trifluorotoluene (Surr)	1		0.000					ND	
$ 11 BFB	95	1.286	2.085	-0.799	0	10180		NR	
12 Dichlorodifluoromethane	85		1.551					ND	
34 Chlorotrifluoroethene	116		1.677					ND	
14 Chloromethane	50		1.677					ND	
15 Vinyl chloride	62		1.802					ND	
36 1,2-Dichloro-1,1,2,2-tetra	85		1.830					ND	
16 Ethylene oxide	43		2.054					ND	
17 Bromomethane	94		2.096					ND	
38 2-Chloro-1,1,1-Trifluoroet	118		2.110					ND	
18 Chloroethane	64		2.180					ND	
19 Dichlorofluoromethane	67		2.403					ND	
20 Trichlorofluoromethane	101		2.445					ND	
21 Ethanol	45		2.640					ND	
22 Ethyl ether	59		2.724					ND	
23 Propene oxide	58		2.794					ND	
24 Acrolein	56		2.878					ND	
25 1,1-Dichloroethene	96		2.990					ND	
26 1,1,2-Trichloro-1,2,2-trif	151		3.031					ND	
27 Acetone	43		3.045					ND	
43 1,2-Dichloro-1,1,2-trifluo	117		3.129					ND	
28 Iodomethane	142		3.157					ND	
44 1,1,1-Trifluoro-2,2-dichlo	83		3.213					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
30 Carbon disulfide	76		3.227					ND	
29 Isopropyl alcohol	45		3.269					ND	
31 Acetonitrile	41		3.409					ND	
32 Methyl acetate	43	3.450	3.436	0.014	96	54675		4.72	
33 3-Chloro-1-propene	41		3.436					ND	
35 Methylene Chloride	84	3.632	3.618	0.014	84	7451		0.1738	
37 2-Methyl-2-propanol	59		3.828					ND	
39 Acrylonitrile	53		3.953					ND	
40 trans-1,2-Dichloroethene	96		3.995					ND	
41 Methyl tert-butyl ether	73		4.009					ND	
42 Hexane	57		4.428					ND	
45 1,1-Dichloroethane	63		4.707					ND	
46 Vinyl acetate	43		4.763					ND	
47 Isopropyl ether	87		4.833					ND	
48 2-Chloro-1,3-butadiene	53		4.833					ND	
49 Tert-butyl ethyl ether	59		5.476					ND	
50 2,2-Dichloropropane	77		5.699					ND	
51 cis-1,2-Dichloroethene	96		5.699					ND	
52 2-Butanone (MEK)	43		5.727					ND	
53 Ethyl acetate	43		5.825					ND	U
54 Propionitrile	54		5.839					ND	
58 Methacrylonitrile	41		6.049					ND	
56 Chlorobromomethane	128		6.056					ND	
57 Tetrahydrofuran	42		6.092					ND	
55 sec-Butyl Alcohol	45		6.113					ND	
59 Chloroform	83		6.242					ND	
60 1,1,1-Trichloroethane	97		6.428					ND	
61 Cyclohexane	56		6.507					ND	
62 Carbon tetrachloride	117		6.628					ND	
63 1,1-Dichloropropene	75		6.643					ND	
64 Benzene	78		6.893					ND	
66 Isobutyl alcohol	41		6.929					ND	
65 1,2-Dichloroethane	62		6.986					ND	
68 Tert-amyl methyl ether	73		7.115					ND	
67 n-Heptane	43		7.315					ND	
69 Trichloroethene	95		7.722					ND	
73 n-Butanol	56		7.737					ND	
70 2-Pentanone	43		7.958					ND	
71 Methylcyclohexane	55		7.965					ND	
72 1,2-Dichloropropane	63		8.008					ND	
75 Dibromomethane	93		8.108					ND	
74 1,4-Dioxane	88		8.108					ND	
77 Methyl methacrylate	100		8.130					ND	
76 Dichlorobromomethane	83		8.316					ND	
80 2-Nitropropane	41		8.559					ND	
78 2-Chloroethyl vinyl ether	63		8.645					ND	
79 cis-1,3-Dichloropropene	75		8.781					ND	
81 4-Methyl-2-pentanone (MIBK	43	9.045	8.952	0.093	33	6736		0.4706	
82 Toluene	91		9.109					ND	
83 trans-1,3-Dichloropropene	75		9.374					ND	
84 Ethyl methacrylate	69		9.446					ND	
85 1,1,2-Trichloroethane	97		9.560					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 Tetrachloroethene	164		9.624					ND	
87 1,3-Dichloropropane	76		9.717					ND	
88 2-Hexanone	43		9.789					ND	
13 Tetrahydrothiophene	60		9.882					ND	
89 Chlorodibromomethane	129		9.925					ND	
90 Ethylene Dibromide	107		10.025					ND	
91 1-Chlorohexane	91	10.475	10.496	-0.021	33	2835		NC	
92 Chlorobenzene	112		10.504					ND	
93 1,1,1,2-Tetrachloroethane	131		10.590					ND	
94 Ethylbenzene	106		10.597					ND	
95 m-Xylene & p-Xylene	106		10.725					ND	
96 o-Xylene	106		11.083					ND	
97 Styrene	104		11.104					ND	
98 Bromoform	173		11.276					ND	
99 Isopropylbenzene	105		11.426					ND	
101 cis-1,4-Dichloro-2-butene	53		11.491					ND	
100 Cyclohexanone	55		11.512					ND	U
103 Bromobenzene	156		11.719					ND	
102 1,1,2,2-Tetrachloroethane	83		11.719					ND	
105 trans-1,4-Dichloro-2-buten	53		11.755					ND	
104 1,2,3-Trichloropropane	110		11.769					ND	U
106 N-Propylbenzene	120		11.812					ND	
107 2-Chlorotoluene	126		11.891					ND	
108 1,3,5-Trimethylbenzene	105		11.977					ND	
109 4-Chlorotoluene	126		12.005					ND	
110 tert-Butylbenzene	119		12.256					ND	
111 1,2,4-Trimethylbenzene	105		12.306					ND	
112 sec-Butylbenzene	134		12.441					ND	
113 1,3-Dichlorobenzene	146		12.534					ND	
114 4-Isopropyltoluene	119		12.556					ND	
115 1,4-Dichlorobenzene	146		12.613					ND	
116 1,2,3-Trimethylbenzene	105		12.627					ND	
117 n-Butylbenzene	91		12.849					ND	
118 1,2-Dichlorobenzene	146		12.863					ND	
119 1,2-Dibromo-3-Chloropropan	157		13.371					ND	
120 1,3,5-Trichlorobenzene	180	13.478	13.478	0.000	94	8086		0.1070	
121 1,2,4-Trichlorobenzene	180		13.879					ND	
122 Hexachlorobutadiene	225		13.964					ND	
123 Naphthalene	128		14.057					ND	
124 1,2,3-Trichlorobenzene	180		14.200					ND	
128 3-Ethylpentane	1		0.000					ND	
125 1-Chlorohexane TIC	1		0.000					ND	
126 2,2-Dimethylpentane	1		0.000					ND	
129 Dimethyl disulfide	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
130 2,2,3-Trimethylbutane	1		0.000					ND	
135 3,3-Dimethylpentane	1		0.000					ND	
133 2,3-Dimethylpentane	1		0.000					ND	
132 Pentachloroethane	167		0.000					ND	
131 2-Methylhexane	1		0.000					ND	
134 3-Methylhexane	1		0.000					ND	
136 2,4-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 137 1,2-Dichloroethene, Total	96		2.000				ND		
S 144 1,2-Dichloroethene, Total	1		0.000				ND		
S 138 Xylenes, Total (URS)	1		0.000				ND		
S 139 Total BTEX	1		0.000				ND		
S 140 1,3-Dichloropropene, Total	1		0.000				ND		
S 143 Xylenes, Total	106		0.000				ND		
S 142 Trihalomethanes, Total	1		0.000				ND		
S 141 TAH	1				0			0	7
T 154 2-Butoxyethanol TIC	1		0.000				ND		
T 155 2,3-dichloro-1-propene TIC	75		0.000				ND		
T 149 Dicyclopentadiene TIC	66		0.000				ND		
T 151 Propene oxide TIC	58		0.000				ND		
T 152 Methyl cyclohexane TIC	1		0.000				ND		
T 147 Dichloroacetonitrile TIC	74		0.000				ND		
T 145 Propene TIC	41		0.000				ND		
T 146 n-Nonane TIC	1		0.000				ND		
T 150 4-Ethyltoluene TIC	105		0.000				ND		
T 153 Cyclohexane TIC	1		0.000				ND		
T 148 1,3-Butadiene TIC	39		0.000				ND		

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

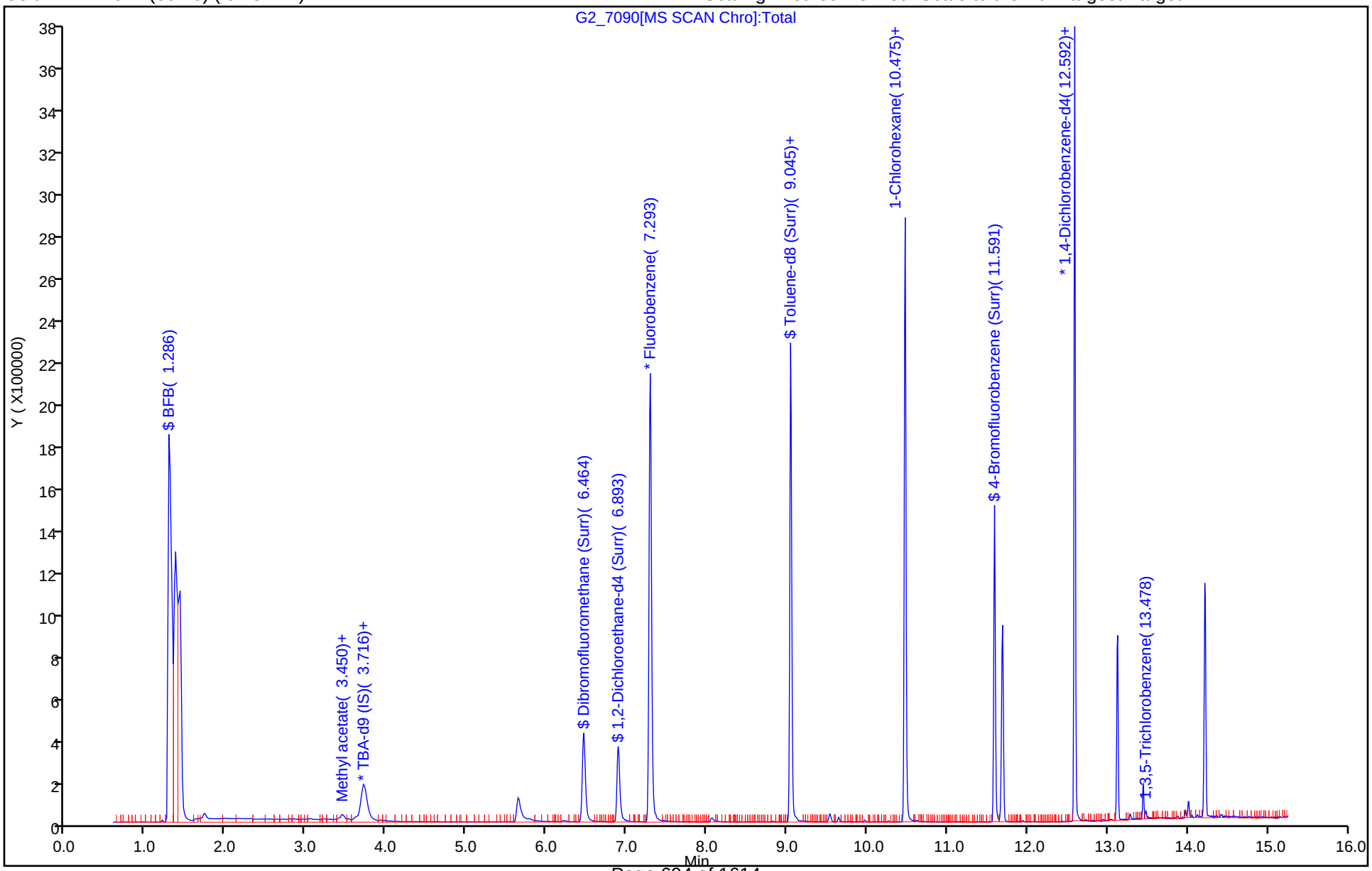
Report Date: 21-Sep-2018 07:07:00 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7090.D

Injection Date:	20-Sep-2018 11:49:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7090.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 20-Sep-2018 11:49:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:06:50 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:43:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.94	99.40
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.87	98.73
$ 8 Toluene-d8 (Surr)	10.0	9.69	96.86
$ 9 4-Bromofluorobenzene (Surr)	10.0	9.67	96.66
$ 11 BFB	0	0	0.00

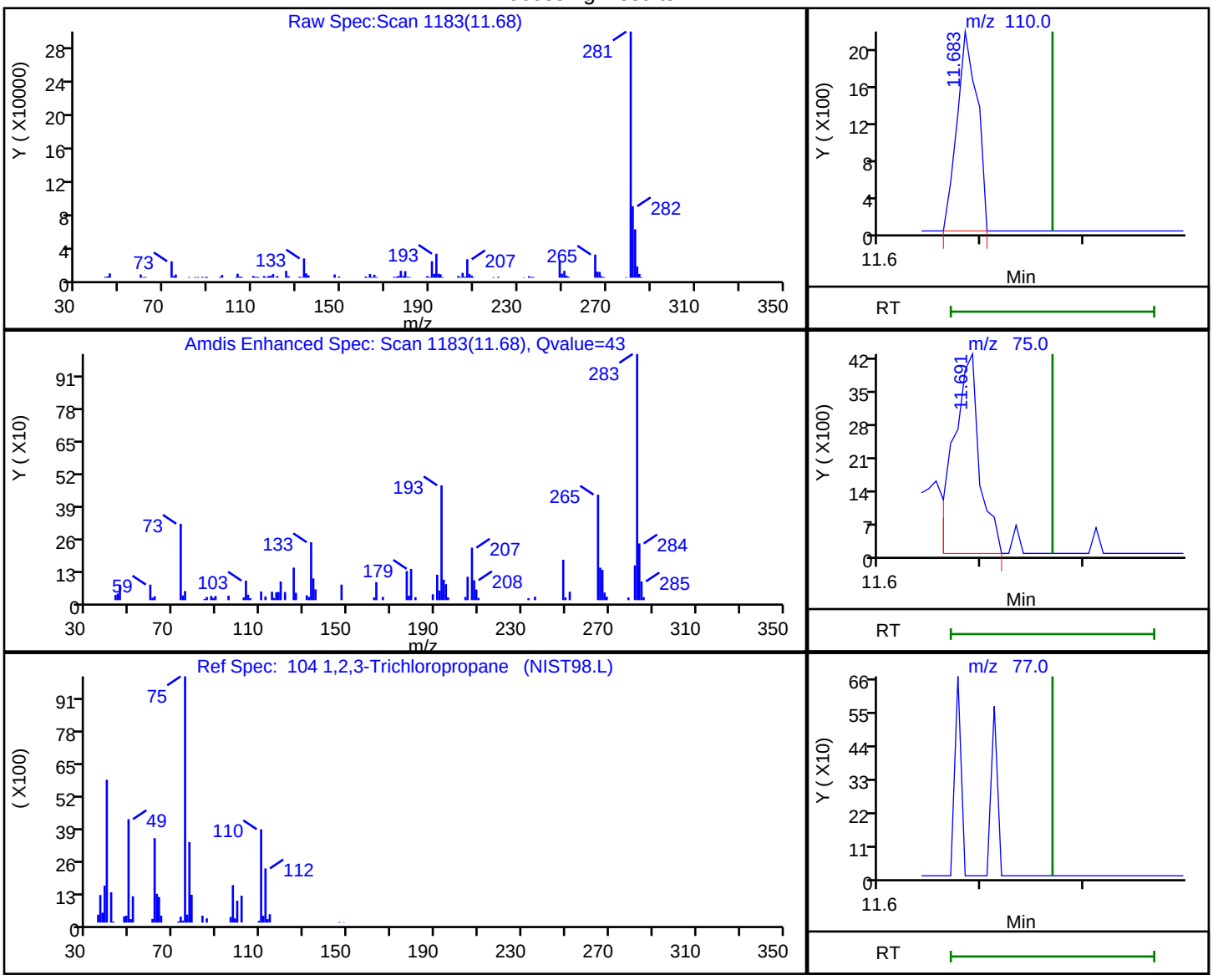
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7090.D				
Injection Date:	20-Sep-2018 11:49:30	Instrument ID:	VMS_G2		
Lims ID:	MB				
Client ID:					
Operator ID:	ilczyszynd	ALS Bottle#:	15	Worklist Smp#:	6
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

104 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
11.68	110.00	3017	0.427967
11.69	75.00	7441	
11.77	77.00	0	

Reviewer: ilczyszynd, 20-Sep-2018 12:42:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430151/4

Matrix: Water | Lab File ID: Z1625.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	4.73		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	4.76		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.66		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	4.87		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	4.91		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.77		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	4.65		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.38		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	4.78		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	4.29		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.21		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	4.53	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	4.79		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.17		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	4.92		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.45		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	4.90		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.28		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.24		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	4.70		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.21		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.74		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	20.8		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.21		1.0	0.40	0.17
591-78-6	2-Hexanone	20.6		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.49		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.20		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	20.1		5.0	3.2	0.98
67-64-1	Acetone	22.6		10	6.4	1.9
71-43-2	Benzene	4.58		1.0	0.40	0.16
108-86-1	Bromobenzene	4.38		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.85		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.84		1.0	0.40	0.17
75-25-2	Bromoform	4.89		1.0	0.40	0.19
74-83-9	Bromomethane	5.09		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.49		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430151/4

Matrix: Water | Lab File ID: Z1625.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	4.66		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.63		1.0	0.40	0.17
75-00-3	Chloroethane	5.27		2.0	1.6	0.41
67-66-3	Chloroform	4.87		1.0	0.40	0.16
74-87-3	Chloromethane	4.88		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	4.73		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.80		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.66		1.0	0.40	0.17
74-95-3	Dibromomethane	4.79		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.64		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.39		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.07		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.37		1.0	0.40	0.19
179601-23-1	m,p-Xylene	4.57		2.0	0.80	0.34
74-88-4	Methyl iodide	4.76		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.87	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.47	J	5.0	0.80	0.32
91-20-3	Naphthalene	4.74		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.37		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.17		1.0	0.40	0.16
95-47-6	o-Xylene	4.31		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.12		1.0	0.40	0.17
100-42-5	Styrene	4.22		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.14		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.40		1.0	0.40	0.20
108-88-3	Toluene	4.51		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	4.72		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.92		1.0	0.40	0.19
79-01-6	Trichloroethene	4.68		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.30		2.0	0.80	0.29
108-05-4	Vinyl acetate	10.2		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.27		1.5	0.20	0.10
1330-20-7	Xylenes, Total	8.88		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430151/4

Matrix: Water | Lab File ID: Z1625.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 10:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	89		85-114
1868-53-7	Dibromofluoromethane (Surr)	96		80-119
2037-26-5	Toluene-d8 (Surr)	105		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1625.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Sep-2018 10:36:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.335	3.349	-0.014	0	143230	250.0	250.0	
* 2 Fluorobenzene	96	6.120	6.134	-0.014	99	1290272	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.716	10.712	0.004	87	270061	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.806	14.803	0.003	95	540771	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.233	5.233	0.000	93	638797	11.5	11.0	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.668	5.669	0.000	0	251012	11.5	11.0	
$ 10 Toluene-d8 (Surr)	98	8.401	8.401	0.000	92	1292756	11.5	12.1	
$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.736	-0.001	88	713880	11.5	10.3	
27 Dichlorodifluoromethane	85	1.821	1.835	-0.014	99	212519	5.00	4.64	
30 Chloromethane	50	1.978	1.991	-0.013	99	150022	5.00	4.88	
32 Vinyl chloride	62	2.047	2.061	-0.014	98	134318	5.00	5.27	
35 Bromomethane	94	2.273	2.287	-0.014	90	173483	5.00	5.09	
36 Chloroethane	64	2.308	2.322	-0.014	98	92509	5.00	5.27	
37 Dichlorofluoromethane	67	2.448	2.461	-0.013	99	350110	5.00	5.36	
38 Trichlorofluoromethane	101	2.500	2.496	0.004	100	383715	5.00	5.30	
40 Ethyl ether	59	2.674	2.688	-0.014	94	62450	5.00	5.17	
44 Acrolein	56	2.796	2.792	0.004	99	26927	29.6	25.0	
45 1,1-Dichloroethene	96	2.900	2.914	-0.014	97	169514	5.00	4.77	
48 Acetone	43	2.917	2.931	-0.014	32	37302	20.0	22.6	
46 1,1,2-Trichloro-1,2,2-trif	151	2.952	2.949	0.003	97	230736	5.00	4.71	
49 Iodomethane	142	3.057	3.053	0.004	99	407227	5.00	4.76	
50 Carbon disulfide	76	3.126	3.140	-0.014	100	526107	5.00	4.49	
52 3-Chloro-1-propene	41	3.213	3.210	0.003	91	231903	5.00	4.84	
51 Methyl acetate	43	3.196	3.210	-0.014	49	88707	10.0	12.6	
54 Methylene Chloride	84	3.318	3.314	0.004	92	134658	5.00	4.47	
55 2-Methyl-2-propanol	59	3.422	3.419	0.003	98	30073	50.0	48.4	
58 Acrylonitrile	53	3.527	3.523	0.004	99	109451	50.0	49.7	
57 trans-1,2-Dichloroethene	96	3.596	3.593	0.003	99	188761	5.00	4.72	
56 Methyl tert-butyl ether	73	3.614	3.610	0.004	96	216745	5.00	4.87	
59 Hexane	57	3.875	3.871	0.004	95	203939	5.00	4.30	
62 1,1-Dichloroethane	63	4.014	4.010	0.004	96	278422	5.00	4.91	
61 Vinyl acetate	43	4.049	4.045	0.004	96	333421	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	4.658	4.672	-0.014	81	192522	5.00	4.73	
67 2-Butanone (MEK)	43	4.658	4.672	-0.014	41	74890	20.0	20.8	
66 2,2-Dichloropropane	77	4.693	4.689	0.004	88	301933	5.00	4.74	
71 Chlorobromomethane	128	4.954	4.950	0.004	95	83061	5.00	4.85	
72 Tetrahydrofuran	42	5.041	5.037	0.004	36	26091	10.0	10.0	
74 Chloroform	83	5.041	5.037	0.004	94	319031	5.00	4.87	
75 1,1,1-Trichloroethane	97	5.320	5.316	0.004	97	322994	5.00	4.76	
76 Cyclohexane	56	5.407	5.403	0.004	92	242574	5.00	4.54	
78 1,1-Dichloropropene	75	5.511	5.507	0.004	98	248523	5.00	4.65	
77 Carbon tetrachloride	117	5.529	5.542	-0.013	97	285864	5.00	4.66	
80 Isobutyl alcohol	41	5.668	5.647	0.021	38	29702	125.0	113.3	
82 1,2-Dichloroethane	62	5.772	5.769	0.003	55	124576	5.00	4.92	
81 Benzene	78	5.772	5.769	0.003	97	456121	5.00	4.58	
84 n-Heptane	43	6.138	6.152	-0.014	95	274344	5.00	4.40	
85 Trichloroethene	95	6.643	6.639	0.004	97	237275	5.00	4.68	
87 Methylcyclohexane	55	6.939	6.935	0.003	88	216496	5.00	4.32	
90 1,2-Dichloropropane	63	6.921	6.935	-0.014	90	164142	5.00	4.90	
92 Dibromomethane	93	7.095	7.092	0.003	97	115152	5.00	4.79	
93 1,4-Dioxane	88	7.147	7.144	0.003	82	7909	100.0	69.5	
94 Dichlorobromomethane	83	7.321	7.318	0.003	99	283708	5.00	4.84	
96 2-Chloroethyl vinyl ether	63	7.774	7.788	-0.014	93	40017	5.00	4.72	
97 cis-1,3-Dichloropropene	75	7.983	7.979	0.004	97	224295	5.00	4.80	
98 4-Methyl-2-pentanone (MIBK	43	8.244	8.240	0.004	97	243121	20.0	20.1	
99 Toluene	91	8.505	8.519	-0.014	99	583597	5.00	4.51	
100 trans-1,3-Dichloropropene	75	8.836	8.850	-0.014	93	164704	5.00	4.92	
101 Ethyl methacrylate	69	9.045	9.041	0.004	91	105867	5.00	4.69	
102 1,1,2-Trichloroethane	97	9.114	9.128	-0.014	90	116756	5.00	4.87	
104 1,3-Dichloropropane	76	9.393	9.389	0.004	67	162377	5.00	4.70	
103 Tetrachloroethene	164	9.393	9.389	0.004	97	218342	5.00	4.40	
105 2-Hexanone	43	9.567	9.563	0.004	99	152182	20.0	20.6	
107 Chlorodibromomethane	129	9.758	9.755	0.003	90	198814	5.00	4.66	
109 Ethylene Dibromide	107	9.933	9.929	0.003	98	144545	5.00	4.79	
111 Chlorobenzene	112	10.768	10.764	0.004	95	392410	5.00	4.63	
113 1,1,1,2-Tetrachloroethane	131	10.907	10.904	0.003	96	189532	5.00	4.73	
112 Ethylbenzene	106	10.977	10.973	0.004	99	189151	5.00	4.39	
114 m-Xylene & p-Xylene	106	11.186	11.182	0.004	0	262780	5.00	4.57	
115 o-Xylene	106	11.847	11.844	0.003	97	222853	5.00	4.31	
116 Styrene	104	11.865	11.861	0.004	94	347462	5.00	4.22	
117 Bromoform	173	12.143	12.140	0.003	96	138369	5.00	4.89	
118 Isopropylbenzene	105	12.509	12.505	0.004	95	717723	5.00	4.37	
119 Cyclohexanone	55	12.631	12.610	0.021	93	63446	200.0	185.8	
121 Bromobenzene	156	12.996	12.992	0.004	90	207006	5.00	4.38	
122 1,1,2,2-Tetrachloroethane	83	13.014	13.010	0.004	94	141212	5.00	4.66	
124 1,2,3-Trichloropropane	110	13.066	13.062	0.004	77	33313	5.00	4.78	
125 trans-1,4-Dichloro-2-buten	53	13.118	13.114	0.004	81	25139	5.00	5.05	
123 N-Propylbenzene	120	13.240	13.236	0.004	99	167965	5.00	4.17	
126 2-Chlorotoluene	126	13.344	13.341	0.003	96	144160	5.00	4.21	
128 4-Chlorotoluene	126	13.553	13.549	0.004	97	171602	5.00	4.49	
127 1,3,5-Trimethylbenzene	105	13.571	13.567	0.004	93	540151	5.00	4.28	
129 tert-Butylbenzene	119	14.128	14.124	0.004	91	560175	5.00	4.14	
130 1,2,4-Trimethylbenzene	105	14.215	14.211	0.004	96	525952	5.00	4.21	
131 sec-Butylbenzene	134	14.528	14.524	0.004	94	148802	5.00	4.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.685	14.681	0.004	97	315204	5.00	4.24	
133 4-Isopropyltoluene	119	14.806	14.803	0.003	96	631905	5.00	4.20	
134 1,4-Dichlorobenzene	146	14.841	14.838	0.003	93	381385	5.00	4.21	
138 1,2-Dichlorobenzene	146	15.503	15.499	0.004	97	282256	5.00	4.17	
137 n-Butylbenzene	91	15.555	15.551	0.004	98	658610	5.00	4.37	
139 1,2-Dibromo-3-Chloropropan	157	16.669	16.665	0.004	92	28881	5.00	4.53	
141 1,2,4-Trichlorobenzene	180	17.644	17.640	0.004	95	209610	5.00	4.29	
142 Hexachlorobutadiene	225	17.835	17.832	0.003	98	180794	5.00	4.07	
143 Naphthalene	128	17.870	17.866	0.004	98	194233	5.00	4.74	
144 1,2,3-Trichlorobenzene	180	18.114	18.110	0.004	96	167437	5.00	4.38	
S 150 Xylenes, Total (URS)	1				0		10.0	8.88	
S 146 Xylenes, Total	106				0		10.0	8.88	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.73	
S 145 1,2-Dichloroethene, Total	1				0		10.0	9.44	
S 147 1,2-Dichloroethene, Total	96				0		10.0	9.44	
S 149 Trihalomethanes, Total	1				0		20.0	19.3	

Reagents:

MV-MegaMain B_00001	Amount Added:	2.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

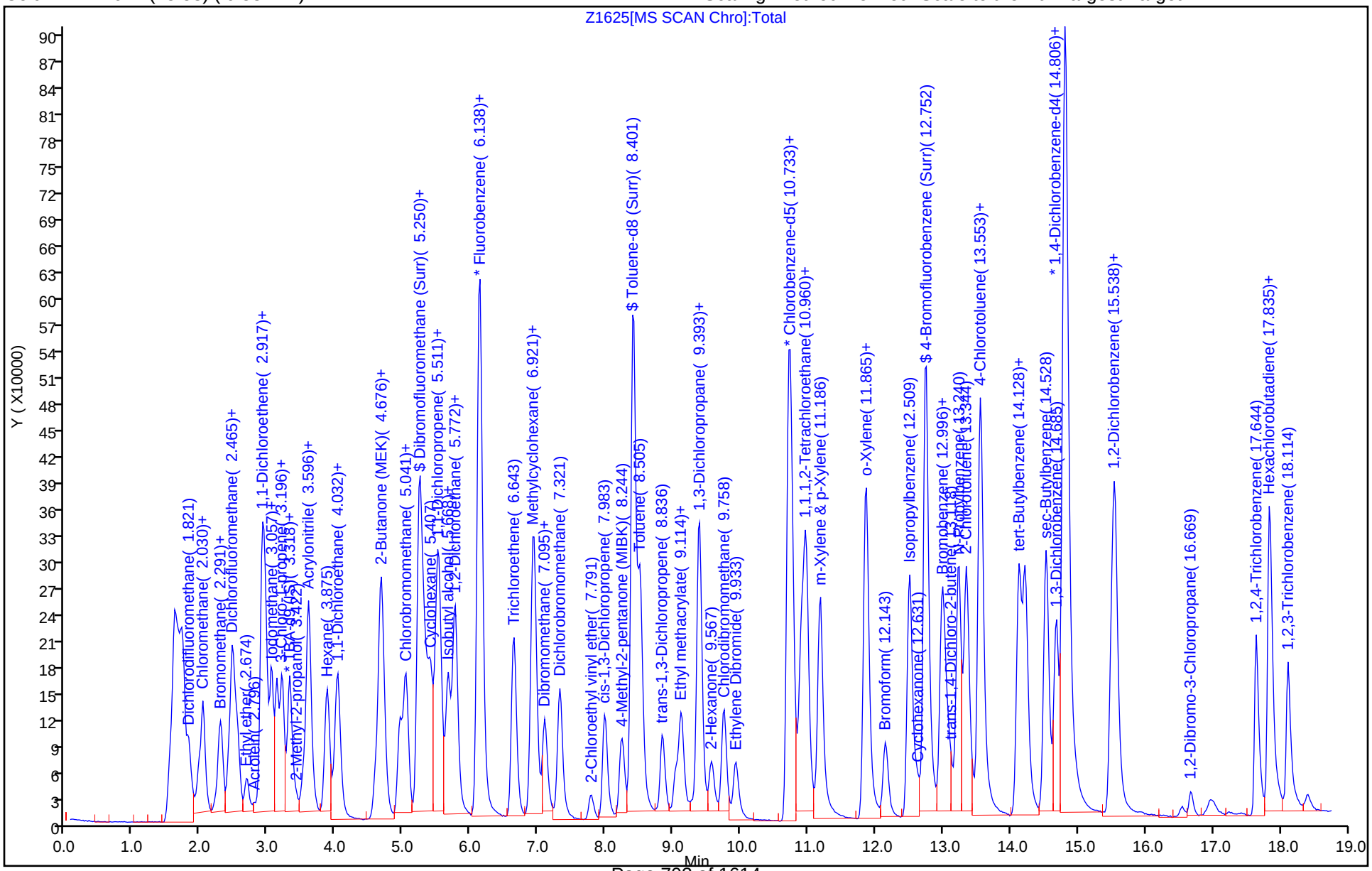
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1625.D

Injection Date:	19-Sep-2018 10:36:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1625.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Sep-2018 10:36:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:34:12 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 19-Sep-2018 11:50:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.0	95.79
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	11.0	95.88
$ 10 Toluene-d8 (Surr)	11.5	12.1	105.31
$ 11 4-Bromofluorobenzene (Surr)	11.5	10.3	89.44

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430151/33

Matrix: Water | Lab File ID: Z1650.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 20:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	4.36	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	105		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1650.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 19-Sep-2018 20:01:30 ALS Bottle#: 30 Worklist Smp#: 33
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: lcs sup
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: newcomer Date: 19-Sep-2018 20:37:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.347	3.349	-0.002	0	159520	250.0	250.0	
* 2 Fluorobenzene	96	6.132	6.134	-0.002	99	1208299	12.5	12.5	
* 4 Chlorobenzene-d5	119	10.728	10.712	0.016	87	277246	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.801	14.803	-0.002	94	525814	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.245	5.233	0.012	94	656528	11.5	12.1	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.680	5.669	0.012	0	253512	11.5	11.9	
$ 10 Toluene-d8 (Surr)	98	8.413	8.401	0.012	92	1262685	11.5	11.5	
$ 11 4-Bromofluorobenzene (Surr	95	12.747	12.736	0.011	89	744026	11.5	11.0	
34 Ethylene oxide	43	2.216	2.222	-0.006	99	65336	400.0	475.4	
42 Propene oxide	58	2.755	2.744	0.011	96	409771	400.0	482.4	
39 Ethanol	45		2.857				ND	ND	
47 Isopropyl alcohol	45		3.022				ND	ND	
53 Acetonitrile	41	3.156	3.162	-0.006	94	16608	40.0	36.1	
60 Isopropyl ether	87	4.113	4.102	0.011	98	93416	4.00	4.36	
63 2-Chloro-1,3-butadiene	53	4.131	4.119	0.012	88	134347	4.00	3.44	
64 Tert-butyl ethyl ether	59	4.514	4.520	-0.006	97	289810	4.00	4.31	
69 Propionitrile	54	4.740	4.729	0.011	46	30805	40.0	46.3	
68 Ethyl acetate	43	4.757	4.746	0.011	99	77814	8.00	9.40	
73 Methacrylonitrile	41	4.914	4.903	0.011	94	224843	40.0	48.4	
83 Tert-amyl methyl ether	73	5.941	5.947	-0.006	97	249285	4.00	4.76	
86 n-Butanol	56	6.585	6.574	0.011	89	16659	100.0	104.5	
91 Methyl methacrylate	100	7.125	7.131	-0.006	94	35992	8.00	9.77	
95 2-Nitropropane	41	7.629	7.618	0.011	98	15312	8.00	9.61	
106 Tetrahydrothiophene	60	9.736	9.742	-0.006	82	4879	8.00	7.10	
120 cis-1,4-Dichloro-2-butene	53	12.608	12.596	0.012	0	15503	8.00	5.83	
135 1,2,3-Trimethylbenzene	105	14.975	14.964	0.011	99	375981	4.00	3.77	
140 1,3,5-Trichlorobenzene	180	16.977	16.966	0.011	98	203736	4.00	3.54	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp B_00021	Amount Added:	2.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

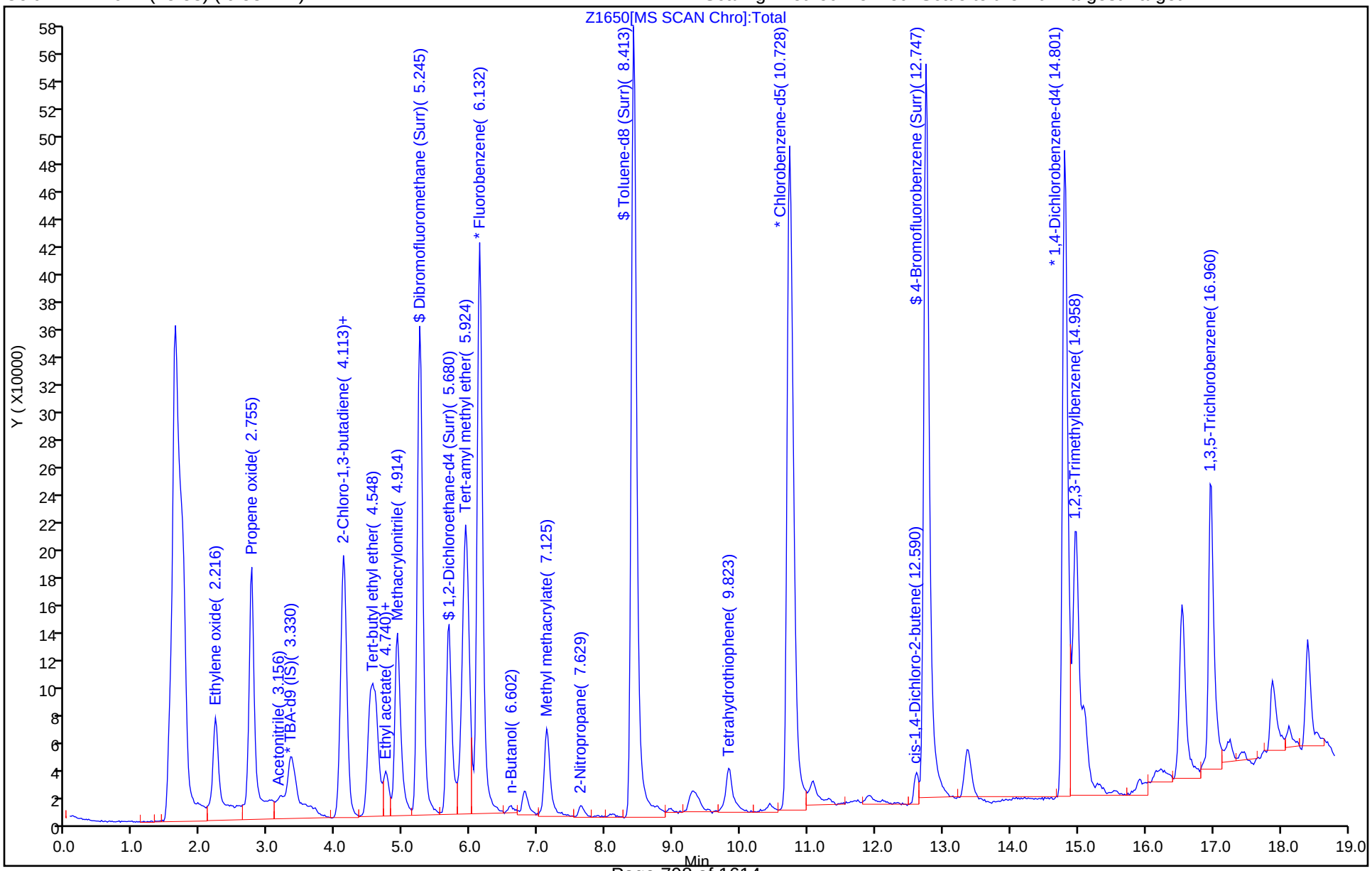
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1650.D

Injection Date:	19-Sep-2018 20:01:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	lcs			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1650.D				
Lims ID:	lcs				
Client ID:					
Sample Type:	LCS				
Inject. Date:	19-Sep-2018 20:01:30	ALS Bottle#:	30	Worklist Smp#:	33
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	lcs sup				
Operator ID:	ilczyszynd	Instrument ID:	VMS_Z		
Method:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	20-Sep-2018 07:32:08	Calib Date:	14-Sep-2018 12:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	CTX0305				

First Level Reviewer: newcomer Date: 19-Sep-2018 20:37:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	12.1	105.12
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	11.9	103.41
$ 10 Toluene-d8 (Surr)	11.5	11.5	100.19
$ 11 4-Bromofluorobenzene (Surr)	11.5	11.0	95.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430312/4

Matrix: Water | Lab File ID: G2_7087.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	4.14		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	4.47		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	3.70		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	3.99		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	4.57		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.75		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	4.87		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	3.96		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	3.95		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	3.95		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.78		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	3.34	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	4.13		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.16		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	4.26		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.39		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	4.35		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.79		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.34		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	4.03		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.24		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.46		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	14.9		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.57		1.0	0.40	0.17
591-78-6	2-Hexanone	14.4		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.69		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	5.05		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	14.3		5.0	3.2	0.98
67-64-1	Acetone	16.0		10	6.4	1.9
71-43-2	Benzene	4.69		1.0	0.40	0.16
108-86-1	Bromobenzene	4.40		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.33		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.24		1.0	0.40	0.17
75-25-2	Bromoform	3.72		1.0	0.40	0.19
74-83-9	Bromomethane	4.62		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.57		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430312/4

Matrix: Water | Lab File ID: G2_7087.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	4.36		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.36		1.0	0.40	0.17
75-00-3	Chloroethane	5.34		2.0	1.6	0.41
67-66-3	Chloroform	4.51		1.0	0.40	0.16
74-87-3	Chloromethane	4.67		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	4.55		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.37		1.0	0.40	0.16
124-48-1	Dibromochloromethane	3.98		1.0	0.40	0.17
74-95-3	Dibromomethane	4.08		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.39		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.51		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.40		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.93		1.0	0.40	0.19
179601-23-1	m,p-Xylene	4.41		2.0	0.80	0.34
74-88-4	Methyl iodide	4.62		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.12	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.49	J	5.0	0.80	0.32
91-20-3	Naphthalene	3.15		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.71		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.81		1.0	0.40	0.16
95-47-6	o-Xylene	4.43		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.59		1.0	0.40	0.17
100-42-5	Styrene	4.59		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.93		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.50		1.0	0.40	0.20
108-88-3	Toluene	4.76		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	4.84		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	3.98		1.0	0.40	0.19
79-01-6	Trichloroethene	4.43		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.82		2.0	0.80	0.29
108-05-4	Vinyl acetate	7.98		3.0	2.0	0.94
75-01-4	Vinyl chloride	4.80		1.5	0.20	0.10
1330-20-7	Xylenes, Total	8.84		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430312/4

Matrix: Water | Lab File ID: G2_7087.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	94		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7087.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 20-Sep-2018 10:47:30 ALS Bottle#: 12 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:27:22 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:35:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	357975	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2354243	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	504321	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.591	12.592	-0.001	96	854924	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	94	373923	10.0	9.37	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.886	0.007	97	364239	10.0	9.00	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1604181	10.0	10.2	
$ 9 4-Bromofluorobenzene (Surr	95	11.590	11.591	-0.001	93	496498	10.0	10.0	
12 Dichlorodifluoromethane	85	1.565	1.551	0.014	99	399475	5.00	4.39	
14 Chloromethane	50	1.690	1.677	0.013	99	332651	5.00	4.67	
15 Vinyl chloride	62	1.802	1.802	0.000	98	346143	5.00	4.80	
17 Bromomethane	94	2.109	2.096	0.013	92	237154	5.00	4.62	
18 Chloroethane	64	2.193	2.180	0.013	99	211869	5.00	5.34	
19 Dichlorofluoromethane	67	2.417	2.403	0.014	97	554385	5.00	4.89	
20 Trichlorofluoromethane	101	2.445	2.445	0.000	98	590437	5.00	4.82	
22 Ethyl ether	59	2.738	2.724	0.014	88	101102	5.00	4.38	
24 Acrolein	56	2.892	2.878	0.014	98	58657	29.6	20.6	
25 1,1-Dichloroethene	96	2.989	2.990	-0.001	98	262454	5.00	4.75	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	91	281195	5.00	4.45	
27 Acetone	43	3.059	3.045	0.014	98	89657	20.0	16.0	
28 Iodomethane	142	3.171	3.157	0.014	99	431539	5.00	4.62	
30 Carbon disulfide	76	3.241	3.227	0.014	100	831296	5.00	4.57	
32 Methyl acetate	43	3.450	3.436	0.014	48	143591	10.0	12.4	
33 3-Chloro-1-propene	41	3.450	3.436	0.014	86	352086	5.00	4.78	
35 Methylene Chloride	84	3.632	3.618	0.014	91	209833	5.00	4.49	
37 2-Methyl-2-propanol	59	3.841	3.828	0.013	97	65977	50.0	31.5	
39 Acrylonitrile	53	3.981	3.953	0.028	96	246568	50.0	37.2	
40 trans-1,2-Dichloroethene	96	4.009	3.995	0.014	97	264418	5.00	4.84	
41 Methyl tert-butyl ether	73	4.023	4.009	0.014	79	349110	5.00	4.12	
42 Hexane	57	4.442	4.428	0.014	91	333722	5.00	4.60	
45 1,1-Dichloroethane	63	4.721	4.707	0.014	97	419082	5.00	4.57	
46 Vinyl acetate	43	4.777	4.763	0.014	98	265629	10.0	7.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
50 2,2-Dichloropropane	77	5.699	5.699	0.000	90	507195	5.00	4.46	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	84	227003	5.00	4.55	
52 2-Butanone (MEK)	43	5.755	5.727	0.028	100	94446	20.0	14.9	
56 Chlorobromomethane	128	6.078	6.056	0.022	95	76480	5.00	4.33	
57 Tetrahydrofuran	42	6.106	6.092	0.014	67	19303	10.0	7.32	
59 Chloroform	83	6.249	6.242	0.007	95	392201	5.00	4.51	
60 1,1,1-Trichloroethane	97	6.442	6.428	0.014	98	443032	5.00	4.47	
61 Cyclohexane	56	6.514	6.507	0.007	92	411261	5.00	4.44	
62 Carbon tetrachloride	117	6.635	6.628	0.007	96	393777	5.00	4.36	
63 1,1-Dichloropropene	75	6.650	6.643	0.007	93	323244	5.00	4.87	
64 Benzene	78	6.900	6.893	0.007	97	864530	5.00	4.69	
66 Isobutyl alcohol	41	6.943	6.929	0.014	92	41802	125.0	78.4	
65 1,2-Dichloroethane	62	6.993	6.986	0.007	98	206384	5.00	4.26	
67 n-Heptane	43	7.322	7.315	0.007	91	394898	5.00	4.43	
69 Trichloroethene	95	7.722	7.722	0.000	96	222571	5.00	4.43	
71 Methylcyclohexane	55	7.965	7.965	0.000	90	349567	5.00	4.28	
72 1,2-Dichloropropane	63	8.015	8.008	0.007	92	177337	5.00	4.35	
75 Dibromomethane	93	8.108	8.108	0.000	95	70226	5.00	4.08	
74 1,4-Dioxane	88	8.130	8.108	0.022	32	6725	100.0	52.3	
76 Dichlorobromomethane	83	8.323	8.316	0.007	98	207204	5.00	4.24	
78 2-Chloroethyl vinyl ether	63	8.652	8.645	0.007	93	17951	5.00	4.30	
79 cis-1,3-Dichloropropene	75	8.788	8.781	0.007	92	193825	5.00	4.37	
81 4-Methyl-2-pentanone (MIBK	43	8.959	8.952	0.007	97	222555	20.0	14.3	
82 Toluene	91	9.116	9.109	0.007	98	924343	5.00	4.76	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	97	140423	5.00	3.98	
84 Ethyl methacrylate	69	9.445	9.446	-0.001	91	75694	5.00	3.45	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	95	96652	5.00	3.99	
86 Tetrachloroethene	164	9.624	9.624	0.000	98	226982	5.00	4.50	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	161627	5.00	4.03	
88 2-Hexanone	43	9.789	9.789	0.000	98	128349	20.0	14.4	
89 Chlorodibromomethane	129	9.924	9.925	-0.001	90	104602	5.00	3.98	
90 Ethylene Dibromide	107	10.024	10.025	-0.001	95	82680	5.00	4.13	
92 Chlorobenzene	112	10.504	10.504	0.000	94	567967	5.00	4.36	
93 1,1,1,2-Tetrachloroethane	131	10.589	10.590	-0.001	91	186800	5.00	4.14	
94 Ethylbenzene	106	10.597	10.597	-0.001	99	324759	5.00	4.51	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	386477	5.00	4.41	
96 o-Xylene	106	11.083	11.083	0.000	97	354426	5.00	4.43	
97 Styrene	104	11.104	11.104	0.000	94	544804	5.00	4.59	
98 Bromoform	173	11.269	11.276	-0.007	95	50473	5.00	3.72	
99 Isopropylbenzene	105	11.426	11.426	0.000	96	1113388	5.00	4.93	
100 Cyclohexanone	55	11.512	11.512	0.000	93	73951	200.0	129.3	
103 Bromobenzene	156	11.719	11.719	0.000	95	221027	5.00	4.40	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	96	99411	5.00	3.70	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	77	23259	5.00	3.70	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	88	32681	5.00	3.95	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	318853	5.00	4.81	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	254579	5.00	4.57	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	-0.001	94	910446	5.00	4.79	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	259428	5.00	4.69	
110 tert-Butylbenzene	119	12.255	12.256	-0.001	94	784635	5.00	4.93	
111 1,2,4-Trimethylbenzene	105	12.305	12.306	-0.001	98	910435	5.00	4.78	
112 sec-Butylbenzene	134	12.441	12.441	0.000	95	262808	5.00	4.59	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	478388	5.00	4.34	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	1139703	5.00	5.05	
115 1,4-Dichlorobenzene	146	12.613	12.613	0.000	95	480029	5.00	4.24	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	1000723	5.00	4.71	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	426572	5.00	4.16	
119 1,2-Dibromo-3-Chloropropan	157	13.371	13.371	0.000	81	14822	5.00	3.34	
121 1,2,4-Trichlorobenzene	180	13.878	13.879	-0.001	94	308425	5.00	3.95	
122 Hexachlorobutadiene	225	13.971	13.964	0.007	96	278938	5.00	4.40	
123 Naphthalene	128	14.057	14.057	0.000	97	310557	5.00	3.15	
124 1,2,3-Trichlorobenzene	180	14.207	14.200	0.007	95	265678	5.00	3.96	
S 137 1,2-Dichloroethene, Total	96				0		10.0	9.38	
S 144 1,2-Dichloroethene, Total	1				0		10.0	9.38	
S 138 Xylenes, Total (URS)	1				0		10.0	8.84	
S 140 1,3-Dichloropropene, Total	1				0		10.0	8.35	
S 143 Xylenes, Total	106				0		10.0	8.84	
S 142 Trihalomethanes, Total	1				0		20.0	16.5	

Reagents:

MV-MegaMain B_00001	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

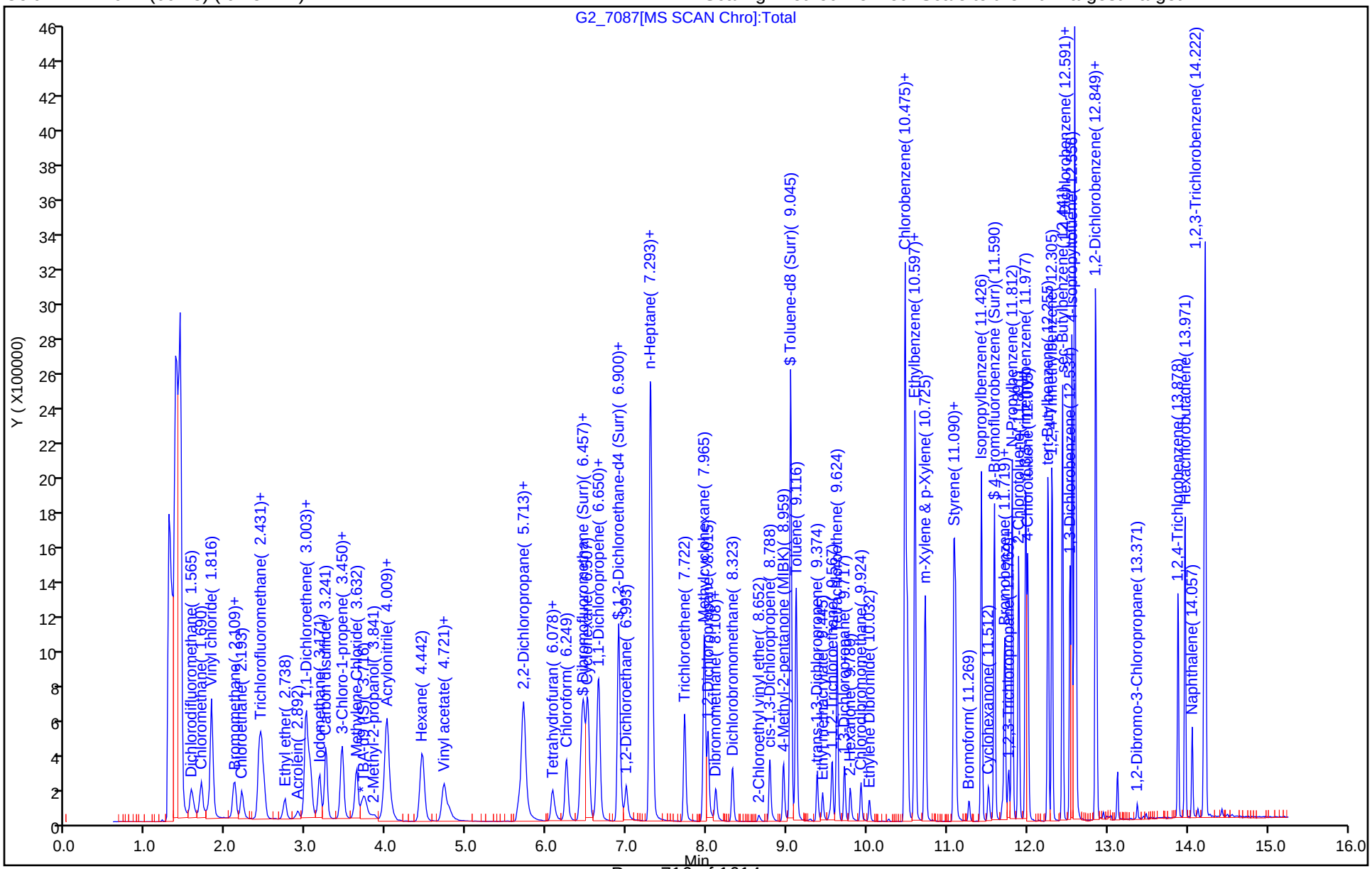
Report Date: 21-Sep-2018 07:27:54 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7087.D

Injection Date:	20-Sep-2018 10:47:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7087.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 20-Sep-2018 10:47:30 ALS Bottle#: 12 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:27:22 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 12:35:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.37	93.67
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.00	90.02
$ 8 Toluene-d8 (Surr)	10.0	10.2	101.94
$ 9 4-Bromofluorobenzene (Surr)	10.0	10.0	100.01

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-430312/32

Matrix: Water | Lab File ID: G2_7089.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	4.56	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	95		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7089.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 20-Sep-2018 11:29:30 ALS Bottle#: 14 Worklist Smp#: 32
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs supp
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 14:11:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.702	3.716	-0.014	0	399482	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.293	0.000	98	2273622	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	484307	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	740064	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	93	364599	10.0	9.46	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.886	0.007	99	361659	10.0	9.25	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1467589	10.0	9.71	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	92	427568	10.0	9.95	
16 Ethylene oxide	43	2.054	2.054	0.000	100	240066	500.0	606.5	
21 Ethanol	45	2.640	2.640	0.000	95	50148	300.0	262.9	
23 Propene oxide	58	2.780	2.794	-0.014	95	1122623	500.0	576.2	
29 Isopropyl alcohol	45	3.255	3.269	-0.014	95	45258	50.0	44.5	
31 Acetonitrile	41	3.409	3.409	-0.001	99	82146	50.0	46.1	
47 Isopropyl ether	87	4.833	4.833	0.000	90	153664	5.00	4.56	
48 2-Chloro-1,3-butadiene	53	4.833	4.833	0.000	89	401596	5.00	5.00	
49 Tert-butyl ethyl ether	59	5.476	5.476	0.000	96	428546	5.00	4.49	
53 Ethyl acetate	43	5.825	5.825	0.000	99	89658	10.0	9.11	
54 Propionitrile	54	5.839	5.839	0.000	76	53511	50.0	49.8	
58 Methacrylonitrile	41	6.049	6.049	0.000	94	416161	50.0	48.6	
68 Tert-amyl methyl ether	73	7.115	7.115	-0.001	95	366400	5.00	4.99	
73 n-Butanol	56	7.744	7.737	0.007	96	13021	125.0	46.7	
77 Methyl methacrylate	100	8.130	8.130	0.000	90	31935	10.0	7.95	
80 2-Nitropropane	41	8.559	8.559	0.000	96	23803	10.0	12.8	
13 Tetrahydrothiophene	60	9.889	9.882	0.007	83	7071	10.0	7.82	
101 cis-1,4-Dichloro-2-butene	53	11.490	11.491	-0.001	95	20976	10.0	8.51	
116 1,2,3-Trimethylbenzene	105	12.627	12.627	0.000	99	774754	5.00	5.14	
120 1,3,5-Trichlorobenzene	180	13.485	13.478	0.007	97	422291	5.00	5.50	

Reagents:

MV-Supp B_00021	Amount Added:	2.50	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

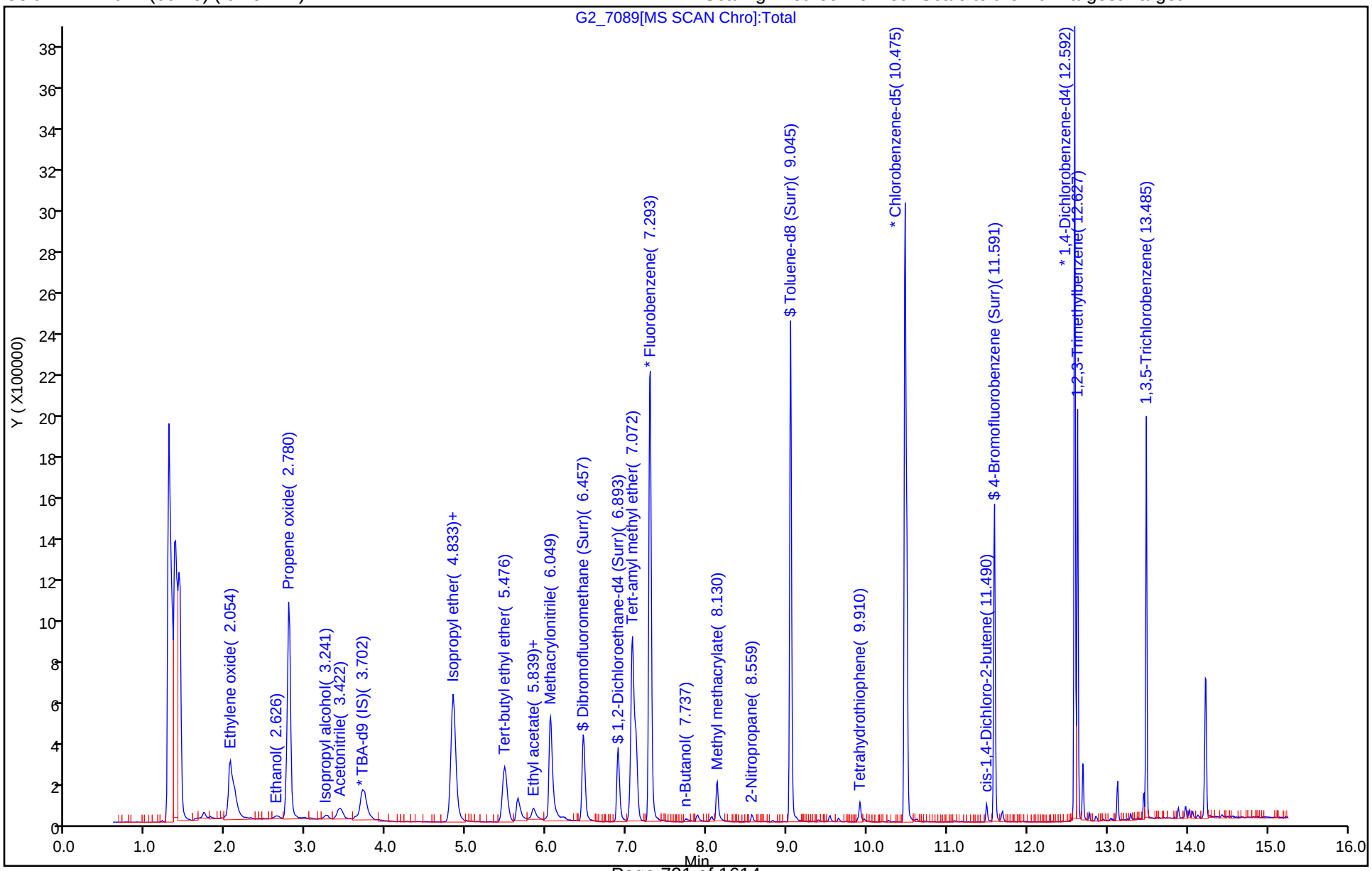
Report Date: 21-Sep-2018 07:06:38 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7089.D

Injection Date:	20-Sep-2018 11:29:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	lcs			Worklist Smp#:	32
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7089.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 20-Sep-2018 11:29:30 ALS Bottle#: 14 Worklist Smp#: 32
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs supp
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 14:11:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.46	94.58
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.25	92.55
$ 8 Toluene-d8 (Surr)	10.0	9.71	97.11
$ 9 4-Bromofluorobenzene (Surr)	10.0	9.95	99.49

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-430312/5

Matrix: Water | Lab File ID: G2_7088.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	4.37		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	4.63		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.03		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	4.62		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	4.78		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.64		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	4.81		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.31		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	4.45		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	4.35		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.91		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	3.86	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	4.24		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.40		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	4.57		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.81		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	4.67		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.87		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.49		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	4.40		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.32		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.70		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	18.3	Q	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.66		1.0	0.40	0.17
591-78-6	2-Hexanone	15.7		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.74		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.93		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	16.7		5.0	3.2	0.98
67-64-1	Acetone	19.8	M Q	10	6.4	1.9
71-43-2	Benzene	4.87		1.0	0.40	0.16
108-86-1	Bromobenzene	4.48		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.64		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.46		1.0	0.40	0.17
75-25-2	Bromoform	4.04		1.0	0.40	0.19
74-83-9	Bromomethane	5.02		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.71		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-430312/5

Matrix: Water | Lab File ID: G2_7088.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	4.54		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.44		1.0	0.40	0.17
75-00-3	Chloroethane	5.50		2.0	1.6	0.41
67-66-3	Chloroform	4.67		1.0	0.40	0.16
74-87-3	Chloromethane	4.96		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	4.83		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.55		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.39		1.0	0.40	0.17
74-95-3	Dibromomethane	4.28		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.53		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.52		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.37		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.91		1.0	0.40	0.19
179601-23-1	m,p-Xylene	4.55		2.0	0.80	0.34
74-88-4	Methyl iodide	4.91		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.72	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.91	J	5.0	0.80	0.32
91-20-3	Naphthalene	3.67		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.67		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.76		1.0	0.40	0.16
95-47-6	o-Xylene	4.60		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.74		1.0	0.40	0.17
100-42-5	Styrene	4.65		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.89		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.48		1.0	0.40	0.20
108-88-3	Toluene	4.90		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	4.98		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.29		1.0	0.40	0.19
79-01-6	Trichloroethene	4.56		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.93		2.0	0.80	0.29
108-05-4	Vinyl acetate	8.21		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.04		1.5	0.20	0.10
1330-20-7	Xylenes, Total	9.15		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-430312/5

Matrix: Water | Lab File ID: G2_7088.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 11:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7088.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 20-Sep-2018 11:08:30 ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:27:22 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 07:27:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.702	0.014	0	407096	250.0	250.0	
* 2 Fluorobenzene	96	7.293	7.286	0.007	98	2349036	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	87	516070	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	95	885947	12.5	12.5	
$ 6 Dibromofluoromethane (Surr	111	6.464	6.457	0.007	93	391772	10.0	9.84	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.893	6.886	0.007	97	386425	10.0	9.57	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	94	1622674	10.0	10.1	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	94	527138	10.0	10.2	
12 Dichlorodifluoromethane	85	1.565	1.551	0.014	98	411577	5.00	4.53	
14 Chloromethane	50	1.691	1.677	0.014	99	352065	5.00	4.96	
15 Vinyl chloride	62	1.802	1.802	0.000	98	363125	5.00	5.04	
17 Bromomethane	94	2.096	2.096	0.000	92	256948	5.00	5.02	
18 Chloroethane	64	2.193	2.180	0.013	100	217341	5.00	5.50	
19 Dichlorofluoromethane	67	2.403	2.403	0.000	97	583222	5.00	5.16	
20 Trichlorofluoromethane	101	2.445	2.445	0.000	98	602714	5.00	4.93	
22 Ethyl ether	59	2.724	2.724	0.000	90	105699	5.00	4.59	
24 Acrolein	56	2.892	2.878	0.014	97	67915	29.6	23.9	
25 1,1-Dichloroethene	96	2.990	2.990	0.000	97	255447	5.00	4.64	
26 1,1,2-Trichloro-1,2,2-trif	151	3.031	3.031	0.000	91	294514	5.00	4.68	
27 Acetone	43	3.059	3.045	0.014	98	110806	20.0	19.8	M
28 Iodomethane	142	3.157	3.157	0.000	99	458418	5.00	4.91	
30 Carbon disulfide	76	3.241	3.227	0.014	100	855101	5.00	4.71	
32 Methyl acetate	43	3.450	3.436	0.014	53	161141	10.0	14.1	
33 3-Chloro-1-propene	41	3.450	3.436	0.014	87	375364	5.00	5.12	
35 Methylene Chloride	84	3.618	3.618	0.000	91	228594	5.00	4.91	
37 2-Methyl-2-propanol	59	3.855	3.828	0.027	96	78643	50.0	37.6	
39 Acrylonitrile	53	3.967	3.953	0.014	96	285646	50.0	43.2	
40 trans-1,2-Dichloroethene	96	4.009	3.995	0.014	97	271908	5.00	4.98	
41 Methyl tert-butyl ether	73	4.023	4.009	0.014	98	398936	5.00	4.72	
42 Hexane	57	4.442	4.428	0.014	92	338126	5.00	4.55	
45 1,1-Dichloroethane	63	4.721	4.707	0.014	97	437073	5.00	4.78	
46 Vinyl acetate	43	4.777	4.763	0.014	98	274203	10.0	8.21	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
50 2,2-Dichloropropane	77	5.699	5.699	0.000	81	528560	5.00	4.70	
51 cis-1,2-Dichloroethene	96	5.713	5.699	0.014	84	240613	5.00	4.83	
52 2-Butanone (MEK)	43	5.755	5.727	0.028	99	115497	20.0	18.3	
56 Chlorobromomethane	128	6.071	6.056	0.015	94	81745	5.00	4.64	
57 Tetrahydrofuran	42	6.114	6.092	0.022	74	24701	10.0	8.92	
59 Chloroform	83	6.249	6.242	0.007	94	405468	5.00	4.67	
60 1,1,1-Trichloroethane	97	6.435	6.428	0.007	98	457768	5.00	4.63	
61 Cyclohexane	56	6.514	6.507	0.007	92	432520	5.00	4.68	
62 Carbon tetrachloride	117	6.635	6.628	0.007	97	409150	5.00	4.54	
63 1,1-Dichloropropene	75	6.657	6.643	0.014	93	318286	5.00	4.81	
64 Benzene	78	6.900	6.893	0.007	96	895238	5.00	4.87	
66 Isobutyl alcohol	41	6.929	6.929	0.000	86	44637	125.0	83.9	
65 1,2-Dichloroethane	62	6.993	6.986	0.007	98	220475	5.00	4.57	
67 n-Heptane	43	7.322	7.315	0.007	90	398554	5.00	4.48	
69 Trichloroethene	95	7.722	7.722	0.000	96	228560	5.00	4.56	
71 Methylcyclohexane	55	7.965	7.965	0.000	91	364599	5.00	4.47	
72 1,2-Dichloropropane	63	8.015	8.008	0.007	94	189739	5.00	4.67	
75 Dibromomethane	93	8.108	8.108	0.000	92	73547	5.00	4.28	
74 1,4-Dioxane	88	8.123	8.108	0.015	85	9213	100.0	66.8	
76 Dichlorobromomethane	83	8.316	8.316	0.000	98	217233	5.00	4.46	
78 2-Chloroethyl vinyl ether	63	8.645	8.645	0.000	95	17864	5.00	4.29	
79 cis-1,3-Dichloropropene	75	8.788	8.781	0.007	92	206470	5.00	4.55	
81 4-Methyl-2-pentanone (MIBK	43	8.952	8.952	0.000	97	259213	20.0	16.7	
82 Toluene	91	9.117	9.109	0.008	98	949421	5.00	4.90	
83 trans-1,3-Dichloropropene	75	9.374	9.374	0.000	98	150980	5.00	4.29	
84 Ethyl methacrylate	69	9.446	9.446	0.000	90	85909	5.00	3.75	
85 1,1,2-Trichloroethane	97	9.560	9.560	0.000	94	111664	5.00	4.62	
86 Tetrachloroethene	164	9.624	9.624	0.000	97	231598	5.00	4.48	
87 1,3-Dichloropropane	76	9.717	9.717	0.000	95	180483	5.00	4.40	
88 2-Hexanone	43	9.789	9.789	0.000	97	143263	20.0	15.7	
89 Chlorodibromomethane	129	9.925	9.925	0.000	89	117934	5.00	4.39	
90 Ethylene Dibromide	107	10.032	10.025	0.007	99	86793	5.00	4.24	
92 Chlorobenzene	112	10.504	10.504	0.000	94	591358	5.00	4.44	
93 1,1,1,2-Tetrachloroethane	131	10.597	10.590	0.007	91	201896	5.00	4.37	
94 Ethylbenzene	106	10.597	10.597	0.000	99	332676	5.00	4.52	
95 m-Xylene & p-Xylene	106	10.725	10.725	0.000	99	408390	5.00	4.55	
96 o-Xylene	106	11.083	11.083	0.000	97	376542	5.00	4.60	
97 Styrene	104	11.104	11.104	0.000	95	565215	5.00	4.65	
98 Bromoform	173	11.276	11.276	0.000	96	56173	5.00	4.04	
99 Isopropylbenzene	105	11.426	11.426	0.000	96	1147887	5.00	4.91	
100 Cyclohexanone	55	11.512	11.512	0.000	93	95727	200.0	158.3	
103 Bromobenzene	156	11.719	11.719	0.000	95	232894	5.00	4.48	
102 1,1,2,2-Tetrachloroethane	83	11.719	11.719	0.000	96	112162	5.00	4.03	
105 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	80	23654	5.00	3.64	
104 1,2,3-Trichloropropane	110	11.769	11.769	0.000	89	38210	5.00	4.45	
106 N-Propylbenzene	120	11.812	11.812	0.000	99	327176	5.00	4.76	
107 2-Chlorotoluene	126	11.891	11.891	0.000	96	269003	5.00	4.66	
108 1,3,5-Trimethylbenzene	105	11.977	11.977	0.000	95	959519	5.00	4.87	
109 4-Chlorotoluene	126	12.005	12.005	0.000	98	271498	5.00	4.74	
110 tert-Butylbenzene	119	12.256	12.256	0.000	94	806570	5.00	4.89	
111 1,2,4-Trimethylbenzene	105	12.306	12.306	0.000	98	968963	5.00	4.91	
112 sec-Butylbenzene	134	12.441	12.441	0.000	95	281204	5.00	4.74	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
113 1,3-Dichlorobenzene	146	12.534	12.534	0.000	98	513119	5.00	4.49	
114 4-Isopropyltoluene	119	12.556	12.556	0.000	97	1152399	5.00	4.93	
115 1,4-Dichlorobenzene	146	12.606	12.613	-0.007	95	507057	5.00	4.32	
117 n-Butylbenzene	91	12.849	12.849	0.000	98	1028493	5.00	4.67	
118 1,2-Dichlorobenzene	146	12.863	12.863	0.000	97	466539	5.00	4.40	
119 1,2-Dibromo-3-Chloropropan	157	13.378	13.371	0.007	82	17742	5.00	3.86	
121 1,2,4-Trichlorobenzene	180	13.886	13.879	0.007	93	352573	5.00	4.35	
122 Hexachlorobutadiene	225	13.972	13.964	0.008	95	287164	5.00	4.37	
123 Naphthalene	128	14.065	14.057	0.008	97	380312	5.00	3.67	
124 1,2,3-Trichlorobenzene	180	14.208	14.200	0.008	95	300039	5.00	4.31	
S 137 1,2-Dichloroethene, Total	96				0		10.0	9.81	
S 144 1,2-Dichloroethene, Total	1				0		10.0	9.81	
S 138 Xylenes, Total (URS)	1				0		10.0	9.15	
S 140 1,3-Dichloropropene, Total	1				0		10.0	8.84	
S 143 Xylenes, Total	106				0		10.0	9.15	
S 142 Trihalomethanes, Total	1				0		20.0	17.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00001	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

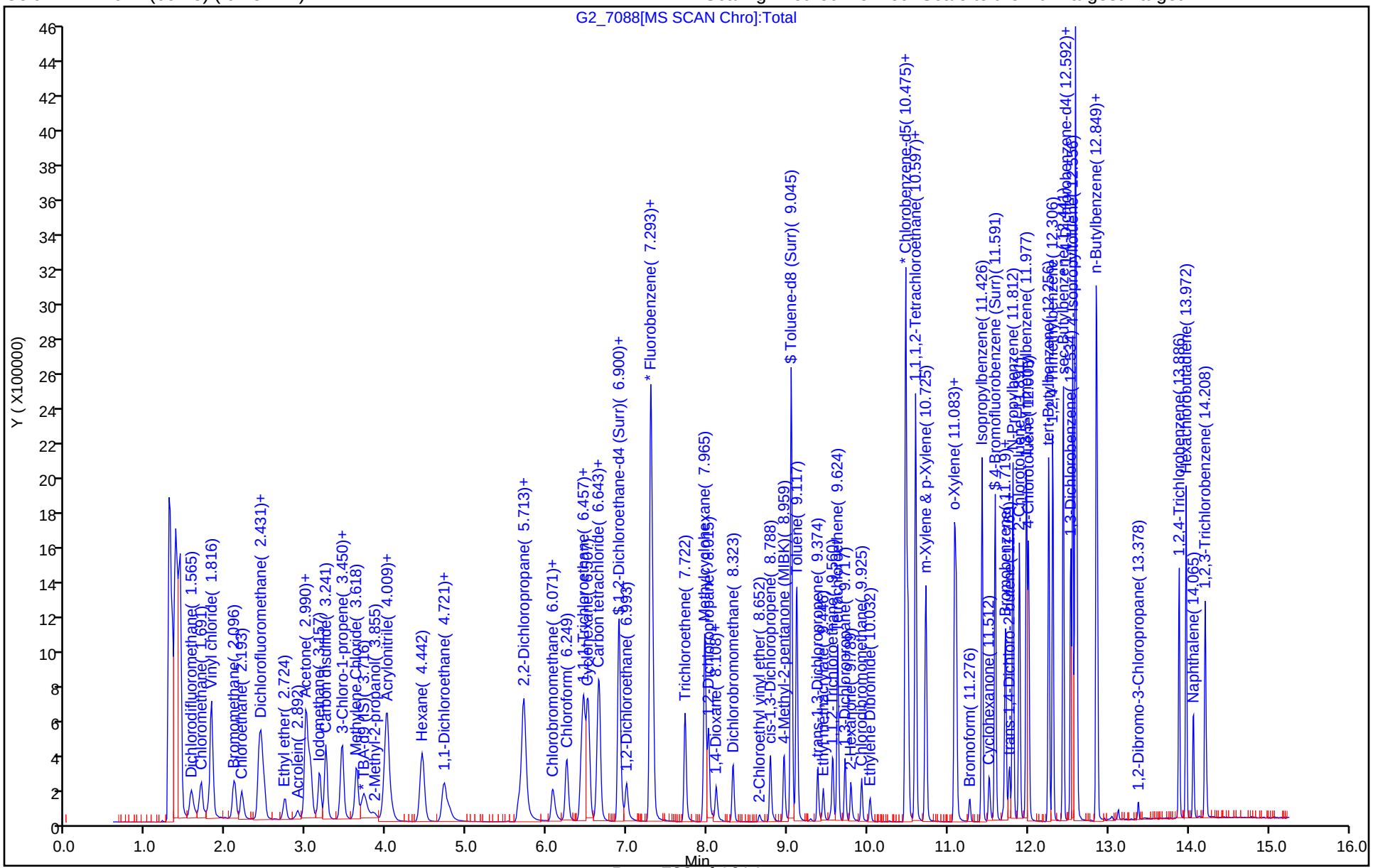
Report Date: 21-Sep-2018 07:27:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7088.D

Injection Date:	20-Sep-2018 11:08:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7088.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 20-Sep-2018 11:08:30 ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:27:22 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 07:27:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	9.84	98.36
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	9.57	95.71
$ 8 Toluene-d8 (Surr)	10.0	10.1	100.77
$ 9 4-Bromofluorobenzene (Surr)	10.0	10.2	102.47

Manual Integration/User Assign Peak Report

TestAmerica Denver

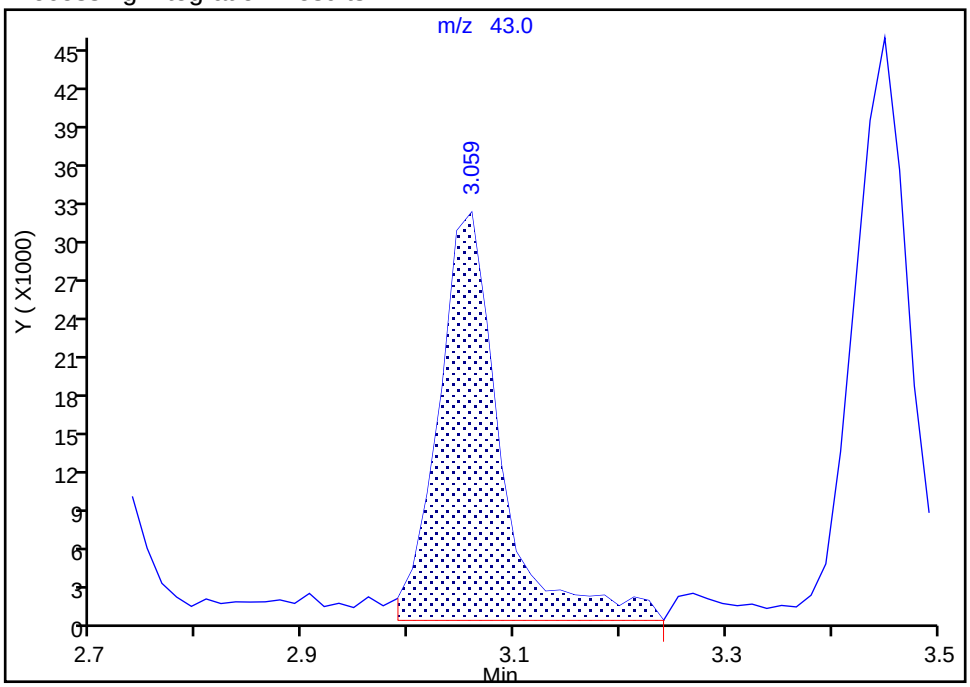
Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7088.D
Injection Date: 20-Sep-2018 11:08:30 Instrument ID: VMS_G2
Lims ID: LCSD
Client ID:
Operator ID: ilczyszynd ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

27 Acetone, CAS: 67-64-1

Signal: 1

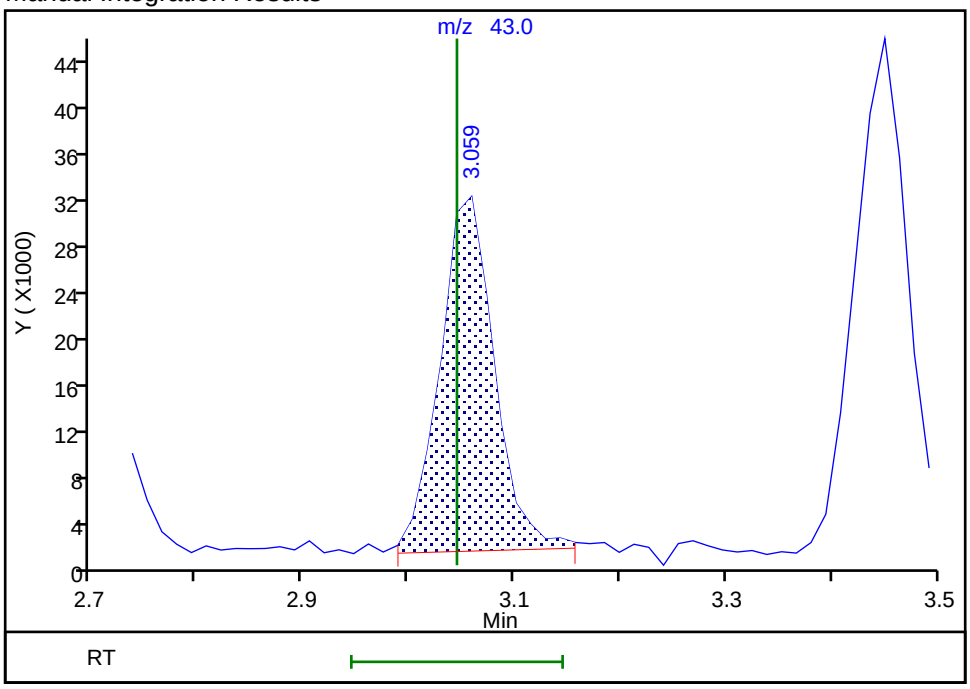
Processing Integration Results

RT: 3.06
Area: 131673
Amount: 23.554710
Amount Units: ug/l



Manual Integration Results

RT: 3.06
Area: 110806
Amount: 19.821856
Amount Units: ug/l



Reviewer: ilczyszynd, 21-Sep-2018 07:27:17
Audit Action: Manually Integrated Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup DU | Lab Sample ID: 280-114110-2 DU

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.314	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U M	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	21.2		10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup DU | Lab Sample ID: 280-114110-2 DU

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.37		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.180	J	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	24.3		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH1-10-dup DU | Lab Sample ID: 280-114110-2 DU

Matrix: Water | Lab File ID: Z1629.D

Analysis Method: 8260B | Date Collected: 09/06/2018 09:00

Sample wt/vol: 20(mL) | Date Analyzed: 09/19/2018 12:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (75.53) ID: 0.53(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430151 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D
Lims ID: 280-114110-C-2 DU
Client ID: BH1-10-dup
Sample Type: DU
Inject. Date: 19-Sep-2018 12:12:30 ALS Bottle#: 8 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 280-114110-C-2 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_Z

Method: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Sep-2018 07:32:08 Calib Date: 14-Sep-2018 12:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D

Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.348	3.349	-0.001	0	156339	250.0	250.0	
* 2 Fluorobenzene	96	6.133	6.134	-0.001	99	1256311	12.5	12.5	
* 3 1,4-Dioxane-d8	96	7.108	7.184	-0.076	0	6763		0	
* 4 Chlorobenzene-d5	119	10.728	10.712	0.016	90	288061	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.802	14.803	-0.001	95	514394	12.5	12.5	
$ 8 Dibromofluoromethane (Surr	111	5.245	5.233	0.012	94	636237	11.5	11.3	
$ 9 1,2-Dichloroethane-d4 (Sur	65	5.680	5.669	0.012	0	238191	11.5	10.7	
$ 10 Toluene-d8 (Surr)	98	8.413	8.401	0.012	92	1253170	11.5	11.0	
$ 11 4-Bromofluorobenzene (Surr	95	12.748	12.736	0.012	89	720853	11.5	10.9	
$ 6 Trifluorotoluene (Surr)	1		0.000					ND	
$ 7 BFB	95		2.391					ND	
27 Dichlorodifluoromethane	85		1.835					ND	
26 Chlorotrifluoroethene	116		1.872					ND	
30 Chloromethane	50		1.991					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		1.994					ND	
32 Vinyl chloride	62		2.061					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.133					ND	
34 Ethylene oxide	43		2.222					ND	
35 Bromomethane	94		2.287					ND	
36 Chloroethane	64		2.322					ND	
37 Dichlorofluoromethane	67		2.461					ND	
38 Trichlorofluoromethane	101		2.496					ND	
40 Ethyl ether	59		2.688					ND	
42 Propene oxide	58		2.744					ND	
44 Acrolein	56		2.792					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		2.812					ND	
39 Ethanol	45		2.857					ND	
43 1,1,1-Trifluoro-2,2-dichlo	83		2.864					ND	
45 1,1-Dichloroethene	96		2.914					ND	
48 Acetone	43	2.930	2.931	-0.001	99	34186		21.2	
46 1,1,2-Trichloro-1,2,2-trif	151		2.949					ND	
47 Isopropyl alcohol	45	3.035	3.022	0.013	95	28365		NC	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
49 Iodomethane	142		3.053					ND	
50 Carbon disulfide	76	3.139	3.140	-0.001	95	14664		0.1285	
53 Acetonitrile	41		3.162					ND	
52 3-Chloro-1-propene	41		3.210					ND	
51 Methyl acetate	43	3.226	3.210	0.016	95	20118		2.46	
54 Methylene Chloride	84		3.314					ND	U
55 2-Methyl-2-propanol	59		3.419					ND	
58 Acrylonitrile	53		3.523					ND	
57 trans-1,2-Dichloroethene	96		3.593					ND	
56 Methyl tert-butyl ether	73		3.610					ND	
59 Hexane	57		3.871					ND	
62 1,1-Dichloroethane	63		4.010					ND	
61 Vinyl acetate	43		4.045					ND	
60 Isopropyl ether	87		4.102					ND	
63 2-Chloro-1,3-butadiene	53		4.119					ND	
64 Tert-butyl ethyl ether	59		4.520					ND	
65 cis-1,2-Dichloroethene	96		4.672					ND	
67 2-Butanone (MEK)	43		4.672					ND	U
66 2,2-Dichloropropane	77		4.689					ND	
69 Propionitrile	54		4.729					ND	
68 Ethyl acetate	43		4.746					ND	U
70 sec-Butyl Alcohol	45		4.896					ND	
73 Methacrylonitrile	41		4.903					ND	
71 Chlorobromomethane	128		4.950					ND	
72 Tetrahydrofuran	42		5.037					ND	
74 Chloroform	83	5.054	5.037	0.017	95	87524		1.37	
75 1,1,1-Trichloroethane	97	5.332	5.316	0.016	97	20764		0.3142	
76 Cyclohexane	56		5.403					ND	
78 1,1-Dichloropropene	75		5.507					ND	
77 Carbon tetrachloride	117		5.542					ND	
80 Isobutyl alcohol	41		5.647					ND	U
82 1,2-Dichloroethane	62		5.769					ND	
81 Benzene	78		5.769					ND	
83 Tert-amyl methyl ether	73		5.947					ND	
84 n-Heptane	43		6.152					ND	U
86 n-Butanol	56		6.574					ND	
85 Trichloroethene	95	6.638	6.639	-0.001	97	1199016		24.3	
89 2-Pentanone	43		6.863					ND	
87 Methylcyclohexane	55		6.935					ND	
90 1,2-Dichloropropane	63		6.935					ND	
92 Dibromomethane	93		7.092					ND	
91 Methyl methacrylate	100		7.131					ND	
93 1,4-Dioxane	88		7.144					ND	
94 Dichlorobromomethane	83		7.318					ND	
95 2-Nitropropane	41		7.618					ND	
96 2-Chloroethyl vinyl ether	63		7.788					ND	
97 cis-1,3-Dichloropropene	75		7.979					ND	
98 4-Methyl-2-pentanone (MIBK	43		8.240					ND	
99 Toluene	91	8.518	8.519	-0.001	98	22654		0.1796	
100 trans-1,3-Dichloropropene	75		8.850					ND	
101 Ethyl methacrylate	69		9.041					ND	
102 1,1,2-Trichloroethane	97		9.128					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichloropropane	76		9.389					ND	
103 Tetrachloroethene	164		9.389					ND	
105 2-Hexanone	43		9.563					ND	
106 Tetrahydrothiophene	60		9.742					ND	
107 Chlorodibromomethane	129		9.755					ND	
109 Ethylene Dibromide	107		9.929					ND	
110 1-Chlorohexane	91	10.728	10.760	-0.032	33	2154		NC	
111 Chlorobenzene	112		10.764					ND	
113 1,1,1,2-Tetrachloroethane	131		10.904					ND	
112 Ethylbenzene	106		10.973					ND	
114 m-Xylene & p-Xylene	106	11.198	11.182	0.016	0	11883		0.1939	
115 o-Xylene	106	11.860	11.844	0.016	97	6133		0.1112	
116 Styrene	104		11.861					ND	
117 Bromoform	173		12.140					ND	
118 Isopropylbenzene	105		12.505					ND	
120 cis-1,4-Dichloro-2-butene	53		12.596					ND	
119 Cyclohexanone	55		12.610					ND	
121 Bromobenzene	156		12.992					ND	
122 1,1,2,2-Tetrachloroethane	83		13.010					ND	
124 1,2,3-Trichloropropane	110		13.062					ND	
125 trans-1,4-Dichloro-2-buten	53		13.114					ND	
123 N-Propylbenzene	120		13.236					ND	
126 2-Chlorotoluene	126		13.341					ND	
128 4-Chlorotoluene	126		13.549					ND	
127 1,3,5-Trimethylbenzene	105		13.567					ND	
129 tert-Butylbenzene	119		14.124					ND	
130 1,2,4-Trimethylbenzene	105		14.211					ND	
131 sec-Butylbenzene	134		14.524					ND	
132 1,3-Dichlorobenzene	146		14.681					ND	
133 4-Isopropyltoluene	119		14.803					ND	
134 1,4-Dichlorobenzene	146		14.838					ND	
135 1,2,3-Trimethylbenzene	105		14.964					ND	
138 1,2-Dichlorobenzene	146		15.499					ND	
137 n-Butylbenzene	91		15.551					ND	
139 1,2-Dibromo-3-Chloropropan	157		16.665					ND	
140 1,3,5-Trichlorobenzene	180		16.966					ND	
141 1,2,4-Trichlorobenzene	180		17.640					ND	
142 Hexachlorobutadiene	225		17.832					ND	
143 Naphthalene	128		17.866					ND	
144 1,2,3-Trichlorobenzene	180		18.110					ND	
16 2-Methylhexane	1		0.000					ND	
14 3-Methylhexane	1		0.000					ND	
23 2,4-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
21 2,2-Dimethylpentane	1		0.000					ND	
13 2,3-Dimethylpentane	1		0.000					ND	
20 3,3-Dimethylpentane	1		0.000					ND	
17 n-Nonyl Aldehyde	1		0.000					ND	
22 Dimethyl disulfide	1		0.000					ND	
18 Pentachloroethane	167		0.000					ND	
157 n-Nonane TIC	1		0.000					ND	
28 3-Ethylpentane	1		1.795					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 156 TAH	1				0			0	7
S 150 Xylenes, Total (URS)	1				0			0.3050	
S 151 Total BTEX	1				0			0.4847	
S 146 Xylenes, Total	106				0			0.3050	
S 148 1,3-Dichloropropene, Total	1		0.000					ND	
S 145 1,2-Dichloroethene, Total	1		0.000					ND	
S 147 1,2-Dichloroethene, Total	96		0.000					ND	
S 149 Trihalomethanes, Total	1				0			1.37	
T 158 1-Chlorohexane TIC	91		0.000					ND	
T 79 Propene oxide TIC	58		0.000					ND	
T 160 Cyclohexane TIC	56		0.000					ND	
T 154 4-Ethyltoluene TIC	105		0.000					ND	
T 155 1,3-Butadiene TIC	39		0.000					ND	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 19 2-Butoxyethanol TIC	1		0.000					ND	
T 24 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 159 Methyl cyclohexane TIC	55		0.000					ND	
T 152 Propene TIC	41		0.000					ND	
T 153 Dicyclopentadiene TIC	66		0.000					ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.92	Units: uL	Run Reagent

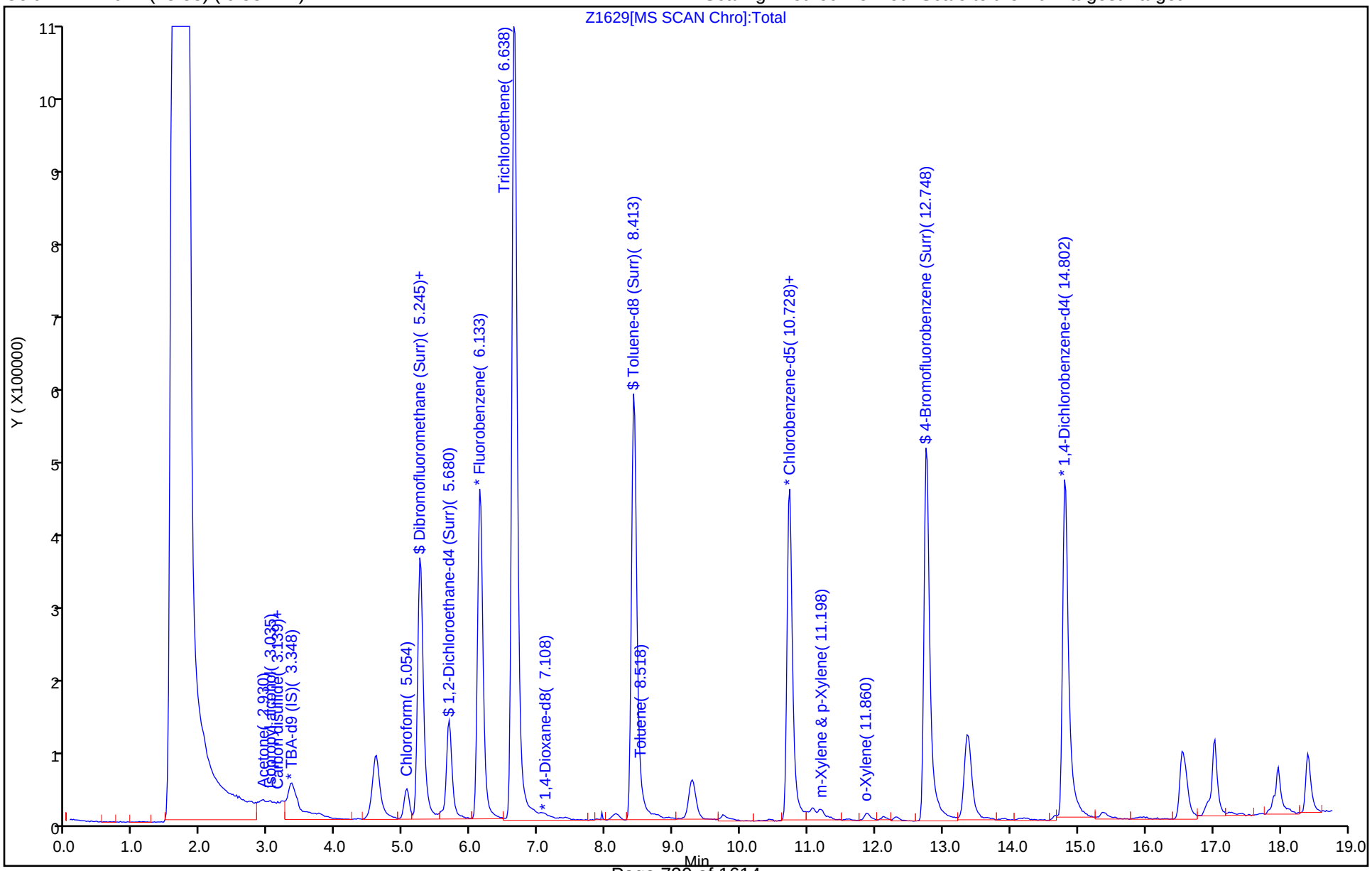
Report Date: 20-Sep-2018 07:32:45 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D

Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z	Operator ID:	ilczyszynd
Lims ID:	280-114110-C-2 DU			Worklist Smp#:	12
Client ID:	BH1-10-dup				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (75.53) (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Sample Type:	DU				
Inject. Date:	19-Sep-2018 12:12:30	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	280-114110-C-2 DU pH2				
Operator ID:	ilczyszynd	Instrument ID:	VMS_Z		
Method:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\AQ_VMSZ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	20-Sep-2018 07:32:08	Calib Date:	14-Sep-2018 12:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b\Z1439.D				
Column 1 :	DB-624 (75.53) (0.53 mm)		Det: MS SCAN		
Process Host:	CTX0305				

First Level Reviewer: ilczyszynd Date: 20-Sep-2018 07:09:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 8 Dibromofluoromethane (Surr)	11.5	11.3	97.98
$ 9 1,2-Dichloroethane-d4 (Surr)	11.5	10.7	93.45
$ 10 Toluene-d8 (Surr)	11.5	11.0	95.71
$ 11 4-Bromofluorobenzene (Surr)	11.5	10.9	94.94

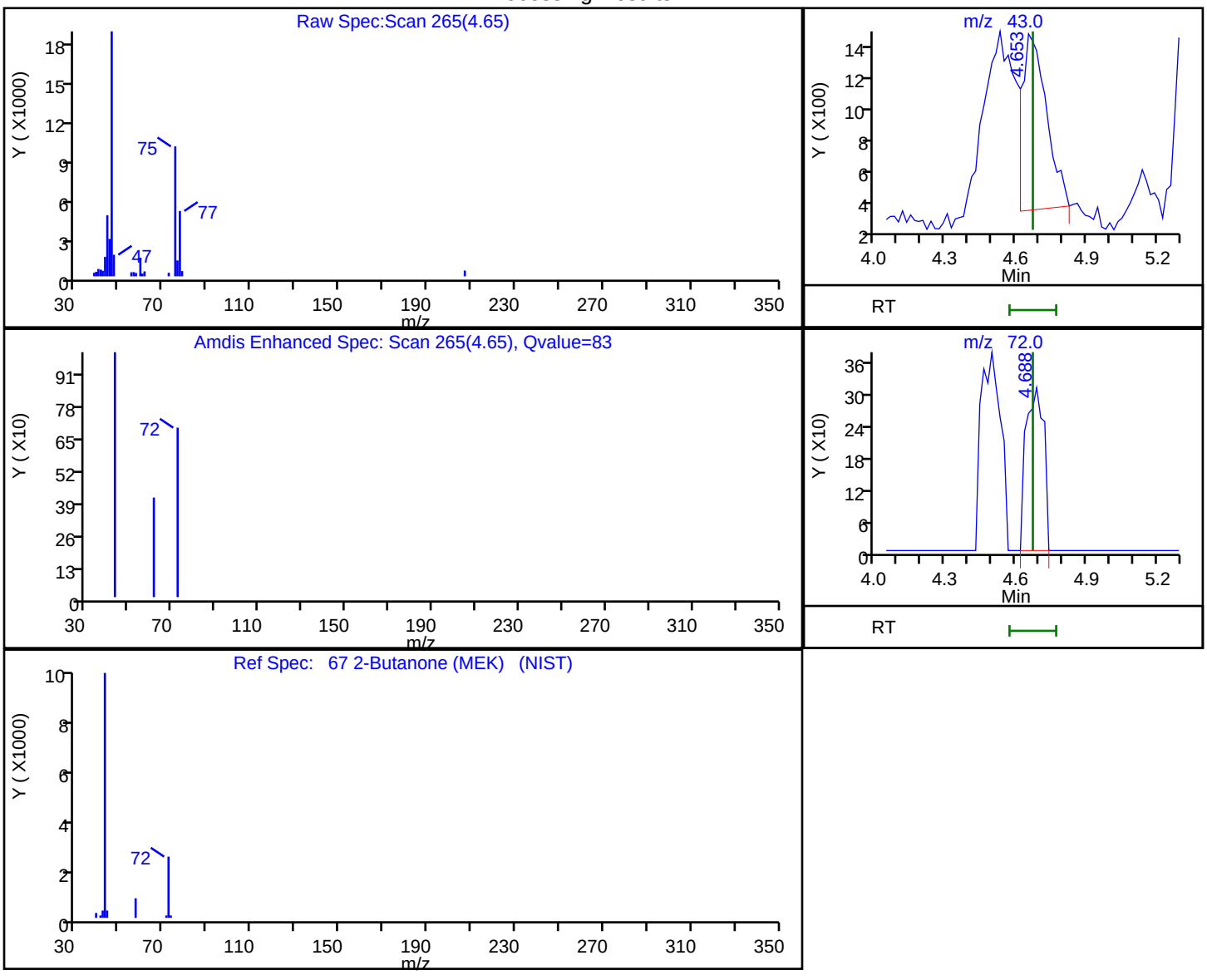
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

67 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
4.65	43.00	7849	2.242806
4.69	72.00	1646	

Reviewer: ilczyszynd, 20-Sep-2018 07:09:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

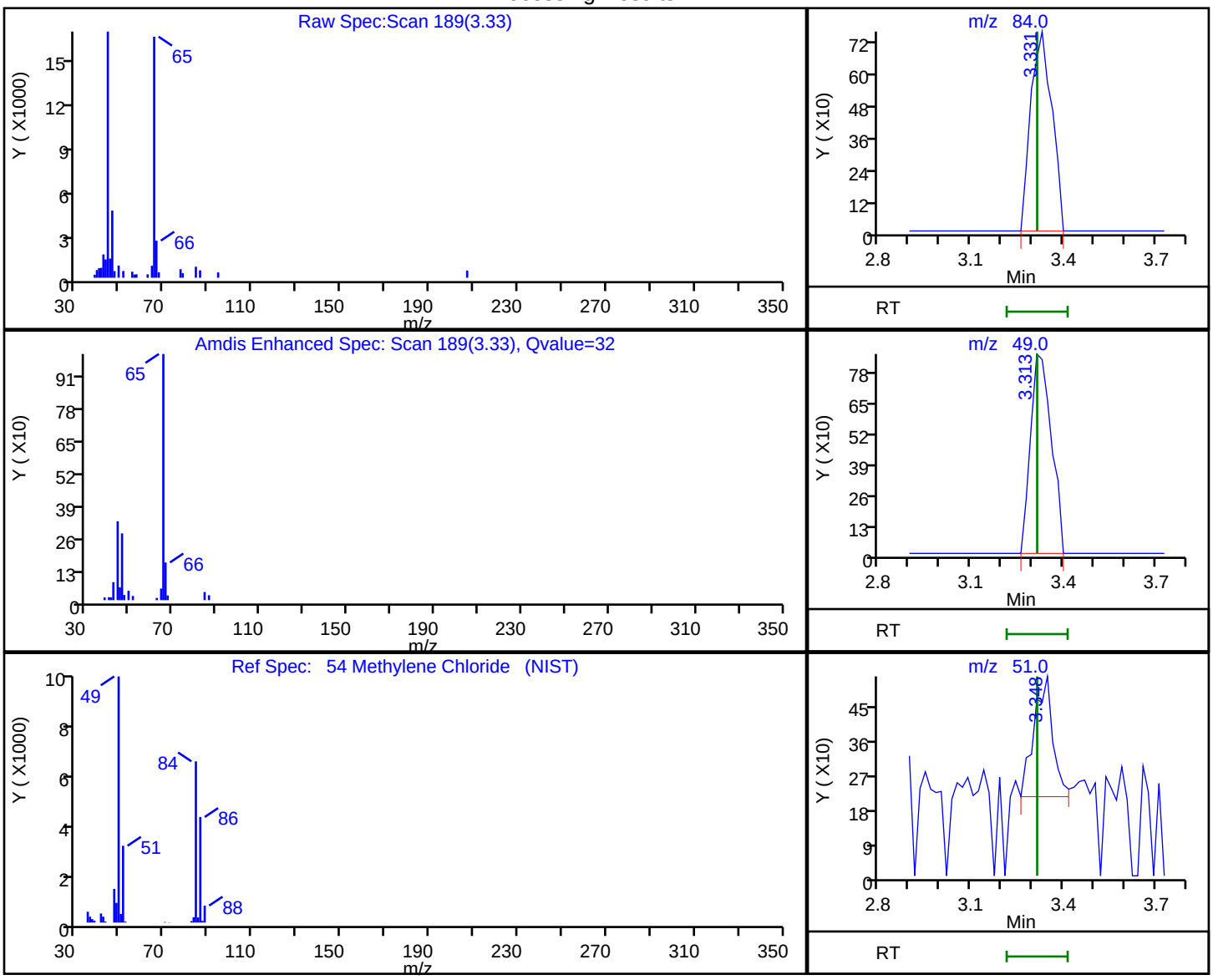
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b\Z1629.D				
Injection Date:	19-Sep-2018 12:12:30	Instrument ID:	VMS_Z		
Lims ID:	280-114110-C-2 DU				
Client ID:	BH1-10-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	8	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	AQ_VMSZ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (75.53) (0.53 mm)	Detector	MS SCAN		

54 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.33	84.00	3601	0.122871
3.31	49.00	4039	
3.35	51.00	1366	

Reviewer: ilczyszynd, 20-Sep-2018 07:09:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup DU | Lab Sample ID: 280-114110-3 DU

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U M	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U Q	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	7.03	J Q	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup DU | Lab Sample ID: 280-114110-3 DU

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.868	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	49.9		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Client Sample ID: BH2-5-dup DU | Lab Sample ID: 280-114110-3 DU

Matrix: Water | Lab File ID: G2_7103.D

Analysis Method: 8260B | Date Collected: 09/07/2018 08:15

Sample wt/vol: 20(mL) | Date Analyzed: 09/20/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 430312 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	85		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D
Lims ID: 280-114110-B-3 DU
Client ID: BH2-5-dup
Sample Type: DU
Inject. Date: 20-Sep-2018 16:37:30 ALS Bottle#: 28 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-B-3 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.716	3.716	0.000	0	298609	250.0	250.0	
* 2 Fluorobenzene	96	7.286	7.293	-0.007	98	1611024	12.5	12.5	
* 3 Chlorobenzene-d5	119	10.475	10.475	0.000	88	347447	12.5	12.5	
* 4 1,4-Dichlorobenzene-d4	152	12.592	12.592	0.000	96	569423	12.5	12.5	
* 5 1,4-Dioxane-d8	96		0.000					ND	
$ 6 Dibromofluoromethane (Surr	111	6.457	6.457	0.000	93	289559	10.0	10.6	
$ 7 1,2-Dichloroethane-d4 (Sur	65	6.886	6.886	0.000	98	277023	10.0	10.0	
$ 8 Toluene-d8 (Surr)	98	9.045	9.045	0.000	95	1053219	10.0	9.71	
$ 9 4-Bromofluorobenzene (Surr	95	11.591	11.591	0.000	92	282358	10.0	8.54	
$ 10 Trifluorotoluene (Surr)	1		0.000					ND	
$ 11 BFB	95	1.300	2.085	-0.785	0	12116		NR	
12 Dichlorodifluoromethane	85		1.551					ND	
34 Chlorotrifluoroethene	116		1.677					ND	
14 Chloromethane	50		1.677					ND	
15 Vinyl chloride	62		1.802					ND	
36 1,2-Dichloro-1,1,2,2-tetra	85		1.830					ND	
16 Ethylene oxide	43		2.054					ND	
17 Bromomethane	94		2.096					ND	
38 2-Chloro-1,1,1-Trifluoroet	118		2.110					ND	
18 Chloroethane	64		2.180					ND	
19 Dichlorofluoromethane	67		2.403					ND	
20 Trichlorofluoromethane	101	2.445	2.445	0.000	96	13985		0.1670	
21 Ethanol	45		2.640					ND	
22 Ethyl ether	59		2.724					ND	
23 Propene oxide	58		2.794					ND	
24 Acrolein	56		2.878					ND	
25 1,1-Dichloroethene	96		2.990					ND	
26 1,1,2-Trichloro-1,2,2-trif	151		3.031					ND	
27 Acetone	43	3.045	3.045	0.000	98	26941		7.03	
43 1,2-Dichloro-1,1,2-trifluo	117		3.129					ND	
28 Iodomethane	142		3.157					ND	
44 1,1,1-Trifluoro-2,2-dichlo	83		3.213					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
30 Carbon disulfide	76		3.227					ND	
29 Isopropyl alcohol	45	3.255	3.269	-0.014	94	69201		104.5	
31 Acetonitrile	41		3.409					ND	
32 Methyl acetate	43		3.436					ND	
33 3-Chloro-1-propene	41		3.436					ND	
35 Methylene Chloride	84	3.618	3.618	0.000	93	5989		0.1874	
37 2-Methyl-2-propanol	59		3.828					ND	U
39 Acrylonitrile	53		3.953					ND	
40 trans-1,2-Dichloroethene	96		3.995					ND	
41 Methyl tert-butyl ether	73		4.009					ND	
42 Hexane	57		4.428					ND	
45 1,1-Dichloroethane	63		4.707					ND	
46 Vinyl acetate	43		4.763					ND	
47 Isopropyl ether	87		4.833					ND	
48 2-Chloro-1,3-butadiene	53		4.833					ND	
49 Tert-butyl ethyl ether	59		5.476					ND	
50 2,2-Dichloropropane	77		5.699					ND	
51 cis-1,2-Dichloroethene	96		5.699					ND	
52 2-Butanone (MEK)	43		5.727					ND	
53 Ethyl acetate	43		5.825					ND	U
54 Propionitrile	54		5.839					ND	
58 Methacrylonitrile	41		6.049					ND	
56 Chlorobromomethane	128		6.056					ND	
57 Tetrahydrofuran	42		6.092					ND	
55 sec-Butyl Alcohol	45		6.113					ND	
59 Chloroform	83	6.242	6.242	0.000	95	51663		0.8684	
60 1,1,1-Trichloroethane	97		6.428					ND	U
61 Cyclohexane	56		6.507					ND	
62 Carbon tetrachloride	117		6.628					ND	
63 1,1-Dichloropropene	75		6.643					ND	
64 Benzene	78		6.893					ND	
66 Isobutyl alcohol	41		6.929					ND	
65 1,2-Dichloroethane	62		6.986					ND	
68 Tert-amyl methyl ether	73		7.115					ND	
67 n-Heptane	43		7.315					ND	
69 Trichloroethene	95	7.715	7.722	-0.007	96	1716897		49.9	
73 n-Butanol	56		7.737					ND	
70 2-Pentanone	43		7.958					ND	
71 Methylcyclohexane	55		7.965					ND	
72 1,2-Dichloropropane	63		8.008					ND	
75 Dibromomethane	93		8.108					ND	
74 1,4-Dioxane	88		8.108					ND	
77 Methyl methacrylate	100		8.130					ND	
76 Dichlorobromomethane	83		8.316					ND	
80 2-Nitropropane	41		8.559					ND	
78 2-Chloroethyl vinyl ether	63		8.645					ND	
79 cis-1,3-Dichloropropene	75		8.781					ND	
81 4-Methyl-2-pentanone (MIBK	43		8.952					ND	
82 Toluene	91		9.109					ND	
83 trans-1,3-Dichloropropene	75		9.374					ND	
84 Ethyl methacrylate	69		9.446					ND	
85 1,1,2-Trichloroethane	97		9.560					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 Tetrachloroethene	164		9.624					ND	
87 1,3-Dichloropropane	76		9.717					ND	
88 2-Hexanone	43		9.789					ND	
13 Tetrahydrothiophene	60		9.882					ND	
89 Chlorodibromomethane	129		9.925					ND	
90 Ethylene Dibromide	107		10.025					ND	
91 1-Chlorohexane	91	10.475	10.496	-0.021	6	1717		NC	
92 Chlorobenzene	112	10.504	10.504	0.000	84	11417		0.1273	
93 1,1,1,2-Tetrachloroethane	131		10.590					ND	
94 Ethylbenzene	106		10.597					ND	
95 m-Xylene & p-Xylene	106		10.725					ND	
96 o-Xylene	106		11.083					ND	
97 Styrene	104		11.104					ND	
98 Bromoform	173		11.276					ND	
99 Isopropylbenzene	105		11.426					ND	
101 cis-1,4-Dichloro-2-butene	53		11.491					ND	
100 Cyclohexanone	55		11.512					ND	U
103 Bromobenzene	156		11.719					ND	
102 1,1,2,2-Tetrachloroethane	83		11.719					ND	
105 trans-1,4-Dichloro-2-buten	53		11.755					ND	
104 1,2,3-Trichloropropane	110		11.769					ND	
106 N-Propylbenzene	120		11.812					ND	
107 2-Chlorotoluene	126		11.891					ND	
108 1,3,5-Trimethylbenzene	105		11.977					ND	
109 4-Chlorotoluene	126		12.005					ND	
110 tert-Butylbenzene	119		12.256					ND	
111 1,2,4-Trimethylbenzene	105		12.306					ND	
112 sec-Butylbenzene	134		12.441					ND	
113 1,3-Dichlorobenzene	146		12.534					ND	
114 4-Isopropyltoluene	119		12.556					ND	
115 1,4-Dichlorobenzene	146		12.613					ND	
116 1,2,3-Trimethylbenzene	105		12.627					ND	
117 n-Butylbenzene	91		12.849					ND	
118 1,2-Dichlorobenzene	146		12.863					ND	
119 1,2-Dibromo-3-Chloropropan	157		13.371					ND	
120 1,3,5-Trichlorobenzene	180		13.478					ND	
121 1,2,4-Trichlorobenzene	180		13.879					ND	
122 Hexachlorobutadiene	225		13.964					ND	
123 Naphthalene	128		14.057					ND	
124 1,2,3-Trichlorobenzene	180		14.200					ND	
126 2,2-Dimethylpentane	1		0.000					ND	
125 1-Chlorohexane TIC	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
129 Dimethyl disulfide	1		0.000					ND	
128 3-Ethylpentane	1		0.000					ND	
130 2,2,3-Trimethylbutane	1		0.000					ND	
135 3,3-Dimethylpentane	1		0.000					ND	
133 2,3-Dimethylpentane	1		0.000					ND	
132 Pentachloroethane	167		0.000					ND	
131 2-Methylhexane	1		0.000					ND	
134 3-Methylhexane	1		0.000					ND	
136 2,4-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 137 1,2-Dichloroethene, Total	96		2.000					ND	
S 144 1,2-Dichloroethene, Total	1		0.000					ND	
S 138 Xylenes, Total (URS)	1		0.000					ND	
S 139 Total BTEX	1		0.000					ND	
S 140 1,3-Dichloropropene, Total	1		0.000					ND	
S 143 Xylenes, Total	106		0.000					ND	
S 142 Trihalomethanes, Total	1				0			0.8684	
S 141 TAH	1				0			0	7
T 154 2-Butoxyethanol TIC	1		0.000					ND	
T 155 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 149 Dicyclopentadiene TIC	66		0.000					ND	
T 151 Propene oxide TIC	58		0.000					ND	
T 152 Methyl cyclohexane TIC	1		0.000					ND	
T 147 Dichloroacetonitrile TIC	74		0.000					ND	
T 145 Propene TIC	41		0.000					ND	
T 146 n-Nonane TIC	1		0.000					ND	
T 150 4-Ethyltoluene TIC	105		0.000					ND	
T 153 Cyclohexane TIC	1		0.000					ND	
T 148 1,3-Butadiene TIC	39		0.000					ND	

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00102	Amount Added:	0.80	Units: uL	Run Reagent

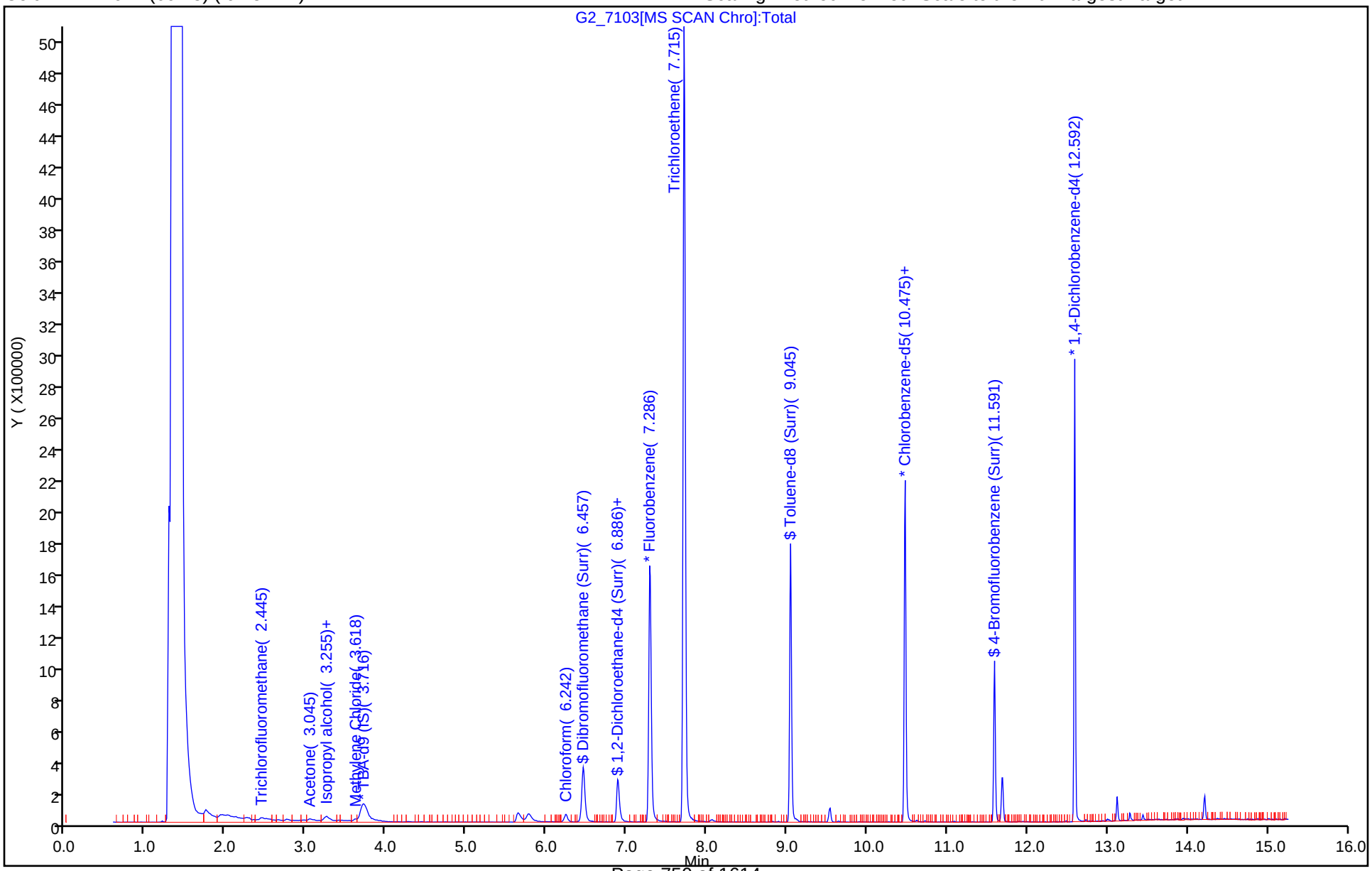
Report Date: 21-Sep-2018 07:06:27 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D

Injection Date:	20-Sep-2018 16:37:30	Instrument ID:	VMS_G2	Operator ID:	ilczyszynd
Lims ID:	280-114110-B-3 DU			Worklist Smp#:	22
Client ID:	BH2-5-dup				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D
Lims ID: 280-114110-B-3 DU
Client ID: BH2-5-dup
Sample Type: DU
Inject. Date: 20-Sep-2018 16:37:30 ALS Bottle#: 28 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-114110-B-3 DU pH2
Operator ID: ilczyszynd Instrument ID: VMS_G2

Method: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 21-Sep-2018 07:04:39 Calib Date: 17-Sep-2018 11:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b\G2_7001.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: ilczyszynd Date: 21-Sep-2018 06:59:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	10.0	10.6	106.00
$ 7 1,2-Dichloroethane-d4 (Surr)	10.0	10.0	100.05
$ 8 Toluene-d8 (Surr)	10.0	9.71	97.15
$ 9 4-Bromofluorobenzene (Surr)	10.0	8.54	85.39
$ 11 BFB	0	0	0.00

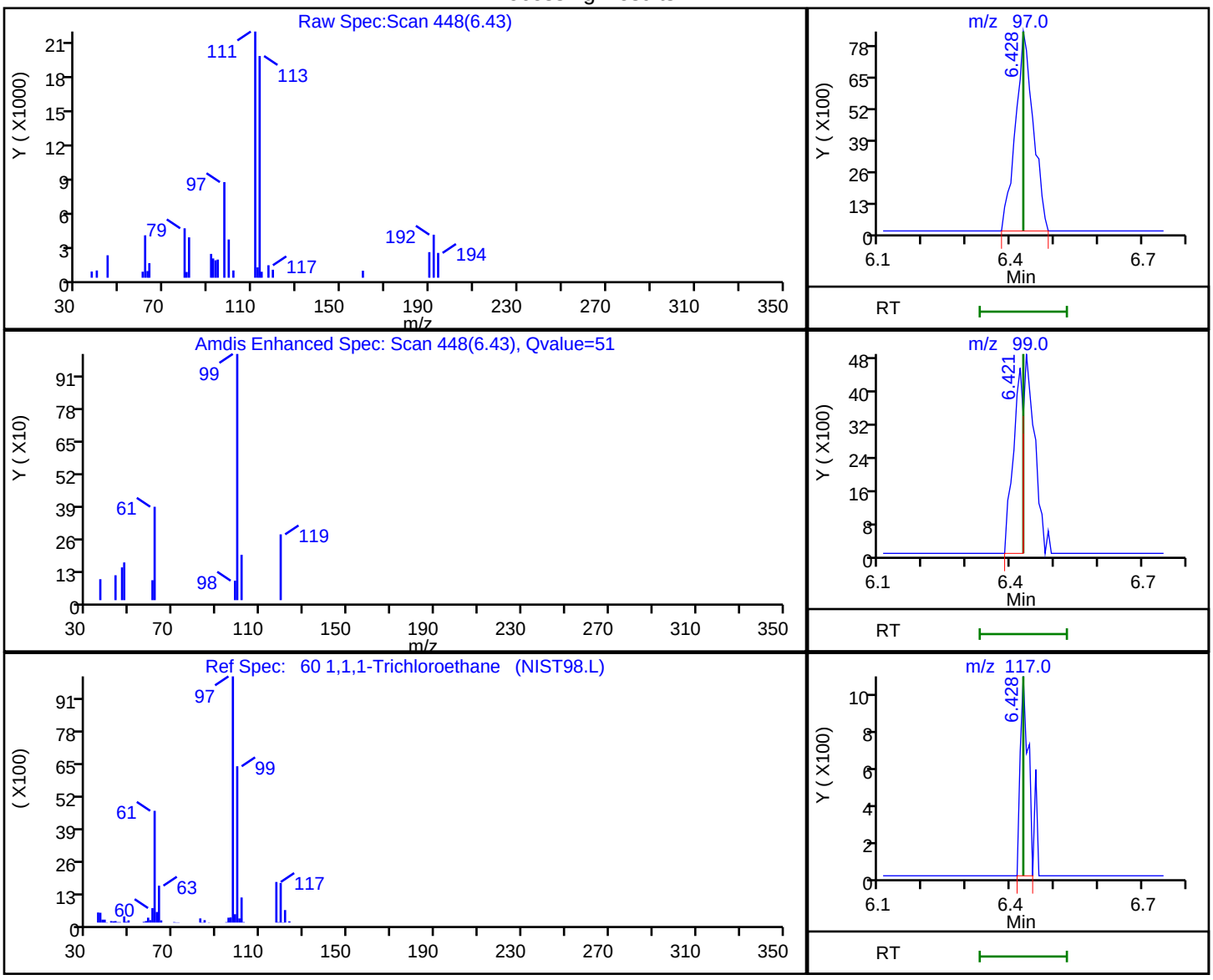
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b\G2_7103.D				
Injection Date:	20-Sep-2018 16:37:30	Instrument ID:	VMS_G2		
Lims ID:	280-114110-B-3 DU				
Client ID:	BH2-5-dup				
Operator ID:	ilczyszynd	ALS Bottle#:	28	Worklist Smp#:	22
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

60 1,1,1-Trichloroethane, CAS: 71-55-6

Processing Results



RT	Mass	Response	Amount
6.43	97.00	23547	0.347085
6.42	99.00	7409	
6.43	117.00	1359	

Reviewer: ilczyszynd, 21-Sep-2018 06:59:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Start Date: 09/07/2018 08:41

Analysis Batch Number: 428698 End Date: 09/07/2018 18:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-428698/1		09/07/2018 08:41	1	Z1178.D	DB-624 (75.53) 0.53(mm)
IC 280-428698/10		09/07/2018 12:35	1	Z1188.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 12:35	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/11		09/07/2018 12:57	1	Z1189.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 12:57	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/12		09/07/2018 13:20	1	Z1190.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 13:20	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/13		09/07/2018 13:42	1	Z1191.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 13:42	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/14		09/07/2018 14:04	1	Z1192.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 14:04	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/15		09/07/2018 14:26	1	Z1193.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 14:26	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/16		09/07/2018 14:49	1	Z1194.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 14:49	1		DB-624 (75.53) 0.53(mm)
ICV 280-428698/17		09/07/2018 15:33	1	Z1196.D	DB-624 (75.53) 0.53(mm)
IC 280-428698/18		09/07/2018 15:56	1	Z1197.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 15:56	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/19		09/07/2018 16:18	1	Z1198.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 16:18	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/20		09/07/2018 16:40	1	Z1199.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 16:40	1		DB-624 (75.53) 0.53(mm)
ICIS 280-428698/21		09/07/2018 17:02	1	Z1200.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 17:02	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/22		09/07/2018 17:24	1	Z1201.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 17:24	1		DB-624 (75.53) 0.53(mm)
IC 280-428698/23		09/07/2018 17:47	1	Z1202.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/07/2018 17:47	1		DB-624 (75.53) 0.53(mm)
ICV 280-428698/24		09/07/2018 18:09	1	Z1203.D	DB-624 (75.53) 0.53(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 09/07/2018 08:12

Analysis Batch Number: 428900 End Date: 09/07/2018 18:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-428900/1		09/07/2018 08:12	1	G2_6760.D	DB-624 (60.25) 0.25(mm)
IC 280-428900/10		09/07/2018 13:05	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/11		09/07/2018 13:26	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/12		09/07/2018 13:46	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/13		09/07/2018 14:07	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/14		09/07/2018 14:28	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/15		09/07/2018 14:49	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/16		09/07/2018 15:10	1		DB-624 (60.25) 0.25(mm)
ICV 280-428900/17		09/07/2018 15:52	1		DB-624 (60.25) 0.25(mm)
IC 280-428900/18		09/07/2018 16:13	1	G2_6777.D	DB-624 (60.25) 0.25(mm)
IC 280-428900/19		09/07/2018 16:34	1	G2_6778.D	DB-624 (60.25) 0.25(mm)
IC 280-428900/20		09/07/2018 16:55	1	G2_6779.D	DB-624 (60.25) 0.25(mm)
ICIS 280-428900/21		09/07/2018 17:16	1	G2_6780.D	DB-624 (60.25) 0.25(mm)
IC 280-428900/22		09/07/2018 17:36	1	G2_6781.D	DB-624 (60.25) 0.25(mm)
IC 280-428900/23		09/07/2018 17:57	1	G2_6782.D	DB-624 (60.25) 0.25(mm)
ICV 280-428900/24		09/07/2018 18:18	1	G2_6783.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Start Date: 09/14/2018 08:10

Analysis Batch Number: 429676 End Date: 09/14/2018 12:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-429676/1		09/14/2018 08:10	1	Z1428.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/13		09/14/2018 09:41	1	Z1432.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/14		09/14/2018 10:03	1	Z1433.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/15		09/14/2018 10:25	1	Z1434.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/16		09/14/2018 10:48	1	Z1435.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/10		09/14/2018 11:32	1	Z1437.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/11		09/14/2018 11:55	1	Z1438.D	DB-624 (75.53) 0.53(mm)
IC 280-429676/12		09/14/2018 12:17	1	Z1439.D	DB-624 (75.53) 0.53(mm)
ICV 280-429676/17		09/14/2018 12:39	1	Z1440.D	DB-624 (75.53) 0.53(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 09/17/2018 08:13

Analysis Batch Number: 429808 End Date: 09/17/2018 19:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-429808/1		09/17/2018 08:13	1	G2_6994b.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/10		09/17/2018 08:54	1	G2_6995.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/11		09/17/2018 09:15	1	G2_6996.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/12		09/17/2018 09:36	1	G2_6997.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/13		09/17/2018 09:57	1	G2_6998.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/14		09/17/2018 10:18	1	G2_6999.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/15		09/17/2018 10:39	1	G2_7000.D	DB-624 (60.25) 0.25(mm)
IC 280-429808/16		09/17/2018 11:00	1	G2_7001.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 12:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 12:24	1		DB-624 (60.25) 0.25(mm)
ICV 280-429808/17		09/17/2018 13:28	1	G2_7008.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 14:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 14:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 15:13	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 15:34	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 15:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 16:16	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 16:37	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 16:58	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 17:19	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 17:41	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 18:02	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 18:23	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 18:44	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 19:05	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/17/2018 19:26	20		DB-624 (60.25) 0.25(mm)
CCVC 280-429808/33		09/17/2018 19:47	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_Z Start Date: 09/19/2018 09:00

Analysis Batch Number: 430151 End Date: 09/19/2018 20:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-430151/1		09/19/2018 09:00	1	Z1621.D	DB-624 (75.53) 0.53(mm)
CCV 280-430151/2		09/19/2018 09:51	1	Z1623.D	DB-624 (75.53) 0.53(mm)
CCV 280-430151/3		09/19/2018 10:14	1	Z1624.D	DB-624 (75.53) 0.53(mm)
LCS 280-430151/4		09/19/2018 10:36	1	Z1625.D	DB-624 (75.53) 0.53(mm)
MB 280-430151/6		09/19/2018 10:58	1	Z1626.D	DB-624 (75.53) 0.53(mm)
280-114110-1		09/19/2018 11:28	1	Z1627.D	DB-624 (75.53) 0.53(mm)
280-114110-2		09/19/2018 11:50	1	Z1628.D	DB-624 (75.53) 0.53(mm)
280-114110-5		09/19/2018 12:12	1	Z1629.D	DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 12:35	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 12:57	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 13:19	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 13:42	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 14:04	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 14:26	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 14:49	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 15:11	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 15:33	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 15:56	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 16:18	4		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 16:40	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 17:03	10		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 17:25	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 17:47	10		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 18:10	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 18:32	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 18:54	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 19:17	1		DB-624 (75.53) 0.53(mm)
ZZZZZ		09/19/2018 19:39	1		DB-624 (75.53) 0.53(mm)
LCS 280-430151/33		09/19/2018 20:01	1	Z1650.D	DB-624 (75.53) 0.53(mm)
CCVC 280-430151/34		09/19/2018 20:24	1	Z1651.D	DB-624 (75.53) 0.53(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 09/20/2018 09:19

Analysis Batch Number: 430312 End Date: 09/20/2018 21:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-430312/1		09/20/2018 09:19	1	G2_7084.D	DB-624 (60.25) 0.25(mm)
CCV 280-430312/2		09/20/2018 10:05	1	G2_7085.D	DB-624 (60.25) 0.25(mm)
CCV 280-430312/3		09/20/2018 10:26	1	G2_7086.D	DB-624 (60.25) 0.25(mm)
LCS 280-430312/4		09/20/2018 10:47	1	G2_7087.D	DB-624 (60.25) 0.25(mm)
LCSD 280-430312/5		09/20/2018 11:08	1	G2_7088.D	DB-624 (60.25) 0.25(mm)
LCS 280-430312/32		09/20/2018 11:29	1	G2_7089.D	DB-624 (60.25) 0.25(mm)
MB 280-430312/6		09/20/2018 11:49	1	G2_7090.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 12:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 12:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 12:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 13:30	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 13:51	1000		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 14:32	1000		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 15:14	20		DB-624 (60.25) 0.25(mm)
280-114110-3		09/20/2018 16:16	1	G2_7102.D	DB-624 (60.25) 0.25(mm)
280-114110-6		09/20/2018 16:37	1	G2_7103.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 17:19	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 17:40	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 18:01	40		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 18:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 18:42	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 19:03	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 19:24	50		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 19:45	50		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 20:05	4		DB-624 (60.25) 0.25(mm)
CCVC 280-430312/33		09/20/2018 20:26	1	G2_7114.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 20:47	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		09/20/2018 21:08	10		DB-624 (60.25) 0.25(mm)

Sequence Name: C:\HPCHEM\1\SEQUENCE\091918.S
Comment:
Operator: ilczyszynd
Data Path: C:\HPCHEM\1\DATA\091918\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Test America Denver
Instrument: 3
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 900- 2024
Lims Batch: 430151

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	Z1621	BFB	BFB
2	Sample	1	Z1622	8260	Blank
3	Sample	2	Z1623	8260	CCV
4	Sample	3	Z1624	8260	CCV
5	Sample	4	Z1625	8260	LCS
6	Sample	5	Z1626	8260	Blank
7	Sample	6	Z1627	8260	280-114110-B-1 pH2
8	Sample	7	Z1628	8260	280-114110-A-2 pH2
9	Sample	8	Z1629	8260	280-114110-C-2 DU pH2
10	Sample	9	Z1630	8260	560-75667-A-1 pH2
11	Sample	10	Z1631	8260	560-75667-B-2 pH2
12	Sample	11	Z1632	8260	560-75667-B-3 pH2
13	Sample	12	Z1633	8260	560-75668-B-1 pH2
14	Sample	13	Z1634	8260	560-75668-A-2 pH2
15	Sample	14	Z1635	8260	560-75668-A-3 pH2
16	Sample	15	Z1636	8260	560-75668-A-17 pH2
17	Sample	16	Z1637	8260	560-75668-C-18 pH2
18	Sample	17	Z1638	8260	560-75667-C-3 pH2
19	Sample	18	Z1639	8260	560-75667-B-6 pH2 5ml
20	Sample	19	Z1640	8260	560-75667-B-6 pH2 5ml
21	Sample	20	Z1641	8260	560-75667-B-7 pH2
22	Sample	22	Z1642	8260	560-75667-B-7 pH2 2ml
23	Sample	23	Z1643	8260	560-75667-C-8 pH2
24	Sample	24	Z1644	8260	560-75667-C-8 pH2 2ml
25	Sample	25	Z1645	8260	560-75667-C-9 pH2
26	Sample	26	Z1646	8260	560-75667-B-9 ms pH2
27	Sample	27	Z1647	8260	560-75667-B-9 msd pH2
28	Sample	28	Z1648	8260	560-75667-A-10 pH2
29	Sample	29	Z1649	8260	560-75667-B-11 pH2
30	Sample	30	Z1650	8260	lcs sup
31	Sample	31	Z1651	8260	ccvc

9/20/18

Last Modified: Wed Sep 19 15:54:17 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 091918 **Worklist Number:** 74144
Instrument Name: VMS_Z **Chrom Method:** AQ_VMSZ_8260
Injection Volume: 1.000 **Units:** uL
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_Z\20180919-74144.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_Z
Run Reagent: MV-568718-D_00014 **Amount Added:** 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 **Amount Added:** 0.920, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074144-001	# 1 BFB	MV-BFB_00026	BFB	voaWater	1.000	uL	1.000
280-0074144-002	# 2 CCV	MV-MegaMainA_00001 MV-568718-D_00014	CCV	voaWater	20.00	mL	1.000
280-0074144-003	# 3 CCV	MV-Supp A_00032	CCV	voaWater	20.00	mL	1.000
280-0074144-004	# 4 LCS	MV-MegaMain B_00001	LCS	voaWater	20.00	mL	1.000
280-0074144-005	# 5 LCSD	MV-MegaMain B_00001	LCSD	voaWater	20.00	mL	1.000
280-0074144-006	# 6 MB		MB	voaWater	20.00	mL	1.000
280-0074144-007	# 7 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0074144-008	# 8 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0074144-009	# 9 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0074144-010	#10 280-114110-B-1		Client	voaWater	20.00	mL	1.000
280-0074144-011	#11 280-114110-A-2		Client	voaWater	20.00	mL	1.000
280-0074144-012	#12 280-114110-C-2 DU		DU	voaWater	20.00	mL	1.000
280-0074144-013	#13 560-75667-A-1		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074144-014	#14 560-75667-B-2		Client	voaWater	20.00	mL	1.000
280-0074144-015	#15 560-75667-B-3		Client	voaWater	20.00	mL	1.000
280-0074144-016	#16 560-75668-B-1		Client	voaWater	20.00	mL	1.000
280-0074144-017	#17 560-75668-A-2		Client	voaWater	20.00	mL	1.000
280-0074144-018	#18 560-75668-A-3		Client	voaWater	20.00	mL	1.000
280-0074144-019	#19 560-75668-A-17		Client	voaWater	20.00	mL	1.000
280-0074144-020	#20 560-75668-C-18		Client	voaWater	20.00	mL	1.000
280-0074144-021	#21 560-75667-C-3		Client	voaWater	20.00	mL	1.000
280-0074144-022	#22 560-75667-B-6		Client	voaWater	20.00	mL	1.000
280-0074144-023	#23 560-75667-B-6		Client	voaWater	20.00	mL	4.000
280-0074144-024	#24 560-75667-B-7		Client	voaWater	20.00	mL	1.000
280-0074144-025	#25 560-75667-B-7		Client	voaWater	20.00	mL	10.00
280-0074144-026	#26 560-75667-C-8		Client	voaWater	20.00	mL	1.000
280-0074144-027	#27 560-75667-C-8		Client	voaWater	20.00	mL	10.00
280-0074144-028	#28 560-75667-C-9		Client	voaWater	20.00	mL	1.000
280-0074144-029	#29 560-75667-B-9 MS	MV-MegaMain B_00001	MS	voaWater	20.00	mL	1.000
280-0074144-030	#30 560-75667-B-9 MSD	MV-MegaMain B_00001	MSD	voaWater	20.00	mL	1.000
280-0074144-031	#31 560-75667-A-10		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074144-032	#32 560-75667-B-11		Client	voaWater	20.00	mL	1.000
280-0074144-033	#33 lcs	MV-Supp B_00021	LCS	voaWater	20.00	mL	1.000
280-0074144-034	#34 ccvc	MV-MegaMainA_00001	CCVC	voaWater	20.00	mL	1.000
280-0074144-035	#35 Samp 35		Client	voaWater	20.00	mL	1.000

Sequence Name: C:\msdchem\1\sequence\092200188.ss
Comment:
Operator: illczyszyrd
Data Path: C:\msdchem\1\DATA\092200188\

Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line					Sample Name/Misc Info
1)	Sample	100	G2_7084	BFB	bfb
2)	Sample	10	G2_7085	8260B2	ccw
3)	Sample	11	G2_7086	8260B2	ccw
4)	Sample	12	G2_7087	8260B2	lcs
5)	Sample	13	G2_7088	8260B2	lcsd
6)	Sample	14	G2_7089	8260B2	lcs supp
7)	Sample	15	G2_7090	8260B2	mb
8)	Sample	16	G2_7091	8260B2	280-114088-B-14 pH2
9)	Sample	17	G2_7092	8260B2	280-114088-C-15 pH2
10)	Sample	18	G2_7093	8260B2	280-114088-B-16 pH2
11)	Sample	19	G2_7094	8260B2	280-114349-D-4 pH7 5ml
12)	Sample	20	G2_7095	8260B2	560-75668-A-12 pH2 20uL
13)	Sample	21	G2_7096	8260B2	560-75668-A-12 pH2 2uL
14)	Sample	22	G2_7097	8260B2	560-75668-C-13 pH2 20uL
15)	Sample	23	G2_7098	8260B2	560-75668-C-13 pH2 1ml
16)	Sample	24	G2_7099	8260B2	560-75668-B-17 pH2 1ml
17)	Sample	25	G2_7100	8260B2	560-75668-B-17 pH2 0.1ml
18)	Sample	26	G2_7101	8260B2	560-75668-A-18 pH2 0..5ml DL 50 uL
19)	Sample	27	G2_7102	8260B2	280-114110-A-3 pH2
20)	Sample	28	G2_7103	8260B2	280-114110-B-3 DU pH2
21)	Sample	29	G2_7104	8260B2	560-75668-A-8 pH2 2ml DL 0.5ml
22)	Sample	30	G2_7105	8260B2	560-75668-C-10 pH2
23)	Sample	31	G2_7106	8260B2	560-75668-C-10 pH2 2ml DL 0.2ml
24)	Sample	32	G2_7107	8260B2	560-75668-B-11 pH2 0.5ml
25)	Sample	33	G2_7108	8260B2	560-75668-A-14 pH2
26)	Sample	34	G2_7109	8260B2	560-75668-A-14 pH2 2ml
27)	Sample	35	G2_7110	8260B2	560-75668-B-15 pH2 2ml
28)	Sample	36	G2_7111	8260B2	560-75668-A-12 pH2 0.4ml
29)	Sample	37	G2_7112	8260B2	560-75668-C-13 pH2 0.4ml
30)	Sample	38	G2_7113	8260B2	560-75668-B-17 pH2 5ml
31)	Sample	39	G2_7114	8260B2	ccvc
32)	Sample	40	G2_7115	8260B2	280-114183-B-10 pH2
33)	Sample	41	G2_7116	8260B2	280-114183-B-10 pH2 2ml

Test America Denver
Instrument: G2
DV-MS-0010 (G2003/624) (Circle)
Purge Volume: (2mL/5mL/5g)

Tune Time: 919 - 2026 (Circle)
Lims Batch: 430317

Last Modified: Thu Sep 20 15:46:39 2018 Page: 11

TestAmerica Laboratories
Worklist Report

Worklist Name: 092018 Worklist Number: 74194
Instrument Name: VMS_G2 Chrom Method: AQ_VMSG2_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180920-74194.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074194-001	# 1 BFB	MV-BFB_00026	BFB	voaWater	1.000	uL	1.000
280-0074194-002	# 2 CCV	MV-MegaMainA_00001	CCV	voaWater	20.00	mL	1.000
280-0074194-003	# 3 CCV	MV-Supp A_00032 MV-568718-D_00010	CCV	voaWater	20.00	mL	1.000
280-0074194-004	# 4 LCS	MV-MegaMain B_00001	LCS	voaWater	20.00	mL	1.000
280-0074194-005	# 5 LCSD	MV-MegaMain B_00001	LCSD	voaWater	20.00	mL	1.000
280-0074194-006	# 6 MB		MB	voaWater	20.00	mL	1.000
280-0074194-007	# 7 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0074194-008	# 8 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0074194-009	# 9 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0074194-010	#10 280-114088-B-14		Client	voaWater	20.00	mL	1.000
280-0074194-011	#11 280-114088-C-15		Client	voaWater	20.00	mL	1.000
280-0074194-012	#12 280-114088-B-16		Client	voaWater	20.00	mL	1.000
280-0074194-013	#13 280-114349-D-4		Client	voaWater	20.00	mL	4.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074194-014	#14 560-75668-A-12		Client	voaWater	20.00	mL	1000.0
280-0074194-016	#16 560-75668-C-13		Client	voaWater	20.00	mL	1000.0
280-0074194-018	#18 560-75668-B-17		Client	voaWater	20.00	mL	20.00
280-0074194-020	#20 560-75668-A-18		Client	voaWater	20.00	mL	40.00
280-0074194-021	#21 280-114110-A-3		Client	voaWater	20.00	mL	1.000
280-0074194-022	#22 280-114110-B-3 DU		DU	voaWater	20.00	mL	1.000
280-0074194-023	#23 560-75668-A-8		Client	voaWater	20.00	mL	10.00
280-0074194-024	#24 560-75668-C-10		Client	voaWater	20.00	mL	1.000
280-0074194-025	#25 560-75668-C-10		Client	voaWater	20.00	mL	10.00
280-0074194-026	#26 560-75668-B-11		Client	voaWater	20.00	mL	40.00
280-0074194-027	#27 560-75668-A-14		Client	voaWater	20.00	mL	10.00
280-0074194-028	#28 560-75668-A-14		Client	voaWater	20.00	mL	10.00
280-0074194-029	#29 560-75668-B-15		Client	voaWater	20.00	mL	1.000
280-0074194-030	#30 280-114183-C-10		Client	voaWater	20.00	mL	1.000
280-0074194-031	#31 280-114183-C-10		Client	voaWater	20.00	mL	10.00
280-0074194-032	#32 lcs	MV-Supp B_00021	LCS	voaWater	20.00	mL	1.000
280-0074194-033	#33 ccvc	MV-MegaMainA_00001	CCVC	voaWater	20.00	mL	1.000
280-0074194-034	#34 560-75668-A-12		Client	voaWater	20.00	mL	50.00

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074194-035	#35 560-75668-C-13		Client	voaWater	20.00	mL	50.00
280-0074194-036	#36 560-75668-B-17		Client	voaWater	20.00	mL	4.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\090718.S
Comment:
Operator: ilczyszynd
Data Path: C:\HPCHEM\1\DATA\090718\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: Z
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (25mL/5mL/5g)
Tune Time: 641 - 1609 (Circle)
Lims Batch: 428698

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	Z1178	BFB	BFB
2	Sample	1	Z1179	8260	ic
3	Sample	2	Z1180	8260	ic
4	Sample	3	Z1181	8260	ic
5	Sample	4	Z1182	8260	ic
6	Sample	5	Z1183	8260	ic
7	Sample	6	Z1184	8260	ic
8	Sample	7	Z1185	8260	ic
9	Sample	8	Z1186	8260	blk
10	Sample	9	Z1187	8260	blk
11	Sample	10	Z1188	8260	ic
12	Sample	11	Z1189	8260	ic
13	Sample	12	Z1190	8260	ic
14	Sample	13	Z1191	8260	ic
15	Sample	14	Z1192	8260	ic
16	Sample	15	Z1193	8260	ic
17	Sample	16	Z1194	8260	ic
18	Sample	17	Z1195	8260	blk
19	Sample	18	Z1196	8260	icv
20	Sample	19	Z1197	8260	ic
21	Sample	20	Z1198	8260	ic
22	Sample	22	Z1199	8260	ic
23	Sample	23	Z1200	8260	ic
24	Sample	24	Z1201	8260	ic
25	Sample	25	Z1202	8260	ic
26	Sample	26	Z1203	8260	icv

MAIN 33627.
ICV 17

SUPP/SURR 33628
ICV 24
ICIS 21

All compounds < 20%

not calibrated for

1,4-dioxane
ethanol
n-butanol

1-chlorohexane
2-Pentanone
2-butanol (sec butyl alcohol)

AL 9/10/18 2nd level

Last Modified: Fri Sep 07 14:45:29 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 090618 **Worklist Number:** 73744
Instrument Name: VMS_Z **Chrom Method:** AQ_VMSZ_8260
Injection Volume: 1.000 **Units:** uL
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_Z\20180906-73744.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_Z
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 Amount Added: 0.920, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073744-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0073744-002	# 2 CCV	MV-2cleve+AVA_00037	CCV		voaWater	20.00	mL	1.000
280-0073744-003	# 3 CCV	MV-Supp A_00032 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0073744-004	# 4 LCS	MV-SS 2-Cleve_00046	LCS		voaWater	20.00	mL	1.000
280-0073744-005	# 5 LCSD	MV-SS 2-Cleve_00046	LCSD		voaWater	20.00	mL	1.000
280-0073744-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0073744-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0073744-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0073744-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0073744-010	#10 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	1	voaWater	20.00	mL	1.000
280-0073744-011	#11 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	2	voaWater	20.00	mL	1.000
280-0073744-012	#12 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	3	voaWater	20.00	mL	1.000
280-0073744-013	#13 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	4	voaWater	20.00	mL	1.000

Tag 568 #1614

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073744-014	#14 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	5	voaWater	20.00	mL	1.000
280-0073744-015	#15 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	6	voaWater	20.00	mL	1.000
280-0073744-016	#16 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	7	voaWater	20.00	mL	1.000
280-0073744-017	#17 icv	MV-568718-D_00014 MV-MegaMain B_00001	ICV		voaWater	20.00	mL	1.000
280-0073744-018	#18 ic	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	IC	2	voaWater	20.00	mL	1.000
280-0073744-019	#19 ic	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	IC	3	voaWater	20.00	mL	1.000
280-0073744-020	#20 ic	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	IC	4	voaWater	20.00	mL	1.000
280-0073744-021	#21 icis	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	ICIS	5	voaWater	20.00	mL	1.000
280-0073744-022	#22 ic	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	IC	6	voaWater	20.00	mL	1.000
280-0073744-023	#23 ic	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp A_00032	IC	7	voaWater	20.00	mL	1.000
280-0073744-024	#24 icv	MV-568718-D_00014 MV-ARCH SS A_00102 MV-Supp B_00021	ICV		voaWater	20.00	mL	1.000
280-0073744-025	#25 Samp 25		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\msdchem\1\sequence\090718.s
Comment:
Operator: ilczyszynd
Data Path: C:\msdchem\1\DATA\090718\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	100	G2_6759	BFB	bfb
2)	Sample	10	G2_6760	8260B2	ic
3)	Sample	11	G2_6761	8260B2	ic
4)	Sample	12	G2_6762	8260B2	ic
5)	Sample	13	G2_6763	8260B2	ic
6)	Sample	14	G2_6764	8260B2	ic
7)	Sample	15	G2_6765	8260B2	ic
8)	Sample	16	G2_6766	8260B2	ic
9)	Sample	17	G2_6767	8260B2	blk
10)	Sample	10	G2_6768	8260B2	ic
11)	Sample	11	G2_6769	8260B2	ic
12)	Sample	12	G2_6770	8260B2	ic
13)	Sample	13	G2_6771	8260B2	ic
14)	Sample	14	G2_6772	8260B2	ic
15)	Sample	15	G2_6773	8260B2	ic
16)	Sample	16	G2_6774	8260B2	ic
17)	Sample	17	G2_6775	8260B2	blk
18)	Sample	18	G2_6776	8260B2	icv
19)	Sample	19	G2_6777	8260B2	ic
20)	Sample	20	G2_6778	8260B2	ic
21)	Sample	21	G2_6779	8260B2	ic
22)	Sample	22	G2_6780	8260B2	ic
23)	Sample	23	G2_6781	8260B2	ic
24)	Sample	24	G2_6782	8260B2	ic
25)	Sample	25	G2_6783	8260B2	icv

Test America Denver
Instrument: G2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 812-1814
Lims Batch: 428400

MAIN 33625 ICV 17

SUPP/SURR 33626 ICV 24 ICIS 21

9/10/18 MJ 9/10/18

dichlorodifluoromethane 34.2%

not calibrated for n-butanol

2nd level: JAW 9-10-18

Last Modified: Fri Sep 07 14:48:34 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 090718i Worklist Number: 73796
Instrument Name: VMS_G2 Chrom Method: AQ_VMSG2_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180907-73796.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073796-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0073796-002	# 2 CCV	MV-MegaMainA_00001	CCV		voaWater	20.00	mL	1.000
280-0073796-003	# 3 CCV	MV-568718-D_00010 MV-Supp A_00032	CCV		voaWater	20.00	mL	1.000
280-0073796-004	# 4 LCS	MV-SS 2-Cleve_00046	LCS		voaWater	20.00	mL	1.000
280-0073796-005	# 5 LCSD	MV-SS 2-Cleve_00046	LCSD		voaWater	20.00	mL	1.000
280-0073796-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0073796-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0073796-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0073796-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0073796-010	#10 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	1	voaWater	20.00	mL	1.000
280-0073796-011	#11 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	2	voaWater	20.00	mL	1.000
280-0073796-012	#12 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	3	voaWater	20.00	mL	1.000
280-0073796-013	#13 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073796-014	#14 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	5	voaWater	20.00	mL	1.000
280-0073796-015	#15 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	6	voaWater	20.00	mL	1.000
280-0073796-016	#16 ic	MV-568718-D_00010 MV-MegaMainA_00001	IC	7	voaWater	20.00	mL	1.000
280-0073796-017	#17 icv	MV-568718-D_00010 MV-MegaMain B_00001	ICV		voaWater	20.00	mL	1.000
280-0073796-018	#18 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	IC	2	voaWater	20.00	mL	1.000
280-0073796-019	#19 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	IC	3	voaWater	20.00	mL	1.000
280-0073796-020	#20 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	IC	4	voaWater	20.00	mL	1.000
280-0073796-021	#21 icis	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	ICIS	5	voaWater	20.00	mL	1.000
280-0073796-022	#22 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	IC	6	voaWater	20.00	mL	1.000
280-0073796-023	#23 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp A_00032	IC	7	voaWater	20.00	mL	1.000
280-0073796-024	#24 icv	MV-568718-D_00010 MV-ARCH SS A_00102 MV-Supp B_00021	ICV		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\091418.
Comment:
Operator: ilczyszynd
Data Path: C:\HPCHEM\1\DATA\091418\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	Z1428	BFB	bfb
2	Sample	1	Z1429	8260	ic
3	Sample	2	Z1430	8260	ic
4	Sample	3	Z1431	8260	ic
5	Sample	4	Z1432	8260	ic
6	Sample	5	Z1433	8260	ic
7	Sample	6	Z1434	8260	ic
8	Sample	7	Z1435	8260	ic
9	Sample	8	Z1436	8260	blk
10	Sample	9	Z1437	8260	ic
11	Sample	10	Z1438	8260	ic
12	Sample	11	Z1439	8260	ic
13	Sample	12	Z1440	8260	icv

Test America Denver
Instrument: 2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (25mL/5mL/5g)
(Circle)
Tune Time: 610 - 1239
Lims Num: 429676

MAIN

33681

ICV line 17

All <20%

not cal for 1,4-dioxane

2nd leveled RSN 9/14/18

TestAmerica Laboratories
Worklist Report

Worklist Name: 091418i
Worklist Number: 74010
Instrument Name: VMS_Z
Chrom Method: AQ_VMSZ_8260
Injection Volume: 1.000
Units: uL
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_Z\20180914-74010.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_Z
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 Amount Added: 0.920, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074010-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0074010-002	# 2 CCV	MV-MegaMainA_00001 MV-568718-D_00014	CCV		voaWater	20.00	mL	1.000
280-0074010-003	# 3 CCV	MV-Supp A_00032	CCV		voaWater	20.00	mL	1.000
280-0074010-004	# 4 LCS	MV-MegaMain B_00001	LCS		voaWater	20.00	mL	1.000
280-0074010-005	# 5 LCSD	MV-MegaMain B_00001	LCSD		voaWater	20.00	mL	1.000
280-0074010-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0074010-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0074010-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0074010-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0074010-010	#10 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	1	voaWater	20.00	mL	1.000
280-0074010-011	#11 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	2	voaWater	20.00	mL	1.000
280-0074010-012	#12 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	3	voaWater	20.00	mL	1.000
280-0074010-013	#13 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074010-014	#14 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	5	voaWater	20.00	mL	1.000
280-0074010-015	#15 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	6	voaWater	20.00	mL	1.000
280-0074010-016	#16 ic	MV-568718-D_00014 MV-MegaMainA_00001	IC	7	voaWater	20.00	mL	1.000
280-0074010-017	#17 icv	MV-568718-D_00014 MV-MegaMain B_00001	ICV		voaWater	20.00	mL	1.000
280-0074010-018	#18 Samp 18		Client		voaWater	20.00	mL	1.000

TestAmerica Laboratories
Worklist Run Log Report

Worklist Name: 091718 Worklist Num: 74047
Instrument: VMS_G2 Method: AQ_VMSG2_8260
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b
Anaylysis Type: VOA Creator: Ilczyszyn, Dennis P
Inj Volume: 20.00 Inj Vol Units: mL
Run Reagents:
MV-568718-D_00010, Amount Added: 1.00 , Units: uL
MV-ARCH SS A_00102, Amount Added: 0.80 , Units: uL

Lab ID	Worklist ID	Sample Type	Cal Lvl	Inj Date/Time	File Name	Vial	Dil Factor	Client ID	Fract
BFB	280-0074047-001	BFB	0	17-Sep-2018 08:13:30	G2_6994b.D	11	1.0		voaWater
CCV	280-0074047-002	CCV	0	17-Sep-2018 13:07:30	G2_7007.D	24	1.0		voaWater
CCV	280-0074047-003	CCV	0	17-Sep-2018 08:13:30	G2_6994.D	11	1.0		voaWater
LCS	280-0074047-004	LCS	0	17-Sep-2018 12:03:30	G2_7004.D	21	1.0		voaWater
LCSD	280-0074047-005	LCSD							
MB	280-0074047-006	MB	0	17-Sep-2018 12:24:30	G2_7005.D	22	1.0		voaWater
280-108595-A-1	280-0074047-007	Client							
280-108595-A-2	280-0074047-008	Client							
280-108595-A-3	280-0074047-009	Client							
ic	280-0074047-010	IC	1	17-Sep-2018 08:54:30	G2_6995.D	12	1.0		voaWater
ic	280-0074047-011	IC	2	17-Sep-2018 09:15:30	G2_6996.D	13	1.0		voaWater
ic	280-0074047-012	IC	3	17-Sep-2018 09:36:30	G2_6997.D	14	1.0		voaWater
ic	280-0074047-013	IC	4	17-Sep-2018 09:57:30	G2_6998.D	15	1.0		voaWater
ic	280-0074047-014	IC	5	17-Sep-2018 10:18:30	G2_6999.D	16	1.0		voaWater
ic	280-0074047-015	IC	6	17-Sep-2018 10:39:30	G2_7000.D	17	1.0		voaWater
ic	280-0074047-016	IC	7	17-Sep-2018 11:00:30	G2_7001.D	18	1.0		voaWater
icv	280-0074047-017	ICV	0	17-Sep-2018 13:28:30	G2_7008.D	25	1.0		voaWater
280-113978-D-5	280-0074047-018	Client	0	17-Sep-2018 14:31:30	G2_7009.D	26	1.0	SP-7	voaWater
280-113978-B-7	280-0074047-019	Client	0	17-Sep-2018 14:52:30	G2_7010.D	27	1.0	SP-9	voaWater
280-113978-B-8	280-0074047-020	Client	0	17-Sep-2018 15:13:30	G2_7011.D	28	1.0	TB-090518	voaWater
280-113978-I-9	280-0074047-021	Client	0	17-Sep-2018 15:34:30	G2_7012.D	29	1.0	SP-10	voaWater
280-113978-C-10	280-0074047-022	Client	0	17-Sep-2018 15:55:30	G2_7013.D	30	1.0	SP-090518	voaWater
280-113978-I-1	280-0074047-023	Client	0	17-Sep-2018 16:16:30	G2_7014.D	31	10.0	SP-1A	voaWater
280-113978-I-1	280-0074047-024	Client	0	17-Sep-2018 16:37:30	G2_7015.D	32	100.	SP-1A	voaWater
280-113978-G-2	280-0074047-025	Client	0	17-Sep-2018 16:58:30	G2_7016.D	33	1.0	SP-1B	voaWater
280-113978-G-2	280-0074047-026	Client	0	17-Sep-2018 17:19:30	G2_7017.D	34	4.0	SP-1B	voaWater
280-113978-I-2 MS	280-0074047-027	MS	0	17-Sep-2018 17:41:30	G2_7018.D	35	1.0	SP-1B	voaWater
280-113978-I-2 MSD	280-0074047-028	MSD	0	17-Sep-2018 18:02:30	G2_7019.D	36	1.0	SP-1B	voaWater
280-113978-B-3	280-0074047-029	Client	0	17-Sep-2018 18:23:30	G2_7020.D	37	2.0	SP-3	voaWater
280-113978-B-3	280-0074047-030	Client	0	17-Sep-2018 18:44:30	G2_7021.D	38	20.0	SP-3	voaWater
280-113978-E-4	280-0074047-031	Client	0	17-Sep-2018 19:05:30	G2_7022.D	39	2.0	SP-5	voaWater
280-113978-E-4	280-0074047-032	Client	0	17-Sep-2018 19:26:30	G2_7023.D	40	20.0	SP-5	voaWater
ccvc	280-0074047-033	CCVC	0	17-Sep-2018 19:47:30	G2_7024.D	41	1.0		voaWater
Samp 34	280-0074047-034	Client							

Test America Denver
Instrument: G2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)
Tune Time: 613 - 1447 (Circle)
Lims Batch: 4295806

TestAmerica Laboratories
Worklist Report

Worklist Name: 091718 Worklist Number: 74047
Instrument Name: VMS_G2 Chrom Method: AQ_VMSG2_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G2\20180917-74047.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00102 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074047-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0074047-002	# 2 CCV	MV-MegaMainA_00001	CCV		voaWater	20.00	mL	1.000
280-0074047-003	# 3 CCV	MV-Supp A_00032 MV-568718-D_00010	CCV		voaWater	20.00	mL	1.000
280-0074047-004	# 4 LCS	MV-MegaMain B_00001	LCS		voaWater	20.00	mL	1.000
280-0074047-005	# 5 LCSD	MV-MegaMain B_00001	LCSD		voaWater	20.00	mL	1.000
280-0074047-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0074047-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0074047-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0074047-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0074047-010	#10 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	1	voaWater	20.00	mL	1.000
280-0074047-011	#11 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	2	voaWater	20.00	mL	1.000
280-0074047-012	#12 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	3	voaWater	20.00	mL	1.000
280-0074047-013	#13 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074047-014	#14 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	5	voaWater	20.00	mL	1.000
280-0074047-015	#15 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	6	voaWater	20.00	mL	1.000
280-0074047-016	#16 ic	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMainA_00001	IC	7	voaWater	20.00	mL	1.000
280-0074047-017	#17 icv	MV-568718-D_00010 MV-ARCH SS A_00102 MV-MegaMain B_00001	ICV		voaWater	20.00	mL	1.000
280-0074047-018	#18 280-113978-D-5		Client		voaWater	20.00	mL	1.000
280-0074047-019	#19 280-113978-B-7		Client		voaWater	20.00	mL	1.000
280-0074047-020	#20 280-113978-B-8		Client		voaWater	20.00	mL	1.000
280-0074047-021	#21 280-113978-I-9		Client		voaWater	20.00	mL	1.000
280-0074047-022	#22 280-113978-C-10		Client		voaWater	20.00	mL	1.000
280-0074047-023	#23 280-113978-I-1		Client		voaWater	20.00	mL	10.00
280-0074047-024	#24 280-113978-I-1		Client		voaWater	20.00	mL	100.0
280-0074047-025	#25 280-113978-G-2		Client		voaWater	20.00	mL	1.000
280-0074047-026	#26 280-113978-G-2		Client		voaWater	20.00	mL	4.000
280-0074047-027	#27 280-113978-I-2 MS	MV-MegaMain B_00001	MS		voaWater	20.00	mL	1.000
280-0074047-028	#28 280-113978-I-2 MSD	MV-MegaMain B_00001	MSD		voaWater	20.00	mL	1.000
280-0074047-029	#29 280-113978-B-3		Client		voaWater	20.00	mL	2.000
280-0074047-030	#30 280-113978-B-3		Client		voaWater	20.00	mL	20.00
280-0074047-031	#31 280-113978-E-4		Client		voaWater	20.00	mL	2.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074047-032	#32 280-113978-E-4		Client		voaWater	20.00	mL	20.00
280-0074047-033	#33 ccvc	MV-MegaMainA_00001	CCVC		voaWater	20.00	mL	1.000
280-0074047-034	#34 Samp 34		Client		voaWater	20.00	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 428698 Batch Start Date: 09/07/18 08:41 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00102	MV-BFB 00026	MV-MegaMain B 00001
BFB 280-428698/1		8260B		1 uL	1 uL			1 uL	
IC 280-428698/10		8260B		20 mL	20 mL	1 uL			
IC 280-428698/11		8260B		20 mL	20 mL	1 uL			
IC 280-428698/12		8260B		20 mL	20 mL	1 uL			
IC 280-428698/13		8260B		20 mL	20 mL	1 uL			
IC 280-428698/14		8260B		20 mL	20 mL	1 uL			
IC 280-428698/15		8260B		20 mL	20 mL	1 uL			
IC 280-428698/16		8260B		20 mL	20 mL	1 uL			
ICV 280-428698/17		8260B		20 mL	20 mL	1 uL			4 uL
IC 280-428698/18		8260B		20 mL	20 mL	1 uL	0.08 uL		
IC 280-428698/19		8260B		20 mL	20 mL	1 uL	0.16 uL		
IC 280-428698/20		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-428698/21		8260B		20 mL	20 mL	1 uL	0.8 uL		
IC 280-428698/22		8260B		20 mL	20 mL	1 uL	2.4 uL		
IC 280-428698/23		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-428698/24		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00001	MV-Supp A 00032	MV-Supp B 00021			
BFB 280-428698/1		8260B							
IC 280-428698/10		8260B		0.2 uL					
IC 280-428698/11		8260B		0.4 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 428698 Batch Start Date: 09/07/18 08:41 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00001	MV-Supp A 00032	MV-Supp B 00021			
IC 280-428698/12		8260B		0.8 uL					
IC 280-428698/13		8260B		2 uL					
IC 280-428698/14		8260B		4 uL					
IC 280-428698/15		8260B		10 uL					
IC 280-428698/16		8260B		24 uL					
ICV 280-428698/17		8260B							
IC 280-428698/18		8260B			0.5 uL				
IC 280-428698/19		8260B			1 uL				
IC 280-428698/20		8260B			2.5 uL				
ICIS 280-428698/21		8260B			5 uL				
IC 280-428698/22		8260B			15 uL				
IC 280-428698/23		8260B			30 uL				
ICV 280-428698/24		8260B				5 uL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 428900 Batch Start Date: 09/07/18 08:12 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00102	MV-BFB 00026	MV-Supp A 00032
BFB 280-428900/1		8260B		1 uL	1 uL			1 uL	
IC 280-428900/18		8260B		20 mL	20 mL	1 uL	0.08 uL		0.5 uL
IC 280-428900/19		8260B		20 mL	20 mL	1 uL	0.16 uL		1 uL
IC 280-428900/20		8260B		20 mL	20 mL	1 uL	0.4 uL		2.5 uL
ICIS 280-428900/21		8260B		20 mL	20 mL	1 uL	0.8 uL		5 uL
IC 280-428900/22		8260B		20 mL	20 mL	1 uL	2.4 uL		15 uL
IC 280-428900/23		8260B		20 mL	20 mL	1 uL	4.8 uL		30 uL
ICV 280-428900/24		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Supp B 00021					
BFB 280-428900/1		8260B							
IC 280-428900/18		8260B							
IC 280-428900/19		8260B							
IC 280-428900/20		8260B							
ICIS 280-428900/21		8260B							
IC 280-428900/22		8260B							
IC 280-428900/23		8260B							
ICV 280-428900/24		8260B		5 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 428900 Batch Start Date: 09/07/18 08:12 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429676 Batch Start Date: 09/14/18 08:10 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-BFB 00026	MV-MegaMain B 00001	MV-MegaMainA 00001
BFB 280-429676/1		8260B		1 uL	1 uL		1 uL		
IC 280-429676/10		8260B		20 mL	20 mL	1 uL			0.2 uL
IC 280-429676/11		8260B		20 mL	20 mL	1 uL			0.4 uL
IC 280-429676/12		8260B		20 mL	20 mL	1 uL			0.8 uL
IC 280-429676/13		8260B		20 mL	20 mL	1 uL			2 uL
IC 280-429676/14		8260B		20 mL	20 mL	1 uL			4 uL
IC 280-429676/15		8260B		20 mL	20 mL	1 uL			10 uL
IC 280-429676/16		8260B		20 mL	20 mL	1 uL			24 uL
ICV 280-429676/17		8260B		20 mL	20 mL	1 uL		4 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429808 Batch Start Date: 09/17/18 08:13 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00102	MV-BFB 00026	MV-MegaMain B 00001
BFB 280-429808/1		8260B		1 uL	1 uL			1 uL	
IC 280-429808/10		8260B		20 mL	20 mL	1 uL	0.024 uL		
IC 280-429808/11		8260B		20 mL	20 mL	1 uL	0.08 uL		
IC 280-429808/12		8260B		20 mL	20 mL	1 uL	0.16 uL		
IC 280-429808/13		8260B		20 mL	20 mL	1 uL	0.4 uL		
IC 280-429808/14		8260B		20 mL	20 mL	1 uL	0.8 uL		
IC 280-429808/15		8260B		20 mL	20 mL	1 uL	2.4 uL		
IC 280-429808/16		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-429808/17		8260B		20 mL	20 mL	1 uL	0.8 uL		4 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00001					
BFB 280-429808/1		8260B							
IC 280-429808/10		8260B		0.2 uL					
IC 280-429808/11		8260B		0.4 uL					
IC 280-429808/12		8260B		0.8 uL					
IC 280-429808/13		8260B		2 uL					
IC 280-429808/14		8260B		4 uL					
IC 280-429808/15		8260B		10 uL					
IC 280-429808/16		8260B		24 uL					
ICV 280-429808/17		8260B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429808 Batch Start Date: 09/17/18 08:13 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 430151 Batch Start Date: 09/19/18 09:00 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00102	MV-BFB 00026	MV-MegaMain B 00001
BFB 280-430151/1		8260B		1 uL	1 uL			1 uL	
CCV 280-430151/2		8260B		20 mL	20 mL	1 uL			
CCV 280-430151/3		8260B		20 mL	20 mL	1 uL	0.92 uL		
LCS 280-430151/4		8260B		20 mL	20 mL	1 uL	0.92 uL		2 uL
MB 280-430151/6		8260B		20 mL	20 mL	1 uL	0.92 uL		
280-114110-B-1	Trip Blank	8260B	T	20 mL	20 mL	1 uL	0.92 uL		
280-114110-A-2	BH1-10	8260B	T	20 mL	20 mL	1 uL	0.92 uL		
280-114110-A-5	BH1-10-dup	8260B	T	20 mL	20 mL	1 uL	0.92 uL		
LCS 280-430151/33		8260B		20 mL	20 mL	1 uL	0.92 uL		
CCVC 280-430151/34		8260B		20 mL	20 mL	1 uL	0.92 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00001	MV-Supp A 00032	MV-Supp B 00021			
BFB 280-430151/1		8260B							
CCV 280-430151/2		8260B		4 uL					
CCV 280-430151/3		8260B			5 uL				
LCS 280-430151/4		8260B							
MB 280-430151/6		8260B							
280-114110-B-1	Trip Blank	8260B	T						
280-114110-A-2	BH1-10	8260B	T						
280-114110-A-5	BH1-10-dup	8260B	T						
LCS 280-430151/33		8260B				2 uL			
CCVC 280-430151/34		8260B		4 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 430151 Batch Start Date: 09/19/18 09:00 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 430312 Batch Start Date: 09/20/18 09:19 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00102	MV-BFB 00026	MV-MegaMain B 00001
BFB 280-430312/1		8260B		1 uL	1 uL			1 uL	
CCV 280-430312/2		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCV 280-430312/3		8260B		20 mL	20 mL	1 uL			
LCS 280-430312/4		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
LCSD 280-430312/5		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
MB 280-430312/6		8260B		20 mL	20 mL	1 uL	0.8 uL		
280-114110-A-3	BH2-5	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-114110-A-6	BH2-5-dup	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
LCS 280-430312/32		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-430312/33		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00001	MV-Supp A 00032	MV-Supp B 00021			
BFB 280-430312/1		8260B							
CCV 280-430312/2		8260B		4 uL					
CCV 280-430312/3		8260B			5 uL				
LCS 280-430312/4		8260B							
LCSD 280-430312/5		8260B							
MB 280-430312/6		8260B							
280-114110-A-3	BH2-5	8260B	T						
280-114110-A-6	BH2-5-dup	8260B	T						
LCS 280-430312/32		8260B				2.5 uL			
CCVC 280-430312/33		8260B		4 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 430312 Batch Start Date: 09/20/18 09:19 Batch Analyst: Ilczyszyn, Dennis P

Batch Method: 8260B Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

Project: Griffiss AFB, NY (BRAC Eastern)

Client Sample ID	Lab Sample ID
775MW-6	280-114110-4
775MW-6-dup	280-114110-7

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: 775MW-6 Lab Sample ID: 280-114110-4

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG ID.:

Matrix: Water Date Sampled: 09/07/2018 09:07

Reporting Basis: WET Date Received: 09/08/2018 08:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	85	100	85	22	ug/L	U		1	6010C
Manganese	45	3.5	0.95	0.31	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: 775MW-6-dup
Lab Sample ID: 280-114110-7
Lab Name: TestAmerica Denver
Job No.: 280-114110-1
SDG ID.:
Matrix: Water
Date Sampled: 09/07/2018 09:07
Reporting Basis: WET
Date Received: 09/08/2018 08:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	85	100	85	22	ug/L	U		1	6010C
Manganese	74	3.5	0.95	0.31	ug/L			1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: ICP ICVH_52_00020 Concentration Units: ug/L

CCV Source: ICP CCVH_00607

Analyte	ICVH 280-430658/8 09/21/2018 10:45				ICVH 280-430658/9 09/21/2018 10:49				CCVH 280-430658/75 09/21/2018 19:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	81100		80000	101	80900		80000	101	49800		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: ICP ICVH_52_00020 Concentration Units: ug/L

CCV Source: ICP CCVH_00607

Analyte	CCVH 280-430658/88 09/21/2018 20:24											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	50000		50000	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: ICP ICV_00641 Concentration Units: ug/L

CCV Source: ICP CCV_52_00006

Analyte	ICV 280-430658/10 09/21/2018 10:53				ICV 280-430658/11 09/21/2018 10:56				CCV 280-430658/76 09/21/2018 19:43			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	250		250	100	256		250	103	2500		2500	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: ICP ICV_00641 Concentration Units: ug/L

CCV Source: ICP CCV_52_00006

Analyte	CCV 280-430658/89 09/21/2018 20:28											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	2500		2500	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: ICP LLCCV_02357 Concentration Units: ug/L

CCV Source: ICP LLCCV_02357

Analyte	ICVL 280-430658/12 09/21/2018 11:00				CCVL 280-430658/78 09/21/2018 19:50				CCVL 280-430658/91 09/21/2018 20:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	108		100	108	97.1	J	100	97	86.2	J	100	86

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: MS 77 ICV_01869 Concentration Units: ug/L

CCV Source: ms 77 ccv_01872

Analyte	ICV 280-430284/9 09/19/2018 12:32				CCV 280-430284/73 09/19/2018 16:49				CCV 280-430284/81 09/19/2018 17:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	41.0		40.0	103	49.2		50.0	98	50.0		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: MS 77 LLCCV_01675 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01675

Analyte	ICVL 280-430284/11 09/19/2018 12:40				CCVL 280-430284/75 09/19/2018 16:56				CCVL 280-430284/83 09/19/2018 17:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	1.13		1.00	113	1.02		1.00	102	0.950	J	1.00	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: MS 77 ICV_01870 Concentration Units: ug/L

CCV Source: ms 77 ccv_01873

Analyte	ICV 280-430407/9 09/20/2018 10:42				CCV 280-430407/20 09/20/2018 11:25				CCV 280-430407/30 09/20/2018 12:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	40.4		40.0	101	49.2		50.0	98	50.9		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICV Source: MS 77 LLCCV_01676 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01676

Analyte	ICVL 280-430407/11 09/20/2018 10:50				CCVL 280-430407/22 09/20/2018 11:33				CCVL 280-430407/32 09/20/2018 12:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	1.07		1.00	107	0.937	J	1.00	94	0.976	J	1.00	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Method: 6010C Instrument ID: MT_052

Lab Sample ID: CRI 280-430658/16 Concentration Units: ug/L

CRQL Check Standard Source: ICP LLCCV_02357

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Iron	100	89.2	J	89	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Method: 6020A Instrument ID: MT_077

Lab Sample ID: CRI 280-430284/13 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 alt RL_01042

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Manganese	1.00	1.14		114	80-120

Lab Sample ID: CRI 280-430407/12 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 RL_01758

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Manganese	1.00	0.853	J	85	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-430658/15 09/21/2018 11:10		CCB 280-430658/77 09/21/2018 19:46		CCB 280-430658/90 09/21/2018 20:31			
		Found	C	Found	C	Found	C	Found	C
Iron	100	85	U	85	U	85	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-430284/10 09/19/2018 12:36		CCB 280-430284/74 09/19/2018 16:53		CCB 280-430284/82 09/19/2018 17:23			
		Found	C	Found	C	Found	C	Found	C
Manganese	1.0	0.95	U	0.95	U	0.95	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-430407/10 09/20/2018 10:46		CCB 280-430407/21 09/20/2018 11:29		CCB 280-430407/31 09/20/2018 12:07			
		Found	C	Found	C	Found	C	Found	C
Manganese	1.0	0.95	U	0.95	U	0.95	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-429322/1-E

Instrument Code: MT_052 Batch No.: 430658

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	85	U		6010C_DOD5

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-429322/1-D

Instrument Code: MT_077 Batch No.: 430284

CAS No.	Analyte	Concentration	C	Q	Method
7439-96-5	Manganese	0.95	U		6020A_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSA 280-430658/17 Instrument ID: MT_052

Lab File ID: 52A092118B.csv ICS Source: ICP ICSA_00170

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**194159**	**97**
Aluminum	*500000*	*515982*	*103*
Aluminum	*500000*	*519576*	*104*
Antimony		*4.72*	
Arsenic		*-3.14*	
Barium		*-0.453*	
Boron		*2.40*	
Cadmium		*-1.57*	
Calcium	*500000*	*483604*	*97*
Chromium		*-0.610*	
Cobalt		*-0.327*	
Copper		*-6.85*	
Lead		*4.81*	
Lithium		*7.80*	
Magnesium	*500000*	*504185*	*101*
Molybdenum		*1.20*	
Phosphorus		*-15.6*	
Potassium		*134*	
Selenium		*6.45*	
Silicon		*53.2*	
Silver		*-1.12*	
Sodium		*113*	
Thallium		*5.46*	
Tin		*-0.315*	
Titanium		*0.710*	
Vanadium		*2.79*	
Zinc		*0.428*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSAB 280-430658/18 Instrument ID: MT_052

Lab File ID: 52A092118B.csv ICS Source: ICP ICSAB_00190

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**192660**	**96**
Aluminum	*500000*	*511539*	*102*
Aluminum	*500000*	*512652*	*103*
Antimony	*1000*	*1076*	*108*
Arsenic	*2000*	*2124*	*106*
Barium	*500*	*516*	*103*
Beryllium	*500*	*507*	*101*
Boron	*2000*	*2180*	*109*
Cadmium	*1000*	*968*	*97*
Calcium	*500000*	*480083*	*96*
Chromium	*500*	*489*	*98*
Cobalt	*500*	*473*	*95*
Copper	*500*	*525*	*105*
Lead	*1000*	*995*	*100*
Lithium	*1000*	*1099*	*110*
Magnesium	*500000*	*500053*	*100*
Manganese	*500*	*491*	*98*
Molybdenum	*1000*	*997*	*100*
Nickel	*1000*	*918*	*92*
Phosphorus	*2000*	*2117*	*106*
Potassium	*50000*	*56322*	*113*
Selenium	*5000*	*5223*	*104*
Silicon	*10000*	*10763*	*108*
Silver	*1000*	*1139*	*114*
Sodium	*50000*	*53518*	*107*
Strontium	*1000*	*1030*	*103*
Thallium	*10000*	*9526*	*95*
Tin	*10000*	*9675*	*97*
Titanium	*1000*	*1031*	*103*
Vanadium	*500*	*508*	*102*
Zinc	*1000*	*944*	*94*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSA 280-430284/15 Instrument ID: MT_077

Lab File ID: 015ICSA.d ICS Source: ms 77 icsa_00378

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.789**	
Antimony		*0.145*	
Arsenic		*0.0180*	
Barium		*0.0870*	
Beryllium		*0.0010*	
Cadmium		*0.228*	
Chromium		*0.224*	
Cobalt		*0.0090*	
Copper		*0.338*	
Lead		*0.0720*	
Molybdenum	*2000*	*2007*	*100*
Nickel		*0.232*	
Selenium		*0.0460*	
Silver		*0.0170*	
Thallium		*0.0060*	
Vanadium		*0.554*	
Zn		*0.328*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSAB 280-430284/16 Instrument ID: MT_077

Lab File ID: 016ICSB.d ICS Source: ms 77 icsab_00375

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Manganese	**100**	**99.6**	**100**
Antimony	*100*	*104*	*104*
Arsenic	*100*	*92.9*	*93*
Barium	*100*	*100*	*100*
Beryllium	*100*	*97.9*	*98*
Cadmium	*100*	*91.8*	*92*
Chromium	*100*	*97.7*	*98*
Cobalt	*100*	*97.9*	*98*
Copper	*100*	*93.4*	*93*
Lead	*100*	*93.5*	*94*
Molybdenum	*2100*	*2120*	*101*
Nickel	*100*	*96.9*	*97*
Selenium	*100*	*98.6*	*99*
Silver	*100*	*89.7*	*90*
Thallium	*100*	*93.3*	*93*
Vanadium	*100*	*98.8*	*99*
Zn	*100*	*96.2*	*96*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSA 280-430284/134 Instrument ID: MT_077

Lab File ID: 134ICSA.d ICS Source: ms 77 icsa_00378

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.769**	
Antimony		*0.248*	
Arsenic		*0.112*	
Barium		*0.0000*	
Beryllium		*-0.0430*	
Cadmium		*0.344*	
Chromium		*0.226*	
Cobalt		*-0.0050*	
Copper		*0.255*	
Lead		*0.0850*	
Molybdenum	*2000*	*2053*	*103*
Nickel		*0.264*	
Selenium		*0.0570*	
Silver		*0.0250*	
Thallium		*0.0060*	
Vanadium		*0.0840*	
Zn		*0.910*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSAB 280-430284/135 Instrument ID: MT_077

Lab File ID: 135ICSB.d ICS Source: ms 77 icsab_00375

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Manganese	**100**	**99.4**	**99**
Antimony	*100*	*104*	*104*
Arsenic	*100*	*94.0*	*94*
Barium	*100*	*103*	*103*
Beryllium	*100*	*95.5*	*95*
Cadmium	*100*	*95.5*	*96*
Chromium	*100*	*99.3*	*99*
Cobalt	*100*	*97.7*	*98*
Copper	*100*	*97.1*	*97*
Lead	*100*	*94.9*	*95*
Molybdenum	*2100*	*2196*	*105*
Nickel	*100*	*94.7*	*95*
Selenium	*100*	*99.2*	*99*
Silver	*100*	*92.7*	*93*
Thallium	*100*	*94.1*	*94*
Vanadium	*100*	*99.9*	*100*
Zn	*100*	*99.7*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSA 280-430407/15 Instrument ID: MT_077

Lab File ID: 015ICSA.d ICS Source: ms 77 icsa_00378

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.832**	
Antimony		*0.156*	
Arsenic		*0.0780*	
Barium		*-0.0090*	
Beryllium		*-0.0470*	
Cadmium		*0.276*	
Chromium		*0.201*	
Cobalt		*0.0060*	
Copper		*0.715*	
Lead		*0.0670*	
Molybdenum	*2000*	*2091*	*105*
Nickel		*0.216*	
Selenium		*0.0020*	
Silver		*0.0250*	
Thallium		*-0.0040*	
Vanadium		*0.254*	
Zn		*0.835*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSAB 280-430407/16 Instrument ID: MT_077

Lab File ID: 016ICSB.d ICS Source: ms 77 icsab_00375

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Manganese	**100**	**98.2**	**98**
Antimony	*100*	*106*	*106*
Arsenic	*100*	*94.0*	*94*
Barium	*100*	*103*	*103*
Beryllium	*100*	*97.7*	*98*
Cadmium	*100*	*93.7*	*94*
Chromium	*100*	*98.9*	*99*
Cobalt	*100*	*98.2*	*98*
Copper	*100*	*107*	*107*
Lead	*100*	*93.2*	*93*
Molybdenum	*2100*	*2175*	*104*
Nickel	*100*	*95.8*	*96*
Selenium	*100*	*97.9*	*98*
Silver	*100*	*93.6*	*94*
Thallium	*100*	*92.8*	*93*
Vanadium	*100*	*101*	*101*
Zn	*100*	*97.2*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSA 280-430407/81 Instrument ID: MT_077

Lab File ID: 087ICSA.d ICS Source: ms 77 icsa_00378

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.385**	
Antimony		*0.185*	
Arsenic		*0.0580*	
Barium		*0.0490*	
Beryllium		*-0.0370*	
Cadmium		*0.244*	
Chromium		*0.249*	
Cobalt		*0.0160*	
Copper		*0.353*	
Lead		*0.0670*	
Molybdenum	*2000*	*2031*	*102*
Nickel		*0.111*	
Selenium		*0.0390*	
Silver		*0.0260*	
Thallium		*0.0090*	
Vanadium		*0.577*	
Zn		*0.222*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Lab Sample ID: ICSAB 280-430407/82 Instrument ID: MT_077

Lab File ID: 088ICSB.d ICS Source: ms 77 icsab_00375

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Manganese	**100**	**99.3**	**99**
Antimony	*100*	*105*	*105*
Arsenic	*100*	*92.5*	*93*
Barium	*100*	*101*	*101*
Beryllium	*100*	*98.8*	*99*
Cadmium	*100*	*94.5*	*95*
Chromium	*100*	*99.1*	*99*
Cobalt	*100*	*98.1*	*98*
Copper	*100*	*106*	*106*
Lead	*100*	*94.4*	*94*
Molybdenum	*2100*	*2170*	*103*
Nickel	*100*	*95.6*	*96*
Selenium	*100*	*96.5*	*96*
Silver	*100*	*94.0*	*94*
Thallium	*100*	*95.1*	*95*
Vanadium	*100*	*98.7*	*99*
Zn	*100*	*95.1*	*95*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: 775MW-6 MS
Lab ID: 280-114110-4 MS
Lab Name: TestAmerica Denver
Job No.: 280-114110-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1010		85	U	1000	101	87-115		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: 775MW-6 MSD
Lab ID: 280-114110-4 MSD
Lab Name: TestAmerica Denver
Job No.: 280-114110-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1010		1000	101	87-115	0	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: 775MW-6 PDS | Lab ID: 280-114110-4 PDS

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	973		85	U	1000	97	80-120		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS - DISSOLVED

Client ID: 775MW-6-dup DU | Lab ID: 280-114110-4 DU

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

SDG No.:

% Solids for Sample: | % Solids for Duplicate:

Matrix: Water | Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Iron	100	85	U	85	U	NC		6010C
Manganese	3.5	45		74.2		50	J1	6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - DISSOLVED

Lab ID: LCS 280-429322/2-E

Lab Name: TestAmerica Denver Job No.: 280-114110-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00152

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1010		101	87	115		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - DISSOLVED

Lab ID: LCSD 280-429322/3-D

Lab Name: TestAmerica Denver Job No.: 280-114110-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00152

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	998		1000	100	87-115	1	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS - DISSOLVED

Lab ID: LCS 280-429322/2-D

Lab Name: TestAmerica Denver | Job No.: 280-114110-1

Sample Matrix: Water | LCS Source: MS CALSTD-1_00129

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Manganese	40.0	39.9		100	87	115		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - DISSOLVED

Lab ID: LCSD 280-429322/3-C

Lab Name: TestAmerica Denver Job No.: 280-114110-1

Sample Matrix: Water LCS Source: MS CALSTD-1_00129

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Manganese	41.3		40.0	103	87-115	3	20		6020A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 280-114110-4

SDG No:

Lab Name: TestAmerica Denver Job No: 280-114110-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	85	U	430	U	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG Number:

Matrix: Water Instrument ID: MT_052

Method: 6010C DL Date: 08/01/2018 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Iron	259.9	100	22

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG Number:

Matrix: Water Instrument ID: MT_052

Method: 6010C XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron		100	22

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A DL Date: 08/01/2018 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Manganese	55	3.5	0.31

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Manganese		1	0.31

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	394.401													0.001512	
Aluminum	396.152								-0.000104					-0.000023	
Antimony	206.834		0.000044									0.006677		0.00005	
Arsenic	188.980		-0.000012											-0.000018	
Barium	493.408													0.000008	
Beryllium	234.861													0.000108	
Bismuth	223.061													0.000079	0.000001
Boron	249.678													-0.000081	
Cadmium	214.439													0.000014	
Calcium	315.887		0.000125												
Chromium	205.560		-0.000004				-0.000136							-0.000001	
Cobalt	228.615														
Copper	324.754		0.000005						-0.000012					0.000025	
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.000042									-0.000509		-0.000005	
Lithium	670.783														
Magnesium	279.078													-0.000401	
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604								0.000004					0.000039	
Phosphorus	213.618												-0.038774		
Potassium	766.491														
Selenium	196.026													-0.000171	
Silicon	288.158													0.000004	
Silver	328.068														
Sodium	589.592					-0.030677									
Sodium	589.593					-0.275847									
Strontium	421.552													0.000001	
Sulfur	181.972								0.000176						

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794										0.00204			-0.000008	
Thorium	288.505						-0.005957							-0.000049	
Tin	189.925													0.000003	
Titanium	336.122								0.000026					-0.000002	
Uranium	409.013								-0.000041					0.000265	
Vanadium	292.401											-0.00709		-0.00001	
Zinc	206.200													0.000005	
Zirconium	343.823													0.000025	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.040824										0.190657
Aluminum	394.401														0.02099
Antimony	206.834				-0.003886									-0.000291	
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861				-0.000327										
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560				-0.000696		-0.000286								
Cobalt	228.615						0.0001								
Copper	324.754				0.000286										
Iron	238.204														
Iron	259.940														
Lead	220.353				-0.000822										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026			0.000916	0.000109										
Silicon	288.158														
Silver	328.068														
Sodium	589.593														
Sodium	589.592														
Strontium	421.552														
Sulfur	181.972			0.006869											

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.002337										
Thorium	288.505			0.010208											
Tin	189.925														
Titanium	336.122						0.000067								
Uranium	409.013														
Vanadium	292.401				-0.001399										
Zinc	206.200														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	394.401	-0.021133			0.011488										
Aluminum	396.152														
Antimony	206.834		0.002608					-0.001135							
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560														
Cobalt	228.615		0.001881												
Copper	324.754	0.004174	-0.000232		-0.001247										
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.000427		0.000755										
Lithium	670.783														
Magnesium	279.078				-0.004857										
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604			0.000222											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.068				-0.000389	-0.009028		0.006919							
Sodium	589.592														
Sodium	589.593														
Strontium	421.552														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-114110-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 08/20/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.00212												
Thorium	288.505		-0.000396		0.002914	-0.06422									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.039324							
Vanadium	292.401	0.002016	0.000703		-0.000998										
Zinc	206.200														
Zirconium	343.823														

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-114110-1

SDG No.:

Instrument ID: MT_052 Date: 09/01/2018 10:17

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Iron		500	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-114110-1

SDG No.:

Instrument ID: MT_077 Date: 07/06/2018 14:21

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Manganese		18000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-429322/1-E	09/20/2018 18:00	430229		50	50
LCS 280-429322/2-E	09/20/2018 18:00	430229		50	50
LCSD 280-429322/3-D	09/20/2018 18:00	430229		50	50
280-114110-4	09/20/2018 18:00	430229		50	50
280-114110-4 MS	09/20/2018 18:00	430229		50	50
280-114110-4 MSD	09/20/2018 18:00	430229		50	50
280-114110-7	09/20/2018 18:00	430229		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-429322/1-D	09/12/2018 16:14	429435		50	50
LCS 280-429322/2-D	09/12/2018 16:14	429435		50	50
LCSD 280-429322/3-C	09/12/2018 16:14	429435		50	50
280-114110-4	09/12/2018 16:14	429435		50	50
280-114110-7	09/12/2018 16:14	429435		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 09/21/2018 10:19 End Date: 09/21/2018 21:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
ICIS 280-430658/1	1		10:19	X																								
IC 280-430658/2			10:22	X																								
IC 280-430658/3			10:27	X																								
IC 280-430658/4			10:30	X																								
ZZZZZZ			10:34																									
ZZZZZZ			10:38																									
ZZZZZZ			10:41																									
ICVH 280-430658/8	1		10:45	X																								
ICVH 280-430658/9	1		10:49	X																								
ICV 280-430658/10	1		10:53	X																								
ICV 280-430658/11	1		10:56	X																								
ICVL 280-430658/12	1		11:00	X																								
CCVH 280-430658/13			11:03																									
CCV 280-430658/14			11:07																									
ICB 280-430658/15	1		11:10	X																								
CRI 280-430658/16	1		11:14	X																								
ICSA 280-430658/17	1		11:17	X																								
ICSAB 280-430658/18	1		11:51	X																								
LRA 280-430658/19			11:54																									
CCVH 280-430658/20			11:58																									
CCV 280-430658/21			12:02																									
CCB 280-430658/22			12:05																									
CCVL 280-430658/23			12:08																									
CCVH 280-430658/24			16:39																									
CCV 280-430658/25			16:43																									
CCB 280-430658/26			16:47																									
CCVL 280-430658/27			16:50																									
ZZZZZZ			16:57																									
ZZZZZZ			17:00																									
ZZZZZZ			17:03																									
ZZZZZZ			17:07																									
ZZZZZZ			17:10																									
ZZZZZZ			17:13																									
ZZZZZZ			17:17																									
ZZZZZZ			17:20																									
ZZZZZZ			17:24																									
CCVH 280-430658/37			17:27																									
CCV 280-430658/38			17:31																									
CCB 280-430658/39			17:34																									
CCVL 280-430658/40			17:37																									
ZZZZZZ			17:41																									
ZZZZZZ			17:44																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 09/21/2018 10:19 End Date: 09/21/2018 21:41

Lab Sample Id	D/F	Type	Time	Analytes
				Fe
ZZZZZZ			17:48	
ZZZZZZ			17:51	
ZZZZZZ			17:55	
ZZZZZZ			17:58	
ZZZZZZ			18:02	
CCVH 280-430658/48			18:05	
CCV 280-430658/49			18:09	
CCB 280-430658/50			18:12	
CCVL 280-430658/51			18:16	
ZZZZZZ			18:19	
ZZZZZZ			18:22	
ZZZZZZ			18:26	
ZZZZZZ			18:29	
ZZZZZZ			18:33	
ZZZZZZ			18:36	
ZZZZZZ			18:40	
ZZZZZZ			18:43	
ZZZZZZ			18:47	
ZZZZZZ			18:50	
CCVH 280-430658/62			18:54	
CCV 280-430658/63			18:58	
CCB 280-430658/64			19:01	
CCVL 280-430658/65			19:04	
ZZZZZZ			19:08	
ZZZZZZ			19:11	
ZZZZZZ			19:14	
ZZZZZZ			19:18	
ZZZZZZ			19:22	
ZZZZZZ			19:25	
ZZZZZZ			19:29	
ZZZZZZ			19:32	
ZZZZZZ			19:36	
CCVH 280-430658/75	1		19:39	X
CCV 280-430658/76	1		19:43	X
CCB 280-430658/77	1		19:46	X
CCVL 280-430658/78	1		19:50	X
MB 280-429322/1-E	1	D	19:53	X
LCS 280-429322/2-E	1	D	19:56	X
LCSD 280-429322/3-D	1	D	20:00	X
280-114110-4	1	D	20:03	X
280-114110-4 SD	5	D	20:07	X
280-114110-4 MS	1	D	20:10	X

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 09/21/2018 10:19 End Date: 09/21/2018 21:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
280-114110-4 MSD	1	D	20:14	X																								
280-114110-4 PDS	1	D	20:17	X																								
280-114110-7	1	D	20:21	X																								
CCVH 280-430658/88	1		20:24	X																								
CCV 280-430658/89	1		20:28	X																								
CCB 280-430658/90	1		20:31	X																								
CCVL 280-430658/91	1		20:34	X																								
ZZZZZZ			20:38																									
ZZZZZZ			20:41																									
ZZZZZZ			20:45																									
ZZZZZZ			20:48																									
ZZZZZZ			20:52																									
ZZZZZZ			20:55																									
ZZZZZZ			20:59																									
CCVH 280-430658/99			21:02																									
CCV 280-430658/100			21:06																									
CCB 280-430658/101			21:09																									
CCVL 280-430658/102			21:13																									
ZZZZZZ			21:16																									
ZZZZZZ			21:20																									
ZZZZZZ			21:23																									
ZZZZZZ			21:27																									
CCVH 280-430658/107			21:30																									
CCV 280-430658/108			21:34																									
CCB 280-430658/109			21:37																									
CCVL 280-430658/110			21:41																									

Prep Types:
D = Dissolved

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/19/2018 12:02 End Date: 09/19/2018 21:00

Lab Sample Id	D/F	Type	Time	Analytes
				Mn
RINSE 280-430284/1			12:02	
RINSE 280-430284/2			12:06	
RINSE 280-430284/3			12:09	
RINSE 280-430284/4			12:13	
RINSE 280-430284/5			12:17	
RINSE 280-430284/6			12:21	
ICIS 280-430284/7			12:25	X
IC 280-430284/8			12:29	X
ICV 280-430284/9	1		12:32	X
ICB 280-430284/10	1		12:36	X
ICVL 280-430284/11	1		12:40	X
CRI 280-430284/12			12:44	
CRI 280-430284/13	1		12:50	X
ZZZZZZ			12:54	
ICSA 280-430284/15	1		12:58	X
ICSAB 280-430284/16	1		13:01	X
RINSE 280-430284/17			13:05	
LRA 280-430284/18			13:09	
RINSE 280-430284/19			13:13	
CCV 280-430284/20			13:17	
CCB 280-430284/21			13:20	
CCVL 280-430284/22			13:24	
ZZZZZZ			13:28	
ZZZZZZ			13:32	
ZZZZZZ			13:36	
ZZZZZZ			13:39	
ZZZZZZ			13:43	
ZZZZZZ			13:47	
ZZZZZZ			13:51	
ZZZZZZ			13:55	
CCV 280-430284/31			13:59	
CCB 280-430284/32			14:03	
CCVL 280-430284/33			14:07	
ZZZZZZ			14:10	
ZZZZZZ			14:14	
CCV 280-430284/36			14:18	
CCB 280-430284/37			14:22	
CCVL 280-430284/38			14:26	
RINSE 280-430284/39			14:30	
RINSE 280-430284/40			14:34	
RINSE 280-430284/41			14:42	
ICIS 280-430284/42			14:46	X

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/19/2018 12:02 End Date: 09/19/2018 21:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
IC 280-430284/43			14:50	X																								
CCV 280-430284/44			14:55																									
CCB 280-430284/45			14:58																									
CCVL 280-430284/46			15:02																									
ZZZZZZ			15:06																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:17																									
ZZZZZZ			15:21																									
ZZZZZZ			15:25																									
ZZZZZZ			15:29																									
ZZZZZZ			15:33																									
CCV 280-430284/55			15:36																									
CCB 280-430284/56			15:40																									
CCVL 280-430284/57			15:44																									
ZZZZZZ			15:48																									
ZZZZZZ			15:52																									
ZZZZZZ			15:56																									
ZZZZZZ			15:59																									
ZZZZZZ			16:03																									
CCV 280-430284/63			16:07																									
CCB 280-430284/64			16:11																									
CCVL 280-430284/65			16:18																									
RINSE 280-430284/66			16:22																									
RINSE 280-430284/67			16:26																									
RINSE 280-430284/68			16:30																									
RINSE 280-430284/69			16:33																									
RINSE 280-430284/70			16:37																									
ICIS 280-430284/71			16:41	X																								
IC 280-430284/72	1		16:45	X																								
CCV 280-430284/73	1		16:49	X																								
CCB 280-430284/74	1		16:53	X																								
CCVL 280-430284/75	1		16:56	X																								
ZZZZZZ			17:00																									
ZZZZZZ			17:04																									
MB 280-429322/1-D	1	D	17:08	X																								
LCS 280-429322/2-D	1	D	17:12	X																								
LCSD 280-429322/3-C	1	D	17:15	X																								
CCV 280-430284/81	1		17:19	X																								
CCB 280-430284/82	1		17:23	X																								
CCVL 280-430284/83	1		17:27	X																								
ZZZZZZ			17:31																									

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/19/2018 12:02 End Date: 09/19/2018 21:00

Lab Sample Id	D/F	Type	Time	Analytes
				Mn
ZZZZZZ			17:34	
ZZZZZZ			17:38	
ZZZZZZ			17:42	
ZZZZZZ			17:46	
ZZZZZZ			17:50	
ZZZZZZ			17:53	
CCV 280-430284/91			17:57	
CCB 280-430284/92			18:01	
CCVL 280-430284/93			18:05	
ZZZZZZ			18:09	
ZZZZZZ			18:12	
ZZZZZZ			18:16	
ZZZZZZ			18:20	
ZZZZZZ			18:24	
ZZZZZZ			18:27	
ZZZZZZ			18:31	
ZZZZZZ			18:35	
ZZZZZZ			18:39	
ZZZZZZ			18:43	
CCV 280-430284/104			18:46	
CCB 280-430284/105			18:50	
CCVL 280-430284/106			18:54	
ZZZZZZ			18:58	
ZZZZZZ			19:02	
ZZZZZZ			19:05	
ZZZZZZ			19:09	
ZZZZZZ			19:13	
ZZZZZZ			19:17	
CCV 280-430284/113			19:21	
CCB 280-430284/114			19:25	
CCVL 280-430284/115			19:28	
ZZZZZZ			19:32	
ZZZZZZ			19:36	
ZZZZZZ			19:40	
ZZZZZZ			19:44	
ZZZZZZ			19:47	
CCV 280-430284/121			19:51	
CCB 280-430284/122			19:55	
CCVL 280-430284/123			19:59	
RINSE 280-430284/124			20:03	
RINSE 280-430284/125			20:07	
RINSE 280-430284/126			20:10	

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/19/2018 12:02 End Date: 09/19/2018 21:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				Mn																									
RINSE 280-430284/127			20:14																										
RINSE 280-430284/128			20:18																										
ICIS 280-430284/129			20:22	X																									
IC 280-430284/130			20:26	X																									
CCV 280-430284/131			20:30																										
CCB 280-430284/132			20:33																										
CCVL 280-430284/133			20:37																										
ICSA 280-430284/134	1		20:41	X																									
ICSAB 280-430284/135	1		20:45	X																									
RINSE 280-430284/136			20:48																										
CCV 280-430284/137			20:52																										
CCB 280-430284/138			20:56																										
CCVL 280-430284/139			21:00																										

Prep Types:
D = Dissolved

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/20/2018 10:09 End Date: 09/20/2018 15:57

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
RINSE 280-430407/1			10:09																									
RINSE 280-430407/2			10:13																									
RINSE 280-430407/3			10:17																									
RINSE 280-430407/4			10:21																									
RINSE 280-430407/5			10:25																									
RINSE 280-430407/6			10:28																									
ICIS 280-430407/7			10:32	X																								
IC 280-430407/8	1		10:38	X																								
ICV 280-430407/9	1		10:42	X																								
ICB 280-430407/10	1		10:46	X																								
ICVL 280-430407/11	1		10:50	X																								
CRI 280-430407/12	1		10:53	X																								
CRI 280-430407/13			10:59																									
ZZZZZZ			11:03																									
ICSA 280-430407/15	1		11:06	X																								
ICSAB 280-430407/16	1		11:10	X																								
RINSE 280-430407/17			11:14																									
LRA 280-430407/18			11:18																									
RINSE 280-430407/19			11:22																									
CCV 280-430407/20	1		11:25	X																								
CCB 280-430407/21	1		11:29	X																								
CCVL 280-430407/22	1		11:33	X																								
ZZZZZZ			11:37																									
ZZZZZZ			11:41																									
ZZZZZZ			11:44																									
ZZZZZZ			11:48																									
ZZZZZZ			11:52																									
280-114110-4	1	D	11:56	X																								
280-114110-7	1	D	11:59	X																								
CCV 280-430407/30	1		12:03	X																								
CCB 280-430407/31	1		12:07	X																								
CCVL 280-430407/32	1		12:11	X																								
ZZZZZZ			12:15																									
ZZZZZZ			12:18																									
ZZZZZZ			12:22																									
ZZZZZZ			12:26																									
ZZZZZZ			12:30																									
ZZZZZZ			12:34																									
ZZZZZZ			12:37																									
ZZZZZZ			12:41																									
CCV 280-430407/41			12:45																									
CCB 280-430407/42			12:49																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/20/2018 10:09 End Date: 09/20/2018 15:57

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
CCVL 280-430407/43			12:53																									
ZZZZZZ			12:56																									
ZZZZZZ			13:00																									
ZZZZZZ			13:04																									
ZZZZZZ			13:08																									
ZZZZZZ			13:12																									
ZZZZZZ			13:16																									
ZZZZZZ			13:19																									
ZZZZZZ			13:23																									
ZZZZZZ			13:30																									
CCV 280-430407/53			13:35																									
CCB 280-430407/54			13:39																									
CCVL 280-430407/55			13:43																									
CCV 280-430407/56			14:10																									
CCV 280-430407/57			14:17																									
CCV 280-430407/58			14:21																									
CCB 280-430407/59			14:25																									
CCVL 280-430407/60			14:29																									
ZZZZZZ			14:33																									
ZZZZZZ			14:37																									
ZZZZZZ			14:40																									
ZZZZZZ			14:44																									
ZZZZZZ			14:48																									
ZZZZZZ			14:52																									
ZZZZZZ			14:56																									
ZZZZZZ			15:00																									
CCV 280-430407/69			15:04																									
CCB 280-430407/70			15:08																									
RINSE 280-430407/71			15:11																									
RINSE 280-430407/72			15:15																									
RINSE 280-430407/73			15:19																									
RINSE 280-430407/74			15:23																									
RINSE 280-430407/75			15:27																									
ICIS 280-430407/76			15:30	X																								
IC 280-430407/77			15:34	X																								
CCV 280-430407/78			15:38																									
CCB 280-430407/79			15:42																									
CCVL 280-430407/80			15:46																									
ICSA 280-430407/81	1		15:49	X																								
ICSAB 280-430407/82	1		15:53	X																								
RINSE 280-430407/83			15:57																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 09/20/2018 10:09 End Date: 09/20/2018 15:57

Lab Sample Id	D/F	Type	Time	Analytes																							
				Mn																							

Prep Types:
D = Dissolved

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICP Instrument ID: MT_052 Start Date: 09/21/2018 End Date: 09/21/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-430658/1	10:19										
ICVH 280-430658/8	10:45	99		99		102					
ICVH 280-430658/9	10:49	99		99		102					
ICV 280-430658/10	10:53	100		100		101					
ICV 280-430658/11	10:56	100		101		102					
ICVL 280-430658/12	11:00	102		102		102					
ICB 280-430658/15	11:10	102		102		103					
CRI 280-430658/16	11:14	104		104		104					
ICSA 280-430658/17	11:17	91		91		98					
ICSAB 280-430658/18	11:51	88		90		95					
CCVH 280-430658/75	19:39	107		107		110					
CCV 280-430658/76	19:43	108		108		111					
CCB 280-430658/77	19:46	107		107		108					
CCVL 280-430658/78	19:50	109		109		109					
MB 280-429322/1-E	19:53	110		109		110					
LCS 280-429322/2-E	19:56	106		106		110					
LCSD 280-429322/3-D	20:00	107		107		111					
280-114110-4	20:03	107		107		110					
280-114110-4 SD	20:07	107		107		108					
280-114110-4 MS	20:10	104		105		108					
280-114110-4 MSD	20:14	103		104		109					
280-114110-4 PDS	20:17	105		106		109					
280-114110-7	20:21	106		106		110					
CCVH 280-430658/88	20:24	104		103		106					
CCV 280-430658/89	20:28	106		107		109					
CCB 280-430658/90	20:31	107		107		108					
CCVL 280-430658/91	20:34	108		108		109					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 09/19/2018 End Date: 09/19/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
ICV 280-430284/9	12:32	95		98		99		99		96	
ICB 280-430284/10	12:36	97		99		100		100		98	
ICVL 280-430284/11	12:40	97		98		99		102		101	
CRI 280-430284/13	12:50	100		100		105		107		104	
ICSA 280-430284/15	12:58	96		95		98		100		94	
ICSAB 280-430284/16	13:01	92		92		96		100		95	
IC 280-430284/72	16:45	99		102		99		100		102	
CCV 280-430284/73	16:49	101		102		100		100		101	
CCB 280-430284/74	16:53	103		100		100		101		101	
CCVL 280-430284/75	16:56	102		105		101		101		101	
MB 280-429322/1-D	17:08	100		102		100		101		99	
LCS 280-429322/2-D	17:12	100		100		100		102		101	
LCSD 280-429322/3-C	17:15	102		101		101		102		101	
CCV 280-430284/81	17:19	104		106		102		103		102	
CCB 280-430284/82	17:23	106		105		102		103		104	
CCVL 280-430284/83	17:27	105		105		102		103		103	
ICSA 280-430284/134	20:41	97		97		95		96		99	
ICSAB 280-430284/135	20:45	94		96		94		96		97	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 09/19/2018 End Date: 09/19/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
ICV 280-430284/9	12:32	98		100		101		100			
ICB 280-430284/10	12:36	99		101		102		102			
ICVL 280-430284/11	12:40	100		102		104		103			
CRI 280-430284/13	12:50	102		106		109		106			
ICSA 280-430284/15	12:58	95		98		98		101			
ICSAB 280-430284/16	13:01	93		98		99		101			
IC 280-430284/72	16:45	98		99		98		99			
CCV 280-430284/73	16:49	99		99		98		101			
CCB 280-430284/74	16:53	100		99		100		101			
CCVL 280-430284/75	16:56	100		100		101		102			
MB 280-429322/1-D	17:08	99		100		100		101			
LCS 280-429322/2-D	17:12	99		100		99		102			
LCSD 280-429322/3-C	17:15	99		101		102		103			
CCV 280-430284/81	17:19	100		101		101		102			
CCB 280-430284/82	17:23	101		101		101		102			
CCVL 280-430284/83	17:27	100		101		102		103			
ICSA 280-430284/134	20:41	93		94		91		97			
ICSAB 280-430284/135	20:45	93		93		91		96			

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 09/20/2018 End Date: 09/20/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
IC 280-430407/8	10:38	97		98		102		102		97	
ICV 280-430407/9	10:42	98		97		101		101		96	
ICB 280-430407/10	10:46	100		98		101		101		100	
ICVL 280-430407/11	10:50	103		99		102		103		102	
CRI 280-430407/12	10:53	104		100		103		104		101	
ICSA 280-430407/15	11:06	98		96		99		100		97	
ICSAB 280-430407/16	11:10	94		93		98		100		98	
CCV 280-430407/20	11:25	99		99		102		103		99	
CCB 280-430407/21	11:29	102		101		104		104		101	
CCVL 280-430407/22	11:33	101		101		105		106		102	
280-114110-4	11:56	102		99		106		113		106	
280-114110-7	11:59	102		100		108		114		105	
CCV 280-430407/30	12:03	102		101		104		108		97	
CCB 280-430407/31	12:07	104		99		105		108		99	
CCVL 280-430407/32	12:11	103		101		106		108		100	
ICSA 280-430407/81	15:49	93		90		88		90		89	
ICSAB 280-430407/82	15:53	88		90		87		89		88	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 09/20/2018 End Date: 09/20/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
IC 280-430407/8	10:38	101		102		101		101			
ICV 280-430407/9	10:42	100		101		101		101			
ICB 280-430407/10	10:46	100		101		101		101			
ICVL 280-430407/11	10:50	101		103		105		103			
CRI 280-430407/12	10:53	103		103		104		103			
ICSA 280-430407/15	11:06	95		97		96		99			
ICSAB 280-430407/16	11:10	96		97		97		99			
CCV 280-430407/20	11:25	100		103		102		102			
CCB 280-430407/21	11:29	102		104		105		102			
CCVL 280-430407/22	11:33	103		105		106		103			
280-114110-4	11:56	104		113		111		108			
280-114110-7	11:59	104		111		111		108			
CCV 280-430407/30	12:03	103		107		108		104			
CCB 280-430407/31	12:07	103		107		108		106			
CCVL 280-430407/32	12:11	103		108		108		105			
ICSA 280-430407/81	15:49	86		88		88		93			
ICSAB 280-430407/82	15:53	85		87		86		92			

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429322 Batch Start Date: 09/11/18 21:35 Batch Analyst: Broander, Laura L

Batch Method: FILTRATION Batch End Date: 09/12/18 01:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	Final pH	InitialAmount	FinalAmount		
MB 280-429322/1		FILTRATION, 3005A, 6010C				250 mL	250 mL		
LCS 280-429322/2		FILTRATION, 3005A, 6010C				250 mL	250 mL		
LCSD 280-429322/3		FILTRATION, 3005A, 6010C				250 mL	250 mL		
280-114110-A-4	775MW-6	FILTRATION, 3005A, 6010C	D	7 SU	<2 SU	250 mL	250 mL		
280-114110-A-7	775MW-6-dup	FILTRATION, 3005A, 6010C	D	7 SU	<2 SU	250 mL	250 mL		

Batch Notes	
Filter ID	11072146
Nitric Acid ID	192582
Pipette/Syringe/Dispenser ID	8086667

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 430229 Batch Start Date: 09/20/18 18:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3005A Batch End Date: 09/21/18 00:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ICP SPK 2B 00079	ICP SPK 3A 00152	
MB 280-429322/1-A		3005A, 6010C			50 mL	50 mL			
LCS 280-429322/2-A		3005A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
LCSD 280-429322/3-A		3005A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
280-114110-A-4-A	775MW-6	3005A, 6010C	D	<2 SU	50 mL	50 mL			
280-114110-A-4-A MS	775MW-6	3005A, 6010C	D	<2 SU	50 mL	50 mL	0.5 mL	0.5 mL	
280-114110-A-4-A MSD	775MW-6	3005A, 6010C	D	<2 SU	50 mL	50 mL	0.5 mL	0.5 mL	
280-114110-A-7-A	775MW-6-dup	3005A, 6010C	D	<2 SU	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion End Time	09/21/2018 00:15
Digestion Start Time	09/20/2018 18:00
Digestion Unit ID	13
Hydrochloric Acid ID	0000198300-03/23
Nitric Acid ID	1804377
Pipette/Syringe/Dispenser ID	MET-109
Thermometer ID	QA-8
Digestion Tube/Cup ID	1804377
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	90 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429322 Batch Start Date: 09/11/18 21:35 Batch Analyst: Broander, Laura L

Batch Method: FILTRATION Batch End Date: 09/12/18 01:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	Final pH	InitialAmount	FinalAmount		
MB 280-429322/1		FILTRATION, 3005A, 6020A				250 mL	250 mL		
LCS 280-429322/2		FILTRATION, 3005A, 6020A				250 mL	250 mL		
LCSD 280-429322/3		FILTRATION, 3005A, 6020A				250 mL	250 mL		
280-114110-A-4	775MW-6	FILTRATION, 3005A, 6020A	D	7 SU	<2 SU	250 mL	250 mL		
280-114110-A-7	775MW-6-dup	FILTRATION, 3005A, 6020A	D	7 SU	<2 SU	250 mL	250 mL		

Batch Notes	
Filter ID	11072146
Nitric Acid ID	192582
Pipette/Syringe/Dispenser ID	8086667

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-114110-1

SDG No.:

Batch Number: 429435 Batch Start Date: 09/13/18 14:30 Batch Analyst: Lodl, Dagmara A

Batch Method: 3005A Batch End Date: 09/13/18 19:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MS CALSTD-1 00129	MS spike 2 00070	
MB 280-429322/1-A		3005A, 6020A			50 mL	50 mL			
LCS 280-429322/2-A		3005A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
LCSD 280-429322/3-A		3005A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
280-114110-A-4-A	775MW-6	3005A, 6020A	D	<2 SU	50 mL	50 mL			
280-114110-A-7-A	775MW-6-dup	3005A, 6020A	D	<2 SU	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	93 Degrees C
Digestion End Time	09/13/2018 19:15
Digestion Start Time	09/13/2018 14:30
Digestion Unit ID	02
Nitric Acid ID	0000192582-05/23
Pipette/Syringe/Dispenser ID	MET-88
Thermometer ID	QA-31
Digestion Tube/Cup ID	1804377
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Path: D:\My Results\52A092118.esws

Date created: 9/21/2018 9:27:50 AM

Instrument used: MY18171010

Software Version : 7.4.1.10449

Firmware Version : 3585

Notes:

Sample Name: icis

Date: 9/21/2018 10:19:42 AM Rack:Tube: S1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000000 !	ppm	N/A	N/A	-88.164700 !	Y 377.433
Al (394.401 nm)	0.000000 !	ppm	N/A	N/A	41.174000 !	Y 377.433
Al H (396.152 nm)	0.000000 !	ppm	N/A	N/A	0.333605 !	Y_R 377.433
As (188.980 nm)	0.000000 !	ppm	N/A	N/A	-10.233500 !	Y 242.219
B (249.678 nm)	0.000000 !	ppm	N/A	N/A	-0.484127 !	Y 242.219
Ba (493.408 nm)	0.000000 !	ppm	N/A	N/A	539.256000 !	Y_R 488.368
Be (234.861 nm)	0.000000 !	ppm	N/A	N/A	-3.949070 !	Y_R 488.368
Bi (223.061 nm)	0.000000 !	ppm	N/A	N/A	58.211400 !	Y 377.433
Ca (315.887 nm)	0.000000 !	ppm	N/A	N/A	-6.001671 !	Y_R 377.433
Cd (214.439 nm)	0.000000 !	ppm	N/A	N/A	-13.103100 !	Y 377.433
Co (228.615 nm)	0.000000 !	ppm	N/A	N/A	-17.759700 !	Y 242.219
Cr (205.560 nm)	0.000000 !	ppm	N/A	N/A	-10.233600 !	Y 377.433
Cu (324.754 nm)	0.000000 !	ppm	N/A	N/A	143.285000 !	Y 377.433
Fe (238.204 nm)	0.000000 !	ppm	N/A	N/A	27.966679 !	Y_R 377.433
Fe H (259.940 nm)	0.000000 !	ppm	N/A	N/A	17.892200 !	Y_R 377.433
K (766.491 nm)	0.000000 !	ppm	N/A	N/A	1755.660000 !	Y_R2 488.368
Li (670.783 nm)	0.000000 !	ppm	N/A	N/A	-1158.950000 !	Y_R2 488.368
Mg (279.078 nm)	0.000000 !	ppm	N/A	N/A	6.545170 !	Y 377.433
Mn (257.610 nm)	0.000000 !	ppm	N/A	N/A	54.776500 !	Y 377.433
Mo (202.032 nm)	0.000000 !	ppm	N/A	N/A	20.415500 !	Y 377.433
Na (589.592 nm)	0.000000 !	ppm	N/A	N/A	-96.793500 !	Y_R2 488.368
Na H (589.593 nm)	0.000000 !	ppm	N/A	N/A	368.083526 !	Y_R4
Ni (231.604 nm)	0.000000 !	ppm	N/A	N/A	16.172800 !	Y 377.433
P (213.618 nm)	0.000000 !	ppm	N/A	N/A	-1.180550 !	Y 242.219
Pb (220.353 nm)	0.000000 !	ppm	N/A	N/A	9.421270 !	Y 242.219
S (181.972 nm)	0.000000 !	ppm	N/A	N/A	0.936782 !	Y 377.433
Sb (206.834 nm)	0.000000 !	ppm	N/A	N/A	19.856900 !	Y 377.433
Se (196.026 nm)	0.000000 !	ppm	N/A	N/A	9.152350 !	Y 242.219
Si (288.158 nm)	0.000000 !	ppm	N/A	N/A	371.218000 !	Y 377.433
Sn (189.925 nm)	0.000000 !	ppm	N/A	N/A	-0.491566 !	Y 377.433
Sr (421.552 nm)	0.000000 !	ppm	N/A	N/A	154.596399 !	Y_R 488.368
Th (288.505 nm)	0.000000 !	ppm	N/A	N/A	8.545140 !	Y 377.433
Ti (336.122 nm)	0.000000 !	ppm	N/A	N/A	-111.156000 !	Y 377.433
Tl (190.794 nm)	0.000000 !	ppm	N/A	N/A	2.343830 !	Y 377.433
U (409.013 nm)	0.000000 !	ppm	N/A	N/A	247.313000 !	Y 377.433
V (292.401 nm)	0.000000 !	ppm	N/A	N/A	-263.250000 !	Y 377.433
Zn (206.200 nm)	0.000000 !	ppm	N/A	N/A	4.280500 !	Y 377.433
Zr (343.823 nm)	0.000000 !	ppm	N/A	N/A	114.040000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000 !	10288.703923 !	0.000000	0.00
Y 377.433	1.000000 !	425807.022179 !	0.000000	0.00
Y_R 377.433	1.000000 !	40232.200000 !	0.000000	0.00
Y_R 488.368	1.000000 !	37091.900000 !	0.000000	0.00
Y_R2 488.368	1.000000 !	70987.610754 !	0.000000	0.00
Y_R4	1.000000 !	34281.800000 !	0.000000	0.00

Sample Name: ic1

Date: 9/21/2018 10:22:54 AM Rack:Tube: 3:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.000000 !	ppm	N/A	N/A	25114.500000 !	Y 377.433
Al (394.401 nm)	1.000000 !	ppm	N/A	N/A	11153.100000 !	Y 377.433
Al H (396.152 nm)	1.000000 !	ppm	N/A	N/A	1488.620000 !	Y_R 377.433
As (188.980 nm)	2.000000 !	ppm	N/A	N/A	2599.590000 !	Y 242.219
B (249.678 nm)	1.000000 !	ppm	N/A	N/A	3752.730000 !	Y 242.219
Ba (493.408 nm)	1.000000 !	ppm	N/A	N/A	91882.600000 !	Y_R 488.368
Be (234.861 nm)	1.000000 !	ppm	N/A	N/A	54180.500000 !	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	53.428100 !	Y 377.433
Ca (315.887 nm)	10.000000 !	ppm	N/A	N/A	6588.241448 !	Y_R 377.433
Cd (214.439 nm)	1.000000 !	ppm	N/A	N/A	25390.600000 !	Y 377.433
Co (228.615 nm)	1.000000 !	ppm	N/A	N/A	19862.900000 !	Y 242.219
Cr (205.560 nm)	1.000000 !	ppm	N/A	N/A	4892.350000 !	Y 377.433
Cu (324.754 nm)	1.000000 !	ppm	N/A	N/A	42804.800000 !	Y 377.433
Fe (238.204 nm)	5.000000 !	ppm	N/A	N/A	8183.229366 !	Y_R 377.433
Fe H (259.940 nm)	5.000000 !	ppm	N/A	N/A	4605.480000 !	Y_R 377.433
K (766.491 nm)	100.000000 !	ppm	N/A	N/A	106435.000000 !	Y_R2 488.368
Li (670.783 nm)	2.000000 !	ppm	N/A	N/A	26431.800000 !	Y_R2 488.368
Mg (279.078 nm)	40.000000 !	ppm	N/A	N/A	84902.500000 !	Y 377.433
Mn (257.610 nm)	1.000000 !	ppm	N/A	N/A	176730.000000 !	Y 377.433
Mo (202.032 nm)	1.000000 !	ppm	N/A	N/A	10424.200000 !	Y 377.433
Na (589.592 nm)		ppm	N/A	N/A	4987.910000 !	Y_R2 488.368
Na H (589.593 nm)		ppm	N/A	N/A	4198.505817 !	Y_R4
Ni (231.604 nm)	1.000000 !	ppm	N/A	N/A	3720.040000 !	Y 377.433
P (213.618 nm)	2.000000 !	ppm	N/A	N/A	2184.740000 !	Y 242.219
Pb (220.353 nm)	2.000000 !	ppm	N/A	N/A	4183.480000 !	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	8.157198 !	Y 377.433
Sb (206.834 nm)	2.000000 !	ppm	N/A	N/A	3254.720000 !	Y 377.433
Se (196.026 nm)	2.000000 !	ppm	N/A	N/A	2640.160000 !	Y 242.219
Si (288.158 nm)	10.000000 !	ppm	N/A	N/A	40823.400000 !	Y 377.433
Sn (189.925 nm)	2.000000 !	ppm	N/A	N/A	2358.250000 !	Y 377.433
Sr (421.552 nm)	1.000000 !	ppm	N/A	N/A	114965.832177 !	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	-68.229800 !	Y 377.433
Ti (336.122 nm)	1.000000 !	ppm	N/A	N/A	90197.000000 !	Y 377.433
Tl (190.794 nm)	2.000000 !	ppm	N/A	N/A	3582.550000 !	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	145.334000 !	Y 377.433
V (292.401 nm)	1.000000 !	ppm	N/A	N/A	41083.100000 !	Y 377.433
Zn (206.200 nm)	1.000000 !	ppm	N/A	N/A	3392.390000 !	Y 377.433
Zr (343.823 nm)	1.000000 !	ppm	N/A	N/A	39120.400000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992188 !	10208.326407 !	0.001159	0.12
Y 377.433	0.994892 !	423632.126879 !	0.001417	0.14
Y_R 377.433	1.009120 !	40599.000000 !	0.004362	0.43
Y_R 488.368	1.012070 !	37539.500000 !	0.004427	0.44
Y_R2 488.368	1.009203 !	71640.917435 !	0.005070	0.50
Y_R4	1.010500 !	34641.600000 !	0.003055	0.30

Sample Name: ic3

Date: 9/21/2018 10:27:02 AM Rack:Tube: 3:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-80.827800 !	Y 377.433
Al (394.401 nm)		ppm	N/A	N/A	-5.819180 !	Y 377.433
Al H (396.152 nm)		ppm	N/A	N/A	3.304050 !	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-8.656000 !	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	5.976280 !	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	572.518000 !	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	2.928280 !	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	54.750200 !	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-5.827599 !	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	-5.068390 !	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	-17.231500 !	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-8.925450 !	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	149.887000 !	Y 377.433
Fe (238.204 nm)		ppm	N/A	N/A	19.563735 !	Y_R 377.433
Fe H (259.940 nm)		ppm	N/A	N/A	11.179700 !	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	1850.590000 !	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-1037.090000 !	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	21.110400 !	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	71.378200 !	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	21.951200 !	Y 377.433
Na (589.592 nm)	50.000000 !	ppm	N/A	N/A	26987.200000 !	Y_R2 488.368
Na H (589.593 nm)	50.000000 !	ppm	N/A	N/A	19209.519484 !	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	15.569800 !	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	-0.072080 !	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	10.911700 !	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	3.120531 !	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	22.450500 !	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	9.170480 !	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	389.681000 !	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	-0.714257 !	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	157.571910 !	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	-2.930400 !	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	-94.276100 !	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	0.322354 !	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	235.187000 !	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-250.052000 !	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	3.638250 !	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	113.089000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004448 !	10334.471187 !	0.003361	0.33
Y 377.433	1.005884 !	428312.346469 !	0.005137	0.51
Y_R 377.433	1.025150 !	41244.100000 !	0.003733	0.36
Y_R 488.368	1.019750 !	37824.500000 !	0.006174	0.61
Y_R2 488.368	1.026937 !	72899.802268 !	0.010815	1.05
Y_R4	1.016770 !	34856.500000 !	0.004798	0.47

Sample Name: ic2

Date: 9/21/2018 10:30:37 AM Rack:Tube: 3:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-172.259000 !	Y 377.433
Al (394.401 nm)	100.000000 !	ppm	N/A	N/A	1133660.000000 !	Y 377.433
Al H (396.152 nm)	100.000000 !	ppm	N/A	N/A	172980.000000 !	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-16.637300 !	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	-10.966700 !	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	765.612000 !	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	-643.486000 !	Y_R 488.368
Bi (223.061 nm)	2.000000 !	ppm	N/A	N/A	3268.950000 !	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	79.528768 !	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	-0.304003 !	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	105.292000 !	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-16.153200 !	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	1055.000000 !	Y 377.433
Fe (238.204 nm)	100.000000 !	ppm	N/A	N/A	161718.344058 !	Y_R 377.433
Fe H (259.940 nm)	100.000000 !	ppm	N/A	N/A	90609.400000 !	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	2279.820000 !	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-1097.060000 !	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-326.086000 !	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	296.623000 !	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	19.377100 !	Y 377.433
Na (589.592 nm)	500.000000 !	ppm	N/A	N/A	255785.000000 !	Y_R2 488.368
Na H (589.593 nm)	500.000000 !	ppm	N/A	N/A	186012.196326 !	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	35.075200 !	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	-47.591800 !	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	36.742100 !	Y 242.219
S (181.972 nm)	10.000000 !	ppm	N/A	N/A	4654.531630 !	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	36.570900 !	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-11.635500 !	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	467.518000 !	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	2.175240 !	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	237.430971 !	Y_R 488.368
Th (288.505 nm)	10.000000 !	ppm	N/A	N/A	9656.290000 !	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	23.786300 !	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-13.340300 !	Y 377.433
U (409.013 nm)	20.000000 !	ppm	N/A	N/A	47108.700000 !	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-577.297000 !	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	78.706500 !	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-306.131000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964991 !	9928.511810 !	0.003000	0.31
Y 377.433	0.959949 !	408752.824657 !	0.002390	0.25
Y_R 377.433	1.005950 !	40471.400000 !	0.006435	0.64
Y_R 488.368	1.018260 !	37769.000000 !	0.013639	1.34
Y_R2 488.368	0.998524 !	70882.835239 !	0.007998	0.80
Y_R4	1.029470 !	35292.000000 !	0.006635	0.64

Sample Name: S1-5320276

Date: 9/21/2018 10:34:45 AM Rack:Tube: 3:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.001500 !	ppm	0.002366	0.24	25100.000000 !	Y 377.433
Al (394.401 nm)	0.989662 !	ppm	0.002422	0.24	11262.000000 !	Y 377.433
Al H (396.152 nm)	0.972434 !	ppm	0.016584	1.71	1837.710000 !	Y_R 377.433
As (188.980 nm)	2.001020 !	ppm	0.002075	0.10	2600.790000 !	Y 242.219
B (249.678 nm)	1.001460 !	ppm	0.006628	0.66	3756.680000 !	Y 242.219
Ba (493.408 nm)	0.993764 !	ppm	0.001219	0.12	91316.600000 !	Y_R 488.368
Be (234.861 nm)	0.995211 !	ppm	0.002431	0.24	53891.700000 !	Y_R 488.368
Bi (223.061 nm)	-0.004558 !u	ppm	0.001283	28.15	51.687900 !	Y 377.433
Ca (315.887 nm)	9.844515 !	ppm	0.023977	0.24	6485.797318 !	Y_R 377.433
Cd (214.439 nm)	0.993077 !	ppm	0.002517	0.25	25216.600000 !	Y 377.433
Co (228.615 nm)	0.991469 !	ppm	0.002917	0.29	19732.600000 !	Y 242.219
Cr (205.560 nm)	0.996761 !	ppm	0.005357	0.54	4870.980000 !	Y 377.433
Cu (324.754 nm)	0.997139 !	ppm	0.002651	0.27	42690.400000 !	Y 377.433
Fe (238.204 nm)	4.957982 !	ppm	0.011275	0.23	8114.695832 !	Y_R 377.433
Fe H (259.940 nm)	4.979100 !	ppm	0.004368	0.09	4586.560000 !	Y_R 377.433
K (766.491 nm)	99.145100 !	ppm	0.063743	0.06	105541.000000 !	Y_R2 488.368
Li (670.783 nm)	1.979420 !	ppm	0.000544	0.03	26147.800000 !	Y_R2 488.368
Mg (279.078 nm)	39.630100 !	ppm	0.052557	0.13	84113.500000 !	Y 377.433
Mn (257.610 nm)	0.994724 !	ppm	0.000175	0.02	175797.000000 !	Y 377.433
Mo (202.032 nm)	0.993999 !	ppm	0.000840	0.08	10361.800000 !	Y 377.433
Na (589.592 nm)	9.544030 !	ppm	0.008435	0.09	5056.500000 !	Y_R2 488.368
Na H (589.593 nm)	10.854293 Q!u	ppm	0.155362	1.43	4597.702011 Q!	Y_R4
Ni (231.604 nm)	0.985497 !	ppm	0.000753	0.08	3668.830000 !	Y 377.433
P (213.618 nm)	2.001210 !	ppm	0.000725	0.04	2143.780000 !	Y 242.219
Pb (220.353 nm)	1.987390 !	ppm	0.004423	0.22	4153.300000 !	Y 242.219
S (181.972 nm)	0.005767 !	ppm	0.003585	62.17	7.588909 !	Y 377.433
Sb (206.834 nm)	1.992180 !	ppm	0.000647	0.03	3239.990000 !	Y 377.433
Se (196.026 nm)	1.997740 !	ppm	0.012298	0.62	2637.410000 !	Y 242.219
Si (288.158 nm)	10.052500 !	ppm	0.012151	0.12	41035.800000 !	Y 377.433
Sn (189.925 nm)	1.989980 !	ppm	0.000412	0.02	2346.460000 !	Y 377.433
Sr (421.552 nm)	0.993555 !	ppm	0.002568	0.26	114226.451517 !	Y_R 488.368
Th (288.505 nm)	-0.010206 !u	ppm	0.012280	> 100.00	-59.743000 !	Y 377.433
Ti (336.122 nm)	0.998750 !	ppm	0.001931	0.19	90112.200000 !	Y 377.433
Tl (190.794 nm)	1.989510 !	ppm	0.008534	0.43	3559.390000 !	Y 377.433
U (409.013 nm)	-0.000299 !u	ppm	0.004932	> 100.00	156.261000 !	Y 377.433
V (292.401 nm)	0.996235 !	ppm	0.001963	0.20	40607.900000 !	Y 377.433
Zn (206.200 nm)	0.981270 !	ppm	0.002332	0.24	3329.020000 !	Y 377.433
Zr (343.823 nm)	1.001530 !	ppm	0.001575	0.16	39184.800000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001890 !	10308.147018 !	0.000017	0.00
Y 377.433	1.005467 !	428134.893271 !	0.000321	0.03
Y_R 377.433	1.015570 !	40858.800000 !	0.000485	0.05
Y_R 488.368	1.018890 !	37792.400000 !	0.000724	0.07
Y_R2 488.368	1.018469 !	72298.678844 !	0.008222	0.81
Y_R4	1.019050 !	34934.800000 !	0.007240	0.71

Sample Name: S3-5266790

Date: 9/21/2018 10:38:20 AM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000152 !u	ppm	0.000285	> 100.00	-84.148000 !	Y 377.433
Al (394.401 nm)	-0.003952 !u	ppm	0.001246	31.54	-5.116330 !	Y 377.433
Al H (396.152 nm)	0.145534 !u	ppm	0.009913	6.81	8.455860 !	Y_R 377.433
As (188.980 nm)	0.001171 !u	ppm	0.002865	> 100.00	-8.705030 !	Y 242.219
B (249.678 nm)	0.001161 !u	ppm	0.002943	> 100.00	3.876230 !	Y 242.219
Ba (493.408 nm)	0.000022 !u	ppm	0.000505	> 100.00	541.247000 !	Y_R 488.368
Be (234.861 nm)	0.000139 !	ppm	0.000079	57.04	3.591770 !	Y_R 488.368
Bi (223.061 nm)	-0.002559 !u	ppm	0.002232	87.22	54.103600 !	Y 377.433
Ca (315.887 nm)	0.003440 !u	ppm	0.009757	> 100.00	-3.733274 !	Y_R 377.433
Cd (214.439 nm)	0.000198 !	ppm	0.000064	32.36	-8.069710 !	Y 377.433
Co (228.615 nm)	0.000173 !u	ppm	0.000338	> 100.00	-14.322800 !	Y 242.219
Cr (205.560 nm)	-0.000278 !u	ppm	0.000238	85.49	-11.594200 !	Y 377.433
Cu (324.754 nm)	0.000466 !	ppm	0.000150	32.20	163.733000 !	Y 377.433
Fe (238.204 nm)	-0.003915 !u	ppm	0.004211	> 100.00	21.580843 !	Y_R 377.433
Fe H (259.940 nm)	-0.070557 !u	ppm	0.004094	5.80	15.086900 !	Y_R 377.433
K (766.491 nm)	0.095531 !	ppm	0.031072	32.53	1855.660000 !	Y_R2 488.368
Li (670.783 nm)	0.008875 !	ppm	0.004643	52.31	-1036.520000 !	Y_R2 488.368
Mg (279.078 nm)	0.007267 !	ppm	0.000124	1.70	22.264300 !	Y 377.433
Mn (257.610 nm)	0.000085 !	ppm	0.000021	24.46	69.845900 !	Y 377.433
Mo (202.032 nm)	-0.000008 !u	ppm	0.000034	> 100.00	20.333600 !	Y 377.433
Na (589.592 nm)	50.027000 !	ppm	0.105092	0.21	27001.800000 !	Y_R2 488.368
Na H (589.593 nm)	50.632555 !	ppm	0.095443	0.19	19444.039003 !	Y_R4
Ni (231.604 nm)	-0.000943 !u	ppm	0.000316	33.51	12.682300 !	Y 377.433
P (213.618 nm)	-0.002761 !u	ppm	0.003221	> 100.00	-4.191070 !	Y 242.219
Pb (220.353 nm)	0.001253 !u	ppm	0.001909	> 100.00	11.993100 !	Y 242.219
S (181.972 nm)	0.006772 !	ppm	0.001572	23.21	4.088624 !	Y 377.433
Sb (206.834 nm)	0.000433 !u	ppm	0.001716	> 100.00	20.557000 !	Y 377.433
Se (196.026 nm)	-0.003539 !u	ppm	0.001283	36.26	4.497660 !	Y 242.219
Si (288.158 nm)	0.002415 !	ppm	0.000557	23.07	380.987000 !	Y 377.433
Sn (189.925 nm)	0.000613 !	ppm	0.000155	25.25	0.231484 !	Y 377.433
Sr (421.552 nm)	-0.000085 !u	ppm	0.000119	> 100.00	144.801789 !	Y_R 488.368
Th (288.505 nm)	-0.007246 !u	ppm	0.001589	21.92	1.466870 !	Y 377.433
Ti (336.122 nm)	0.000206 !	ppm	0.000085	41.11	-92.574100 !	Y 377.433
Tl (190.794 nm)	0.003498 !	ppm	0.002967	84.82	8.606410 !	Y 377.433
U (409.013 nm)	-0.015371 !u	ppm	0.002020	13.14	211.326000 !	Y 377.433
V (292.401 nm)	0.000306 !	ppm	0.000235	76.69	-249.813000 !	Y 377.433
Zn (206.200 nm)	-0.000093 !u	ppm	0.000220	> 100.00	3.965780 !	Y 377.433
Zr (343.823 nm)	-0.000086 !u	ppm	0.000100	> 100.00	110.687000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015397 !	10447.114095 !	0.003846	0.38
Y 377.433	1.016189 !	432700.477570 !	0.005039	0.50
Y_R 377.433	1.030710 !	41467.600000 !	0.003531	0.34
Y_R 488.368	1.039060 !	38540.600000 !	0.009700	0.93
Y_R2 488.368	1.029681 !	73094.585079 !	0.008160	0.79
Y_R4	1.022820 !	35064.000000 !	0.007896	0.77

Sample Name: S2-5320297

Date: 9/21/2018 10:41:51 AM Rack:Tube: 3:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.004260 !	ppm	0.000677	15.89	-176.504000 !	Y 377.433
Al (394.401 nm)	100.913000 !o	ppm	0.012619	0.01	1121590.000000 !	Y 377.433
Al H (396.152 nm)	99.337700 !	ppm	0.235255	0.24	171829.000000 !	Y_R 377.433
As (188.980 nm)	-0.000746 !u	ppm	0.001569	> 100.00	-15.096700 !	Y 242.219
B (249.678 nm)	0.005353 !	ppm	0.002955	55.20	-10.604600 !	Y 242.219
Ba (493.408 nm)	0.001642 !	ppm	0.000805	49.05	761.828000 !	Y_R 488.368
Be (234.861 nm)	-0.000964 !u	ppm	0.000432	44.84	-637.739000 !	Y_R 488.368
Bi (223.061 nm)	1.983160 !	ppm	0.013420	0.68	3254.520000 !	Y 377.433
Ca (315.887 nm)	0.049683 !	ppm	0.010134	20.40	34.948236 !	Y_R 377.433
Cd (214.439 nm)	-0.000752 !u	ppm	0.000133	17.62	3.130940 !	Y 377.433
Co (228.615 nm)	0.006024 !	ppm	0.000266	4.41	102.026000 !	Y 242.219
Cr (205.560 nm)	-0.000396 !u	ppm	0.000071	17.85	-14.619800 !	Y 377.433
Cu (324.754 nm)	0.001508 !	ppm	0.000258	17.12	1044.520000 !	Y 377.433
Fe (238.204 nm)	98.450059 !o	ppm	0.180306	0.18	160605.184866 !	Y_R 377.433
Fe H (259.940 nm)	99.433500 !	ppm	0.271198	0.27	90096.500000 !	Y_R 377.433
K (766.491 nm)	0.531531 !	ppm	0.001042	0.20	2312.060000 !	Y_R2 488.368
Li (670.783 nm)	0.003458 !u	ppm	0.005478	> 100.00	-1111.250000 !	Y_R2 488.368
Mg (279.078 nm)	-0.025291 !u	ppm	0.002414	9.54	-336.104000 !	Y 377.433
Mn (257.610 nm)	0.000859 !	ppm	0.000003	0.34	206.617000 !	Y 377.433
Mo (202.032 nm)	0.000531 !	ppm	0.000171	32.20	25.938800 !	Y 377.433
Na (589.592 nm)	468.588000 !o	ppm	2.896890	0.62	253728.000000 !	Y_R2 488.368
Na H (589.593 nm)	499.267331 !	ppm	2.426996	0.49	185740.467581 !	Y_R4
Ni (231.604 nm)	0.000968 !	ppm	0.000954	98.61	34.111100 !	Y 377.433
P (213.618 nm)	-0.039187 !u	ppm	0.001065	2.72	-46.461800 !	Y 242.219
Pb (220.353 nm)	0.002532 !	ppm	0.000439	17.32	36.203500 !	Y 242.219
S (181.972 nm)	9.859644 !	ppm	0.058725	0.60	4588.813102 !	Y 377.433
Sb (206.834 nm)	0.001074 !u	ppm	0.005902	> 100.00	29.628300 !	Y 377.433
Se (196.026 nm)	-0.000511 !u	ppm	0.001904	> 100.00	-13.872600 !	Y 242.219
Si (288.158 nm)	0.025646 !	ppm	0.001571	6.12	476.569000 !	Y 377.433
Sn (189.925 nm)	0.003979 !	ppm	0.000299	7.52	4.553190 !	Y 377.433
Sr (421.552 nm)	0.000398 !	ppm	0.000123	31.01	211.720414 !	Y_R 488.368
Th (288.505 nm)	9.901390 !	ppm	0.003614	0.04	9612.010000 !	Y 377.433
Ti (336.122 nm)	0.001611 !	ppm	0.000005	0.28	16.612700 !	Y 377.433
Tl (190.794 nm)	-0.009734 !u	ppm	0.000047	0.48	-16.486000 !	Y 377.433
U (409.013 nm)	19.816000 !	ppm	0.012703	0.06	46731.800000 !	Y 377.433
V (292.401 nm)	-0.006617 !u	ppm	0.000240	3.63	-570.045000 !	Y 377.433
Zn (206.200 nm)	0.007239 !	ppm	0.000812	11.21	30.490000 !	Y 377.433
Zr (343.823 nm)	-0.013371 !u	ppm	0.000031	0.23	-310.584000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957619 !	9852.661485 !	0.001569	0.16
Y 377.433	0.954401 !	406390.851272 !	0.001034	0.11
Y_R 377.433	0.990555 !	39852.200000 !	0.000381	0.04
Y_R 488.368	0.999888 !	37087.700000 !	0.012145	1.21
Y_R2 488.368	0.984912 !	69916.579911 !	0.003923	0.40
Y_R4	1.015150 !	34801.000000 !	0.000606	0.06

Sample Name: ICVH-5320360

Date: 9/21/2018 10:45:58 AM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000146 !u	ppm	0.000368	> 100.00	-134.126000 !	Y 377.433
Al (394.401 nm)	40.654100 !o	ppm	0.057498	0.14	451762.000000 !	Y 377.433
Al H (396.152 nm)	40.614300 !	ppm	0.084621	0.21	70106.500000 !	Y_R 377.433
As (188.980 nm)	-0.001348 !u	ppm	0.001978	> 100.00	-14.521900 !	Y 242.219
B (249.678 nm)	0.002971 !	ppm	0.000377	12.68	-13.852500 !	Y 242.219
Ba (493.408 nm)	0.000544 !	ppm	0.000110	20.22	647.898000 !	Y_R 488.368
Be (234.861 nm)	-0.000948 !u	ppm	0.000382	40.27	-527.258000 !	Y_R 488.368
Bi (223.061 nm)	0.473465 !	ppm	0.000475	0.10	828.525000 !	Y 377.433
Ca (315.887 nm)	-0.008927 !u	ppm	0.009040	> 100.00	-8.545954 !	Y_R 377.433
Cd (214.439 nm)	-0.000569 !u	ppm	0.000065	11.34	1.130580 !	Y 377.433
Co (228.615 nm)	0.002278 !	ppm	0.000077	3.37	27.538500 !	Y 242.219
Cr (205.560 nm)	-0.000120 !u	ppm	0.000021	17.11	-12.013600 !	Y 377.433
Cu (324.754 nm)	0.001221 !	ppm	0.000409	33.51	529.546000 !	Y 377.433
Fe (238.204 nm)	80.063638 !o	ppm	0.142527	0.18	130615.966493 !	Y_R 377.433
Fe H (259.940 nm)	81.080900 !	ppm	0.210611	0.26	73481.900000 !	Y_R 377.433
K (766.491 nm)	0.199195 !	ppm	0.028749	14.43	1964.170000 !	Y_R2 488.368
Li (670.783 nm)	-0.001327 !u	ppm	0.002233	> 100.00	-1177.250000 !	Y_R2 488.368
Mg (279.078 nm)	-0.003796 !u	ppm	0.004748	> 100.00	-122.253000 !	Y 377.433
Mn (257.610 nm)	0.000404 !	ppm	0.000072	17.82	126.146000 !	Y 377.433
Mo (202.032 nm)	0.000338 !	ppm	0.000153	45.23	23.931900 !	Y 377.433
Na (589.592 nm)	80.819600 !o	ppm	0.108932	0.13	43681.500000 !	Y_R2 488.368
Na H (589.593 nm)	82.095515 !	ppm	0.196853	0.24	31106.403647 !	Y_R4
Ni (231.604 nm)	-0.002866 !u	ppm	0.000864	30.16	17.206300 !	Y 377.433
P (213.618 nm)	-0.007634 !u	ppm	0.002107	27.60	-10.085900 !	Y 242.219
Pb (220.353 nm)	0.002247 !u	ppm	0.003804	> 100.00	17.678800 !	Y 242.219
S (181.972 nm)	3.925692 !	ppm	0.030741	0.78	1827.459697 !	Y 377.433
Sb (206.834 nm)	-0.002214 !u	ppm	0.002666	> 100.00	22.795800 !	Y 377.433
Se (196.026 nm)	0.001790 !	ppm	0.000507	28.30	-6.633660 !	Y 242.219
Si (288.158 nm)	0.003785 !	ppm	0.001156	30.55	387.833000 !	Y 377.433
Sn (189.925 nm)	0.000275 !	ppm	0.000153	55.72	0.118647 !	Y 377.433
Sr (421.552 nm)	-0.000237 !u	ppm	0.000008	3.42	136.651630 !	Y_R 488.368
Th (288.505 nm)	2.966510 !	ppm	0.015827	0.53	2880.930000 !	Y 377.433
Ti (336.122 nm)	0.000514 !	ppm	0.000165	32.10	-79.269600 !	Y 377.433
Tl (190.794 nm)	-0.003140 !u	ppm	0.000081	2.59	-4.424540 !	Y 377.433
U (409.013 nm)	5.026830 !	ppm	0.011642	0.23	12069.300000 !	Y 377.433
V (292.401 nm)	-0.000889 !u	ppm	0.000311	35.02	-303.930000 !	Y 377.433
Zn (206.200 nm)	-0.000464 !u	ppm	0.000061	13.22	4.074720 !	Y 377.433
Zr (343.823 nm)	-0.003687 !u	ppm	0.000034	0.93	48.883300 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992409 !	10210.601507 !	0.004840	0.49
Y 377.433	0.988442 !	420885.429914 !	0.003989	0.40
Y_R 377.433	1.008060 !	40556.500000 !	0.002597	0.26
Y_R 488.368	1.015150 !	37654.000000 !	0.005082	0.50
Y_R2 488.368	1.000609 !	71030.875963 !	0.004065	0.41
Y_R4	1.021520 !	35019.600000 !	0.003110	0.30

Sample Name: ICVH-5320360

Date: 9/21/2018 10:49:40 AM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000051 !u	ppm	0.000611	> 100.00	-136.761000 !	Y 377.433
Al (394.401 nm)	40.662900 !o	ppm	0.045561	0.11	451869.000000 !	Y 377.433
Al H (396.152 nm)	40.516400 !	ppm	0.093351	0.23	69937.000000 !	Y_R 377.433
As (188.980 nm)	-0.000701 !u	ppm	0.000477	68.07	-13.669400 !	Y 242.219
B (249.678 nm)	0.001889 !	ppm	0.002640	> 100.00	-17.826500 !	Y 242.219
Ba (493.408 nm)	0.000426 !	ppm	0.000418	97.99	636.934000 !	Y_R 488.368
Be (234.861 nm)	-0.001212 !u	ppm	0.000097	7.99	-539.916000 !	Y_R 488.368
Bi (223.061 nm)	0.474815 !	ppm	0.005391	1.14	830.657000 !	Y 377.433
Ca (315.887 nm)	-0.001302 !u	ppm	0.006435	> 100.00	-3.525890 !	Y_R 377.433
Cd (214.439 nm)	-0.000850 !u	ppm	0.000250	29.45	-6.116710 !	Y 377.433
Co (228.615 nm)	0.002436 !	ppm	0.000248	10.18	30.675100 !	Y 242.219
Cr (205.560 nm)	0.001221 !	ppm	0.000070	5.72	-5.438820 !	Y 377.433
Cu (324.754 nm)	0.001464 !	ppm	0.000090	6.16	534.172000 !	Y 377.433
Fe (238.204 nm)	79.807345 !o	ppm	0.187882	0.24	130197.938904 !	Y_R 377.433
Fe H (259.940 nm)	80.929700 !	ppm	0.048150	0.06	73345.000000 !	Y_R 377.433
K (766.491 nm)	-0.042970 !u	ppm	0.050029	> 100.00	1710.680000 !	Y_R2 488.368
Li (670.783 nm)	0.003166 !	ppm	0.003135	99.01	-1115.270000 !	Y_R2 488.368
Mg (279.078 nm)	-0.008050 !u	ppm	0.000268	3.32	-131.230000 !	Y 377.433
Mn (257.610 nm)	0.000399 !	ppm	0.000042	10.54	125.351000 !	Y 377.433
Mo (202.032 nm)	0.000087 !u	ppm	0.000721	> 100.00	21.322700 !	Y 377.433
Na (589.592 nm)	81.097400 !o	ppm	0.100891	0.12	43832.000000 !	Y_R2 488.368
Na H (589.593 nm)	81.462967 !	ppm	0.469058	0.58	30871.975136 !	Y_R4
Ni (231.604 nm)	0.000384 !u	ppm	0.000874	> 100.00	29.204400 !	Y 377.433
P (213.618 nm)	-0.007909 !u	ppm	0.003221	40.73	-10.358800 !	Y 242.219
Pb (220.353 nm)	0.003641 !	ppm	0.002384	65.47	20.627900 !	Y 242.219
S (181.972 nm)	3.908396 !	ppm	0.010881	0.28	1819.412947 !	Y 377.433
Sb (206.834 nm)	0.002070 !u	ppm	0.003403	> 100.00	29.707200 !	Y 377.433
Se (196.026 nm)	-0.001962 !u	ppm	0.000974	49.67	-11.505800 !	Y 242.219
Si (288.158 nm)	0.003170 !	ppm	0.001790	56.45	385.342000 !	Y 377.433
Sn (189.925 nm)	0.001134 !	ppm	0.001257	> 100.00	1.130550 !	Y 377.433
Sr (421.552 nm)	-0.000063 !u	ppm	0.000054	86.36	156.608896 !	Y_R 488.368
Th (288.505 nm)	2.935580 !	ppm	0.007875	0.27	2851.140000 !	Y 377.433
Ti (336.122 nm)	0.000524 !	ppm	0.000016	3.09	-78.318100 !	Y 377.433
Tl (190.794 nm)	-0.002202 !u	ppm	0.002850	> 100.00	-2.739280 !	Y 377.433
U (409.013 nm)	5.046980 !	ppm	0.003409	0.07	12116.400000 !	Y 377.433
V (292.401 nm)	-0.000874 !u	ppm	0.000370	42.29	-306.128000 !	Y 377.433
Zn (206.200 nm)	-0.000823 !u	ppm	0.000849	> 100.00	2.854260 !	Y 377.433
Zr (343.823 nm)	-0.003899 !u	ppm	0.000253	6.50	40.341300 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994503 !	10232.144058 !	0.003123	0.31
Y 377.433	0.991151 !	422038.915832 !	0.003282	0.33
Y_R 377.433	1.014790 !	40827.300000 !	0.005723	0.56
Y_R 488.368	1.023860 !	37977.000000 !	0.008074	0.79
Y_R2 488.368	1.005998 !	71413.395671 !	0.004782	0.48
Y_R4	1.015470 !	34812.000000 !	0.006454	0.64

Sample Name: ICV-5320260

Date: 9/21/2018 10:53:21 AM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.242854 !	ppm	0.000878	0.36	6019.680000 !	Y 377.433
Al (394.401 nm)	0.250084 !	ppm	0.011300	4.52	2878.760000 !	Y 377.433
Al H (396.152 nm)	0.363512 !u	ppm	0.000792	0.22	488.018000 !	Y_R 377.433
As (188.980 nm)	0.248503 !	ppm	0.000894	0.36	314.030000 !	Y 242.219
B (249.678 nm)	0.248939 !	ppm	0.000067	0.03	933.758000 !	Y 242.219
Ba (493.408 nm)	0.255274 !	ppm	0.002706	1.06	23857.000000 !	Y_R 488.368
Be (234.861 nm)	0.247170 !	ppm	0.000375	0.15	13387.300000 !	Y_R 488.368
Bi (223.061 nm)	-0.003118 !u	ppm	0.007798	> 100.00	53.271100 !	Y 377.433
Ca (315.887 nm)	2.032240 !	ppm	0.004211	0.21	1334.129669 !	Y_R 377.433
Cd (214.439 nm)	0.252410 !	ppm	0.000465	0.18	6399.140000 !	Y 377.433
Co (228.615 nm)	0.249378 !	ppm	0.000763	0.31	4949.920000 !	Y 242.219
Cr (205.560 nm)	0.251658 !	ppm	0.000569	0.23	1222.170000 !	Y 377.433
Cu (324.754 nm)	0.248174 !	ppm	0.000392	0.16	10731.000000 !	Y 377.433
Fe (238.204 nm)	0.250385 !	ppm	0.006350	2.54	436.357374 !	Y_R 377.433
Fe H (259.940 nm)	0.189756 !u	ppm	0.002729	1.44	250.750000 !	Y_R 377.433
K (766.491 nm)	20.202000 !	ppm	0.063540	0.31	22903.100000 !	Y_R2 488.368
Li (670.783 nm)	0.259881 !	ppm	0.004734	1.82	2426.210000 !	Y_R2 488.368
Mg (279.078 nm)	10.081500 !	ppm	0.001916	0.02	21403.400000 !	Y 377.433
Mn (257.610 nm)	0.263066 Q!	ppm	0.000021	0.01	46532.000000 Q!	Y 377.433
Mo (202.032 nm)	0.249890 !	ppm	0.000862	0.35	2620.220000 !	Y 377.433
Na (589.592 nm)	2.064370 !	ppm	0.003107	0.15	1017.260000 !	Y_R2 488.368
Na H (589.593 nm)	2.182736 !u	ppm	0.013934	0.64	1459.307585 !	Y_R4
Ni (231.604 nm)	0.249468 !	ppm	0.001154	0.46	940.656000 !	Y 377.433
P (213.618 nm)	2.002480 !	ppm	0.004679	0.23	2176.910000 !	Y 242.219
Pb (220.353 nm)	0.258210 !	ppm	0.001712	0.66	547.347000 !	Y 242.219
S (181.972 nm)	0.003832 !	ppm	0.000217	5.66	3.718584 !	Y 377.433
Sb (206.834 nm)	0.249427 !	ppm	0.000793	0.32	422.697000 !	Y 377.433
Se (196.026 nm)	0.496219 !	ppm	0.004470	0.90	662.226000 !	Y 242.219
Si (288.158 nm)	2.022490 !	ppm	0.011450	0.57	8552.650000 !	Y 377.433
Sn (189.925 nm)	0.499492 !	ppm	0.001020	0.20	588.596000 !	Y 377.433
Sr (421.552 nm)	0.256084 !	ppm	0.002304	0.90	29555.991998 !	Y_R 488.368
Th (288.505 nm)	-0.012757 !u	ppm	0.013070	> 100.00	-18.116600 !	Y 377.433
Ti (336.122 nm)	0.253224 !	ppm	0.000438	0.17	22763.000000 !	Y 377.433
Tl (190.794 nm)	0.515355 !	ppm	0.001595	0.31	923.790000 !	Y 377.433
U (409.013 nm)	-0.007912 !u	ppm	0.003682	46.54	205.681000 !	Y 377.433
V (292.401 nm)	0.251611 !	ppm	0.000025	0.01	10059.500000 !	Y 377.433
Zn (206.200 nm)	0.247076 !	ppm	0.000684	0.28	841.407000 !	Y 377.433
Zr (343.823 nm)	0.251088 !	ppm	0.000253	0.10	9908.320000 !	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001015 !	10299.148865 !	0.004479	0.45
Y 377.433	1.004716 !	427814.991540 !	0.004496	0.45
Y_R 377.433	1.008980 !	40593.500000 !	0.001872	0.19
Y_R 488.368	1.014030 !	37612.100000 !	0.007388	0.73
Y_R2 488.368	1.016218 !	72138.879339 !	0.000530	0.05
Y_R4	1.010440 !	34639.600000 !	0.003938	0.39

Sample Name: ICV-5320260

Date: 9/21/2018 10:56:50 AM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.242633	ppm	0.000609	0.25	6014.020000	Y 377.433
Al (394.401 nm)	0.245064	ppm	0.002509	1.02	2823.380000	Y 377.433
Al H (396.152 nm)	0.369541 u	ppm	0.003506	0.95	497.793000	Y_R 377.433
As (188.980 nm)	0.250438	ppm	0.003835	1.53	316.555000	Y 242.219
B (249.678 nm)	0.248944	ppm	0.001364	0.55	933.778000	Y 242.219
Ba (493.408 nm)	0.254388	ppm	0.001803	0.71	23776.100000	Y_R 488.368
Be (234.861 nm)	0.246078	ppm	0.000814	0.33	13328.100000	Y_R 488.368
Bi (223.061 nm)	-0.008650 u	ppm	0.003848	44.49	44.390200	Y 377.433
Ca (315.887 nm)	2.033170	ppm	0.005261	0.26	1334.743742	Y_R 377.433
Cd (214.439 nm)	0.252094	ppm	0.000201	0.08	6391.120000	Y 377.433
Co (228.615 nm)	0.248657	ppm	0.001206	0.49	4935.570000	Y 242.219
Cr (205.560 nm)	0.251358	ppm	0.001345	0.54	1220.700000	Y 377.433
Cu (324.754 nm)	0.247898	ppm	0.000220	0.09	10718.400000	Y 377.433
Fe (238.204 nm)	0.256385	ppm	0.009202	3.59	446.143739	Y_R 377.433
Fe H (259.940 nm)	0.194215 u	ppm	0.008995	4.63	254.786000	Y_R 377.433
K (766.491 nm)	20.259900	ppm	0.026371	0.13	22963.700000	Y_R2 488.368
Li (670.783 nm)	0.255129	ppm	0.011484	4.50	2360.650000	Y_R2 488.368
Mg (279.078 nm)	10.056300	ppm	0.016336	0.16	21350.000000	Y 377.433
Mn (257.610 nm)	0.262452	ppm	0.000420	0.16	46423.500000	Y 377.433
Mo (202.032 nm)	0.248727	ppm	0.000172	0.07	2608.110000	Y 377.433
Na (589.592 nm)	2.065590	ppm	0.029044	1.41	1017.940000	Y_R2 488.368
Na H (589.593 nm)	1.897209 u	ppm	0.020196	1.06	1353.565342	Y_R4
Ni (231.604 nm)	0.248664	ppm	0.000180	0.07	937.677000	Y 377.433
P (213.618 nm)	1.997180	ppm	0.003881	0.19	2171.150000	Y 242.219
Pb (220.353 nm)	0.256036	ppm	0.000930	0.36	542.808000	Y 242.219
S (181.972 nm)	-0.001768 u	ppm	0.000883	49.97	1.110956	Y 377.433
Sb (206.834 nm)	0.246637	ppm	0.000360	0.15	418.190000	Y 377.433
Se (196.026 nm)	0.494631	ppm	0.005100	1.03	660.136000	Y 242.219
Si (288.158 nm)	2.014380	ppm	0.006203	0.31	8519.840000	Y 377.433
Sn (189.925 nm)	0.499796	ppm	0.001595	0.32	588.954000	Y 377.433
Sr (421.552 nm)	0.254185	ppm	0.001108	0.44	29337.948591	Y_R 488.368
Th (288.505 nm)	-0.008644 u	ppm	0.002121	24.53	-14.150800	Y 377.433
Ti (336.122 nm)	0.252725	ppm	0.000044	0.02	22718.000000	Y 377.433
Tl (190.794 nm)	0.514326	ppm	0.004780	0.93	921.950000	Y 377.433
U (409.013 nm)	-0.002575 u	ppm	0.007538	> 100.00	218.253000	Y 377.433
V (292.401 nm)	0.251350	ppm	0.000375	0.15	10048.600000	Y 377.433
Zn (206.200 nm)	0.248215	ppm	0.001608	0.65	845.266000	Y 377.433
Zr (343.823 nm)	0.250706	ppm	0.000070	0.03	9893.420000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002969	10319.255123	0.000426	0.04
Y 377.433	1.005344	428082.435506	0.000600	0.06
Y_R 377.433	1.012950	40753.200000	0.002517	0.25
Y_R 488.368	1.018250	37768.700000	0.003862	0.38
Y_R2 488.368	1.006917	71478.627753	0.000129	0.01
Y_R4	1.006910	34518.700000	0.006160	0.61

Sample Name: ICVL-5320254

Date: 9/21/2018 11:00:18 AM Rack:Tube: 3:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009864	ppm	0.000466	4.73	160.669000	Y 377.433
Al (394.401 nm)	0.099195	ppm	0.000326	0.33	1148.100000	Y 377.433
Al H (396.152 nm)	0.251248 u	ppm	0.007336	2.92	196.242000	Y_R 377.433
As (188.980 nm)	0.014389	ppm	0.000377	2.62	8.538820	Y 242.219
B (249.678 nm)	0.097740	ppm	0.000984	1.01	366.320000	Y 242.219
Ba (493.408 nm)	0.010296	ppm	0.000480	4.67	1479.770000	Y_R 488.368
Be (234.861 nm)	0.001023	ppm	0.000058	5.69	50.850000	Y_R 488.368
Bi (223.061 nm)	0.090987	ppm	0.004683	5.15	204.298000	Y 377.433
Ca (315.887 nm)	0.205558	ppm	0.003460	1.68	129.558220	Y_R 377.433
Cd (214.439 nm)	0.005318	ppm	0.000324	6.10	122.026000	Y 377.433
Co (228.615 nm)	0.010632	ppm	0.000088	0.83	194.001000	Y 242.219
Cr (205.560 nm)	0.009595	ppm	0.000303	3.16	36.681100	Y 377.433
Cu (324.754 nm)	0.015420	ppm	0.000389	2.52	801.369000	Y 377.433
Fe (238.204 nm)	0.107542	ppm	0.000278	0.26	203.372932	Y_R 377.433
Fe H (259.940 nm)	0.041046 u	ppm	0.002484	6.05	116.122000	Y_R 377.433
K (766.491 nm)	3.170580	ppm	0.029330	0.93	5074.610000	Y_R2 488.368
Li (670.783 nm)	0.022743	ppm	0.002299	10.11	-845.203000	Y_R2 488.368
Mg (279.078 nm)	0.206195	ppm	0.001944	0.94	443.657000	Y 377.433
Mn (257.610 nm)	0.010451	ppm	0.000030	0.28	1901.260000	Y 377.433
Mo (202.032 nm)	0.019233	ppm	0.000335	1.74	220.513000	Y 377.433
Na (589.592 nm)	1.153660	ppm	0.043344	3.76	527.962000	Y_R2 488.368
Na H (589.593 nm)	0.673318 u	ppm	0.045192	6.71	924.485999	Y_R4
Ni (231.604 nm)	0.040364	ppm	0.000733	1.82	165.704000	Y 377.433
P (213.618 nm)	2.889550	ppm	0.009671	0.33	3156.320000	Y 242.219
Pb (220.353 nm)	0.010378	ppm	0.000329	3.17	31.085500	Y 242.219
S (181.972 nm)	0.100274	ppm	0.006810	6.79	47.645653	Y 377.433
Sb (206.834 nm)	0.019606	ppm	0.004139	21.11	51.432500	Y 377.433
Se (196.026 nm)	0.017786	ppm	0.001088	6.12	32.541000	Y 242.219
Si (288.158 nm)	0.486309	ppm	0.001734	0.36	2338.450000	Y 377.433
Sn (189.925 nm)	0.095631	ppm	0.001359	1.42	112.294000	Y 377.433
Sr (421.552 nm)	0.009754	ppm	0.000101	1.04	1274.485169	Y_R 488.368
Th (288.505 nm)	0.013417	ppm	0.004913	36.62	21.190900	Y 377.433
Ti (336.122 nm)	0.009989	ppm	0.000001	0.01	791.514000	Y 377.433
Tl (190.794 nm)	0.017318	ppm	0.003537	20.42	33.269200	Y 377.433
U (409.013 nm)	0.043994	ppm	0.008551	19.44	349.121000	Y 377.433
V (292.401 nm)	0.009981	ppm	0.000019	0.19	145.622000	Y 377.433
Zn (206.200 nm)	0.020536	ppm	0.000431	2.10	73.861500	Y 377.433
Zr (343.823 nm)	0.014640	ppm	0.000114	0.78	685.187000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015392	10447.066303	0.000759	0.07
Y 377.433	1.018073	433502.477229	0.002426	0.24
Y_R 377.433	1.022030	41118.500000	0.001543	0.15
Y_R 488.368	1.018490	37777.700000	0.003353	0.33
Y_R2 488.368	1.012747	71892.523883	0.001857	0.18
Y_R4	1.010830	34653.200000	0.004696	0.46

Sample Name: CCVH-5320321

Date: 9/21/2018 11:03:47 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002479	ppm	0.000604	24.36	-123.521000	Y 377.433
Al (394.401 nm)	50.570800 o	ppm	0.090021	0.18	562104.000000	Y 377.433
Al H (396.152 nm)	49.497000	ppm	0.017543	0.04	85494.600000	Y_R 377.433
As (188.980 nm)	0.000870 u	ppm	0.001845	> 100.00	-11.038400	Y 242.219
B (249.678 nm)	0.003241	ppm	0.000552	17.02	-3.414050	Y 242.219
Ba (493.408 nm)	0.000777	ppm	0.000030	3.88	646.489000	Y_R 488.368
Be (234.861 nm)	-0.000427 u	ppm	0.000075	17.65	-317.597000	Y_R 488.368
Bi (223.061 nm)	0.979925	ppm	0.002734	0.28	1637.650000	Y 377.433
Ca (315.887 nm)	-0.005248 u	ppm	0.004607	87.78	-5.387134	Y_R 377.433
Cd (214.439 nm)	-0.000487 u	ppm	0.000000	0.03	-7.806980	Y 377.433
Co (228.615 nm)	0.003249	ppm	0.000134	4.14	46.844000	Y 242.219
Cr (205.560 nm)	-0.001217 u	ppm	0.000030	2.50	-17.417100	Y 377.433
Cu (324.754 nm)	0.001011	ppm	0.000339	33.56	589.461000	Y 377.433
Fe (238.204 nm)	49.296077 o	ppm	0.196234	0.40	80432.457935	Y_R 377.433
Fe H (259.940 nm)	49.863200	ppm	0.019179	0.04	45220.300000	Y_R 377.433
K (766.491 nm)	0.219200	ppm	0.118675	54.14	1985.120000	Y_R2 488.368
Li (670.783 nm)	0.006864	ppm	0.003329	48.50	-1064.250000	Y_R2 488.368
Mg (279.078 nm)	-0.008550 u	ppm	0.001343	15.71	-156.048000	Y 377.433
Mn (257.610 nm)	0.000281	ppm	0.000018	6.57	104.345000	Y 377.433
Mo (202.032 nm)	-0.000139 u	ppm	0.000104	75.11	18.970700	Y 377.433
Na (589.592 nm)	241.550000 o	ppm	1.071130	0.44	130746.000000	Y_R2 488.368
Na H (589.593 nm)	249.295771	ppm	1.953408	0.78	93082.955340	Y_R4
Ni (231.604 nm)	0.001330	ppm	0.000141	10.60	28.269500	Y 377.433
P (213.618 nm)	-0.020912 u	ppm	0.000579	2.77	-25.209000	Y 242.219
Pb (220.353 nm)	0.001518 u	ppm	0.002155	> 100.00	23.359400	Y 242.219
S (181.972 nm)	4.901130	ppm	0.017670	0.36	2281.520371	Y 377.433
Sb (206.834 nm)	0.002402	ppm	0.000849	35.36	27.755400	Y 377.433
Se (196.026 nm)	-0.004702 u	ppm	0.003205	68.15	-8.200510	Y 242.219
Si (288.158 nm)	0.009254	ppm	0.003320	35.87	409.455000	Y 377.433
Sn (189.925 nm)	0.000106 u	ppm	0.000817	> 100.00	-0.190428	Y 377.433
Sr (421.552 nm)	0.000029 u	ppm	0.000052	> 100.00	163.609641	Y_R 488.368
Th (288.505 nm)	4.879020	ppm	0.037745	0.77	4741.140000	Y 377.433
Ti (336.122 nm)	0.000832	ppm	0.000020	2.39	-44.958100	Y 377.433
Tl (190.794 nm)	-0.004999 u	ppm	0.001388	27.77	-7.303480	Y 377.433
U (409.013 nm)	9.899550	ppm	0.011023	0.11	23469.800000	Y 377.433
V (292.401 nm)	-0.003203 u	ppm	0.000310	9.68	-419.331000	Y 377.433
Zn (206.200 nm)	0.000150 u	ppm	0.000442	> 100.00	5.628520	Y 377.433
Zr (343.823 nm)	-0.006757 u	ppm	0.000069	1.03	-101.119000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986800	10152.889675	0.005474	0.55
Y 377.433	0.983272	418684.250968	0.005821	0.59
Y_R 377.433	1.013000	40755.100000	0.002600	0.26
Y_R 488.368	1.034920	38387.100000	0.013790	1.33
Y_R2 488.368	1.009129	71635.640614	0.003533	0.35
Y_R4	1.027970	35240.700000	0.001903	0.19

Sample Name: CCV-5305988

Date: 9/21/2018 11:07:27 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496182	ppm	0.000017	0.00	12392.200000	Y 377.433
Al (394.401 nm)	0.501749	ppm	0.003061	0.61	5728.430000	Y 377.433
Al H (396.152 nm)	0.560968 u	ppm	0.009063	1.62	926.262000	Y_R 377.433
As (188.980 nm)	0.984592	ppm	0.008399	0.85	1274.500000	Y 242.219
B (249.678 nm)	0.495029	ppm	0.004653	0.94	1856.700000	Y 242.219
Ba (493.408 nm)	0.497874	ppm	0.003784	0.76	46018.500000	Y_R 488.368
Be (234.861 nm)	0.496202	ppm	0.000199	0.04	26867.800000	Y_R 488.368
Bi (223.061 nm)	-0.000036 u	ppm	0.006063	> 100.00	58.550800	Y 377.433
Ca (315.887 nm)	4.932099	ppm	0.013323	0.27	3246.387371	Y_R 377.433
Cd (214.439 nm)	0.493478	ppm	0.003705	0.75	12524.000000	Y 377.433
Co (228.615 nm)	0.490796	ppm	0.002234	0.46	9759.150000	Y 242.219
Cr (205.560 nm)	0.492138	ppm	0.002483	0.50	2399.780000	Y 377.433
Cu (324.754 nm)	0.496690	ppm	0.000242	0.05	21336.600000	Y 377.433
Fe (238.204 nm)	2.487086	ppm	0.003032	0.12	4084.534025	Y_R 377.433
Fe H (259.940 nm)	2.461960 u	ppm	0.000131	0.01	2307.790000	Y_R 377.433
K (766.491 nm)	49.490000	ppm	0.235615	0.48	53561.600000	Y_R2 488.368
Li (670.783 nm)	0.984732	ppm	0.006827	0.69	12425.800000	Y_R2 488.368
Mg (279.078 nm)	19.654200	ppm	0.006490	0.03	41718.700000	Y 377.433
Mn (257.610 nm)	0.493934	ppm	0.000101	0.02	87320.500000	Y 377.433
Mo (202.032 nm)	0.496075	ppm	0.000562	0.11	5181.480000	Y 377.433
Na (589.592 nm)	24.982000	ppm	0.103652	0.41	13427.200000	Y_R2 488.368
Na H (589.593 nm)	25.691442 u	ppm	0.144405	0.56	10148.361304	Y_R4
Ni (231.604 nm)	0.491940	ppm	0.001519	0.31	1839.500000	Y 377.433
P (213.618 nm)	0.997595	ppm	0.007182	0.72	1068.100000	Y 242.219
Pb (220.353 nm)	0.991016	ppm	0.005646	0.57	2075.780000	Y 242.219
S (181.972 nm)	0.002590	ppm	0.000513	19.81	4.107081	Y 377.433
Sb (206.834 nm)	0.993965	ppm	0.001852	0.19	1626.460000	Y 377.433
Se (196.026 nm)	0.993668	ppm	0.006022	0.61	1316.430000	Y 242.219
Si (288.158 nm)	4.948510	ppm	0.028756	0.58	20389.100000	Y 377.433
Sn (189.925 nm)	0.986282	ppm	0.001643	0.17	1162.710000	Y 377.433
Sr (421.552 nm)	0.496961	ppm	0.003451	0.69	57211.560707	Y_R 488.368
Th (288.505 nm)	-0.012130 u	ppm	0.002493	20.56	-31.828100	Y 377.433
Ti (336.122 nm)	0.498335	ppm	0.000205	0.04	44906.500000	Y 377.433
Tl (190.794 nm)	0.996638	ppm	0.000906	0.09	1784.220000	Y 377.433
U (409.013 nm)	0.003575 u	ppm	0.013598	> 100.00	210.867000	Y 377.433
V (292.401 nm)	0.492863	ppm	0.000304	0.06	19956.300000	Y 377.433
Zn (206.200 nm)	0.490732	ppm	0.000403	0.08	1666.980000	Y 377.433
Zr (343.823 nm)	0.497835	ppm	0.001397	0.28	19535.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006463	10355.197929	0.000286	0.03
Y 377.433	1.008455	429407.106881	0.000703	0.07
Y_R 377.433	1.014210	40803.800000	0.005608	0.55
Y_R 488.368	1.018700	37785.600000	0.001337	0.13
Y_R2 488.368	1.008174	71567.836495	0.003244	0.32
Y_R4	1.011480	34675.400000	0.004788	0.47

Sample Name: ICB

Date: 9/21/2018 11:10:59 AM Rack:Tube: S1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000672 u	ppm	0.000357	53.14	-105.065000	Y 377.433
Al (394.401 nm)	-0.005716 u	ppm	0.001378	24.10	-22.047400	Y 377.433
Al H (396.152 nm)	0.144947 Zu	ppm	0.000338	0.23	7.481030 Z	Y_R 377.433
As (188.980 nm)	0.000449 u	ppm	0.003239	> 100.00	-9.646930	Y 242.219
B (249.678 nm)	0.000565	ppm	0.000470	83.21	1.635190	Y 242.219
Ba (493.408 nm)	0.000118 u	ppm	0.000320	> 100.00	550.052000	Y_R 488.368
Be (234.861 nm)	0.000103	ppm	0.000004	3.99	1.616400	Y_R 488.368
Bi (223.061 nm)	-0.002739 u	ppm	0.003236	> 100.00	53.815300	Y 377.433
Ca (315.887 nm)	-0.010167 u	ppm	0.002120	20.85	-12.706346	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000043	47.04	-10.763300	Y 377.433
Co (228.615 nm)	0.000044 u	ppm	0.000192	> 100.00	-16.880700	Y 242.219
Cr (205.560 nm)	0.000327	ppm	0.000133	40.63	-8.629990	Y 377.433
Cu (324.754 nm)	0.000367	ppm	0.000135	36.77	158.261000	Y 377.433
Fe (238.204 nm)	-0.000076 u	ppm	0.000774	> 100.00	27.842356	Y_R 377.433
Fe H (259.940 nm)	-0.065178 u	ppm	0.006655	10.21	19.956700	Y_R 377.433
K (766.491 nm)	0.074987	ppm	0.010613	14.15	1834.150000	Y_R2 488.368
Li (670.783 nm)	0.006240	ppm	0.006741	> 100.00	-1072.870000	Y_R2 488.368
Mg (279.078 nm)	0.000070 u	ppm	0.000554	> 100.00	6.801250	Y 377.433
Mn (257.610 nm)	-0.000062 u	ppm	0.000026	42.06	43.883500	Y 377.433
Mo (202.032 nm)	0.000436	ppm	0.000611	> 100.00	24.956100	Y 377.433
Na (589.592 nm)	0.075997	ppm	0.015112	19.88	-55.616600	Y_R2 488.368
Na H (589.593 nm)	-0.180342 u	ppm	0.042827	23.75	609.108419	Y_R4
Ni (231.604 nm)	-0.000489 u	ppm	0.000295	60.26	14.359600	Y 377.433
P (213.618 nm)	-0.006475 u	ppm	0.005230	80.78	-8.264410	Y 242.219
Pb (220.353 nm)	0.002247	ppm	0.000119	5.28	14.094500	Y 242.219
S (181.972 nm)	0.006241	ppm	0.000096	1.55	3.840875	Y 377.433
Sb (206.834 nm)	-0.002309 u	ppm	0.003947	> 100.00	16.123000	Y 377.433
Se (196.026 nm)	-0.001017 u	ppm	0.002276	> 100.00	7.814740	Y 242.219
Si (288.158 nm)	-0.003438 u	ppm	0.002616	76.10	357.311000	Y 377.433
Sn (189.925 nm)	-0.000601 u	ppm	0.000039	6.43	-1.200160	Y 377.433
Sr (421.552 nm)	-0.000022 u	ppm	0.000061	> 100.00	152.078704	Y_R 488.368
Th (288.505 nm)	-0.007054 u	ppm	0.003142	44.54	1.708590	Y 377.433
Ti (336.122 nm)	-0.000086 u	ppm	0.000107	> 100.00	-118.979000	Y 377.433
Tl (190.794 nm)	-0.000704 u	ppm	0.001237	> 100.00	1.083220	Y 377.433
U (409.013 nm)	-0.012219 u	ppm	0.002174	17.79	218.720000	Y 377.433
V (292.401 nm)	0.000275	ppm	0.000069	25.12	-252.068000	Y 377.433
Zn (206.200 nm)	-0.000283 u	ppm	0.000313	> 100.00	3.321520	Y 377.433
Zr (343.823 nm)	-0.000321 u	ppm	0.000030	9.22	101.534000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016138	10454.745086	0.005320	0.52
Y 377.433	1.020805	434666.066514	0.002039	0.20
Y_R 377.433	1.021200	41085.100000	0.004078	0.40
Y_R 488.368	1.033480	38333.600000	0.001205	0.12
Y_R2 488.368	1.021098	72485.282104	0.000642	0.06
Y_R4	1.012550	34712.200000	0.006153	0.61

Sample Name: CRI-5320254

Date: 9/21/2018 11:14:10 AM Rack:Tube: 3:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009732	ppm	0.000765	7.86	157.457000	Y 377.433
Al (394.401 nm)	0.092943	ppm	0.000102	0.11	1079.950000	Y 377.433
Al H (396.152 nm)	0.247310 u	ppm	0.003334	1.35	189.406000	Y_R 377.433
As (188.980 nm)	0.014666	ppm	0.000559	3.81	8.900870	Y 242.219
B (249.678 nm)	0.098131	ppm	0.001134	1.16	367.794000	Y 242.219
Ba (493.408 nm)	0.010039	ppm	0.000125	1.24	1456.340000	Y_R 488.368
Be (234.861 nm)	0.001001	ppm	0.000022	2.20	49.743900	Y_R 488.368
Bi (223.061 nm)	0.092248	ppm	0.002449	2.65	206.320000	Y 377.433
Ca (315.887 nm)	0.205788	ppm	0.012348	6.00	129.709242	Y_R 377.433
Cd (214.439 nm)	0.005445	ppm	0.000103	1.88	125.250000	Y 377.433
Co (228.615 nm)	0.010254	ppm	0.000162	1.58	186.492000	Y 242.219
Cr (205.560 nm)	0.009880	ppm	0.000530	5.36	38.080900	Y 377.433
Cu (324.754 nm)	0.015549	ppm	0.000172	1.11	805.518000	Y 377.433
Fe (238.204 nm)	0.089242	ppm	0.001519	1.70	173.525652	Y_R 377.433
Fe H (259.940 nm)	0.033002 u	ppm	0.013182	39.94	108.840000	Y_R 377.433
K (766.491 nm)	3.056090	ppm	0.059616	1.95	4954.760000	Y_R2 488.368
Li (670.783 nm)	0.022872	ppm	0.003244	14.18	-843.424000	Y_R2 488.368
Mg (279.078 nm)	0.208195	ppm	0.000406	0.20	447.990000	Y 377.433
Mn (257.610 nm)	0.010403	ppm	0.000062	0.59	1892.670000	Y 377.433
Mo (202.032 nm)	0.019737	ppm	0.000522	2.64	225.759000	Y 377.433
Na (589.592 nm)	1.080700	ppm	0.002813	0.26	488.458000	Y_R2 488.368
Na H (589.593 nm)	0.557670 u	ppm	0.017379	3.12	881.738081	Y_R4
Ni (231.604 nm)	0.039237	ppm	0.000227	0.58	161.527000	Y 377.433
P (213.618 nm)	2.885110	ppm	0.004642	0.16	3151.480000	Y 242.219
Pb (220.353 nm)	0.012268 Q	ppm	0.000397	3.24	35.018400 Q	Y 242.219
S (181.972 nm)	0.098172	ppm	0.002149	2.19	46.666299	Y 377.433
Sb (206.834 nm)	0.013240 Q	ppm	0.000647	4.89	41.137300 Q	Y 377.433
Se (196.026 nm)	0.016990	ppm	0.003335	19.63	31.498200	Y 242.219
Si (288.158 nm)	0.483725	ppm	0.001846	0.38	2327.990000	Y 377.433
Sn (189.925 nm)	0.097213	ppm	0.001045	1.07	114.159000	Y 377.433
Sr (421.552 nm)	0.009690	ppm	0.000046	0.48	1267.181831	Y_R 488.368
Th (288.505 nm)	0.005335 Q	ppm	0.002808	52.62	13.381000 Q	Y 377.433
Ti (336.122 nm)	0.010033	ppm	0.000065	0.65	795.444000	Y 377.433
Tl (190.794 nm)	0.012688	ppm	0.002820	22.23	24.977200	Y 377.433
U (409.013 nm)	0.047291 Q	ppm	0.007842	16.58	356.833000 Q	Y 377.433
V (292.401 nm)	0.010168	ppm	0.000154	1.52	152.641000	Y 377.433
Zn (206.200 nm)	0.019366	ppm	0.000008	0.04	69.895800	Y 377.433
Zr (343.823 nm)	0.014800	ppm	0.000127	0.86	691.423000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.036356	10662.759205	0.002946	0.28
Y 377.433	1.040645	443113.862862	0.002360	0.23
Y_R 377.433	1.037300	41732.700000	0.001332	0.13
Y_R 488.368	1.041950	38647.800000	0.009010	0.86
Y_R2 488.368	1.036004	73543.431782	0.001343	0.13
Y_R4	1.019500	34950.200000	0.001954	0.19

Sample Name: ICSA-5286697

Date: 9/21/2018 11:17:36 AM Rack:Tube: 3:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001118 u	ppm	0.000086	7.74	-115.665000	Y 377.433
Al (394.401 nm)	515.982000 o	ppm	1.192490	0.23	5733610.000000	Y 377.433
Al H (396.152 nm)	519.576000	ppm	4.222480	0.81	899688.000000	Y_R 377.433
As (188.980 nm)	-0.003136 u	ppm	0.000123	3.91	-26.991500	Y 242.219
B (249.678 nm)	0.002404	ppm	0.002291	95.32	-49.936800	Y 242.219
Ba (493.408 nm)	-0.000453 u	ppm	0.000320	70.60	638.405000	Y_R 488.368
Be (234.861 nm)	-0.001935 Ku	ppm	0.000828	42.79	-1234.350000 K	Y_R 488.368
Bi (223.061 nm)	0.037092	ppm	0.002959	7.98	142.151000	Y 377.433
Ca (315.887 nm)	483.604223	ppm	0.912663	0.19	318937.268245	Y_R 377.433
Cd (214.439 nm)	-0.001570 u	ppm	0.000094	6.02	15.419400	Y 377.433
Co (228.615 nm)	-0.000327 u	ppm	0.000507	> 100.00	-24.247400	Y 242.219
Cr (205.560 nm)	-0.000610 u	ppm	0.000466	76.48	-24.383200	Y 377.433
Cu (324.754 nm)	-0.006849 u	ppm	0.000433	6.32	-82.381900	Y 377.433
Fe (238.204 nm)	190.872299 o	ppm	0.267040	0.14	311350.714781	Y_R 377.433
Fe H (259.940 nm)	194.159000	ppm	0.493496	0.25	175852.000000	Y_R 377.433
K (766.491 nm)	0.133506	ppm	0.027141	20.33	1895.410000	Y_R2 488.368
Li (670.783 nm)	0.007803	ppm	0.002165	27.74	-1051.310000	Y_R2 488.368
Mg (279.078 nm)	504.185000	ppm	1.567470	0.31	1069920.000000	Y 377.433
Mn (257.610 nm)	-0.001435 Ku	ppm	0.000044	3.03	-198.819000 K	Y 377.433
Mo (202.032 nm)	0.001203	ppm	0.001001	83.24	32.926800	Y 377.433
Na (589.592 nm)	0.112575	ppm	0.035809	31.81	-35.820400	Y_R2 488.368
Na H (589.593 nm)	0.232778 u	ppm	0.044671	19.19	762.133240	Y_R4
Ni (231.604 nm)	-0.005367 Ku	ppm	0.000240	4.47	31.344000 K	Y 377.433
P (213.618 nm)	-0.015629 u	ppm	0.000187	1.20	-17.931100	Y 242.219
Pb (220.353 nm)	0.004806 K	ppm	0.005326	> 100.00	-28.089400 K	Y 242.219
S (181.972 nm)	-0.040487 u	ppm	0.004316	10.66	21.393210	Y 377.433
Sb (206.834 nm)	0.004721	ppm	0.002343	49.63	43.019100	Y 377.433
Se (196.026 nm)	0.006448	ppm	0.004372	67.80	-25.633200	Y 242.219
Si (288.158 nm)	0.053208	ppm	0.003601	6.77	589.566000	Y 377.433
Sn (189.925 nm)	-0.000315 u	ppm	0.001550	> 100.00	-0.182505	Y 377.433
Sr (421.552 nm)	0.003965 K	ppm	0.000060	1.51	631.916205 K	Y_R 488.368
Th (288.505 nm)	-0.029586 Ku	ppm	0.017517	59.21	-28.973400 K	Y 377.433
Ti (336.122 nm)	0.000710	ppm	0.000146	20.51	1067.990000	Y 377.433
Tl (190.794 nm)	0.005459	ppm	0.004563	83.59	9.360010	Y 377.433
U (409.013 nm)	0.026310	ppm	0.001385	5.26	365.856000	Y 377.433
V (292.401 nm)	0.002793	ppm	0.000094	3.35	-227.314000	Y 377.433
Zn (206.200 nm)	0.000428 u	ppm	0.001404	> 100.00	8.988220	Y 377.433
Zr (343.823 nm)	-0.002036 u	ppm	0.000107	5.28	222.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.911259	9375.674591	0.001767	0.19
Y 377.433	0.914890	389566.687360	0.002804	0.31
Y_R 377.433	0.970324	39038.300000	0.006526	0.67
Y_R 488.368	0.978950	36311.100000	0.014546	1.49
Y_R2 488.368	0.972942	69066.826729	0.005715	0.59
Y_R4	0.975324	33435.800000	0.003520	0.36

Sample Name: ICSAB-5301519

Date: 9/21/2018 11:51:00 AM Rack:Tube: 3:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.139170	ppm	0.001038	0.09	28683.500000	Y 377.433
Al (394.401 nm)	511.539000 o	ppm	0.384542	0.08	5684060.000000	Y 377.433
Al H (396.152 nm)	512.652000	ppm	2.568080	0.50	888104.000000	Y_R 377.433
As (188.980 nm)	2.123520	ppm	0.001061	0.05	2748.240000	Y 242.219
B (249.678 nm)	2.180190	ppm	0.002486	0.11	8124.170000	Y 242.219
Ba (493.408 nm)	0.516146	ppm	0.005122	0.99	47825.300000	Y_R 488.368
Be (234.861 nm)	0.506957	ppm	0.006145	1.21	26348.000000	Y_R 488.368
Bi (223.061 nm)	1.027520	ppm	0.001534	0.15	1732.060000	Y 377.433
Ca (315.887 nm)	480.082884	ppm	0.146887	0.03	316614.658531	Y_R 377.433
Cd (214.439 nm)	0.968013	ppm	0.000529	0.05	24646.000000	Y 377.433
Co (228.615 nm)	0.473009	ppm	0.000084	0.02	9425.830000	Y 242.219
Cr (205.560 nm)	0.488540	ppm	0.000184	0.04	2368.870000	Y 377.433
Cu (324.754 nm)	0.524792	ppm	0.001150	0.22	22920.000000	Y 377.433
Fe (238.204 nm)	189.644200 o	ppm	0.645147	0.34	309347.620308	Y_R 377.433
Fe H (259.940 nm)	192.660000	ppm	0.552674	0.29	174495.000000	Y_R 377.433
K (766.491 nm)	56.321700	ppm	0.418684	0.74	60713.000000	Y_R2 488.368
Li (670.783 nm)	1.098740	ppm	0.002268	0.21	13998.500000	Y_R2 488.368
Mg (279.078 nm)	500.053000	ppm	0.196473	0.04	1061160.000000	Y 377.433
Mn (257.610 nm)	0.490992	ppm	0.000022	0.00	86800.700000	Y 377.433
Mo (202.032 nm)	0.996548	ppm	0.000318	0.03	10388.300000	Y 377.433
Na (589.592 nm)	53.517500	ppm	0.324512	0.61	28884.000000	Y_R2 488.368
Na H (589.593 nm)	54.841253	ppm	0.088564	0.16	20951.375387	Y_R4
Ni (231.604 nm)	0.917515	ppm	0.002081	0.23	3457.190000	Y 377.433
P (213.618 nm)	2.116950	ppm	0.003414	0.16	2290.160000	Y 242.219
Pb (220.353 nm)	0.995457	ppm	0.002687	0.27	2036.810000	Y 242.219
S (181.972 nm)	1.076942	ppm	0.015345	1.42	542.560315	Y 377.433
Sb (206.834 nm)	1.076490	ppm	0.002743	0.25	1764.670000	Y 377.433
Se (196.026 nm)	5.222500	ppm	0.007169	0.14	6837.160000	Y 242.219
Si (288.158 nm)	10.762800	ppm	0.017645	0.16	43912.300000	Y 377.433
Sn (189.925 nm)	9.674590	ppm	0.017310	0.18	11410.100000	Y 377.433
Sr (421.552 nm)	1.029932	ppm	0.005832	0.57	118424.329406	Y_R 488.368
Th (288.505 nm)	1.960310	ppm	0.012509	0.64	1861.250000	Y 377.433
Ti (336.122 nm)	1.031000	ppm	0.000447	0.04	94106.100000	Y 377.433
Tl (190.794 nm)	9.525910	ppm	0.004384	0.05	17045.700000	Y 377.433
U (409.013 nm)	0.020575	ppm	0.012560	61.04	259.165000	Y 377.433
V (292.401 nm)	0.507908	ppm	0.000072	0.01	20639.000000	Y 377.433
Zn (206.200 nm)	0.944025	ppm	0.000657	0.07	3205.980000	Y 377.433
Zr (343.823 nm)	1.011990	ppm	0.001295	0.13	39774.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.883444	9089.494789	0.000556	0.06
Y 377.433	0.898557	382612.063889	0.000634	0.07
Y_R 377.433	0.953632	38366.700000	0.005233	0.55
Y_R 488.368	0.954302	35396.800000	0.012059	1.26
Y_R2 488.368	0.950946	67505.416852	0.016165	1.70
Y_R4	0.966023	33117.000000	0.001834	0.19

Sample Name: LRA-5310543

Date: 9/21/2018 11:54:49 AM Rack:Tube: 3:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.024871 u	ppm	0.000436	1.75	-2970.880000	Y 377.433
Al (394.401 nm)	0.100453	ppm	0.017765	17.68	3401.510000	Y 377.433
Al H (396.152 nm)	-1.450610 u	ppm	0.006368	0.44	894.807000	Y_R 377.433
As (188.980 nm)	9.735750	ppm	0.059224	0.61	12682.800000	Y 242.219
B (249.678 nm)	9.916200	ppm	0.028436	0.29	37071.700000	Y 242.219
Ba (493.408 nm)	12.097300	ppm	0.049247	0.41	1105890.000000	Y_R 488.368
Be (234.861 nm)	-0.006301 u	ppm	0.000238	3.78	-3145.010000	Y_R 488.368
Bi (223.061 nm)	-0.012069 u	ppm	0.008657	71.73	99.510100	Y 377.433
Ca (315.887 nm)	0.297497	ppm	0.021582	7.25	190.223231	Y_R 377.433
Cd (214.439 nm)	1.934700	ppm	0.002256	0.12	49305.700000	Y 377.433
Co (228.615 nm)	4.989180	ppm	0.023837	0.48	99552.400000	Y 242.219
Cr (205.560 nm)	9.799250	ppm	0.007445	0.08	47998.300000	Y 377.433
Cu (324.754 nm)	10.284800	ppm	0.042894	0.42	439464.000000	Y 377.433
Fe (238.204 nm)	476.304273 o	ppm	0.373777	0.08	776905.259269	Y_R 377.433
Fe H (259.940 nm)	483.917000	ppm	0.366232	0.08	438171.000000	Y_R 377.433
K (766.491 nm)	-0.172328 u	ppm	0.006732	3.91	1575.260000	Y_R2 488.368
Li (670.783 nm)	0.007519	ppm	0.000767	10.20	-1055.230000	Y_R2 488.368
Mg (279.078 nm)	0.248155	ppm	0.019497	7.86	124.959000	Y 377.433
Mn (257.610 nm)	9.732470	ppm	0.017597	0.18	1719540.000000	Y 377.433
Mo (202.032 nm)	4.927520	ppm	0.002763	0.06	51285.300000	Y 377.433
Na (589.592 nm)	-4.444400 u	ppm	0.073507	1.65	-2707.240000	Y_R2 488.368
Na H (589.593 nm)	2.383135 u	ppm	0.140853	5.91	310.124736	Y_R4
Ni (231.604 nm)	9.911450	ppm	0.002835	0.03	36800.100000	Y 377.433
P (213.618 nm)	-0.056733 u	ppm	0.009671	17.05	-497.014000	Y 242.219
Pb (220.353 nm)	10.069900	ppm	0.007601	0.08	20993.100000	Y 242.219
S (181.972 nm)	-0.022148 u	ppm	0.014641	66.10	19.562284	Y 377.433
Sb (206.834 nm)	0.024699	ppm	0.002323	9.40	134.195000	Y 377.433
Se (196.026 nm)	4.914100	ppm	0.007012	0.14	6378.420000	Y 242.219
Si (288.158 nm)	49.481000	ppm	0.155956	0.32	200541.000000	Y 377.433
Sn (189.925 nm)	0.000565	ppm	0.000598	> 100.00	1.867630	Y 377.433
Sr (421.552 nm)	10.093261	ppm	0.012657	0.13	1159029.256604	Y_R 488.368
Th (288.505 nm)	-0.100368 u	ppm	0.015271	15.21	-633.560000	Y 377.433
Ti (336.122 nm)	9.646880	ppm	0.041218	0.43	871054.000000	Y 377.433
Tl (190.794 nm)	5.059680	ppm	0.002954	0.06	9013.660000	Y 377.433
U (409.013 nm)	-0.042193 u	ppm	0.004262	10.10	407.546000	Y 377.433
V (292.401 nm)	9.844130	ppm	0.012406	0.13	403670.000000	Y 377.433
Zn (206.200 nm)	9.420180	ppm	0.002605	0.03	31929.000000	Y 377.433
Zr (343.823 nm)	-0.006681 u	ppm	0.000101	1.51	319.982000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010758	10399.389786	0.001144	0.11
Y 377.433	1.017725	433354.649438	0.002521	0.25
Y_R 377.433	1.034850	41634.200000	0.000617	0.06
Y_R 488.368	1.043360	38700.300000	0.000056	0.01
Y_R2 488.368	1.038307	73706.961098	0.001929	0.19
Y_R4	1.015570	34815.400000	0.006265	0.62

Sample Name: CCVH-5320321

Date: 9/21/2018 11:58:34 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001904	ppm	0.000673	35.34	-137.491000	Y 377.433
Al (394.401 nm)	50.549000 o	ppm	0.034887	0.07	561857.000000	Y 377.433
Al H (396.152 nm)	49.839200	ppm	0.035363	0.07	86087.800000	Y_R 377.433
As (188.980 nm)	0.002842	ppm	0.002870	> 100.00	-8.479580	Y 242.219
B (249.678 nm)	0.010111	ppm	0.001961	19.40	22.242800	Y 242.219
Ba (493.408 nm)	0.001814	ppm	0.000158	8.73	741.585000	Y_R 488.368
Be (234.861 nm)	-0.000524 u	ppm	0.000086	16.43	-325.325000	Y_R 488.368
Bi (223.061 nm)	0.984774	ppm	0.005208	0.53	1645.490000	Y 377.433
Ca (315.887 nm)	0.041400	ppm	0.003941	9.52	25.400308	Y_R 377.433
Cd (214.439 nm)	-0.000146 u	ppm	0.000035	23.93	1.001660	Y 377.433
Co (228.615 nm)	0.004005	ppm	0.000092	2.30	61.897800	Y 242.219
Cr (205.560 nm)	0.001610	ppm	0.000103	6.38	-3.569090	Y 377.433
Cu (324.754 nm)	0.001853	ppm	0.000676	36.46	627.252000	Y 377.433
Fe (238.204 nm)	49.842360 o	ppm	0.128646	0.26	81323.474964	Y_R 377.433
Fe H (259.940 nm)	50.264200	ppm	0.106696	0.21	45583.300000	Y_R 377.433
K (766.491 nm)	0.043257	ppm	0.012981	30.01	1800.940000	Y_R2 488.368
Li (670.783 nm)	0.005190	ppm	0.003981	76.70	-1087.350000	Y_R2 488.368
Mg (279.078 nm)	0.041944	ppm	0.007780	18.55	-48.679200	Y 377.433
Mn (257.610 nm)	0.001531	ppm	0.000352	22.96	325.283000	Y 377.433
Mo (202.032 nm)	0.000793	ppm	0.000323	40.77	28.661800	Y 377.433
Na (589.592 nm)	242.758000 o	ppm	1.408560	0.58	131400.000000	Y_R2 488.368
Na H (589.593 nm)	248.714821	ppm	0.749251	0.30	92867.571292	Y_R4
Ni (231.604 nm)	0.000748	ppm	0.000920	> 100.00	26.180300	Y 377.433
P (213.618 nm)	-0.019412 u	ppm	0.003300	17.00	-23.604200	Y 242.219
Pb (220.353 nm)	0.002879	ppm	0.000976	33.90	26.078300	Y 242.219
S (181.972 nm)	4.981741	ppm	0.002772	0.06	2319.038799	Y 377.433
Sb (206.834 nm)	0.002143	ppm	0.000369	17.23	27.374600	Y 377.433
Se (196.026 nm)	-0.000064 u	ppm	0.000516	> 100.00	-2.191510	Y 242.219
Si (288.158 nm)	0.021110	ppm	0.004086	19.36	457.421000	Y 377.433
Sn (189.925 nm)	0.000636	ppm	0.000654	> 100.00	0.435187	Y 377.433
Sr (421.552 nm)	0.001107	ppm	0.000011	0.95	287.415198	Y_R 488.368
Th (288.505 nm)	4.887880	ppm	0.025345	0.52	4749.490000	Y 377.433
Ti (336.122 nm)	0.002157	ppm	0.000250	11.59	74.763500	Y 377.433
Tl (190.794 nm)	-0.000256 u	ppm	0.001509	> 100.00	1.178140	Y 377.433
U (409.013 nm)	9.875430	ppm	0.009215	0.09	23413.400000	Y 377.433
V (292.401 nm)	-0.002276 u	ppm	0.000297	13.04	-380.002000	Y 377.433
Zn (206.200 nm)	0.001454	ppm	0.000903	62.09	10.055500	Y 377.433
Zr (343.823 nm)	-0.006211 u	ppm	0.000345	5.56	-79.423400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990417	10190.102608	0.001091	0.11
Y 377.433	0.987106	420316.487368	0.001544	0.16
Y_R 377.433	1.018640	40982.300000	0.000325	0.03
Y_R 488.368	1.037460	38481.200000	0.002824	0.27
Y_R2 488.368	1.018499	72300.792084	0.005729	0.56
Y_R4	1.034250	35455.900000	0.004664	0.45

Sample Name: CCV-5305988

Date: 9/21/2018 12:02:13 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497174	ppm	0.000875	0.18	12417.000000	Y 377.433
Al (394.401 nm)	0.521296	ppm	0.029264	5.61	5940.540000	Y 377.433
Al H (396.152 nm)	0.616757 u	ppm	0.022599	3.66	1021.640000	Y_R 377.433
As (188.980 nm)	0.990436	ppm	0.000648	0.07	1282.130000	Y 242.219
B (249.678 nm)	0.498842	ppm	0.003297	0.66	1870.990000	Y 242.219
Ba (493.408 nm)	0.496925	ppm	0.002216	0.45	45931.900000	Y_R 488.368
Be (234.861 nm)	0.495669	ppm	0.002352	0.47	26838.500000	Y_R 488.368
Bi (223.061 nm)	-0.002061 u	ppm	0.002294	> 100.00	55.307800	Y 377.433
Ca (315.887 nm)	4.980338	ppm	0.028179	0.57	3278.201908	Y_R 377.433
Cd (214.439 nm)	0.494956	ppm	0.000741	0.15	12561.600000	Y 377.433
Co (228.615 nm)	0.495394	ppm	0.000300	0.06	9850.630000	Y 242.219
Cr (205.560 nm)	0.493657	ppm	0.001461	0.30	2407.210000	Y 377.433
Cu (324.754 nm)	0.499651	ppm	0.001255	0.25	21464.700000	Y 377.433
Fe (238.204 nm)	2.555311	ppm	0.033417	1.31	4195.813200	Y_R 377.433
Fe H (259.940 nm)	2.532580 u	ppm	0.056270	2.22	2371.720000	Y_R 377.433
K (766.491 nm)	49.694900	ppm	0.080939	0.16	53776.100000	Y_R2 488.368
Li (670.783 nm)	0.982031	ppm	0.005396	0.55	12388.500000	Y_R2 488.368
Mg (279.078 nm)	19.778600	ppm	0.047773	0.24	41982.900000	Y 377.433
Mn (257.610 nm)	0.496207	ppm	0.000391	0.08	87722.000000	Y 377.433
Mo (202.032 nm)	0.497169	ppm	0.000350	0.07	5192.860000	Y 377.433
Na (589.592 nm)	25.023300	ppm	0.011215	0.04	13449.600000	Y_R2 488.368
Na H (589.593 nm)	25.121418 u	ppm	0.077069	0.31	9937.189025	Y_R4
Ni (231.604 nm)	0.496368	ppm	0.000166	0.03	1855.920000	Y 377.433
P (213.618 nm)	0.999924	ppm	0.001132	0.11	1070.550000	Y 242.219
Pb (220.353 nm)	1.000210	ppm	0.001786	0.18	2094.910000	Y 242.219
S (181.972 nm)	0.003059 u	ppm	0.005352	> 100.00	4.333359	Y 377.433
Sb (206.834 nm)	1.006070	ppm	0.000830	0.08	1646.080000	Y 377.433
Se (196.026 nm)	0.999402	ppm	0.002621	0.26	1323.960000	Y 242.219
Si (288.158 nm)	4.978510	ppm	0.007597	0.15	20510.400000	Y 377.433
Sn (189.925 nm)	1.000570	ppm	0.000445	0.04	1179.560000	Y 377.433
Sr (421.552 nm)	0.495174	ppm	0.001655	0.33	57006.463862	Y_R 488.368
Th (288.505 nm)	-0.009258 u	ppm	0.001255	13.55	-29.217100	Y 377.433
Ti (336.122 nm)	0.498970	ppm	0.000530	0.11	44963.900000	Y 377.433
Tl (190.794 nm)	1.005500	ppm	0.005226	0.52	1800.080000	Y 377.433
U (409.013 nm)	-0.006425 u	ppm	0.004057	63.14	187.554000	Y 377.433
V (292.401 nm)	0.494986	ppm	0.001055	0.21	20043.900000	Y 377.433
Zn (206.200 nm)	0.491764	ppm	0.002335	0.47	1670.470000	Y 377.433
Zr (343.823 nm)	0.496675	ppm	0.000522	0.11	19490.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014713	10440.086342	0.002310	0.23
Y 377.433	1.014321	431905.028371	0.001499	0.15
Y_R 377.433	1.021710	41105.700000	0.000275	0.03
Y_R 488.368	1.032140	38283.900000	0.003293	0.32
Y_R2 488.368	1.020385	72434.727551	0.002223	0.22
Y_R4	1.014730	34786.700000	0.005204	0.51

Sample Name: CCB

Date: 9/21/2018 12:05:45 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000339 u	ppm	0.000119	35.17	-96.709100	Y 377.433
Al (394.401 nm)	0.030714	ppm	0.014468	47.11	383.038000	Y 377.433
Al H (396.152 nm)	0.166120 Zu	ppm	0.017343	10.44	44.381300 Z	Y_R 377.433
As (188.980 nm)	0.003576	ppm	0.003448	96.41	-5.567750	Y 242.219
B (249.678 nm)	0.004627	ppm	0.000813	17.56	16.875600	Y 242.219
Ba (493.408 nm)	0.000850	ppm	0.000417	49.08	616.890000	Y_R 488.368
Be (234.861 nm)	0.000117	ppm	0.000066	56.17	2.301730	Y_R 488.368
Bi (223.061 nm)	-0.003466 u	ppm	0.000656	18.94	52.649700	Y 377.433
Ca (315.887 nm)	0.007676 u	ppm	0.027894	> 100.00	-0.937646	Y_R 377.433
Cd (214.439 nm)	0.000399	ppm	0.000256	64.06	-2.963290	Y 377.433
Co (228.615 nm)	0.000607	ppm	0.000226	37.22	-5.657070	Y 242.219
Cr (205.560 nm)	0.001240	ppm	0.000122	9.83	-4.157420	Y 377.433
Cu (324.754 nm)	0.001205	ppm	0.000701	58.21	193.997000	Y 377.433
Fe (238.204 nm)	0.018314	ppm	0.023716	> 100.00	57.838265	Y_R 377.433
Fe H (259.940 nm)	-0.050964 u	ppm	0.024038	47.17	32.825100	Y_R 377.433
K (766.491 nm)	0.037252	ppm	0.005888	15.81	1794.650000	Y_R2 488.368
Li (670.783 nm)	0.001863	ppm	0.001939	> 100.00	-1133.250000	Y_R2 488.368
Mg (279.078 nm)	0.045604 Z	ppm	0.013828	30.32	103.420000 Z	Y 377.433
Mn (257.610 nm)	0.001057 Z	ppm	0.000364	34.47	241.439000 Z	Y 377.433
Mo (202.032 nm)	0.000727	ppm	0.000285	39.14	27.981600	Y 377.433
Na (589.592 nm)	-0.023055 u	ppm	0.010403	45.12	-109.286000	Y_R2 488.368
Na H (589.593 nm)	-0.614634 u	ppm	0.019540	3.18	448.037409	Y_R4
Ni (231.604 nm)	0.001081	ppm	0.000335	31.03	20.178400	Y 377.433
P (213.618 nm)	-0.006631 u	ppm	0.002910	43.88	-8.454820	Y 242.219
Pb (220.353 nm)	0.002078	ppm	0.001376	66.22	13.737900	Y 242.219
S (181.972 nm)	0.007976	ppm	0.002830	35.48	4.646578	Y 377.433
Sb (206.834 nm)	-0.002368 u	ppm	0.001998	84.37	16.031100	Y 377.433
Se (196.026 nm)	0.003672	ppm	0.000807	21.98	13.979700	Y 242.219
Si (288.158 nm)	0.007675	ppm	0.003704	48.26	402.263000	Y 377.433
Sn (189.925 nm)	0.000298 u	ppm	0.001069	> 100.00	-0.139626	Y 377.433
Sr (421.552 nm)	0.000507	ppm	0.000312	61.54	212.776077	Y_R 488.368
Th (288.505 nm)	-0.012071 Zu	ppm	0.001315	10.90	-3.148180 Z	Y 377.433
Ti (336.122 nm)	0.001200	ppm	0.000301	25.06	-2.902190	Y 377.433
Tl (190.794 nm)	0.001508	ppm	0.000115	7.59	5.039070	Y 377.433
U (409.013 nm)	-0.017485 u	ppm	0.007860	44.96	206.356000	Y 377.433
V (292.401 nm)	0.001114	ppm	0.000345	30.92	-217.663000	Y 377.433
Zn (206.200 nm)	0.000402 u	ppm	0.001146	> 100.00	5.644170	Y 377.433
Zr (343.823 nm)	0.000127 u	ppm	0.000439	> 100.00	119.030000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007017	10360.902323	0.001155	0.11
Y 377.433	1.006912	428750.067981	0.001163	0.12
Y_R 377.433	1.008810	40586.800000	0.002373	0.24
Y_R 488.368	1.012310	37548.600000	0.003459	0.34
Y_R2 488.368	1.017503	72230.096992	0.005070	0.50
Y_R4	1.003880	34414.800000	0.000913	0.09

Sample Name: CCVL-5320254

Date: 9/21/2018 12:08:56 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008806	ppm	0.000158	1.80	133.924000	Y 377.433
Al (394.401 nm)	0.102465	ppm	0.000799	0.78	1187.030000	Y 377.433
Al H (396.152 nm)	0.257279 u	ppm	0.005221	2.03	206.775000	Y_R 377.433
As (188.980 nm)	0.014655	ppm	0.000717	4.89	8.885680	Y 242.219
B (249.678 nm)	0.100579	ppm	0.001503	1.49	376.975000	Y 242.219
Ba (493.408 nm)	0.010737	ppm	0.000158	1.47	1520.070000	Y_R 488.368
Be (234.861 nm)	0.000981	ppm	0.000028	2.85	48.513000	Y_R 488.368
Bi (223.061 nm)	0.091193	ppm	0.000911	1.00	204.629000	Y 377.433
Ca (315.887 nm)	0.214007	ppm	0.002880	1.35	135.129648	Y_R 377.433
Cd (214.439 nm)	0.005187	ppm	0.000234	4.51	118.705000	Y 377.433
Co (228.615 nm)	0.010599	ppm	0.000022	0.21	193.360000	Y 242.219
Cr (205.560 nm)	0.010419	ppm	0.000254	2.44	40.720200	Y 377.433
Cu (324.754 nm)	0.015792	ppm	0.000080	0.50	815.821000	Y 377.433
Fe (238.204 nm)	0.116200	ppm	0.002760	2.38	217.494291	Y_R 377.433
Fe H (259.940 nm)	0.053171 u	ppm	0.001623	3.05	127.098000	Y_R 377.433
K (766.491 nm)	3.023310	ppm	0.128762	4.26	4920.450000	Y_R2 488.368
Li (670.783 nm)	0.020192	ppm	0.001622	8.03	-880.387000	Y_R2 488.368
Mg (279.078 nm)	0.219068	ppm	0.002081	0.95	470.847000	Y 377.433
Mn (257.610 nm)	0.010793	ppm	0.000064	0.59	1961.550000	Y 377.433
Mo (202.032 nm)	0.019528	ppm	0.000163	0.84	223.579000	Y 377.433
Na (589.592 nm)	1.108320	ppm	0.016329	1.47	503.404000	Y_R2 488.368
Na H (589.593 nm)	0.209976 u	ppm	0.006181	2.94	752.770342	Y_R4
Ni (231.604 nm)	0.039819	ppm	0.000443	1.11	163.690000	Y 377.433
P (213.618 nm)	2.881620	ppm	0.001462	0.05	3147.660000	Y 242.219
Pb (220.353 nm)	0.011034	ppm	0.000557	5.05	32.470700	Y 242.219
S (181.972 nm)	0.094830	ppm	0.003282	3.46	45.113327	Y 377.433
Sb (206.834 nm)	0.014701	ppm	0.002654	18.05	43.509600	Y 377.433
Se (196.026 nm)	0.018655	ppm	0.000946	5.07	33.682200	Y 242.219
Si (288.158 nm)	0.488385	ppm	0.000502	0.10	2346.850000	Y 377.433
Sn (189.925 nm)	0.095957	ppm	0.003135	3.27	112.678000	Y 377.433
Sr (421.552 nm)	0.010166	ppm	0.000119	1.17	1321.794754	Y_R 488.368
Th (288.505 nm)	0.008473 Q	ppm	0.001390	16.41	16.450600 Q	Y 377.433
Ti (336.122 nm)	0.010292	ppm	0.000020	0.20	818.934000	Y 377.433
Tl (190.794 nm)	0.016414	ppm	0.001271	7.74	31.646100	Y 377.433
U (409.013 nm)	0.050445	ppm	0.008825	17.49	364.217000	Y 377.433
V (292.401 nm)	0.010447	ppm	0.000106	1.01	163.647000	Y 377.433
Zn (206.200 nm)	0.020852	ppm	0.000746	3.58	74.930200	Y 377.433
Zr (343.823 nm)	0.014872	ppm	0.000296	1.99	694.256000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027987	10576.649586	0.001824	0.18
Y 377.433	1.030366	438737.218074	0.002539	0.25
Y_R 377.433	1.037440	41738.400000	0.004898	0.47
Y_R 488.368	1.038020	38502.100000	0.011930	1.15
Y_R2 488.368	1.041405	73926.888234	0.007345	0.71
Y_R4	1.022330	35047.100000	0.003031	0.30

Sample Name: MB 280-430097/1-C

Date: 9/21/2018 12:19:38 PM Rack:Tube: 1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000476 u	ppm	0.000352	73.95	-100.145000	Y 377.433
Al (394.401 nm)	0.009799	ppm	0.009933	> 100.00	150.232000	Y 377.433
Al H (396.152 nm)	0.156659 u	ppm	0.007208	4.60	27.727200	Y_R 377.433
As (188.980 nm)	0.000392 u	ppm	0.001878	> 100.00	-9.722380	Y 242.219
B (249.678 nm)	0.002319	ppm	0.001083	46.70	8.217530	Y 242.219
Ba (493.408 nm)	0.000033 u	ppm	0.000149	> 100.00	542.286000	Y_R 488.368
Be (234.861 nm)	0.000043	ppm	0.000009	19.87	-1.647380	Y_R 488.368
Bi (223.061 nm)	-0.006072 u	ppm	0.003141	51.74	48.464700	Y 377.433
Ca (315.887 nm)	0.013069	ppm	0.015134	> 100.00	2.617258	Y_R 377.433
Cd (214.439 nm)	0.000194	ppm	0.000196	> 100.00	-8.161860	Y 377.433
Co (228.615 nm)	0.000378	ppm	0.000281	74.31	-10.244600	Y 242.219
Cr (205.560 nm)	0.000176 u	ppm	0.000864	> 100.00	-9.370700	Y 377.433
Cu (324.754 nm)	0.000288	ppm	0.000165	57.49	154.943000	Y 377.433
Fe (238.204 nm)	0.004186	ppm	0.003241	77.41	34.794453	Y_R 377.433
Fe H (259.940 nm)	-0.066427 u	ppm	0.004011	6.04	18.826100	Y_R 377.433
K (766.491 nm)	-0.089078 u	ppm	0.031794	35.69	1662.410000	Y_R2 488.368
Li (670.783 nm)	0.000478	ppm	0.000049	10.35	-1152.350000	Y_R2 488.368
Mg (279.078 nm)	0.022267	ppm	0.007026	31.55	53.915100	Y 377.433
Mn (257.610 nm)	0.000512	ppm	0.000260	50.89	145.181000	Y 377.433
Mo (202.032 nm)	-0.000111 u	ppm	0.000393	> 100.00	19.262500	Y 377.433
Na (589.592 nm)	-0.028123 u	ppm	0.039084	> 100.00	-112.017000	Y_R2 488.368
Na H (589.593 nm)	-1.045807 u	ppm	0.006256	0.60	288.297946	Y_R4
Ni (231.604 nm)	-0.000121 u	ppm	0.000692	> 100.00	15.727600	Y 377.433
P (213.618 nm)	0.000043 u	ppm	0.000149	> 100.00	-1.140790	Y 242.219
Pb (220.353 nm)	0.001401 u	ppm	0.002722	> 100.00	12.326100	Y 242.219
S (181.972 nm)	0.002309	ppm	0.001743	75.49	2.013349	Y 377.433
Sb (206.834 nm)	-0.001452 u	ppm	0.000654	45.05	17.512900	Y 377.433
Se (196.026 nm)	-0.001196 u	ppm	0.000201	16.79	7.579040	Y 242.219
Si (288.158 nm)	0.002542	ppm	0.003432	> 100.00	381.500000	Y 377.433
Sn (189.925 nm)	-0.000546 u	ppm	0.000221	40.55	-1.135250	Y 377.433
Sr (421.552 nm)	-0.000023 u	ppm	0.000122	> 100.00	151.923830	Y_R 488.368
Th (288.505 nm)	-0.008218 u	ppm	0.000204	2.49	0.579724	Y 377.433
Ti (336.122 nm)	0.000680	ppm	0.000113	16.67	-49.701600	Y 377.433
Tl (190.794 nm)	0.001489	ppm	0.001307	87.79	5.010560	Y 377.433
U (409.013 nm)	-0.000201 u	ppm	0.012870	> 100.00	246.876000	Y 377.433
V (292.401 nm)	0.000889	ppm	0.000090	10.14	-226.651000	Y 377.433
Zn (206.200 nm)	0.001382	ppm	0.000142	10.29	8.962450	Y 377.433
Zr (343.823 nm)	0.000038 u	ppm	0.000097	> 100.00	115.512000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.036611	10665.388468	0.000599	0.06
Y 377.433	1.038371	442145.670063	0.001178	0.11
Y_R 377.433	1.044680	42029.600000	0.003483	0.33
Y_R 488.368	1.055150	39137.300000	0.006272	0.59
Y_R2 488.368	1.052322	74701.803817	0.004408	0.42
Y_R4	1.033470	35429.200000	0.006183	0.60

Sample Name: LCS 280-430097/2-C

Date: 9/21/2018 12:22:49 PM Rack:Tube: 1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051377	ppm	0.000169	0.33	1160.550000	Y 377.433
Al (394.401 nm)	1.998140	ppm	0.002246	0.11	22509.800000	Y 377.433
Al H (396.152 nm)	1.949230	ppm	0.018323	0.94	3520.050000	Y_R 377.433
As (188.980 nm)	0.993346	ppm	0.001514	0.15	1285.940000	Y 242.219
B (249.678 nm)	1.019800	ppm	0.001147	0.11	3826.720000	Y 242.219
Ba (493.408 nm)	1.992950	ppm	0.006492	0.33	182583.000000	Y_R 488.368
Be (234.861 nm)	0.049855	ppm	0.000160	0.32	2691.650000	Y_R 488.368
Bi (223.061 nm)	1.881000	ppm	0.001128	0.06	3078.110000	Y 377.433
Ca (315.887 nm)	48.979907	ppm	0.113347	0.23	32292.707082	Y_R 377.433
Cd (214.439 nm)	0.098613	ppm	0.000160	0.16	2492.380000	Y 377.433
Co (228.615 nm)	0.473670	ppm	0.000264	0.06	9437.130000	Y 242.219
Cr (205.560 nm)	0.195141	ppm	0.000798	0.41	942.298000	Y 377.433
Cu (324.754 nm)	0.243142	ppm	0.000072	0.03	10552.100000	Y 377.433
Fe (238.204 nm)	0.983203	ppm	0.014849	1.51	1631.623118	Y_R 377.433
Fe H (259.940 nm)	0.925851 u	ppm	0.012228	1.32	917.139000	Y_R 377.433
K (766.491 nm)	50.633100	ppm	0.457321	0.90	54758.300000	Y_R2 488.368
Li (670.783 nm)	0.989488	ppm	0.004410	0.45	12491.400000	Y_R2 488.368
Mg (279.078 nm)	48.888200	ppm	0.057054	0.12	103746.000000	Y 377.433
Mn (257.610 nm)	0.490670	ppm	0.000293	0.06	86743.700000	Y 377.433
Mo (202.032 nm)	0.999562	ppm	0.000476	0.05	10419.600000	Y 377.433
Na (589.592 nm)	48.220000	ppm	0.059531	0.12	25989.700000	Y_R2 488.368
Na H (589.593 nm)	49.662798 u	ppm	0.122875	0.25	18879.734305	Y_R4
Ni (231.604 nm)	0.476562	ppm	0.000533	0.11	1783.800000	Y 377.433
P (213.618 nm)	10.274800	ppm	0.083063	0.81	11218.300000	Y 242.219
Pb (220.353 nm)	0.495580	ppm	0.002471	0.50	1043.760000	Y 242.219
S (181.972 nm)	1.915418	ppm	0.005128	0.27	897.887599	Y 377.433
Sb (206.834 nm)	0.502888	ppm	0.000594	0.12	823.139000	Y 377.433
Se (196.026 nm)	2.004560	ppm	0.007373	0.37	2646.670000	Y 242.219
Si (288.158 nm)	10.014100	ppm	0.042936	0.43	40880.700000	Y 377.433
Sn (189.925 nm)	1.980180	ppm	0.004922	0.25	2334.890000	Y 377.433
Sr (421.552 nm)	0.989275	ppm	0.002394	0.24	113734.636502	Y_R 488.368
Th (288.505 nm)	0.958776	ppm	0.000587	0.06	912.422000	Y 377.433
Ti (336.122 nm)	0.990741	ppm	0.000612	0.06	89479.200000	Y 377.433
Tl (190.794 nm)	1.987030	ppm	0.000581	0.03	3553.090000	Y 377.433
U (409.013 nm)	1.976740	ppm	0.002709	0.14	4829.560000	Y 377.433
V (292.401 nm)	0.497841	ppm	0.000205	0.04	20228.600000	Y 377.433
Zn (206.200 nm)	0.484550	ppm	0.000162	0.03	1646.010000	Y 377.433
Zr (343.823 nm)	0.492224	ppm	0.000504	0.10	19314.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999301	10281.512950	0.000723	0.07
Y 377.433	1.003466	427282.911002	0.000178	0.02
Y_R 377.433	1.023220	41166.300000	0.001192	0.12
Y_R 488.368	1.026310	38067.600000	0.002941	0.29
Y_R2 488.368	1.026162	72844.782587	0.000723	0.07
Y_R4	1.018230	34906.900000	0.000644	0.06

Sample Name: 280-114415-D-1-H

Date: 9/21/2018 12:26:53 PM Rack:Tube: 1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000325	ppm	0.000459	> 100.00	-80.237300	Y 377.433
Al (394.401 nm)	-0.006036 u	ppm	0.000246	4.08	261.742000	Y 377.433
Al H (396.152 nm)	-0.105348 u	ppm	0.001690	1.60	-43.881200	Y_R 377.433
As (188.980 nm)	0.002326	ppm	0.000709	30.46	-7.198350	Y 242.219
B (249.678 nm)	0.262592	ppm	0.003861	1.47	985.073000	Y 242.219
Ba (493.408 nm)	0.243688	ppm	0.000018	0.01	22798.500000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000028	> 100.00	-5.011470	Y_R 488.368
Bi (223.061 nm)	0.008341	ppm	0.002472	29.63	71.620600	Y 377.433
Ca (315.887 nm)	156.405681	ppm	0.144179	0.09	103131.706488	Y_R 377.433
Cd (214.439 nm)	0.000518	ppm	0.000228	44.05	0.071842	Y 377.433
Co (228.615 nm)	-0.000132 u	ppm	0.000030	22.67	-20.393000	Y 242.219
Cr (205.560 nm)	0.000162	ppm	0.000208	> 100.00	-9.449460	Y 377.433
Cu (324.754 nm)	0.000402	ppm	0.000106	26.50	79.866600	Y 377.433
Fe (238.204 nm)	0.022784	ppm	0.001030	4.52	65.129291	Y_R 377.433
Fe H (259.940 nm)	-0.047132 u	ppm	0.002519	5.35	36.294200	Y_R 377.433
K (766.491 nm)	9.696170	ppm	0.098524	1.02	11905.600000	Y_R2 488.368
Li (670.783 nm)	0.042945	ppm	0.001014	2.36	-566.508000	Y_R2 488.368
Mg (279.078 nm)	23.447400	ppm	0.028948	0.12	49771.700000	Y 377.433
Mn (257.610 nm)	0.000636	ppm	0.000001	0.13	167.144000	Y 377.433
Mo (202.032 nm)	0.003218	ppm	0.000141	4.37	53.897300	Y 377.433
Na (589.592 nm)	136.251000 o	ppm	0.097096	0.07	73703.500000	Y_R2 488.368
Na H (589.593 nm)	141.489236	ppm	0.346427	0.24	53097.542261	Y_R4
Ni (231.604 nm)	-0.000709 u	ppm	0.000879	> 100.00	15.887000	Y 377.433
P (213.618 nm)	0.170234	ppm	0.003695	2.17	184.796000	Y 242.219
Pb (220.353 nm)	0.000264 u	ppm	0.000678	> 100.00	9.906750	Y 242.219
S (181.972 nm)	81.631260	ppm	0.233731	0.29	38001.714674	Y 377.433
Sb (206.834 nm)	-0.005980 u	ppm	0.000284	4.74	10.171300	Y 377.433
Se (196.026 nm)	0.007489	ppm	0.002076	27.72	19.000000	Y 242.219
Si (288.158 nm)	12.690600	ppm	0.036399	0.29	51707.700000	Y 377.433
Sn (189.925 nm)	0.000894	ppm	0.000092	10.26	0.562936	Y 377.433
Sr (421.552 nm)	1.249407	ppm	0.000017	0.00	143600.600605	Y_R 488.368
Th (288.505 nm)	-0.023083 u	ppm	0.002022	8.76	-14.032600	Y 377.433
Ti (336.122 nm)	0.000122	ppm	0.000075	61.16	269.533000	Y 377.433
Tl (190.794 nm)	0.004068	ppm	0.000071	1.74	9.613080	Y 377.433
U (409.013 nm)	-0.011880 u	ppm	0.001351	11.37	204.301000	Y 377.433
V (292.401 nm)	0.004703	ppm	0.000201	4.27	-68.547800	Y 377.433
Zn (206.200 nm)	0.005447	ppm	0.000015	0.28	22.737600	Y 377.433
Zr (343.823 nm)	0.000459	ppm	0.000090	19.54	131.977000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992819	10214.819535	0.003685	0.37
Y 377.433	0.996431	424287.244698	0.005127	0.51
Y_R 377.433	1.030350	41453.200000	0.002945	0.29
Y_R 488.368	1.028460	38147.400000	0.001873	0.18
Y_R2 488.368	1.020573	72448.017653	0.003371	0.33
Y_R4	1.002730	34375.400000	0.009133	0.91

Sample Name: 280-114415-D-1-Hsd@5

Date: 9/21/2018 12:30:59 PM Rack:Tube: 1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000208 u	ppm	0.000589	> 100.00	-82.992200	Y 377.433
Al (394.401 nm)	-0.000926 u	ppm	0.003072	> 100.00	89.011300	Y 377.433
Al H (396.152 nm)	0.095408 u	ppm	0.009793	10.26	-2.672090	Y_R 377.433
As (188.980 nm)	0.001465	ppm	0.000377	25.71	-8.322430	Y 242.219
B (249.678 nm)	0.049985	ppm	0.002117	4.24	187.119000	Y 242.219
Ba (493.408 nm)	0.048361	ppm	0.000407	0.84	4956.740000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000153	> 100.00	-4.242650	Y_R 488.368
Bi (223.061 nm)	-0.005457 u	ppm	0.000937	17.18	49.454800	Y 377.433
Ca (315.887 nm)	31.634464	ppm	0.040958	0.13	20854.532814	Y_R 377.433
Cd (214.439 nm)	0.000210	ppm	0.000138	65.53	-7.768180	Y 377.433
Co (228.615 nm)	0.000123	ppm	0.000020	16.46	-15.304300	Y 242.219
Cr (205.560 nm)	-0.000045 u	ppm	0.000088	> 100.00	-10.457600	Y 377.433
Cu (324.754 nm)	0.000079 u	ppm	0.000209	> 100.00	129.445000	Y 377.433
Fe (238.204 nm)	0.000245 u	ppm	0.002192	> 100.00	28.366535	Y_R 377.433
Fe H (259.940 nm)	-0.065499 u	ppm	0.002732	4.17	19.666000	Y_R 377.433
K (766.491 nm)	1.907200	ppm	0.071844	3.77	3752.110000	Y_R2 488.368
Li (670.783 nm)	0.007929	ppm	0.002931	36.97	-1049.560000	Y_R2 488.368
Mg (279.078 nm)	4.652690	ppm	0.029516	0.63	9881.530000	Y 377.433
Mn (257.610 nm)	0.000349	ppm	0.000065	18.52	116.452000	Y 377.433
Mo (202.032 nm)	0.001057	ppm	0.000296	27.96	31.415900	Y 377.433
Na (589.592 nm)	27.843800	ppm	0.082640	0.30	14984.900000	Y_R2 488.368
Na H (589.593 nm)	28.179930 u	ppm	0.295537	1.05	11116.716961	Y_R4
Ni (231.604 nm)	0.000236	ppm	0.000104	43.93	17.516300	Y 377.433
P (213.618 nm)	0.028472	ppm	0.003632	12.76	29.935300	Y 242.219
Pb (220.353 nm)	0.002145	ppm	0.000106	4.95	13.878300	Y 242.219
S (181.972 nm)	15.394348	ppm	0.100814	0.65	7167.438528	Y 377.433
Sb (206.834 nm)	-0.002174 u	ppm	0.003605	> 100.00	16.332400	Y 377.433
Se (196.026 nm)	0.004550	ppm	0.001024	22.50	15.138800	Y 242.219
Si (288.158 nm)	2.421140	ppm	0.001290	0.05	10165.300000	Y 377.433
Sn (189.925 nm)	0.002026	ppm	0.000173	8.56	1.898210	Y 377.433
Sr (421.552 nm)	0.247532	ppm	0.000685	0.28	28574.031027	Y_R 488.368
Th (288.505 nm)	-0.013751 u	ppm	0.010270	74.68	-4.807040	Y 377.433
Ti (336.122 nm)	0.000326	ppm	0.000129	39.51	-7.365830	Y 377.433
Tl (190.794 nm)	0.001080	ppm	0.000493	45.68	4.272930	Y 377.433
U (409.013 nm)	0.002775	ppm	0.002365	85.25	250.756000	Y 377.433
V (292.401 nm)	0.001451	ppm	0.000130	8.97	-203.603000	Y 377.433
Zn (206.200 nm)	0.000896	ppm	0.000305	34.00	7.316510	Y 377.433
Zr (343.823 nm)	0.000177	ppm	0.000241	> 100.00	120.962000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005920	10349.609679	0.000651	0.06
Y 377.433	1.008548	429446.874409	0.002028	0.20
Y_R 377.433	1.023070	41160.300000	0.001390	0.14
Y_R 488.368	1.026900	38089.700000	0.004912	0.48
Y_R2 488.368	1.030506	73153.176712	0.003909	0.38
Y_R4	1.025470	35155.100000	0.006660	0.65

Sample Name: 280-114415-D-1-I MS

Date: 9/21/2018 12:34:30 PM Rack:Tube: 1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051276	ppm	0.000531	1.04	1159.540000	Y 377.433
Al (394.401 nm)	1.929620	ppm	0.000145	0.01	22006.400000	Y 377.433
Al H (396.152 nm)	1.656030	ppm	0.003064	0.19	3361.680000	Y_R 377.433
As (188.980 nm)	0.991908	ppm	0.001021	0.10	1284.060000	Y 242.219
B (249.678 nm)	1.270700	ppm	0.003405	0.27	4768.440000	Y 242.219
Ba (493.408 nm)	2.159670	ppm	0.005792	0.27	197811.000000	Y_R 488.368
Be (234.861 nm)	0.048427	ppm	0.000034	0.07	2614.480000	Y_R 488.368
Bi (223.061 nm)	1.857600	ppm	0.005240	0.28	3040.560000	Y 377.433
Ca (315.887 nm)	194.130618	ppm	0.399794	0.21	128008.610862	Y_R 377.433
Cd (214.439 nm)	0.093944	ppm	0.000334	0.36	2373.770000	Y 377.433
Co (228.615 nm)	0.459398	ppm	0.002424	0.53	9152.160000	Y 242.219
Cr (205.560 nm)	0.187830	ppm	0.000175	0.09	906.577000	Y 377.433
Cu (324.754 nm)	0.239165	ppm	0.000228	0.10	10308.800000	Y 377.433
Fe (238.204 nm)	0.948980	ppm	0.006597	0.70	1575.803729	Y_R 377.433
Fe H (259.940 nm)	0.884953 u	ppm	0.008535	0.96	880.115000	Y_R 377.433
K (766.491 nm)	58.899200	ppm	0.013724	0.02	63411.200000	Y_R2 488.368
Li (670.783 nm)	1.002210	ppm	0.000451	0.05	12666.900000	Y_R2 488.368
Mg (279.078 nm)	68.901000	ppm	0.070063	0.10	146222.000000	Y 377.433
Mn (257.610 nm)	0.471846	ppm	0.000425	0.09	83418.100000	Y 377.433
Mo (202.032 nm)	0.972970	ppm	0.001166	0.12	10143.000000	Y 377.433
Na (589.592 nm)	172.276000 o	ppm	0.633152	0.37	93185.600000	Y_R2 488.368
Na H (589.593 nm)	182.065779	ppm	0.623247	0.34	67940.840696	Y_R4
Ni (231.604 nm)	0.454507	ppm	0.001298	0.29	1704.170000	Y 377.433
P (213.618 nm)	10.303400	ppm	0.019097	0.19	11249.700000	Y 242.219
Pb (220.353 nm)	0.474921	ppm	0.002520	0.53	1000.530000	Y 242.219
S (181.972 nm)	79.688675	ppm	0.163103	0.20	37102.298836	Y 377.433
Sb (206.834 nm)	0.501071	ppm	0.000743	0.15	820.471000	Y 377.433
Se (196.026 nm)	1.962310	ppm	0.009382	0.48	2591.080000	Y 242.219
Si (288.158 nm)	21.836200	ppm	0.178273	0.82	88703.600000	Y 377.433
Sn (189.925 nm)	1.926860	ppm	0.001535	0.08	2272.000000	Y 377.433
Sr (421.552 nm)	2.140352	ppm	0.004700	0.22	245891.114625	Y_R 488.368
Th (288.505 nm)	0.918122	ppm	0.003795	0.41	873.426000	Y 377.433
Ti (336.122 nm)	0.961515	ppm	0.000306	0.03	87182.300000	Y 377.433
Tl (190.794 nm)	1.875290	ppm	0.005955	0.32	3353.230000	Y 377.433
U (409.013 nm)	1.918810	ppm	0.002821	0.15	4681.090000	Y 377.433
V (292.401 nm)	0.485642	ppm	0.000001	0.00	19729.400000	Y 377.433
Zn (206.200 nm)	0.460597	ppm	0.003079	0.67	1564.850000	Y 377.433
Zr (343.823 nm)	0.477722	ppm	0.000825	0.17	18749.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979486	10077.638929	0.001705	0.17
Y 377.433	0.988438	420884.011333	0.003991	0.40
Y_R 377.433	1.020120	41041.600000	0.002275	0.22
Y_R 488.368	1.022060	37910.200000	0.000815	0.08
Y_R2 488.368	1.018926	72331.122836	0.000576	0.06
Y_R4	1.008470	34572.300000	0.000459	0.05

Sample Name: 280-114415-D-1-J MSD

Date: 9/21/2018 12:38:37 PM Rack:Tube: 1:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053285	ppm	0.000420	0.79	1208.210000	Y 377.433
Al (394.401 nm)	2.002290	ppm	0.000005	0.00	22839.300000	Y 377.433
Al H (396.152 nm)	1.706690	ppm	0.000673	0.04	3482.970000	Y_R 377.433
As (188.980 nm)	1.028600	ppm	0.004589	0.45	1331.950000	Y 242.219
B (249.678 nm)	1.318630	ppm	0.000511	0.04	4948.320000	Y 242.219
Ba (493.408 nm)	2.246320	ppm	0.007225	0.32	205726.000000	Y_R 488.368
Be (234.861 nm)	0.049974	ppm	0.000197	0.39	2698.100000	Y_R 488.368
Bi (223.061 nm)	1.929320	ppm	0.004011	0.21	3155.710000	Y 377.433
Ca (315.887 nm)	203.856445	ppm	0.373097	0.18	134422.064571	Y_R 377.433
Cd (214.439 nm)	0.097190	ppm	0.000120	0.12	2456.240000	Y 377.433
Co (228.615 nm)	0.476894	ppm	0.001474	0.31	9501.370000	Y 242.219
Cr (205.560 nm)	0.195764	ppm	0.001642	0.84	945.321000	Y 377.433
Cu (324.754 nm)	0.248111	ppm	0.000073	0.03	10686.600000	Y 377.433
Fe (238.204 nm)	0.983764	ppm	0.007809	0.79	1632.537497	Y_R 377.433
Fe H (259.940 nm)	0.918030 u	ppm	0.004853	0.53	910.059000	Y_R 377.433
K (766.491 nm)	61.339600	ppm	0.048457	0.08	65965.800000	Y_R2 488.368
Li (670.783 nm)	1.043810	ppm	0.009675	0.93	13240.700000	Y_R2 488.368
Mg (279.078 nm)	71.958200	ppm	0.016409	0.02	152710.000000	Y 377.433
Mn (257.610 nm)	0.489698	ppm	0.000119	0.02	86572.200000	Y 377.433
Mo (202.032 nm)	1.009060	ppm	0.000489	0.05	10518.400000	Y 377.433
Na (589.592 nm)	180.430000 o	ppm	0.488923	0.27	97600.800000	Y_R2 488.368
Na H (589.593 nm)	192.513867	ppm	0.759487	0.39	71804.659169	Y_R4
Ni (231.604 nm)	0.471764	ppm	0.001181	0.25	1768.300000	Y 377.433
P (213.618 nm)	10.744000	ppm	0.034049	0.32	11730.800000	Y 242.219
Pb (220.353 nm)	0.490106	ppm	0.002389	0.49	1032.220000	Y 242.219
S (181.972 nm)	84.367961	ppm	0.084186	0.10	39280.720068	Y 377.433
Sb (206.834 nm)	0.519526	ppm	0.000357	0.07	849.966000	Y 377.433
Se (196.026 nm)	2.048100	ppm	0.004670	0.23	2703.950000	Y 242.219
Si (288.158 nm)	22.816200	ppm	0.233182	1.02	92668.000000	Y 377.433
Sn (189.925 nm)	1.997410	ppm	0.006339	0.32	2355.210000	Y 377.433
Sr (421.552 nm)	2.240906	ppm	0.009194	0.41	257435.924278	Y_R 488.368
Th (288.505 nm)	0.945042	ppm	0.007478	0.79	898.569000	Y 377.433
Ti (336.122 nm)	0.997423	ppm	0.000083	0.01	90448.500000	Y 377.433
Tl (190.794 nm)	1.950860	ppm	0.008704	0.45	3488.300000	Y 377.433
U (409.013 nm)	1.980220	ppm	0.014158	0.71	4822.500000	Y 377.433
V (292.401 nm)	0.504170	ppm	0.000880	0.17	20491.500000	Y 377.433
Zn (206.200 nm)	0.482911	ppm	0.000760	0.16	1640.450000	Y 377.433
Zr (343.823 nm)	0.494749	ppm	0.000703	0.14	19413.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972134	10001.995973	0.001223	0.13
Y 377.433	0.981610	417976.286371	0.000495	0.05
Y_R 377.433	1.018740	40986.300000	0.004924	0.48
Y_R 488.368	1.019050	37798.300000	0.009328	0.92
Y_R2 488.368	1.031166	73199.986321	0.006010	0.58
Y_R4	1.028000	35241.800000	0.003811	0.37

Sample Name: CCVH-5320321

Date: 9/21/2018 12:42:43 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001225	ppm	0.000260	21.19	-154.278000	Y 377.433
Al (394.401 nm)	50.507700 o	ppm	0.024565	0.05	561398.000000	Y 377.433
Al H (396.152 nm)	49.480000	ppm	0.065507	0.13	85465.600000	Y_R 377.433
As (188.980 nm)	-0.000373 u	ppm	0.001579	> 100.00	-12.670500	Y 242.219
B (249.678 nm)	0.006674	ppm	0.001560	23.38	9.338630	Y 242.219
Ba (493.408 nm)	0.001464	ppm	0.000303	20.72	709.577000	Y_R 488.368
Be (234.861 nm)	-0.000689 u	ppm	0.000002	0.23	-334.344000	Y_R 488.368
Bi (223.061 nm)	0.990804	ppm	0.009816	0.99	1655.170000	Y 377.433
Ca (315.887 nm)	0.070620	ppm	0.039430	55.83	44.638572	Y_R 377.433
Cd (214.439 nm)	-0.000556 u	ppm	0.000081	14.62	-9.411270	Y 377.433
Co (228.615 nm)	0.003592	ppm	0.000302	8.41	53.669000	Y 242.219
Cr (205.560 nm)	-0.000818 u	ppm	0.000590	72.06	-15.462200	Y 377.433
Cu (324.754 nm)	0.000799	ppm	0.000293	36.74	580.598000	Y 377.433
Fe (238.204 nm)	49.916203 o	ppm	0.201134	0.40	81443.915457	Y_R 377.433
Fe H (259.940 nm)	50.081200	ppm	0.069420	0.14	45417.700000	Y_R 377.433
K (766.491 nm)	0.278373	ppm	0.007893	2.84	2047.060000	Y_R2 488.368
Li (670.783 nm)	0.001785 u	ppm	0.003852	> 100.00	-1134.320000	Y_R2 488.368
Mg (279.078 nm)	0.027294	ppm	0.010649	39.01	-79.499000	Y 377.433
Mn (257.610 nm)	0.000618	ppm	0.000028	4.47	163.921000	Y 377.433
Mo (202.032 nm)	0.000315 u	ppm	0.000864	> 100.00	23.690300	Y 377.433
Na (589.592 nm)	242.283000 o	ppm	0.091379	0.04	131143.000000	Y_R2 488.368
Na H (589.593 nm)	250.379707	ppm	1.221756	0.49	93484.694573	Y_R4
Ni (231.604 nm)	0.000442 u	ppm	0.000729	> 100.00	25.043800	Y 377.433
P (213.618 nm)	-0.013061 u	ppm	0.002122	16.24	-16.620000	Y 242.219
Pb (220.353 nm)	0.001771	ppm	0.000962	54.30	23.756800	Y 242.219
S (181.972 nm)	5.052275	ppm	0.037241	0.74	2351.858047	Y 377.433
Sb (206.834 nm)	0.000253 u	ppm	0.000752	> 100.00	24.309800	Y 377.433
Se (196.026 nm)	0.000827	ppm	0.000999	> 100.00	-1.023300	Y 242.219
Si (288.158 nm)	0.026220	ppm	0.001033	3.94	478.095000	Y 377.433
Sn (189.925 nm)	0.001306 u	ppm	0.001957	> 100.00	1.225450	Y 377.433
Sr (421.552 nm)	0.000749	ppm	0.000203	27.15	246.313002	Y_R 488.368
Th (288.505 nm)	4.888710	ppm	0.005538	0.11	4750.240000	Y 377.433
Ti (336.122 nm)	0.001480	ppm	0.000171	11.54	13.526900	Y 377.433
Tl (190.794 nm)	-0.002889 u	ppm	0.000307	10.63	-3.536070	Y 377.433
U (409.013 nm)	9.852600	ppm	0.021023	0.21	23360.000000	Y 377.433
V (292.401 nm)	-0.003000 u	ppm	0.000161	5.35	-409.864000	Y 377.433
Zn (206.200 nm)	0.001546	ppm	0.000028	1.82	10.367500	Y 377.433
Zr (343.823 nm)	-0.006617 u	ppm	0.000441	6.67	-95.226200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996554	10253.247381	0.001596	0.16
Y 377.433	0.990746	421866.412000	0.001289	0.13
Y_R 377.433	1.015560	40858.200000	0.008358	0.82
Y_R 488.368	1.019570	37817.600000	0.017992	1.76
Y_R2 488.368	1.021382	72505.464897	0.007082	0.69
Y_R4	1.040500	35670.300000	0.011055	1.06

Sample Name: CCV-5305988

Date: 9/21/2018 12:46:51 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498284	ppm	0.001368	0.27	12445.600000	Y 377.433
Al (394.401 nm)	0.497455	ppm	0.005805	1.17	5678.650000	Y 377.433
Al H (396.152 nm)	0.573327 u	ppm	0.004681	0.82	946.192000	Y_R 377.433
As (188.980 nm)	0.987177	ppm	0.000685	0.07	1277.880000	Y 242.219
B (249.678 nm)	0.496647	ppm	0.000523	0.11	1862.770000	Y 242.219
Ba (493.408 nm)	0.498208	ppm	0.004796	0.96	46049.000000	Y_R 488.368
Be (234.861 nm)	0.493056	ppm	0.004367	0.89	26697.300000	Y_R 488.368
Bi (223.061 nm)	-0.003225 u	ppm	0.006682	> 100.00	53.433600	Y 377.433
Ca (315.887 nm)	5.011064	ppm	0.001991	0.04	3298.459716	Y_R 377.433
Cd (214.439 nm)	0.498397	ppm	0.005005	1.00	12648.900000	Y 377.433
Co (228.615 nm)	0.495428	ppm	0.003152	0.64	9851.320000	Y 242.219
Cr (205.560 nm)	0.489045	ppm	0.000675	0.14	2384.600000	Y 377.433
Cu (324.754 nm)	0.499338	ppm	0.001309	0.26	21448.800000	Y 377.433
Fe (238.204 nm)	2.512382	ppm	0.011950	0.48	4125.793007	Y_R 377.433
Fe H (259.940 nm)	2.459260 u	ppm	0.009753	0.40	2305.340000	Y_R 377.433
K (766.491 nm)	49.683800	ppm	0.011287	0.02	53764.500000	Y_R2 488.368
Li (670.783 nm)	0.980877	ppm	0.000310	0.03	12372.600000	Y_R2 488.368
Mg (279.078 nm)	19.720400	ppm	0.054445	0.28	41859.400000	Y 377.433
Mn (257.610 nm)	0.495114	ppm	0.001550	0.31	87529.000000	Y 377.433
Mo (202.032 nm)	0.496214	ppm	0.000070	0.01	5182.930000	Y 377.433
Na (589.592 nm)	24.988700	ppm	0.187059	0.75	13430.800000	Y_R2 488.368
Na H (589.593 nm)	25.961719 u	ppm	0.071266	0.27	10248.553246	Y_R4
Ni (231.604 nm)	0.496532	ppm	0.000697	0.14	1856.520000	Y 377.433
P (213.618 nm)	0.994673	ppm	0.002224	0.22	1064.820000	Y 242.219
Pb (220.353 nm)	0.995334	ppm	0.002403	0.24	2084.740000	Y 242.219
S (181.972 nm)	0.017782	ppm	0.007491	42.13	11.176983	Y 377.433
Sb (206.834 nm)	1.010940	ppm	0.005818	0.58	1653.910000	Y 377.433
Se (196.026 nm)	0.999676	ppm	0.000465	0.05	1324.330000	Y 242.219
Si (288.158 nm)	5.020630	ppm	0.049620	0.99	20680.800000	Y 377.433
Sn (189.925 nm)	0.996326	ppm	0.000714	0.07	1174.560000	Y 377.433
Sr (421.552 nm)	0.495538	ppm	0.003233	0.65	57048.169616	Y_R 488.368
Th (288.505 nm)	-0.024941 u	ppm	0.001141	4.57	-44.229900	Y 377.433
Ti (336.122 nm)	0.498888	ppm	0.000924	0.19	44956.500000	Y 377.433
Tl (190.794 nm)	1.009360	ppm	0.002182	0.22	1807.000000	Y 377.433
U (409.013 nm)	-0.011004 u	ppm	0.004417	40.14	176.728000	Y 377.433
V (292.401 nm)	0.493635	ppm	0.000748	0.15	19988.000000	Y 377.433
Zn (206.200 nm)	0.490048	ppm	0.000262	0.05	1664.660000	Y 377.433
Zr (343.823 nm)	0.497012	ppm	0.000794	0.16	19503.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008655	10377.757466	0.000033	0.00
Y 377.433	1.009166	429709.868487	0.001556	0.15
Y_R 377.433	1.024450	41215.900000	0.003313	0.32
Y_R 488.368	1.034760	38381.100000	0.009337	0.90
Y_R2 488.368	1.025724	72813.665185	0.001777	0.17
Y_R4	1.032150	35383.900000	0.011798	1.14

Sample Name: CCB

Date: 9/21/2018 12:50:23 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000482 u	ppm	0.000358	74.31	-100.285000	Y 377.433
Al (394.401 nm)	-0.006709 u	ppm	0.006560	97.78	-33.724800	Y 377.433
Al H (396.152 nm)	0.149588 Zu	ppm	0.014608	9.77	15.658600 Z	Y_R 377.433
As (188.980 nm)	-0.000795 u	ppm	0.000885	> 100.00	-11.270300	Y 242.219
B (249.678 nm)	0.001953	ppm	0.001111	56.85	6.848740	Y 242.219
Ba (493.408 nm)	0.000316 u	ppm	0.000695	> 100.00	568.084000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000080	99.11	0.428448	Y_R 488.368
Bi (223.061 nm)	-0.003961 u	ppm	0.000837	21.14	51.852300	Y 377.433
Ca (315.887 nm)	0.037598	ppm	0.002821	7.50	18.791793	Y_R 377.433
Cd (214.439 nm)	0.000034 u	ppm	0.000082	> 100.00	-12.242400	Y 377.433
Co (228.615 nm)	0.000423	ppm	0.000036	8.60	-9.340330	Y 242.219
Cr (205.560 nm)	0.000023 u	ppm	0.000890	> 100.00	-10.121400	Y 377.433
Cu (324.754 nm)	0.000367	ppm	0.000250	68.15	158.945000	Y 377.433
Fe (238.204 nm)	-0.004056 u	ppm	0.000832	20.52	21.351196	Y_R 377.433
Fe H (259.940 nm)	-0.068913 u	ppm	0.003960	5.75	16.575900	Y_R 377.433
K (766.491 nm)	-0.033706 u	ppm	0.055969	> 100.00	1720.370000	Y_R2 488.368
Li (670.783 nm)	0.003383	ppm	0.000975	28.83	-1112.280000	Y_R2 488.368
Mg (279.078 nm)	0.016015	ppm	0.012869	80.35	40.615600	Y 377.433
Mn (257.610 nm)	0.000078 u	ppm	0.000166	> 100.00	68.503600	Y 377.433
Mo (202.032 nm)	0.000264	ppm	0.000057	21.49	23.161700	Y 377.433
Na (589.592 nm)	0.073038	ppm	0.026650	36.49	-57.225000	Y_R2 488.368
Na H (589.593 nm)	0.102986 u	ppm	0.010015	9.72	714.097454	Y_R4
Ni (231.604 nm)	0.000294	ppm	0.000149	50.69	17.263000	Y 377.433
P (213.618 nm)	-0.003238 u	ppm	0.000593	18.31	-4.731390	Y 242.219
Pb (220.353 nm)	0.000725 u	ppm	0.001105	> 100.00	10.921500	Y 242.219
S (181.972 nm)	0.015980	ppm	0.013671	85.55	8.375923	Y 377.433
Sb (206.834 nm)	-0.001723 u	ppm	0.003532	> 100.00	17.074300	Y 377.433
Se (196.026 nm)	-0.002247 u	ppm	0.003281	> 100.00	6.197890	Y 242.219
Si (288.158 nm)	0.004085	ppm	0.003445	84.35	387.741000	Y 377.433
Sn (189.925 nm)	-0.000547 u	ppm	0.000930	> 100.00	-1.136140	Y 377.433
Sr (421.552 nm)	0.000399	ppm	0.000125	31.39	200.462398	Y_R 488.368
Th (288.505 nm)	-0.007427 u	ppm	0.000110	1.49	1.353090	Y 377.433
Ti (336.122 nm)	0.000061	ppm	0.000026	43.50	-105.616000	Y 377.433
Tl (190.794 nm)	0.001655	ppm	0.000748	45.17	5.306190	Y 377.433
U (409.013 nm)	-0.006518 u	ppm	0.002870	44.04	232.053000	Y 377.433
V (292.401 nm)	0.000332	ppm	0.000251	75.46	-249.558000	Y 377.433
Zn (206.200 nm)	-0.000111 u	ppm	0.000058	52.64	3.904900	Y 377.433
Zr (343.823 nm)	-0.000275 u	ppm	0.000443	> 100.00	103.308000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009103	10382.360839	0.003917	0.39
Y 377.433	1.009822	429989.432513	0.003261	0.32
Y_R 377.433	1.015720	40864.500000	0.005774	0.57
Y_R 488.368	1.027140	38098.400000	0.000760	0.07
Y_R2 488.368	1.027890	72967.484664	0.009035	0.88
Y_R4	1.022220	35043.500000	0.000954	0.09

Sample Name: CCVL-5320254

Date: 9/21/2018 12:53:35 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009004	ppm	0.000176	1.95	138.997000	Y 377.433
Al (394.401 nm)	0.089988	ppm	0.001253	1.39	1046.220000	Y 377.433
Al H (396.152 nm)	0.241197 u	ppm	0.002580	1.07	178.829000	Y_R 377.433
As (188.980 nm)	0.015939	ppm	0.001248	7.83	10.562100	Y 242.219
B (249.678 nm)	0.098751	ppm	0.001616	1.64	370.120000	Y 242.219
Ba (493.408 nm)	0.010559	ppm	0.000160	1.52	1503.850000	Y_R 488.368
Be (234.861 nm)	0.001047	ppm	0.000095	9.09	52.230800	Y_R 488.368
Bi (223.061 nm)	0.090723	ppm	0.001245	1.37	203.871000	Y 377.433
Ca (315.887 nm)	0.205497	ppm	0.009708	4.72	129.516483	Y_R 377.433
Cd (214.439 nm)	0.005209	ppm	0.000366	7.03	119.253000	Y 377.433
Co (228.615 nm)	0.010458	ppm	0.000182	1.74	190.543000	Y 242.219
Cr (205.560 nm)	0.010202	ppm	0.000498	4.88	39.657800	Y 377.433
Cu (324.754 nm)	0.015554	ppm	0.000027	0.17	806.470000	Y 377.433
Fe (238.204 nm)	0.089675	ppm	0.002730	3.04	174.231895	Y_R 377.433
Fe H (259.940 nm)	0.028809 u	ppm	0.003677	12.76	105.043000	Y_R 377.433
K (766.491 nm)	3.067180	ppm	0.085163	2.78	4966.370000	Y_R2 488.368
Li (670.783 nm)	0.026604 Q	ppm	0.000312	1.17	-791.937000 Q	Y_R2 488.368
Mg (279.078 nm)	0.208384	ppm	0.002702	1.30	448.385000	Y 377.433
Mn (257.610 nm)	0.010411	ppm	0.000064	0.62	1894.120000	Y 377.433
Mo (202.032 nm)	0.019153	ppm	0.000451	2.35	219.679000	Y 377.433
Na (589.592 nm)	1.096090	ppm	0.013258	1.21	496.773000	Y_R2 488.368
Na H (589.593 nm)	0.703658 u	ppm	0.023225	3.30	935.720585	Y_R4
Ni (231.604 nm)	0.040360	ppm	0.000844	2.09	165.688000	Y 377.433
P (213.618 nm)	2.894650	ppm	0.003078	0.11	3161.910000	Y 242.219
Pb (220.353 nm)	0.011971 Q	ppm	0.002029	16.95	34.402000 Q	Y 242.219
S (181.972 nm)	0.098802	ppm	0.009119	9.23	46.960133	Y 377.433
Sb (206.834 nm)	0.018177	ppm	0.002183	12.01	49.123300	Y 377.433
Se (196.026 nm)	0.018472	ppm	0.002466	13.35	33.447700	Y 242.219
Si (288.158 nm)	0.485760	ppm	0.000882	0.18	2336.220000	Y 377.433
Sn (189.925 nm)	0.098072	ppm	0.000884	0.90	115.172000	Y 377.433
Sr (421.552 nm)	0.009913	ppm	0.000232	2.34	1292.749523	Y_R 488.368
Th (288.505 nm)	0.010790	ppm	0.004621	42.83	18.622400	Y 377.433
Ti (336.122 nm)	0.009981	ppm	0.000074	0.74	790.821000	Y 377.433
Tl (190.794 nm)	0.014780	ppm	0.001112	7.53	28.724400	Y 377.433
U (409.013 nm)	0.051044	ppm	0.010648	20.86	365.642000	Y 377.433
V (292.401 nm)	0.010164	ppm	0.000128	1.26	152.930000	Y 377.433
Zn (206.200 nm)	0.018992	ppm	0.000194	1.02	68.629900	Y 377.433
Zr (343.823 nm)	0.014443	ppm	0.000121	0.83	677.487000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033878	10637.265723	0.003430	0.33
Y 377.433	1.036091	441174.878799	0.004849	0.47
Y_R 377.433	1.035890	41676.100000	0.004285	0.41
Y_R 488.368	1.044570	38745.000000	0.022707	2.17
Y_R2 488.368	1.040739	73879.557483	0.000702	0.07
Y_R4	1.027780	35234.100000	0.002877	0.28

Sample Name: MB

Date: 9/21/2018 12:59:52 PM Rack:Tube: 1:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000517 u	ppm	0.000238	46.09	-101.208000	Y 377.433
Al (394.401 nm)	-0.010146 u	ppm	0.001447	14.26	-70.355300	Y 377.433
Al H (396.152 nm)	0.138656 u	ppm	0.003331	2.40	-3.511870	Y_R 377.433
As (188.980 nm)	0.002530	ppm	0.000570	22.54	-6.931830	Y 242.219
B (249.678 nm)	0.001408	ppm	0.000160	11.37	4.803920	Y 242.219
Ba (493.408 nm)	-0.000080 u	ppm	0.000246	> 100.00	531.910000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000086	> 100.00	-3.603310	Y_R 488.368
Bi (223.061 nm)	-0.005657 u	ppm	0.000418	7.40	49.129400	Y 377.433
Ca (315.887 nm)	0.008946	ppm	0.007129	79.68	-0.102742	Y_R 377.433
Cd (214.439 nm)	-0.000003 u	ppm	0.000106	> 100.00	-13.185900	Y 377.433
Co (228.615 nm)	-0.000126 u	ppm	0.000393	> 100.00	-20.282800	Y 242.219
Cr (205.560 nm)	-0.000016 u	ppm	0.000142	> 100.00	-10.307200	Y 377.433
Cu (324.754 nm)	0.000218	ppm	0.000104	47.96	151.469000	Y 377.433
Fe (238.204 nm)	-0.007031 u	ppm	0.001567	22.28	16.499155	Y_R 377.433
Fe H (259.940 nm)	-0.074367 u	ppm	0.004692	6.31	11.638200	Y_R 377.433
K (766.491 nm)	-0.013312 u	ppm	0.091321	> 100.00	1741.720000	Y_R2 488.368
Li (670.783 nm)	0.003602	ppm	0.000449	12.47	-1109.260000	Y_R2 488.368
Mg (279.078 nm)	0.003140	ppm	0.001334	42.48	13.254800	Y 377.433
Mn (257.610 nm)	-0.000030 u	ppm	0.000025	82.10	49.392600	Y 377.433
Mo (202.032 nm)	0.000109 u	ppm	0.000200	> 100.00	21.548100	Y 377.433
Na (589.592 nm)	-0.019008 u	ppm	0.034785	> 100.00	-107.076000	Y_R2 488.368
Na H (589.593 nm)	-0.576398 u	ppm	0.003660	0.63	462.319901	Y_R4
Ni (231.604 nm)	-0.000915 u	ppm	0.000266	29.00	12.779800	Y 377.433
P (213.618 nm)	-0.004051 u	ppm	0.001179	29.10	-5.589940	Y 242.219
Pb (220.353 nm)	0.001241	ppm	0.000992	79.92	12.005800	Y 242.219
S (181.972 nm)	0.005742	ppm	0.007054	> 100.00	3.603135	Y 377.433
Sb (206.834 nm)	-0.001436 u	ppm	0.002461	> 100.00	17.536000	Y 377.433
Se (196.026 nm)	-0.002476 u	ppm	0.002717	> 100.00	5.896280	Y 242.219
Si (288.158 nm)	-0.003046 u	ppm	0.002584	84.81	358.894000	Y 377.433
Sn (189.925 nm)	0.001743	ppm	0.000917	52.65	1.563640	Y 377.433
Sr (421.552 nm)	-0.000310 u	ppm	0.000039	12.65	118.955703	Y_R 488.368
Th (288.505 nm)	-0.009443 u	ppm	0.003202	33.91	-0.577050	Y 377.433
Ti (336.122 nm)	-0.000043 u	ppm	0.000124	> 100.00	-115.212000	Y 377.433
Tl (190.794 nm)	-0.000609 u	ppm	0.001602	> 100.00	1.255480	Y 377.433
U (409.013 nm)	-0.000510 u	ppm	0.002803	> 100.00	246.147000	Y 377.433
V (292.401 nm)	0.000088 u	ppm	0.000220	> 100.00	-260.061000	Y 377.433
Zn (206.200 nm)	-0.000645 u	ppm	0.000158	24.58	2.095640	Y 377.433
Zr (343.823 nm)	-0.000067 u	ppm	0.000127	> 100.00	111.437000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027059	10567.104405	0.004242	0.41
Y 377.433	1.028194	437812.430824	0.003730	0.36
Y_R 377.433	1.028600	41382.800000	0.008058	0.78
Y_R 488.368	1.042550	38669.900000	0.011489	1.10
Y_R2 488.368	1.029059	73050.445410	0.004414	0.43
Y_R4	1.019730	34958.200000	0.000876	0.09

Sample Name: 114252-b-1

Date: 9/21/2018 1:03:03 PM Rack:Tube: 1:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000195	ppm	0.000129	66.26	-83.059000	Y 377.433
Al (394.401 nm)	0.207609	ppm	0.000845	0.41	2736.700000	Y 377.433
Al H (396.152 nm)	0.063523 u	ppm	0.001622	2.55	408.618000	Y_R 377.433
As (188.980 nm)	0.001252	ppm	0.000134	10.68	-8.615880	Y 242.219
B (249.678 nm)	0.016118	ppm	0.002244	13.92	59.844300	Y 242.219
Ba (493.408 nm)	1.003990	ppm	0.000928	0.09	92247.100000	Y_R 488.368
Be (234.861 nm)	0.000028 u	ppm	0.000130	> 100.00	-5.612060	Y_R 488.368
Bi (223.061 nm)	0.001189 u	ppm	0.002327	> 100.00	60.193900	Y 377.433
Ca (315.887 nm)	50.829518	ppm	0.059372	0.12	33512.238666	Y_R 377.433
Cd (214.439 nm)	0.000244	ppm	0.000025	10.39	-6.721270	Y 377.433
Co (228.615 nm)	0.000223	ppm	0.000131	58.50	-13.223900	Y 242.219
Cr (205.560 nm)	0.000366	ppm	0.000460	> 100.00	-8.441340	Y 377.433
Cu (324.754 nm)	-0.000289 u	ppm	0.000028	9.70	104.714000	Y 377.433
Fe (238.204 nm)	0.540494	ppm	0.006884	1.27	909.540159	Y_R 377.433
Fe H (259.940 nm)	0.474941 u	ppm	0.004977	1.05	508.929000	Y_R 377.433
K (766.491 nm)	2.767260	ppm	0.046405	1.68	4652.420000	Y_R2 488.368
Li (670.783 nm)	0.012707	ppm	0.003540	27.86	-983.654000	Y_R2 488.368
Mg (279.078 nm)	9.709550	ppm	0.012105	0.12	20613.900000	Y 377.433
Mn (257.610 nm)	0.121214	ppm	0.000228	0.19	21470.200000	Y 377.433
Mo (202.032 nm)	0.000170 u	ppm	0.000294	> 100.00	22.187000	Y 377.433
Na (589.592 nm)	22.665500	ppm	0.099716	0.44	12164.000000	Y_R2 488.368
Na H (589.593 nm)	22.881527 u	ppm	0.106745	0.47	9054.849306	Y_R4
Ni (231.604 nm)	-0.001328 u	ppm	0.001011	76.15	12.088700	Y 377.433
P (213.618 nm)	0.015077	ppm	0.001506	9.99	15.305400	Y 242.219
Pb (220.353 nm)	-0.000893 u	ppm	0.001419	> 100.00	7.479560	Y 242.219
S (181.972 nm)	6.716629	ppm	0.002188	0.03	3131.149197	Y 377.433
Sb (206.834 nm)	-0.006659 u	ppm	0.003098	46.52	9.117800	Y 377.433
Se (196.026 nm)	-0.003206 u	ppm	0.000868	27.08	4.958820	Y 242.219
Si (288.158 nm)	6.657890	ppm	0.029949	0.45	27303.900000	Y 377.433
Sn (189.925 nm)	0.000776	ppm	0.000016	2.12	0.425980	Y 377.433
Sr (421.552 nm)	1.678432	ppm	0.000861	0.05	192857.565327	Y_R 488.368
Th (288.505 nm)	-0.018305 u	ppm	0.004182	22.85	-8.074620	Y 377.433
Ti (336.122 nm)	0.003950	ppm	0.000025	0.63	365.328000	Y 377.433
Tl (190.794 nm)	0.001548	ppm	0.001775	> 100.00	5.096050	Y 377.433
U (409.013 nm)	-0.003884 u	ppm	0.012106	> 100.00	233.598000	Y 377.433
V (292.401 nm)	0.001195	ppm	0.000041	3.46	-213.882000	Y 377.433
Zn (206.200 nm)	0.002811	ppm	0.000161	5.73	13.812900	Y 377.433
Zr (343.823 nm)	-0.000077 u	ppm	0.000192	> 100.00	111.574000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.066388	10971.753209	0.001443	0.14
Y 377.433	1.066949	454314.415036	0.000077	0.01
Y_R 377.433	1.076660	43316.400000	0.000277	0.03
Y_R 488.368	1.078160	39991.000000	0.000131	0.01
Y_R2 488.368	1.084456	76982.970275	0.013652	1.26
Y_R4	1.061480	36389.600000	0.007443	0.70

Sample Name: 114252-b-1sd@5

Date: 9/21/2018 1:06:32 PM Rack:Tube: 1:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000303 u	ppm	0.000183	60.37	-95.720300	Y 377.433
Al (394.401 nm)	0.030875	ppm	0.000075	0.24	462.061000	Y 377.433
Al H (396.152 nm)	0.126766 u	ppm	0.005999	4.73	83.049400	Y_R 377.433
As (188.980 nm)	-0.000887 u	ppm	0.003264	> 100.00	-11.394100	Y 242.219
B (249.678 nm)	0.002972	ppm	0.001080	36.33	10.641000	Y 242.219
Ba (493.408 nm)	0.198829	ppm	0.000935	0.47	18701.100000	Y_R 488.368
Be (234.861 nm)	-0.000081 u	ppm	0.000008	9.59	-8.903770	Y_R 488.368
Bi (223.061 nm)	-0.001793 u	ppm	0.002618	> 100.00	55.345600	Y 377.433
Ca (315.887 nm)	10.018169	ppm	0.032283	0.32	6600.226536	Y_R 377.433
Cd (214.439 nm)	0.000166	ppm	0.000046	27.79	-8.860130	Y 377.433
Co (228.615 nm)	-0.000146 u	ppm	0.000019	12.75	-20.650100	Y 242.219
Cr (205.560 nm)	0.000473	ppm	0.000114	24.01	-7.912750	Y 377.433
Cu (324.754 nm)	-0.000021 u	ppm	0.000139	> 100.00	136.232000	Y 377.433
Fe (238.204 nm)	0.094630	ppm	0.002801	2.96	182.313281	Y_R 377.433
Fe H (259.940 nm)	0.023256 u	ppm	0.004400	18.92	100.016000	Y_R 377.433
K (766.491 nm)	0.556979	ppm	0.111556	20.03	2338.700000	Y_R2 488.368
Li (670.783 nm)	0.003177	ppm	0.003928	> 100.00	-1115.130000	Y_R2 488.368
Mg (279.078 nm)	1.886500	ppm	0.019430	1.03	4010.480000	Y 377.433
Mn (257.610 nm)	0.023602	ppm	0.000352	1.49	4224.610000	Y 377.433
Mo (202.032 nm)	0.000202	ppm	0.000098	48.54	22.512700	Y 377.433
Na (589.592 nm)	4.581350	ppm	0.012250	0.27	2381.590000	Y_R2 488.368
Na H (589.593 nm)	4.152721 u	ppm	0.007183	0.17	2195.271602	Y_R4
Ni (231.604 nm)	-0.000522 u	ppm	0.000764	> 100.00	14.401400	Y 377.433
P (213.618 nm)	0.000594 u	ppm	0.005794	> 100.00	-0.510773	Y 242.219
Pb (220.353 nm)	0.001300	ppm	0.001250	96.17	12.112100	Y 242.219
S (181.972 nm)	1.164996	ppm	0.022644	1.94	543.969265	Y 377.433
Sb (206.834 nm)	-0.005019 u	ppm	0.000138	2.74	11.747700	Y 377.433
Se (196.026 nm)	0.001709 u	ppm	0.002718	> 100.00	11.407200	Y 242.219
Si (288.158 nm)	1.190920	ppm	0.010868	0.91	5188.740000	Y 377.433
Sn (189.925 nm)	0.000320 u	ppm	0.000690	> 100.00	-0.113939	Y 377.433
Sr (421.552 nm)	0.331235	ppm	0.001072	0.32	38184.076020	Y_R 488.368
Th (288.505 nm)	-0.011258 u	ppm	0.003683	32.72	-2.130930	Y 377.433
Ti (336.122 nm)	0.000783	ppm	0.000234	29.88	-17.093300	Y 377.433
Tl (190.794 nm)	0.001359 u	ppm	0.003401	> 100.00	4.774920	Y 377.433
U (409.013 nm)	-0.002002 u	ppm	0.003986	> 100.00	241.715000	Y 377.433
V (292.401 nm)	0.000265	ppm	0.000080	30.21	-252.745000	Y 377.433
Zn (206.200 nm)	-0.000638 u	ppm	0.000264	41.40	2.119470	Y 377.433
Zr (343.823 nm)	0.000050	ppm	0.000014	29.16	116.066000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025638	10552.488724	0.001719	0.17
Y 377.433	1.027027	437315.424978	0.003101	0.30
Y_R 377.433	1.036260	41691.100000	0.006329	0.61
Y_R 488.368	1.039530	38558.200000	0.006285	0.60
Y_R2 488.368	1.043810	74097.574424	0.006349	0.61
Y_R4	1.032410	35392.900000	0.002352	0.23

Sample Name: 114252-b-1 DU

Date: 9/21/2018 1:09:57 PM Rack:Tube: 1:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000595	ppm	0.000201	33.89	-72.990200	Y 377.433
Al (394.401 nm)	0.208719	ppm	0.002161	1.04	2750.440000	Y 377.433
Al H (396.152 nm)	0.061325 u	ppm	0.007783	12.69	404.948000	Y_R 377.433
As (188.980 nm)	0.001660	ppm	0.001472	88.72	-8.084230	Y 242.219
B (249.678 nm)	0.016021	ppm	0.000349	2.18	59.484600	Y 242.219
Ba (493.408 nm)	1.004630	ppm	0.000765	0.08	92306.000000	Y_R 488.368
Be (234.861 nm)	0.000085	ppm	0.000004	4.86	-2.456720	Y_R 488.368
Bi (223.061 nm)	0.000002 u	ppm	0.002575	> 100.00	58.286500	Y 377.433
Ca (315.887 nm)	50.946322	ppm	0.083913	0.16	33589.261166	Y_R 377.433
Cd (214.439 nm)	0.000423	ppm	0.000181	42.84	-2.179490	Y 377.433
Co (228.615 nm)	0.000147	ppm	0.000085	57.49	-14.736900	Y 242.219
Cr (205.560 nm)	0.000436	ppm	0.000079	18.10	-8.100380	Y 377.433
Cu (324.754 nm)	-0.000120 u	ppm	0.000170	> 100.00	110.985000	Y 377.433
Fe (238.204 nm)	0.533960	ppm	0.003757	0.70	898.883424	Y_R 377.433
Fe H (259.940 nm)	0.469740 u	ppm	0.003962	0.84	504.220000	Y_R 377.433
K (766.491 nm)	2.707990	ppm	0.047812	1.77	4590.370000	Y_R2 488.368
Li (670.783 nm)	0.017428	ppm	0.000545	3.13	-918.517000	Y_R2 488.368
Mg (279.078 nm)	9.738250	ppm	0.014943	0.15	20674.800000	Y 377.433
Mn (257.610 nm)	0.121398	ppm	0.000106	0.09	21502.800000	Y 377.433
Mo (202.032 nm)	0.000690	ppm	0.000210	30.43	27.593500	Y 377.433
Na (589.592 nm)	22.665800	ppm	0.004181	0.02	12164.100000	Y_R2 488.368
Na H (589.593 nm)	22.845346 u	ppm	0.094515	0.41	9041.342173	Y_R4
Ni (231.604 nm)	-0.001704 u	ppm	0.001064	62.48	10.700200	Y 377.433
P (213.618 nm)	0.014666	ppm	0.002646	18.04	14.853600	Y 242.219
Pb (220.353 nm)	0.000658 u	ppm	0.001193	> 100.00	10.721200	Y 242.219
S (181.972 nm)	6.716955	ppm	0.017337	0.26	3131.314589	Y 377.433
Sb (206.834 nm)	-0.005514 u	ppm	0.002926	53.05	10.969400	Y 377.433
Se (196.026 nm)	0.002451	ppm	0.000842	34.37	12.400900	Y 242.219
Si (288.158 nm)	6.634770	ppm	0.031501	0.47	27210.300000	Y 377.433
Sn (189.925 nm)	-0.000201 u	ppm	0.000575	> 100.00	-0.726241	Y 377.433
Sr (421.552 nm)	1.678451	ppm	0.001258	0.07	192859.744505	Y_R 488.368
Th (288.505 nm)	-0.018301 u	ppm	0.000965	5.28	-8.060490	Y 377.433
Ti (336.122 nm)	0.003983	ppm	0.000132	3.32	368.732000	Y 377.433
Tl (190.794 nm)	0.001278	ppm	0.000198	15.46	4.610470	Y 377.433
U (409.013 nm)	-0.009442 u	ppm	0.003341	35.38	220.535000	Y 377.433
V (292.401 nm)	0.001446	ppm	0.000111	7.70	-204.000000	Y 377.433
Zn (206.200 nm)	0.003032	ppm	0.000786	25.91	14.561500	Y 377.433
Zr (343.823 nm)	0.000288	ppm	0.000050	17.43	125.811000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063569	10942.744429	0.001841	0.17
Y 377.433	1.065975	453899.782862	0.000552	0.05
Y_R 377.433	1.085770	43682.700000	0.000722	0.07
Y_R 488.368	1.088280	40366.300000	0.004962	0.46
Y_R2 488.368	1.080550	76705.668198	0.002187	0.20
Y_R4	1.064060	36477.700000	0.010085	0.95

Sample Name: 114252-b-2

Date: 9/21/2018 1:13:26 PM Rack:Tube: 1:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000469	ppm	0.000442	94.19	-76.102800	Y 377.433
Al (394.401 nm)	0.957545	ppm	0.000947	0.10	10812.400000	Y 377.433
Al H (396.152 nm)	1.063560	ppm	0.014488	1.36	1773.090000	Y_R 377.433
As (188.980 nm)	0.000712	ppm	0.000120	16.79	-9.350320	Y 242.219
B (249.678 nm)	0.020327	ppm	0.000212	1.04	75.419900	Y 242.219
Ba (493.408 nm)	0.177789	ppm	0.000193	0.11	16780.000000	Y_R 488.368
Be (234.861 nm)	0.000107	ppm	0.000132	> 100.00	-5.597780	Y_R 488.368
Bi (223.061 nm)	-0.003052 u	ppm	0.000938	30.74	53.475400	Y 377.433
Ca (315.887 nm)	55.598405	ppm	0.034459	0.06	36657.022567	Y_R 377.433
Cd (214.439 nm)	0.000225	ppm	0.000067	29.61	-6.934200	Y 377.433
Co (228.615 nm)	0.014633	ppm	0.000011	0.08	273.991000	Y 242.219
Cr (205.560 nm)	0.000698	ppm	0.000186	26.61	-6.833480	Y 377.433
Cu (324.754 nm)	0.001026	ppm	0.000105	10.27	157.920000	Y 377.433
Fe (238.204 nm)	1.265258	ppm	0.004635	0.37	2091.668351	Y_R 377.433
Fe H (259.940 nm)	1.206500 u	ppm	0.006184	0.51	1171.210000	Y_R 377.433
K (766.491 nm)	1.596280	ppm	0.103170	6.46	3426.640000	Y_R2 488.368
Li (670.783 nm)	0.008603	ppm	0.000183	2.12	-1040.270000	Y_R2 488.368
Mg (279.078 nm)	13.203900	ppm	0.032608	0.25	28029.800000	Y 377.433
Mn (257.610 nm)	0.359764	ppm	0.001097	0.30	63616.000000	Y 377.433
Mo (202.032 nm)	0.000174 u	ppm	0.000258	> 100.00	22.227800	Y 377.433
Na (589.592 nm)	38.543700	ppm	0.057904	0.15	20778.700000	Y_R2 488.368
Na H (589.593 nm)	38.392758 u	ppm	0.249754	0.65	14889.314537	Y_R4
Ni (231.604 nm)	-0.000491 u	ppm	0.000412	83.83	15.366400	Y 377.433
P (213.618 nm)	0.029927	ppm	0.000637	2.13	31.481800	Y 242.219
Pb (220.353 nm)	0.000317 u	ppm	0.000635	> 100.00	9.914120	Y 242.219
S (181.972 nm)	28.393803	ppm	0.046869	0.17	13219.988304	Y 377.433
Sb (206.834 nm)	-0.007401 u	ppm	0.005070	68.50	7.893910	Y 377.433
Se (196.026 nm)	-0.001911 u	ppm	0.000560	29.28	6.784580	Y 242.219
Si (288.158 nm)	8.580900	ppm	0.119344	1.39	35082.900000	Y 377.433
Sn (189.925 nm)	0.001179	ppm	0.001194	> 100.00	0.903290	Y 377.433
Sr (421.552 nm)	0.562059	ppm	0.001123	0.20	64685.382922	Y_R 488.368
Th (288.505 nm)	-0.021485 u	ppm	0.005449	25.36	-8.861230	Y 377.433
Ti (336.122 nm)	0.025342	ppm	0.000871	3.44	2308.620000	Y 377.433
Tl (190.794 nm)	-0.000170 u	ppm	0.001118	> 100.00	1.986790	Y 377.433
U (409.013 nm)	-0.004695 u	ppm	0.003287	70.02	231.531000	Y 377.433
V (292.401 nm)	0.001985	ppm	0.000292	14.72	-181.474000	Y 377.433
Zn (206.200 nm)	0.007102	ppm	0.001141	16.07	28.363300	Y 377.433
Zr (343.823 nm)	0.001093	ppm	0.000423	38.73	157.922000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050323	10806.460478	0.001654	0.16
Y 377.433	1.052297	448075.268027	0.002861	0.27
Y_R 377.433	1.076330	43302.900000	0.004691	0.44
Y_R 488.368	1.083630	40194.000000	0.007281	0.67
Y_R2 488.368	1.070974	76025.910417	0.004597	0.43
Y_R4	1.048590	35947.600000	0.006526	0.62

Sample Name: 114252-b-3

Date: 9/21/2018 1:16:57 PM Rack:Tube: 1:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000738	ppm	0.000168	22.83	-69.445700	Y 377.433
Al (394.401 nm)	0.867469	ppm	0.001264	0.15	9809.190000	Y 377.433
Al H (396.152 nm)	1.000010	ppm	0.003618	0.36	1659.610000	Y_R 377.433
As (188.980 nm)	0.003862	ppm	0.001820	47.11	-5.230610	Y 242.219
B (249.678 nm)	0.020326	ppm	0.001330	6.54	75.517300	Y 242.219
Ba (493.408 nm)	0.156837	ppm	0.000274	0.17	14865.900000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000071	> 100.00	-5.806610	Y_R 488.368
Bi (223.061 nm)	0.001438 u	ppm	0.005699	> 100.00	60.641300	Y 377.433
Ca (315.887 nm)	56.092879	ppm	0.065124	0.12	36983.086344	Y_R 377.433
Cd (214.439 nm)	0.000267	ppm	0.000076	28.49	-5.991910	Y 377.433
Co (228.615 nm)	0.006714	ppm	0.000162	2.42	116.592000	Y 242.219
Cr (205.560 nm)	0.000109 u	ppm	0.000580	> 100.00	-9.721430	Y 377.433
Cu (324.754 nm)	0.000461	ppm	0.000036	7.87	133.424000	Y 377.433
Fe (238.204 nm)	0.933804	ppm	0.003821	0.41	1551.049300	Y_R 377.433
Fe H (259.940 nm)	0.865554 u	ppm	0.011628	1.34	862.553000	Y_R 377.433
K (766.491 nm)	1.628600	ppm	0.093339	5.73	3460.470000	Y_R2 488.368
Li (670.783 nm)	0.016325	ppm	0.003873	23.73	-933.743000	Y_R2 488.368
Mg (279.078 nm)	13.302600	ppm	0.021037	0.16	28239.500000	Y 377.433
Mn (257.610 nm)	0.377668	ppm	0.000412	0.11	66779.200000	Y 377.433
Mo (202.032 nm)	-0.000095 u	ppm	0.000103	> 100.00	19.425000	Y 377.433
Na (589.592 nm)	37.332200	ppm	0.088366	0.24	20122.700000	Y_R2 488.368
Na H (589.593 nm)	37.201894 u	ppm	0.099705	0.27	14449.990110	Y_R4
Ni (231.604 nm)	-0.000601 u	ppm	0.000414	68.93	14.917800	Y 377.433
P (213.618 nm)	0.024300	ppm	0.003188	13.12	25.347900	Y 242.219
Pb (220.353 nm)	0.001984	ppm	0.001204	60.67	13.410600	Y 242.219
S (181.972 nm)	28.691078	ppm	0.014822	0.05	13358.427760	Y 377.433
Sb (206.834 nm)	-0.004985 u	ppm	0.002806	56.28	11.771300	Y 377.433
Se (196.026 nm)	-0.000615 u	ppm	0.005079	> 100.00	8.585670	Y 242.219
Si (288.158 nm)	8.496090	ppm	0.060307	0.71	34739.800000	Y 377.433
Sn (189.925 nm)	0.000601	ppm	0.000383	63.82	0.220135	Y 377.433
Sr (421.552 nm)	0.550100	ppm	0.000508	0.09	63312.372653	Y_R 488.368
Th (288.505 nm)	-0.021706 u	ppm	0.003554	16.37	-8.871690	Y 377.433
Ti (336.122 nm)	0.026481	ppm	0.001401	5.29	2412.720000	Y 377.433
Tl (190.794 nm)	0.000246 u	ppm	0.000580	> 100.00	2.704910	Y 377.433
U (409.013 nm)	-0.007477 u	ppm	0.004442	59.41	224.807000	Y 377.433
V (292.401 nm)	0.002450	ppm	0.000277	11.32	-162.009000	Y 377.433
Zn (206.200 nm)	0.006306	ppm	0.000283	4.49	25.660600	Y 377.433
Zr (343.823 nm)	0.000845	ppm	0.000141	16.74	147.906000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050374	10806.989151	0.002134	0.20
Y 377.433	1.054122	448852.415202	0.001521	0.14
Y_R 377.433	1.069390	43024.100000	0.000681	0.06
Y_R 488.368	1.081860	40128.200000	0.001142	0.11
Y_R2 488.368	1.072094	76105.391955	0.001650	0.15
Y_R4	1.055070	36169.700000	0.001132	0.11

Sample Name: 114252-b-4

Date: 9/21/2018 1:20:28 PM Rack:Tube: 1:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000620 u	ppm	0.000430	69.31	-103.693000	Y 377.433
Al (394.401 nm)	-0.008363 u	ppm	0.001408	16.83	-51.976100	Y 377.433
Al H (396.152 nm)	0.142711 u	ppm	0.003855	2.70	3.588480	Y_R 377.433
As (188.980 nm)	0.002437	ppm	0.002400	98.46	-7.052830	Y 242.219
B (249.678 nm)	0.000230 u	ppm	0.000822	> 100.00	0.381630	Y 242.219
Ba (493.408 nm)	0.000001 u	ppm	0.000438	> 100.00	539.318000	Y_R 488.368
Be (234.861 nm)	0.000074	ppm	0.000009	11.76	0.136459	Y_R 488.368
Bi (223.061 nm)	-0.004252 u	ppm	0.001817	42.73	51.384200	Y 377.433
Ca (315.887 nm)	0.052978	ppm	0.017646	33.31	28.933284	Y_R 377.433
Cd (214.439 nm)	0.000060	ppm	0.000001	1.73	-11.586800	Y 377.433
Co (228.615 nm)	0.000082	ppm	0.000022	26.54	-16.143600	Y 242.219
Cr (205.560 nm)	0.000098 u	ppm	0.000484	> 100.00	-9.750090	Y 377.433
Cu (324.754 nm)	0.000536	ppm	0.000621	> 100.00	165.474000	Y 377.433
Fe (238.204 nm)	-0.011559 u	ppm	0.000275	2.38	9.113676	Y_R 377.433
Fe H (259.940 nm)	-0.076654 u	ppm	0.000415	0.54	9.567560	Y_R 377.433
K (766.491 nm)	-0.185272 u	ppm	0.116260	62.75	1561.710000	Y_R2 488.368
Li (670.783 nm)	0.009105	ppm	0.002120	23.28	-1033.340000	Y_R2 488.368
Mg (279.078 nm)	0.009887	ppm	0.004243	42.92	27.740700	Y 377.433
Mn (257.610 nm)	0.000147	ppm	0.000054	36.42	80.765000	Y 377.433
Mo (202.032 nm)	-0.000374 u	ppm	0.000387	> 100.00	16.522200	Y 377.433
Na (589.592 nm)	0.028301	ppm	0.002365	8.36	-81.452200	Y_R2 488.368
Na H (589.593 nm)	-1.101480 u	ppm	0.042585	3.87	267.668382	Y_R4
Ni (231.604 nm)	-0.000848 u	ppm	0.000039	4.54	13.028700	Y 377.433
P (213.618 nm)	0.001676	ppm	0.001949	> 100.00	0.654187	Y 242.219
Pb (220.353 nm)	-0.000218 u	ppm	0.000998	> 100.00	8.936100	Y 242.219
S (181.972 nm)	0.016560	ppm	0.001108	6.69	8.646143	Y 377.433
Sb (206.834 nm)	-0.000912 u	ppm	0.005884	> 100.00	18.389600	Y 377.433
Se (196.026 nm)	0.001011	ppm	0.000379	37.45	10.485400	Y 242.219
Si (288.158 nm)	0.000978	ppm	0.000469	47.92	375.174000	Y 377.433
Sn (189.925 nm)	-0.000207 u	ppm	0.000001	0.36	-0.736018	Y 377.433
Sr (421.552 nm)	0.000069	ppm	0.000035	51.30	162.475975	Y_R 488.368
Th (288.505 nm)	-0.008762 u	ppm	0.002331	26.60	0.044623	Y 377.433
Ti (336.122 nm)	0.000316	ppm	0.000102	32.31	-82.596300	Y 377.433
Tl (190.794 nm)	0.000262 u	ppm	0.002129	> 100.00	2.817600	Y 377.433
U (409.013 nm)	-0.022210 u	ppm	0.011995	54.01	195.329000	Y 377.433
V (292.401 nm)	0.000317	ppm	0.000215	67.77	-250.212000	Y 377.433
Zn (206.200 nm)	0.001330	ppm	0.000423	31.83	8.785860	Y 377.433
Zr (343.823 nm)	-0.000437 u	ppm	0.000212	48.44	96.996300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079727	11108.992727	0.001257	0.12
Y 377.433	1.076694	458463.716295	0.000715	0.07
Y_R 377.433	1.087780	43763.900000	0.002298	0.21
Y_R 488.368	1.092350	40517.200000	0.001786	0.16
Y_R2 488.368	1.096476	77836.196108	0.004613	0.42
Y_R4	1.059640	36326.400000	0.011775	1.11

Sample Name: CCVH-5320321

Date: 9/21/2018 1:23:39 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001399	ppm	0.001013	72.42	-150.356000	Y 377.433
Al (394.401 nm)	50.432000 o	ppm	0.020286	0.04	560565.000000	Y 377.433
Al H (396.152 nm)	49.600600	ppm	0.016054	0.03	85674.300000	Y_R 377.433
As (188.980 nm)	0.000726 u	ppm	0.001287	> 100.00	-11.231800	Y 242.219
B (249.678 nm)	0.003806	ppm	0.000953	25.04	-1.336790	Y 242.219
Ba (493.408 nm)	0.000976	ppm	0.000338	34.59	664.841000	Y_R 488.368
Be (234.861 nm)	-0.000785 u	ppm	0.000065	8.22	-337.904000	Y_R 488.368
Bi (223.061 nm)	0.982189	ppm	0.005220	0.53	1641.300000	Y 377.433
Ca (315.887 nm)	0.015905	ppm	0.006771	42.57	8.570166	Y_R 377.433
Cd (214.439 nm)	-0.000570 u	ppm	0.000074	12.97	-9.870810	Y 377.433
Co (228.615 nm)	0.003236	ppm	0.000003	0.08	46.571800	Y 242.219
Cr (205.560 nm)	-0.000208 u	ppm	0.000383	> 100.00	-12.467800	Y 377.433
Cu (324.754 nm)	0.000916	ppm	0.000499	54.53	581.470000	Y 377.433
Fe (238.204 nm)	49.693238 o	ppm	0.020066	0.04	81080.248128	Y_R 377.433
Fe H (259.940 nm)	49.986800	ppm	0.018313	0.04	45332.300000	Y_R 377.433
K (766.491 nm)	0.146444	ppm	0.021389	14.61	1908.950000	Y_R2 488.368
Li (670.783 nm)	0.006765	ppm	0.000312	4.61	-1065.620000	Y_R2 488.368
Mg (279.078 nm)	-0.009814 u	ppm	0.005006	51.00	-158.410000	Y 377.433
Mn (257.610 nm)	0.000353	ppm	0.000008	2.16	117.198000	Y 377.433
Mo (202.032 nm)	-0.000199 u	ppm	0.000187	93.68	18.343100	Y 377.433
Na (589.592 nm)	241.925000 o	ppm	2.071910	0.86	130949.000000	Y_R2 488.368
Na H (589.593 nm)	250.056866	ppm	1.394758	0.56	93365.075884	Y_R4
Ni (231.604 nm)	0.000454 u	ppm	0.000767	> 100.00	25.046000	Y 377.433
P (213.618 nm)	-0.019475 u	ppm	0.000248	1.27	-23.625500	Y 242.219
Pb (220.353 nm)	0.002949	ppm	0.000901	30.55	26.266700	Y 242.219
S (181.972 nm)	4.982896	ppm	0.025067	0.50	2319.571450	Y 377.433
Sb (206.834 nm)	0.000597 u	ppm	0.002492	> 100.00	24.850900	Y 377.433
Se (196.026 nm)	-0.002259 u	ppm	0.003601	> 100.00	-5.020060	Y 242.219
Si (288.158 nm)	0.011654	ppm	0.001114	9.56	419.167000	Y 377.433
Sn (189.925 nm)	0.000771	ppm	0.000876	> 100.00	0.594004	Y 377.433
Sr (421.552 nm)	0.000250	ppm	0.000118	47.35	189.042869	Y_R 488.368
Th (288.505 nm)	4.905030	ppm	0.024826	0.51	4766.110000	Y 377.433
Ti (336.122 nm)	0.000815	ppm	0.000103	12.66	-46.468100	Y 377.433
Tl (190.794 nm)	-0.003989 u	ppm	0.002072	51.94	-5.497510	Y 377.433
U (409.013 nm)	9.872380	ppm	0.002874	0.03	23406.200000	Y 377.433
V (292.401 nm)	-0.003365 u	ppm	0.000256	7.62	-427.317000	Y 377.433
Zn (206.200 nm)	0.000056 u	ppm	0.000207	> 100.00	5.315460	Y 377.433
Zr (343.823 nm)	-0.006972 u	ppm	0.000034	0.48	-109.341000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985728	10141.864147	0.002267	0.23
Y 377.433	0.980912	417679.161224	0.003048	0.31
Y_R 377.433	1.009140	40599.800000	0.002898	0.29
Y_R 488.368	1.009010	37426.100000	0.011265	1.12
Y_R2 488.368	1.009959	71694.544367	0.004269	0.42
Y_R4	1.027510	35224.700000	0.003959	0.39

Sample Name: CCV-5305988

Date: 9/21/2018 1:27:18 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496254	ppm	0.000242	0.05	12394.400000	Y 377.433
Al (394.401 nm)	0.495200	ppm	0.000320	0.06	5650.380000	Y 377.433
Al H (396.152 nm)	0.562344 u	ppm	0.004499	0.80	927.786000	Y_R 377.433
As (188.980 nm)	0.986699	ppm	0.005087	0.52	1277.250000	Y 242.219
B (249.678 nm)	0.494170	ppm	0.000769	0.16	1853.480000	Y 242.219
Ba (493.408 nm)	0.498793	ppm	0.005479	1.10	46102.500000	Y_R 488.368
Be (234.861 nm)	0.498329	ppm	0.002763	0.55	26983.100000	Y_R 488.368
Bi (223.061 nm)	-0.004612 u	ppm	0.000311	6.74	51.204700	Y 377.433
Ca (315.887 nm)	4.936051	ppm	0.009085	0.18	3248.993879	Y_R 377.433
Cd (214.439 nm)	0.495878	ppm	0.002378	0.48	12584.900000	Y 377.433
Co (228.615 nm)	0.491457	ppm	0.001050	0.21	9772.310000	Y 242.219
Cr (205.560 nm)	0.488547	ppm	0.002730	0.56	2382.170000	Y 377.433
Cu (324.754 nm)	0.497300	ppm	0.001100	0.22	21364.600000	Y 377.433
Fe (238.204 nm)	2.491775	ppm	0.004627	0.19	4092.182426	Y_R 377.433
Fe H (259.940 nm)	2.461050 u	ppm	0.005364	0.22	2306.960000	Y_R 377.433
K (766.491 nm)	49.571800	ppm	0.085095	0.17	53647.300000	Y_R2 488.368
Li (670.783 nm)	0.977407	ppm	0.008205	0.84	12324.700000	Y_R2 488.368
Mg (279.078 nm)	19.617700	ppm	0.034941	0.18	41641.600000	Y 377.433
Mn (257.610 nm)	0.492979	ppm	0.000031	0.01	87151.800000	Y 377.433
Mo (202.032 nm)	0.495225	ppm	0.000223	0.05	5172.640000	Y 377.433
Na (589.592 nm)	24.947600	ppm	0.054156	0.22	13408.600000	Y_R2 488.368
Na H (589.593 nm)	25.429728 u	ppm	0.075430	0.30	10051.301217	Y_R4
Ni (231.604 nm)	0.494398	ppm	0.000438	0.09	1848.610000	Y 377.433
P (213.618 nm)	0.986224	ppm	0.000442	0.04	1055.680000	Y 242.219
Pb (220.353 nm)	0.992403	ppm	0.001091	0.11	2078.620000	Y 242.219
S (181.972 nm)	0.004511	ppm	0.000839	18.60	4.991362	Y 377.433
Sb (206.834 nm)	1.004300	ppm	0.003067	0.31	1643.180000	Y 377.433
Se (196.026 nm)	0.993721	ppm	0.006912	0.70	1316.500000	Y 242.219
Si (288.158 nm)	5.005310	ppm	0.001736	0.03	20618.900000	Y 377.433
Sn (189.925 nm)	0.989907	ppm	0.001402	0.14	1166.990000	Y 377.433
Sr (421.552 nm)	0.496675	ppm	0.004876	0.98	57178.757783	Y_R 488.368
Th (288.505 nm)	-0.012307 u	ppm	0.007773	63.16	-32.047000	Y 377.433
Ti (336.122 nm)	0.497634	ppm	0.000211	0.04	44843.200000	Y 377.433
Tl (190.794 nm)	1.001390	ppm	0.000303	0.03	1792.720000	Y 377.433
U (409.013 nm)	-0.011235 u	ppm	0.004212	37.49	176.284000	Y 377.433
V (292.401 nm)	0.492961	ppm	0.000466	0.09	19961.700000	Y 377.433
Zn (206.200 nm)	0.487335	ppm	0.001538	0.32	1655.470000	Y 377.433
Zr (343.823 nm)	0.495986	ppm	0.000139	0.03	19463.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010367	10395.367226	0.004540	0.45
Y 377.433	1.012287	431039.032408	0.004362	0.43
Y_R 377.433	1.019380	41011.900000	0.004842	0.47
Y_R 488.368	1.023600	37967.400000	0.003273	0.32
Y_R2 488.368	1.017461	72227.157186	0.002753	0.27
Y_R4	1.029680	35299.300000	0.004594	0.45

Sample Name: CCB

Date: 9/21/2018 1:30:50 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000899 u	ppm	0.000310	34.48	-110.663000	Y 377.433
Al (394.401 nm)	-0.012105 u	ppm	0.000368	3.04	-94.888800	Y 377.433
Al H (396.152 nm)	0.147546 Zu	ppm	0.002415	1.64	11.988500 Z	Y_R 377.433
As (188.980 nm)	0.000042 u	ppm	0.000944	> 100.00	-10.179100	Y 242.219
B (249.678 nm)	0.000771	ppm	0.000908	> 100.00	2.412270	Y 242.219
Ba (493.408 nm)	-0.000140 u	ppm	0.000231	> 100.00	526.491000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000022	> 100.00	-4.692170	Y_R 488.368
Bi (223.061 nm)	-0.003408 u	ppm	0.003326	97.58	52.738500	Y 377.433
Ca (315.887 nm)	0.002285 u	ppm	0.006029	> 100.00	-4.494341	Y_R 377.433
Cd (214.439 nm)	-0.000001 u	ppm	0.000039	> 100.00	-13.124800	Y 377.433
Co (228.615 nm)	-0.000019 u	ppm	0.000245	> 100.00	-18.140000	Y 242.219
Cr (205.560 nm)	-0.000130 u	ppm	0.000214	> 100.00	-10.866800	Y 377.433
Cu (324.754 nm)	0.000340	ppm	0.000361	> 100.00	158.364000	Y 377.433
Fe (238.204 nm)	-0.009702 u	ppm	0.000787	8.11	12.142333	Y_R 377.433
Fe H (259.940 nm)	-0.070778 u	ppm	0.000885	1.25	14.887400	Y_R 377.433
K (766.491 nm)	0.038643	ppm	0.025104	64.96	1796.110000	Y_R2 488.368
Li (670.783 nm)	0.001321 u	ppm	0.004964	> 100.00	-1140.730000	Y_R2 488.368
Mg (279.078 nm)	0.001114 u	ppm	0.005045	> 100.00	9.060450	Y 377.433
Mn (257.610 nm)	-0.000022 u	ppm	0.000028	> 100.00	50.864500	Y 377.433
Mo (202.032 nm)	0.000140	ppm	0.000176	> 100.00	21.867800	Y 377.433
Na (589.592 nm)	0.001233 u	ppm	0.024892	> 100.00	-96.111500	Y_R2 488.368
Na H (589.593 nm)	-0.362040 u	ppm	0.043654	12.06	541.778406	Y_R4
Ni (231.604 nm)	-0.000989 u	ppm	0.000371	37.55	12.508300	Y 377.433
P (213.618 nm)	-0.003699 u	ppm	0.000222	6.00	-5.207050	Y 242.219
Pb (220.353 nm)	0.000818 u	ppm	0.001916	> 100.00	11.105300	Y 242.219
S (181.972 nm)	0.010128	ppm	0.007364	72.71	5.650604	Y 377.433
Sb (206.834 nm)	-0.002066 u	ppm	0.001022	49.47	16.515300	Y 377.433
Se (196.026 nm)	-0.000300 u	ppm	0.001005	> 100.00	8.759560	Y 242.219
Si (288.158 nm)	0.001307	ppm	0.000793	60.72	376.503000	Y 377.433
Sn (189.925 nm)	-0.000131 u	ppm	0.000426	> 100.00	-0.646409	Y 377.433
Sr (421.552 nm)	0.000051 u	ppm	0.000136	> 100.00	160.434356	Y_R 488.368
Th (288.505 nm)	-0.002848 u	ppm	0.001606	56.37	5.768020	Y 377.433
Ti (336.122 nm)	-0.000050 u	ppm	0.000039	77.21	-115.696000	Y 377.433
Tl (190.794 nm)	0.000899	ppm	0.000799	88.80	3.954090	Y 377.433
U (409.013 nm)	-0.011671 u	ppm	0.004678	40.08	219.970000	Y 377.433
V (292.401 nm)	0.000028	ppm	0.000005	17.87	-261.615000	Y 377.433
Zn (206.200 nm)	-0.000591 u	ppm	0.000363	61.37	2.278500	Y 377.433
Zr (343.823 nm)	-0.000034 u	ppm	0.000138	> 100.00	112.702000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011670	10408.777381	0.005827	0.58
Y 377.433	1.012664	431199.283061	0.005200	0.51
Y_R 377.433	1.018770	40987.300000	0.005853	0.57
Y_R 488.368	1.015570	37669.400000	0.004544	0.45
Y_R2 488.368	1.020745	72460.279658	0.009983	0.98
Y_R4	1.022530	35054.000000	0.005708	0.56

Sample Name: CCVL-5320254

Date: 9/21/2018 1:34:01 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008485	ppm	0.000115	1.36	125.816000	Y 377.433
Al (394.401 nm)	0.090977	ppm	0.002186	2.40	1059.950000	Y 377.433
Al H (396.152 nm)	0.239618 u	ppm	0.009671	4.04	176.169000	Y_R 377.433
As (188.980 nm)	0.015400	ppm	0.001037	6.74	9.858520	Y 242.219
B (249.678 nm)	0.097892	ppm	0.000430	0.44	366.897000	Y 242.219
Ba (493.408 nm)	0.010395	ppm	0.000155	1.50	1488.830000	Y_R 488.368
Be (234.861 nm)	0.000929	ppm	0.000040	4.35	45.860000	Y_R 488.368
Bi (223.061 nm)	0.085827	ppm	0.001804	2.10	196.011000	Y 377.433
Ca (315.887 nm)	0.195321	ppm	0.008448	4.33	122.806230	Y_R 377.433
Cd (214.439 nm)	0.005018	ppm	0.000071	1.41	114.399000	Y 377.433
Co (228.615 nm)	0.010282	ppm	0.000264	2.57	187.037000	Y 242.219
Cr (205.560 nm)	0.010003	ppm	0.000450	4.50	38.683400	Y 377.433
Cu (324.754 nm)	0.015393	ppm	0.000051	0.33	798.328000	Y 377.433
Fe (238.204 nm)	0.088783	ppm	0.002567	2.89	172.776508	Y_R 377.433
Fe H (259.940 nm)	0.028251 u	ppm	0.003152	11.16	104.538000	Y_R 377.433
K (766.491 nm)	3.042720	ppm	0.068208	2.24	4940.760000	Y_R2 488.368
Li (670.783 nm)	0.025820	ppm	0.002697	10.44	-802.757000	Y_R2 488.368
Mg (279.078 nm)	0.203930	ppm	0.003423	1.68	438.748000	Y 377.433
Mn (257.610 nm)	0.010367	ppm	0.000026	0.25	1886.300000	Y 377.433
Mo (202.032 nm)	0.019349	ppm	0.000395	2.04	221.721000	Y 377.433
Na (589.592 nm)	1.074150	ppm	0.078214	7.28	484.894000	Y_R2 488.368
Na H (589.593 nm)	0.431388 u	ppm	0.048936	11.34	834.831865	Y_R4
Ni (231.604 nm)	0.039334	ppm	0.000693	1.76	161.890000	Y 377.433
P (213.618 nm)	2.873860	ppm	0.010242	0.36	3139.200000	Y 242.219
Pb (220.353 nm)	0.009364	ppm	0.002212	23.63	28.987400	Y 242.219
S (181.972 nm)	0.096597	ppm	0.002439	2.52	45.933826	Y 377.433
Sb (206.834 nm)	0.016723	ppm	0.002313	13.83	46.773200	Y 377.433
Se (196.026 nm)	0.018623	ppm	0.000985	5.29	33.646300	Y 242.219
Si (288.158 nm)	0.486585	ppm	0.000237	0.05	2339.560000	Y 377.433
Sn (189.925 nm)	0.098935	ppm	0.000278	0.28	116.190000	Y 377.433
Sr (421.552 nm)	0.009912	ppm	0.000007	0.07	1292.657918	Y_R 488.368
Th (288.505 nm)	0.004750 Q	ppm	0.006278	> 100.00	12.867900 Q	Y 377.433
Ti (336.122 nm)	0.009832	ppm	0.000013	0.13	777.370000	Y 377.433
Tl (190.794 nm)	0.016053	ppm	0.000175	1.09	31.002400	Y 377.433
U (409.013 nm)	0.053808	ppm	0.018551	34.48	372.113000	Y 377.433
V (292.401 nm)	0.010216	ppm	0.000298	2.92	154.054000	Y 377.433
Zn (206.200 nm)	0.019315	ppm	0.000071	0.37	69.723800	Y 377.433
Zr (343.823 nm)	0.014515	ppm	0.000084	0.58	680.321000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038210	10681.835833	0.000570	0.05
Y 377.433	1.039043	442431.679808	0.000830	0.08
Y_R 377.433	1.034710	41628.800000	0.001713	0.17
Y_R 488.368	1.026510	38075.100000	0.002206	0.21
Y_R2 488.368	1.040365	73853.059831	0.013773	1.32
Y_R4	1.035660	35504.400000	0.006520	0.63

Sample Name: 280-114364-A-7-A@5

Date: 9/21/2018 1:37:27 PM Rack:Tube: 1:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000671 u	ppm	0.000058	8.69	-105.719000	Y 377.433
Al (394.401 nm)	-0.005820 u	ppm	0.000122	2.09	-7.556480	Y 377.433
Al H (396.152 nm)	0.126282 u	ppm	0.000318	0.25	-6.141220	Y_R 377.433
As (188.980 nm)	0.012436	ppm	0.004259	34.25	5.994640	Y 242.219
B (249.678 nm)	0.007164	ppm	0.000580	8.10	26.406100	Y 242.219
Ba (493.408 nm)	0.017537	ppm	0.000117	0.67	2141.110000	Y_R 488.368
Be (234.861 nm)	-0.000087 u	ppm	0.000079	90.66	-8.627380	Y_R 488.368
Bi (223.061 nm)	-0.002542 u	ppm	0.003365	> 100.00	54.132900	Y 377.433
Ca (315.887 nm)	14.011380	ppm	0.055318	0.39	9233.442622	Y_R 377.433
Cd (214.439 nm)	0.000097	ppm	0.000008	8.73	-10.652600	Y 377.433
Co (228.615 nm)	0.000126	ppm	0.000109	86.69	-15.253900	Y 242.219
Cr (205.560 nm)	0.000132 u	ppm	0.000862	> 100.00	-9.589290	Y 377.433
Cu (324.754 nm)	-0.000148 u	ppm	0.000052	34.90	128.707000	Y 377.433
Fe (238.204 nm)	-0.005364 u	ppm	0.000309	5.76	19.217683	Y_R 377.433
Fe H (259.940 nm)	-0.076967 u	ppm	0.003120	4.05	9.284090	Y_R 377.433
K (766.491 nm)	1.817200	ppm	0.090811	5.00	3657.900000	Y_R2 488.368
Li (670.783 nm)	0.004818	ppm	0.005117	> 100.00	-1092.480000	Y_R2 488.368
Mg (279.078 nm)	3.526750	ppm	0.055505	1.57	7491.810000	Y 377.433
Mn (257.610 nm)	0.000087	ppm	0.000022	25.38	70.159400	Y 377.433
Mo (202.032 nm)	0.000859	ppm	0.000235	27.32	29.347900	Y 377.433
Na (589.592 nm)	11.210600	ppm	0.064442	0.57	5975.490000	Y_R2 488.368
Na H (589.593 nm)	10.904871 u	ppm	0.124505	1.14	4716.368513	Y_R4
Ni (231.604 nm)	-0.001134 u	ppm	0.000809	71.38	12.177900	Y 377.433
P (213.618 nm)	11.489100	ppm	0.103367	0.90	12556.000000	Y 242.219
Pb (220.353 nm)	0.000662 u	ppm	0.002562	> 100.00	10.787900	Y 242.219
S (181.972 nm)	2.801592	ppm	0.043154	1.54	1305.824650	Y 377.433
Sb (206.834 nm)	-0.004094 u	ppm	0.002874	70.18	13.230000	Y 377.433
Se (196.026 nm)	0.002181	ppm	0.002185	> 100.00	12.023200	Y 242.219
Si (288.158 nm)	4.364840	ppm	0.064590	1.48	18028.000000	Y 377.433
Sn (189.925 nm)	-0.001034 u	ppm	0.000446	43.09	-1.711620	Y 377.433
Sr (421.552 nm)	0.064993	ppm	0.000644	0.99	7616.491400	Y_R 488.368
Th (288.505 nm)	-0.009530 u	ppm	0.004811	50.48	-0.864852	Y 377.433
Ti (336.122 nm)	-0.000194 u	ppm	0.000006	2.91	-95.991900	Y 377.433
Tl (190.794 nm)	0.000598	ppm	0.000161	26.96	3.411820	Y 377.433
U (409.013 nm)	-0.000059 u	ppm	0.005025	> 100.00	245.851000	Y 377.433
V (292.401 nm)	0.004666	ppm	0.000179	3.83	-70.809100	Y 377.433
Zn (206.200 nm)	-0.000534 u	ppm	0.000553	> 100.00	2.470430	Y 377.433
Zr (343.823 nm)	0.000026 u	ppm	0.000344	> 100.00	115.034000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030034	10597.717189	0.001317	0.13
Y 377.433	1.031389	439172.676446	0.000133	0.01
Y_R 377.433	1.036600	41704.700000	0.001069	0.10
Y_R 488.368	1.048330	38884.500000	0.003148	0.30
Y_R2 488.368	1.042943	74036.003082	0.003691	0.35
Y_R4	1.040690	35676.600000	0.002706	0.26

Sample Name: 280-114364-A-8-A@5

Date: 9/21/2018 1:40:56 PM Rack:Tube: 1:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000330 u	ppm	0.000581	> 100.00	-97.076600	Y 377.433
Al (394.401 nm)	-0.006053 u	ppm	0.001032	17.05	-11.117600	Y 377.433
Al H (396.152 nm)	0.128894 u	ppm	0.009703	7.53	-1.208000	Y_R 377.433
As (188.980 nm)	0.010998	ppm	0.000904	8.22	4.118820	Y 242.219
B (249.678 nm)	0.006781	ppm	0.001486	21.91	24.969900	Y 242.219
Ba (493.408 nm)	0.018082	ppm	0.000100	0.55	2190.870000	Y_R 488.368
Be (234.861 nm)	-0.000023 u	ppm	0.000046	> 100.00	-5.152590	Y_R 488.368
Bi (223.061 nm)	-0.005897 u	ppm	0.005157	87.45	48.746300	Y 377.433
Ca (315.887 nm)	13.955079	ppm	0.067441	0.48	9196.316145	Y_R 377.433
Cd (214.439 nm)	0.000201	ppm	0.000128	63.83	-8.005440	Y 377.433
Co (228.615 nm)	-0.000159 u	ppm	0.000217	> 100.00	-20.921800	Y 242.219
Cr (205.560 nm)	0.000220 u	ppm	0.000959	> 100.00	-9.156810	Y 377.433
Cu (324.754 nm)	-0.000269 u	ppm	0.000078	28.87	124.255000	Y 377.433
Fe (238.204 nm)	-0.009590 u	ppm	0.000742	7.74	12.324141	Y_R 377.433
Fe H (259.940 nm)	-0.074619 u	ppm	0.001657	2.22	11.410100	Y_R 377.433
K (766.491 nm)	1.841190	ppm	0.133754	7.26	3683.010000	Y_R2 488.368
Li (670.783 nm)	0.001575	ppm	0.000386	24.51	-1137.220000	Y_R2 488.368
Mg (279.078 nm)	3.535990	ppm	0.033725	0.95	7511.480000	Y 377.433
Mn (257.610 nm)	0.000078	ppm	0.000014	17.35	68.596100	Y 377.433
Mo (202.032 nm)	0.001451	ppm	0.000295	20.36	35.512300	Y 377.433
Na (589.592 nm)	11.220500	ppm	0.242518	2.16	5980.840000	Y_R2 488.368
Na H (589.593 nm)	10.888828 u	ppm	0.150478	1.38	4710.334347	Y_R4
Ni (231.604 nm)	-0.001520 u	ppm	0.000277	18.20	10.746000	Y 377.433
P (213.618 nm)	11.612500	ppm	0.163732	1.41	12690.900000	Y 242.219
Pb (220.353 nm)	0.001102	ppm	0.000636	57.69	11.695700	Y 242.219
S (181.972 nm)	2.805779	ppm	0.018919	0.67	1307.771018	Y 377.433
Sb (206.834 nm)	-0.003928 u	ppm	0.004461	> 100.00	13.496400	Y 377.433
Se (196.026 nm)	0.002169	ppm	0.001816	83.70	12.008500	Y 242.219
Si (288.158 nm)	4.382060	ppm	0.045716	1.04	18097.600000	Y 377.433
Sn (189.925 nm)	0.000739	ppm	0.000045	6.14	0.379933	Y 377.433
Sr (421.552 nm)	0.065602	ppm	0.000304	0.46	7686.471891	Y_R 488.368
Th (288.505 nm)	-0.011052 u	ppm	0.001349	12.20	-2.355020	Y 377.433
Ti (336.122 nm)	-0.000301 u	ppm	0.000167	55.62	-105.696000	Y 377.433
Tl (190.794 nm)	0.000040 u	ppm	0.000065	> 100.00	2.409160	Y 377.433
U (409.013 nm)	0.000688 u	ppm	0.001339	> 100.00	247.593000	Y 377.433
V (292.401 nm)	0.005063	ppm	0.000086	1.69	-54.034300	Y 377.433
Zn (206.200 nm)	0.000105 u	ppm	0.000240	> 100.00	4.635820	Y 377.433
Zr (343.823 nm)	-0.000101 u	ppm	0.000068	67.25	110.093000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028188	10578.722783	0.005401	0.53
Y 377.433	1.029415	438332.102278	0.003613	0.35
Y_R 377.433	1.037320	41733.600000	0.003756	0.36
Y_R 488.368	1.029730	38194.500000	0.012377	1.20
Y_R2 488.368	1.032881	73321.781025	0.000371	0.04
Y_R4	1.028470	35257.700000	0.006634	0.65

Sample Name: 280-114364-A-9-A@10

Date: 9/21/2018 1:44:23 PM Rack:Tube: 1:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000670 u	ppm	0.000059	8.78	-105.549000	Y 377.433
Al (394.401 nm)	0.022828	ppm	0.000384	1.68	297.141000	Y 377.433
Al H (396.152 nm)	0.167608 u	ppm	0.000394	0.23	48.458600	Y_R 377.433
As (188.980 nm)	0.004288	ppm	0.000155	3.61	-4.639100	Y 242.219
B (249.678 nm)	0.004184	ppm	0.000490	11.70	15.211800	Y 242.219
Ba (493.408 nm)	0.001470	ppm	0.000625	42.52	673.588000	Y_R 488.368
Be (234.861 nm)	0.000065	ppm	0.000019	29.44	-0.552205	Y_R 488.368
Bi (223.061 nm)	-0.008990 u	ppm	0.000571	6.35	43.797300	Y 377.433
Ca (315.887 nm)	1.424827	ppm	0.016103	1.13	933.565053	Y_R 377.433
Cd (214.439 nm)	0.000010 u	ppm	0.000089	> 100.00	-12.854800	Y 377.433
Co (228.615 nm)	0.000149 u	ppm	0.000348	> 100.00	-14.780400	Y 242.219
Cr (205.560 nm)	0.000445	ppm	0.000024	5.40	-8.056270	Y 377.433
Cu (324.754 nm)	0.006170	ppm	0.000035	0.56	404.919000	Y 377.433
Fe (238.204 nm)	0.019078	ppm	0.002160	11.32	59.083502	Y_R 377.433
Fe H (259.940 nm)	-0.048475 u	ppm	0.004026	8.31	35.077900	Y_R 377.433
K (766.491 nm)	9.619920	ppm	0.105189	1.09	11825.800000	Y_R2 488.368
Li (670.783 nm)	-0.002671 u	ppm	0.003390	> 100.00	-1195.800000	Y_R2 488.368
Mg (279.078 nm)	0.729463	ppm	0.010910	1.50	1554.790000	Y 377.433
Mn (257.610 nm)	0.001329	ppm	0.000031	2.31	289.628000	Y 377.433
Mo (202.032 nm)	0.000745	ppm	0.000174	23.41	28.163000	Y 377.433
Na (589.592 nm)	36.093900	ppm	0.041019	0.11	19454.500000	Y_R2 488.368
Na H (589.593 nm)	36.718041 u	ppm	0.234410	0.64	14286.144197	Y_R4
Ni (231.604 nm)	-0.000040 u	ppm	0.001121	> 100.00	16.046200	Y 377.433
P (213.618 nm)	24.934100	ppm	0.411551	1.65	27250.600000	Y 242.219
Pb (220.353 nm)	0.000643 u	ppm	0.001194	> 100.00	10.750500	Y 242.219
S (181.972 nm)	1.561200	ppm	0.030653	1.96	727.568800	Y 377.433
Sb (206.834 nm)	-0.002945 u	ppm	0.001336	45.37	15.087300	Y 377.433
Se (196.026 nm)	-0.001215 u	ppm	0.004564	> 100.00	7.551390	Y 242.219
Si (288.158 nm)	2.373740	ppm	0.026192	1.10	9973.510000	Y 377.433
Sn (189.925 nm)	0.001286	ppm	0.000744	57.88	1.024670	Y 377.433
Sr (421.552 nm)	0.005662	ppm	0.000028	0.49	804.604683	Y_R 488.368
Th (288.505 nm)	-0.011623 u	ppm	0.010530	90.59	-2.836920	Y 377.433
Ti (336.122 nm)	0.001308	ppm	0.000132	10.05	10.125200	Y 377.433
Tl (190.794 nm)	-0.000246 u	ppm	0.000869	> 100.00	1.897110	Y 377.433
U (409.013 nm)	0.009832	ppm	0.012366	> 100.00	270.205000	Y 377.433
V (292.401 nm)	0.004329	ppm	0.000260	6.01	-84.696800	Y 377.433
Zn (206.200 nm)	0.001478	ppm	0.000365	24.73	9.287130	Y 377.433
Zr (343.823 nm)	0.000169 u	ppm	0.000347	> 100.00	120.646000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016601	10459.503187	0.001442	0.14
Y 377.433	1.018208	433560.233264	0.003735	0.37
Y_R 377.433	1.017660	40942.700000	0.004453	0.44
Y_R 488.368	1.011010	37500.300000	0.015619	1.54
Y_R2 488.368	1.024871	72753.150423	0.002895	0.28
Y_R4	1.029420	35290.400000	0.004034	0.39

Sample Name: 280-114364-A-10-A@10

Date: 9/21/2018 1:47:52 PM Rack:Tube: 1:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000886 u	ppm	0.000034	3.85	-111.217000	Y 377.433
Al (394.401 nm)	0.005784	ppm	0.001103	19.07	109.963000	Y 377.433
Al H (396.152 nm)	0.150479 u	ppm	0.001424	0.95	18.500400	Y_R 377.433
As (188.980 nm)	0.005180	ppm	0.000849	16.38	-3.473560	Y 242.219
B (249.678 nm)	0.003150	ppm	0.000160	5.08	11.338100	Y 242.219
Ba (493.408 nm)	0.000332	ppm	0.000170	51.19	569.543000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000067	> 100.00	-0.285612	Y_R 488.368
Bi (223.061 nm)	-0.008889 u	ppm	0.003536	39.78	43.956000	Y 377.433
Ca (315.887 nm)	1.375672	ppm	0.012866	0.94	901.150165	Y_R 377.433
Cd (214.439 nm)	0.000142	ppm	0.000083	58.34	-9.496710	Y 377.433
Co (228.615 nm)	0.000286	ppm	0.000004	1.43	-12.069400	Y 242.219
Cr (205.560 nm)	0.000480 u	ppm	0.000686	> 100.00	-7.882510	Y 377.433
Cu (324.754 nm)	0.006248	ppm	0.000237	3.79	406.790000	Y 377.433
Fe (238.204 nm)	-0.003492 u	ppm	0.003239	92.76	22.271436	Y_R 377.433
Fe H (259.940 nm)	-0.063765 u	ppm	0.004574	7.17	21.236000	Y_R 377.433
K (766.491 nm)	9.306330	ppm	0.114084	1.23	11497.500000	Y_R2 488.368
Li (670.783 nm)	0.002549 u	ppm	0.006718	> 100.00	-1123.790000	Y_R2 488.368
Mg (279.078 nm)	0.717633	ppm	0.005222	0.73	1529.610000	Y 377.433
Mn (257.610 nm)	0.000375	ppm	0.000072	19.16	120.992000	Y 377.433
Mo (202.032 nm)	0.000614	ppm	0.000361	58.71	26.806400	Y 377.433
Na (589.592 nm)	35.805300	ppm	0.208715	0.58	19298.200000	Y_R2 488.368
Na H (589.593 nm)	36.352476 u	ppm	0.245725	0.68	14150.783440	Y_R4
Ni (231.604 nm)	-0.000081 u	ppm	0.000032	39.24	15.894500	Y 377.433
P (213.618 nm)	24.698900	ppm	0.058110	0.24	26993.500000	Y 242.219
Pb (220.353 nm)	0.000836	ppm	0.000919	> 100.00	11.168900	Y 242.219
S (181.972 nm)	1.544497	ppm	0.016562	1.07	719.786353	Y 377.433
Sb (206.834 nm)	-0.004389 u	ppm	0.001169	26.62	12.756800	Y 377.433
Se (196.026 nm)	0.000068 u	ppm	0.000400	> 100.00	9.243020	Y 242.219
Si (288.158 nm)	2.313140	ppm	0.047621	2.06	9728.380000	Y 377.433
Sn (189.925 nm)	0.000929	ppm	0.000544	58.51	0.604173	Y 377.433
Sr (421.552 nm)	0.004918	ppm	0.000078	1.59	719.186763	Y_R 488.368
Th (288.505 nm)	-0.011985 u	ppm	0.000207	1.73	-3.176580	Y 377.433
Ti (336.122 nm)	0.000295	ppm	0.000181	61.36	-81.617300	Y 377.433
Tl (190.794 nm)	0.001387	ppm	0.000192	13.86	4.823560	Y 377.433
U (409.013 nm)	0.000246 u	ppm	0.001727	> 100.00	247.791000	Y 377.433
V (292.401 nm)	0.004311	ppm	0.000171	3.96	-86.304500	Y 377.433
Zn (206.200 nm)	0.001477	ppm	0.000467	31.65	9.283140	Y 377.433
Zr (343.823 nm)	0.000059 u	ppm	0.000142	> 100.00	116.355000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028833	10585.359684	0.004362	0.42
Y 377.433	1.030211	438671.229167	0.004696	0.46
Y_R 377.433	1.029580	41422.500000	0.000540	0.05
Y_R 488.368	1.031250	38251.000000	0.003714	0.36
Y_R2 488.368	1.034687	73449.931394	0.009736	0.94
Y_R4	1.038720	35609.200000	0.005133	0.49

Sample Name: 280-114399-A-5-A@10

Date: 9/21/2018 1:51:22 PM Rack:Tube: 1:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000656 u	ppm	0.000421	64.11	-105.177000	Y 377.433
Al (394.401 nm)	0.019812	ppm	0.001459	7.37	263.889000	Y 377.433
Al H (396.152 nm)	0.168109 u	ppm	0.005494	3.27	49.726300	Y_R 377.433
As (188.980 nm)	0.005167	ppm	0.000183	3.54	-3.492370	Y 242.219
B (249.678 nm)	0.002086	ppm	0.000771	36.96	7.341150	Y 242.219
Ba (493.408 nm)	0.003338	ppm	0.000261	7.82	844.215000	Y_R 488.368
Be (234.861 nm)	0.000040	ppm	0.000004	10.57	-1.858540	Y_R 488.368
Bi (223.061 nm)	-0.005192 u	ppm	0.000271	5.22	49.891200	Y 377.433
Ca (315.887 nm)	1.666307	ppm	0.006814	0.41	1092.804360	Y_R 377.433
Cd (214.439 nm)	0.000104 u	ppm	0.000186	> 100.00	-10.443100	Y 377.433
Co (228.615 nm)	-0.000098 u	ppm	0.000005	5.01	-19.677600	Y 242.219
Cr (205.560 nm)	0.000441 u	ppm	0.000908	> 100.00	-8.071240	Y 377.433
Cu (324.754 nm)	0.004650	ppm	0.000055	1.18	339.715000	Y 377.433
Fe (238.204 nm)	0.017470	ppm	0.000007	0.04	56.461663	Y_R 377.433
Fe H (259.940 nm)	-0.046721 u	ppm	0.004005	8.57	36.666100	Y_R 377.433
K (766.491 nm)	7.819600	ppm	0.027721	0.35	9941.200000	Y_R2 488.368
Li (670.783 nm)	-0.002010 u	ppm	0.003376	> 100.00	-1186.670000	Y_R2 488.368
Mg (279.078 nm)	0.738255	ppm	0.005468	0.74	1573.520000	Y 377.433
Mn (257.610 nm)	0.001115	ppm	0.000013	1.20	251.740000	Y 377.433
Mo (202.032 nm)	0.000935	ppm	0.000002	0.20	30.145300	Y 377.433
Na (589.592 nm)	32.943700	ppm	0.007703	0.02	17748.100000	Y_R2 488.368
Na H (589.593 nm)	32.912985 u	ppm	0.160789	0.49	12875.553878	Y_R4
Ni (231.604 nm)	-0.000586 u	ppm	0.001678	> 100.00	14.030300	Y 377.433
P (213.618 nm)	22.078100	ppm	0.225445	1.02	24129.100000	Y 242.219
Pb (220.353 nm)	-0.000378 u	ppm	0.000348	92.15	8.609890	Y 242.219
S (181.972 nm)	1.543107	ppm	0.014225	0.92	719.167018	Y 377.433
Sb (206.834 nm)	-0.001877 u	ppm	0.000339	18.06	16.823700	Y 377.433
Se (196.026 nm)	-0.001757 u	ppm	0.002956	> 100.00	6.838040	Y 242.219
Si (288.158 nm)	2.367650	ppm	0.048651	2.05	9948.910000	Y 377.433
Sn (189.925 nm)	-0.000099 u	ppm	0.000126	> 100.00	-0.608163	Y 377.433
Sr (421.552 nm)	0.007149	ppm	0.000251	3.51	975.362123	Y_R 488.368
Th (288.505 nm)	-0.008669 u	ppm	0.005586	64.43	-0.004267	Y 377.433
Ti (336.122 nm)	0.001414	ppm	0.000016	1.12	20.200600	Y 377.433
Tl (190.794 nm)	0.002138	ppm	0.002663	> 100.00	6.166810	Y 377.433
U (409.013 nm)	0.001994 u	ppm	0.022037	> 100.00	251.837000	Y 377.433
V (292.401 nm)	0.004428	ppm	0.000046	1.05	-80.761100	Y 377.433
Zn (206.200 nm)	0.002586	ppm	0.000307	11.89	13.041700	Y 377.433
Zr (343.823 nm)	0.000524	ppm	0.000006	1.14	134.487000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022628	10521.515717	0.005434	0.53
Y 377.433	1.024666	436310.141308	0.005275	0.51
Y_R 377.433	1.026200	41286.200000	0.004330	0.42
Y_R 488.368	1.026870	38088.400000	0.028149	2.74
Y_R2 488.368	1.032716	73310.049149	0.002996	0.29
Y_R4	1.040250	35661.700000	0.003865	0.37

Sample Name: 280-114399-A-6-A@10

Date: 9/21/2018 1:54:52 PM Rack:Tube: 1:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000840 u	ppm	0.000029	3.42	-109.946000	Y 377.433
Al (394.401 nm)	0.000693 u	ppm	0.002411	> 100.00	52.106900	Y 377.433
Al H (396.152 nm)	0.148546 u	ppm	0.009306	6.26	15.578700	Y_R 377.433
As (188.980 nm)	0.007574	ppm	0.001353	17.87	-0.349827	Y 242.219
B (249.678 nm)	0.002651	ppm	0.000034	1.29	9.466330	Y 242.219
Ba (493.408 nm)	0.000778	ppm	0.000540	69.43	610.288000	Y_R 488.368
Be (234.861 nm)	0.000024	ppm	0.000029	> 100.00	-2.618240	Y_R 488.368
Bi (223.061 nm)	-0.010090 u	ppm	0.004849	48.06	42.025900	Y 377.433
Ca (315.887 nm)	1.601124	ppm	0.010463	0.65	1049.819072	Y_R 377.433
Cd (214.439 nm)	0.000073	ppm	0.000085	> 100.00	-11.244000	Y 377.433
Co (228.615 nm)	-0.000018 u	ppm	0.000202	> 100.00	-18.122600	Y 242.219
Cr (205.560 nm)	0.000973	ppm	0.000698	71.74	-5.465890	Y 377.433
Cu (324.754 nm)	0.004356	ppm	0.000310	7.12	326.686000	Y 377.433
Fe (238.204 nm)	-0.006828 u	ppm	0.003534	51.75	16.829453	Y_R 377.433
Fe H (259.940 nm)	-0.072327 u	ppm	0.002657	3.67	13.484500	Y_R 377.433
K (766.491 nm)	8.288890	ppm	0.077979	0.94	10432.400000	Y_R2 488.368
Li (670.783 nm)	0.000042 u	ppm	0.007586	> 100.00	-1158.370000	Y_R2 488.368
Mg (279.078 nm)	0.749699	ppm	0.012083	1.61	1597.790000	Y 377.433
Mn (257.610 nm)	0.000152	ppm	0.000011	7.35	81.677300	Y 377.433
Mo (202.032 nm)	0.001274	ppm	0.000151	11.84	33.666100	Y 377.433
Na (589.592 nm)	34.782500	ppm	0.195020	0.56	18744.100000	Y_R2 488.368
Na H (589.593 nm)	35.625437 u	ppm	0.424546	1.19	13881.257247	Y_R4
Ni (231.604 nm)	-0.000238 u	ppm	0.000112	46.86	15.310400	Y 377.433
P (213.618 nm)	23.013600	ppm	0.181873	0.79	25151.700000	Y 242.219
Pb (220.353 nm)	-0.000691 u	ppm	0.000438	63.36	7.963880	Y 242.219
S (181.972 nm)	1.555114	ppm	0.016816	1.08	724.744344	Y 377.433
Sb (206.834 nm)	-0.005871 u	ppm	0.002111	35.95	10.363800	Y 377.433
Se (196.026 nm)	-0.001377 u	ppm	0.003293	> 100.00	7.342020	Y 242.219
Si (288.158 nm)	2.389830	ppm	0.047376	1.98	10038.600000	Y 377.433
Sn (189.925 nm)	0.000339	ppm	0.000071	20.82	-0.091211	Y 377.433
Sr (421.552 nm)	0.006026	ppm	0.000057	0.94	846.488533	Y_R 488.368
Th (288.505 nm)	-0.008679 u	ppm	0.008289	95.50	-0.020827	Y 377.433
Ti (336.122 nm)	0.000225	ppm	0.000030	13.42	-87.412000	Y 377.433
Tl (190.794 nm)	-0.001383 u	ppm	0.000884	63.90	-0.135748	Y 377.433
U (409.013 nm)	0.000054 u	ppm	0.008379	> 100.00	247.324000	Y 377.433
V (292.401 nm)	0.004402	ppm	0.000179	4.06	-82.260000	Y 377.433
Zn (206.200 nm)	0.000880	ppm	0.000445	50.57	7.261490	Y 377.433
Zr (343.823 nm)	0.000084	ppm	0.000049	57.84	117.321000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023690	10532.440438	0.003506	0.34
Y 377.433	1.025538	436681.375601	0.003372	0.33
Y_R 377.433	1.028960	41397.400000	0.001382	0.13
Y_R 488.368	1.041280	38623.000000	0.009917	0.95
Y_R2 488.368	1.032390	73286.903487	0.013799	1.34
Y_R4	1.031500	35361.700000	0.003520	0.34

Sample Name: 280-114399-A-7-A@5

Date: 9/21/2018 1:58:23 PM Rack:Tube: 1:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000761 u	ppm	0.000191	25.13	-107.898000	Y 377.433
Al (394.401 nm)	-0.009524 u	ppm	0.001810	19.00	-48.337800	Y 377.433
Al H (396.152 nm)	0.124382 u	ppm	0.001011	0.81	-9.603500	Y_R 377.433
As (188.980 nm)	0.011956	ppm	0.000824	6.89	5.367790	Y 242.219
B (249.678 nm)	0.005101	ppm	0.000618	12.12	18.664600	Y 242.219
Ba (493.408 nm)	0.017788	ppm	0.000225	1.27	2164.030000	Y_R 488.368
Be (234.861 nm)	0.000015 u	ppm	0.000033	> 100.00	-3.090310	Y_R 488.368
Bi (223.061 nm)	-0.007281 u	ppm	0.001359	18.66	46.524500	Y 377.433
Ca (315.887 nm)	13.866339	ppm	0.003773	0.03	9137.798773	Y_R 377.433
Cd (214.439 nm)	0.000014 u	ppm	0.000243	> 100.00	-12.751700	Y 377.433
Co (228.615 nm)	-0.000191 u	ppm	0.000393	> 100.00	-21.570600	Y 242.219
Cr (205.560 nm)	0.000403	ppm	0.000103	25.63	-8.260100	Y 377.433
Cu (324.754 nm)	0.001073	ppm	0.000189	17.61	179.990000	Y 377.433
Fe (238.204 nm)	-0.011972 u	ppm	0.000284	2.38	8.439762	Y_R 377.433
Fe H (259.940 nm)	-0.082435 u	ppm	0.004129	5.01	4.334330	Y_R 377.433
K (766.491 nm)	1.817610	ppm	0.047163	2.59	3658.330000	Y_R2 488.368
Li (670.783 nm)	0.006380	ppm	0.007300	> 100.00	-1070.930000	Y_R2 488.368
Mg (279.078 nm)	3.537440	ppm	0.027570	0.78	7514.630000	Y 377.433
Mn (257.610 nm)	0.000008	ppm	0.000011	> 100.00	56.184000	Y 377.433
Mo (202.032 nm)	0.000943	ppm	0.000366	38.81	30.222100	Y 377.433
Na (589.592 nm)	13.094600	ppm	0.021989	0.17	6996.020000	Y_R2 488.368
Na H (589.593 nm)	12.943077 u	ppm	0.170872	1.32	5471.849659	Y_R4
Ni (231.604 nm)	-0.001431 u	ppm	0.000016	1.14	11.075600	Y 377.433
P (213.618 nm)	13.713600	ppm	0.068114	0.50	14987.300000	Y 242.219
Pb (220.353 nm)	0.000290 u	ppm	0.002572	> 100.00	9.994440	Y 242.219
S (181.972 nm)	2.718645	ppm	0.006750	0.25	1267.212072	Y 377.433
Sb (206.834 nm)	-0.001227 u	ppm	0.001656	> 100.00	17.868800	Y 377.433
Se (196.026 nm)	0.002834	ppm	0.000632	22.30	12.883200	Y 242.219
Si (288.158 nm)	4.575320	ppm	0.042175	0.92	18879.400000	Y 377.433
Sn (189.925 nm)	0.000406	ppm	0.000190	46.76	-0.012822	Y 377.433
Sr (421.552 nm)	0.064145	ppm	0.000619	0.96	7519.155994	Y_R 488.368
Th (288.505 nm)	-0.017218 u	ppm	0.002266	13.16	-8.326950	Y 377.433
Ti (336.122 nm)	-0.000142 u	ppm	0.000001	0.37	-91.696800	Y 377.433
Tl (190.794 nm)	-0.000222 u	ppm	0.002043	> 100.00	1.943800	Y 377.433
U (409.013 nm)	-0.012555 u	ppm	0.004180	33.30	216.562000	Y 377.433
V (292.401 nm)	0.005211	ppm	0.000030	0.57	-48.523700	Y 377.433
Zn (206.200 nm)	0.003366	ppm	0.001733	51.49	15.683700	Y 377.433
Zr (343.823 nm)	-0.000005 u	ppm	0.000209	> 100.00	113.846000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032146	10619.443987	0.001070	0.10
Y 377.433	1.035113	440758.314678	0.000239	0.02
Y_R 377.433	1.034340	41613.900000	0.002880	0.28
Y_R 488.368	1.036550	38447.400000	0.005532	0.53
Y_R2 488.368	1.039281	73776.097877	0.011876	1.14
Y_R4	1.020440	34982.400000	0.004516	0.44

Sample Name: 280-114399-A-8-A@5

Date: 9/21/2018 2:01:50 PM Rack:Tube: 1:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000336 u	ppm	0.000223	66.28	-97.256800	Y 377.433
Al (394.401 nm)	-0.009694 u	ppm	0.002622	27.05	-50.976600	Y 377.433
Al H (396.152 nm)	0.118816 u	ppm	0.002431	2.05	-19.259200	Y_R 377.433
As (188.980 nm)	0.011461	ppm	0.000255	2.22	4.721670	Y 242.219
B (249.678 nm)	0.004757	ppm	0.000538	11.31	17.374400	Y 242.219
Ba (493.408 nm)	0.017639	ppm	0.000138	0.78	2150.410000	Y_R 488.368
Be (234.861 nm)	-0.000052 u	ppm	0.000071	> 100.00	-6.736900	Y_R 488.368
Bi (223.061 nm)	0.001865 u	ppm	0.003360	> 100.00	61.208000	Y 377.433
Ca (315.887 nm)	13.978920	ppm	0.071657	0.51	9212.038272	Y_R 377.433
Cd (214.439 nm)	0.000084 u	ppm	0.000132	> 100.00	-10.965200	Y 377.433
Co (228.615 nm)	-0.000322 u	ppm	0.000023	7.12	-24.177300	Y 242.219
Cr (205.560 nm)	0.000520 u	ppm	0.000788	> 100.00	-7.683810	Y 377.433
Cu (324.754 nm)	-0.000206 u	ppm	0.000250	> 100.00	126.218000	Y 377.433
Fe (238.204 nm)	-0.008940 u	ppm	0.003671	41.07	13.385860	Y_R 377.433
Fe H (259.940 nm)	-0.072117 u	ppm	0.003760	5.21	13.675000	Y_R 377.433
K (766.491 nm)	1.878940	ppm	0.021313	1.13	3722.530000	Y_R2 488.368
Li (670.783 nm)	-0.005665 u	ppm	0.000350	6.18	-1237.100000	Y_R2 488.368
Mg (279.078 nm)	3.551800	ppm	0.053454	1.50	7545.040000	Y 377.433
Mn (257.610 nm)	0.000021	ppm	0.000011	54.64	58.438700	Y 377.433
Mo (202.032 nm)	0.001441	ppm	0.000379	26.30	35.408700	Y 377.433
Na (589.592 nm)	13.511000	ppm	0.040801	0.30	7221.590000	Y_R2 488.368
Na H (589.593 nm)	13.231034 u	ppm	0.135083	1.02	5578.584211	Y_R4
Ni (231.604 nm)	-0.001556 u	ppm	0.000260	16.68	10.613300	Y 377.433
P (213.618 nm)	13.936900	ppm	0.180152	1.29	15231.300000	Y 242.219
Pb (220.353 nm)	0.002057	ppm	0.000464	22.56	13.689700	Y 242.219
S (181.972 nm)	2.702678	ppm	0.042711	1.58	1259.791089	Y 377.433
Sb (206.834 nm)	-0.005259 u	ppm	0.003541	67.33	11.350100	Y 377.433
Se (196.026 nm)	0.001888	ppm	0.000718	38.00	11.638500	Y 242.219
Si (288.158 nm)	4.623770	ppm	0.059318	1.28	19075.400000	Y 377.433
Sn (189.925 nm)	0.000128 u	ppm	0.000201	> 100.00	-0.341197	Y 377.433
Sr (421.552 nm)	0.063801	ppm	0.001098	1.72	7479.679140	Y_R 488.368
Th (288.505 nm)	-0.014463 u	ppm	0.001805	12.48	-5.661620	Y 377.433
Ti (336.122 nm)	0.000044 u	ppm	0.000133	> 100.00	-74.621000	Y 377.433
Tl (190.794 nm)	-0.000449 u	ppm	0.001789	> 100.00	1.533470	Y 377.433
U (409.013 nm)	-0.002891 u	ppm	0.008104	> 100.00	239.181000	Y 377.433
V (292.401 nm)	0.004871	ppm	0.000154	3.15	-62.455100	Y 377.433
Zn (206.200 nm)	-0.000069 u	ppm	0.000585	> 100.00	4.046510	Y 377.433
Zr (343.823 nm)	0.000063	ppm	0.000004	6.78	116.503000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002740	10316.897830	0.004031	0.40
Y 377.433	1.002171	426731.550608	0.004261	0.43
Y_R 377.433	0.989169	39796.400000	0.003116	0.32
Y_R 488.368	0.996538	36963.400000	0.017228	1.73
Y_R2 488.368	0.983963	69849.188125	0.000067	0.01
Y_R4	0.998789	34240.300000	0.003844	0.38

Sample Name: 280-114399-A-9-A@5

Date: 9/21/2018 2:05:17 PM Rack:Tube: 1:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000222	ppm	0.000004	1.99	-83.769500	Y 377.433
Al (394.401 nm)	0.016105	ppm	0.000008	0.05	224.490000	Y 377.433
Al H (396.152 nm)	0.167877 u	ppm	0.010833	6.45	50.675000	Y_R 377.433
As (188.980 nm)	0.009349	ppm	0.000036	0.39	1.965560	Y 242.219
B (249.678 nm)	0.005104	ppm	0.000955	18.72	18.668500	Y 242.219
Ba (493.408 nm)	0.002586	ppm	0.000135	5.23	775.521000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000029	> 100.00	-4.844410	Y_R 488.368
Bi (223.061 nm)	-0.001628 u	ppm	0.000739	45.38	55.621600	Y 377.433
Ca (315.887 nm)	2.843891	ppm	0.007827	0.28	1869.331922	Y_R 377.433
Cd (214.439 nm)	-0.000034 u	ppm	0.000182	> 100.00	-13.963600	Y 377.433
Co (228.615 nm)	-0.000059 u	ppm	0.000148	> 100.00	-18.913500	Y 242.219
Cr (205.560 nm)	0.000511	ppm	0.000103	20.16	-7.733390	Y 377.433
Cu (324.754 nm)	0.007224	ppm	0.000522	7.22	448.990000	Y 377.433
Fe (238.204 nm)	0.012338	ppm	0.000488	3.95	48.090471	Y_R 377.433
Fe H (259.940 nm)	-0.053108 u	ppm	0.001768	3.33	30.883600	Y_R 377.433
K (766.491 nm)	14.191300	ppm	0.097691	0.69	16611.100000	Y_R2 488.368
Li (670.783 nm)	-0.006764 u	ppm	0.000398	5.89	-1252.260000	Y_R2 488.368
Mg (279.078 nm)	1.310140	ppm	0.012870	0.98	2787.150000	Y 377.433
Mn (257.610 nm)	0.000921	ppm	0.000127	13.80	217.434000	Y 377.433
Mo (202.032 nm)	0.001691	ppm	0.000251	14.87	38.011000	Y 377.433
Na (589.592 nm)	55.552900 o	ppm	0.071940	0.13	29995.000000	Y_R2 488.368
Na H (589.593 nm)	57.523726	ppm	0.521132	0.91	21998.207882	Y_R4
Ni (231.604 nm)	0.000287 u	ppm	0.000746	> 100.00	17.276300	Y 377.433
P (213.618 nm)	35.209400	ppm	0.664396	1.89	38481.000000	Y 242.219
Pb (220.353 nm)	0.002216	ppm	0.001673	75.51	14.043900	Y 242.219
S (181.972 nm)	3.261151	ppm	0.030465	0.93	1518.771787	Y 377.433
Sb (206.834 nm)	-0.006038 u	ppm	0.000305	5.05	10.084200	Y 377.433
Se (196.026 nm)	-0.002208 u	ppm	0.004231	> 100.00	6.245970	Y 242.219
Si (288.158 nm)	4.323490	ppm	0.063920	1.48	17860.700000	Y 377.433
Sn (189.925 nm)	-0.000194 u	ppm	0.001017	> 100.00	-0.720827	Y 377.433
Sr (421.552 nm)	0.011679	ppm	0.000132	1.13	1495.454285	Y_R 488.368
Th (288.505 nm)	-0.008711 u	ppm	0.002210	25.36	-0.194673	Y 377.433
Ti (336.122 nm)	0.000988	ppm	0.000008	0.83	-15.528000	Y 377.433
Tl (190.794 nm)	-0.000282 u	ppm	0.002190	> 100.00	1.831080	Y 377.433
U (409.013 nm)	0.000014 u	ppm	0.007456	> 100.00	247.032000	Y 377.433
V (292.401 nm)	0.007431	ppm	0.000040	0.54	43.178900	Y 377.433
Zn (206.200 nm)	0.001698	ppm	0.000334	19.68	10.034800	Y 377.433
Zr (343.823 nm)	0.000799	ppm	0.000168	21.09	145.204000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982121	10104.753649	0.000666	0.07
Y 377.433	0.980196	417374.265244	0.001519	0.15
Y_R 377.433	0.979988	39427.100000	0.002246	0.23
Y_R 488.368	0.991730	36785.100000	0.010993	1.11
Y_R2 488.368	0.976489	69318.615392	0.007165	0.73
Y_R4	0.992812	34035.400000	0.007705	0.78

Sample Name: 280-114399-A-10-A@5

Date: 9/21/2018 2:08:48 PM Rack:Tube: 1:23

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000535 u	ppm	0.000436	81.41	-102.890000	Y 377.433
Al (394.401 nm)	0.006698	ppm	0.000097	1.45	120.599000	Y 377.433
Al H (396.152 nm)	0.154570 u	ppm	0.020132	13.02	27.630600	Y_R 377.433
As (188.980 nm)	0.009632	ppm	0.001047	10.87	2.335090	Y 242.219
B (249.678 nm)	0.005155	ppm	0.001225	23.76	18.863000	Y 242.219
Ba (493.408 nm)	0.001881	ppm	0.000624	33.18	711.039000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000080	> 100.00	-5.614420	Y_R 488.368
Bi (223.061 nm)	-0.002197 u	ppm	0.003565	> 100.00	54.707600	Y 377.433
Ca (315.887 nm)	2.873013	ppm	0.028192	0.98	1888.534465	Y_R 377.433
Cd (214.439 nm)	-0.000012 u	ppm	0.000067	> 100.00	-13.398300	Y 377.433
Co (228.615 nm)	-0.000151 u	ppm	0.000046	30.19	-20.748800	Y 242.219
Cr (205.560 nm)	0.000489	ppm	0.000278	56.90	-7.839690	Y 377.433
Cu (324.754 nm)	0.007496	ppm	0.000011	0.14	460.300000	Y 377.433
Fe (238.204 nm)	-0.003060 u	ppm	0.001291	42.18	22.975673	Y_R 377.433
Fe H (259.940 nm)	-0.068209 u	ppm	0.001718	2.52	17.212400	Y_R 377.433
K (766.491 nm)	14.259400	ppm	0.155271	1.09	16682.300000	Y_R2 488.368
Li (670.783 nm)	-0.005532 u	ppm	0.011258	> 100.00	-1235.260000	Y_R2 488.368
Mg (279.078 nm)	1.331170	ppm	0.011506	0.86	2831.740000	Y 377.433
Mn (257.610 nm)	0.000515	ppm	0.000006	1.22	145.832000	Y 377.433
Mo (202.032 nm)	0.001832	ppm	0.000185	10.11	39.471900	Y 377.433
Na (589.592 nm)	56.576100 o	ppm	0.151163	0.27	30549.300000	Y_R2 488.368
Na H (589.593 nm)	58.610608	ppm	0.386552	0.66	22401.083491	Y_R4
Ni (231.604 nm)	-0.000513 u	ppm	0.000936	> 100.00	14.315200	Y 377.433
P (213.618 nm)	35.611000	ppm	0.457389	1.28	38920.000000	Y 242.219
Pb (220.353 nm)	0.001061 u	ppm	0.001526	> 100.00	11.642900	Y 242.219
S (181.972 nm)	3.266234	ppm	0.026478	0.81	1521.138081	Y 377.433
Sb (206.834 nm)	0.000430	ppm	0.000441	> 100.00	20.544300	Y 377.433
Se (196.026 nm)	0.003265	ppm	0.001420	43.49	13.449000	Y 242.219
Si (288.158 nm)	4.351470	ppm	0.008037	0.18	17973.900000	Y 377.433
Sn (189.925 nm)	0.000547 u	ppm	0.002128	> 100.00	0.153159	Y 377.433
Sr (421.552 nm)	0.011636	ppm	0.000246	2.12	1490.590168	Y_R 488.368
Th (288.505 nm)	-0.009488 u	ppm	0.006203	65.37	-0.926786	Y 377.433
Ti (336.122 nm)	0.000400	ppm	0.000041	10.17	-68.535800	Y 377.433
Tl (190.794 nm)	-0.000099 u	ppm	0.000771	> 100.00	2.158410	Y 377.433
U (409.013 nm)	0.014900	ppm	0.010621	71.28	281.903000	Y 377.433
V (292.401 nm)	0.007689	ppm	0.000594	7.73	53.655900	Y 377.433
Zn (206.200 nm)	0.002025	ppm	0.000459	22.68	11.142700	Y 377.433
Zr (343.823 nm)	0.000420	ppm	0.000204	48.57	130.404000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.984772	10132.028506	0.003818	0.39
Y 377.433	0.980099	417332.928092	0.003626	0.37
Y_R 377.433	0.973778	39177.200000	0.002806	0.29
Y_R 488.368	0.969510	35960.900000	0.006106	0.63
Y_R2 488.368	0.976632	69328.741541	0.002004	0.21
Y_R4	0.980697	33620.000000	0.002440	0.25

Sample Name: CCVH-5320321

Date: 9/21/2018 2:12:19 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001219	ppm	0.000033	2.73	-153.391000	Y 377.433
Al (394.401 nm)	50.552100 o	ppm	0.042014	0.08	561879.000000	Y 377.433
Al H (396.152 nm)	49.448000	ppm	0.090137	0.18	85409.800000	Y_R 377.433
As (188.980 nm)	-0.001237 u	ppm	0.000569	46.03	-13.789800	Y 242.219
B (249.678 nm)	0.005017	ppm	0.000348	6.95	3.208010	Y 242.219
Ba (493.408 nm)	0.000981	ppm	0.000103	10.53	665.234000	Y_R 488.368
Be (234.861 nm)	-0.000695 u	ppm	0.000064	9.20	-332.963000	Y_R 488.368
Bi (223.061 nm)	0.976528	ppm	0.001877	0.19	1632.210000	Y 377.433
Ca (315.887 nm)	0.002161 u	ppm	0.007195	> 100.00	-0.506701	Y_R 377.433
Cd (214.439 nm)	-0.000496 u	ppm	0.000006	1.23	-7.986010	Y 377.433
Co (228.615 nm)	0.003017	ppm	0.000206	6.82	42.225600	Y 242.219
Cr (205.560 nm)	-0.000569 u	ppm	0.000576	> 100.00	-14.237700	Y 377.433
Cu (324.754 nm)	-0.000391 u	ppm	0.000224	57.19	535.112000	Y 377.433
Fe (238.204 nm)	49.705559 o	ppm	0.018992	0.04	81100.344585	Y_R 377.433
Fe H (259.940 nm)	49.965000	ppm	0.020677	0.04	45312.500000	Y_R 377.433
K (766.491 nm)	0.120867	ppm	0.117270	97.02	1882.180000	Y_R2 488.368
Li (670.783 nm)	0.000761 u	ppm	0.001904	> 100.00	-1148.450000	Y_R2 488.368
Mg (279.078 nm)	-0.011703 u	ppm	0.006109	52.20	-161.002000	Y 377.433
Mn (257.610 nm)	0.000226	ppm	0.000068	30.04	94.665400	Y 377.433
Mo (202.032 nm)	-0.000336 u	ppm	0.000258	76.69	16.918200	Y 377.433
Na (589.592 nm)	240.528000 o	ppm	0.160419	0.07	130192.000000	Y_R2 488.368
Na H (589.593 nm)	249.286468	ppm	1.361555	0.55	93079.488403	Y_R4
Ni (231.604 nm)	-0.000217 u	ppm	0.001304	> 100.00	22.560100	Y 377.433
P (213.618 nm)	-0.006739 u	ppm	0.000865	12.83	-9.683940	Y 242.219
Pb (220.353 nm)	0.002854	ppm	0.000356	12.49	25.866800	Y 242.219
S (181.972 nm)	4.985674	ppm	0.005056	0.10	2320.864051	Y 377.433
Sb (206.834 nm)	0.002008	ppm	0.002385	> 100.00	27.134900	Y 377.433
Se (196.026 nm)	-0.002306 u	ppm	0.000203	8.79	-5.080830	Y 242.219
Si (288.158 nm)	0.012503	ppm	0.000884	7.07	422.599000	Y 377.433
Sn (189.925 nm)	-0.000355 u	ppm	0.000886	> 100.00	-0.734477	Y 377.433
Sr (421.552 nm)	0.000094	ppm	0.000009	9.01	171.158834	Y_R 488.368
Th (288.505 nm)	4.926550	ppm	0.061534	1.25	4786.490000	Y 377.433
Ti (336.122 nm)	0.000777	ppm	0.000034	4.39	-49.927000	Y 377.433
Tl (190.794 nm)	-0.004258 u	ppm	0.001553	36.47	-5.978650	Y 377.433
U (409.013 nm)	9.747810	ppm	0.018083	0.19	23114.300000	Y 377.433
V (292.401 nm)	-0.003775 u	ppm	0.000250	6.61	-437.622000	Y 377.433
Zn (206.200 nm)	0.000090 u	ppm	0.000156	> 100.00	5.429440	Y 377.433
Zr (343.823 nm)	-0.006779 u	ppm	0.000001	0.01	-101.816000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985457	10139.078904	0.008319	0.84
Y 377.433	0.979214	416956.381503	0.005987	0.61
Y_R 377.433	1.007140	40519.400000	0.006561	0.65
Y_R 488.368	1.022780	37936.800000	0.008815	0.86
Y_R2 488.368	1.016214	72138.622252	0.004431	0.44
Y_R4	1.031550	35363.300000	0.008847	0.86

Sample Name: CCV-5305988

Date: 9/21/2018 2:15:59 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.494982	ppm	0.000494	0.10	12362.200000	Y 377.433
Al (394.401 nm)	0.494914	ppm	0.000726	0.15	5650.070000	Y 377.433
Al H (396.152 nm)	0.559239 u	ppm	0.001398	0.25	922.916000	Y_R 377.433
As (188.980 nm)	0.981239	ppm	0.002698	0.27	1270.130000	Y 242.219
B (249.678 nm)	0.493931	ppm	0.003345	0.68	1852.580000	Y 242.219
Ba (493.408 nm)	0.503879	ppm	0.002395	0.48	46567.100000	Y_R 488.368
Be (234.861 nm)	0.503281	ppm	0.005810	1.15	27251.400000	Y_R 488.368
Bi (223.061 nm)	-0.006787 u	ppm	0.000540	7.96	47.712600	Y 377.433
Ca (315.887 nm)	4.928837	ppm	0.005831	0.12	3244.236399	Y_R 377.433
Cd (214.439 nm)	0.494377	ppm	0.001739	0.35	12546.800000	Y 377.433
Co (228.615 nm)	0.491533	ppm	0.001217	0.25	9773.780000	Y 242.219
Cr (205.560 nm)	0.485573	ppm	0.001774	0.37	2367.580000	Y 377.433
Cu (324.754 nm)	0.495176	ppm	0.001114	0.22	21272.600000	Y 377.433
Fe (238.204 nm)	2.493160	ppm	0.001322	0.05	4094.441845	Y_R 377.433
Fe H (259.940 nm)	2.448890 u	ppm	0.010417	0.43	2295.950000	Y_R 377.433
K (766.491 nm)	49.643000	ppm	0.164963	0.33	53721.800000	Y_R2 488.368
Li (670.783 nm)	0.967019	ppm	0.003212	0.33	12181.400000	Y_R2 488.368
Mg (279.078 nm)	19.714500	ppm	0.031920	0.16	41846.800000	Y 377.433
Mn (257.610 nm)	0.492746	ppm	0.000614	0.12	87110.600000	Y 377.433
Mo (202.032 nm)	0.494425	ppm	0.000449	0.09	5164.310000	Y 377.433
Na (589.592 nm)	24.808700	ppm	0.104950	0.42	13333.300000	Y_R2 488.368
Na H (589.593 nm)	25.354279 u	ppm	0.121826	0.48	10022.812212	Y_R4
Ni (231.604 nm)	0.494024	ppm	0.002441	0.49	1847.220000	Y 377.433
P (213.618 nm)	1.004000	ppm	0.002468	0.25	1075.210000	Y 242.219
Pb (220.353 nm)	0.991748	ppm	0.003406	0.34	2077.280000	Y 242.219
S (181.972 nm)	0.008398	ppm	0.005870	69.90	6.792603	Y 377.433
Sb (206.834 nm)	1.010170	ppm	0.001818	0.18	1652.700000	Y 377.433
Se (196.026 nm)	0.989901	ppm	0.003921	0.40	1311.470000	Y 242.219
Si (288.158 nm)	4.950370	ppm	0.026384	0.53	20396.600000	Y 377.433
Sn (189.925 nm)	0.993800	ppm	0.005573	0.56	1171.580000	Y 377.433
Sr (421.552 nm)	0.499554	ppm	0.001829	0.37	57509.280032	Y_R 488.368
Th (288.505 nm)	-0.017323 u	ppm	0.010163	58.67	-36.786900	Y 377.433
Ti (336.122 nm)	0.495353	ppm	0.000370	0.07	44637.100000	Y 377.433
Tl (190.794 nm)	1.006380	ppm	0.002415	0.24	1801.650000	Y 377.433
U (409.013 nm)	-0.006207 u	ppm	0.008511	> 100.00	188.328000	Y 377.433
V (292.401 nm)	0.492094	ppm	0.000220	0.04	19924.600000	Y 377.433
Zn (206.200 nm)	0.492359	ppm	0.002761	0.56	1672.490000	Y 377.433
Zr (343.823 nm)	0.493083	ppm	0.000611	0.12	19349.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011550	10407.535338	0.002176	0.22
Y 377.433	1.010448	430256.013934	0.000576	0.06
Y_R 377.433	1.014770	40826.500000	0.003744	0.37
Y_R 488.368	1.014190	37618.100000	0.009226	0.91
Y_R2 488.368	1.019035	72338.837200	0.004793	0.47
Y_R4	1.017970	34898.000000	0.006069	0.60

Sample Name: CCB

Date: 9/21/2018 2:19:31 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000432 u	ppm	0.000841	> 100.00	-98.912800	Y 377.433
Al (394.401 nm)	-0.007551 u	ppm	0.001901	25.17	-42.207200	Y 377.433
Al H (396.152 nm)	0.134385 Zu	ppm	0.011543	8.59	-10.795400 Z	Y_R 377.433
As (188.980 nm)	0.000105 u	ppm	0.003098	> 100.00	-10.095700	Y 242.219
B (249.678 nm)	0.001756	ppm	0.000157	8.95	6.107870	Y 242.219
Ba (493.408 nm)	0.000078 u	ppm	0.000216	> 100.00	546.356000	Y_R 488.368
Be (234.861 nm)	0.000064	ppm	0.000001	1.67	-0.445014	Y_R 488.368
Bi (223.061 nm)	-0.005666 u	ppm	0.002744	48.43	49.114800	Y 377.433
Ca (315.887 nm)	-0.009474 u	ppm	0.010916	> 100.00	-12.249645	Y_R 377.433
Cd (214.439 nm)	0.000032 u	ppm	0.000091	> 100.00	-12.281300	Y 377.433
Co (228.615 nm)	0.000069 u	ppm	0.000246	> 100.00	-16.392500	Y 242.219
Cr (205.560 nm)	-0.000210 u	ppm	0.000374	> 100.00	-11.260200	Y 377.433
Cu (324.754 nm)	-0.000070 u	ppm	0.000024	33.72	139.588000	Y 377.433
Fe (238.204 nm)	-0.009624 u	ppm	0.000177	1.84	12.269583	Y_R 377.433
Fe H (259.940 nm)	-0.078787 u	ppm	0.002778	3.53	7.636680	Y_R 377.433
K (766.491 nm)	0.085496	ppm	0.035029	40.97	1845.150000	Y_R2 488.368
Li (670.783 nm)	-0.003243 u	ppm	0.005211	> 100.00	-1203.680000	Y_R2 488.368
Mg (279.078 nm)	0.004137	ppm	0.001478	35.73	15.406800	Y 377.433
Mn (257.610 nm)	-0.000057 u	ppm	0.000011	19.94	44.658000	Y 377.433
Mo (202.032 nm)	0.000088 u	ppm	0.000381	> 100.00	21.326800	Y 377.433
Na (589.592 nm)	0.005061 u	ppm	0.044447	> 100.00	-94.040900	Y_R2 488.368
Na H (589.593 nm)	-0.433224 u	ppm	0.009136	2.11	515.372804	Y_R4
Ni (231.604 nm)	-0.001076 u	ppm	0.000979	90.91	12.184400	Y 377.433
P (213.618 nm)	0.002324 u	ppm	0.004575	> 100.00	1.382290	Y 242.219
Pb (220.353 nm)	-0.000258 u	ppm	0.000495	> 100.00	8.872830	Y 242.219
S (181.972 nm)	0.006926	ppm	0.003731	53.88	4.159312	Y 377.433
Sb (206.834 nm)	-0.001993 u	ppm	0.000343	17.18	16.631600	Y 377.433
Se (196.026 nm)	-0.000887 u	ppm	0.002474	> 100.00	7.988080	Y 242.219
Si (288.158 nm)	-0.000030 u	ppm	0.001388	> 100.00	371.095000	Y 377.433
Sn (189.925 nm)	-0.000206 u	ppm	0.000029	14.26	-0.734553	Y 377.433
Sr (421.552 nm)	0.000077 u	ppm	0.000123	> 100.00	163.460198	Y_R 488.368
Th (288.505 nm)	-0.007899 Zu	ppm	0.003062	38.76	0.916451 Z	Y 377.433
Ti (336.122 nm)	-0.000171 u	ppm	0.000012	7.26	-126.574000	Y 377.433
Tl (190.794 nm)	-0.001327 u	ppm	0.001734	> 100.00	-0.030020	Y 377.433
U (409.013 nm)	-0.003357 u	ppm	0.004059	> 100.00	239.427000	Y 377.433
V (292.401 nm)	-0.000008 u	ppm	0.000188	> 100.00	-263.759000	Y 377.433
Zn (206.200 nm)	-0.000429 u	ppm	0.000296	69.06	2.827750	Y 377.433
Zr (343.823 nm)	0.000335	ppm	0.000240	71.65	127.081000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008323	10374.337474	0.007832	0.78
Y 377.433	1.007937	429186.468587	0.005558	0.55
Y_R 377.433	1.006410	40490.200000	0.007063	0.70
Y_R 488.368	1.022270	37917.800000	0.003566	0.35
Y_R2 488.368	1.000944	71054.623000	0.003007	0.30
Y_R4	1.006400	34501.300000	0.004696	0.47

Sample Name: CCVL-5320254

Date: 9/21/2018 2:22:41 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009041	ppm	0.000482	5.33	140.121000	Y 377.433
Al (394.401 nm)	0.090665	ppm	0.002231	2.46	1052.750000	Y 377.433
Al H (396.152 nm)	0.243910 u	ppm	0.004391	1.80	183.532000	Y_R 377.433
As (188.980 nm)	0.013969	ppm	0.000286	2.05	7.991620	Y 242.219
B (249.678 nm)	0.099402	ppm	0.000112	0.11	372.565000	Y 242.219
Ba (493.408 nm)	0.010806	ppm	0.000122	1.13	1526.380000	Y_R 488.368
Be (234.861 nm)	0.000901	ppm	0.000025	2.80	44.339800	Y_R 488.368
Bi (223.061 nm)	0.088748	ppm	0.001581	1.78	200.700000	Y 377.433
Ca (315.887 nm)	0.204761	ppm	0.004317	2.11	129.031276	Y_R 377.433
Cd (214.439 nm)	0.005180	ppm	0.000169	3.25	118.509000	Y 377.433
Co (228.615 nm)	0.010312	ppm	0.000327	3.17	187.634000	Y 242.219
Cr (205.560 nm)	0.009701	ppm	0.000011	0.11	37.199000	Y 377.433
Cu (324.754 nm)	0.015387	ppm	0.000127	0.83	800.085000	Y 377.433
Fe (238.204 nm)	0.087034	ppm	0.001002	1.15	169.923195	Y_R 377.433
Fe H (259.940 nm)	0.024453 u	ppm	0.002153	8.80	101.100000	Y_R 377.433
K (766.491 nm)	3.070060	ppm	0.129053	4.20	4969.380000	Y_R2 488.368
Li (670.783 nm)	0.023392	ppm	0.000518	2.21	-836.246000	Y_R2 488.368
Mg (279.078 nm)	0.205094	ppm	0.001620	0.79	441.401000	Y 377.433
Mn (257.610 nm)	0.010340	ppm	0.000009	0.09	1881.610000	Y 377.433
Mo (202.032 nm)	0.019525	ppm	0.000865	4.43	223.551000	Y 377.433
Na (589.592 nm)	1.062750	ppm	0.023511	2.21	478.713000	Y_R2 488.368
Na H (589.593 nm)	0.414079 u	ppm	0.005495	1.33	828.370138	Y_R4
Ni (231.604 nm)	0.040899	ppm	0.000491	1.20	167.684000	Y 377.433
P (213.618 nm)	2.872990	ppm	0.004748	0.17	3138.230000	Y 242.219
Pb (220.353 nm)	0.010324	ppm	0.001775	17.20	30.963600	Y 242.219
S (181.972 nm)	0.089730	ppm	0.005188	5.78	42.737505	Y 377.433
Sb (206.834 nm)	0.018331	ppm	0.000225	1.23	49.367400	Y 377.433
Se (196.026 nm)	0.015834	ppm	0.007808	49.31	29.977800	Y 242.219
Si (288.158 nm)	0.484078	ppm	0.000588	0.12	2329.420000	Y 377.433
Sn (189.925 nm)	0.099299	ppm	0.001023	1.03	116.619000	Y 377.433
Sr (421.552 nm)	0.009787	ppm	0.000208	2.12	1278.272143	Y_R 488.368
Th (288.505 nm)	0.009214 Q	ppm	0.002890	31.37	17.143200 Q	Y 377.433
Ti (336.122 nm)	0.009851	ppm	0.000016	0.16	779.046000	Y 377.433
Tl (190.794 nm)	0.017248	ppm	0.000707	4.10	33.141000	Y 377.433
U (409.013 nm)	0.044652	ppm	0.001206	2.70	350.636000	Y 377.433
V (292.401 nm)	0.009798	ppm	0.000095	0.97	138.118000	Y 377.433
Zn (206.200 nm)	0.018533	ppm	0.000672	3.63	67.073300	Y 377.433
Zr (343.823 nm)	0.014715	ppm	0.000227	1.54	688.104000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027440	10571.024623	0.000180	0.02
Y 377.433	1.027664	437586.563513	0.001251	0.12
Y_R 377.433	1.020090	41040.500000	0.005268	0.52
Y_R 488.368	1.019350	37809.500000	0.010148	1.00
Y_R2 488.368	1.028593	73017.370184	0.007946	0.77
Y_R4	1.023160	35075.700000	0.002548	0.25

Sample Name: 280-114399-A-11-A@5

Date: 9/21/2018 2:26:07 PM Rack:Tube: 1:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000229 u	ppm	0.000484	> 100.00	-83.055300	Y 377.433
Al (394.401 nm)	-0.007171 u	ppm	0.000554	7.73	-21.067300	Y 377.433
Al H (396.152 nm)	0.127291 u	ppm	0.006656	5.23	-4.194780	Y_R 377.433
As (188.980 nm)	0.012500	ppm	0.001878	15.02	6.077550	Y 242.219
B (249.678 nm)	0.006908	ppm	0.000612	8.87	25.446100	Y 242.219
Ba (493.408 nm)	0.018557	ppm	0.000546	2.94	2234.320000	Y_R 488.368
Be (234.861 nm)	0.000111	ppm	0.000110	99.30	2.127340	Y_R 488.368
Bi (223.061 nm)	-0.004475 u	ppm	0.003751	83.83	51.028600	Y 377.433
Ca (315.887 nm)	14.235101	ppm	0.034752	0.24	9380.969493	Y_R 377.433
Cd (214.439 nm)	0.000028 u	ppm	0.000041	> 100.00	-12.385600	Y 377.433
Co (228.615 nm)	-0.000238 u	ppm	0.000181	75.77	-22.501200	Y 242.219
Cr (205.560 nm)	0.000139 u	ppm	0.000351	> 100.00	-9.557860	Y 377.433
Cu (324.754 nm)	-0.000194 u	ppm	0.000064	33.10	125.734000	Y 377.433
Fe (238.204 nm)	-0.009396 u	ppm	0.002115	22.51	12.641953	Y_R 377.433
Fe H (259.940 nm)	-0.076746 u	ppm	0.002517	3.28	9.484510	Y_R 377.433
K (766.491 nm)	1.908820	ppm	0.101989	5.34	3753.800000	Y_R2 488.368
Li (670.783 nm)	-0.003732 u	ppm	0.000486	13.02	-1210.440000	Y_R2 488.368
Mg (279.078 nm)	3.639030	ppm	0.043536	1.20	7730.090000	Y 377.433
Mn (257.610 nm)	0.000037	ppm	0.000008	22.16	61.345000	Y 377.433
Mo (202.032 nm)	0.001612	ppm	0.000614	38.07	37.183300	Y 377.433
Na (589.592 nm)	17.238300	ppm	0.154304	0.90	9240.550000	Y_R2 488.368
Na H (589.593 nm)	16.787699 u	ppm	0.060512	0.36	6896.832517	Y_R4
Ni (231.604 nm)	-0.000182 u	ppm	0.001539	> 100.00	15.707500	Y 377.433
P (213.618 nm)	16.713100	ppm	0.267713	1.60	18265.600000	Y 242.219
Pb (220.353 nm)	0.000286 u	ppm	0.000681	> 100.00	10.006800	Y 242.219
S (181.972 nm)	2.880770	ppm	0.030359	1.05	1342.689149	Y 377.433
Sb (206.834 nm)	-0.003799 u	ppm	0.000190	5.00	13.702400	Y 377.433
Se (196.026 nm)	0.000756	ppm	0.001003	> 100.00	10.149900	Y 242.219
Si (288.158 nm)	4.418840	ppm	0.058777	1.33	18246.400000	Y 377.433
Sn (189.925 nm)	0.000151	ppm	0.000129	85.26	-0.313313	Y 377.433
Sr (421.552 nm)	0.065505	ppm	0.000019	0.03	7675.284916	Y_R 488.368
Th (288.505 nm)	-0.016074 u	ppm	0.003130	19.47	-7.194020	Y 377.433
Ti (336.122 nm)	-0.000052 u	ppm	0.000014	27.59	-82.661900	Y 377.433
Tl (190.794 nm)	0.000403 u	ppm	0.001759	> 100.00	3.059850	Y 377.433
U (409.013 nm)	-0.005650 u	ppm	0.003831	67.81	232.676000	Y 377.433
V (292.401 nm)	0.005164	ppm	0.000328	6.35	-50.693800	Y 377.433
Zn (206.200 nm)	-0.000202 u	ppm	0.000349	> 100.00	3.597450	Y 377.433
Zr (343.823 nm)	0.000183 u	ppm	0.000277	> 100.00	121.172000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014461	10437.484743	0.003008	0.30
Y 377.433	1.012331	431057.505969	0.003217	0.32
Y_R 377.433	1.013880	40790.800000	0.006512	0.64
Y_R 488.368	1.014510	37629.900000	0.011370	1.12
Y_R2 488.368	1.013657	71957.091266	0.000070	0.01
Y_R4	1.008460	34571.900000	0.000355	0.04

Sample Name: 280-114399-A-12-A@5

Date: 9/21/2018 2:29:35 PM Rack:Tube: 1:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000499 u	ppm	0.000123	24.73	-101.537000	Y 377.433
Al (394.401 nm)	-0.007510 u	ppm	0.000360	4.80	-25.992400	Y 377.433
Al H (396.152 nm)	0.125483 u	ppm	0.002459	1.96	-6.966270	Y_R 377.433
As (188.980 nm)	0.015743	ppm	0.000998	6.34	10.310500	Y 242.219
B (249.678 nm)	0.007750	ppm	0.000683	8.81	28.606300	Y 242.219
Ba (493.408 nm)	0.019121	ppm	0.000591	3.09	2285.830000	Y_R 488.368
Be (234.861 nm)	-0.000022 u	ppm	0.000110	> 100.00	-5.083890	Y_R 488.368
Bi (223.061 nm)	-0.004526 u	ppm	0.000561	12.38	50.947900	Y 377.433
Ca (315.887 nm)	14.500961	ppm	0.036580	0.25	9556.284397	Y_R 377.433
Cd (214.439 nm)	0.000190	ppm	0.000100	52.54	-8.283520	Y 377.433
Co (228.615 nm)	-0.000022 u	ppm	0.000212	> 100.00	-18.197500	Y 242.219
Cr (205.560 nm)	0.000254 u	ppm	0.000451	> 100.00	-8.991370	Y 377.433
Cu (324.754 nm)	-0.000305 u	ppm	0.000329	> 100.00	121.830000	Y 377.433
Fe (238.204 nm)	-0.008565 u	ppm	0.000291	3.40	13.997416	Y_R 377.433
Fe H (259.940 nm)	-0.077940 u	ppm	0.006428	8.25	8.402870	Y_R 377.433
K (766.491 nm)	1.914990	ppm	0.039487	2.06	3760.260000	Y_R2 488.368
Li (670.783 nm)	-0.001162 u	ppm	0.004964	> 100.00	-1174.970000	Y_R2 488.368
Mg (279.078 nm)	3.702330	ppm	0.044114	1.19	7864.470000	Y 377.433
Mn (257.610 nm)	0.000035 u	ppm	0.000063	> 100.00	61.005500	Y 377.433
Mo (202.032 nm)	0.001589	ppm	0.000122	7.69	36.944300	Y 377.433
Na (589.592 nm)	17.540800	ppm	0.067029	0.38	9404.400000	Y_R2 488.368
Na H (589.593 nm)	17.428900 u	ppm	0.110395	0.63	7134.495697	Y_R4
Ni (231.604 nm)	-0.001936 u	ppm	0.000781	40.32	9.214170	Y 377.433
P (213.618 nm)	16.953900	ppm	0.305623	1.80	18528.800000	Y 242.219
Pb (220.353 nm)	0.000853	ppm	0.001020	> 100.00	11.184600	Y 242.219
S (181.972 nm)	2.942246	ppm	0.042474	1.44	1371.320499	Y 377.433
Sb (206.834 nm)	-0.002762 u	ppm	0.000326	11.81	15.382500	Y 377.433
Se (196.026 nm)	-0.001060 u	ppm	0.000658	62.04	7.760050	Y 242.219
Si (288.158 nm)	5.116800	ppm	0.064979	1.27	21069.800000	Y 377.433
Sn (189.925 nm)	-0.000566 u	ppm	0.000962	> 100.00	-1.159110	Y 377.433
Sr (421.552 nm)	0.066340	ppm	0.000710	1.07	7771.184685	Y_R 488.368
Th (288.505 nm)	-0.014311 u	ppm	0.005850	40.88	-5.516750	Y 377.433
Ti (336.122 nm)	-0.000053 u	ppm	0.000049	91.77	-82.116100	Y 377.433
Tl (190.794 nm)	-0.000997 u	ppm	0.002001	> 100.00	0.552551	Y 377.433
U (409.013 nm)	-0.003190 u	ppm	0.001333	41.79	238.474000	Y 377.433
V (292.401 nm)	0.005356	ppm	0.000195	3.65	-42.297400	Y 377.433
Zn (206.200 nm)	0.000004 u	ppm	0.000331	> 100.00	4.293610	Y 377.433
Zr (343.823 nm)	-0.000090 u	ppm	0.000115	> 100.00	110.523000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.013722	10429.887823	0.000636	0.06
Y 377.433	1.012918	431307.808035	0.001271	0.13
Y_R 377.433	1.009830	40627.600000	0.004354	0.43
Y_R 488.368	1.012550	37557.300000	0.006526	0.64
Y_R2 488.368	1.012386	71866.876754	0.000336	0.03
Y_R4	1.001680	34339.200000	0.004378	0.44

Sample Name: MB 280-430004/1-A

Date: 9/21/2018 2:33:02 PM Rack:Tube: 1:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001063 u	ppm	0.000440	41.41	-114.855000	Y 377.433
Al (394.401 nm)	-0.008479 u	ppm	0.002143	25.27	-53.883500	Y 377.433
Al H (396.152 nm)	0.139343 u	ppm	0.004425	3.18	-2.290920	Y_R 377.433
As (188.980 nm)	0.001252	ppm	0.000831	66.31	-8.599020	Y 242.219
B (249.678 nm)	0.001925	ppm	0.000098	5.10	6.743000	Y 242.219
Ba (493.408 nm)	0.000499	ppm	0.000013	2.53	584.851000	Y_R 488.368
Be (234.861 nm)	0.000061	ppm	0.000041	67.94	-0.607252	Y_R 488.368
Bi (223.061 nm)	-0.003924 u	ppm	0.002834	72.21	51.910300	Y 377.433
Ca (315.887 nm)	0.008059 u	ppm	0.018155	> 100.00	-0.687944	Y_R 377.433
Cd (214.439 nm)	-0.000051 u	ppm	0.000021	40.14	-14.408100	Y 377.433
Co (228.615 nm)	-0.000144 u	ppm	0.000069	47.58	-20.631100	Y 242.219
Cr (205.560 nm)	0.000157	ppm	0.000195	> 100.00	-9.462930	Y 377.433
Cu (324.754 nm)	-0.000374 u	ppm	0.000332	88.60	127.236000	Y 377.433
Fe (238.204 nm)	-0.006994 u	ppm	0.002480	35.46	16.559259	Y_R 377.433
Fe H (259.940 nm)	-0.076445 u	ppm	0.000466	0.61	9.756880	Y_R 377.433
K (766.491 nm)	-0.019010 u	ppm	0.026953	> 100.00	1735.760000	Y_R2 488.368
Li (670.783 nm)	-0.001990 u	ppm	0.001024	51.46	-1186.400000	Y_R2 488.368
Mg (279.078 nm)	0.000387 u	ppm	0.001575	> 100.00	7.534080	Y 377.433
Mn (257.610 nm)	0.000026	ppm	0.000020	76.00	59.388800	Y 377.433
Mo (202.032 nm)	0.000037 u	ppm	0.000259	> 100.00	20.801800	Y 377.433
Na (589.592 nm)	-0.002343 u	ppm	0.019558	> 100.00	-98.069200	Y_R2 488.368
Na H (589.593 nm)	-0.819109 u	ppm	0.027326	3.34	372.226661	Y_R4
Ni (231.604 nm)	-0.000354 u	ppm	0.001679	> 100.00	14.859300	Y 377.433
P (213.618 nm)	0.003122	ppm	0.003927	> 100.00	2.271600	Y 242.219
Pb (220.353 nm)	0.000348	ppm	0.000260	74.87	10.122500	Y 242.219
S (181.972 nm)	0.000029 u	ppm	0.004841	> 100.00	0.950852	Y 377.433
Sb (206.834 nm)	-0.002659 u	ppm	0.000849	31.94	15.557000	Y 377.433
Se (196.026 nm)	0.001317	ppm	0.000335	25.44	10.886500	Y 242.219
Si (288.158 nm)	0.008639	ppm	0.001891	21.89	406.166000	Y 377.433
Sn (189.925 nm)	0.000818	ppm	0.000521	63.71	0.472921	Y 377.433
Sr (421.552 nm)	-0.000202 u	ppm	0.000083	41.30	131.416687	Y_R 488.368
Th (288.505 nm)	-0.007374 u	ppm	0.007602	> 100.00	1.389930	Y 377.433
Ti (336.122 nm)	0.000137	ppm	0.000040	29.51	-98.804600	Y 377.433
Tl (190.794 nm)	0.000814 u	ppm	0.002190	> 100.00	3.801920	Y 377.433
U (409.013 nm)	-0.005231 u	ppm	0.004638	88.67	235.091000	Y 377.433
V (292.401 nm)	0.000206	ppm	0.000255	> 100.00	-254.481000	Y 377.433
Zn (206.200 nm)	0.001672	ppm	0.000192	11.49	9.945440	Y 377.433
Zr (343.823 nm)	-0.000311 u	ppm	0.000265	85.10	101.886000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033453	10632.888707	0.001827	0.18
Y 377.433	1.030860	438947.384989	0.001471	0.14
Y_R 377.433	1.027040	41319.900000	0.003598	0.35
Y_R 488.368	1.028320	38142.300000	0.001776	0.17
Y_R2 488.368	1.030811	73174.831602	0.003085	0.30
Y_R4	1.018040	34900.100000	0.010147	1.00

Sample Name: LCS 280-430004/2-A

Date: 9/21/2018 2:36:14 PM Rack:Tube: 1:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052905	ppm	0.000410	0.77	1195.250000	Y 377.433
Al (394.401 nm)	2.054080	ppm	0.003301	0.16	23137.000000	Y 377.433
Al H (396.152 nm)	2.013760	ppm	0.011903	0.59	3639.720000	Y_R 377.433
As (188.980 nm)	1.010780	ppm	0.002381	0.24	1308.690000	Y 242.219
B (249.678 nm)	1.012430	ppm	0.001449	0.14	3799.070000	Y 242.219
Ba (493.408 nm)	2.058960	ppm	0.010105	0.49	188612.000000	Y_R 488.368
Be (234.861 nm)	0.051654	ppm	0.000597	1.16	2788.900000	Y_R 488.368
Bi (223.061 nm)	1.927880	ppm	0.000296	0.02	3153.380000	Y 377.433
Ca (315.887 nm)	50.614261	ppm	0.003381	0.01	33370.445090	Y_R 377.433
Cd (214.439 nm)	0.100647	ppm	0.000515	0.51	2544.090000	Y 377.433
Co (228.615 nm)	0.486540	ppm	0.000726	0.15	9692.920000	Y 242.219
Cr (205.560 nm)	0.199889	ppm	0.000053	0.03	965.555000	Y 377.433
Cu (324.754 nm)	0.248972	ppm	0.000261	0.10	10801.900000	Y 377.433
Fe (238.204 nm)	1.023582	ppm	0.005786	0.57	1697.482927	Y_R 377.433
Fe H (259.940 nm)	0.954233 u	ppm	0.003178	0.33	942.834000	Y_R 377.433
K (766.491 nm)	52.178400	ppm	0.221589	0.42	56375.900000	Y_R2 488.368
Li (670.783 nm)	1.010700	ppm	0.000673	0.07	12784.100000	Y_R2 488.368
Mg (279.078 nm)	50.307500	ppm	0.010664	0.02	106758.000000	Y 377.433
Mn (257.610 nm)	0.503518	ppm	0.000318	0.06	89013.800000	Y 377.433
Mo (202.032 nm)	0.995807	ppm	0.000484	0.05	10380.600000	Y 377.433
Na (589.592 nm)	49.309600	ppm	0.292410	0.59	26578.800000	Y_R2 488.368
Na H (589.593 nm)	51.451255	ppm	0.228603	0.44	19536.042404	Y_R4
Ni (231.604 nm)	0.489032	ppm	0.001177	0.24	1830.050000	Y 377.433
P (213.618 nm)	10.420300	ppm	0.010662	0.10	11377.100000	Y 242.219
Pb (220.353 nm)	0.508753	ppm	0.001493	0.29	1071.300000	Y 242.219
S (181.972 nm)	1.901600	ppm	0.009843	0.52	891.599927	Y 377.433
Sb (206.834 nm)	0.502223	ppm	0.000784	0.16	822.161000	Y 377.433
Se (196.026 nm)	2.023640	ppm	0.000391	0.02	2671.780000	Y 242.219
Si (288.158 nm)	9.973580	ppm	0.028977	0.29	40716.600000	Y 377.433
Sn (189.925 nm)	1.979390	ppm	0.000765	0.04	2333.950000	Y 377.433
Sr (421.552 nm)	1.018288	ppm	0.004364	0.43	117065.600618	Y_R 488.368
Th (288.505 nm)	0.989553	ppm	0.007032	0.71	941.496000	Y 377.433
Ti (336.122 nm)	0.985796	ppm	0.000266	0.03	89035.800000	Y 377.433
Tl (190.794 nm)	2.049110	ppm	0.003791	0.18	3664.280000	Y 377.433
U (409.013 nm)	2.010870	ppm	0.016752	0.83	4909.680000	Y 377.433
V (292.401 nm)	0.512676	ppm	0.000138	0.03	20840.300000	Y 377.433
Zn (206.200 nm)	0.499038	ppm	0.000326	0.07	1695.100000	Y 377.433
Zr (343.823 nm)	0.489459	ppm	0.000659	0.13	19207.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989913	10184.919058	0.003085	0.31
Y 377.433	0.990885	421925.754714	0.003497	0.35
Y_R 377.433	0.999705	40220.300000	0.001694	0.17
Y_R 488.368	1.002880	37198.600000	0.002872	0.29
Y_R2 488.368	0.997483	70808.931898	0.003470	0.35
Y_R4	1.002500	34367.500000	0.002706	0.27

Sample Name: 280-114250-B-1-A

Date: 9/21/2018 2:39:45 PM Rack:Tube: 1:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000387	ppm	0.000056	14.40	-78.591100	Y 377.433
Al (394.401 nm)	0.004489	ppm	0.001241	27.64	151.722000	Y 377.433
Al H (396.152 nm)	0.108706 u	ppm	0.002647	2.44	16.141000	Y_R 377.433
As (188.980 nm)	0.004035	ppm	0.000934	23.15	-4.971910	Y 242.219
B (249.678 nm)	0.004184	ppm	0.000176	4.22	15.174100	Y 242.219
Ba (493.408 nm)	0.054242	ppm	0.000795	1.47	5494.000000	Y_R 488.368
Be (234.861 nm)	0.000062 u	ppm	0.000114	> 100.00	-1.466790	Y_R 488.368
Bi (223.061 nm)	0.000284 u	ppm	0.001148	> 100.00	58.687400	Y 377.433
Ca (315.887 nm)	34.554231	ppm	0.052195	0.15	22779.898971	Y_R 377.433
Cd (214.439 nm)	0.000472	ppm	0.000143	30.35	-1.058960	Y 377.433
Co (228.615 nm)	0.000487	ppm	0.000144	29.63	-8.075130	Y 242.219
Cr (205.560 nm)	0.000692	ppm	0.000263	38.01	-6.856850	Y 377.433
Cu (324.754 nm)	0.002083	ppm	0.000145	6.96	210.970000	Y 377.433
Fe (238.204 nm)	0.150100	ppm	0.003292	2.19	272.787905	Y_R 377.433
Fe H (259.940 nm)	0.083559 u	ppm	0.002193	2.62	154.609000	Y_R 377.433
K (766.491 nm)	0.777419	ppm	0.022135	2.85	2569.460000	Y_R2 488.368
Li (670.783 nm)	-0.000739 u	ppm	0.000597	80.70	-1169.150000	Y_R2 488.368
Mg (279.078 nm)	24.858600	ppm	0.022986	0.09	52766.100000	Y 377.433
Mn (257.610 nm)	0.041059	ppm	0.000118	0.29	7308.820000	Y 377.433
Mo (202.032 nm)	0.004045	ppm	0.000251	6.21	62.498300	Y 377.433
Na (589.592 nm)	1.972130	ppm	0.027652	1.40	970.605000	Y_R2 488.368
Na H (589.593 nm)	1.154602 u	ppm	0.067532	5.85	1098.537437	Y_R4
Ni (231.604 nm)	-0.000313 u	ppm	0.000412	> 100.00	15.545200	Y 377.433
P (213.618 nm)	0.008705	ppm	0.006071	69.75	8.204720	Y 242.219
Pb (220.353 nm)	0.001731	ppm	0.001330	76.80	13.054400	Y 242.219
S (181.972 nm)	25.626320	ppm	0.018886	0.07	11929.336988	Y 377.433
Sb (206.834 nm)	-0.003316 u	ppm	0.001147	34.60	14.490300	Y 377.433
Se (196.026 nm)	-0.000948 u	ppm	0.002844	> 100.00	7.920930	Y 242.219
Si (288.158 nm)	2.631970	ppm	0.010754	0.41	11018.100000	Y 377.433
Sn (189.925 nm)	0.000621	ppm	0.000500	80.56	0.240784	Y 377.433
Sr (421.552 nm)	0.236493	ppm	0.001899	0.80	27306.720903	Y_R 488.368
Th (288.505 nm)	-0.022372 u	ppm	0.004253	19.01	-12.607700	Y 377.433
Ti (336.122 nm)	0.000082	ppm	0.000017	20.50	-22.908200	Y 377.433
Tl (190.794 nm)	0.001122	ppm	0.000313	27.91	4.334160	Y 377.433
U (409.013 nm)	0.020932	ppm	0.005000	23.89	293.102000	Y 377.433
V (292.401 nm)	0.000130	ppm	0.000078	59.85	-260.505000	Y 377.433
Zn (206.200 nm)	0.172280	ppm	0.000055	0.03	587.986000	Y 377.433
Zr (343.823 nm)	0.000152	ppm	0.000124	81.31	120.126000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005488	10345.172442	0.001514	0.15
Y 377.433	1.006386	428526.331177	0.002608	0.26
Y_R 377.433	1.009820	40627.400000	0.010263	1.02
Y_R 488.368	1.004860	37272.000000	0.015677	1.56
Y_R2 488.368	1.018462	72298.182023	0.001084	0.11
Y_R4	1.007320	34532.800000	0.005738	0.57

Sample Name: 280-114250-B-1-Asd@5

Date: 9/21/2018 2:43:11 PM Rack:Tube: 1:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000427 u	ppm	0.000288	67.33	-98.949400	Y 377.433
Al (394.401 nm)	-0.008551 u	ppm	0.001469	17.18	-41.127900	Y 377.433
Al H (396.152 nm)	0.136096 u	ppm	0.002424	1.78	6.096110	Y_R 377.433
As (188.980 nm)	0.001562	ppm	0.001753	> 100.00	-8.195570	Y 242.219
B (249.678 nm)	0.000744	ppm	0.000283	37.99	2.303550	Y 242.219
Ba (493.408 nm)	0.010865	ppm	0.000020	0.18	1531.690000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000018	21.96	0.265765	Y_R 488.368
Bi (223.061 nm)	-0.007938 u	ppm	0.000886	11.16	45.471000	Y 377.433
Ca (315.887 nm)	6.979873	ppm	0.019994	0.29	4596.696087	Y_R 377.433
Cd (214.439 nm)	0.000152	ppm	0.000004	2.71	-9.241270	Y 377.433
Co (228.615 nm)	-0.000222 u	ppm	0.000082	36.82	-22.168000	Y 242.219
Cr (205.560 nm)	-0.000510 u	ppm	0.000098	19.18	-12.738500	Y 377.433
Cu (324.754 nm)	0.000289	ppm	0.000140	48.40	150.795000	Y 377.433
Fe (238.204 nm)	0.018922	ppm	0.001307	6.91	58.829624	Y_R 377.433
Fe H (259.940 nm)	-0.050350 u	ppm	0.004727	9.39	33.380600	Y_R 377.433
K (766.491 nm)	0.133636	ppm	0.042341	31.68	1895.550000	Y_R2 488.368
Li (670.783 nm)	-0.008763 u	ppm	0.003672	41.91	-1279.830000	Y_R2 488.368
Mg (279.078 nm)	4.924000	ppm	0.049097	1.00	10457.200000	Y 377.433
Mn (257.610 nm)	0.008252	ppm	0.000130	1.58	1512.750000	Y 377.433
Mo (202.032 nm)	0.001064	ppm	0.000405	38.10	31.485100	Y 377.433
Na (589.592 nm)	0.372791	ppm	0.009074	2.43	104.974000	Y_R2 488.368
Na H (589.593 nm)	-0.443445 u	ppm	0.029838	6.73	510.496843	Y_R4
Ni (231.604 nm)	-0.000429 u	ppm	0.001223	> 100.00	14.691700	Y 377.433
P (213.618 nm)	0.003884	ppm	0.005061	> 100.00	3.058670	Y 242.219
Pb (220.353 nm)	0.000605 u	ppm	0.002007	> 100.00	10.689400	Y 242.219
S (181.972 nm)	4.972757	ppm	0.054114	1.09	2315.644842	Y 377.433
Sb (206.834 nm)	0.000785	ppm	0.000760	96.83	21.119400	Y 377.433
Se (196.026 nm)	-0.002410 u	ppm	0.000011	0.45	5.987500	Y 242.219
Si (288.158 nm)	0.505209	ppm	0.003908	0.77	2414.900000	Y 377.433
Sn (189.925 nm)	0.001684	ppm	0.001272	75.53	1.494160	Y 377.433
Sr (421.552 nm)	0.046476	ppm	0.000213	0.46	5490.592704	Y_R 488.368
Th (288.505 nm)	-0.012473 u	ppm	0.002033	16.30	-3.396680	Y 377.433
Ti (336.122 nm)	0.000070	ppm	0.000036	50.97	-88.706900	Y 377.433
Tl (190.794 nm)	0.002303	ppm	0.001059	46.00	6.462750	Y 377.433
U (409.013 nm)	0.010614	ppm	0.009788	92.22	271.519000	Y 377.433
V (292.401 nm)	0.000104 u	ppm	0.000196	> 100.00	-259.676000	Y 377.433
Zn (206.200 nm)	0.032854	ppm	0.001199	3.65	115.594000	Y 377.433
Zr (343.823 nm)	0.000354	ppm	0.000218	61.61	127.879000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005956	10349.987941	0.003036	0.30
Y 377.433	1.003046	427104.125464	0.002111	0.21
Y_R 377.433	0.995980	40070.400000	0.003161	0.32
Y_R 488.368	1.009000	37425.800000	0.000653	0.06
Y_R2 488.368	1.003815	71258.444336	0.009590	0.96
Y_R4	1.002780	34377.100000	0.006062	0.60

Sample Name: 280-114250-B-1-B MS

Date: 9/21/2018 2:46:24 PM Rack:Tube: 1:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052384	ppm	0.000430	0.82	1185.650000	Y 377.433
Al (394.401 nm)	2.028930	ppm	0.001191	0.06	22912.500000	Y 377.433
Al H (396.152 nm)	1.937360	ppm	0.002201	0.11	3573.550000	Y_R 377.433
As (188.980 nm)	1.006810	ppm	0.000870	0.09	1303.500000	Y 242.219
B (249.678 nm)	1.035300	ppm	0.000116	0.01	3884.850000	Y 242.219
Ba (493.408 nm)	2.076520	ppm	0.003829	0.18	190217.000000	Y_R 488.368
Be (234.861 nm)	0.050461	ppm	0.000343	0.68	2723.300000	Y_R 488.368
Bi (223.061 nm)	1.897240	ppm	0.003019	0.16	3104.210000	Y 377.433
Ca (315.887 nm)	83.825424	ppm	0.080532	0.10	55270.692183	Y_R 377.433
Cd (214.439 nm)	0.098718	ppm	0.000305	0.31	2495.110000	Y 377.433
Co (228.615 nm)	0.475761	ppm	0.001909	0.40	9479.140000	Y 242.219
Cr (205.560 nm)	0.195762	ppm	0.001619	0.83	945.284000	Y 377.433
Cu (324.754 nm)	0.247676	ppm	0.000075	0.03	10725.500000	Y 377.433
Fe (238.204 nm)	1.183624	ppm	0.001664	0.14	1958.519815	Y_R 377.433
Fe H (259.940 nm)	1.112040 u	ppm	0.003414	0.31	1085.700000	Y_R 377.433
K (766.491 nm)	51.821000	ppm	0.089259	0.17	56001.800000	Y_R2 488.368
Li (670.783 nm)	0.986972	ppm	0.002573	0.26	12456.700000	Y_R2 488.368
Mg (279.078 nm)	74.086000	ppm	0.117084	0.16	157225.000000	Y 377.433
Mn (257.610 nm)	0.533585	ppm	0.000628	0.12	94325.800000	Y 377.433
Mo (202.032 nm)	1.013590	ppm	0.001888	0.19	10565.600000	Y 377.433
Na (589.592 nm)	50.178200	ppm	0.052860	0.11	27049.100000	Y_R2 488.368
Na H (589.593 nm)	52.557111	ppm	0.206857	0.39	19944.167832	Y_R4
Ni (231.604 nm)	0.476110	ppm	0.000050	0.01	1782.660000	Y 377.433
P (213.618 nm)	10.277900	ppm	0.007272	0.07	11221.500000	Y 242.219
Pb (220.353 nm)	0.499544	ppm	0.001869	0.37	1052.020000	Y 242.219
S (181.972 nm)	28.322047	ppm	0.096547	0.34	13189.415283	Y 377.433
Sb (206.834 nm)	0.520373	ppm	0.000655	0.13	851.283000	Y 377.433
Se (196.026 nm)	1.998860	ppm	0.006810	0.34	2639.190000	Y 242.219
Si (288.158 nm)	12.728300	ppm	0.007605	0.06	51860.200000	Y 377.433
Sn (189.925 nm)	2.012960	ppm	0.003893	0.19	2373.540000	Y 377.433
Sr (421.552 nm)	1.240455	ppm	0.000098	0.01	142572.852462	Y_R 488.368
Th (288.505 nm)	0.968320	ppm	0.005072	0.52	921.856000	Y 377.433
Ti (336.122 nm)	1.000280	ppm	0.002018	0.20	90421.500000	Y 377.433
Tl (190.794 nm)	1.997760	ppm	0.007233	0.36	3572.180000	Y 377.433
U (409.013 nm)	1.993970	ppm	0.005897	0.30	4866.360000	Y 377.433
V (292.401 nm)	0.502759	ppm	0.000573	0.11	20429.000000	Y 377.433
Zn (206.200 nm)	0.652135	ppm	0.001185	0.18	2213.810000	Y 377.433
Zr (343.823 nm)	0.495843	ppm	0.000971	0.20	19456.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976558	10047.518588	0.001228	0.13
Y 377.433	0.980176	417365.900553	0.001742	0.18
Y_R 377.433	0.998430	40169.000000	0.000359	0.04
Y_R 488.368	1.000890	37124.900000	0.001059	0.11
Y_R2 488.368	0.996715	70754.431356	0.002464	0.25
Y_R4	0.995735	34135.600000	0.004767	0.48

Sample Name: 280-114250-B-1-C MSD

Date: 9/21/2018 2:49:54 PM Rack:Tube: 1:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052728	ppm	0.000165	0.31	1193.770000	Y 377.433
Al (394.401 nm)	2.035020	ppm	0.003899	0.19	22978.400000	Y 377.433
Al H (396.152 nm)	1.941300	ppm	0.006657	0.34	3580.540000	Y_R 377.433
As (188.980 nm)	1.011940	ppm	0.009179	0.91	1310.200000	Y 242.219
B (249.678 nm)	1.035890	ppm	0.000580	0.06	3887.080000	Y 242.219
Ba (493.408 nm)	2.082490	ppm	0.001223	0.06	190762.000000	Y_R 488.368
Be (234.861 nm)	0.050779	ppm	0.000048	0.09	2740.730000	Y_R 488.368
Bi (223.061 nm)	1.901550	ppm	0.008965	0.47	3111.130000	Y 377.433
Ca (315.887 nm)	83.805626	ppm	0.234593	0.28	55257.636084	Y_R 377.433
Cd (214.439 nm)	0.099304	ppm	0.000149	0.15	2509.990000	Y 377.433
Co (228.615 nm)	0.474955	ppm	0.003451	0.73	9463.080000	Y 242.219
Cr (205.560 nm)	0.196315	ppm	0.000960	0.49	947.985000	Y 377.433
Cu (324.754 nm)	0.248391	ppm	0.000546	0.22	10758.200000	Y 377.433
Fe (238.204 nm)	1.153360	ppm	0.000976	0.08	1909.157803	Y_R 377.433
Fe H (259.940 nm)	1.087100 u	ppm	0.008936	0.82	1063.120000	Y_R 377.433
K (766.491 nm)	52.150400	ppm	0.236303	0.45	56346.500000	Y_R2 488.368
Li (670.783 nm)	0.990551	ppm	0.008676	0.88	12506.100000	Y_R2 488.368
Mg (279.078 nm)	74.136600	ppm	0.005750	0.01	157333.000000	Y 377.433
Mn (257.610 nm)	0.534851	ppm	0.000455	0.09	94549.600000	Y 377.433
Mo (202.032 nm)	1.015950	ppm	0.000950	0.09	10590.100000	Y 377.433
Na (589.592 nm)	50.506800	ppm	0.078240	0.15	27226.900000	Y_R2 488.368
Na H (589.593 nm)	52.782057	ppm	0.017993	0.03	20026.719233	Y_R4
Ni (231.604 nm)	0.477490	ppm	0.000699	0.15	1787.760000	Y 377.433
P (213.618 nm)	10.360300	ppm	0.044388	0.43	11311.500000	Y 242.219
Pb (220.353 nm)	0.502869	ppm	0.000978	0.19	1058.980000	Y 242.219
S (181.972 nm)	28.202104	ppm	0.082251	0.29	13133.601289	Y 377.433
Sb (206.834 nm)	0.525545	ppm	0.001066	0.20	859.647000	Y 377.433
Se (196.026 nm)	2.002930	ppm	0.004617	0.23	2644.540000	Y 242.219
Si (288.158 nm)	12.871500	ppm	0.072717	0.56	52439.100000	Y 377.433
Sn (189.925 nm)	2.016740	ppm	0.004692	0.23	2378.000000	Y 377.433
Sr (421.552 nm)	1.236544	ppm	0.001542	0.12	142123.921652	Y_R 488.368
Th (288.505 nm)	0.974296	ppm	0.010874	1.12	927.574000	Y 377.433
Ti (336.122 nm)	0.999633	ppm	0.000057	0.01	90363.100000	Y 377.433
Tl (190.794 nm)	2.012990	ppm	0.000780	0.04	3599.420000	Y 377.433
U (409.013 nm)	1.999210	ppm	0.020707	1.04	4878.620000	Y 377.433
V (292.401 nm)	0.504272	ppm	0.000071	0.01	20491.700000	Y 377.433
Zn (206.200 nm)	0.653074	ppm	0.000507	0.08	2216.990000	Y 377.433
Zr (343.823 nm)	0.496045	ppm	0.000338	0.07	19464.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975637	10038.039815	0.000227	0.02
Y 377.433	0.976627	415854.805275	0.001074	0.11
Y_R 377.433	0.991622	39895.100000	0.001402	0.14
Y_R 488.368	0.996496	36961.900000	0.000349	0.04
Y_R2 488.368	0.989268	70225.741856	0.000527	0.05
Y_R4	0.991076	33975.900000	0.000355	0.04

Sample Name: 280-114250-B-2-B

Date: 9/21/2018 2:53:25 PM Rack:Tube: 1:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000441	ppm	0.000253	57.38	-76.880000	Y 377.433
Al (394.401 nm)	0.010316	ppm	0.000100	0.97	203.629000	Y 377.433
Al H (396.152 nm)	0.126460 u	ppm	0.016846	13.32	35.024700	Y_R 377.433
As (188.980 nm)	0.001713	ppm	0.000511	29.82	-8.000480	Y 242.219
B (249.678 nm)	0.007038	ppm	0.002309	32.81	25.908300	Y 242.219
Ba (493.408 nm)	0.051628	ppm	0.001069	2.07	5255.160000	Y_R 488.368
Be (234.861 nm)	-0.000071 u	ppm	0.000166	> 100.00	-8.229520	Y_R 488.368
Bi (223.061 nm)	-0.000090 u	ppm	0.001803	> 100.00	58.077400	Y 377.433
Ca (315.887 nm)	34.222095	ppm	0.074261	0.22	22560.880589	Y_R 377.433
Cd (214.439 nm)	0.000607	ppm	0.000051	8.47	2.335870	Y 377.433
Co (228.615 nm)	-0.000123 u	ppm	0.000228	> 100.00	-20.196300	Y 242.219
Cr (205.560 nm)	0.000126 u	ppm	0.000576	> 100.00	-9.619650	Y 377.433
Cu (324.754 nm)	0.000485	ppm	0.000354	72.94	145.055000	Y 377.433
Fe (238.204 nm)	0.070792	ppm	0.000298	0.42	143.432535	Y_R 377.433
Fe H (259.940 nm)	0.001278 u	ppm	0.006207	> 100.00	80.120000	Y_R 377.433
K (766.491 nm)	0.798713	ppm	0.126123	15.79	2591.750000	Y_R2 488.368
Li (670.783 nm)	-0.001301 u	ppm	0.001450	> 100.00	-1176.900000	Y_R2 488.368
Mg (279.078 nm)	14.955800	ppm	0.015275	0.10	31748.800000	Y 377.433
Mn (257.610 nm)	0.033406	ppm	0.000081	0.24	5956.840000	Y 377.433
Mo (202.032 nm)	0.001304	ppm	0.000967	74.16	33.986800	Y 377.433
Na (589.592 nm)	1.164810	ppm	0.056082	4.81	533.338000	Y_R2 488.368
Na H (589.593 nm)	0.427628 u	ppm	0.019036	4.45	829.334098	Y_R4
Ni (231.604 nm)	-0.000316 u	ppm	0.001035	> 100.00	15.517900	Y 377.433
P (213.618 nm)	0.005785	ppm	0.007380	> 100.00	5.125930	Y 242.219
Pb (220.353 nm)	0.000650	ppm	0.000249	38.32	10.758400	Y 242.219
S (181.972 nm)	16.807945	ppm	0.026468	0.16	7825.571389	Y 377.433
Sb (206.834 nm)	-0.003345 u	ppm	0.002183	65.26	14.443000	Y 377.433
Se (196.026 nm)	0.000613 u	ppm	0.001903	> 100.00	9.982570	Y 242.219
Si (288.158 nm)	1.732040	ppm	0.009571	0.55	7377.700000	Y 377.433
Sn (189.925 nm)	0.000995	ppm	0.000137	13.73	0.681890	Y 377.433
Sr (421.552 nm)	0.200564	ppm	0.004246	2.12	23181.575930	Y_R 488.368
Th (288.505 nm)	-0.018181 u	ppm	0.000433	2.38	-8.712890	Y 377.433
Ti (336.122 nm)	0.000598	ppm	0.000154	25.67	22.935000	Y 377.433
Tl (190.794 nm)	0.002018	ppm	0.000557	27.62	5.948470	Y 377.433
U (409.013 nm)	0.007290	ppm	0.004392	60.25	261.098000	Y 377.433
V (292.401 nm)	0.000603	ppm	0.000191	31.63	-239.025000	Y 377.433
Zn (206.200 nm)	0.107500	ppm	0.000388	0.36	368.502000	Y 377.433
Zr (343.823 nm)	0.000464	ppm	0.000000	0.09	132.217000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017057	10464.201909	0.003388	0.33
Y 377.433	1.018184	433549.747981	0.005135	0.50
Y_R 377.433	1.025850	41272.000000	0.002724	0.27
Y_R 488.368	1.029490	38185.600000	0.022538	2.19
Y_R2 488.368	1.024733	72743.382790	0.004737	0.46
Y_R4	1.014570	34781.200000	0.002551	0.25

Sample Name: 280-114250-B-3-C

Date: 9/21/2018 2:56:52 PM Rack:Tube: 1:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000797	ppm	0.000703	88.19	-68.387000	Y 377.433
Al (394.401 nm)	0.005624	ppm	0.000174	3.09	166.767000	Y 377.433
Al H (396.152 nm)	0.098115 u	ppm	0.002643	2.69	2.300510	Y_R 377.433
As (188.980 nm)	0.003983	ppm	0.000373	9.37	-5.042260	Y 242.219
B (249.678 nm)	0.005068	ppm	0.000936	18.47	18.454900	Y 242.219
Ba (493.408 nm)	0.052408	ppm	0.000052	0.10	5326.560000	Y_R 488.368
Be (234.861 nm)	-0.000099 u	ppm	0.000018	17.62	-10.902500	Y_R 488.368
Bi (223.061 nm)	-0.001624 u	ppm	0.006705	> 100.00	55.639500	Y 377.433
Ca (315.887 nm)	34.488215	ppm	0.008635	0.03	22736.365672	Y_R 377.433
Cd (214.439 nm)	0.000571	ppm	0.000164	28.69	1.489070	Y 377.433
Co (228.615 nm)	0.000604	ppm	0.000153	25.41	-5.737830	Y 242.219
Cr (205.560 nm)	0.000283	ppm	0.000131	46.21	-8.866980	Y 377.433
Cu (324.754 nm)	0.003788	ppm	0.000329	8.69	284.706000	Y 377.433
Fe (238.204 nm)	0.267383	ppm	0.000198	0.07	464.082341	Y_R 377.433
Fe H (259.940 nm)	0.201060 u	ppm	0.001722	0.86	260.983000	Y_R 377.433
K (766.491 nm)	0.763693	ppm	0.049302	6.46	2555.090000	Y_R2 488.368
Li (670.783 nm)	0.002993	ppm	0.001723	57.57	-1117.660000	Y_R2 488.368
Mg (279.078 nm)	28.425300	ppm	0.032258	0.11	60335.800000	Y 377.433
Mn (257.610 nm)	0.034330	ppm	0.000037	0.11	6120.000000	Y 377.433
Mo (202.032 nm)	0.005235	ppm	0.000215	4.12	74.879300	Y 377.433
Na (589.592 nm)	2.230910	ppm	0.010470	0.47	1110.820000	Y_R2 488.368
Na H (589.593 nm)	1.371274 u	ppm	0.057073	4.16	1179.073298	Y_R4
Ni (231.604 nm)	0.001428	ppm	0.000689	48.29	22.009300	Y 377.433
P (213.618 nm)	0.005566	ppm	0.000579	10.41	4.703450	Y 242.219
Pb (220.353 nm)	0.004094	ppm	0.001615	39.46	17.993100	Y 242.219
S (181.972 nm)	28.994028	ppm	0.109011	0.38	13496.503831	Y 377.433
Sb (206.834 nm)	-0.005445 u	ppm	0.001741	31.97	11.042100	Y 377.433
Se (196.026 nm)	-0.001464 u	ppm	0.001950	> 100.00	7.207280	Y 242.219
Si (288.158 nm)	3.062170	ppm	0.035151	1.15	12758.400000	Y 377.433
Sn (189.925 nm)	0.000421 u	ppm	0.000879	> 100.00	0.005671	Y 377.433
Sr (421.552 nm)	0.249702	ppm	0.000141	0.06	28823.176652	Y_R 488.368
Th (288.505 nm)	-0.015938 u	ppm	0.000222	1.39	-6.465640	Y 377.433
Ti (336.122 nm)	0.000283	ppm	0.000047	16.67	-4.948880	Y 377.433
Tl (190.794 nm)	0.000424 u	ppm	0.003617	> 100.00	3.078100	Y 377.433
U (409.013 nm)	0.032468	ppm	0.002889	8.90	320.219000	Y 377.433
V (292.401 nm)	0.000398	ppm	0.000011	2.82	-249.116000	Y 377.433
Zn (206.200 nm)	0.174192	ppm	0.001787	1.03	594.468000	Y 377.433
Zr (343.823 nm)	-0.000046 u	ppm	0.000077	> 100.00	112.516000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012304	10415.298251	0.000134	0.01
Y 377.433	1.014603	432024.913691	0.001014	0.10
Y_R 377.433	1.023480	41176.700000	0.000727	0.07
Y_R 488.368	1.029670	38192.500000	0.001522	0.15
Y_R2 488.368	1.034290	73421.796844	0.003817	0.37
Y_R4	1.020410	34981.500000	0.013661	1.34

Sample Name: CCVH-5320321

Date: 9/21/2018 3:00:20 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000829	ppm	0.000041	4.97	-162.960000	Y 377.433
Al (394.401 nm)	50.290700 o	ppm	0.051074	0.10	558978.000000	Y 377.433
Al H (396.152 nm)	49.365000	ppm	0.031284	0.06	85266.000000	Y_R 377.433
As (188.980 nm)	-0.001724 u	ppm	0.002585	> 100.00	-14.423700	Y 242.219
B (249.678 nm)	0.004033	ppm	0.002462	61.04	-0.479955	Y 242.219
Ba (493.408 nm)	0.001031	ppm	0.000207	20.05	669.766000	Y_R 488.368
Be (234.861 nm)	-0.000803 u	ppm	0.000092	11.49	-338.715000	Y_R 488.368
Bi (223.061 nm)	0.979302	ppm	0.009886	1.01	1636.660000	Y 377.433
Ca (315.887 nm)	0.006681	ppm	0.001291	19.33	2.467500	Y_R 377.433
Cd (214.439 nm)	-0.000525 u	ppm	0.000168	31.97	-8.741150	Y 377.433
Co (228.615 nm)	0.003173	ppm	0.000117	3.69	45.334900	Y 242.219
Cr (205.560 nm)	-0.001212 u	ppm	0.000038	3.16	-17.389400	Y 377.433
Cu (324.754 nm)	-0.000035 u	ppm	0.000122	> 100.00	545.527000	Y 377.433
Fe (238.204 nm)	49.741991 o	ppm	0.079356	0.16	81159.767691	Y_R 377.433
Fe H (259.940 nm)	49.757100	ppm	0.048582	0.10	45124.200000	Y_R 377.433
K (766.491 nm)	0.199717	ppm	0.062033	31.06	1964.720000	Y_R2 488.368
Li (670.783 nm)	0.000383 u	ppm	0.002544	> 100.00	-1153.660000	Y_R2 488.368
Mg (279.078 nm)	0.009026	ppm	0.004555	50.47	-116.622000	Y 377.433
Mn (257.610 nm)	0.000380	ppm	0.000018	4.69	121.829000	Y 377.433
Mo (202.032 nm)	-0.000292 u	ppm	0.000425	> 100.00	17.373800	Y 377.433
Na (589.592 nm)	238.862000 o	ppm	0.677593	0.28	129290.000000	Y_R2 488.368
Na H (589.593 nm)	248.729522	ppm	0.029515	0.01	92873.046973	Y_R4
Ni (231.604 nm)	-0.000049 u	ppm	0.000259	> 100.00	23.179400	Y 377.433
P (213.618 nm)	-0.014410 u	ppm	0.002145	14.89	-18.086400	Y 242.219
Pb (220.353 nm)	0.003325	ppm	0.001240	37.28	26.800100	Y 242.219
S (181.972 nm)	4.967199	ppm	0.010236	0.21	2312.267106	Y 377.433
Sb (206.834 nm)	-0.002742 u	ppm	0.001451	52.93	19.445500	Y 377.433
Se (196.026 nm)	-0.004146 u	ppm	0.001979	47.75	-7.496540	Y 242.219
Si (288.158 nm)	0.010255	ppm	0.001999	19.49	413.506000	Y 377.433
Sn (189.925 nm)	0.000022 u	ppm	0.001164	> 100.00	-0.289826	Y 377.433
Sr (421.552 nm)	0.000168	ppm	0.000158	94.21	179.585277	Y_R 488.368
Th (288.505 nm)	4.907640	ppm	0.047080	0.96	4768.140000	Y 377.433
Ti (336.122 nm)	0.000930	ppm	0.000051	5.51	-36.113000	Y 377.433
Tl (190.794 nm)	-0.005968 u	ppm	0.000836	14.00	-9.041830	Y 377.433
U (409.013 nm)	9.713970	ppm	0.019847	0.20	23035.000000	Y 377.433
V (292.401 nm)	-0.003695 u	ppm	0.000142	3.84	-435.852000	Y 377.433
Zn (206.200 nm)	-0.000499 u	ppm	0.000093	18.67	3.431690	Y 377.433
Zr (343.823 nm)	-0.006867 u	ppm	0.000167	2.43	-105.282000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997957	10267.683292	0.001888	0.19
Y 377.433	0.992148	422463.489423	0.004203	0.42
Y_R 377.433	1.022410	41133.900000	0.007271	0.71
Y_R 488.368	1.025210	38026.800000	0.001645	0.16
Y_R2 488.368	1.019959	72404.445742	0.001850	0.18
Y_R4	1.043630	35777.500000	0.002066	0.20

Sample Name: CCV-5305988

Date: 9/21/2018 3:03:58 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.493136	ppm	0.000110	0.02	12316.000000	Y 377.433
Al (394.401 nm)	0.499233	ppm	0.005641	1.13	5694.930000	Y 377.433
Al H (396.152 nm)	0.561760 u	ppm	0.004906	0.87	925.117000	Y_R 377.433
As (188.980 nm)	0.971182	ppm	0.003465	0.36	1257.010000	Y 242.219
B (249.678 nm)	0.493632	ppm	0.000440	0.09	1851.460000	Y 242.219
Ba (493.408 nm)	0.498906	ppm	0.003330	0.67	46112.800000	Y_R 488.368
Be (234.861 nm)	0.496345	ppm	0.008122	1.64	26875.600000	Y_R 488.368
Bi (223.061 nm)	-0.002094 u	ppm	0.005473	> 100.00	55.246000	Y 377.433
Ca (315.887 nm)	4.928817	ppm	0.004479	0.09	3244.222538	Y_R 377.433
Cd (214.439 nm)	0.491348	ppm	0.002001	0.41	12469.900000	Y 377.433
Co (228.615 nm)	0.493037	ppm	0.004032	0.82	9803.620000	Y 242.219
Cr (205.560 nm)	0.483565	ppm	0.000121	0.02	2357.760000	Y 377.433
Cu (324.754 nm)	0.493460	ppm	0.000253	0.05	21200.400000	Y 377.433
Fe (238.204 nm)	2.493436	ppm	0.002544	0.10	4094.891004	Y_R 377.433
Fe H (259.940 nm)	2.447930 u	ppm	0.006292	0.26	2295.080000	Y_R 377.433
K (766.491 nm)	49.427200	ppm	0.019428	0.04	53495.900000	Y_R2 488.368
Li (670.783 nm)	0.962990	ppm	0.010476	1.09	12125.800000	Y_R2 488.368
Mg (279.078 nm)	19.591000	ppm	0.026553	0.14	41584.900000	Y 377.433
Mn (257.610 nm)	0.489768	ppm	0.000261	0.05	86584.500000	Y 377.433
Mo (202.032 nm)	0.492169	ppm	0.000432	0.09	5140.840000	Y 377.433
Na (589.592 nm)	24.590000	ppm	0.054933	0.22	13214.800000	Y_R2 488.368
Na H (589.593 nm)	25.265423 u	ppm	0.196956	0.78	9989.986175	Y_R4
Ni (231.604 nm)	0.490544	ppm	0.000489	0.10	1834.330000	Y 377.433
P (213.618 nm)	0.986849	ppm	0.001068	0.11	1056.560000	Y 242.219
Pb (220.353 nm)	0.988652	ppm	0.004587	0.46	2070.810000	Y 242.219
S (181.972 nm)	0.017061	ppm	0.010694	62.68	10.811267	Y 377.433
Sb (206.834 nm)	1.005480	ppm	0.002489	0.25	1645.120000	Y 377.433
Se (196.026 nm)	0.985468	ppm	0.005865	0.60	1305.640000	Y 242.219
Si (288.158 nm)	4.941130	ppm	0.045937	0.93	20359.200000	Y 377.433
Sn (189.925 nm)	0.992728	ppm	0.002205	0.22	1170.310000	Y 377.433
Sr (421.552 nm)	0.493803	ppm	0.003587	0.73	56849.037878	Y_R 488.368
Th (288.505 nm)	-0.018350 u	ppm	0.006482	35.32	-37.643600	Y 377.433
Ti (336.122 nm)	0.493732	ppm	0.000494	0.10	44490.700000	Y 377.433
Tl (190.794 nm)	1.002800	ppm	0.003197	0.32	1795.250000	Y 377.433
U (409.013 nm)	-0.003486 u	ppm	0.013538	> 100.00	194.796000	Y 377.433
V (292.401 nm)	0.490319	ppm	0.000172	0.04	19852.300000	Y 377.433
Zn (206.200 nm)	0.486378	ppm	0.000832	0.17	1652.230000	Y 377.433
Zr (343.823 nm)	0.491608	ppm	0.000175	0.04	19292.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004367	10333.638081	0.008725	0.87
Y 377.433	1.003016	427091.265102	0.008973	0.89
Y_R 377.433	1.011930	40712.100000	0.000313	0.03
Y_R 488.368	1.018100	37763.300000	0.008488	0.83
Y_R2 488.368	1.017562	72234.269475	0.000322	0.03
Y_R4	1.021760	35027.700000	0.004806	0.47

Sample Name: CCB

Date: 9/21/2018 3:07:31 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000953 u	ppm	0.000180	18.86	-112.161000	Y 377.433
Al (394.401 nm)	-0.005431 u	ppm	0.000123	2.27	-16.571800	Y 377.433
Al H (396.152 nm)	0.140924 Zu	ppm	0.011828	8.39	0.564198 Z	Y_R 377.433
As (188.980 nm)	-0.000988 u	ppm	0.000645	65.28	-11.522900	Y 242.219
B (249.678 nm)	0.001274	ppm	0.000916	71.88	4.299290	Y 242.219
Ba (493.408 nm)	0.000527	ppm	0.000493	93.56	587.406000	Y_R 488.368
Be (234.861 nm)	0.000081	ppm	0.000064	78.96	0.505284	Y_R 488.368
Bi (223.061 nm)	-0.003875 u	ppm	0.005770	> 100.00	51.990000	Y 377.433
Ca (315.887 nm)	-0.000993 u	ppm	0.004722	> 100.00	-6.656412	Y_R 377.433
Cd (214.439 nm)	-0.000015 u	ppm	0.000253	> 100.00	-13.475600	Y 377.433
Co (228.615 nm)	0.000261	ppm	0.000037	14.23	-12.561400	Y 242.219
Cr (205.560 nm)	0.000331 u	ppm	0.000682	> 100.00	-8.607420	Y 377.433
Cu (324.754 nm)	0.000181 u	ppm	0.000367	> 100.00	148.964000	Y 377.433
Fe (238.204 nm)	-0.008899 u	ppm	0.001568	17.62	13.451240	Y_R 377.433
Fe H (259.940 nm)	-0.072020 u	ppm	0.004715	6.55	13.762500	Y_R 377.433
K (766.491 nm)	0.045829	ppm	0.020447	44.62	1803.630000	Y_R2 488.368
Li (670.783 nm)	-0.001704 u	ppm	0.003746	> 100.00	-1182.450000	Y_R2 488.368
Mg (279.078 nm)	0.020173	ppm	0.001312	6.51	49.395200	Y 377.433
Mn (257.610 nm)	0.000108	ppm	0.000053	49.04	73.835800	Y 377.433
Mo (202.032 nm)	0.000051 u	ppm	0.000341	> 100.00	20.942700	Y 377.433
Na (589.592 nm)	0.041491	ppm	0.005742	13.84	-74.324300	Y_R2 488.368
Na H (589.593 nm)	-0.512270 u	ppm	0.026376	5.15	485.968857	Y_R4
Ni (231.604 nm)	0.000262	ppm	0.000073	27.97	17.143700	Y 377.433
P (213.618 nm)	0.002220	ppm	0.000351	15.79	1.275310	Y 242.219
Pb (220.353 nm)	-0.000130 u	ppm	0.000803	> 100.00	9.146230	Y 242.219
S (181.972 nm)	0.014947	ppm	0.003658	24.47	7.892829	Y 377.433
Sb (206.834 nm)	-0.001944 u	ppm	0.003472	> 100.00	16.715300	Y 377.433
Se (196.026 nm)	-0.001742 u	ppm	0.001662	95.43	6.863340	Y 242.219
Si (288.158 nm)	0.000681 u	ppm	0.001003	> 100.00	373.971000	Y 377.433
Sn (189.925 nm)	-0.000636 u	ppm	0.000142	22.28	-1.241690	Y 377.433
Sr (421.552 nm)	0.000168	ppm	0.000075	44.63	173.907051	Y_R 488.368
Th (288.505 nm)	-0.011911 Zu	ppm	0.000282	2.37	-2.949820 Z	Y 377.433
Ti (336.122 nm)	0.000247	ppm	0.000039	15.95	-88.901200	Y 377.433
Tl (190.794 nm)	0.000952 u	ppm	0.001372	> 100.00	4.050360	Y 377.433
U (409.013 nm)	-0.004535 u	ppm	0.014063	> 100.00	236.691000	Y 377.433
V (292.401 nm)	0.000391	ppm	0.000026	6.67	-248.075000	Y 377.433
Zn (206.200 nm)	-0.000195 u	ppm	0.000244	> 100.00	3.619810	Y 377.433
Zr (343.823 nm)	0.000156 u	ppm	0.000286	> 100.00	120.125000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002658	10316.054793	0.001947	0.19
Y 377.433	1.003567	427326.086667	0.002459	0.25
Y_R 377.433	0.991679	39897.400000	0.003541	0.36
Y_R 488.368	0.991744	36785.600000	0.011423	1.15
Y_R2 488.368	0.997889	70837.781441	0.000673	0.07
Y_R4	0.987215	33843.500000	0.000413	0.04

Sample Name: CCVL-5320254

Date: 9/21/2018 3:10:43 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008254	ppm	0.000477	5.78	120.085000	Y 377.433
Al (394.401 nm)	0.090305	ppm	0.000076	0.08	1051.860000	Y 377.433
Al H (396.152 nm)	0.246706 u	ppm	0.001256	0.51	188.325000	Y_R 377.433
As (188.980 nm)	0.012933	ppm	0.004032	31.18	6.639030	Y 242.219
B (249.678 nm)	0.097229	ppm	0.001668	1.72	364.408000	Y 242.219
Ba (493.408 nm)	0.010188	ppm	0.000093	0.91	1469.930000	Y_R 488.368
Be (234.861 nm)	0.000999	ppm	0.000028	2.80	49.658900	Y_R 488.368
Bi (223.061 nm)	0.090483	ppm	0.000250	0.28	203.487000	Y 377.433
Ca (315.887 nm)	0.208167	ppm	0.003451	1.66	131.278397	Y_R 377.433
Cd (214.439 nm)	0.005084	ppm	0.000133	2.62	116.080000	Y 377.433
Co (228.615 nm)	0.010290	ppm	0.000192	1.86	187.210000	Y 242.219
Cr (205.560 nm)	0.009694	ppm	0.000450	4.64	37.163800	Y 377.433
Cu (324.754 nm)	0.015321	ppm	0.000214	1.40	795.576000	Y 377.433
Fe (238.204 nm)	0.094124	ppm	0.000916	0.97	181.488174	Y_R 377.433
Fe H (259.940 nm)	0.023770 u	ppm	0.004745	19.96	100.482000	Y_R 377.433
K (766.491 nm)	3.071880	ppm	0.021641	0.70	4971.290000	Y_R2 488.368
Li (670.783 nm)	0.023657	ppm	0.005323	22.50	-832.584000	Y_R2 488.368
Mg (279.078 nm)	0.216414	ppm	0.000612	0.28	465.256000	Y 377.433
Mn (257.610 nm)	0.010304	ppm	0.000013	0.12	1875.210000	Y 377.433
Mo (202.032 nm)	0.019661	ppm	0.000135	0.68	224.967000	Y 377.433
Na (589.592 nm)	1.090750	ppm	0.001559	0.14	493.885000	Y_R2 488.368
Na H (589.593 nm)	0.363329 u	ppm	0.013566	3.73	809.598352	Y_R4
Ni (231.604 nm)	0.040073	ppm	0.000292	0.73	164.625000	Y 377.433
P (213.618 nm)	2.867440	ppm	0.007959	0.28	3132.170000	Y 242.219
Pb (220.353 nm)	0.011749 Q	ppm	0.000838	7.13	33.961400 Q	Y 242.219
S (181.972 nm)	0.098841	ppm	0.001449	1.47	46.978604	Y 377.433
Sb (206.834 nm)	0.015847	ppm	0.002047	12.92	45.357600	Y 377.433
Se (196.026 nm)	0.018240	ppm	0.002499	13.70	33.140800	Y 242.219
Si (288.158 nm)	0.481196	ppm	0.002651	0.55	2317.770000	Y 377.433
Sn (189.925 nm)	0.095093	ppm	0.003538	3.72	111.659000	Y 377.433
Sr (421.552 nm)	0.009799	ppm	0.000125	1.28	1279.678757	Y_R 488.368
Th (288.505 nm)	0.005798 Q	ppm	0.004936	85.13	13.886000 Q	Y 377.433
Ti (336.122 nm)	0.010015	ppm	0.000003	0.03	793.910000	Y 377.433
Tl (190.794 nm)	0.017857	ppm	0.002067	11.57	34.229100	Y 377.433
U (409.013 nm)	0.055321	ppm	0.001313	2.37	375.639000	Y 377.433
V (292.401 nm)	0.010105	ppm	0.000043	0.42	149.579000	Y 377.433
Zn (206.200 nm)	0.019824	ppm	0.000022	0.11	71.448200	Y 377.433
Zr (343.823 nm)	0.014825	ppm	0.000128	0.86	692.383000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022826	10523.557767	0.004193	0.41
Y 377.433	1.023960	436009.553657	0.002240	0.22
Y_R 377.433	1.017530	40937.500000	0.001036	0.10
Y_R 488.368	1.016250	37694.600000	0.009121	0.90
Y_R2 488.368	1.024477	72725.174219	0.002227	0.22
Y_R4	1.006620	34508.800000	0.004814	0.48

Sample Name: 280-114250-A-4-C

Date: 9/21/2018 3:14:08 PM Rack:Tube: 1:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000181	ppm	0.000209	> 100.00	-83.736600	Y 377.433
Al (394.401 nm)	0.037600	ppm	0.000480	1.28	508.534000	Y 377.433
Al H (396.152 nm)	0.142536 u	ppm	0.002713	1.90	59.096300	Y_R 377.433
As (188.980 nm)	0.001674 u	ppm	0.002463	> 100.00	-8.069320	Y 242.219
B (249.678 nm)	0.001518	ppm	0.000913	60.16	4.960310	Y 242.219
Ba (493.408 nm)	0.040760	ppm	0.000485	1.19	4262.990000	Y_R 488.368
Be (234.861 nm)	0.000035	ppm	0.000032	92.82	-6.895860	Y_R 488.368
Bi (223.061 nm)	0.002239	ppm	0.000548	24.50	61.911300	Y 377.433
Ca (315.887 nm)	37.404573	ppm	0.068048	0.18	24659.485066	Y_R 377.433
Cd (214.439 nm)	0.001607	ppm	0.000076	4.71	28.013200	Y 377.433
Co (228.615 nm)	0.000594	ppm	0.000275	46.28	-5.938830	Y 242.219
Cr (205.560 nm)	0.000431	ppm	0.000007	1.53	-8.141770	Y 377.433
Cu (324.754 nm)	0.015717	ppm	0.000358	2.28	791.875000	Y 377.433
Fe (238.204 nm)	0.827042	ppm	0.004483	0.54	1376.915928	Y_R 377.433
Fe H (259.940 nm)	0.754508 u	ppm	0.005509	0.73	762.022000	Y_R 377.433
K (766.491 nm)	0.563861	ppm	0.044233	7.84	2345.910000	Y_R2 488.368
Li (670.783 nm)	0.001883 u	ppm	0.003498	> 100.00	-1132.980000	Y_R2 488.368
Mg (279.078 nm)	29.246000	ppm	0.027983	0.10	62077.300000	Y 377.433
Mn (257.610 nm)	0.056270	ppm	0.000021	0.04	9996.310000	Y 377.433
Mo (202.032 nm)	0.003906	ppm	0.000230	5.90	61.054900	Y 377.433
Na (589.592 nm)	0.675957	ppm	0.026803	3.97	268.718000	Y_R2 488.368
Na H (589.593 nm)	-0.149696 u	ppm	0.012179	8.14	616.461284	Y_R4
Ni (231.604 nm)	0.002372	ppm	0.000793	33.43	25.630200	Y 377.433
P (213.618 nm)	0.002464	ppm	0.000107	4.33	0.803853	Y 242.219
Pb (220.353 nm)	0.001080	ppm	0.001482	> 100.00	11.673300	Y 242.219
S (181.972 nm)	30.877751	ppm	0.038229	0.12	14373.416627	Y 377.433
Sb (206.834 nm)	-0.004035 u	ppm	0.002486	61.62	13.377500	Y 377.433
Se (196.026 nm)	-0.000935 u	ppm	0.003026	> 100.00	7.803890	Y 242.219
Si (288.158 nm)	2.367740	ppm	0.016778	0.71	9949.290000	Y 377.433
Sn (189.925 nm)	-0.000303 u	ppm	0.000156	51.60	-0.845492	Y 377.433
Sr (421.552 nm)	0.190009	ppm	0.000281	0.15	21969.848102	Y_R 488.368
Th (288.505 nm)	-0.025372 u	ppm	0.001990	7.84	-15.426500	Y 377.433
Ti (336.122 nm)	0.000113 u	ppm	0.000176	> 100.00	-13.579400	Y 377.433
Tl (190.794 nm)	0.000468 u	ppm	0.001681	> 100.00	3.154880	Y 377.433
U (409.013 nm)	0.020000	ppm	0.007686	38.43	291.003000	Y 377.433
V (292.401 nm)	0.000588	ppm	0.000137	23.30	-241.547000	Y 377.433
Zn (206.200 nm)	0.653246	ppm	0.000385	0.06	2217.560000	Y 377.433
Zr (343.823 nm)	0.000134	ppm	0.000044	32.66	120.077000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015238	10445.485210	0.002432	0.24
Y 377.433	1.018326	433610.547459	0.002263	0.22
Y_R 377.433	1.023860	41192.200000	0.001820	0.18
Y_R 488.368	1.017340	37735.000000	0.000227	0.02
Y_R2 488.368	1.028235	72991.948727	0.002369	0.23
Y_R4	1.026870	35202.900000	0.006040	0.59

Sample Name: 280-114250-B-5-C

Date: 9/21/2018 3:17:37 PM Rack:Tube: 1:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000170 u	ppm	0.000735	> 100.00	-92.250500	Y 377.433
Al (394.401 nm)	-0.002725 u	ppm	0.000882	32.37	68.735900	Y 377.433
Al H (396.152 nm)	0.094555 u	ppm	0.006587	6.97	-4.136300	Y_R 377.433
As (188.980 nm)	0.001390	ppm	0.000376	27.01	-8.421510	Y 242.219
B (249.678 nm)	0.003627	ppm	0.000289	7.98	13.099100	Y 242.219
Ba (493.408 nm)	0.042435	ppm	0.000628	1.48	4415.470000	Y_R 488.368
Be (234.861 nm)	-0.000023 u	ppm	0.000026	> 100.00	-5.727080	Y_R 488.368
Bi (223.061 nm)	-0.007208 u	ppm	0.002250	31.22	46.653300	Y 377.433
Ca (315.887 nm)	24.615133	ppm	0.014767	0.06	16225.814960	Y_R 377.433
Cd (214.439 nm)	0.000092 u	ppm	0.000136	> 100.00	-10.734500	Y 377.433
Co (228.615 nm)	-0.000068 u	ppm	0.000169	> 100.00	-19.098600	Y 242.219
Cr (205.560 nm)	0.001007	ppm	0.000593	58.92	-5.316940	Y 377.433
Cu (324.754 nm)	0.001740	ppm	0.000207	11.91	203.404000	Y 377.433
Fe (238.204 nm)	0.093956	ppm	0.000526	0.56	181.214479	Y_R 377.433
Fe H (259.940 nm)	0.023979 u	ppm	0.006512	27.16	100.671000	Y_R 377.433
K (766.491 nm)	0.651004	ppm	0.012565	1.93	2437.130000	Y_R2 488.368
Li (670.783 nm)	0.008108	ppm	0.001978	24.40	-1047.100000	Y_R2 488.368
Mg (279.078 nm)	19.698500	ppm	0.021845	0.11	41814.700000	Y 377.433
Mn (257.610 nm)	0.008300	ppm	0.000068	0.81	1521.220000	Y 377.433
Mo (202.032 nm)	0.005821	ppm	0.000199	3.41	80.978100	Y 377.433
Na (589.592 nm)	1.535450	ppm	0.043418	2.83	734.262000	Y_R2 488.368
Na H (589.593 nm)	0.652102 u	ppm	0.021589	3.31	913.502775	Y_R4
Ni (231.604 nm)	0.000296	ppm	0.000361	> 100.00	17.645400	Y 377.433
P (213.618 nm)	-0.001955 u	ppm	0.001467	75.02	-3.417010	Y 242.219
Pb (220.353 nm)	0.001236	ppm	0.000093	7.54	11.970400	Y 242.219
S (181.972 nm)	13.691396	ppm	0.068398	0.50	6374.391460	Y 377.433
Sb (206.834 nm)	-0.005327 u	ppm	0.001320	24.79	11.222600	Y 377.433
Se (196.026 nm)	-0.003221 u	ppm	0.000951	29.53	4.904090	Y 242.219
Si (288.158 nm)	3.151090	ppm	0.016405	0.52	13118.100000	Y 377.433
Sn (189.925 nm)	0.000290 u	ppm	0.001236	> 100.00	-0.149032	Y 377.433
Sr (421.552 nm)	0.243287	ppm	0.002888	1.19	28086.640489	Y_R 488.368
Th (288.505 nm)	-0.015738 u	ppm	0.014485	92.04	-6.599270	Y 377.433
Ti (336.122 nm)	0.000201	ppm	0.000192	95.49	-35.421400	Y 377.433
Tl (190.794 nm)	-0.001100 u	ppm	0.000353	32.11	0.349929	Y 377.433
U (409.013 nm)	0.000843 u	ppm	0.001431	> 100.00	246.945000	Y 377.433
V (292.401 nm)	0.000256	ppm	0.000086	33.53	-253.952000	Y 377.433
Zn (206.200 nm)	0.003374	ppm	0.000511	15.14	15.713400	Y 377.433
Zr (343.823 nm)	0.000128 u	ppm	0.000250	> 100.00	119.115000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.024718	10543.015491	0.002011	0.20
Y 377.433	1.025238	436553.570267	0.001647	0.16
Y_R 377.433	1.030130	41444.500000	0.001699	0.16
Y_R 488.368	1.037900	38497.600000	0.009478	0.91
Y_R2 488.368	1.035006	73472.603836	0.000527	0.05
Y_R4	1.022480	35052.300000	0.002147	0.21

Sample Name: 280-114250-B-6-C

Date: 9/21/2018 3:21:03 PM Rack:Tube: 1:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000621	ppm	0.000255	41.04	-73.076600	Y 377.433
Al (394.401 nm)	-0.001774 u	ppm	0.001385	78.09	96.569400	Y 377.433
Al H (396.152 nm)	0.082800 u	ppm	0.005763	6.96	-14.668600	Y_R 377.433
As (188.980 nm)	0.001967	ppm	0.000066	3.33	-7.671420	Y 242.219
B (249.678 nm)	0.003503	ppm	0.000255	7.27	12.604600	Y 242.219
Ba (493.408 nm)	0.070281	ppm	0.000686	0.98	6959.050000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000022	> 100.00	-5.332680	Y_R 488.368
Bi (223.061 nm)	0.000905	ppm	0.000283	31.30	59.690000	Y 377.433
Ca (315.887 nm)	42.001723	ppm	0.131764	0.31	27690.955686	Y_R 377.433
Cd (214.439 nm)	0.000182	ppm	0.000168	92.01	-8.399700	Y 377.433
Co (228.615 nm)	0.000993	ppm	0.000049	4.89	1.993630	Y 242.219
Cr (205.560 nm)	0.000159	ppm	0.000164	> 100.00	-9.474590	Y 377.433
Cu (324.754 nm)	0.000470	ppm	0.000259	55.12	137.331000	Y 377.433
Fe (238.204 nm)	0.189423	ppm	0.005441	2.87	336.925679	Y_R 377.433
Fe H (259.940 nm)	0.110884 u	ppm	0.010121	9.13	179.346000	Y_R 377.433
K (766.491 nm)	0.672501	ppm	0.088073	13.10	2459.630000	Y_R2 488.368
Li (670.783 nm)	-0.003746 u	ppm	0.002484	66.31	-1210.630000	Y_R2 488.368
Mg (279.078 nm)	36.479700	ppm	0.053014	0.15	77430.300000	Y 377.433
Mn (257.610 nm)	0.050903	ppm	0.000038	0.07	9048.110000	Y 377.433
Mo (202.032 nm)	0.005479	ppm	0.000034	0.61	77.418600	Y 377.433
Na (589.592 nm)	3.874980	ppm	0.014712	0.38	2001.090000	Y_R2 488.368
Na H (589.593 nm)	3.000156 u	ppm	0.014338	0.48	1781.079822	Y_R4
Ni (231.604 nm)	0.000700 u	ppm	0.001480	> 100.00	19.414800	Y 377.433
P (213.618 nm)	-0.003966 u	ppm	0.000751	18.94	-5.552380	Y 242.219
Pb (220.353 nm)	0.009902	ppm	0.000029	0.30	30.164200	Y 242.219
S (181.972 nm)	44.353607	ppm	0.087179	0.20	20644.892937	Y 377.433
Sb (206.834 nm)	-0.003990 u	ppm	0.000834	20.91	13.389000	Y 377.433
Se (196.026 nm)	0.000582	ppm	0.000721	> 100.00	9.936410	Y 242.219
Si (288.158 nm)	3.269690	ppm	0.014928	0.46	13597.800000	Y 377.433
Sn (189.925 nm)	-0.000750 u	ppm	0.001289	> 100.00	-1.375830	Y 377.433
Sr (421.552 nm)	0.284270	ppm	0.001784	0.63	32792.034230	Y_R 488.368
Th (288.505 nm)	-0.020259 u	ppm	0.004493	22.18	-10.386700	Y 377.433
Ti (336.122 nm)	0.000154 u	ppm	0.000248	> 100.00	0.919530	Y 377.433
Tl (190.794 nm)	0.001825	ppm	0.000251	13.74	5.587960	Y 377.433
U (409.013 nm)	0.069877	ppm	0.007769	11.12	407.080000	Y 377.433
V (292.401 nm)	0.000516	ppm	0.000054	10.41	-245.682000	Y 377.433
Zn (206.200 nm)	0.039933	ppm	0.000021	0.05	139.582000	Y 377.433
Zr (343.823 nm)	0.000260	ppm	0.000349	> 100.00	124.375000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021659	10511.546411	0.000675	0.07
Y 377.433	1.024632	436295.391464	0.002160	0.21
Y_R 377.433	1.030230	41448.400000	0.000546	0.05
Y_R 488.368	1.028790	38159.700000	0.010137	0.99
Y_R2 488.368	1.029635	73091.341102	0.007972	0.77
Y_R4	1.010500	34641.900000	0.009021	0.89

Sample Name: MB 280-430098/1-B

Date: 9/21/2018 3:24:31 PM Rack:Tube: 1:37

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001022 u	ppm	0.000563	55.11	-113.901000	Y 377.433
Al (394.401 nm)	-0.008564 u	ppm	0.000778	9.08	-55.287300	Y 377.433
Al H (396.152 nm)	0.135901 u	ppm	0.008651	6.37	-8.179400	Y_R 377.433
As (188.980 nm)	0.001072	ppm	0.000540	50.37	-8.833660	Y 242.219
B (249.678 nm)	0.000587 u	ppm	0.002559	> 100.00	1.722700	Y 242.219
Ba (493.408 nm)	-0.000039 u	ppm	0.000312	> 100.00	535.692000	Y_R 488.368
Be (234.861 nm)	0.000048	ppm	0.000027	56.37	-1.295570	Y_R 488.368
Bi (223.061 nm)	-0.008410 u	ppm	0.003404	40.48	44.709100	Y 377.433
Ca (315.887 nm)	0.020684	ppm	0.001090	5.27	7.637102	Y_R 377.433
Cd (214.439 nm)	0.000066	ppm	0.000061	92.87	-11.426100	Y 377.433
Co (228.615 nm)	-0.000119 u	ppm	0.000115	96.40	-20.137400	Y 242.219
Cr (205.560 nm)	-0.000146 u	ppm	0.000271	> 100.00	-10.944800	Y 377.433
Cu (324.754 nm)	0.000062 u	ppm	0.000097	> 100.00	146.304000	Y 377.433
Fe (238.204 nm)	-0.010220 u	ppm	0.002268	22.19	11.297292	Y_R 377.433
Fe H (259.940 nm)	-0.077744 u	ppm	0.003505	4.51	8.580360	Y_R 377.433
K (766.491 nm)	-0.037413 u	ppm	0.042429	> 100.00	1716.490000	Y_R2 488.368
Li (670.783 nm)	0.000893 u	ppm	0.008627	> 100.00	-1146.630000	Y_R2 488.368
Mg (279.078 nm)	0.024302	ppm	0.001631	6.71	58.279300	Y 377.433
Mn (257.610 nm)	0.000074	ppm	0.000068	91.70	67.813600	Y 377.433
Mo (202.032 nm)	0.000468	ppm	0.000575	> 100.00	25.279600	Y 377.433
Na (589.592 nm)	-0.008588 u	ppm	0.038358	> 100.00	-101.432000	Y_R2 488.368
Na H (589.593 nm)	-1.020250 u	ppm	0.010893	1.07	297.794754	Y_R4
Ni (231.604 nm)	-0.000910 u	ppm	0.000196	21.57	12.801300	Y 377.433
P (213.618 nm)	-0.001722 u	ppm	0.007317	> 100.00	-3.026770	Y 242.219
Pb (220.353 nm)	0.000663 u	ppm	0.002106	> 100.00	10.783100	Y 242.219
S (181.972 nm)	0.027006	ppm	0.000560	2.07	13.500218	Y 377.433
Sb (206.834 nm)	-0.001955 u	ppm	0.000968	49.51	16.697100	Y 377.433
Se (196.026 nm)	-0.003412 u	ppm	0.003001	87.95	4.666810	Y 242.219
Si (288.158 nm)	0.000682	ppm	0.000693	> 100.00	373.978000	Y 377.433
Sn (189.925 nm)	-0.000591 u	ppm	0.000079	13.33	-1.188590	Y 377.433
Sr (421.552 nm)	-0.000039 u	ppm	0.000050	> 100.00	150.090210	Y_R 488.368
Th (288.505 nm)	-0.001138 u	ppm	0.004253	> 100.00	7.408180	Y 377.433
Ti (336.122 nm)	0.000286	ppm	0.000005	1.70	-85.475000	Y 377.433
Tl (190.794 nm)	0.000096 u	ppm	0.001234	> 100.00	2.515900	Y 377.433
U (409.013 nm)	-0.005995 u	ppm	0.008448	> 100.00	233.331000	Y 377.433
V (292.401 nm)	0.000397	ppm	0.000134	33.87	-246.424000	Y 377.433
Zn (206.200 nm)	0.001201	ppm	0.000435	36.22	8.350400	Y 377.433
Zr (343.823 nm)	-0.000571 u	ppm	0.000038	6.69	91.753500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034171	10640.284122	0.003962	0.38
Y 377.433	1.034712	440587.659604	0.000459	0.04
Y_R 377.433	1.033200	41567.800000	0.001298	0.13
Y_R 488.368	1.028320	38142.200000	0.005270	0.51
Y_R2 488.368	1.040853	73887.680418	0.002493	0.24
Y_R4	1.019470	34949.300000	0.004586	0.45

Sample Name: LCS 280-430098/2-B

Date: 9/21/2018 3:27:42 PM Rack:Tube: 1:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050364	ppm	0.000492	0.98	1137.010000	Y 377.433
Al (394.401 nm)	1.981180	ppm	0.000066	0.00	22320.500000	Y 377.433
Al H (396.152 nm)	1.933290	ppm	0.000635	0.03	3489.260000	Y_R 377.433
As (188.980 nm)	0.974989	ppm	0.000495	0.05	1261.990000	Y 242.219
B (249.678 nm)	1.023750	ppm	0.000285	0.03	3841.590000	Y 242.219
Ba (493.408 nm)	1.987530	ppm	0.001076	0.05	182088.000000	Y_R 488.368
Be (234.861 nm)	0.049690	ppm	0.000105	0.21	2682.770000	Y_R 488.368
Bi (223.061 nm)	1.860880	ppm	0.001613	0.09	3045.810000	Y 377.433
Ca (315.887 nm)	48.845470	ppm	0.031126	0.06	32204.055123	Y_R 377.433
Cd (214.439 nm)	0.097276	ppm	0.000258	0.27	2458.430000	Y 377.433
Co (228.615 nm)	0.470970	ppm	0.002087	0.44	9383.740000	Y 242.219
Cr (205.560 nm)	0.191727	ppm	0.000058	0.03	925.541000	Y 377.433
Cu (324.754 nm)	0.240683	ppm	0.000278	0.12	10444.500000	Y 377.433
Fe (238.204 nm)	0.974746	ppm	0.005552	0.57	1617.828432	Y_R 377.433
Fe H (259.940 nm)	0.903746 u	ppm	0.000956	0.11	897.128000	Y_R 377.433
K (766.491 nm)	49.941200	ppm	0.154021	0.31	54034.000000	Y_R2 488.368
Li (670.783 nm)	0.959968	ppm	0.002341	0.24	12084.200000	Y_R2 488.368
Mg (279.078 nm)	48.504900	ppm	0.006344	0.01	102933.000000	Y 377.433
Mn (257.610 nm)	0.485345	ppm	0.000235	0.05	85803.100000	Y 377.433
Mo (202.032 nm)	1.003820	ppm	0.000702	0.07	10464.000000	Y 377.433
Na (589.592 nm)	47.322600	ppm	0.029895	0.06	25503.700000	Y_R2 488.368
Na H (589.593 nm)	49.234101 u	ppm	0.069745	0.14	18721.545018	Y_R4
Ni (231.604 nm)	0.471245	ppm	0.001282	0.27	1764.070000	Y 377.433
P (213.618 nm)	10.050400	ppm	0.057210	0.57	10973.200000	Y 242.219
Pb (220.353 nm)	0.490991	ppm	0.000402	0.08	1034.110000	Y 242.219
S (181.972 nm)	1.943570	ppm	0.010400	0.54	910.913860	Y 377.433
Sb (206.834 nm)	0.512598	ppm	0.002214	0.43	838.739000	Y 377.433
Se (196.026 nm)	1.968660	ppm	0.003110	0.16	2599.440000	Y 242.219
Si (288.158 nm)	10.165600	ppm	0.144071	1.42	41493.300000	Y 377.433
Sn (189.925 nm)	1.990550	ppm	0.003828	0.19	2347.110000	Y 377.433
Sr (421.552 nm)	0.983657	ppm	0.000281	0.03	113089.593473	Y_R 488.368
Th (288.505 nm)	0.946690	ppm	0.009652	1.02	900.947000	Y 377.433
Ti (336.122 nm)	0.995771	ppm	0.000404	0.04	89932.100000	Y 377.433
Tl (190.794 nm)	1.980920	ppm	0.000381	0.02	3542.070000	Y 377.433
U (409.013 nm)	1.936120	ppm	0.020390	1.05	4734.300000	Y 377.433
V (292.401 nm)	0.493774	ppm	0.000357	0.07	20059.800000	Y 377.433
Zn (206.200 nm)	0.479054	ppm	0.000353	0.07	1627.390000	Y 377.433
Zr (343.823 nm)	0.493628	ppm	0.000274	0.06	19369.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004642	10336.463972	0.001003	0.10
Y 377.433	1.005812	428281.860424	0.000952	0.09
Y_R 377.433	1.024570	41220.500000	0.000631	0.06
Y_R 488.368	1.027880	38125.900000	0.001607	0.16
Y_R2 488.368	1.023867	72681.883711	0.005290	0.52
Y_R4	1.014290	34771.800000	0.003942	0.39

Sample Name: 720-88587-A-1-B

Date: 9/21/2018 3:31:13 PM Rack:Tube: 1:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002365	ppm	0.000025	1.07	-35.884800	Y 377.433
Al (394.401 nm)	0.068039	ppm	0.000038	0.06	1646.220000	Y 377.433
Al H (396.152 nm)	-0.469670 u	ppm	0.007887	1.68	136.103000	Y_R 377.433
As (188.980 nm)	2.282640	ppm	0.000132	0.01	2968.400000	Y 242.219
B (249.678 nm)	3.479800	ppm	0.000741	0.02	13060.000000	Y 242.219
Ba (493.408 nm)	0.505487	ppm	0.001982	0.39	46712.100000	Y_R 488.368
Be (234.861 nm)	0.000274	ppm	0.000048	17.72	10.799300	Y_R 488.368
Bi (223.061 nm)	0.020583	ppm	0.000925	4.50	91.567100	Y 377.433
Ca (315.887 nm)	221.712566	ppm	0.022775	0.01	146196.662284	Y_R 377.433
Cd (214.439 nm)	0.000340	ppm	0.000182	53.49	-4.451620	Y 377.433
Co (228.615 nm)	0.001582	ppm	0.000274	17.33	16.546100	Y 242.219
Cr (205.560 nm)	0.039254	ppm	0.000357	0.91	182.175000	Y 377.433
Cu (324.754 nm)	-0.001663 u	ppm	0.000124	7.47	-33.548200	Y 377.433
Fe (238.204 nm)	0.013848	ppm	0.005585	40.33	50.553302	Y_R 377.433
Fe H (259.940 nm)	-0.082974 u	ppm	0.006811	8.21	3.845740	Y_R 377.433
K (766.491 nm)	192.705000	ppm	0.012308	0.01	203479.000000	Y_R2 488.368
Li (670.783 nm)	0.135346	ppm	0.002058	1.52	708.194000	Y_R2 488.368
Mg (279.078 nm)	502.427000	ppm	1.937650	0.39	1066360.000000	Y 377.433
Mn (257.610 nm)	1.937530	ppm	0.002559	0.13	342368.000000	Y 377.433
Mo (202.032 nm)	0.002814	ppm	0.000071	2.51	49.693100	Y 377.433
Na (589.592 nm)	2439.480000 bo	ppm	2.633720	0.11	1321310.000000	Y_R2 488.368
Na H (589.593 nm)	3383.398891 bo	ppm	26.144151	0.77	1254757.881937	Y_R4
Ni (231.604 nm)	0.014283	ppm	0.000087	0.61	72.360200	Y 377.433
P (213.618 nm)	2.169610	ppm	0.013675	0.63	2370.060000	Y 242.219
Pb (220.353 nm)	-0.000239 u	ppm	0.005000	> 100.00	8.501460	Y 242.219
S (181.972 nm)	85.432826	ppm	0.028028	0.03	39782.205408	Y 377.433
Sb (206.834 nm)	0.000820 u	ppm	0.003373	> 100.00	21.244100	Y 377.433
Se (196.026 nm)	-0.001291 u	ppm	0.003703	> 100.00	9.769480	Y 242.219
Si (288.158 nm)	25.786500	ppm	0.072007	0.28	104683.000000	Y 377.433
Sn (189.925 nm)	0.001673	ppm	0.000690	41.23	1.481540	Y 377.433
Sr (421.552 nm)	3.781438	ppm	0.023798	0.63	434306.167808	Y_R 488.368
Th (288.505 nm)	-0.037847 u	ppm	0.008221	21.72	-12.379500	Y 377.433
Ti (336.122 nm)	0.083820	ppm	0.000062	0.07	7978.720000	Y 377.433
Tl (190.794 nm)	-0.001443 u	ppm	0.002213	> 100.00	-0.533873	Y 377.433
U (409.013 nm)	-0.156749 u	ppm	0.023510	15.00	-141.780000	Y 377.433
V (292.401 nm)	0.045922	ppm	0.000277	0.60	1633.430000	Y 377.433
Zn (206.200 nm)	0.004064	ppm	0.000547	13.46	18.051400	Y 377.433
Zr (343.823 nm)	0.005740	ppm	0.000151	2.63	337.939000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.820792	8444.882645	0.001259	0.15
Y 377.433	0.867316	369309.360090	0.000908	0.10
Y_R 377.433	0.999085	40195.400000	0.013681	1.37
Y_R 488.368	1.004650	37264.400000	0.010208	1.02
Y_R2 488.368	0.980524	69605.088970	0.000387	0.04
Y_R4	0.960145	32915.500000	0.001789	0.19

Sample Name: 720-88587-F-3-B

Date: 9/21/2018 3:35:19 PM Rack:Tube: 1:40

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001813	ppm	0.000569	31.37	-43.823100	Y 377.433
Al (394.401 nm)	-0.013570 u	ppm	0.001400	10.32	400.065000	Y 377.433
Al H (396.152 nm)	-0.300385 u	ppm	0.012031	4.01	-65.679900	Y_R 377.433
As (188.980 nm)	0.004133	ppm	0.001753	42.40	-4.847170	Y 242.219
B (249.678 nm)	0.718383	ppm	0.001433	0.20	2695.660000	Y 242.219
Ba (493.408 nm)	0.355204	ppm	0.003649	1.03	32985.000000	Y_R 488.368
Be (234.861 nm)	0.000076 u	ppm	0.000118	> 100.00	-1.720290	Y_R 488.368
Bi (223.061 nm)	0.013742	ppm	0.004844	35.25	80.342400	Y 377.433
Ca (315.887 nm)	228.028448	ppm	0.443563	0.19	150361.500622	Y_R 377.433
Cd (214.439 nm)	0.000285	ppm	0.000033	11.55	-5.747390	Y 377.433
Co (228.615 nm)	0.000170	ppm	0.000114	66.75	-14.256700	Y 242.219
Cr (205.560 nm)	0.003474	ppm	0.000074	2.14	6.785970	Y 377.433
Cu (324.754 nm)	-0.001304 u	ppm	0.000157	12.05	-23.842500	Y 377.433
Fe (238.204 nm)	0.318976	ppm	0.002305	0.72	548.232824	Y_R 377.433
Fe H (259.940 nm)	0.219049 u	ppm	0.002787	1.27	277.269000	Y_R 377.433
K (766.491 nm)	18.638800	ppm	0.021583	0.12	21266.800000	Y_R2 488.368
Li (670.783 nm)	0.007968	ppm	0.000648	8.14	-1049.030000	Y_R2 488.368
Mg (279.078 nm)	123.375000	ppm	0.189830	0.15	261858.000000	Y 377.433
Mn (257.610 nm)	4.262760	ppm	0.008247	0.19	753178.000000	Y 377.433
Mo (202.032 nm)	0.001109	ppm	0.000018	1.65	31.957800	Y 377.433
Na (589.592 nm)	749.476000 o	ppm	0.145752	0.02	405873.000000	Y_R2 488.368
Na H (589.593 nm)	865.417029	ppm	2.311683	0.27	321426.406297	Y_R4
Ni (231.604 nm)	0.003469	ppm	0.000092	2.66	32.444200	Y 377.433
P (213.618 nm)	0.790606	ppm	0.001064	0.13	862.879000	Y 242.219
Pb (220.353 nm)	-0.001547 u	ppm	0.000006	0.37	6.010670	Y 242.219
S (181.972 nm)	79.268505	ppm	0.221996	0.28	36921.431633	Y 377.433
Sb (206.834 nm)	-0.006458 u	ppm	0.001621	25.11	9.446880	Y 377.433
Se (196.026 nm)	0.002623 u	ppm	0.004768	> 100.00	17.624600	Y 242.219
Si (288.158 nm)	23.893700	ppm	0.093305	0.39	97026.600000	Y 377.433
Sn (189.925 nm)	-0.000911 u	ppm	0.000532	58.45	-1.564650	Y 377.433
Sr (421.552 nm)	2.265870	ppm	0.022911	1.01	260301.912036	Y_R 488.368
Th (288.505 nm)	-0.051052 u	ppm	0.000403	0.79	-0.135969	Y 377.433
Ti (336.122 nm)	0.004540	ppm	0.000010	0.23	832.994000	Y 377.433
Tl (190.794 nm)	0.003026	ppm	0.000873	28.84	7.740720	Y 377.433
U (409.013 nm)	-0.059582 u	ppm	0.004052	6.80	85.878300	Y 377.433
V (292.401 nm)	0.012499	ppm	0.000586	4.69	256.562000	Y 377.433
Zn (206.200 nm)	0.002567	ppm	0.000342	13.34	12.984100	Y 377.433
Zr (343.823 nm)	0.001163	ppm	0.000373	32.10	159.696000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948046	9754.163702	0.003584	0.38
Y 377.433	0.961023	409210.169146	0.003539	0.37
Y_R 377.433	0.987125	39714.200000	0.000985	0.10
Y_R 488.368	0.988623	36669.900000	0.008807	0.89
Y_R2 488.368	0.987771	70119.535951	0.004472	0.45
Y_R4	0.993590	34062.000000	0.008773	0.88

Sample Name: 720-88587-F-4-B

Date: 9/21/2018 3:38:52 PM Rack:Tube: 1:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.003679	ppm	0.000078	2.12	6.305470	Y 377.433
Al (394.401 nm)	-0.183515 u	ppm	0.001288	0.70	444.540000	Y 377.433
Al H (396.152 nm)	-1.918150 u	ppm	0.002759	0.14	-163.959000	Y_R 377.433
As (188.980 nm)	0.020403	ppm	0.000407	2.00	16.377400	Y 242.219
B (249.678 nm)	1.768930	ppm	0.008613	0.49	6638.510000	Y 242.219
Ba (493.408 nm)	1.468280	ppm	0.019204	1.31	134657.000000	Y_R 488.368
Be (234.861 nm)	0.000033 u	ppm	0.000063	> 100.00	-5.627700	Y_R 488.368
Bi (223.061 nm)	0.035096	ppm	0.000078	0.22	114.859000	Y 377.433
Ca (315.887 nm)	462.161171	ppm	0.916029	0.20	304754.308714	Y_R 377.433
Cd (214.439 nm)	0.000269	ppm	0.000100	37.26	-6.057270	Y 377.433
Co (228.615 nm)	0.006441	ppm	0.000026	0.41	110.299000	Y 242.219
Cr (205.560 nm)	0.001117	ppm	0.000177	15.84	-4.786060	Y 377.433
Cu (324.754 nm)	-0.002233 u	ppm	0.000165	7.37	-181.593000	Y 377.433
Fe (238.204 nm)	0.591156	ppm	0.009283	1.57	992.172427	Y_R 377.433
Fe H (259.940 nm)	0.440572 u	ppm	0.004238	0.96	477.815000	Y_R 377.433
K (766.491 nm)	143.170000	ppm	0.696854	0.49	151626.000000	Y_R2 488.368
Li (670.783 nm)	0.063561	ppm	0.001348	2.12	-282.098000	Y_R2 488.368
Mg (279.078 nm)	1032.500000	ppm	7.510060	0.73	2191390.000000	Y 377.433
Mn (257.610 nm)	1.908900	ppm	0.005553	0.29	337309.000000	Y 377.433
Mo (202.032 nm)	0.001232	ppm	0.000101	8.20	33.234600	Y 377.433
Na (589.592 nm)	2656.630000 bo	ppm	3.869820	0.15	1438920.000000	Y_R2 488.368
Na H (589.593 nm)	3749.710415 bo	ppm	23.841013	0.64	1390440.267026	Y_R4
Ni (231.604 nm)	0.009072	ppm	0.000562	6.20	56.702400	Y 377.433
P (213.618 nm)	0.006580	ppm	0.008667	> 100.00	5.943590	Y 242.219
Pb (220.353 nm)	-0.001489 u	ppm	0.002134	> 100.00	6.003040	Y 242.219
S (181.972 nm)	162.440965 bo	ppm	0.228666	0.14	75638.222653	Y 377.433
Sb (206.834 nm)	-0.003166 u	ppm	0.004889	> 100.00	14.794600	Y 377.433
Se (196.026 nm)	-0.000167 u	ppm	0.004969	> 100.00	11.084000	Y 242.219
Si (288.158 nm)	16.457000	ppm	0.006378	0.04	66943.300000	Y 377.433
Sn (189.925 nm)	0.001595	ppm	0.000365	22.86	1.391860	Y 377.433
Sr (421.552 nm)	10.699653	ppm	0.064596	0.60	1228595.094115	Y_R 488.368
Th (288.505 nm)	-0.055109 u	ppm	0.011347	20.59	-26.641400	Y 377.433
Ti (336.122 nm)	0.001494	ppm	0.000188	12.55	1107.000000	Y 377.433
Tl (190.794 nm)	0.001521	ppm	0.001319	86.76	5.075880	Y 377.433
U (409.013 nm)	-0.183831 u	ppm	0.000374	0.20	-227.557000	Y 377.433
V (292.401 nm)	0.001516	ppm	0.000106	6.99	-195.502000	Y 377.433
Zn (206.200 nm)	0.008211	ppm	0.001948	23.73	32.111200	Y 377.433
Zr (343.823 nm)	0.001141	ppm	0.000201	17.65	159.136000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.760841	7828.069887	0.001071	0.14
Y 377.433	0.822956	350420.448018	0.004123	0.50
Y_R 377.433	0.969746	39015.000000	0.003067	0.32
Y_R 488.368	0.977428	36254.600000	0.009296	0.95
Y_R2 488.368	0.965762	68557.147327	0.001498	0.16
Y_R4	0.925603	31731.300000	0.004076	0.44

Sample Name: 720-88587-F-5-B

Date: 9/21/2018 3:42:58 PM Rack:Tube: 1:42

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001271	ppm	0.000040	3.14	-55.116900	Y 377.433
Al (394.401 nm)	-0.002001 u	ppm	0.000533	26.63	174.033000	Y 377.433
Al H (396.152 nm)	-0.007803 u	ppm	0.002828	36.24	-32.345600	Y_R 377.433
As (188.980 nm)	0.013981	ppm	0.003157	22.58	8.006930	Y 242.219
B (249.678 nm)	1.433940	ppm	0.003282	0.23	5381.360000	Y 242.219
Ba (493.408 nm)	0.165447	ppm	0.000550	0.33	15651.800000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000088	> 100.00	-4.947640	Y_R 488.368
Bi (223.061 nm)	0.012220	ppm	0.006110	50.00	77.894000	Y 377.433
Ca (315.887 nm)	105.286583	ppm	0.398147	0.38	69422.530854	Y_R 377.433
Cd (214.439 nm)	0.000247	ppm	0.000079	31.97	-6.763490	Y 377.433
Co (228.615 nm)	0.001315	ppm	0.000008	0.64	8.471880	Y 242.219
Cr (205.560 nm)	0.004644	ppm	0.000632	13.61	12.511900	Y 377.433
Cu (324.754 nm)	-0.001293 u	ppm	0.000008	0.64	41.724100	Y 377.433
Fe (238.204 nm)	0.159680	ppm	0.003017	1.89	288.412961	Y_R 377.433
Fe H (259.940 nm)	0.068642 u	ppm	0.002797	4.07	141.105000	Y_R 377.433
K (766.491 nm)	27.832800	ppm	0.048222	0.17	30891.000000	Y_R2 488.368
Li (670.783 nm)	0.043979	ppm	0.002938	6.68	-552.237000	Y_R2 488.368
Mg (279.078 nm)	81.789000	ppm	0.198058	0.24	173597.000000	Y 377.433
Mn (257.610 nm)	2.046980	ppm	0.002891	0.14	361704.000000	Y 377.433
Mo (202.032 nm)	0.001265	ppm	0.000341	27.00	33.572200	Y 377.433
Na (589.592 nm)	1053.500000 o	ppm	0.455582	0.04	570561.000000	Y_R2 488.368
Na H (589.593 nm)	1243.855365	ppm	0.950278	0.08	461722.536900	Y_R4
Ni (231.604 nm)	0.009888	ppm	0.001331	13.46	54.378400	Y 377.433
P (213.618 nm)	0.019320	ppm	0.005191	26.87	19.901100	Y 242.219
Pb (220.353 nm)	0.000299 u	ppm	0.001504	> 100.00	9.831260	Y 242.219
S (181.972 nm)	9.694637	ppm	0.013202	0.14	4527.502781	Y 377.433
Sb (206.834 nm)	-0.005796 u	ppm	0.002066	35.65	10.519200	Y 377.433
Se (196.026 nm)	0.001059	ppm	0.001273	> 100.00	12.952600	Y 242.219
Si (288.158 nm)	17.666500	ppm	0.094123	0.53	71836.200000	Y 377.433
Sn (189.925 nm)	-0.000039 u	ppm	0.000823	> 100.00	-0.536876	Y 377.433
Sr (421.552 nm)	0.746583	ppm	0.001224	0.16	85870.770884	Y_R 488.368
Th (288.505 nm)	-0.032911 u	ppm	0.001716	5.21	-3.783040	Y 377.433
Ti (336.122 nm)	0.002937	ppm	0.000233	7.93	400.532000	Y 377.433
Tl (190.794 nm)	0.000857	ppm	0.001160	> 100.00	3.867270	Y 377.433
U (409.013 nm)	-0.082264 u	ppm	0.022085	26.85	44.376500	Y 377.433
V (292.401 nm)	0.003021	ppm	0.000316	10.46	-134.050000	Y 377.433
Zn (206.200 nm)	0.002095	ppm	0.000403	19.24	11.382900	Y 377.433
Zr (343.823 nm)	0.001449	ppm	0.000017	1.18	170.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.909348	9356.009683	0.004041	0.44
Y 377.433	0.912037	388351.771591	0.003932	0.43
Y_R 377.433	0.973216	39154.600000	0.001258	0.13
Y_R 488.368	0.981382	36401.300000	0.001679	0.17
Y_R2 488.368	0.960372	68174.529410	0.012128	1.26
Y_R4	1.007590	34541.800000	0.004314	0.43

Sample Name: 720-88587-F-6-B

Date: 9/21/2018 3:46:31 PM Rack:Tube: 1:43

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008563	ppm	0.001079	12.60	129.118000	Y 377.433
Al (394.401 nm)	-0.156813 u	ppm	0.004259	2.72	471.257000	Y 377.433
Al H (396.152 nm)	-1.748800 u	ppm	0.003042	0.17	-204.575000	Y_R 377.433
As (188.980 nm)	0.063136	ppm	0.002152	3.41	72.010300	Y 242.219
B (249.678 nm)	2.641810	ppm	0.006718	0.25	9912.950000	Y 242.219
Ba (493.408 nm)	0.028485	ppm	0.000520	1.83	3145.640000	Y_R 488.368
Be (234.861 nm)	-0.000106 u	ppm	0.000068	63.86	-45.281100	Y_R 488.368
Bi (223.061 nm)	0.046444	ppm	0.001779	3.83	133.640000	Y 377.433
Ca (315.887 nm)	610.665154	ppm	0.392093	0.06	402681.445277	Y_R 377.433
Cd (214.439 nm)	0.000353	ppm	0.000015	4.19	-1.974660	Y 377.433
Co (228.615 nm)	0.206622	ppm	0.000225	0.11	4090.690000	Y 242.219
Cr (205.560 nm)	-0.000010 u	ppm	0.002020	> 100.00	-10.799100	Y 377.433
Cu (324.754 nm)	-0.003095 u	ppm	0.000299	9.65	-246.624000	Y 377.433
Fe (238.204 nm)	6.106138 o	ppm	0.011544	0.19	9987.398151	Y_R 377.433
Fe H (259.940 nm)	5.995030	ppm	0.019053	0.32	5506.290000	Y_R 377.433
K (766.491 nm)	61.175000	ppm	0.023606	0.04	65793.500000	Y_R2 488.368
Li (670.783 nm)	0.251167	ppm	0.002842	1.13	2305.990000	Y_R2 488.368
Mg (279.078 nm)	1141.870000 bo	ppm	1.588890	0.14	2423500.000000	Y 377.433
Mn (257.610 nm)	41.066800 bo	ppm	0.069365	0.17	7255520.000000	Y 377.433
Mo (202.032 nm)	0.002020	ppm	0.000068	3.36	41.427300	Y 377.433
Na (589.592 nm)	2611.460000 bo	ppm	3.348600	0.13	1414480.000000	Y_R2 488.368
Na H (589.593 nm)	3453.525411 bo	ppm	6.429791	0.19	1280800.476039	Y_R4
Ni (231.604 nm)	0.330831	ppm	0.000448	0.14	1251.500000	Y 377.433
P (213.618 nm)	0.004303 u	ppm	0.009313	> 100.00	3.450750	Y 242.219
Pb (220.353 nm)	0.007174	ppm	0.000398	5.55	24.081400	Y 242.219
S (181.972 nm)	2197.012019 bo	ppm	1.415542	0.06	1022581.641902	Y 377.433
Sb (206.834 nm)	0.000697 u	ppm	0.003810	> 100.00	21.469700	Y 377.433
Se (196.026 nm)	0.005600 b	ppm	0.000768	13.71	64.312400	Y 242.219
Si (288.158 nm)	26.208600	ppm	0.052944	0.20	106391.000000	Y 377.433
Sn (189.925 nm)	-0.002377 u	ppm	0.003149	> 100.00	-3.273020	Y 377.433
Sr (421.552 nm)	9.750834	ppm	0.002395	0.02	1119660.639897	Y_R 488.368
Th (288.505 nm)	-0.360780 bu	ppm	0.004581	1.27	61.396600	Y 377.433
Ti (336.122 nm)	0.000945	ppm	0.000024	2.56	1406.780000	Y 377.433
Tl (190.794 nm)	0.008497	ppm	0.001400	16.47	18.201500	Y 377.433
U (409.013 nm)	-0.110568 u	ppm	0.011994	10.85	-67.240400	Y 377.433
V (292.401 nm)	-0.000883 u	ppm	0.000405	45.92	-277.647000	Y 377.433
Zn (206.200 nm)	0.006924	ppm	0.001166	16.85	27.844100	Y 377.433
Zr (343.823 nm)	0.001723	ppm	0.000279	16.18	187.183000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.779854	8023.682929	0.000508	0.07
Y 377.433	0.828168	352639.710134	0.001493	0.18
Y_R 377.433	0.943902	37975.300000	0.001839	0.19
Y_R 488.368	0.952168	35317.700000	0.000070	0.01
Y_R2 488.368	0.931828	66148.218323	0.005592	0.60
Y_R4	0.934077	32021.800000	0.004145	0.44

Sample Name: CCVH-5320321

Date: 9/21/2018 3:50:14 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000912	ppm	0.000632	69.35	-160.232000	Y 377.433
Al (394.401 nm)	50.583400 o	ppm	0.008460	0.02	562230.000000	Y 377.433
Al H (396.152 nm)	49.574100	ppm	0.028741	0.06	85629.000000	Y_R 377.433
As (188.980 nm)	-0.003337 u	ppm	0.001966	58.91	-16.536600	Y 242.219
B (249.678 nm)	0.007113	ppm	0.001325	18.62	11.011700	Y 242.219
Ba (493.408 nm)	0.001383	ppm	0.000269	19.42	702.120000	Y_R 488.368
Be (234.861 nm)	-0.000629 u	ppm	0.000181	28.83	-330.629000	Y_R 488.368
Bi (223.061 nm)	0.971632	ppm	0.000216	0.02	1624.380000	Y 377.433
Ca (315.887 nm)	0.147968	ppm	0.053782	36.35	95.649325	Y_R 377.433
Cd (214.439 nm)	-0.000571 u	ppm	0.000043	7.47	-9.832360	Y 377.433
Co (228.615 nm)	0.003164	ppm	0.000252	7.95	45.145600	Y 242.219
Cr (205.560 nm)	-0.000324 u	ppm	0.000058	17.90	-13.038500	Y 377.433
Cu (324.754 nm)	-0.001224 u	ppm	0.000100	8.19	493.227000	Y 377.433
Fe (238.204 nm)	50.198643 o	ppm	0.047536	0.09	81904.591009	Y_R 377.433
Fe H (259.940 nm)	50.001300	ppm	0.090636	0.18	45345.300000	Y_R 377.433
K (766.491 nm)	0.534619	ppm	0.093677	17.52	2315.300000	Y_R2 488.368
Li (670.783 nm)	-0.007005 u	ppm	0.003602	51.42	-1255.580000	Y_R2 488.368
Mg (279.078 nm)	0.400931	ppm	0.010516	2.62	715.562000	Y 377.433
Mn (257.610 nm)	0.010192	ppm	0.000503	4.93	1855.490000	Y 377.433
Mo (202.032 nm)	-0.000691 u	ppm	0.000560	81.06	13.229300	Y 377.433
Na (589.592 nm)	242.547000 o	ppm	0.157967	0.07	131286.000000	Y_R2 488.368
Na H (589.593 nm)	268.536610	ppm	0.001065	0.00	100214.927683	Y_R4
Ni (231.604 nm)	0.000146 u	ppm	0.000502	> 100.00	23.935600	Y 377.433
P (213.618 nm)	-0.018877 u	ppm	0.002591	13.73	-22.923200	Y 242.219
Pb (220.353 nm)	0.002038 u	ppm	0.003963	> 100.00	24.005300	Y 242.219
S (181.972 nm)	5.633508 Q	ppm	0.037202	0.66	2622.379016 Q	Y 377.433
Sb (206.834 nm)	0.002300	ppm	0.000790	34.33	27.623200	Y 377.433
Se (196.026 nm)	-0.004952 u	ppm	0.001769	35.72	-8.597710	Y 242.219
Si (288.158 nm)	0.021782	ppm	0.003070	14.09	460.138000	Y 377.433
Sn (189.925 nm)	0.000612	ppm	0.000152	24.87	0.406570	Y 377.433
Sr (421.552 nm)	0.002366	ppm	0.000672	28.39	431.990517	Y_R 488.368
Th (288.505 nm)	4.890750	ppm	0.010882	0.22	4751.770000	Y 377.433
Ti (336.122 nm)	0.000792	ppm	0.000255	32.21	-48.328800	Y 377.433
Tl (190.794 nm)	-0.004552 u	ppm	0.001240	27.25	-6.507160	Y 377.433
U (409.013 nm)	9.645540	ppm	0.011453	0.12	22874.800000	Y 377.433
V (292.401 nm)	-0.004129 u	ppm	0.000395	9.58	-453.783000	Y 377.433
Zn (206.200 nm)	0.000210 u	ppm	0.000324	> 100.00	5.838240	Y 377.433
Zr (343.823 nm)	-0.006729 u	ppm	0.000001	0.01	-99.671000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969917	9979.186450	0.000242	0.02
Y 377.433	0.962730	409937.359273	0.000935	0.10
Y_R 377.433	0.983331	39561.600000	0.003523	0.36
Y_R 488.368	0.998080	37020.600000	0.003730	0.37
Y_R2 488.368	0.978902	69489.915091	0.001719	0.18
Y_R4	1.012610	34714.200000	0.001346	0.13

Sample Name: CCV-5305988

Date: 9/21/2018 3:53:55 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492775	ppm	0.000833	0.17	12306.600000	Y 377.433
Al (394.401 nm)	0.502627	ppm	0.000311	0.06	5735.340000	Y 377.433
Al H (396.152 nm)	0.570801 u	ppm	0.009884	1.73	942.850000	Y_R 377.433
As (188.980 nm)	0.973823	ppm	0.000641	0.07	1260.450000	Y 242.219
B (249.678 nm)	0.491068	ppm	0.002737	0.56	1841.840000	Y 242.219
Ba (493.408 nm)	0.506630	ppm	0.004550	0.90	46818.400000	Y_R 488.368
Be (234.861 nm)	0.503731	ppm	0.003219	0.64	27275.800000	Y_R 488.368
Bi (223.061 nm)	-0.003693 u	ppm	0.002451	66.36	52.679400	Y 377.433
Ca (315.887 nm)	4.984656	ppm	0.012787	0.26	3281.045508	Y_R 377.433
Cd (214.439 nm)	0.489121	ppm	0.001818	0.37	12413.300000	Y 377.433
Co (228.615 nm)	0.493691	ppm	0.001173	0.24	9816.660000	Y 242.219
Cr (205.560 nm)	0.482755	ppm	0.001409	0.29	2353.770000	Y 377.433
Cu (324.754 nm)	0.493854	ppm	0.000667	0.14	21217.000000	Y 377.433
Fe (238.204 nm)	2.516203	ppm	0.001526	0.06	4132.026313	Y_R 377.433
Fe H (259.940 nm)	2.445220 u	ppm	0.013190	0.54	2292.630000	Y_R 377.433
K (766.491 nm)	49.635600	ppm	0.238359	0.48	53714.100000	Y_R2 488.368
Li (670.783 nm)	0.952134	ppm	0.009696	1.02	11976.100000	Y_R2 488.368
Mg (279.078 nm)	20.006600	ppm	0.002308	0.01	42466.700000	Y 377.433
Mn (257.610 nm)	0.498425	ppm	0.000434	0.09	88113.900000	Y 377.433
Mo (202.032 nm)	0.492622	ppm	0.000258	0.05	5145.550000	Y 377.433
Na (589.592 nm)	25.813200	ppm	0.119367	0.46	13877.300000	Y_R2 488.368
Na H (589.593 nm)	39.269433 u	ppm	0.020655	0.05	15180.575144	Y_R4
Ni (231.604 nm)	0.493146	ppm	0.000861	0.17	1843.970000	Y 377.433
P (213.618 nm)	0.978984	ppm	0.000502	0.05	1047.960000	Y 242.219
Pb (220.353 nm)	0.995864	ppm	0.001788	0.18	2085.880000	Y 242.219
S (181.972 nm)	0.355938	ppm	0.031660	8.89	168.538551	Y 377.433
Sb (206.834 nm)	1.011310	ppm	0.003865	0.38	1654.560000	Y 377.433
Se (196.026 nm)	0.979168	ppm	0.002338	0.24	1297.350000	Y 242.219
Si (288.158 nm)	4.932780	ppm	0.003403	0.07	20325.400000	Y 377.433
Sn (189.925 nm)	0.988930	ppm	0.003334	0.34	1165.830000	Y 377.433
Sr (421.552 nm)	0.501679	ppm	0.005729	1.14	57753.289033	Y_R 488.368
Th (288.505 nm)	-0.012915 u	ppm	0.005451	42.20	-32.332800	Y 377.433
Ti (336.122 nm)	0.493728	ppm	0.000036	0.01	44490.500000	Y 377.433
Tl (190.794 nm)	1.003890	ppm	0.001822	0.18	1797.190000	Y 377.433
U (409.013 nm)	0.003660	ppm	0.000677	18.50	211.609000	Y 377.433
V (292.401 nm)	0.491504	ppm	0.000391	0.08	19900.100000	Y 377.433
Zn (206.200 nm)	0.489126	ppm	0.002417	0.49	1661.540000	Y 377.433
Zr (343.823 nm)	0.490703	ppm	0.000629	0.13	19257.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982862	10112.373625	0.003202	0.33
Y 377.433	0.980049	417311.847054	0.003289	0.34
Y_R 377.433	0.986521	39689.900000	0.002748	0.28
Y_R 488.368	0.984340	36511.000000	0.008694	0.88
Y_R2 488.368	0.991989	70418.959026	0.006430	0.65
Y_R4	0.998533	34231.500000	0.006975	0.70

Sample Name: CCB

Date: 9/21/2018 3:57:27 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000930 u	ppm	0.000066	7.08	-111.588000	Y 377.433
Al (394.401 nm)	-0.009319 u	ppm	0.002229	23.92	-60.148000	Y 377.433
Al H (396.152 nm)	0.148372 Zu	ppm	0.001954	1.32	13.745800 Z	Y_R 377.433
As (188.980 nm)	-0.000249 u	ppm	0.002698	> 100.00	-10.559000	Y 242.219
B (249.678 nm)	0.002884	ppm	0.001567	54.34	10.343000	Y 242.219
Ba (493.408 nm)	0.000554	ppm	0.000288	52.00	589.870000	Y_R 488.368
Be (234.861 nm)	0.000027	ppm	0.000034	> 100.00	-2.453160	Y_R 488.368
Bi (223.061 nm)	-0.001198 u	ppm	0.000608	50.74	56.288200	Y 377.433
Ca (315.887 nm)	0.074904	ppm	0.009219	12.31	43.393376	Y_R 377.433
Cd (214.439 nm)	0.000216	ppm	0.000026	12.14	-7.606200	Y 377.433
Co (228.615 nm)	0.000027 u	ppm	0.000058	> 100.00	-17.223300	Y 242.219
Cr (205.560 nm)	0.000346	ppm	0.000213	61.62	-8.539370	Y 377.433
Cu (324.754 nm)	0.000129 u	ppm	0.000653	> 100.00	147.362000	Y 377.433
Fe (238.204 nm)	-0.006512 u	ppm	0.000564	8.66	17.345237	Y_R 377.433
Fe H (259.940 nm)	-0.076399 u	ppm	0.000098	0.13	9.798060	Y_R 377.433
K (766.491 nm)	0.177239	ppm	0.037840	21.35	1941.190000	Y_R2 488.368
Li (670.783 nm)	-0.010720 Zu	ppm	0.004071	37.97	-1306.840000 Z	Y_R2 488.368
Mg (279.078 nm)	0.188369 Z	ppm	0.009114	4.84	406.316000 Z	Y 377.433
Mn (257.610 nm)	0.003811 Z	ppm	0.000272	7.14	728.033000 Z	Y 377.433
Mo (202.032 nm)	-0.000100 u	ppm	0.000130	> 100.00	19.377400	Y 377.433
Na (589.592 nm)	1.380560 Z	ppm	0.043673	3.16	651.026000 Z	Y_R2 488.368
Na H (589.593 nm)	10.395867 u	ppm	0.015658	0.15	4529.335564	Y_R4
Ni (231.604 nm)	0.000025 u	ppm	0.000531	> 100.00	16.267800	Y 377.433
P (213.618 nm)	-0.001904 u	ppm	0.001929	> 100.00	-3.241990	Y 242.219
Pb (220.353 nm)	0.001335	ppm	0.000254	19.00	12.209700	Y 242.219
S (181.972 nm)	0.240712 Z	ppm	0.009663	4.01	112.971867 Z	Y 377.433
Sb (206.834 nm)	-0.002016 u	ppm	0.001250	62.01	16.594600	Y 377.433
Se (196.026 nm)	-0.002720 u	ppm	0.001316	48.40	5.580020	Y 242.219
Si (288.158 nm)	0.009604	ppm	0.002170	22.60	410.067000	Y 377.433
Sn (189.925 nm)	0.001203	ppm	0.000314	26.10	0.926860	Y 377.433
Sr (421.552 nm)	0.001031	ppm	0.000076	7.33	273.014345	Y_R 488.368
Th (288.505 nm)	-0.011213 Zu	ppm	0.001802	16.07	-2.222550 Z	Y 377.433
Ti (336.122 nm)	0.000015 u	ppm	0.000147	> 100.00	-109.654000	Y 377.433
Tl (190.794 nm)	0.000100 u	ppm	0.001308	> 100.00	2.524060	Y 377.433
U (409.013 nm)	0.002540	ppm	0.000305	12.03	253.247000	Y 377.433
V (292.401 nm)	0.000016 u	ppm	0.000114	> 100.00	-263.311000	Y 377.433
Zn (206.200 nm)	-0.000255 u	ppm	0.000112	43.87	3.416540	Y 377.433
Zr (343.823 nm)	0.000126	ppm	0.000120	95.46	118.956000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991663	10202.922168	0.001786	0.18
Y 377.433	0.989508	421339.265419	0.001248	0.13
Y_R 377.433	0.981132	39473.100000	0.005516	0.56
Y_R 488.368	0.988514	36665.800000	0.004455	0.45
Y_R2 488.368	0.984670	69899.398585	0.003627	0.37
Y_R4	0.998841	34242.100000	0.005558	0.56

Sample Name: CCVL-5320254

Date: 9/21/2018 4:00:38 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008527	ppm	0.000373	4.38	127.177000	Y 377.433
Al (394.401 nm)	0.089630	ppm	0.001387	1.55	1043.250000	Y 377.433
Al H (396.152 nm)	0.237892 u	ppm	0.004976	2.09	173.109000	Y_R 377.433
As (188.980 nm)	0.013499	ppm	0.001166	8.64	7.377360	Y 242.219
B (249.678 nm)	0.097871	ppm	0.000219	0.22	366.817000	Y 242.219
Ba (493.408 nm)	0.010392	ppm	0.000251	2.42	1488.540000	Y_R 488.368
Be (234.861 nm)	0.001024	ppm	0.000032	3.17	50.996800	Y_R 488.368
Bi (223.061 nm)	0.092933	ppm	0.002869	3.09	207.419000	Y 377.433
Ca (315.887 nm)	0.202344	ppm	0.004859	2.40	127.437305	Y_R 377.433
Cd (214.439 nm)	0.005049	ppm	0.000084	1.66	115.190000	Y 377.433
Co (228.615 nm)	0.010582	ppm	0.000153	1.44	193.016000	Y 242.219
Cr (205.560 nm)	0.009573	ppm	0.000193	2.02	36.574300	Y 377.433
Cu (324.754 nm)	0.015240	ppm	0.000105	0.69	792.436000	Y 377.433
Fe (238.204 nm)	0.090259	ppm	0.001788	1.98	175.183293	Y_R 377.433
Fe H (259.940 nm)	0.031289 u	ppm	0.001474	4.71	107.289000	Y_R 377.433
K (766.491 nm)	3.180330	ppm	0.023214	0.73	5084.820000	Y_R2 488.368
Li (670.783 nm)	0.009801 Q	ppm	0.003620	36.93	-1023.740000 Q	Y_R2 488.368
Mg (279.078 nm)	0.299316 Q	ppm	0.035712	11.93	641.338000 Q	Y 377.433
Mn (257.610 nm)	0.012245	ppm	0.000765	6.25	2218.200000	Y 377.433
Mo (202.032 nm)	0.019399	ppm	0.000684	3.53	222.243000	Y 377.433
Na (589.592 nm)	2.191440 Q	ppm	0.067709	3.09	1090.110000 Q	Y_R2 488.368
Na H (589.593 nm)	9.265401 u	ppm	0.089186	0.96	4109.345204	Y_R4
Ni (231.604 nm)	0.039983	ppm	0.000528	1.32	164.289000	Y 377.433
P (213.618 nm)	2.870760	ppm	0.006052	0.21	3135.820000	Y 242.219
Pb (220.353 nm)	0.008745	ppm	0.000204	2.34	27.674600	Y 242.219
S (181.972 nm)	0.226429 Q	ppm	0.033732	14.90	106.359785 Q	Y 377.433
Sb (206.834 nm)	0.015198	ppm	0.004537	29.85	44.295000	Y 377.433
Se (196.026 nm)	0.015448	ppm	0.000155	1.01	29.470800	Y 242.219
Si (288.158 nm)	0.486615	ppm	0.004053	0.83	2339.680000	Y 377.433
Sn (189.925 nm)	0.098053	ppm	0.001843	1.88	115.149000	Y 377.433
Sr (421.552 nm)	0.010065	ppm	0.000019	0.19	1310.177525	Y_R 488.368
Th (288.505 nm)	0.003382 Qu	ppm	0.006476	> 100.00	11.551000 Q	Y 377.433
Ti (336.122 nm)	0.009913	ppm	0.000039	0.39	784.698000	Y 377.433
Tl (190.794 nm)	0.014180	ppm	0.001935	13.65	27.648700	Y 377.433
U (409.013 nm)	0.053436	ppm	0.017999	33.68	371.207000	Y 377.433
V (292.401 nm)	0.009839	ppm	0.000292	2.97	139.267000	Y 377.433
Zn (206.200 nm)	0.019086	ppm	0.000160	0.84	68.946100	Y 377.433
Zr (343.823 nm)	0.014814	ppm	0.000116	0.78	691.957000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017589	10469.668040	0.000644	0.06
Y 377.433	1.013027	431353.891254	0.000012	0.00
Y_R 377.433	1.008670	40581.100000	0.000213	0.02
Y_R 488.368	1.023380	37959.200000	0.020278	1.98
Y_R2 488.368	1.007434	71515.302862	0.004484	0.45
Y_R4	1.022820	35064.000000	0.007143	0.70

Sample Name: 720-88587-F-7-B

Date: 9/21/2018 4:04:06 PM Rack:Tube: 1:44

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008770	ppm	0.000281	3.21	134.363000	Y 377.433
Al (394.401 nm)	-0.148642 u	ppm	0.002204	1.48	475.929000	Y 377.433
Al H (396.152 nm)	-1.676980 u	ppm	0.003426	0.20	-190.772000	Y_R 377.433
As (188.980 nm)	0.060403	ppm	0.001020	1.69	68.465000	Y 242.219
B (249.678 nm)	2.576110	ppm	0.013883	0.54	9666.640000	Y 242.219
Ba (493.408 nm)	0.026869	ppm	0.000693	2.58	2997.310000	Y_R 488.368
Be (234.861 nm)	-0.000068 u	ppm	0.000033	48.43	-37.900700	Y_R 488.368
Bi (223.061 nm)	0.043399	ppm	0.001320	3.04	128.631000	Y 377.433
Ca (315.887 nm)	594.756584	ppm	1.144308	0.19	392190.953233	Y_R 377.433
Cd (214.439 nm)	0.000268	ppm	0.000126	47.07	-4.458920	Y 377.433
Co (228.615 nm)	0.203141	ppm	0.000174	0.09	4021.490000	Y 242.219
Cr (205.560 nm)	-0.000056 u	ppm	0.000205	> 100.00	-11.021200	Y 377.433
Cu (324.754 nm)	-0.003794 u	ppm	0.000287	7.55	-265.053000	Y 377.433
Fe (238.204 nm)	5.193004	ppm	0.024744	0.48	8498.029561	Y_R 377.433
Fe H (259.940 nm)	5.048470	ppm	0.018188	0.36	4649.360000	Y_R 377.433
K (766.491 nm)	57.364400	ppm	0.392920	0.68	61804.600000	Y_R2 488.368
Li (670.783 nm)	0.245257	ppm	0.005325	2.17	2224.460000	Y_R2 488.368
Mg (279.078 nm)	1120.740000 bo	ppm	4.227230	0.38	2378650.000000	Y 377.433
Mn (257.610 nm)	40.432300 bo	ppm	0.092337	0.23	7143430.000000	Y 377.433
Mo (202.032 nm)	0.002834	ppm	0.000764	26.97	49.897200	Y 377.433
Na (589.592 nm)	2562.420000 bo	ppm	45.795800	1.79	1387910.000000	Y_R2 488.368
Na H (589.593 nm)	3398.721018 bo	ppm	1.257958	0.04	1260486.182028	Y_R4
Ni (231.604 nm)	0.326450	ppm	0.001294	0.40	1234.910000	Y 377.433
P (213.618 nm)	0.002204	ppm	0.000106	4.79	1.169730	Y 242.219
Pb (220.353 nm)	0.006262	ppm	0.001036	16.55	22.171000	Y 242.219
S (181.972 nm)	2167.054032 bo	ppm	5.431561	0.25	1008637.109400	Y 377.433
Sb (206.834 nm)	0.001954 u	ppm	0.003707	> 100.00	23.419500	Y 377.433
Se (196.026 nm)	0.009943 b	ppm	0.001981	19.92	69.471000	Y 242.219
Si (288.158 nm)	25.262600	ppm	0.125494	0.50	102564.000000	Y 377.433
Sn (189.925 nm)	-0.001367 u	ppm	0.000161	11.77	-2.084930	Y 377.433
Sr (421.552 nm)	9.406441	ppm	0.050789	0.54	1080120.275110	Y_R 488.368
Th (288.505 nm)	-0.349422 bu	ppm	0.000376	0.11	66.196800	Y 377.433
Ti (336.122 nm)	0.000729	ppm	0.000088	12.03	1350.480000	Y 377.433
Tl (190.794 nm)	0.010018	ppm	0.001046	10.44	20.921600	Y 377.433
U (409.013 nm)	-0.104777 u	ppm	0.017906	17.09	-52.619400	Y 377.433
V (292.401 nm)	-0.001303 u	ppm	0.000083	6.35	-292.478000	Y 377.433
Zn (206.200 nm)	0.006260	ppm	0.000186	2.97	25.579100	Y 377.433
Zr (343.823 nm)	0.001751	ppm	0.000164	9.34	187.370000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.775281	7976.631836	0.007096	0.92
Y 377.433	0.821088	349624.861757	0.009483	1.15
Y_R 377.433	0.956658	38488.500000	0.007380	0.77
Y_R 488.368	0.967966	35903.600000	0.015910	1.64
Y_R2 488.368	0.951277	67528.916001	0.011835	1.24
Y_R4	0.943746	32353.300000	0.006232	0.66

Sample Name: 720-88587-F-7-Bsd@5

Date: 9/21/2018 4:07:47 PM Rack:Tube: 1:45

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002873	ppm	0.000142	4.96	-14.846200	Y 377.433
Al (394.401 nm)	-0.023432 u	ppm	0.002982	12.73	192.473000	Y 377.433
Al H (396.152 nm)	-0.218780 u	ppm	0.000840	0.38	-44.048000	Y_R 377.433
As (188.980 nm)	0.012617	ppm	0.001833	14.53	6.205590	Y 242.219
B (249.678 nm)	0.494856	ppm	0.001342	0.27	1856.500000	Y 242.219
Ba (493.408 nm)	0.005448	ppm	0.000048	0.88	1037.700000	Y_R 488.368
Be (234.861 nm)	-0.000130 u	ppm	0.000063	48.68	-17.124300	Y_R 488.368
Bi (223.061 nm)	0.013221	ppm	0.002721	20.58	79.584700	Y 377.433
Ca (315.887 nm)	122.957571	ppm	0.560238	0.46	81075.210395	Y_R 377.433
Cd (214.439 nm)	0.000123	ppm	0.000039	31.86	-9.597160	Y 377.433
Co (228.615 nm)	0.042146	ppm	0.001194	2.83	820.295000	Y 242.219
Cr (205.560 nm)	-0.000174 u	ppm	0.000092	52.61	-11.204200	Y 377.433
Cu (324.754 nm)	-0.001460 u	ppm	0.000603	41.34	25.175500	Y 377.433
Fe (238.204 nm)	1.055005	ppm	0.001830	0.17	1748.735665	Y_R 377.433
Fe H (259.940 nm)	0.930437 u	ppm	0.010061	1.08	921.291000	Y_R 377.433
K (766.491 nm)	10.058400	ppm	0.029519	0.29	12284.800000	Y_R2 488.368
Li (670.783 nm)	0.039350	ppm	0.004456	11.32	-616.095000	Y_R2 488.368
Mg (279.078 nm)	248.614000	ppm	1.853950	0.75	527664.000000	Y 377.433
Mn (257.610 nm)	9.434300	ppm	0.060471	0.64	1666860.000000	Y 377.433
Mo (202.032 nm)	0.000517	ppm	0.000031	5.90	25.798600	Y 377.433
Na (589.592 nm)	804.952000 o	ppm	0.713982	0.09	435929.000000	Y_R2 488.368
Na H (589.593 nm)	919.213164	ppm	0.292629	0.03	341402.559969	Y_R4
Ni (231.604 nm)	0.072732	ppm	0.000310	0.43	287.543000	Y 377.433
P (213.618 nm)	-0.000756 u	ppm	0.002581	> 100.00	-2.043620	Y 242.219
Pb (220.353 nm)	0.001401 u	ppm	0.002289	> 100.00	12.199200	Y 242.219
S (181.972 nm)	541.835634 bo	ppm	3.795544	0.70	252189.207144	Y 377.433
Sb (206.834 nm)	-0.001980 u	ppm	0.002130	> 100.00	16.737000	Y 377.433
Se (196.026 nm)	0.001151 u	ppm	0.002023	> 100.00	21.695000	Y 242.219
Si (288.158 nm)	4.907110	ppm	0.002771	0.06	20221.600000	Y 377.433
Sn (189.925 nm)	0.000357	ppm	0.000263	73.70	-0.066981	Y 377.433
Sr (421.552 nm)	1.842371	ppm	0.002150	0.12	211679.580444	Y_R 488.368
Th (288.505 nm)	-0.090986 u	ppm	0.011012	12.10	12.490100	Y 377.433
Ti (336.122 nm)	-0.000306 u	ppm	0.000017	5.51	149.322000	Y 377.433
Tl (190.794 nm)	0.002084	ppm	0.002171	> 100.00	6.205380	Y 377.433
U (409.013 nm)	-0.048040 u	ppm	0.009052	18.84	123.406000	Y 377.433
V (292.401 nm)	0.000099 u	ppm	0.000155	> 100.00	-255.562000	Y 377.433
Zn (206.200 nm)	0.001971	ppm	0.000662	33.57	10.977900	Y 377.433
Zr (343.823 nm)	0.000654	ppm	0.000026	3.92	140.562000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.913416	9397.866962	0.004330	0.47
Y 377.433	0.923463	393217.079563	0.004727	0.51
Y_R 377.433	0.968201	38952.800000	0.000320	0.03
Y_R 488.368	0.969214	35949.900000	0.001780	0.18
Y_R2 488.368	0.970380	68884.935303	0.001536	0.16
Y_R4	0.991294	33983.300000	0.003437	0.35

Sample Name: 720-88587-F-7-C MS

Date: 9/21/2018 4:11:18 PM Rack:Tube: 1:46

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.066541	ppm	0.000045	0.07	1547.960000	Y 377.433
Al (394.401 nm)	1.848160	ppm	0.002115	0.11	23006.300000	Y 377.433
Al H (396.152 nm)	0.225682 u	ppm	0.001961	0.87	3572.040000	Y_R 377.433
As (188.980 nm)	1.134020	ppm	0.000958	0.08	1469.380000	Y 242.219
B (249.678 nm)	3.693960	ppm	0.010601	0.29	13861.800000	Y 242.219
Ba (493.408 nm)	2.111740	ppm	0.015303	0.72	193437.000000	Y_R 488.368
Be (234.861 nm)	0.046686	ppm	0.000418	0.89	2489.380000	Y_R 488.368
Bi (223.061 nm)	1.997550	ppm	0.004533	0.23	3265.990000	Y 377.433
Ca (315.887 nm)	649.953033	ppm	0.964075	0.15	428589.010209	Y_R 377.433
Cd (214.439 nm)	0.084856	ppm	0.000083	0.10	2144.760000	Y 377.433
Co (228.615 nm)	0.666841	ppm	0.002604	0.39	13277.000000	Y 242.219
Cr (205.560 nm)	0.179642	ppm	0.000302	0.17	866.139000	Y 377.433
Cu (324.754 nm)	0.263198	ppm	0.000032	0.01	11147.200000	Y 377.433
Fe (238.204 nm)	6.235418 o	ppm	0.001250	0.02	10198.260485	Y_R 377.433
Fe H (259.940 nm)	6.132910	ppm	0.015693	0.26	5631.110000	Y_R 377.433
K (766.491 nm)	117.320000	ppm	0.399509	0.34	124566.000000	Y_R2 488.368
Li (670.783 nm)	1.388200	ppm	0.001207	0.09	17991.800000	Y_R2 488.368
Mg (279.078 nm)	1176.910000 bo	ppm	2.416340	0.21	2497850.000000	Y 377.433
Mn (257.610 nm)	41.307900 bo	ppm	0.090318	0.22	7298120.000000	Y 377.433
Mo (202.032 nm)	0.915808	ppm	0.000177	0.02	9548.290000	Y 377.433
Na (589.592 nm)	2583.500000 bo	ppm	28.568900	1.11	1399300.000000	Y_R2 488.368
Na H (589.593 nm)	3466.408463 bo	ppm	22.518282	0.65	1285361.851996	Y_R4
Ni (231.604 nm)	0.763730	ppm	0.001645	0.22	2856.810000	Y 377.433
P (213.618 nm)	10.929500	ppm	0.019224	0.18	11932.800000	Y 242.219
Pb (220.353 nm)	0.460982	ppm	0.002828	0.61	971.437000	Y 242.219
S (181.972 nm)	2186.208859 bo	ppm	1.576521	0.07	1017558.104337	Y 377.433
Sb (206.834 nm)	0.525152	ppm	0.005474	1.04	860.183000	Y 377.433
Se (196.026 nm)	2.239590 b	ppm	0.003624	0.16	3003.500000	Y 242.219
Si (288.158 nm)	36.237600	ppm	0.075436	0.21	146961.000000	Y 377.433
Sn (189.925 nm)	1.671260	ppm	0.000213	0.01	1970.570000	Y 377.433
Sr (421.552 nm)	10.679335	ppm	0.022228	0.21	1226262.976172	Y_R 488.368
Th (288.505 nm)	0.615057 b	ppm	0.011920	1.94	980.269000	Y 377.433
Ti (336.122 nm)	0.978959	ppm	0.000260	0.03	89821.600000	Y 377.433
Tl (190.794 nm)	1.657970	ppm	0.005241	0.32	2965.080000	Y 377.433
U (409.013 nm)	1.976620	ppm	0.000207	0.01	4774.460000	Y 377.433
V (292.401 nm)	0.482379	ppm	0.000544	0.11	19616.900000	Y 377.433
Zn (206.200 nm)	0.416318	ppm	0.003019	0.73	1414.920000	Y 377.433
Zr (343.823 nm)	0.491484	ppm	0.000664	0.14	19291.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.774797	7971.653193	0.002686	0.35
Y 377.433	0.825018	351298.247207	0.003619	0.44
Y_R 377.433	0.946730	38089.000000	0.006995	0.74
Y_R 488.368	0.954706	35411.800000	0.005223	0.55
Y_R2 488.368	0.949719	67418.262181	0.015272	1.61
Y_R4	0.924705	31700.500000	0.006007	0.65

Sample Name: 720-88587-F-7-D MSD

Date: 9/21/2018 4:15:05 PM Rack:Tube: 1:47

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.065864	ppm	0.000076	0.12	1533.520000	Y 377.433
Al (394.401 nm)	1.823080	ppm	0.001358	0.07	22684.100000	Y 377.433
Al H (396.152 nm)	0.237815 u	ppm	0.012801	5.38	3542.490000	Y_R 377.433
As (188.980 nm)	1.127920	ppm	0.003860	0.34	1461.420000	Y 242.219
B (249.678 nm)	3.669510	ppm	0.014638	0.40	13770.100000	Y 242.219
Ba (493.408 nm)	2.071030	ppm	0.014503	0.70	189718.000000	Y_R 488.368
Be (234.861 nm)	0.045215	ppm	0.000562	1.24	2410.200000	Y_R 488.368
Bi (223.061 nm)	1.974250	ppm	0.004235	0.21	3228.570000	Y 377.433
Ca (315.887 nm)	639.581552	ppm	2.075429	0.32	421749.802333	Y_R 377.433
Cd (214.439 nm)	0.083749	ppm	0.000230	0.27	2116.620000	Y 377.433
Co (228.615 nm)	0.659773	ppm	0.002049	0.31	13136.900000	Y 242.219
Cr (205.560 nm)	0.178437	ppm	0.000451	0.25	860.212000	Y 377.433
Cu (324.754 nm)	0.259656	ppm	0.000948	0.37	11004.600000	Y 377.433
Fe (238.204 nm)	6.145201 o	ppm	0.019324	0.31	10051.112451	Y_R 377.433
Fe H (259.940 nm)	6.042760	ppm	0.002212	0.04	5549.500000	Y_R 377.433
K (766.491 nm)	114.444000	ppm	0.474253	0.41	121556.000000	Y_R2 488.368
Li (670.783 nm)	1.370920	ppm	0.011665	0.85	17753.400000	Y_R2 488.368
Mg (279.078 nm)	1154.440000 bo	ppm	3.149900	0.27	2450170.000000	Y 377.433
Mn (257.610 nm)	40.606500 bo	ppm	0.080560	0.20	7174190.000000	Y 377.433
Mo (202.032 nm)	0.927566	ppm	0.000110	0.01	9670.620000	Y 377.433
Na (589.592 nm)	2452.850000 bo	ppm	19.996700	0.82	1328520.000000	Y_R2 488.368
Na H (589.593 nm)	3345.770010 bo	ppm	28.963498	0.87	1240648.588048	Y_R4
Ni (231.604 nm)	0.754507	ppm	0.002348	0.31	2822.480000	Y 377.433
P (213.618 nm)	10.865100	ppm	0.035819	0.33	11862.500000	Y 242.219
Pb (220.353 nm)	0.451826	ppm	0.002130	0.47	952.269000	Y 242.219
S (181.972 nm)	2156.358412 bo	ppm	3.561096	0.17	1003663.937548	Y 377.433
Sb (206.834 nm)	0.529637	ppm	0.000154	0.03	867.270000	Y 377.433
Se (196.026 nm)	2.219400 b	ppm	0.003370	0.15	2976.140000	Y 242.219
Si (288.158 nm)	35.785200	ppm	0.240167	0.67	145131.000000	Y 377.433
Sn (189.925 nm)	1.687880	ppm	0.000679	0.04	1990.170000	Y 377.433
Sr (421.552 nm)	10.504361	ppm	0.038351	0.37	1206173.989472	Y_R 488.368
Th (288.505 nm)	0.633768 b	ppm	0.005800	0.92	991.937000	Y 377.433
Ti (336.122 nm)	0.990888	ppm	0.001541	0.16	90876.000000	Y 377.433
Tl (190.794 nm)	1.645350	ppm	0.005072	0.31	2942.380000	Y 377.433
U (409.013 nm)	1.960230	ppm	0.005218	0.27	4736.430000	Y 377.433
V (292.401 nm)	0.475984	ppm	0.000699	0.15	19354.600000	Y 377.433
Zn (206.200 nm)	0.411703	ppm	0.000133	0.03	1399.280000	Y 377.433
Zr (343.823 nm)	0.497325	ppm	0.000620	0.12	19518.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.778189	8006.558524	0.001301	0.17
Y 377.433	0.828718	352873.816511	0.000750	0.09
Y_R 377.433	0.961020	38664.000000	0.010189	1.06
Y_R 488.368	0.970725	36006.000000	0.012613	1.30
Y_R2 488.368	0.975182	69225.832374	0.009975	1.02
Y_R4	0.940569	32244.400000	0.003864	0.41

Sample Name: MB 280-429854/1-B

Date: 9/21/2018 4:18:56 PM Rack:Tube: 1:48

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001434 u	ppm	0.000449	31.34	-124.344000	Y 377.433
Al (394.401 nm)	-0.009149 u	ppm	0.003324	36.34	-59.432000	Y 377.433
Al H (396.152 nm)	0.140276 u	ppm	0.011434	8.15	1.112410	Y_R 377.433
As (188.980 nm)	-0.000031 u	ppm	0.001107	> 100.00	-10.273700	Y 242.219
B (249.678 nm)	0.004804	ppm	0.002684	55.86	17.547300	Y 242.219
Ba (493.408 nm)	0.000844	ppm	0.000296	35.13	616.314000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000030	> 100.00	-4.732810	Y_R 488.368
Bi (223.061 nm)	-0.007391 u	ppm	0.001670	22.59	46.345100	Y 377.433
Ca (315.887 nm)	0.391289	ppm	0.013529	3.46	252.024466	Y_R 377.433
Cd (214.439 nm)	0.000077	ppm	0.000085	> 100.00	-11.136300	Y 377.433
Co (228.615 nm)	0.000211	ppm	0.000259	> 100.00	-13.565900	Y 242.219
Cr (205.560 nm)	0.000409	ppm	0.000004	1.09	-8.229350	Y 377.433
Cu (324.754 nm)	-0.000117 u	ppm	0.000325	> 100.00	138.005000	Y 377.433
Fe (238.204 nm)	-0.004552 u	ppm	0.002150	47.24	20.542110	Y_R 377.433
Fe H (259.940 nm)	-0.070505 u	ppm	0.000779	1.10	15.134300	Y_R 377.433
K (766.491 nm)	0.187544	ppm	0.026112	13.92	1951.980000	Y_R2 488.368
Li (670.783 nm)	-0.003993 u	ppm	0.003227	80.83	-1214.030000	Y_R2 488.368
Mg (279.078 nm)	0.488291	ppm	0.397310	81.37	1042.960000	Y 377.433
Mn (257.610 nm)	0.018498	ppm	0.014537	78.59	3322.890000	Y 377.433
Mo (202.032 nm)	0.000138 u	ppm	0.000403	> 100.00	21.851300	Y 377.433
Na (589.592 nm)	2.196290	ppm	0.109639	4.99	1092.890000	Y_R2 488.368
Na H (589.593 nm)	23.859840 u	ppm	0.530699	2.22	9520.089072	Y_R4
Ni (231.604 nm)	0.000112 u	ppm	0.000281	> 100.00	16.591700	Y 377.433
P (213.618 nm)	0.006473	ppm	0.000655	10.13	5.900250	Y 242.219
Pb (220.353 nm)	0.002688	ppm	0.002798	> 100.00	15.020800	Y 242.219
S (181.972 nm)	1.144802	ppm	0.743182	64.92	533.764772	Y 377.433
Sb (206.834 nm)	-0.004765 u	ppm	0.002788	58.50	12.153500	Y 377.433
Se (196.026 nm)	0.000918	ppm	0.000990	> 100.00	10.383000	Y 242.219
Si (288.158 nm)	0.011036	ppm	0.009702	87.92	415.860000	Y 377.433
Sn (189.925 nm)	0.000582 u	ppm	0.000887	> 100.00	0.194888	Y 377.433
Sr (421.552 nm)	0.005371	ppm	0.000153	2.84	771.286783	Y_R 488.368
Th (288.505 nm)	-0.003702 u	ppm	0.002175	58.76	5.117230	Y 377.433
Ti (336.122 nm)	0.000577	ppm	0.000009	1.56	-58.310200	Y 377.433
Tl (190.794 nm)	0.000721 u	ppm	0.002649	> 100.00	3.636180	Y 377.433
U (409.013 nm)	0.004099 u	ppm	0.009094	> 100.00	256.911000	Y 377.433
V (292.401 nm)	0.000612	ppm	0.000421	68.85	-238.010000	Y 377.433
Zn (206.200 nm)	0.001072	ppm	0.000256	23.93	7.911610	Y 377.433
Zr (343.823 nm)	-0.000069 u	ppm	0.000292	> 100.00	111.330000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043251	10733.704307	0.004503	0.43
Y 377.433	1.041079	443298.651033	0.003062	0.29
Y_R 377.433	1.035050	41642.400000	0.001915	0.18
Y_R 488.368	1.044240	38732.800000	0.007534	0.72
Y_R2 488.368	1.041502	73933.703207	0.005024	0.48
Y_R4	1.034120	35451.600000	0.002876	0.28

Sample Name: LCS 280-429854/2-B

Date: 9/21/2018 4:22:07 PM Rack:Tube: 1:49

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051403	ppm	0.000282	0.55	1161.420000	Y 377.433
Al (394.401 nm)	1.995510	ppm	0.002314	0.12	22481.000000	Y 377.433
Al H (396.152 nm)	1.959600	ppm	0.007522	0.38	3536.190000	Y_R 377.433
As (188.980 nm)	0.988587	ppm	0.000004	0.00	1279.730000	Y 242.219
B (249.678 nm)	1.022950	ppm	0.001380	0.13	3838.560000	Y 242.219
Ba (493.408 nm)	2.007770	ppm	0.003305	0.16	183936.000000	Y_R 488.368
Be (234.861 nm)	0.050260	ppm	0.000148	0.29	2713.550000	Y_R 488.368
Bi (223.061 nm)	1.877010	ppm	0.009560	0.51	3071.710000	Y 377.433
Ca (315.887 nm)	49.431308	ppm	0.139992	0.28	32590.372766	Y_R 377.433
Cd (214.439 nm)	0.097991	ppm	0.000343	0.35	2476.580000	Y 377.433
Co (228.615 nm)	0.475943	ppm	0.000888	0.19	9482.360000	Y 242.219
Cr (205.560 nm)	0.193398	ppm	0.000762	0.39	933.746000	Y 377.433
Cu (324.754 nm)	0.242586	ppm	0.000063	0.03	10526.200000	Y 377.433
Fe (238.204 nm)	0.993055	ppm	0.001007	0.10	1647.691665	Y_R 377.433
Fe H (259.940 nm)	0.917841 u	ppm	0.006355	0.69	909.888000	Y_R 377.433
K (766.491 nm)	50.254200	ppm	0.250684	0.50	54361.700000	Y_R2 488.368
Li (670.783 nm)	0.961977	ppm	0.004890	0.51	12111.900000	Y_R2 488.368
Mg (279.078 nm)	49.321400	ppm	0.023313	0.05	104666.000000	Y 377.433
Mn (257.610 nm)	0.499982	ppm	0.001489	0.30	88388.900000	Y 377.433
Mo (202.032 nm)	0.997922	ppm	0.000907	0.09	10402.600000	Y 377.433
Na (589.592 nm)	50.028900	ppm	0.658129	1.32	26969.300000	Y_R2 488.368
Na H (589.593 nm)	67.686934	ppm	0.312844	0.46	25559.500302	Y_R4
Ni (231.604 nm)	0.475901	ppm	0.001535	0.32	1781.340000	Y 377.433
P (213.618 nm)	10.211500	ppm	0.033569	0.33	11149.100000	Y 242.219
Pb (220.353 nm)	0.492582	ppm	0.001572	0.32	1037.470000	Y 242.219
S (181.972 nm)	2.549290	ppm	0.128074	5.02	1192.872483	Y 377.433
Sb (206.834 nm)	0.508046	ppm	0.002531	0.50	831.474000	Y 377.433
Se (196.026 nm)	1.986190	ppm	0.004424	0.22	2622.520000	Y 242.219
Si (288.158 nm)	10.161800	ppm	0.057421	0.57	41478.100000	Y 377.433
Sn (189.925 nm)	1.984070	ppm	0.003861	0.19	2339.470000	Y 377.433
Sr (421.552 nm)	0.990873	ppm	0.000157	0.02	113918.118819	Y_R 488.368
Th (288.505 nm)	0.959469	ppm	0.006769	0.71	913.172000	Y 377.433
Ti (336.122 nm)	0.988360	ppm	0.000342	0.03	89263.900000	Y 377.433
Tl (190.794 nm)	2.002230	ppm	0.005583	0.28	3580.270000	Y 377.433
U (409.013 nm)	1.942850	ppm	0.009317	0.48	4750.330000	Y 377.433
V (292.401 nm)	0.498911	ppm	0.000580	0.12	20271.800000	Y 377.433
Zn (206.200 nm)	0.480622	ppm	0.000051	0.01	1632.700000	Y 377.433
Zr (343.823 nm)	0.490236	ppm	0.000581	0.12	19237.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993296	10219.729696	0.002108	0.21
Y 377.433	0.995150	423741.813260	0.001573	0.16
Y_R 377.433	1.008800	40586.200000	0.005003	0.50
Y_R 488.368	1.013380	37588.100000	0.001857	0.18
Y_R2 488.368	1.005995	71413.201723	0.001725	0.17
Y_R4	1.021460	35017.400000	0.005654	0.55

Sample Name: 280-114380-C-1-D

Date: 9/21/2018 4:25:38 PM Rack:Tube: 1:50

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001007	ppm	0.001181	> 100.00	-62.357900	Y 377.433
Al (394.401 nm)	-0.045873 u	ppm	0.001160	2.53	1154.020000	Y 377.433
Al H (396.152 nm)	-1.141120 u	ppm	0.007716	0.68	27.096900	Y_R 377.433
As (188.980 nm)	0.000425 u	ppm	0.000752	> 100.00	-9.682920	Y 242.219
B (249.678 nm)	0.127005	ppm	0.000673	0.53	476.154000	Y 242.219
Ba (493.408 nm)	0.020741	ppm	0.000460	2.22	2433.930000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000010	> 100.00	-4.742400	Y_R 488.368
Bi (223.061 nm)	0.012562	ppm	0.006800	54.13	78.397700	Y 377.433
Ca (315.887 nm)	331.788563	ppm	1.452701	0.44	218783.445796	Y_R 377.433
Cd (214.439 nm)	0.000340	ppm	0.000203	59.75	-4.419620	Y 377.433
Co (228.615 nm)	-0.000109 u	ppm	0.000096	88.13	-19.902200	Y 242.219
Cr (205.560 nm)	0.000260 u	ppm	0.000618	> 100.00	-8.972120	Y 377.433
Cu (324.754 nm)	-0.001349 u	ppm	0.000543	40.24	-81.225400	Y 377.433
Fe (238.204 nm)	0.129904	ppm	0.000655	0.50	239.846411	Y_R 377.433
Fe H (259.940 nm)	0.040652 u	ppm	0.000295	0.73	115.765000	Y_R 377.433
K (766.491 nm)	2.573120	ppm	0.052910	2.06	4449.200000	Y_R2 488.368
Li (670.783 nm)	0.030008	ppm	0.001200	4.00	-744.975000	Y_R2 488.368
Mg (279.078 nm)	75.421800	ppm	0.366998	0.49	160082.000000	Y 377.433
Mn (257.610 nm)	0.016825	ppm	0.000534	3.18	3027.250000	Y 377.433
Mo (202.032 nm)	0.001728	ppm	0.000025	1.42	38.397800	Y 377.433
Na (589.592 nm)	356.124000 o	ppm	0.948114	0.27	192808.000000	Y_R2 488.368
Na H (589.593 nm)	395.887520	ppm	1.467357	0.37	147418.635533	Y_R4
Ni (231.604 nm)	0.000494	ppm	0.000354	71.69	22.924900	Y 377.433
P (213.618 nm)	0.029594	ppm	0.003448	11.65	31.108500	Y 242.219
Pb (220.353 nm)	0.000122	ppm	0.000060	48.95	9.567280	Y 242.219
S (181.972 nm)	428.633426 bo	ppm	1.105454	0.26	199496.712858	Y 377.433
Sb (206.834 nm)	-0.005937 u	ppm	0.000573	9.65	10.258700	Y 377.433
Se (196.026 nm)	0.066552	ppm	0.002313	3.48	96.692600	Y 242.219
Si (288.158 nm)	10.129000	ppm	0.020918	0.21	41345.500000	Y 377.433
Sn (189.925 nm)	0.000019 u	ppm	0.002419	> 100.00	-0.468528	Y 377.433
Sr (421.552 nm)	7.076294	ppm	0.000641	0.01	812592.689155	Y_R 488.368
Th (288.505 nm)	-0.025852 u	ppm	0.001768	6.84	-16.510100	Y 377.433
Ti (336.122 nm)	0.000872	ppm	0.000054	6.24	744.333000	Y 377.433
Tl (190.794 nm)	0.001687	ppm	0.001085	64.33	5.352560	Y 377.433
U (409.013 nm)	-0.016709 u	ppm	0.008579	51.34	176.388000	Y 377.433
V (292.401 nm)	0.002214	ppm	0.000105	4.74	-169.979000	Y 377.433
Zn (206.200 nm)	0.008225	ppm	0.000017	0.20	32.150200	Y 377.433
Zr (343.823 nm)	0.000629	ppm	0.000298	47.33	138.704000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994747	10234.659710	0.015958	1.60
Y 377.433	1.001853	426595.892632	0.018715	1.87
Y_R 377.433	1.068000	42967.900000	0.011391	1.07
Y_R 488.368	1.062250	39400.700000	0.014375	1.35
Y_R2 488.368	1.063360	75485.367613	0.004166	0.39
Y_R4	1.079090	36993.200000	0.001257	0.12

Sample Name: 280-114380-C-1-Dsd@5

Date: 9/21/2018 4:29:10 PM Rack:Tube: 1:51

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000128 u	ppm	0.000020	16.01	-91.184900	Y 377.433
Al (394.401 nm)	-0.013252 u	ppm	0.001583	11.94	230.935000	Y 377.433
Al H (396.152 nm)	-0.132757 u	ppm	0.003221	2.43	-11.477500	Y_R 377.433
As (188.980 nm)	0.000946	ppm	0.000900	95.17	-8.999220	Y 242.219
B (249.678 nm)	0.026248	ppm	0.000466	1.77	98.026100	Y 242.219
Ba (493.408 nm)	0.004101	ppm	0.000553	13.48	913.882000	Y_R 488.368
Be (234.861 nm)	-0.000088 u	ppm	0.000112	> 100.00	-8.812650	Y_R 488.368
Bi (223.061 nm)	0.000097 u	ppm	0.002529	> 100.00	58.369400	Y 377.433
Ca (315.887 nm)	69.563256	ppm	0.534246	0.77	45865.700705	Y_R 377.433
Cd (214.439 nm)	0.000323	ppm	0.000145	44.83	-4.895220	Y 377.433
Co (228.615 nm)	-0.000217 u	ppm	0.000034	15.82	-22.068200	Y 242.219
Cr (205.560 nm)	-0.000376 u	ppm	0.000189	50.29	-12.077200	Y 377.433
Cu (324.754 nm)	-0.000270 u	ppm	0.000289	> 100.00	93.887600	Y 377.433
Fe (238.204 nm)	0.016389	ppm	0.000794	4.85	54.698749	Y_R 377.433
Fe H (259.940 nm)	-0.060925 u	ppm	0.001131	1.86	23.807100	Y_R 377.433
K (766.491 nm)	0.561350	ppm	0.046958	8.37	2343.280000	Y_R2 488.368
Li (670.783 nm)	0.002527 u	ppm	0.004345	> 100.00	-1124.080000	Y_R2 488.368
Mg (279.078 nm)	14.783600	ppm	0.254865	1.72	31383.600000	Y 377.433
Mn (257.610 nm)	0.003017	ppm	0.000012	0.40	587.838000	Y 377.433
Mo (202.032 nm)	0.000099	ppm	0.000075	76.50	21.442200	Y 377.433
Na (589.592 nm)	78.593400 o	ppm	0.067803	0.09	42475.600000	Y_R2 488.368
Na H (589.593 nm)	95.014587	ppm	0.296474	0.31	35894.884351	Y_R4
Ni (231.604 nm)	-0.001810 u	ppm	0.000414	22.88	10.499700	Y 377.433
P (213.618 nm)	0.003763	ppm	0.003178	84.46	2.923300	Y 242.219
Pb (220.353 nm)	-0.000178 u	ppm	0.000158	89.09	9.012480	Y 242.219
S (181.972 nm)	81.587246	ppm	1.445657	1.77	37974.015386	Y 377.433
Sb (206.834 nm)	-0.007095 u	ppm	0.003308	46.62	8.380050	Y 377.433
Se (196.026 nm)	0.014219	ppm	0.002998	21.08	27.857400	Y 242.219
Si (288.158 nm)	1.915260	ppm	0.028710	1.50	8118.860000	Y 377.433
Sn (189.925 nm)	-0.000150 u	ppm	0.000048	32.14	-0.668467	Y 377.433
Sr (421.552 nm)	1.455812	ppm	0.003060	0.21	167298.140284	Y_R 488.368
Th (288.505 nm)	-0.027721 u	ppm	0.007371	26.59	-18.262500	Y 377.433
Ti (336.122 nm)	-0.000047 u	ppm	0.000015	33.10	47.180300	Y 377.433
Tl (190.794 nm)	0.002078	ppm	0.001748	84.12	6.062010	Y 377.433
U (409.013 nm)	0.002640 u	ppm	0.012363	> 100.00	246.834000	Y 377.433
V (292.401 nm)	0.000576	ppm	0.000147	25.49	-240.137000	Y 377.433
Zn (206.200 nm)	0.000659	ppm	0.000588	89.18	6.513050	Y 377.433
Zr (343.823 nm)	0.000134	ppm	0.000095	71.12	119.289000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019931	10493.768202	0.004466	0.44
Y 377.433	1.023470	435800.583966	0.004839	0.47
Y_R 377.433	1.034880	41635.700000	0.003069	0.30
Y_R 488.368	1.031210	38249.500000	0.001832	0.18
Y_R2 488.368	1.034000	73401.222719	0.003208	0.31
Y_R4	1.044080	35792.900000	0.003158	0.30

Sample Name: 280-114380-C-1-E MS

Date: 9/21/2018 4:32:41 PM Rack:Tube: 1:52

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054544	ppm	0.000477	0.87	1240.810000	Y 377.433
Al (394.401 nm)	1.988610	ppm	0.000382	0.02	23982.900000	Y 377.433
Al H (396.152 nm)	0.753555 u	ppm	0.007767	1.03	3645.570000	Y_R 377.433
As (188.980 nm)	1.047330	ppm	0.004282	0.41	1356.380000	Y 242.219
B (249.678 nm)	1.183330	ppm	0.004797	0.41	4440.470000	Y 242.219
Ba (493.408 nm)	2.075090	ppm	0.002268	0.11	190086.000000	Y_R 488.368
Be (234.861 nm)	0.051363	ppm	0.000558	1.09	2772.520000	Y_R 488.368
Bi (223.061 nm)	1.971170	ppm	0.001506	0.08	3222.900000	Y 377.433
Ca (315.887 nm)	374.810613	ppm	0.240753	0.06	247153.409138	Y_R 377.433
Cd (214.439 nm)	0.096132	ppm	0.001102	1.15	2429.420000	Y 377.433
Co (228.615 nm)	0.484565	ppm	0.004409	0.91	9654.010000	Y 242.219
Cr (205.560 nm)	0.190936	ppm	0.000140	0.07	921.660000	Y 377.433
Cu (324.754 nm)	0.254274	ppm	0.000150	0.06	10867.200000	Y 377.433
Fe (238.204 nm)	1.135639	ppm	0.009355	0.82	1880.253736	Y_R 377.433
Fe H (259.940 nm)	1.050020 u	ppm	0.009485	0.90	1029.550000	Y_R 377.433
K (766.491 nm)	56.098800	ppm	0.686182	1.22	60479.800000	Y_R2 488.368
Li (670.783 nm)	1.047010	ppm	0.003608	0.34	13284.900000	Y_R2 488.368
Mg (279.078 nm)	123.421000	ppm	0.036407	0.03	261935.000000	Y 377.433
Mn (257.610 nm)	0.507993	ppm	0.000279	0.05	89804.400000	Y 377.433
Mo (202.032 nm)	1.000440	ppm	0.002354	0.24	10428.800000	Y 377.433
Na (589.592 nm)	394.924000 o	ppm	0.969964	0.25	213791.000000	Y_R2 488.368
Na H (589.593 nm)	443.736406	ppm	2.525571	0.57	164943.779600	Y_R4
Ni (231.604 nm)	0.474815	ppm	0.000332	0.07	1782.070000	Y 377.433
P (213.618 nm)	10.778600	ppm	0.006327	0.06	11768.300000	Y 242.219
Pb (220.353 nm)	0.489934	ppm	0.000330	0.07	1031.800000	Y 242.219
S (181.972 nm)	421.707046 bo	ppm	1.211000	0.29	196278.511383	Y 377.433
Sb (206.834 nm)	0.534037	ppm	0.003419	0.64	873.466000	Y 377.433
Se (196.026 nm)	2.126550	ppm	0.006175	0.29	2807.140000	Y 242.219
Si (288.158 nm)	20.182500	ppm	0.181554	0.90	82013.900000	Y 377.433
Sn (189.925 nm)	1.959940	ppm	0.005843	0.30	2311.020000	Y 377.433
Sr (421.552 nm)	7.915850	ppm	0.041268	0.52	908983.268407	Y_R 488.368
Th (288.505 nm)	0.968298	ppm	0.007617	0.79	921.106000	Y 377.433
Ti (336.122 nm)	1.001340	ppm	0.000100	0.01	91197.600000	Y 377.433
Tl (190.794 nm)	1.908720	ppm	0.002484	0.13	3412.870000	Y 377.433
U (409.013 nm)	2.002830	ppm	0.015638	0.78	4859.210000	Y 377.433
V (292.401 nm)	0.505035	ppm	0.000464	0.09	20530.400000	Y 377.433
Zn (206.200 nm)	0.477455	ppm	0.000335	0.07	1621.970000	Y 377.433
Zr (343.823 nm)	0.496040	ppm	0.001052	0.21	19463.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976931	10051.358567	0.009472	0.97
Y 377.433	0.988548	420930.560619	0.011283	1.14
Y_R 377.433	1.016410	40892.400000	0.002604	0.26
Y_R 488.368	1.019890	37829.600000	0.001703	0.17
Y_R2 488.368	1.039572	73796.753278	0.021536	2.07
Y_R4	1.057660	36258.300000	0.001571	0.15

Sample Name: 280-114380-C-1-F MSD

Date: 9/21/2018 4:36:14 PM Rack:Tube: 1:53

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054552	ppm	0.000187	0.34	1237.120000	Y 377.433
Al (394.401 nm)	2.001980	ppm	0.007636	0.38	24140.500000	Y 377.433
Al H (396.152 nm)	0.750244 u	ppm	0.000438	0.06	3645.090000	Y_R 377.433
As (188.980 nm)	1.054440	ppm	0.012147	1.15	1365.650000	Y 242.219
B (249.678 nm)	1.149480	ppm	0.004228	0.37	4313.420000	Y 242.219
Ba (493.408 nm)	2.084310	ppm	0.000756	0.04	190928.000000	Y_R 488.368
Be (234.861 nm)	0.053607	ppm	0.001578	2.94	2894.020000	Y_R 488.368
Bi (223.061 nm)	1.990330	ppm	0.011380	0.57	3253.660000	Y 377.433
Ca (315.887 nm)	377.212019	ppm	2.433502	0.65	248736.953980	Y_R 377.433
Cd (214.439 nm)	0.096809	ppm	0.000016	0.02	2446.610000	Y 377.433
Co (228.615 nm)	0.489663	ppm	0.000591	0.12	9753.900000	Y 242.219
Cr (205.560 nm)	0.192948	ppm	0.001420	0.74	931.645000	Y 377.433
Cu (324.754 nm)	0.256499	ppm	0.000645	0.25	10958.700000	Y 377.433
Fe (238.204 nm)	1.143408	ppm	0.001071	0.09	1892.924783	Y_R 377.433
Fe H (259.940 nm)	1.061340 u	ppm	0.000161	0.02	1039.800000	Y_R 377.433
K (766.491 nm)	56.079800	ppm	0.480719	0.86	60459.900000	Y_R2 488.368
Li (670.783 nm)	1.056450	ppm	0.004602	0.44	13415.200000	Y_R2 488.368
Mg (279.078 nm)	123.784000	ppm	0.842773	0.68	262706.000000	Y 377.433
Mn (257.610 nm)	0.510785	ppm	0.002553	0.50	90297.700000	Y 377.433
Mo (202.032 nm)	0.963316	ppm	0.004021	0.42	10042.600000	Y 377.433
Na (589.592 nm)	394.961000 o	ppm	1.002350	0.25	213811.000000	Y_R2 488.368
Na H (589.593 nm)	446.372659	ppm	0.931285	0.21	165920.142737	Y_R4
Ni (231.604 nm)	0.477577	ppm	0.003145	0.66	1792.340000	Y 377.433
P (213.618 nm)	10.934300	ppm	0.056547	0.52	11938.400000	Y 242.219
Pb (220.353 nm)	0.490412	ppm	0.001040	0.21	1032.900000	Y 242.219
S (181.972 nm)	424.800123 bo	ppm	5.367839	1.26	197718.101210	Y 377.433
Sb (206.834 nm)	0.516030	ppm	0.002129	0.41	844.830000	Y 377.433
Se (196.026 nm)	2.146300	ppm	0.020439	0.95	2833.110000	Y 242.219
Si (288.158 nm)	19.958300	ppm	0.016708	0.08	81107.200000	Y 377.433
Sn (189.925 nm)	1.885970	ppm	0.007706	0.41	2223.780000	Y 377.433
Sr (421.552 nm)	7.944627	ppm	0.010510	0.13	912287.200290	Y_R 488.368
Th (288.505 nm)	0.961086	ppm	0.004374	0.46	913.994000	Y 377.433
Ti (336.122 nm)	0.963263	ppm	0.001927	0.20	87764.800000	Y 377.433
Tl (190.794 nm)	1.914130	ppm	0.001758	0.09	3422.880000	Y 377.433
U (409.013 nm)	2.006250	ppm	0.004396	0.22	4868.660000	Y 377.433
V (292.401 nm)	0.508138	ppm	0.001424	0.28	20658.000000	Y 377.433
Zn (206.200 nm)	0.479061	ppm	0.002107	0.44	1627.410000	Y 377.433
Zr (343.823 nm)	0.477901	ppm	0.000105	0.02	18756.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978047	10062.841105	0.020498	2.10
Y 377.433	0.993161	422894.936120	0.019173	1.93
Y_R 377.433	0.982178	39515.200000	0.006595	0.67
Y_R 488.368	0.984793	36527.800000	0.003462	0.35
Y_R2 488.368	1.062317	75411.315496	0.033782	3.18
Y_R4	1.052750	36090.000000	0.010149	0.96

Sample Name: CCVH-5320321

Date: 9/21/2018 4:39:46 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000208	ppm	0.000010	4.83	-178.351000	Y 377.433
Al (394.401 nm)	50.260600 o	ppm	0.045182	0.09	558649.000000	Y 377.433
Al H (396.152 nm)	49.203000	ppm	0.097373	0.20	84986.300000	Y_R 377.433
As (188.980 nm)	0.001303 u	ppm	0.003034	> 100.00	-10.459000	Y 242.219
B (249.678 nm)	0.007096	ppm	0.001739	24.51	11.173100	Y 242.219
Ba (493.408 nm)	0.001104	ppm	0.000029	2.59	676.100000	Y_R 488.368
Be (234.861 nm)	-0.000540 u	ppm	0.000121	22.45	-321.479000	Y_R 488.368
Bi (223.061 nm)	0.973921	ppm	0.006118	0.63	1627.960000	Y 377.433
Ca (315.887 nm)	0.154005	ppm	0.002032	1.32	99.601327	Y_R 377.433
Cd (214.439 nm)	-0.000531 u	ppm	0.000080	15.12	-9.061580	Y 377.433
Co (228.615 nm)	0.003335	ppm	0.000174	5.22	48.541000	Y 242.219
Cr (205.560 nm)	-0.000485 u	ppm	0.000682	> 100.00	-13.814100	Y 377.433
Cu (324.754 nm)	-0.000639 u	ppm	0.000279	43.61	514.056000	Y 377.433
Fe (238.204 nm)	49.508012 o	ppm	0.080915	0.16	80778.135725	Y_R 377.433
Fe H (259.940 nm)	49.776700	ppm	0.113345	0.23	45142.000000	Y_R 377.433
K (766.491 nm)	0.080603 u	ppm	0.165523	> 100.00	1840.030000	Y_R2 488.368
Li (670.783 nm)	0.005812	ppm	0.001955	33.64	-1078.780000	Y_R2 488.368
Mg (279.078 nm)	0.110465	ppm	0.012140	10.99	99.424400	Y 377.433
Mn (257.610 nm)	0.003645	ppm	0.000442	12.13	698.689000	Y 377.433
Mo (202.032 nm)	-0.000012 u	ppm	0.000520	> 100.00	20.289000	Y 377.433
Na (589.592 nm)	239.487000 o	ppm	0.306799	0.13	129629.000000	Y_R2 488.368
Na H (589.593 nm)	258.135370	ppm	1.019173	0.39	96359.595430	Y_R4
Ni (231.604 nm)	-0.000234 u	ppm	0.002062	> 100.00	22.424600	Y 377.433
P (213.618 nm)	-0.018900 u	ppm	0.001295	6.85	-22.950500	Y 242.219
Pb (220.353 nm)	0.003995	ppm	0.000222	5.56	28.171100	Y 242.219
S (181.972 nm)	5.375526	ppm	0.012403	0.23	2502.308442	Y 377.433
Sb (206.834 nm)	-0.001175 u	ppm	0.000759	64.61	21.938100	Y 377.433
Se (196.026 nm)	-0.001523 u	ppm	0.000607	39.83	-3.927880	Y 242.219
Si (288.158 nm)	0.016278	ppm	0.003641	22.37	437.864000	Y 377.433
Sn (189.925 nm)	0.002109	ppm	0.001298	61.55	2.170370	Y 377.433
Sr (421.552 nm)	0.002830	ppm	0.000043	1.53	485.169256	Y_R 488.368
Th (288.505 nm)	4.894170	ppm	0.043190	0.88	4755.110000	Y 377.433
Ti (336.122 nm)	0.001155	ppm	0.000233	20.16	-15.384500	Y 377.433
Tl (190.794 nm)	-0.002673 u	ppm	0.004278	> 100.00	-3.135470	Y 377.433
U (409.013 nm)	9.679750	ppm	0.010683	0.11	22954.600000	Y 377.433
V (292.401 nm)	-0.003545 u	ppm	0.000072	2.03	-431.328000	Y 377.433
Zn (206.200 nm)	0.000973	ppm	0.000623	64.05	8.412650	Y 377.433
Zr (343.823 nm)	-0.006729 u	ppm	0.000402	5.98	-100.377000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016380	10457.228453	0.001181	0.12
Y 377.433	1.013433	431526.984017	0.001710	0.17
Y_R 377.433	1.046340	42096.400000	0.004160	0.40
Y_R 488.368	1.066930	39574.500000	0.019084	1.79
Y_R2 488.368	1.070441	75988.037794	0.011064	1.03
Y_R4	1.073910	36815.600000	0.005024	0.47

Sample Name: CCV-5305988

Date: 9/21/2018 4:43:26 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492411	ppm	0.000891	0.18	12298.300000	Y 377.433
Al (394.401 nm)	0.496115	ppm	0.000292	0.06	5660.650000	Y 377.433
Al H (396.152 nm)	0.555835 u	ppm	0.004776	0.86	914.572000	Y_R 377.433
As (188.980 nm)	0.970956	ppm	0.001376	0.14	1256.710000	Y 242.219
B (249.678 nm)	0.494461	ppm	0.003045	0.62	1854.580000	Y 242.219
Ba (493.408 nm)	0.499649	ppm	0.002491	0.50	46180.700000	Y_R 488.368
Be (234.861 nm)	0.492101	ppm	0.004669	0.95	26645.700000	Y_R 488.368
Bi (223.061 nm)	-0.006537 u	ppm	0.001074	16.43	48.110300	Y 377.433
Ca (315.887 nm)	4.944434	ppm	0.004835	0.10	3254.520662	Y_R 377.433
Cd (214.439 nm)	0.485225	ppm	0.001089	0.22	12314.300000	Y 377.433
Co (228.615 nm)	0.488971	ppm	0.002880	0.59	9722.750000	Y 242.219
Cr (205.560 nm)	0.476368	ppm	0.003857	0.81	2322.490000	Y 377.433
Cu (324.754 nm)	0.494189	ppm	0.000508	0.10	21231.000000	Y 377.433
Fe (238.204 nm)	2.494286	ppm	0.008373	0.34	4096.278789	Y_R 377.433
Fe H (259.940 nm)	2.420480 u	ppm	0.003466	0.14	2270.230000	Y_R 377.433
K (766.491 nm)	48.857700	ppm	0.025405	0.05	52899.800000	Y_R2 488.368
Li (670.783 nm)	0.950649	ppm	0.007590	0.80	11955.600000	Y_R2 488.368
Mg (279.078 nm)	19.551100	ppm	0.072390	0.37	41500.200000	Y 377.433
Mn (257.610 nm)	0.490946	ppm	0.001634	0.33	86792.600000	Y 377.433
Mo (202.032 nm)	0.488052	ppm	0.001684	0.35	5098.010000	Y 377.433
Na (589.592 nm)	25.411600	ppm	0.075052	0.30	13659.900000	Y_R2 488.368
Na H (589.593 nm)	33.790548 u	ppm	0.033785	0.10	13150.407133	Y_R4
Ni (231.604 nm)	0.489142	ppm	0.002754	0.56	1829.130000	Y 377.433
P (213.618 nm)	0.982513	ppm	0.003119	0.32	1051.830000	Y 242.219
Pb (220.353 nm)	0.984245	ppm	0.001922	0.20	2061.610000	Y 242.219
S (181.972 nm)	0.319149	ppm	0.022259	6.97	151.391201	Y 377.433
Sb (206.834 nm)	1.009590	ppm	0.001691	0.17	1651.790000	Y 377.433
Se (196.026 nm)	0.988270	ppm	0.006318	0.64	1309.320000	Y 242.219
Si (288.158 nm)	4.932840	ppm	0.015377	0.31	20325.700000	Y 377.433
Sn (189.925 nm)	0.979279	ppm	0.000736	0.08	1154.450000	Y 377.433
Sr (421.552 nm)	0.495726	ppm	0.002626	0.53	57069.805472	Y_R 488.368
Th (288.505 nm)	-0.017992 u	ppm	0.003066	17.04	-37.087000	Y 377.433
Ti (336.122 nm)	0.492192	ppm	0.000643	0.13	44351.600000	Y 377.433
Tl (190.794 nm)	0.994729	ppm	0.000451	0.05	1780.800000	Y 377.433
U (409.013 nm)	-0.006512 u	ppm	0.006817	> 100.00	187.817000	Y 377.433
V (292.401 nm)	0.487978	ppm	0.000821	0.17	19756.000000	Y 377.433
Zn (206.200 nm)	0.478809	ppm	0.000529	0.11	1626.580000	Y 377.433
Zr (343.823 nm)	0.489917	ppm	0.000514	0.10	19226.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039874	10698.951109	0.006638	0.64
Y 377.433	1.041709	443566.959120	0.005537	0.53
Y_R 377.433	1.056060	42487.500000	0.001809	0.17
Y_R 488.368	1.065000	39502.800000	0.007169	0.67
Y_R2 488.368	1.064676	75578.806041	0.007719	0.73
Y_R4	1.049930	35993.400000	0.005850	0.56

Sample Name: CCB

Date: 9/21/2018 4:47:00 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001313 u	ppm	0.000916	69.78	-121.234000	Y 377.433
Al (394.401 nm)	-0.007429 u	ppm	0.001507	20.28	-39.148800	Y 377.433
Al H (396.152 nm)	0.149608 Zu	ppm	0.008508	5.69	15.911400 Z	Y_R 377.433
As (188.980 nm)	0.001983	ppm	0.002355	> 100.00	-7.645880	Y 242.219
B (249.678 nm)	0.001992	ppm	0.000234	11.76	6.993290	Y 242.219
Ba (493.408 nm)	-0.000294 u	ppm	0.000287	97.49	512.395000	Y_R 488.368
Be (234.861 nm)	0.000025 u	ppm	0.000139	> 100.00	-2.544690	Y_R 488.368
Bi (223.061 nm)	-0.010318 u	ppm	0.002455	23.80	41.645600	Y 377.433
Ca (315.887 nm)	0.066906	ppm	0.009127	13.64	38.118922	Y_R 377.433
Cd (214.439 nm)	0.000142	ppm	0.000009	6.10	-9.491660	Y 377.433
Co (228.615 nm)	-0.000289 u	ppm	0.000374	> 100.00	-23.494800	Y 242.219
Cr (205.560 nm)	0.000341	ppm	0.000013	3.71	-8.562200	Y 377.433
Cu (324.754 nm)	0.000240	ppm	0.000259	> 100.00	151.848000	Y 377.433
Fe (238.204 nm)	-0.009380 u	ppm	0.001163	12.40	12.667667	Y_R 377.433
Fe H (259.940 nm)	-0.075451 u	ppm	0.004427	5.87	10.656600	Y_R 377.433
K (766.491 nm)	0.017138 u	ppm	0.136018	> 100.00	1773.600000	Y_R2 488.368
Li (670.783 nm)	-0.001082 u	ppm	0.003025	> 100.00	-1173.880000	Y_R2 488.368
Mg (279.078 nm)	0.061790 Z	ppm	0.044683	72.31	137.729000 Z	Y 377.433
Mn (257.610 nm)	0.001618 Z	ppm	0.001311	80.98	340.713000 Z	Y 377.433
Mo (202.032 nm)	0.000002 u	ppm	0.000500	> 100.00	20.440900	Y 377.433
Na (589.592 nm)	0.729712 Z	ppm	0.056202	7.70	298.488000 Z	Y_R2 488.368
Na H (589.593 nm)	7.222050 u	ppm	0.253652	3.51	3352.980371	Y_R4
Ni (231.604 nm)	-0.000465 u	ppm	0.000759	> 100.00	14.450300	Y 377.433
P (213.618 nm)	0.000711 u	ppm	0.003668	> 100.00	-0.393434	Y 242.219
Pb (220.353 nm)	-0.001236 u	ppm	0.002951	> 100.00	6.835990	Y 242.219
S (181.972 nm)	0.188526 Z	ppm	0.096023	50.93	88.679162 Z	Y 377.433
Sb (206.834 nm)	-0.005607 u	ppm	0.003876	69.12	10.788400	Y 377.433
Se (196.026 nm)	-0.000597 u	ppm	0.000359	60.18	8.371160	Y 242.219
Si (288.158 nm)	0.000534 u	ppm	0.001358	> 100.00	373.378000	Y 377.433
Sn (189.925 nm)	0.000945 u	ppm	0.001470	> 100.00	0.623336	Y 377.433
Sr (421.552 nm)	0.001094	ppm	0.000661	60.40	280.168986	Y_R 488.368
Th (288.505 nm)	-0.006555 u	ppm	0.000167	2.55	2.227370	Y 377.433
Ti (336.122 nm)	0.000132	ppm	0.000071	53.78	-99.069600	Y 377.433
Tl (190.794 nm)	0.000762 u	ppm	0.002379	> 100.00	3.708950	Y 377.433
U (409.013 nm)	0.009351	ppm	0.003201	34.23	269.222000	Y 377.433
V (292.401 nm)	0.000439	ppm	0.000228	51.88	-245.836000	Y 377.433
Zn (206.200 nm)	0.000091	ppm	0.000105	> 100.00	4.588300	Y 377.433
Zr (343.823 nm)	0.000193	ppm	0.000086	44.74	121.562000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040588	10706.303445	0.001318	0.13
Y 377.433	1.041120	443316.045735	0.000258	0.02
Y_R 377.433	1.037620	41745.600000	0.003298	0.32
Y_R 488.368	1.051650	39007.700000	0.013575	1.29
Y_R2 488.368	1.045269	74201.137997	0.000345	0.03
Y_R4	1.038970	35617.700000	0.004111	0.40

Sample Name: CCVL-5320254

Date: 9/21/2018 4:50:11 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008162	ppm	0.000026	0.31	117.796000	Y 377.433
Al (394.401 nm)	0.087921	ppm	0.000433	0.49	1025.370000	Y 377.433
Al H (396.152 nm)	0.248431 u	ppm	0.011064	4.45	191.639000	Y_R 377.433
As (188.980 nm)	0.014782	ppm	0.001168	7.90	9.051200	Y 242.219
B (249.678 nm)	0.099014	ppm	0.000343	0.35	371.110000	Y 242.219
Ba (493.408 nm)	0.010426	ppm	0.000231	2.22	1491.670000	Y_R 488.368
Be (234.861 nm)	0.001022	ppm	0.000041	4.00	50.901200	Y_R 488.368
Bi (223.061 nm)	0.088792	ppm	0.002926	3.30	200.772000	Y 377.433
Ca (315.887 nm)	0.244292	ppm	0.001813	0.74	155.100028	Y_R 377.433
Cd (214.439 nm)	0.005078	ppm	0.000113	2.23	115.933000	Y 377.433
Co (228.615 nm)	0.010010	ppm	0.000101	1.01	181.638000	Y 242.219
Cr (205.560 nm)	0.009754	ppm	0.000121	1.24	37.464300	Y 377.433
Cu (324.754 nm)	0.015503	ppm	0.000823	5.31	803.050000	Y 377.433
Fe (238.204 nm)	0.091590	ppm	0.004341	4.74	177.355156	Y_R 377.433
Fe H (259.940 nm)	0.021336 u	ppm	0.002333	10.94	98.277800	Y_R 377.433
K (766.491 nm)	2.971680	ppm	0.004684	0.16	4866.410000	Y_R2 488.368
Li (670.783 nm)	0.022787	ppm	0.003055	13.41	-844.597000	Y_R2 488.368
Mg (279.078 nm)	0.234125	ppm	0.003596	1.54	502.956000	Y 377.433
Mn (257.610 nm)	0.011225	ppm	0.000187	1.66	2037.980000	Y 377.433
Mo (202.032 nm)	0.019034	ppm	0.000087	0.46	218.436000	Y 377.433
Na (589.592 nm)	1.740220 Q	ppm	0.021164	1.22	845.696000 Q	Y_R2 488.368
Na H (589.593 nm)	7.156425 u	ppm	0.053770	0.75	3327.631937	Y_R4
Ni (231.604 nm)	0.040006	ppm	0.000889	2.22	164.376000	Y 377.433
P (213.618 nm)	2.857040	ppm	0.002597	0.09	3120.830000	Y 242.219
Pb (220.353 nm)	0.009107	ppm	0.003196	35.10	28.431600	Y 242.219
S (181.972 nm)	0.231380 Q	ppm	0.004318	1.87	108.661586 Q	Y 377.433
Sb (206.834 nm)	0.018088	ppm	0.000669	3.70	48.982900	Y 377.433
Se (196.026 nm)	0.014512	ppm	0.001377	9.49	28.238100	Y 242.219
Si (288.158 nm)	0.482722	ppm	0.002925	0.61	2323.940000	Y 377.433
Sn (189.925 nm)	0.096967	ppm	0.002645	2.73	113.869000	Y 377.433
Sr (421.552 nm)	0.010870	ppm	0.000020	0.19	1402.637401	Y_R 488.368
Th (288.505 nm)	0.000305 Qu	ppm	0.002821	> 100.00	8.560470 Q	Y 377.433
Ti (336.122 nm)	0.010153	ppm	0.000015	0.15	806.364000	Y 377.433
Tl (190.794 nm)	0.014343	ppm	0.001998	13.93	27.940800	Y 377.433
U (409.013 nm)	0.052064	ppm	0.000006	0.01	368.045000	Y 377.433
V (292.401 nm)	0.010308	ppm	0.000261	2.53	158.134000	Y 377.433
Zn (206.200 nm)	0.018879	ppm	0.000498	2.64	68.247200	Y 377.433
Zr (343.823 nm)	0.014368	ppm	0.000028	0.20	674.555000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.059906	10905.055744	0.000162	0.02
Y 377.433	1.060816	451702.756201	0.003902	0.37
Y_R 377.433	1.061140	42691.800000	0.002424	0.23
Y_R 488.368	1.058150	39248.600000	0.000329	0.03
Y_R2 488.368	1.066835	75732.043920	0.000500	0.05
Y_R4	1.064550	36494.700000	0.003268	0.31

Sample Name: 280-114436-C-1-B

Date: 9/21/2018 4:53:39 PM Rack:Tube: 1:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001719	ppm	0.000279	16.22	-44.596800	Y 377.433
Al (394.401 nm)	0.057459	ppm	0.000227	0.39	2443.200000	Y 377.433
Al H (396.152 nm)	-1.152120 u	ppm	0.006982	0.61	199.439000	Y_R 377.433
As (188.980 nm)	0.001482	ppm	0.000831	56.09	-8.311940	Y 242.219
B (249.678 nm)	0.157581	ppm	0.001675	1.06	590.829000	Y 242.219
Ba (493.408 nm)	0.017928	ppm	0.000062	0.34	2177.160000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000015	> 100.00	-6.616090	Y_R 488.368
Bi (223.061 nm)	0.011939	ppm	0.002721	22.79	77.431100	Y 377.433
Ca (315.887 nm)	371.339587	ppm	0.167385	0.05	244864.362630	Y_R 377.433
Cd (214.439 nm)	0.000278	ppm	0.000164	59.11	-5.903120	Y 377.433
Co (228.615 nm)	-0.000304 u	ppm	0.000087	28.61	-23.783000	Y 242.219
Cr (205.560 nm)	0.000567	ppm	0.000624	> 100.00	-7.463670	Y 377.433
Cu (324.754 nm)	-0.000752 u	ppm	0.000032	4.22	-76.102700	Y 377.433
Fe (238.204 nm)	0.398641	ppm	0.001435	0.36	678.171266	Y_R 377.433
Fe H (259.940 nm)	0.305507 u	ppm	0.000684	0.22	355.540000	Y_R 377.433
K (766.491 nm)	2.254350	ppm	0.084445	3.75	4115.510000	Y_R2 488.368
Li (670.783 nm)	0.027578	ppm	0.007730	28.03	-778.501000	Y_R2 488.368
Mg (279.078 nm)	73.567800	ppm	0.097618	0.13	156147.000000	Y 377.433
Mn (257.610 nm)	0.028372	ppm	0.000060	0.21	5067.410000	Y 377.433
Mo (202.032 nm)	0.000815	ppm	0.000086	10.56	28.890900	Y 377.433
Na (589.592 nm)	311.530000 o	ppm	0.645089	0.21	168652.000000	Y_R2 488.368
Na H (589.593 nm)	336.552756	ppm	2.794174	0.83	125425.115804	Y_R4
Ni (231.604 nm)	-0.001468 u	ppm	0.000284	19.37	16.278100	Y 377.433
P (213.618 nm)	0.057667	ppm	0.003588	6.22	61.745400	Y 242.219
Pb (220.353 nm)	0.003357	ppm	0.003023	90.04	16.309500	Y 242.219
S (181.972 nm)	427.687244 bo	ppm	3.436275	0.80	199059.657425	Y 377.433
Sb (206.834 nm)	-0.007173 u	ppm	0.000090	1.25	8.289510	Y 377.433
Se (196.026 nm)	0.047090	ppm	0.000946	2.01	71.043100	Y 242.219
Si (288.158 nm)	11.236200	ppm	0.072145	0.64	45824.100000	Y 377.433
Sn (189.925 nm)	0.000691	ppm	0.000776	> 100.00	0.325353	Y 377.433
Sr (421.552 nm)	7.702790	ppm	0.128799	1.67	884521.458113	Y_R 488.368
Th (288.505 nm)	-0.022275 u	ppm	0.011382	51.10	-13.019700	Y 377.433
Ti (336.122 nm)	0.000687	ppm	0.000024	3.45	819.992000	Y 377.433
Tl (190.794 nm)	-0.003164 u	ppm	0.001436	45.40	-3.329390	Y 377.433
U (409.013 nm)	-0.005230 u	ppm	0.001772	33.88	199.606000	Y 377.433
V (292.401 nm)	0.003696	ppm	0.000156	4.21	-109.054000	Y 377.433
Zn (206.200 nm)	0.007839	ppm	0.000338	4.31	30.845900	Y 377.433
Zr (343.823 nm)	0.000675	ppm	0.000286	42.36	140.750000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985596	10140.510245	0.016583	1.68
Y 377.433	0.995377	423838.712986	0.019927	2.00
Y_R 377.433	1.030100	41443.300000	0.031240	3.03
Y_R 488.368	1.012260	37546.500000	0.020571	2.03
Y_R2 488.368	1.052362	74704.634275	0.014819	1.41
Y_R4	1.087640	37286.100000	0.011254	1.03

Sample Name: MB 280-430191/1-A

Date: 9/21/2018 4:57:11 PM Rack:Tube: 1:55

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001104 u	ppm	0.000244	22.11	-115.912000	Y 377.433
Al (394.401 nm)	-0.000224 u	ppm	0.000993	> 100.00	38.082800	Y 377.433
Al H (396.152 nm)	0.149867 u	ppm	0.000599	0.40	16.191800	Y_R 377.433
As (188.980 nm)	0.000655	ppm	0.000124	18.87	-9.378100	Y 242.219
B (249.678 nm)	0.002430	ppm	0.001914	78.77	8.636790	Y 242.219
Ba (493.408 nm)	0.000035 u	ppm	0.000565	> 100.00	542.406000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000038	69.39	-0.969357	Y_R 488.368
Bi (223.061 nm)	-0.007206 u	ppm	0.000027	0.37	46.643500	Y 377.433
Ca (315.887 nm)	0.052742	ppm	0.014610	27.70	28.778030	Y_R 377.433
Cd (214.439 nm)	0.000079	ppm	0.000083	> 100.00	-11.085800	Y 377.433
Co (228.615 nm)	0.000165	ppm	0.000083	50.34	-14.488800	Y 242.219
Cr (205.560 nm)	0.000316	ppm	0.000083	26.15	-8.676930	Y 377.433
Cu (324.754 nm)	0.000698	ppm	0.000204	29.15	173.130000	Y 377.433
Fe (238.204 nm)	-0.002225 u	ppm	0.004048	> 100.00	24.337955	Y_R 377.433
Fe H (259.940 nm)	-0.071703 u	ppm	0.000810	1.13	14.049300	Y_R 377.433
K (766.491 nm)	0.020453	ppm	0.021062	> 100.00	1777.070000	Y_R2 488.368
Li (670.783 nm)	-0.001410 u	ppm	0.001188	84.25	-1178.410000	Y_R2 488.368
Mg (279.078 nm)	0.048785	ppm	0.019402	39.77	110.210000	Y 377.433
Mn (257.610 nm)	0.001424	ppm	0.000473	33.21	306.315000	Y 377.433
Mo (202.032 nm)	-0.000372 u	ppm	0.000511	> 100.00	16.542300	Y 377.433
Na (589.592 nm)	0.571802	ppm	0.014950	2.61	212.948000	Y_R2 488.368
Na H (589.593 nm)	5.498644 u	ppm	0.024748	0.45	2714.133583	Y_R4
Ni (231.604 nm)	-0.001285 u	ppm	0.000030	2.37	11.415000	Y 377.433
P (213.618 nm)	-0.002148 u	ppm	0.003665	> 100.00	-3.521160	Y 242.219
Pb (220.353 nm)	0.000650 u	ppm	0.002602	> 100.00	10.760100	Y 242.219
S (181.972 nm)	0.180380	ppm	0.047500	26.33	84.885902	Y 377.433
Sb (206.834 nm)	-0.004142 u	ppm	0.002216	53.50	13.164100	Y 377.433
Se (196.026 nm)	-0.001105 u	ppm	0.002015	> 100.00	7.700850	Y 242.219
Si (288.158 nm)	0.005276	ppm	0.000859	16.27	392.559000	Y 377.433
Sn (189.925 nm)	-0.000105 u	ppm	0.000474	> 100.00	-0.615931	Y 377.433
Sr (421.552 nm)	0.000727	ppm	0.000266	36.58	238.014115	Y_R 488.368
Th (288.505 nm)	-0.002417 u	ppm	0.006714	> 100.00	6.204380	Y 377.433
Ti (336.122 nm)	0.000213	ppm	0.000111	51.90	-91.822700	Y 377.433
Tl (190.794 nm)	-0.000638 u	ppm	0.001547	> 100.00	1.204900	Y 377.433
U (409.013 nm)	-0.004322 u	ppm	0.015266	> 100.00	237.224000	Y 377.433
V (292.401 nm)	0.000070 u	ppm	0.000225	> 100.00	-260.144000	Y 377.433
Zn (206.200 nm)	0.002893	ppm	0.000070	2.41	14.082800	Y 377.433
Zr (343.823 nm)	-0.000404 u	ppm	0.000161	39.73	98.262700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041828	10719.058570	0.007488	0.72
Y 377.433	1.042736	444004.137003	0.007837	0.75
Y_R 377.433	1.041630	41906.900000	0.009602	0.92
Y_R 488.368	1.050180	38953.100000	0.011006	1.05
Y_R2 488.368	1.051708	74658.224910	0.009865	0.94
Y_R4	1.066240	36552.600000	0.003317	0.31

Sample Name: LCS 280-430191/2-A

Date: 9/21/2018 5:00:22 PM Rack:Tube: 1:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050822	ppm	0.000057	0.11	1146.210000	Y 377.433
Al (394.401 nm)	2.010690	ppm	0.000592	0.03	22654.200000	Y 377.433
Al H (396.152 nm)	1.978100	ppm	0.006902	0.35	3572.880000	Y_R 377.433
As (188.980 nm)	0.989512	ppm	0.003724	0.38	1280.940000	Y 242.219
B (249.678 nm)	1.022180	ppm	0.004285	0.42	3835.680000	Y 242.219
Ba (493.408 nm)	2.034780	ppm	0.002820	0.14	186403.000000	Y_R 488.368
Be (234.861 nm)	0.050244	ppm	0.000360	0.72	2712.740000	Y_R 488.368
Bi (223.061 nm)	1.900410	ppm	0.003737	0.20	3109.270000	Y 377.433
Ca (315.887 nm)	49.981411	ppm	0.027865	0.06	32953.126943	Y_R 377.433
Cd (214.439 nm)	0.098558	ppm	0.000355	0.36	2490.990000	Y 377.433
Co (228.615 nm)	0.482708	ppm	0.000741	0.15	9617.190000	Y 242.219
Cr (205.560 nm)	0.195564	ppm	0.000930	0.48	944.337000	Y 377.433
Cu (324.754 nm)	0.245767	ppm	0.000365	0.15	10661.600000	Y 377.433
Fe (238.204 nm)	0.993588	ppm	0.004814	0.48	1648.561379	Y_R 377.433
Fe H (259.940 nm)	0.931575 u	ppm	0.001935	0.21	922.322000	Y_R 377.433
K (766.491 nm)	50.734100	ppm	0.126306	0.25	54863.900000	Y_R2 488.368
Li (670.783 nm)	0.973541	ppm	0.003326	0.34	12271.400000	Y_R2 488.368
Mg (279.078 nm)	49.346600	ppm	0.068716	0.14	104719.000000	Y 377.433
Mn (257.610 nm)	0.494918	ppm	0.000169	0.03	87494.300000	Y 377.433
Mo (202.032 nm)	1.004290	ppm	0.000597	0.06	10468.800000	Y 377.433
Na (589.592 nm)	48.818600	ppm	0.134065	0.27	26313.300000	Y_R2 488.368
Na H (589.593 nm)	55.927827	ppm	0.093789	0.17	21197.998159	Y_R4
Ni (231.604 nm)	0.479854	ppm	0.000540	0.11	1795.990000	Y 377.433
P (213.618 nm)	10.242100	ppm	0.068893	0.67	11182.500000	Y 242.219
Pb (220.353 nm)	0.500753	ppm	0.001755	0.35	1054.530000	Y 242.219
S (181.972 nm)	2.092733	ppm	0.026165	1.25	980.433853	Y 377.433
Sb (206.834 nm)	0.515924	ppm	0.000904	0.18	844.154000	Y 377.433
Se (196.026 nm)	1.994410	ppm	0.000645	0.03	2633.320000	Y 242.219
Si (288.158 nm)	10.048700	ppm	0.064363	0.64	41020.300000	Y 377.433
Sn (189.925 nm)	1.992870	ppm	0.005063	0.25	2349.850000	Y 377.433
Sr (421.552 nm)	1.004786	ppm	0.001787	0.18	115515.375548	Y_R 488.368
Th (288.505 nm)	0.963857	ppm	0.003298	0.34	917.153000	Y 377.433
Ti (336.122 nm)	0.996665	ppm	0.000093	0.01	90015.100000	Y 377.433
Tl (190.794 nm)	2.009200	ppm	0.001947	0.10	3592.710000	Y 377.433
U (409.013 nm)	1.975040	ppm	0.004356	0.22	4825.350000	Y 377.433
V (292.401 nm)	0.503560	ppm	0.000484	0.10	20462.500000	Y 377.433
Zn (206.200 nm)	0.482103	ppm	0.000983	0.20	1637.710000	Y 377.433
Zr (343.823 nm)	0.493871	ppm	0.000002	0.00	19379.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025133	10547.291741	0.001804	0.18
Y 377.433	1.027371	437461.797763	0.002093	0.20
Y_R 377.433	1.045810	42075.400000	0.005263	0.50
Y_R 488.368	1.052950	39055.700000	0.007156	0.68
Y_R2 488.368	1.048743	74447.786891	0.000698	0.07
Y_R4	1.063840	36470.400000	0.002171	0.20

Sample Name: 280-114433-A-1-A

Date: 9/21/2018 5:03:54 PM Rack:Tube: 1:57

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001674 u	ppm	0.000450	26.90	-130.250000	Y 377.433
Al (394.401 nm)	-0.010729 u	ppm	0.000837	7.80	-78.624400	Y 377.433
Al H (396.152 nm)	0.140411 u	ppm	0.000659	0.47	-0.326354	Y_R 377.433
As (188.980 nm)	0.000374 u	ppm	0.003542	> 100.00	-9.744640	Y 242.219
B (249.678 nm)	0.002915	ppm	0.001104	37.87	10.459700	Y 242.219
Ba (493.408 nm)	-0.000363 u	ppm	0.000368	> 100.00	506.115000	Y_R 488.368
Be (234.861 nm)	0.000069	ppm	0.000039	55.69	-0.155184	Y_R 488.368
Bi (223.061 nm)	-0.003235 u	ppm	0.006605	> 100.00	53.017000	Y 377.433
Ca (315.887 nm)	0.025759	ppm	0.000635	2.47	10.983815	Y_R 377.433
Cd (214.439 nm)	0.000139	ppm	0.000157	> 100.00	-9.569340	Y 377.433
Co (228.615 nm)	0.000006 u	ppm	0.000106	> 100.00	-17.651100	Y 242.219
Cr (205.560 nm)	0.000091	ppm	0.000001	1.35	-9.786630	Y 377.433
Cu (324.754 nm)	0.000340	ppm	0.000213	62.72	157.636000	Y 377.433
Fe (238.204 nm)	-0.005421 u	ppm	0.002533	46.73	19.125434	Y_R 377.433
Fe H (259.940 nm)	-0.069115 u	ppm	0.002106	3.05	16.392900	Y_R 377.433
K (766.491 nm)	-0.050194 u	ppm	0.060001	> 100.00	1703.110000	Y_R2 488.368
Li (670.783 nm)	-0.000651 u	ppm	0.002524	> 100.00	-1167.930000	Y_R2 488.368
Mg (279.078 nm)	0.048576	ppm	0.001807	3.72	109.791000	Y 377.433
Mn (257.610 nm)	0.000981	ppm	0.000019	1.96	228.040000	Y 377.433
Mo (202.032 nm)	0.000051 u	ppm	0.000263	> 100.00	20.941300	Y 377.433
Na (589.592 nm)	0.404691	ppm	0.034216	8.45	122.441000	Y_R2 488.368
Na H (589.593 nm)	4.330286 u	ppm	0.077227	1.78	2281.138020	Y_R4
Ni (231.604 nm)	-0.000024 u	ppm	0.000757	> 100.00	16.087900	Y 377.433
P (213.618 nm)	0.003580	ppm	0.003824	> 100.00	2.746300	Y 242.219
Pb (220.353 nm)	-0.001350 u	ppm	0.000535	39.65	6.582230	Y 242.219
S (181.972 nm)	0.141980	ppm	0.002815	1.98	67.013221	Y 377.433
Sb (206.834 nm)	-0.005224 u	ppm	0.000559	10.71	11.407800	Y 377.433
Se (196.026 nm)	0.000130 u	ppm	0.002024	> 100.00	9.326350	Y 242.219
Si (288.158 nm)	0.002090	ppm	0.000389	18.60	379.671000	Y 377.433
Sn (189.925 nm)	0.002136	ppm	0.001314	61.50	2.028010	Y 377.433
Sr (421.552 nm)	0.000210	ppm	0.000031	14.72	178.650016	Y_R 488.368
Th (288.505 nm)	-0.005276 u	ppm	0.000985	18.66	3.432240	Y 377.433
Ti (336.122 nm)	0.000386	ppm	0.000307	79.45	-76.231200	Y 377.433
Tl (190.794 nm)	0.005175	ppm	0.000813	15.71	11.608300	Y 377.433
U (409.013 nm)	-0.008613 u	ppm	0.003668	42.58	227.152000	Y 377.433
V (292.401 nm)	0.000349	ppm	0.000218	62.54	-248.700000	Y 377.433
Zn (206.200 nm)	0.001175	ppm	0.000391	33.24	8.262710	Y 377.433
Zr (343.823 nm)	-0.000119 u	ppm	0.000095	79.88	109.403000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.070561	11014.688282	0.002814	0.26
Y 377.433	1.066807	454253.768984	0.000278	0.03
Y_R 377.433	1.077010	43330.300000	0.000478	0.04
Y_R 488.368	1.070810	39718.400000	0.009950	0.93
Y_R2 488.368	1.087858	77224.457847	0.003877	0.36
Y_R4	1.078390	36969.200000	0.007391	0.69

Sample Name: 280-114433-A-2-A

Date: 9/21/2018 5:07:06 PM Rack:Tube: 1:58

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001661 u	ppm	0.000480	28.88	-130.029000	Y 377.433
Al (394.401 nm)	-0.009704 u	ppm	0.000423	4.36	-65.187900	Y 377.433
Al H (396.152 nm)	0.134825 u	ppm	0.010722	7.95	-9.965100	Y_R 377.433
As (188.980 nm)	0.001560	ppm	0.001340	85.90	-8.197600	Y 242.219
B (249.678 nm)	0.001464	ppm	0.000711	48.56	5.011910	Y 242.219
Ba (493.408 nm)	-0.000248 u	ppm	0.000099	39.98	516.621000	Y_R 488.368
Be (234.861 nm)	-0.000002 u	ppm	0.000042	> 100.00	-4.028390	Y_R 488.368
Bi (223.061 nm)	-0.009116 u	ppm	0.001161	12.74	43.575400	Y 377.433
Ca (315.887 nm)	0.035443	ppm	0.008850	24.97	17.370075	Y_R 377.433
Cd (214.439 nm)	0.000089 u	ppm	0.000130	> 100.00	-10.848400	Y 377.433
Co (228.615 nm)	0.000189	ppm	0.000166	88.13	-14.009600	Y 242.219
Cr (205.560 nm)	-0.000030 u	ppm	0.000459	> 100.00	-10.375600	Y 377.433
Cu (324.754 nm)	0.000593	ppm	0.000235	39.61	167.239000	Y 377.433
Fe (238.204 nm)	-0.005418 u	ppm	0.002570	47.43	19.129873	Y_R 377.433
Fe H (259.940 nm)	-0.070061 u	ppm	0.000240	0.34	15.536000	Y_R 377.433
K (766.491 nm)	-0.144072 u	ppm	0.046178	32.05	1604.840000	Y_R2 488.368
Li (670.783 nm)	0.006650	ppm	0.000214	3.22	-1067.200000	Y_R2 488.368
Mg (279.078 nm)	0.015516	ppm	0.009037	58.24	39.549000	Y 377.433
Mn (257.610 nm)	0.000416	ppm	0.000189	45.31	128.337000	Y 377.433
Mo (202.032 nm)	-0.000508 u	ppm	0.000546	> 100.00	15.130800	Y 377.433
Na (589.592 nm)	0.421369	ppm	0.002820	0.67	131.472000	Y_R2 488.368
Na H (589.593 nm)	3.907213 u	ppm	0.010628	0.27	2124.300309	Y_R4
Ni (231.604 nm)	-0.001152 u	ppm	0.000967	83.97	11.905300	Y 377.433
P (213.618 nm)	-0.002779 u	ppm	0.004848	> 100.00	-4.213880	Y 242.219
Pb (220.353 nm)	0.000092 u	ppm	0.001333	> 100.00	9.602770	Y 242.219
S (181.972 nm)	0.073342	ppm	0.020974	28.60	35.070338	Y 377.433
Sb (206.834 nm)	-0.004670 u	ppm	0.001368	29.29	12.304000	Y 377.433
Se (196.026 nm)	-0.001512 u	ppm	0.001459	96.49	7.164360	Y 242.219
Si (288.158 nm)	-0.001642 u	ppm	0.000646	39.35	364.577000	Y 377.433
Sn (189.925 nm)	0.001565	ppm	0.000025	1.62	1.353590	Y 377.433
Sr (421.552 nm)	0.000332	ppm	0.000293	88.25	192.723034	Y_R 488.368
Th (288.505 nm)	-0.005261 u	ppm	0.002200	41.81	3.464170	Y 377.433
Ti (336.122 nm)	0.000282	ppm	0.000059	20.80	-85.662400	Y 377.433
Tl (190.794 nm)	0.000922	ppm	0.000600	65.09	3.996800	Y 377.433
U (409.013 nm)	-0.010288 u	ppm	0.004151	40.35	223.262000	Y 377.433
V (292.401 nm)	0.000354	ppm	0.000126	35.66	-249.087000	Y 377.433
Zn (206.200 nm)	0.001522	ppm	0.000913	59.98	9.436090	Y 377.433
Zr (343.823 nm)	-0.000234 u	ppm	0.000265	> 100.00	104.920000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.081741	11129.712899	0.001048	0.10
Y 377.433	1.078810	459364.788673	0.000971	0.09
Y_R 377.433	1.083970	43610.500000	0.001341	0.12
Y_R 488.368	1.101530	40857.800000	0.018684	1.70
Y_R2 488.368	1.101108	78165.047195	0.003820	0.35
Y_R4	1.077740	36947.000000	0.005106	0.47

Sample Name: 280-114433-A-2-Asd@5

Date: 9/21/2018 5:10:17 PM Rack:Tube: 1:59

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001693 u	ppm	0.000462	27.26	-130.775000	Y 377.433
Al (394.401 nm)	-0.010005 u	ppm	0.001418	14.17	-68.646200	Y 377.433
Al H (396.152 nm)	0.136819 u	ppm	0.003492	2.55	-6.456630	Y_R 377.433
As (188.980 nm)	0.000264 u	ppm	0.001127	> 100.00	-9.889270	Y 242.219
B (249.678 nm)	0.001203	ppm	0.000264	21.94	4.036280	Y 242.219
Ba (493.408 nm)	-0.000096 u	ppm	0.000173	> 100.00	530.479000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000064	> 100.00	-5.342640	Y_R 488.368
Bi (223.061 nm)	-0.009319 u	ppm	0.001294	13.89	43.248700	Y 377.433
Ca (315.887 nm)	0.005961	ppm	0.001292	21.68	-2.071033	Y_R 377.433
Cd (214.439 nm)	0.000022 u	ppm	0.000157	> 100.00	-12.555400	Y 377.433
Co (228.615 nm)	0.000213	ppm	0.000194	90.65	-13.524400	Y 242.219
Cr (205.560 nm)	-0.000049 u	ppm	0.000905	> 100.00	-10.468600	Y 377.433
Cu (324.754 nm)	0.000765	ppm	0.000082	10.77	174.325000	Y 377.433
Fe (238.204 nm)	-0.013090 u	ppm	0.001168	8.92	6.615716	Y_R 377.433
Fe H (259.940 nm)	-0.078611 u	ppm	0.003459	4.40	7.795580	Y_R 377.433
K (766.491 nm)	-0.066920 u	ppm	0.064396	96.23	1685.610000	Y_R2 488.368
Li (670.783 nm)	-0.001170 u	ppm	0.006876	> 100.00	-1175.090000	Y_R2 488.368
Mg (279.078 nm)	0.017131	ppm	0.001451	8.47	43.065600	Y 377.433
Mn (257.610 nm)	0.000258	ppm	0.000050	19.30	100.426000	Y 377.433
Mo (202.032 nm)	-0.000622 u	ppm	0.000472	75.96	13.944900	Y 377.433
Na (589.592 nm)	0.318313	ppm	0.000466	0.15	75.650400	Y_R2 488.368
Na H (589.593 nm)	3.659145 u	ppm	0.075806	2.07	2032.358603	Y_R4
Ni (231.604 nm)	-0.001037 u	ppm	0.000664	64.01	12.327400	Y 377.433
P (213.618 nm)	-0.001905 u	ppm	0.004720	> 100.00	-3.244950	Y 242.219
Pb (220.353 nm)	0.001864	ppm	0.002170	> 100.00	13.289700	Y 242.219
S (181.972 nm)	0.084012	ppm	0.006873	8.18	40.033306	Y 377.433
Sb (206.834 nm)	-0.002974 u	ppm	0.000706	23.73	15.051300	Y 377.433
Se (196.026 nm)	-0.001476 u	ppm	0.002198	> 100.00	7.213820	Y 242.219
Si (288.158 nm)	-0.001798 u	ppm	0.001297	72.14	363.943000	Y 377.433
Sn (189.925 nm)	-0.000201 u	ppm	0.000860	> 100.00	-0.729126	Y 377.433
Sr (421.552 nm)	0.000519	ppm	0.000017	3.28	214.159982	Y_R 488.368
Th (288.505 nm)	-0.013117 u	ppm	0.004881	37.21	-4.143090	Y 377.433
Ti (336.122 nm)	-0.000006 u	ppm	0.000077	> 100.00	-111.728000	Y 377.433
Tl (190.794 nm)	-0.001284 u	ppm	0.000153	11.89	0.048308	Y 377.433
U (409.013 nm)	-0.003411 u	ppm	0.001593	46.70	239.367000	Y 377.433
V (292.401 nm)	0.000500	ppm	0.000099	19.76	-243.089000	Y 377.433
Zn (206.200 nm)	0.000568	ppm	0.000211	37.15	6.205490	Y 377.433
Zr (343.823 nm)	-0.000267 u	ppm	0.000011	3.99	103.628000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064931	10956.762796	0.004140	0.39
Y 377.433	1.065229	453582.003754	0.001885	0.18
Y_R 377.433	1.066090	42891.100000	0.001489	0.14
Y_R 488.368	1.075280	39884.300000	0.005842	0.54
Y_R2 488.368	1.068550	75853.791261	0.001163	0.11
Y_R4	1.072200	36757.000000	0.009304	0.87

Sample Name: 280-114433-A-2-B MS

Date: 9/21/2018 5:13:28 PM Rack:Tube: 1:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051585	ppm	0.000658	1.28	1165.210000	Y 377.433
Al (394.401 nm)	2.011760	ppm	0.003011	0.15	22664.400000	Y 377.433
Al H (396.152 nm)	1.972470	ppm	0.008401	0.43	3563.550000	Y_R 377.433
As (188.980 nm)	0.996645	ppm	0.008350	0.84	1290.240000	Y 242.219
B (249.678 nm)	1.026980	ppm	0.001699	0.17	3853.680000	Y 242.219
Ba (493.408 nm)	2.038580	ppm	0.004955	0.24	186751.000000	Y_R 488.368
Be (234.861 nm)	0.050465	ppm	0.000013	0.03	2724.680000	Y_R 488.368
Bi (223.061 nm)	1.907910	ppm	0.005551	0.29	3121.310000	Y 377.433
Ca (315.887 nm)	49.934946	ppm	0.065285	0.13	32922.485925	Y_R 377.433
Cd (214.439 nm)	0.098336	ppm	0.000064	0.06	2485.350000	Y 377.433
Co (228.615 nm)	0.485189	ppm	0.003938	0.81	9666.650000	Y 242.219
Cr (205.560 nm)	0.194125	ppm	0.000759	0.39	937.274000	Y 377.433
Cu (324.754 nm)	0.247235	ppm	0.000257	0.10	10726.000000	Y 377.433
Fe (238.204 nm)	0.993821	ppm	0.008625	0.87	1648.940582	Y_R 377.433
Fe H (259.940 nm)	0.932469 u	ppm	0.000522	0.06	923.131000	Y_R 377.433
K (766.491 nm)	50.744500	ppm	0.140466	0.28	54874.900000	Y_R2 488.368
Li (670.783 nm)	0.984012	ppm	0.000557	0.06	12415.800000	Y_R2 488.368
Mg (279.078 nm)	49.387500	ppm	0.111268	0.23	104806.000000	Y 377.433
Mn (257.610 nm)	0.496308	ppm	0.000547	0.11	87739.900000	Y 377.433
Mo (202.032 nm)	1.005830	ppm	0.001949	0.19	10484.800000	Y 377.433
Na (589.592 nm)	48.746600	ppm	0.007598	0.02	26274.200000	Y_R2 488.368
Na H (589.593 nm)	54.405390	ppm	0.222820	0.41	20633.155356	Y_R4
Ni (231.604 nm)	0.479720	ppm	0.002700	0.56	1795.500000	Y 377.433
P (213.618 nm)	10.286100	ppm	0.118233	1.15	11230.600000	Y 242.219
Pb (220.353 nm)	0.503675	ppm	0.000598	0.12	1060.640000	Y 242.219
S (181.972 nm)	1.998328	ppm	0.024714	1.24	936.504613	Y 377.433
Sb (206.834 nm)	0.515450	ppm	0.003457	0.67	843.341000	Y 377.433
Se (196.026 nm)	2.006840	ppm	0.004705	0.23	2649.680000	Y 242.219
Si (288.158 nm)	10.022200	ppm	0.115437	1.15	40913.300000	Y 377.433
Sn (189.925 nm)	1.998930	ppm	0.001337	0.07	2356.990000	Y 377.433
Sr (421.552 nm)	1.006079	ppm	0.002900	0.29	115663.854333	Y_R 488.368
Th (288.505 nm)	0.972108	ppm	0.004778	0.49	925.059000	Y 377.433
Ti (336.122 nm)	1.000130	ppm	0.002308	0.23	90327.800000	Y 377.433
Tl (190.794 nm)	2.013680	ppm	0.005487	0.27	3600.720000	Y 377.433
U (409.013 nm)	1.977400	ppm	0.014282	0.72	4830.780000	Y 377.433
V (292.401 nm)	0.504815	ppm	0.001629	0.32	20515.800000	Y 377.433
Zn (206.200 nm)	0.483638	ppm	0.001066	0.22	1642.920000	Y 377.433
Zr (343.823 nm)	0.495935	ppm	0.000890	0.18	19459.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043594	10737.233798	0.004054	0.39
Y 377.433	1.049014	446677.501234	0.004087	0.39
Y_R 377.433	1.066270	42898.300000	0.003874	0.36
Y_R 488.368	1.074520	39856.000000	0.003060	0.28
Y_R2 488.368	1.072141	76108.756921	0.003428	0.32
Y_R4	1.071040	36717.100000	0.003436	0.32

Sample Name: 280-114433-A-2-C MSD

Date: 9/21/2018 5:17:01 PM Rack:Tube: 1:61

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051466	ppm	0.000326	0.63	1162.400000	Y 377.433
Al (394.401 nm)	2.019580	ppm	0.001738	0.09	22754.000000	Y 377.433
Al H (396.152 nm)	1.980000	ppm	0.007986	0.40	3579.150000	Y_R 377.433
As (188.980 nm)	1.007360	ppm	0.001202	0.12	1304.230000	Y 242.219
B (249.678 nm)	1.033720	ppm	0.002750	0.27	3878.990000	Y 242.219
Ba (493.408 nm)	2.050540	ppm	0.002358	0.12	187843.000000	Y_R 488.368
Be (234.861 nm)	0.050328	ppm	0.000238	0.47	2717.200000	Y_R 488.368
Bi (223.061 nm)	1.913280	ppm	0.000472	0.02	3129.940000	Y 377.433
Ca (315.887 nm)	50.201333	ppm	0.034065	0.07	33098.149095	Y_R 377.433
Cd (214.439 nm)	0.099146	ppm	0.000539	0.54	2505.930000	Y 377.433
Co (228.615 nm)	0.486877	ppm	0.004963	1.02	9700.450000	Y 242.219
Cr (205.560 nm)	0.196626	ppm	0.001429	0.73	949.509000	Y 377.433
Cu (324.754 nm)	0.248297	ppm	0.000480	0.19	10770.500000	Y 377.433
Fe (238.204 nm)	1.001248	ppm	0.002810	0.28	1661.054522	Y_R 377.433
Fe H (259.940 nm)	0.944146 u	ppm	0.006390	0.68	933.702000	Y_R 377.433
K (766.491 nm)	51.062000	ppm	0.096708	0.19	55207.300000	Y_R2 488.368
Li (670.783 nm)	0.994571	ppm	0.002189	0.22	12561.500000	Y_R2 488.368
Mg (279.078 nm)	49.673800	ppm	0.044430	0.09	105413.000000	Y 377.433
Mn (257.610 nm)	0.498574	ppm	0.000305	0.06	88140.300000	Y 377.433
Mo (202.032 nm)	1.012130	ppm	0.001663	0.16	10550.400000	Y 377.433
Na (589.592 nm)	48.790300	ppm	0.027451	0.06	26297.700000	Y_R2 488.368
Na H (589.593 nm)	54.714279	ppm	0.297131	0.54	20746.529841	Y_R4
Ni (231.604 nm)	0.484453	ppm	0.000026	0.01	1813.050000	Y 377.433
P (213.618 nm)	10.381800	ppm	0.041154	0.40	11335.000000	Y 242.219
Pb (220.353 nm)	0.507380	ppm	0.003327	0.66	1068.360000	Y 242.219
S (181.972 nm)	2.034861	ppm	0.012311	0.61	953.534565	Y 377.433
Sb (206.834 nm)	0.521939	ppm	0.001178	0.23	853.793000	Y 377.433
Se (196.026 nm)	2.013810	ppm	0.004112	0.20	2658.840000	Y 242.219
Si (288.158 nm)	10.110200	ppm	0.108107	1.07	41269.300000	Y 377.433
Sn (189.925 nm)	2.012190	ppm	0.003940	0.20	2372.630000	Y 377.433
Sr (421.552 nm)	1.011840	ppm	0.001972	0.19	116325.258174	Y_R 488.368
Th (288.505 nm)	0.975446	ppm	0.002244	0.23	928.215000	Y 377.433
Ti (336.122 nm)	1.006210	ppm	0.000411	0.04	90877.400000	Y 377.433
Tl (190.794 nm)	2.027940	ppm	0.000895	0.04	3626.200000	Y 377.433
U (409.013 nm)	1.986530	ppm	0.004159	0.21	4851.860000	Y 377.433
V (292.401 nm)	0.506513	ppm	0.000361	0.07	20584.300000	Y 377.433
Zn (206.200 nm)	0.485035	ppm	0.001763	0.36	1647.650000	Y 377.433
Zr (343.823 nm)	0.498473	ppm	0.000397	0.08	19558.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038003	10679.710115	0.003548	0.34
Y 377.433	1.044159	444610.241939	0.004291	0.41
Y_R 377.433	1.070260	43059.000000	0.001336	0.12
Y_R 488.368	1.076750	39938.600000	0.002550	0.24
Y_R2 488.368	1.082464	76841.511750	0.010586	0.98
Y_R4	1.064170	36481.500000	0.002897	0.27

Sample Name: 280-114433-A-2-Apds

Date: 9/21/2018 5:20:33 PM Rack:Tube: 1:62

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049122	ppm	0.000102	0.21	1143.180000	Y 377.433
Al (394.401 nm)	0.971288	ppm	0.006031	0.62	10863.600000	Y 377.433
Al H (396.152 nm)	1.096670	ppm	0.003096	0.28	1672.170000	Y_R 377.433
As (188.980 nm)	0.193459	ppm	0.004927	2.55	242.175000	Y 242.219
B (249.678 nm)	0.098903	ppm	0.000350	0.35	370.423000	Y 242.219
Ba (493.408 nm)	0.099260	ppm	0.000000	0.00	9606.680000	Y_R 488.368
Be (234.861 nm)	0.048706	ppm	0.000511	1.05	2629.460000	Y_R 488.368
Bi (223.061 nm)	-0.003699 u	ppm	0.002325	62.86	52.427700	Y 377.433
Ca (315.887 nm)	19.327187	ppm	0.023427	0.12	12738.893828	Y_R 377.433
Cd (214.439 nm)	0.047941	ppm	0.000679	1.42	1205.120000	Y 377.433
Co (228.615 nm)	0.047431	ppm	0.000316	0.67	926.966000	Y 242.219
Cr (205.560 nm)	0.046969	ppm	0.000086	0.18	219.753000	Y 377.433
Cu (324.754 nm)	0.047870	ppm	0.000352	0.73	2182.930000	Y 377.433
Fe (238.204 nm)	0.974571	ppm	0.001002	0.10	1617.542740	Y_R 377.433
Fe H (259.940 nm)	0.904680 u	ppm	0.009151	1.01	897.973000	Y_R 377.433
K (766.491 nm)	19.554700	ppm	0.020972	0.11	22225.500000	Y_R2 488.368
Li (670.783 nm)	0.093047	ppm	0.003639	3.91	124.664000	Y_R2 488.368
Mg (279.078 nm)	19.136100	ppm	0.116297	0.61	40615.600000	Y 377.433
Mn (257.610 nm)	0.049081	ppm	0.000284	0.58	8726.190000	Y 377.433
Mo (202.032 nm)	0.048200	ppm	0.000006	0.01	521.873000	Y 377.433
Na (589.592 nm)	19.720000	ppm	0.041890	0.21	10583.600000	Y_R2 488.368
Na H (589.593 nm)	22.867665 u	ppm	0.141755	0.62	9142.600645	Y_R4
Ni (231.604 nm)	0.045764	ppm	0.000486	1.06	186.262000	Y 377.433
P (213.618 nm)	1.967450	ppm	0.011682	0.59	2147.090000	Y 242.219
Pb (220.353 nm)	0.095276	ppm	0.002099	2.20	208.706000	Y 242.219
S (181.972 nm)	0.062532	ppm	0.000068	0.11	31.755740	Y 377.433
Sb (206.834 nm)	0.093449	ppm	0.000575	0.61	170.959000	Y 377.433
Se (196.026 nm)	0.193989	ppm	0.001846	0.95	264.192000	Y 242.219
Si (288.158 nm)	4.827840	ppm	0.036307	0.75	19900.900000	Y 377.433
Sn (189.925 nm)	0.094911	ppm	0.002905	3.06	111.447000	Y 377.433
Sr (421.552 nm)	0.049415	ppm	0.000431	0.87	5828.118504	Y_R 488.368
Th (288.505 nm)	0.179163	ppm	0.003025	1.69	179.912000	Y 377.433
Ti (336.122 nm)	0.048604	ppm	0.000292	0.60	4323.270000	Y 377.433
Tl (190.794 nm)	0.202186	ppm	0.002709	1.34	364.057000	Y 377.433
U (409.013 nm)	0.480311	ppm	0.011977	2.49	1366.990000	Y 377.433
V (292.401 nm)	0.049043	ppm	0.000020	0.04	1744.340000	Y 377.433
Zn (206.200 nm)	0.190711	ppm	0.001715	0.90	650.447000	Y 377.433
Zr (343.823 nm)	0.047903	ppm	0.000516	1.08	1983.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060139	10907.457180	0.002179	0.21
Y 377.433	1.060488	451563.122827	0.007586	0.72
Y_R 377.433	1.077940	43367.800000	0.008770	0.81
Y_R 488.368	1.078280	39995.400000	0.010010	0.93
Y_R2 488.368	1.075965	76380.162092	0.002272	0.21
Y_R4	1.070830	36710.000000	0.004623	0.43

Sample Name: 280-114433-A-3-A

Date: 9/21/2018 5:24:04 PM Rack:Tube: 1:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000124 u	ppm	0.000176	> 100.00	-94.884800	Y 377.433
Al (394.401 nm)	-0.001752 u	ppm	0.000898	51.24	89.146200	Y 377.433
Al H (396.152 nm)	0.099591 u	ppm	0.003289	3.30	0.888178	Y_R 377.433
As (188.980 nm)	0.010985	ppm	0.002321	21.13	4.100770	Y 242.219
B (249.678 nm)	0.027854	ppm	0.000538	1.93	104.058000	Y 242.219
Ba (493.408 nm)	0.062789	ppm	0.000709	1.13	6274.620000	Y_R 488.368
Be (234.861 nm)	0.000079	ppm	0.000054	67.99	0.342710	Y_R 488.368
Bi (223.061 nm)	-0.002520 u	ppm	0.000544	21.59	54.175400	Y 377.433
Ca (315.887 nm)	49.947341	ppm	0.044953	0.09	32930.489734	Y_R 377.433
Cd (214.439 nm)	0.000174	ppm	0.000153	87.76	-8.685790	Y 377.433
Co (228.615 nm)	0.000087 u	ppm	0.000235	> 100.00	-16.023900	Y 242.219
Cr (205.560 nm)	0.002769	ppm	0.000644	23.26	3.327930	Y 377.433
Cu (324.754 nm)	-0.000094 u	ppm	0.000346	> 100.00	108.672000	Y 377.433
Fe (238.204 nm)	-0.004016 u	ppm	0.001437	35.77	21.416062	Y_R 377.433
Fe H (259.940 nm)	-0.071533 u	ppm	0.003672	5.13	14.203900	Y_R 377.433
K (766.491 nm)	6.616560	ppm	0.042733	0.65	8681.850000	Y_R2 488.368
Li (670.783 nm)	0.008339	ppm	0.002867	34.38	-1043.910000	Y_R2 488.368
Mg (279.078 nm)	12.743400	ppm	0.009876	0.08	27052.400000	Y 377.433
Mn (257.610 nm)	0.000796	ppm	0.000072	9.08	195.422000	Y 377.433
Mo (202.032 nm)	0.004862	ppm	0.000267	5.50	70.996500	Y 377.433
Na (589.592 nm)	30.484000	ppm	0.009540	0.03	16414.800000	Y_R2 488.368
Na H (589.593 nm)	33.582307 u	ppm	0.141977	0.42	13117.873986	Y_R4
Ni (231.604 nm)	-0.001387 u	ppm	0.000788	56.83	11.772700	Y 377.433
P (213.618 nm)	5.986460	ppm	0.008923	0.15	6541.790000	Y 242.219
Pb (220.353 nm)	-0.001873 u	ppm	0.003047	> 100.00	5.601620	Y 242.219
S (181.972 nm)	17.820688	ppm	0.008145	0.05	8298.026028	Y 377.433
Sb (206.834 nm)	-0.003297 u	ppm	0.002145	65.06	14.511100	Y 377.433
Se (196.026 nm)	0.004172	ppm	0.000751	18.00	14.643500	Y 242.219
Si (288.158 nm)	14.965700	ppm	0.058081	0.39	60910.800000	Y 377.433
Sn (189.925 nm)	0.000076	ppm	0.000082	> 100.00	-0.401684	Y 377.433
Sr (421.552 nm)	0.247002	ppm	0.000682	0.28	28513.222721	Y_R 488.368
Th (288.505 nm)	-0.016334 u	ppm	0.000561	3.43	-7.850780	Y 377.433
Ti (336.122 nm)	0.000239	ppm	0.000018	7.66	26.835000	Y 377.433
Tl (190.794 nm)	0.003615	ppm	0.000702	19.43	8.795050	Y 377.433
U (409.013 nm)	0.084503	ppm	0.007309	8.65	440.532000	Y 377.433
V (292.401 nm)	0.015475	ppm	0.000333	2.15	372.355000	Y 377.433
Zn (206.200 nm)	0.021074	ppm	0.000333	1.58	75.681900	Y 377.433
Zr (343.823 nm)	0.000272	ppm	0.000137	50.52	124.642000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050076	10803.923311	0.005929	0.56
Y 377.433	1.053434	448559.386815	0.003844	0.36
Y_R 377.433	1.073470	43187.900000	0.004616	0.43
Y_R 488.368	1.077190	39954.900000	0.006097	0.57
Y_R2 488.368	1.078567	76564.924441	0.003675	0.34
Y_R4	1.076700	36911.200000	0.005365	0.50

Sample Name: CCVH-5320321

Date: 9/21/2018 5:27:33 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000408	ppm	0.000133	32.50	-173.719000	Y 377.433
Al (394.401 nm)	50.369800 o	ppm	0.035218	0.07	559862.000000	Y 377.433
Al H (396.152 nm)	49.464600	ppm	0.079383	0.16	85438.600000	Y_R 377.433
As (188.980 nm)	-0.001260 u	ppm	0.001544	> 100.00	-13.822400	Y 242.219
B (249.678 nm)	0.004979	ppm	0.000253	5.08	3.041060	Y 242.219
Ba (493.408 nm)	0.000282 u	ppm	0.000617	> 100.00	601.451000	Y_R 488.368
Be (234.861 nm)	-0.000618 u	ppm	0.000068	11.00	-329.263000	Y_R 488.368
Bi (223.061 nm)	0.987386	ppm	0.002751	0.28	1649.650000	Y 377.433
Ca (315.887 nm)	0.006938	ppm	0.006154	88.71	2.642446	Y_R 377.433
Cd (214.439 nm)	-0.000556 u	ppm	0.000053	9.61	-9.492540	Y 377.433
Co (228.615 nm)	0.003236	ppm	0.000075	2.32	46.578300	Y 242.219
Cr (205.560 nm)	-0.000241 u	ppm	0.000129	53.70	-12.627700	Y 377.433
Cu (324.754 nm)	-0.000213 u	ppm	0.000249	> 100.00	535.061000	Y 377.433
Fe (238.204 nm)	50.077061 o	ppm	0.099022	0.20	81706.284280	Y_R 377.433
Fe H (259.940 nm)	50.147300	ppm	0.024219	0.05	45477.500000	Y_R 377.433
K (766.491 nm)	0.139653	ppm	0.024362	17.44	1901.850000	Y_R2 488.368
Li (670.783 nm)	0.002799	ppm	0.000442	15.81	-1120.330000	Y_R2 488.368
Mg (279.078 nm)	0.004320	ppm	0.001663	38.49	-126.835000	Y 377.433
Mn (257.610 nm)	0.000524	ppm	0.000009	1.70	147.303000	Y 377.433
Mo (202.032 nm)	-0.000361 u	ppm	0.000273	75.60	16.662200	Y 377.433
Na (589.592 nm)	241.728000 o	ppm	0.331707	0.14	130842.000000	Y_R2 488.368
Na H (589.593 nm)	252.590155	ppm	1.082185	0.43	94304.158392	Y_R4
Ni (231.604 nm)	0.000240 u	ppm	0.000884	> 100.00	24.263400	Y 377.433
P (213.618 nm)	-0.016258 u	ppm	0.003456	21.25	-20.086100	Y 242.219
Pb (220.353 nm)	0.002084	ppm	0.001106	53.07	24.225600	Y 242.219
S (181.972 nm)	5.116819	ppm	0.021996	0.43	2381.893906	Y 377.433
Sb (206.834 nm)	-0.001717 u	ppm	0.000825	48.06	21.115900	Y 377.433
Se (196.026 nm)	-0.000774 u	ppm	0.001606	> 100.00	-3.082960	Y 242.219
Si (288.158 nm)	0.011197	ppm	0.001238	11.05	417.318000	Y 377.433
Sn (189.925 nm)	0.000361	ppm	0.000320	88.56	0.110902	Y 377.433
Sr (421.552 nm)	0.000017 u	ppm	0.000178	> 100.00	162.319776	Y_R 488.368
Th (288.505 nm)	4.894850	ppm	0.024387	0.50	4755.850000	Y 377.433
Ti (336.122 nm)	0.000963	ppm	0.000063	6.53	-33.094300	Y 377.433
Tl (190.794 nm)	-0.003664 u	ppm	0.000611	16.69	-4.915910	Y 377.433
U (409.013 nm)	9.722110	ppm	0.039602	0.41	23054.200000	Y 377.433
V (292.401 nm)	-0.003804 u	ppm	0.000263	6.92	-442.060000	Y 377.433
Zn (206.200 nm)	0.000371 u	ppm	0.001228	> 100.00	6.383250	Y 377.433
Zr (343.823 nm)	-0.007080 u	ppm	0.000016	0.22	-113.485000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040970	10710.231175	0.001937	0.19
Y 377.433	1.037757	441884.290210	0.001617	0.16
Y_R 377.433	1.064550	42829.300000	0.002278	0.21
Y_R 488.368	1.071650	39749.300000	0.017094	1.60
Y_R2 488.368	1.062969	75457.615128	0.000207	0.02
Y_R4	1.101450	37759.800000	0.007055	0.64

Sample Name: CCV-5305988

Date: 9/21/2018 5:31:14 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.494782	ppm	0.001461	0.30	12357.600000	Y 377.433
Al (394.401 nm)	0.496516	ppm	0.000138	0.03	5665.850000	Y 377.433
Al H (396.152 nm)	0.561133 u	ppm	0.004440	0.79	924.428000	Y_R 377.433
As (188.980 nm)	0.976754	ppm	0.001509	0.15	1264.280000	Y 242.219
B (249.678 nm)	0.494123	ppm	0.000348	0.07	1853.300000	Y 242.219
Ba (493.408 nm)	0.501689	ppm	0.000332	0.07	46367.100000	Y_R 488.368
Be (234.861 nm)	0.496644	ppm	0.001869	0.38	26891.800000	Y_R 488.368
Bi (223.061 nm)	-0.007258 u	ppm	0.003207	44.19	46.955000	Y 377.433
Ca (315.887 nm)	4.948247	ppm	0.009372	0.19	3257.035669	Y_R 377.433
Cd (214.439 nm)	0.488734	ppm	0.003421	0.70	12403.500000	Y 377.433
Co (228.615 nm)	0.496564	ppm	0.002997	0.60	9873.760000	Y 242.219
Cr (205.560 nm)	0.479612	ppm	0.001654	0.34	2338.380000	Y 377.433
Cu (324.754 nm)	0.495942	ppm	0.001507	0.30	21305.900000	Y 377.433
Fe (238.204 nm)	2.509887	ppm	0.011085	0.44	4121.724452	Y_R 377.433
Fe H (259.940 nm)	2.449420 u	ppm	0.014580	0.60	2296.430000	Y_R 377.433
K (766.491 nm)	48.700200	ppm	0.171146	0.35	52734.900000	Y_R2 488.368
Li (670.783 nm)	0.960009	ppm	0.000567	0.06	12084.700000	Y_R2 488.368
Mg (279.078 nm)	19.558800	ppm	0.010545	0.05	41516.400000	Y 377.433
Mn (257.610 nm)	0.490598	ppm	0.000315	0.06	86731.100000	Y 377.433
Mo (202.032 nm)	0.490360	ppm	0.000753	0.15	5122.020000	Y 377.433
Na (589.592 nm)	24.793400	ppm	0.065001	0.26	13325.000000	Y_R2 488.368
Na H (589.593 nm)	28.380102 u	ppm	0.096321	0.34	11144.677730	Y_R4
Ni (231.604 nm)	0.490099	ppm	0.002156	0.44	1832.680000	Y 377.433
P (213.618 nm)	0.986874	ppm	0.000556	0.06	1056.510000	Y 242.219
Pb (220.353 nm)	0.990563	ppm	0.004385	0.44	2074.810000	Y 242.219
S (181.972 nm)	0.057179	ppm	0.001988	3.48	29.481641	Y 377.433
Sb (206.834 nm)	1.009280	ppm	0.004922	0.49	1651.270000	Y 377.433
Se (196.026 nm)	0.991846	ppm	0.007163	0.72	1314.020000	Y 242.219
Si (288.158 nm)	4.929210	ppm	0.037451	0.76	20311.000000	Y 377.433
Sn (189.925 nm)	0.985048	ppm	0.008426	0.86	1161.250000	Y 377.433
Sr (421.552 nm)	0.496921	ppm	0.000589	0.12	57207.000723	Y_R 488.368
Th (288.505 nm)	-0.015347 u	ppm	0.001012	6.59	-34.672400	Y 377.433
Ti (336.122 nm)	0.493766	ppm	0.000556	0.11	44493.800000	Y 377.433
Tl (190.794 nm)	1.001870	ppm	0.000446	0.04	1793.580000	Y 377.433
U (409.013 nm)	0.000975 u	ppm	0.005524	> 100.00	205.308000	Y 377.433
V (292.401 nm)	0.490382	ppm	0.000200	0.04	19854.800000	Y 377.433
Zn (206.200 nm)	0.482733	ppm	0.000326	0.07	1639.880000	Y 377.433
Zr (343.823 nm)	0.490576	ppm	0.000294	0.06	19252.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041240	10713.010680	0.001282	0.12
Y 377.433	1.042888	444068.859982	0.000187	0.02
Y_R 377.433	1.052580	42347.500000	0.004669	0.44
Y_R 488.368	1.060090	39320.700000	0.004506	0.43
Y_R2 488.368	1.066590	75714.656843	0.002456	0.23
Y_R4	1.061500	36390.200000	0.001148	0.11

Sample Name: CCB

Date: 9/21/2018 5:34:47 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001062 u	ppm	0.000214	20.19	-115.010000	Y 377.433
Al (394.401 nm)	-0.008062 u	ppm	0.001019	12.64	-45.382800	Y 377.433
Al H (396.152 nm)	0.146038 Zu	ppm	0.006088	4.17	9.442890 Z	Y_R 377.433
As (188.980 nm)	0.001024 u	ppm	0.001554	> 100.00	-8.897100	Y 242.219
B (249.678 nm)	0.001565	ppm	0.000213	13.59	5.391830	Y 242.219
Ba (493.408 nm)	-0.000127 u	ppm	0.000230	> 100.00	527.676000	Y_R 488.368
Be (234.861 nm)	0.000085	ppm	0.000066	77.97	0.690620	Y_R 488.368
Bi (223.061 nm)	-0.010649 u	ppm	0.003228	30.31	41.115000	Y 377.433
Ca (315.887 nm)	0.008426	ppm	0.004980	59.11	-0.445305	Y_R 377.433
Cd (214.439 nm)	0.000167	ppm	0.000075	45.26	-8.875810	Y 377.433
Co (228.615 nm)	0.000083 u	ppm	0.000152	> 100.00	-16.112200	Y 242.219
Cr (205.560 nm)	0.000242 u	ppm	0.000385	> 100.00	-9.043290	Y 377.433
Cu (324.754 nm)	0.000065 u	ppm	0.000210	> 100.00	143.762000	Y 377.433
Fe (238.204 nm)	-0.005430 u	ppm	0.002034	37.46	19.110020	Y_R 377.433
Fe H (259.940 nm)	-0.074129 u	ppm	0.001842	2.48	11.853600	Y_R 377.433
K (766.491 nm)	0.034309	ppm	0.030084	87.69	1791.570000	Y_R2 488.368
Li (670.783 nm)	0.005712	ppm	0.004998	87.49	-1080.150000	Y_R2 488.368
Mg (279.078 nm)	0.016716	ppm	0.002311	13.82	42.040100	Y 377.433
Mn (257.610 nm)	0.000276	ppm	0.000015	5.61	103.492000	Y 377.433
Mo (202.032 nm)	0.000090	ppm	0.000085	94.29	21.348700	Y 377.433
Na (589.592 nm)	0.296557	ppm	0.019389	6.54	63.865000	Y_R2 488.368
Na H (589.593 nm)	2.558675 u	ppm	0.107457	4.20	1624.439107	Y_R4
Ni (231.604 nm)	-0.001200 u	ppm	0.000378	31.51	11.726600	Y 377.433
P (213.618 nm)	-0.000332 u	ppm	0.004352	> 100.00	-1.516070	Y 242.219
Pb (220.353 nm)	0.000714 u	ppm	0.001318	> 100.00	10.910200	Y 242.219
S (181.972 nm)	0.047233	ppm	0.000851	1.80	22.918348	Y 377.433
Sb (206.834 nm)	-0.002536 u	ppm	0.002315	91.29	15.755300	Y 377.433
Se (196.026 nm)	-0.002106 u	ppm	0.000442	21.00	6.384230	Y 242.219
Si (288.158 nm)	0.002000	ppm	0.000341	17.07	379.308000	Y 377.433
Sn (189.925 nm)	0.000316 u	ppm	0.000765	> 100.00	-0.118472	Y 377.433
Sr (421.552 nm)	0.000202	ppm	0.000113	55.92	177.843471	Y_R 488.368
Th (288.505 nm)	-0.009342 Zu	ppm	0.006907	73.93	-0.477798 Z	Y 377.433
Ti (336.122 nm)	0.000170	ppm	0.000080	47.14	-95.770800	Y 377.433
Tl (190.794 nm)	-0.000424 u	ppm	0.001499	> 100.00	1.584350	Y 377.433
U (409.013 nm)	-0.001627 u	ppm	0.002868	> 100.00	243.527000	Y 377.433
V (292.401 nm)	0.000705	ppm	0.000221	31.34	-235.230000	Y 377.433
Zn (206.200 nm)	-0.000257 u	ppm	0.001028	> 100.00	3.409020	Y 377.433
Zr (343.823 nm)	-0.000184 u	ppm	0.000083	45.25	106.855000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049488	10797.872177	0.002507	0.24
Y 377.433	1.049582	446919.506639	0.001926	0.18
Y_R 377.433	1.050320	42256.600000	0.000689	0.07
Y_R 488.368	1.051660	39008.000000	0.006354	0.60
Y_R2 488.368	1.069434	75916.595272	0.008895	0.83
Y_R4	1.055230	36175.200000	0.003480	0.33

Sample Name: CCVL-5320254

Date: 9/21/2018 5:37:58 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008382	ppm	0.000545	6.51	123.355000	Y 377.433
Al (394.401 nm)	0.088128	ppm	0.001472	1.67	1025.050000	Y 377.433
Al H (396.152 nm)	0.247778 u	ppm	0.002067	0.83	190.148000	Y_R 377.433
As (188.980 nm)	0.015085	ppm	0.000131	0.87	9.447330	Y 242.219
B (249.678 nm)	0.100213	ppm	0.000672	0.67	375.608000	Y 242.219
Ba (493.408 nm)	0.010323	ppm	0.000521	5.04	1482.300000	Y_R 488.368
Be (234.861 nm)	0.000947	ppm	0.000092	9.68	46.839900	Y_R 488.368
Bi (223.061 nm)	0.090694	ppm	0.000993	1.10	203.826000	Y 377.433
Ca (315.887 nm)	0.197769	ppm	0.000495	0.25	124.421017	Y_R 377.433
Cd (214.439 nm)	0.005014	ppm	0.000031	0.62	114.293000	Y 377.433
Co (228.615 nm)	0.010390	ppm	0.000063	0.61	189.180000	Y 242.219
Cr (205.560 nm)	0.009486	ppm	0.000038	0.40	36.147700	Y 377.433
Cu (324.754 nm)	0.015609	ppm	0.000270	1.73	808.955000	Y 377.433
Fe (238.204 nm)	0.092710	ppm	0.003440	3.71	179.182274	Y_R 377.433
Fe H (259.940 nm)	0.026713 u	ppm	0.000567	2.12	103.146000	Y_R 377.433
K (766.491 nm)	2.987370	ppm	0.042761	1.43	4882.830000	Y_R2 488.368
Li (670.783 nm)	0.018128	ppm	0.003936	21.71	-908.864000	Y_R2 488.368
Mg (279.078 nm)	0.204518	ppm	0.000585	0.29	440.220000	Y 377.433
Mn (257.610 nm)	0.010400	ppm	0.000083	0.80	1892.210000	Y 377.433
Mo (202.032 nm)	0.019435	ppm	0.000063	0.32	222.615000	Y 377.433
Na (589.592 nm)	1.323380 Q	ppm	0.017637	1.33	619.906000 Q	Y_R2 488.368
Na H (589.593 nm)	3.066167 u	ppm	0.054478	1.78	1811.511494	Y_R4
Ni (231.604 nm)	0.039246	ppm	0.000080	0.20	161.561000	Y 377.433
P (213.618 nm)	2.883640	ppm	0.012787	0.44	3149.890000	Y 242.219
Pb (220.353 nm)	0.008207	ppm	0.001999	24.36	26.538000	Y 242.219
S (181.972 nm)	0.126713	ppm	0.000980	0.77	59.947910	Y 377.433
Sb (206.834 nm)	0.018796	ppm	0.002489	13.24	50.119000	Y 377.433
Se (196.026 nm)	0.016379	ppm	0.000940	5.74	30.692700	Y 242.219
Si (288.158 nm)	0.482595	ppm	0.002383	0.49	2323.420000	Y 377.433
Sn (189.925 nm)	0.095485	ppm	0.000419	0.44	112.122000	Y 377.433
Sr (421.552 nm)	0.009760	ppm	0.000321	3.29	1275.172529	Y_R 488.368
Th (288.505 nm)	0.006301 Qu	ppm	0.011725	> 100.00	14.304800 Q	Y 377.433
Ti (336.122 nm)	0.010011	ppm	0.000004	0.04	793.512000	Y 377.433
Tl (190.794 nm)	0.015223	ppm	0.000698	4.59	29.515900	Y 377.433
U (409.013 nm)	0.045962	ppm	0.003160	6.87	353.777000	Y 377.433
V (292.401 nm)	0.010263	ppm	0.000111	1.09	157.252000	Y 377.433
Zn (206.200 nm)	0.018945	ppm	0.000253	1.34	68.468800	Y 377.433
Zr (343.823 nm)	0.014252	ppm	0.000003	0.02	670.054000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073780	11047.799380	0.002382	0.22
Y 377.433	1.069129	455242.639406	0.000438	0.04
Y_R 377.433	1.075950	43287.900000	0.001692	0.16
Y_R 488.368	1.084940	40242.500000	0.018910	1.74
Y_R2 488.368	1.088915	77299.467534	0.001108	0.10
Y_R4	1.075680	36876.200000	0.007312	0.68

Sample Name: 280-114433-A-4-A

Date: 9/21/2018 5:41:25 PM Rack:Tube: 1:64

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000106 u	ppm	0.000533	> 100.00	-89.079100	Y 377.433
Al (394.401 nm)	-0.000203 u	ppm	0.001213	> 100.00	106.932000	Y 377.433
Al H (396.152 nm)	0.087663 u	ppm	0.012902	14.72	-19.486100	Y_R 377.433
As (188.980 nm)	0.012646	ppm	0.002733	21.61	6.268540	Y 242.219
B (249.678 nm)	0.027990	ppm	0.001134	4.05	104.568000	Y 242.219
Ba (493.408 nm)	0.062967	ppm	0.000065	0.10	6290.890000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000032	94.66	-5.765130	Y_R 488.368
Bi (223.061 nm)	-0.002236 u	ppm	0.003792	> 100.00	54.633000	Y 377.433
Ca (315.887 nm)	50.222365	ppm	0.004854	0.01	33111.846889	Y_R 377.433
Cd (214.439 nm)	0.000219	ppm	0.000141	64.28	-7.535670	Y 377.433
Co (228.615 nm)	-0.000043 u	ppm	0.000419	> 100.00	-18.613200	Y 242.219
Cr (205.560 nm)	0.003038	ppm	0.000670	22.05	4.647000	Y 377.433
Cu (324.754 nm)	-0.000286 u	ppm	0.000093	32.62	99.917400	Y 377.433
Fe (238.204 nm)	-0.003317 u	ppm	0.002707	81.62	22.556700	Y_R 377.433
Fe H (259.940 nm)	-0.076143 u	ppm	0.007845	10.30	10.030500	Y_R 377.433
K (766.491 nm)	6.749380	ppm	0.073386	1.09	8820.890000	Y_R2 488.368
Li (670.783 nm)	0.007766	ppm	0.000662	8.53	-1051.810000	Y_R2 488.368
Mg (279.078 nm)	12.882100	ppm	0.041184	0.32	27347.000000	Y 377.433
Mn (257.610 nm)	0.000364	ppm	0.000030	8.21	119.030000	Y 377.433
Mo (202.032 nm)	0.004787	ppm	0.000326	6.81	70.219500	Y 377.433
Na (589.592 nm)	30.675500	ppm	0.252309	0.82	16518.500000	Y_R2 488.368
Na H (589.593 nm)	32.807609 u	ppm	0.025118	0.08	12830.665067	Y_R4
Ni (231.604 nm)	-0.002118 u	ppm	0.000662	31.26	9.069170	Y 377.433
P (213.618 nm)	5.979830	ppm	0.014712	0.25	6534.550000	Y 242.219
Pb (220.353 nm)	-0.000057 u	ppm	0.000036	64.08	9.385220	Y 242.219
S (181.972 nm)	18.072634	ppm	0.157122	0.87	8415.296226	Y 377.433
Sb (206.834 nm)	-0.003156 u	ppm	0.000422	13.37	14.746000	Y 377.433
Se (196.026 nm)	-0.000689 u	ppm	0.002142	> 100.00	8.248160	Y 242.219
Si (288.158 nm)	15.021400	ppm	0.010534	0.07	61136.000000	Y 377.433
Sn (189.925 nm)	0.000577	ppm	0.000132	22.90	0.189427	Y 377.433
Sr (421.552 nm)	0.247929	ppm	0.000174	0.07	28619.623124	Y_R 488.368
Th (288.505 nm)	-0.020077 u	ppm	0.003665	18.26	-11.488800	Y 377.433
Ti (336.122 nm)	0.000043	ppm	0.000051	> 100.00	9.842460	Y 377.433
Tl (190.794 nm)	0.001127 u	ppm	0.002504	> 100.00	4.341710	Y 377.433
U (409.013 nm)	0.073697	ppm	0.001784	2.42	415.173000	Y 377.433
V (292.401 nm)	0.015869	ppm	0.000172	1.09	388.353000	Y 377.433
Zn (206.200 nm)	0.020825	ppm	0.000050	0.24	74.837100	Y 377.433
Zr (343.823 nm)	0.000411	ppm	0.000192	46.57	130.078000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057546	10880.774412	0.004453	0.42
Y 377.433	1.056249	449758.412228	0.000743	0.07
Y_R 377.433	1.071380	43104.100000	0.004469	0.42
Y_R 488.368	1.078820	40015.300000	0.003796	0.35
Y_R2 488.368	1.075430	76342.232147	0.012072	1.12
Y_R4	1.076990	36921.000000	0.009124	0.85

Sample Name: 280-114433-A-5-A

Date: 9/21/2018 5:44:53 PM Rack:Tube: 1:65

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000110 u	ppm	0.000488	> 100.00	-92.910900	Y 377.433
Al (394.401 nm)	0.036363	ppm	0.000206	0.57	459.192000	Y 377.433
Al H (396.152 nm)	0.167822 u	ppm	0.009786	5.83	67.610700	Y_R 377.433
As (188.980 nm)	0.044305	ppm	0.001022	2.31	47.579700	Y 242.219
B (249.678 nm)	0.027693	ppm	0.001010	3.65	103.452000	Y 242.219
Ba (493.408 nm)	0.012080	ppm	0.000152	1.26	1642.720000	Y_R 488.368
Be (234.861 nm)	0.000077	ppm	0.000059	77.13	0.145926	Y_R 488.368
Bi (223.061 nm)	-0.003759 u	ppm	0.003463	92.14	52.264100	Y 377.433
Ca (315.887 nm)	15.505190	ppm	0.004601	0.03	10218.501026	Y_R 377.433
Cd (214.439 nm)	0.000188	ppm	0.000010	5.24	-8.318100	Y 377.433
Co (228.615 nm)	-0.000151 u	ppm	0.000049	32.18	-20.754000	Y 242.219
Cr (205.560 nm)	0.002742	ppm	0.000914	33.33	3.179540	Y 377.433
Cu (324.754 nm)	0.020869	ppm	0.000426	2.04	1026.240000	Y 377.433
Fe (238.204 nm)	0.009947	ppm	0.002294	23.06	44.190790	Y_R 377.433
Fe H (259.940 nm)	-0.058074 u	ppm	0.001517	2.61	26.388100	Y_R 377.433
K (766.491 nm)	53.071800	ppm	0.204518	0.39	57311.100000	Y_R2 488.368
Li (670.783 nm)	0.012616	ppm	0.005564	44.10	-984.905000	Y_R2 488.368
Mg (279.078 nm)	6.572650	ppm	0.000800	0.01	13956.600000	Y 377.433
Mn (257.610 nm)	0.001545	ppm	0.000039	2.50	327.703000	Y 377.433
Mo (202.032 nm)	0.008899	ppm	0.000507	5.69	113.001000	Y 377.433
Na (589.592 nm)	218.992000 o	ppm	0.634850	0.29	118526.000000	Y_R2 488.368
Na H (589.593 nm)	230.508043	ppm	0.182968	0.08	86117.829302	Y_R4
Ni (231.604 nm)	0.000652	ppm	0.000449	68.83	18.816300	Y 377.433
P (213.618 nm)	141.598000 bo	ppm	1.566760	1.11	154759.000000	Y 242.219
Pb (220.353 nm)	0.001319	ppm	0.001319	> 100.00	12.109700	Y 242.219
S (181.972 nm)	17.247504	ppm	0.005967	0.03	8028.484264	Y 377.433
Sb (206.834 nm)	-0.002754 u	ppm	0.000684	24.83	15.367600	Y 377.433
Se (196.026 nm)	0.001493	ppm	0.001068	71.53	11.117300	Y 242.219
Si (288.158 nm)	21.420200	ppm	0.091007	0.42	87020.900000	Y 377.433
Sn (189.925 nm)	-0.000729 u	ppm	0.001296	> 100.00	-1.351800	Y 377.433
Sr (421.552 nm)	0.069298	ppm	0.001284	1.85	8110.809232	Y_R 488.368
Th (288.505 nm)	-0.009786 u	ppm	0.000912	9.32	-3.106290	Y 377.433
Ti (336.122 nm)	0.001131	ppm	0.000086	7.62	26.932800	Y 377.433
Tl (190.794 nm)	-0.000441 u	ppm	0.000623	> 100.00	1.515500	Y 377.433
U (409.013 nm)	0.000365 u	ppm	0.005891	> 100.00	246.651000	Y 377.433
V (292.401 nm)	0.037173	ppm	0.000207	0.56	1273.220000	Y 377.433
Zn (206.200 nm)	0.007714	ppm	0.001041	13.49	30.416900	Y 377.433
Zr (343.823 nm)	0.000739	ppm	0.000151	20.38	142.892000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025362	10549.647085	0.001890	0.18
Y 377.433	1.023432	435784.671652	0.000796	0.08
Y_R 377.433	1.058390	42581.300000	0.007656	0.72
Y_R 488.368	1.061930	39389.100000	0.010069	0.95
Y_R2 488.368	1.059580	75217.083222	0.009466	0.89
Y_R4	1.073190	36791.000000	0.000438	0.04

Sample Name: 280-114433-A-6-A

Date: 9/21/2018 5:48:20 PM Rack:Tube: 1:66

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000158 u	ppm	0.000199	> 100.00	-99.789500	Y 377.433
Al (394.401 nm)	0.046631	ppm	0.000282	0.61	576.506000	Y 377.433
Al H (396.152 nm)	0.171319 u	ppm	0.005466	3.19	73.751700	Y_R 377.433
As (188.980 nm)	0.043171	ppm	0.002825	6.54	46.098700	Y 242.219
B (249.678 nm)	0.026951	ppm	0.000729	2.71	100.658000	Y 242.219
Ba (493.408 nm)	0.012709	ppm	0.000281	2.21	1700.180000	Y_R 488.368
Be (234.861 nm)	0.000070	ppm	0.000004	5.46	-0.379671	Y_R 488.368
Bi (223.061 nm)	-0.001977 u	ppm	0.002750	> 100.00	55.127500	Y 377.433
Ca (315.887 nm)	15.617647	ppm	0.018981	0.12	10292.657372	Y_R 377.433
Cd (214.439 nm)	0.000118 u	ppm	0.000312	> 100.00	-10.103800	Y 377.433
Co (228.615 nm)	-0.000312 u	ppm	0.000096	30.72	-23.916200	Y 242.219
Cr (205.560 nm)	0.003601	ppm	0.000278	7.73	7.392280	Y 377.433
Cu (324.754 nm)	0.021389	ppm	0.000377	1.76	1046.300000	Y 377.433
Fe (238.204 nm)	0.039300	ppm	0.000363	0.92	92.067580	Y_R 377.433
Fe H (259.940 nm)	-0.026576 u	ppm	0.000590	2.22	54.903400	Y_R 377.433
K (766.491 nm)	52.993200	ppm	0.052113	0.10	57228.800000	Y_R2 488.368
Li (670.783 nm)	0.012488	ppm	0.000027	0.21	-986.666000	Y_R2 488.368
Mg (279.078 nm)	6.577220	ppm	0.002377	0.04	13966.200000	Y 377.433
Mn (257.610 nm)	0.001970	ppm	0.000040	2.01	402.854000	Y 377.433
Mo (202.032 nm)	0.008793	ppm	0.000172	1.96	111.892000	Y 377.433
Na (589.592 nm)	218.460000 o	ppm	0.437195	0.20	118238.000000	Y_R2 488.368
Na H (589.593 nm)	229.481153	ppm	1.006953	0.44	85737.114238	Y_R4
Ni (231.604 nm)	-0.000562 u	ppm	0.000702	> 100.00	14.327200	Y 377.433
P (213.618 nm)	141.335000 bo	ppm	3.161140	2.24	154471.000000	Y 242.219
Pb (220.353 nm)	0.000951	ppm	0.000079	8.29	11.350500	Y 242.219
S (181.972 nm)	17.378141	ppm	0.054218	0.31	8089.291091	Y 377.433
Sb (206.834 nm)	-0.003030 u	ppm	0.004278	> 100.00	14.929400	Y 377.433
Se (196.026 nm)	0.001624	ppm	0.002213	> 100.00	11.284000	Y 242.219
Si (288.158 nm)	21.256100	ppm	0.197636	0.93	86356.900000	Y 377.433
Sn (189.925 nm)	0.000226 u	ppm	0.000440	> 100.00	-0.225092	Y 377.433
Sr (421.552 nm)	0.069961	ppm	0.000724	1.04	8186.854480	Y_R 488.368
Th (288.505 nm)	-0.011694 u	ppm	0.006117	52.31	-4.958340	Y 377.433
Ti (336.122 nm)	0.001972	ppm	0.000039	1.97	103.167000	Y 377.433
Tl (190.794 nm)	0.000809 u	ppm	0.001582	> 100.00	3.750100	Y 377.433
U (409.013 nm)	0.002387 u	ppm	0.003593	> 100.00	251.359000	Y 377.433
V (292.401 nm)	0.037415	ppm	0.000111	0.30	1281.960000	Y 377.433
Zn (206.200 nm)	0.008613	ppm	0.001032	11.99	33.462800	Y 377.433
Zr (343.823 nm)	0.001151	ppm	0.000340	29.55	158.977000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022864	10523.945635	0.001767	0.17
Y 377.433	1.022058	435199.417392	0.001443	0.14
Y_R 377.433	1.047560	42145.600000	0.004975	0.47
Y_R 488.368	1.048790	38901.400000	0.015976	1.52
Y_R2 488.368	1.061686	75366.558662	0.006548	0.62
Y_R4	1.072210	36757.300000	0.004975	0.46

Sample Name: 280-114433-A-7-A

Date: 9/21/2018 5:51:48 PM Rack:Tube: 1:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000080 u	ppm	0.000182	> 100.00	-95.524400	Y 377.433
Al (394.401 nm)	0.000500 u	ppm	0.001142	> 100.00	113.791000	Y 377.433
Al H (396.152 nm)	0.090401 u	ppm	0.000244	0.27	-5.587670	Y_R 377.433
As (188.980 nm)	0.061520	ppm	0.001028	1.67	70.044000	Y 242.219
B (249.678 nm)	0.028335	ppm	0.001503	5.30	105.861000	Y 242.219
Ba (493.408 nm)	0.081167	ppm	0.002083	2.57	7953.310000	Y_R 488.368
Be (234.861 nm)	-0.000019 u	ppm	0.000017	87.11	-5.004280	Y_R 488.368
Bi (223.061 nm)	0.002926	ppm	0.003935	> 100.00	62.922700	Y 377.433
Ca (315.887 nm)	61.982776	ppm	0.111486	0.18	40866.948106	Y_R 377.433
Cd (214.439 nm)	0.000148	ppm	0.000119	80.43	-9.344110	Y 377.433
Co (228.615 nm)	-0.000262 u	ppm	0.000072	27.37	-22.963300	Y 242.219
Cr (205.560 nm)	0.003798	ppm	0.000742	19.53	8.359660	Y 377.433
Cu (324.754 nm)	-0.000229 u	ppm	0.000123	53.96	99.432400	Y 377.433
Fe (238.204 nm)	0.001690 u	ppm	0.002732	> 100.00	30.722351	Y_R 377.433
Fe H (259.940 nm)	-0.068776 u	ppm	0.005094	7.41	16.699400	Y_R 377.433
K (766.491 nm)	8.897120	ppm	0.020117	0.23	11069.100000	Y_R2 488.368
Li (670.783 nm)	0.015681	ppm	0.006089	38.83	-942.624000	Y_R2 488.368
Mg (279.078 nm)	16.228000	ppm	0.006410	0.04	34449.100000	Y 377.433
Mn (257.610 nm)	0.000354	ppm	0.000055	15.62	117.278000	Y 377.433
Mo (202.032 nm)	0.007652	ppm	0.000227	2.97	100.027000	Y 377.433
Na (589.592 nm)	101.427000 o	ppm	0.018100	0.02	54842.800000	Y_R2 488.368
Na H (589.593 nm)	106.208634	ppm	0.462326	0.44	40036.570640	Y_R4
Ni (231.604 nm)	-0.000348 u	ppm	0.001539	> 100.00	15.799500	Y 377.433
P (213.618 nm)	89.806200 bo	ppm	0.371609	0.41	98153.600000	Y 242.219
Pb (220.353 nm)	0.000637	ppm	0.000610	95.67	10.697800	Y 242.219
S (181.972 nm)	16.429202	ppm	0.037340	0.23	7651.478019	Y 377.433
Sb (206.834 nm)	-0.002489 u	ppm	0.000006	0.26	15.818200	Y 377.433
Se (196.026 nm)	0.000923	ppm	0.000962	> 100.00	10.367900	Y 242.219
Si (288.158 nm)	25.400400	ppm	0.097608	0.38	103121.000000	Y 377.433
Sn (189.925 nm)	-0.000026 u	ppm	0.000057	> 100.00	-0.522037	Y 377.433
Sr (421.552 nm)	0.281984	ppm	0.004613	1.64	32529.526805	Y_R 488.368
Th (288.505 nm)	-0.027933 u	ppm	0.008036	28.77	-19.998200	Y 377.433
Ti (336.122 nm)	0.000056 u	ppm	0.000200	> 100.00	38.799700	Y 377.433
Tl (190.794 nm)	-0.001109 u	ppm	0.000408	36.83	0.326121	Y 377.433
U (409.013 nm)	0.007348	ppm	0.005403	73.53	258.571000	Y 377.433
V (292.401 nm)	0.027015	ppm	0.000216	0.80	851.489000	Y 377.433
Zn (206.200 nm)	0.001090	ppm	0.000176	16.12	7.974180	Y 377.433
Zr (343.823 nm)	0.000245	ppm	0.000240	97.97	123.596000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.036908	10668.438417	0.004355	0.42
Y 377.433	1.038250	442094.086161	0.002780	0.27
Y_R 377.433	1.065190	42854.700000	0.003880	0.36
Y_R 488.368	1.076960	39946.500000	0.015783	1.47
Y_R2 488.368	1.076839	76442.225363	0.015516	1.44
Y_R4	1.078490	36972.500000	0.001618	0.15

Sample Name: 280-114433-A-8-A

Date: 9/21/2018 5:55:15 PM Rack:Tube: 1:68

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000084 u	ppm	0.000284	> 100.00	-95.407300	Y 377.433
Al (394.401 nm)	-0.000609 u	ppm	0.000512	84.09	96.865200	Y 377.433
Al H (396.152 nm)	0.087211 u	ppm	0.000842	0.97	-11.608900	Y_R 377.433
As (188.980 nm)	0.061239	ppm	0.000251	0.41	69.677300	Y 242.219
B (249.678 nm)	0.027904	ppm	0.000681	2.44	104.243000	Y 242.219
Ba (493.408 nm)	0.080693	ppm	0.001119	1.39	7910.060000	Y_R 488.368
Be (234.861 nm)	-0.000025 u	ppm	0.000027	> 100.00	-5.353050	Y_R 488.368
Bi (223.061 nm)	-0.003353 u	ppm	0.005912	> 100.00	52.843500	Y 377.433
Ca (315.887 nm)	61.481638	ppm	0.040826	0.07	40536.486345	Y_R 377.433
Cd (214.439 nm)	0.000259	ppm	0.000090	34.77	-6.530580	Y 377.433
Co (228.615 nm)	0.000007 u	ppm	0.000066	> 100.00	-17.622500	Y 242.219
Cr (205.560 nm)	0.002374	ppm	0.000637	26.83	1.381210	Y 377.433
Cu (324.754 nm)	-0.000167 u	ppm	0.000315	> 100.00	105.073000	Y 377.433
Fe (238.204 nm)	0.004701	ppm	0.000171	3.64	35.634814	Y_R 377.433
Fe H (259.940 nm)	-0.072780 u	ppm	0.001603	2.20	13.075000	Y_R 377.433
K (766.491 nm)	8.882720	ppm	0.004122	0.05	11054.100000	Y_R2 488.368
Li (670.783 nm)	0.014643	ppm	0.002376	16.23	-956.945000	Y_R2 488.368
Mg (279.078 nm)	16.112600	ppm	0.061033	0.38	34204.200000	Y 377.433
Mn (257.610 nm)	0.000795	ppm	0.000071	8.92	195.243000	Y 377.433
Mo (202.032 nm)	0.007376	ppm	0.000478	6.49	97.156500	Y 377.433
Na (589.592 nm)	100.774000 o	ppm	0.249291	0.25	54489.300000	Y_R2 488.368
Na H (589.593 nm)	104.660774	ppm	0.152997	0.15	39462.916720	Y_R4
Ni (231.604 nm)	-0.000602 u	ppm	0.000361	59.95	14.851400	Y 377.433
P (213.618 nm)	88.976300 bo	ppm	0.007658	0.01	97246.500000	Y 242.219
Pb (220.353 nm)	-0.002627 u	ppm	0.000901	34.30	3.870260	Y 242.219
S (181.972 nm)	16.323754	ppm	0.070351	0.43	7602.363967	Y 377.433
Sb (206.834 nm)	-0.002759 u	ppm	0.001646	59.68	15.369600	Y 377.433
Se (196.026 nm)	0.003231	ppm	0.001198	37.07	13.403900	Y 242.219
Si (288.158 nm)	25.393200	ppm	0.329030	1.30	103092.000000	Y 377.433
Sn (189.925 nm)	-0.001029 u	ppm	0.000931	90.49	-1.705560	Y 377.433
Sr (421.552 nm)	0.280383	ppm	0.002381	0.85	32345.676234	Y_R 488.368
Th (288.505 nm)	-0.017630 u	ppm	0.006527	37.02	-10.047600	Y 377.433
Ti (336.122 nm)	-0.000123 u	ppm	0.000081	65.86	21.378000	Y 377.433
Tl (190.794 nm)	0.001386	ppm	0.000304	21.93	4.794910	Y 377.433
U (409.013 nm)	-0.004301 u	ppm	0.004252	98.85	231.343000	Y 377.433
V (292.401 nm)	0.026584	ppm	0.000150	0.57	835.571000	Y 377.433
Zn (206.200 nm)	0.002368	ppm	0.000616	26.00	12.305200	Y 377.433
Zr (343.823 nm)	0.000013 u	ppm	0.000321	> 100.00	114.538000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.047668	10779.147881	0.006074	0.58
Y 377.433	1.045298	445095.215423	0.007848	0.75
Y_R 377.433	1.069050	43010.300000	0.007971	0.75
Y_R 488.368	1.075870	39906.200000	0.015946	1.48
Y_R2 488.368	1.075468	76344.876634	0.006212	0.58
Y_R4	1.099600	37696.200000	0.002018	0.18

Sample Name: 280-114433-A-9-A

Date: 9/21/2018 5:58:45 PM Rack:Tube: 1:69

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000504 u	ppm	0.000020	3.99	-102.447000	Y 377.433
Al (394.401 nm)	-0.001427 u	ppm	0.001744	> 100.00	87.399000	Y 377.433
Al H (396.152 nm)	0.085124 u	ppm	0.006434	7.56	-25.759300	Y_R 377.433
As (188.980 nm)	0.004950	ppm	0.001745	35.25	-3.774460	Y 242.219
B (249.678 nm)	0.024517	ppm	0.000399	1.63	91.533900	Y 242.219
Ba (493.408 nm)	0.079278	ppm	0.001187	1.50	7780.770000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000045	> 100.00	-4.032570	Y_R 488.368
Bi (223.061 nm)	0.002318 u	ppm	0.003765	> 100.00	61.940100	Y 377.433
Ca (315.887 nm)	51.382629	ppm	0.016773	0.03	33876.953083	Y_R 377.433
Cd (214.439 nm)	0.000192	ppm	0.000017	9.08	-8.235220	Y 377.433
Co (228.615 nm)	-0.000075 u	ppm	0.000270	> 100.00	-19.242900	Y 242.219
Cr (205.560 nm)	0.003368	ppm	0.000219	6.50	6.264140	Y 377.433
Cu (324.754 nm)	-0.000172 u	ppm	0.000013	7.73	106.414000	Y 377.433
Fe (238.204 nm)	0.000838 u	ppm	0.002173	> 100.00	29.333383	Y_R 377.433
Fe H (259.940 nm)	-0.073218 u	ppm	0.003505	4.79	12.678400	Y_R 377.433
K (766.491 nm)	4.721380	ppm	0.016306	0.35	6697.990000	Y_R2 488.368
Li (670.783 nm)	0.007813	ppm	0.007802	99.86	-1051.170000	Y_R2 488.368
Mg (279.078 nm)	12.243400	ppm	0.039466	0.32	25991.700000	Y 377.433
Mn (257.610 nm)	0.000605	ppm	0.000016	2.66	161.597000	Y 377.433
Mo (202.032 nm)	0.004873	ppm	0.000258	5.30	71.112100	Y 377.433
Na (589.592 nm)	22.291100	ppm	0.100616	0.45	11976.600000	Y_R2 488.368
Na H (589.593 nm)	24.185192 u	ppm	0.179949	0.74	9632.968424	Y_R4
Ni (231.604 nm)	-0.000730 u	ppm	0.000887	> 100.00	14.224900	Y 377.433
P (213.618 nm)	0.131589	ppm	0.007087	5.39	142.652000	Y 242.219
Pb (220.353 nm)	-0.000043 u	ppm	0.000800	> 100.00	9.363230	Y 242.219
S (181.972 nm)	18.035896	ppm	0.055696	0.31	8398.301350	Y 377.433
Sb (206.834 nm)	-0.004618 u	ppm	0.000390	8.45	12.382000	Y 377.433
Se (196.026 nm)	0.001675	ppm	0.000900	53.75	11.357400	Y 242.219
Si (288.158 nm)	12.511800	ppm	0.002444	0.02	50984.400000	Y 377.433
Sn (189.925 nm)	0.000723	ppm	0.000609	84.24	0.360582	Y 377.433
Sr (421.552 nm)	0.242955	ppm	0.002154	0.89	28048.513913	Y_R 488.368
Th (288.505 nm)	-0.014511 u	ppm	0.003428	23.62	-5.728490	Y 377.433
Ti (336.122 nm)	0.000185	ppm	0.000167	89.79	25.631400	Y 377.433
Tl (190.794 nm)	-0.000173 u	ppm	0.000424	> 100.00	2.013200	Y 377.433
U (409.013 nm)	0.052389	ppm	0.000054	0.10	365.157000	Y 377.433
V (292.401 nm)	0.007823	ppm	0.000239	3.05	57.198700	Y 377.433
Zn (206.200 nm)	0.071134	ppm	0.000474	0.67	245.289000	Y 377.433
Zr (343.823 nm)	0.000007 u	ppm	0.000104	> 100.00	114.302000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069815	11007.014372	0.000408	0.04
Y 377.433	1.066296	454036.218385	0.003795	0.36
Y_R 377.433	1.082840	43565.200000	0.000890	0.08
Y_R 488.368	1.098930	40761.500000	0.008702	0.79
Y_R2 488.368	1.105533	78479.142784	0.004900	0.44
Y_R4	1.102690	37802.300000	0.000940	0.09

Sample Name: 280-114433-A-10-A

Date: 9/21/2018 6:02:13 PM Rack:Tube: 1:70

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000461 u	ppm	0.000241	52.28	-101.338000	Y 377.433
Al (394.401 nm)	0.005750	ppm	0.000580	10.09	168.444000	Y 377.433
Al H (396.152 nm)	0.106466 u	ppm	0.003286	3.09	12.447200	Y_R 377.433
As (188.980 nm)	0.002207	ppm	0.000159	7.20	-7.354010	Y 242.219
B (249.678 nm)	0.025154	ppm	0.000216	0.86	93.922800	Y 242.219
Ba (493.408 nm)	0.080964	ppm	0.000312	0.38	7934.740000	Y_R 488.368
Be (234.861 nm)	-0.000012 u	ppm	0.000042	> 100.00	-4.633940	Y_R 488.368
Bi (223.061 nm)	-0.002012 u	ppm	0.000830	41.27	54.989400	Y 377.433
Ca (315.887 nm)	51.316743	ppm	0.030068	0.06	33833.506473	Y_R 377.433
Cd (214.439 nm)	0.000054	ppm	0.000012	21.55	-11.738900	Y 377.433
Co (228.615 nm)	-0.000238 u	ppm	0.000003	1.35	-22.489100	Y 242.219
Cr (205.560 nm)	0.002995	ppm	0.000113	3.78	4.439970	Y 377.433
Cu (324.754 nm)	-0.000192 u	ppm	0.000094	49.08	105.263000	Y 377.433
Fe (238.204 nm)	0.002792	ppm	0.003945	> 100.00	32.520935	Y_R 377.433
Fe H (259.940 nm)	-0.066612 u	ppm	0.003504	5.26	18.658500	Y_R 377.433
K (766.491 nm)	4.706640	ppm	0.112121	2.38	6682.560000	Y_R2 488.368
Li (670.783 nm)	0.011029	ppm	0.003055	27.70	-1006.800000	Y_R2 488.368
Mg (279.078 nm)	12.235400	ppm	0.006128	0.05	25974.600000	Y 377.433
Mn (257.610 nm)	0.000837	ppm	0.000048	5.78	202.664000	Y 377.433
Mo (202.032 nm)	0.004129	ppm	0.000587	14.20	63.377100	Y 377.433
Na (589.592 nm)	22.243300	ppm	0.012441	0.06	11950.700000	Y_R2 488.368
Na H (589.593 nm)	23.869241 u	ppm	0.043109	0.18	9515.666612	Y_R4
Ni (231.604 nm)	-0.000710 u	ppm	0.000886	> 100.00	14.297800	Y 377.433
P (213.618 nm)	0.128607	ppm	0.004187	3.26	139.399000	Y 242.219
Pb (220.353 nm)	-0.000399 u	ppm	0.000362	90.82	8.620860	Y 242.219
S (181.972 nm)	18.085490	ppm	0.039796	0.22	8421.368929	Y 377.433
Sb (206.834 nm)	-0.008445 u	ppm	0.000184	2.18	6.191630	Y 377.433
Se (196.026 nm)	0.001474	ppm	0.001544	> 100.00	11.092100	Y 242.219
Si (288.158 nm)	12.619500	ppm	0.019593	0.16	51419.900000	Y 377.433
Sn (189.925 nm)	-0.000468 u	ppm	0.000667	> 100.00	-1.044040	Y 377.433
Sr (421.552 nm)	0.246760	ppm	0.001363	0.55	28485.394857	Y_R 488.368
Th (288.505 nm)	-0.018557 u	ppm	0.003805	20.50	-9.630120	Y 377.433
Ti (336.122 nm)	0.000811	ppm	0.000178	21.90	81.761700	Y 377.433
Tl (190.794 nm)	-0.000404 u	ppm	0.000799	> 100.00	1.602370	Y 377.433
U (409.013 nm)	0.046599	ppm	0.003087	6.62	351.600000	Y 377.433
V (292.401 nm)	0.007955	ppm	0.000266	3.34	62.690700	Y 377.433
Zn (206.200 nm)	0.073672	ppm	0.000342	0.46	253.891000	Y 377.433
Zr (343.823 nm)	0.000052 u	ppm	0.000315	> 100.00	116.063000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072774	11037.450916	0.001048	0.10
Y 377.433	1.071085	456075.364061	0.000087	0.01
Y_R 377.433	1.091610	43917.900000	0.000734	0.07
Y_R 488.368	1.091730	40494.300000	0.004136	0.38
Y_R2 488.368	1.093536	77627.533953	0.009580	0.88
Y_R4	1.096210	37579.900000	0.009424	0.86

Sample Name: CCVH-5320321

Date: 9/21/2018 6:05:44 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000295	ppm	0.000233	79.08	-176.496000	Y 377.433
Al (394.401 nm)	50.135100 o	ppm	0.114619	0.23	557262.000000	Y 377.433
Al H (396.152 nm)	49.314000	ppm	0.077047	0.16	85177.700000	Y_R 377.433
As (188.980 nm)	-0.000999 u	ppm	0.003023	> 100.00	-13.472800	Y 242.219
B (249.678 nm)	0.003532	ppm	0.001824	51.65	-2.318450	Y 242.219
Ba (493.408 nm)	0.000274	ppm	0.000189	68.93	600.549000	Y_R 488.368
Be (234.861 nm)	-0.000648 u	ppm	0.000267	41.17	-329.554000	Y_R 488.368
Bi (223.061 nm)	0.980849	ppm	0.001930	0.20	1639.130000	Y 377.433
Ca (315.887 nm)	0.033567	ppm	0.011077	33.00	20.187614	Y_R 377.433
Cd (214.439 nm)	-0.000455 u	ppm	0.000061	13.33	-7.010650	Y 377.433
Co (228.615 nm)	0.003322	ppm	0.000312	9.39	48.282900	Y 242.219
Cr (205.560 nm)	0.000066 u	ppm	0.000154	> 100.00	-11.116500	Y 377.433
Cu (324.754 nm)	-0.000336 u	ppm	0.000153	45.66	523.155000	Y 377.433
Fe (238.204 nm)	49.836959 o	ppm	0.029409	0.06	81314.665752	Y_R 377.433
Fe H (259.940 nm)	50.008100	ppm	0.020913	0.04	45351.500000	Y_R 377.433
K (766.491 nm)	-0.004164 u	ppm	0.069450	> 100.00	1751.300000	Y_R2 488.368
Li (670.783 nm)	0.002560	ppm	0.001948	76.10	-1123.630000	Y_R2 488.368
Mg (279.078 nm)	0.019390	ppm	0.001439	7.42	-94.589000	Y 377.433
Mn (257.610 nm)	0.000854	ppm	0.000016	1.92	205.729000	Y 377.433
Mo (202.032 nm)	-0.000667 u	ppm	0.000321	48.16	13.477900	Y 377.433
Na (589.592 nm)	240.365000 o	ppm	0.664114	0.28	130104.000000	Y_R2 488.368
Na H (589.593 nm)	250.800067	ppm	1.181416	0.47	93640.684635	Y_R4
Ni (231.604 nm)	-0.001172 u	ppm	0.000053	4.54	19.003000	Y 377.433
P (213.618 nm)	0.011439	ppm	0.003955	34.57	10.204400	Y 242.219
Pb (220.353 nm)	0.001955	ppm	0.000398	20.35	23.965500	Y 242.219
S (181.972 nm)	5.117081	ppm	0.010175	0.20	2382.019407	Y 377.433
Sb (206.834 nm)	-0.002374 u	ppm	0.001284	54.08	20.039900	Y 377.433
Se (196.026 nm)	-0.003622 u	ppm	0.002925	80.74	-6.777710	Y 242.219
Si (288.158 nm)	0.014107	ppm	0.001914	13.56	429.085000	Y 377.433
Sn (189.925 nm)	0.001265	ppm	0.000749	59.23	1.175380	Y 377.433
Sr (421.552 nm)	0.000058	ppm	0.000013	22.09	166.964744	Y_R 488.368
Th (288.505 nm)	4.882020	ppm	0.003735	0.08	4743.480000	Y 377.433
Ti (336.122 nm)	0.000973	ppm	0.000168	17.25	-32.195000	Y 377.433
Tl (190.794 nm)	-0.004235 u	ppm	0.001569	37.05	-5.934120	Y 377.433
U (409.013 nm)	9.722790	ppm	0.001201	0.01	23055.700000	Y 377.433
V (292.401 nm)	-0.003192 u	ppm	0.000178	5.59	-419.662000	Y 377.433
Zn (206.200 nm)	0.000189	ppm	0.000117	62.13	5.761450	Y 377.433
Zr (343.823 nm)	-0.007303 u	ppm	0.000069	0.95	-122.414000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051934	10823.032880	0.000045	0.00
Y 377.433	1.050468	447296.571082	0.000778	0.07
Y_R 377.433	1.082430	43548.400000	0.005514	0.51
Y_R 488.368	1.091350	40480.400000	0.004275	0.39
Y_R2 488.368	1.085412	77050.776284	0.001765	0.16
Y_R4	1.113690	38179.200000	0.010177	0.91

Sample Name: CCV-5305988

Date: 9/21/2018 6:09:24 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497224	ppm	0.002153	0.43	12418.800000	Y 377.433
Al (394.401 nm)	0.499443	ppm	0.010292	2.06	5696.650000	Y 377.433
Al H (396.152 nm)	0.571193 u	ppm	0.020848	3.65	942.031000	Y_R 377.433
As (188.980 nm)	0.981159	ppm	0.000622	0.06	1270.020000	Y 242.219
B (249.678 nm)	0.493942	ppm	0.000150	0.03	1852.620000	Y 242.219
Ba (493.408 nm)	0.502209	ppm	0.000773	0.15	46414.500000	Y_R 488.368
Be (234.861 nm)	0.497475	ppm	0.001777	0.36	26936.800000	Y_R 488.368
Bi (223.061 nm)	-0.003860 u	ppm	0.004957	> 100.00	52.411600	Y 377.433
Ca (315.887 nm)	4.950807	ppm	0.001030	0.02	3258.724955	Y_R 377.433
Cd (214.439 nm)	0.494564	ppm	0.001946	0.39	12551.600000	Y 377.433
Co (228.615 nm)	0.494842	ppm	0.003454	0.70	9839.610000	Y 242.219
Cr (205.560 nm)	0.482977	ppm	0.002245	0.46	2354.860000	Y 377.433
Cu (324.754 nm)	0.498852	ppm	0.002217	0.44	21431.000000	Y 377.433
Fe (238.204 nm)	2.513714	ppm	0.000204	0.01	4127.966259	Y_R 377.433
Fe H (259.940 nm)	2.463140 u	ppm	0.006917	0.28	2308.860000	Y_R 377.433
K (766.491 nm)	49.235100	ppm	0.049237	0.10	53294.900000	Y_R2 488.368
Li (670.783 nm)	0.961951	ppm	0.004555	0.47	12111.500000	Y_R2 488.368
Mg (279.078 nm)	19.686800	ppm	0.110640	0.56	41788.200000	Y 377.433
Mn (257.610 nm)	0.492972	ppm	0.002807	0.57	87150.600000	Y 377.433
Mo (202.032 nm)	0.492947	ppm	0.001868	0.38	5148.930000	Y 377.433
Na (589.592 nm)	25.107400	ppm	0.051888	0.21	13495.100000	Y_R2 488.368
Na H (589.593 nm)	27.319812 u	ppm	0.033315	0.12	10751.598009	Y_R4
Ni (231.604 nm)	0.495377	ppm	0.000407	0.08	1852.230000	Y 377.433
P (213.618 nm)	0.993295	ppm	0.011710	1.18	1063.400000	Y 242.219
Pb (220.353 nm)	0.991614	ppm	0.003249	0.33	2076.980000	Y 242.219
S (181.972 nm)	0.037381	ppm	0.010607	28.38	20.274113	Y 377.433
Sb (206.834 nm)	1.019410	ppm	0.005421	0.53	1667.670000	Y 377.433
Se (196.026 nm)	0.993327	ppm	0.002161	0.22	1315.970000	Y 242.219
Si (288.158 nm)	4.990520	ppm	0.016812	0.34	20559.000000	Y 377.433
Sn (189.925 nm)	0.990954	ppm	0.002474	0.25	1168.220000	Y 377.433
Sr (421.552 nm)	0.496926	ppm	0.000971	0.20	57207.599350	Y_R 488.368
Th (288.505 nm)	-0.014638 u	ppm	0.003119	21.31	-34.153800	Y 377.433
Ti (336.122 nm)	0.495579	ppm	0.002391	0.48	44657.600000	Y 377.433
Tl (190.794 nm)	1.006890	ppm	0.000494	0.05	1802.560000	Y 377.433
U (409.013 nm)	-0.003392 u	ppm	0.007662	> 100.00	194.964000	Y 377.433
V (292.401 nm)	0.492851	ppm	0.002773	0.56	19956.400000	Y 377.433
Zn (206.200 nm)	0.488712	ppm	0.004294	0.88	1660.130000	Y 377.433
Zr (343.823 nm)	0.492032	ppm	0.002245	0.46	19308.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054540	10849.851044	0.003309	0.31
Y 377.433	1.051061	447549.214971	0.002876	0.27
Y_R 377.433	1.067040	42929.400000	0.000360	0.03
Y_R 488.368	1.074550	39856.900000	0.000886	0.08
Y_R2 488.368	1.085849	77081.856436	0.000638	0.06
Y_R4	1.091610	37422.200000	0.008380	0.77

Sample Name: CCB

Date: 9/21/2018 6:12:56 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001483 u	ppm	0.000204	13.73	-125.607000	Y 377.433
Al (394.401 nm)	-0.006172 u	ppm	0.002299	37.24	-27.006500	Y 377.433
Al H (396.152 nm)	0.140737 Zu	ppm	0.004594	3.26	0.165787 Z	Y_R 377.433
As (188.980 nm)	-0.002045 u	ppm	0.001905	93.13	-12.901900	Y 242.219
B (249.678 nm)	0.000810 u	ppm	0.001881	> 100.00	2.556920	Y 242.219
Ba (493.408 nm)	-0.000412 u	ppm	0.000151	36.70	501.601000	Y_R 488.368
Be (234.861 nm)	0.000075	ppm	0.000064	85.66	0.160033	Y_R 488.368
Bi (223.061 nm)	-0.007685 u	ppm	0.002118	27.56	45.872700	Y 377.433
Ca (315.887 nm)	0.006997	ppm	0.003233	46.21	-1.388111	Y_R 377.433
Cd (214.439 nm)	0.000076	ppm	0.000082	> 100.00	-11.171000	Y 377.433
Co (228.615 nm)	0.000185	ppm	0.000038	20.35	-14.089400	Y 242.219
Cr (205.560 nm)	0.000176 u	ppm	0.000319	> 100.00	-9.365110	Y 377.433
Cu (324.754 nm)	-0.000102 u	ppm	0.000090	88.32	138.534000	Y 377.433
Fe (238.204 nm)	-0.007638 u	ppm	0.005608	73.43	15.509262	Y_R 377.433
Fe H (259.940 nm)	-0.069070 u	ppm	0.003591	5.20	16.433000	Y_R 377.433
K (766.491 nm)	-0.050324 u	ppm	0.013613	27.05	1702.980000	Y_R2 488.368
Li (670.783 nm)	0.001877	ppm	0.001563	83.26	-1133.050000	Y_R2 488.368
Mg (279.078 nm)	0.011003	ppm	0.011112	> 100.00	29.921500	Y 377.433
Mn (257.610 nm)	0.000108 u	ppm	0.000196	> 100.00	73.793600	Y 377.433
Mo (202.032 nm)	-0.000024 u	ppm	0.001021	> 100.00	20.168500	Y 377.433
Na (589.592 nm)	0.232737	ppm	0.042452	18.24	29.298600	Y_R2 488.368
Na H (589.593 nm)	1.485818 u	ppm	0.005889	0.40	1226.784079	Y_R4
Ni (231.604 nm)	-0.001556 u	ppm	0.000420	27.00	10.408900	Y 377.433
P (213.618 nm)	0.006837	ppm	0.000811	11.86	6.317210	Y 242.219
Pb (220.353 nm)	-0.000369 u	ppm	0.001251	> 100.00	8.649900	Y 242.219
S (181.972 nm)	0.035147	ppm	0.010633	30.25	17.293628	Y 377.433
Sb (206.834 nm)	-0.001156 u	ppm	0.000048	4.16	17.989000	Y 377.433
Se (196.026 nm)	-0.000487 u	ppm	0.004616	> 100.00	8.513750	Y 242.219
Si (288.158 nm)	-0.000680 u	ppm	0.005173	> 100.00	368.467000	Y 377.433
Sn (189.925 nm)	0.002128	ppm	0.002414	> 100.00	2.018090	Y 377.433
Sr (421.552 nm)	0.000002 u	ppm	0.000015	> 100.00	154.819359	Y_R 488.368
Th (288.505 nm)	-0.003844 u	ppm	0.004197	> 100.00	4.832500	Y 377.433
Ti (336.122 nm)	0.000052	ppm	0.000052	> 100.00	-106.500000	Y 377.433
Tl (190.794 nm)	-0.001372 u	ppm	0.000575	41.91	-0.110087	Y 377.433
U (409.013 nm)	0.000685 u	ppm	0.006274	> 100.00	248.953000	Y 377.433
V (292.401 nm)	0.000546	ppm	0.000069	12.65	-240.815000	Y 377.433
Zn (206.200 nm)	0.000314 u	ppm	0.001268	> 100.00	5.343460	Y 377.433
Zr (343.823 nm)	-0.000076 u	ppm	0.000166	> 100.00	111.065000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060514	10911.310168	0.002649	0.25
Y 377.433	1.061486	451988.054376	0.003550	0.33
Y_R 377.433	1.067950	42966.100000	0.004220	0.40
Y_R 488.368	1.087450	40335.500000	0.008918	0.82
Y_R2 488.368	1.076654	76429.112181	0.004459	0.41
Y_R4	1.079370	37002.600000	0.003203	0.30

Sample Name: CCVL-5320254

Date: 9/21/2018 6:16:07 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008085	ppm	0.000522	6.45	115.934000	Y 377.433
Al (394.401 nm)	0.092765	ppm	0.000591	0.64	1079.410000	Y 377.433
Al H (396.152 nm)	0.242481 u	ppm	0.001153	0.48	181.050000	Y_R 377.433
As (188.980 nm)	0.013531	ppm	0.000355	2.62	7.419540	Y 242.219
B (249.678 nm)	0.097821	ppm	0.000705	0.72	366.629000	Y 242.219
Ba (493.408 nm)	0.009720	ppm	0.000449	4.62	1427.180000	Y_R 488.368
Be (234.861 nm)	0.000996	ppm	0.000033	3.29	49.456100	Y_R 488.368
Bi (223.061 nm)	0.090803	ppm	0.000050	0.06	204.001000	Y 377.433
Ca (315.887 nm)	0.202654	ppm	0.007561	3.73	127.641841	Y_R 377.433
Cd (214.439 nm)	0.005205	ppm	0.000043	0.84	119.169000	Y 377.433
Co (228.615 nm)	0.010386	ppm	0.000309	2.98	189.116000	Y 242.219
Cr (205.560 nm)	0.009741	ppm	0.000785	8.06	37.399900	Y 377.433
Cu (324.754 nm)	0.015518	ppm	0.000236	1.52	803.233000	Y 377.433
Fe (238.204 nm)	0.093921	ppm	0.000066	0.07	181.157414	Y_R 377.433
Fe H (259.940 nm)	0.025575 u	ppm	0.000392	1.53	102.116000	Y_R 377.433
K (766.491 nm)	3.043260	ppm	0.046304	1.52	4941.330000	Y_R2 488.368
Li (670.783 nm)	0.026508 Q	ppm	0.003545	13.38	-793.260000 Q	Y_R2 488.368
Mg (279.078 nm)	0.212933	ppm	0.004061	1.91	458.020000	Y 377.433
Mn (257.610 nm)	0.010537	ppm	0.000040	0.38	1916.370000	Y 377.433
Mo (202.032 nm)	0.019266	ppm	0.000576	2.99	220.853000	Y 377.433
Na (589.592 nm)	1.285440	ppm	0.002472	0.19	599.366000	Y_R2 488.368
Na H (589.593 nm)	2.265504 u	ppm	0.026909	1.19	1514.825073	Y_R4
Ni (231.604 nm)	0.040055	ppm	0.000619	1.55	164.560000	Y 377.433
P (213.618 nm)	2.893360	ppm	0.019668	0.68	3160.510000	Y 242.219
Pb (220.353 nm)	0.010033	ppm	0.001232	12.28	30.357700	Y 242.219
S (181.972 nm)	0.131933 Q	ppm	0.004768	3.61	62.378484 Q	Y 377.433
Sb (206.834 nm)	0.017752	ppm	0.002529	14.25	48.434300	Y 377.433
Se (196.026 nm)	0.017570	ppm	0.001427	8.12	32.260000	Y 242.219
Si (288.158 nm)	0.483347	ppm	0.001072	0.22	2326.470000	Y 377.433
Sn (189.925 nm)	0.097010	ppm	0.000607	0.63	113.920000	Y 377.433
Sr (421.552 nm)	0.009880	ppm	0.000369	3.73	1288.931042	Y_R 488.368
Th (288.505 nm)	0.001854 Qu	ppm	0.004339	> 100.00	10.037100 Q	Y 377.433
Ti (336.122 nm)	0.010043	ppm	0.000119	1.18	796.392000	Y 377.433
Tl (190.794 nm)	0.017585	ppm	0.000334	1.90	33.742800	Y 377.433
U (409.013 nm)	0.045451	ppm	0.009339	20.55	352.534000	Y 377.433
V (292.401 nm)	0.010239	ppm	0.000226	2.21	155.171000	Y 377.433
Zn (206.200 nm)	0.019807	ppm	0.000612	3.09	71.389500	Y 377.433
Zr (343.823 nm)	0.014738	ppm	0.000029	0.20	689.006000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.085903	11172.534526	0.000322	0.03
Y 377.433	1.078073	459051.112601	0.001304	0.12
Y_R 377.433	1.077920	43367.200000	0.002102	0.20
Y_R 488.368	1.081810	40126.400000	0.000727	0.07
Y_R2 488.368	1.090425	77406.675922	0.003368	0.31
Y_R4	1.095430	37553.200000	0.005656	0.52

Sample Name: MB 280-430236/1-A

Date: 9/21/2018 6:19:34 PM Rack:Tube: 2:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001126 u	ppm	0.000235	20.89	-116.386000	Y 377.433
Al (394.401 nm)	-0.005823 u	ppm	0.001539	26.42	-24.209200	Y 377.433
Al H (396.152 nm)	0.141400 u	ppm	0.004024	2.85	1.289520	Y_R 377.433
As (188.980 nm)	0.002969	ppm	0.001585	53.39	-6.358830	Y 242.219
B (249.678 nm)	0.001751	ppm	0.001405	80.24	6.087640	Y 242.219
Ba (493.408 nm)	-0.000690 u	ppm	0.000063	9.16	476.250000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000007	12.57	-0.959576	Y_R 488.368
Bi (223.061 nm)	-0.008904 u	ppm	0.000399	4.48	43.917100	Y 377.433
Ca (315.887 nm)	0.009321	ppm	0.004221	45.28	0.144423	Y_R 377.433
Cd (214.439 nm)	0.000078 u	ppm	0.000125	> 100.00	-11.126400	Y 377.433
Co (228.615 nm)	-0.000039 u	ppm	0.000230	> 100.00	-18.538300	Y 242.219
Cr (205.560 nm)	-0.000141 u	ppm	0.000199	> 100.00	-10.921800	Y 377.433
Cu (324.754 nm)	0.000276 u	ppm	0.000667	> 100.00	154.477000	Y 377.433
Fe (238.204 nm)	-0.003404 u	ppm	0.000335	9.83	22.414889	Y_R 377.433
Fe H (259.940 nm)	-0.071576 u	ppm	0.000564	0.79	14.164700	Y_R 377.433
K (766.491 nm)	-0.137517 u	ppm	0.024863	18.08	1611.700000	Y_R2 488.368
Li (670.783 nm)	0.001790 u	ppm	0.005645	> 100.00	-1134.260000	Y_R2 488.368
Mg (279.078 nm)	0.010572	ppm	0.000660	6.25	29.241000	Y 377.433
Mn (257.610 nm)	0.000245	ppm	0.000056	22.71	98.067700	Y 377.433
Mo (202.032 nm)	-0.000472 u	ppm	0.000283	59.83	15.500300	Y 377.433
Na (589.592 nm)	0.158676	ppm	0.057266	36.09	-10.808600	Y_R2 488.368
Na H (589.593 nm)	0.898561 u	ppm	0.027956	3.11	1009.165091	Y_R4
Ni (231.604 nm)	-0.001085 u	ppm	0.000729	67.15	12.152300	Y 377.433
P (213.618 nm)	0.005652	ppm	0.001580	27.95	5.022450	Y 242.219
Pb (220.353 nm)	0.001351	ppm	0.000142	10.49	12.202700	Y 242.219
S (181.972 nm)	0.035358	ppm	0.009570	27.07	17.391989	Y 377.433
Sb (206.834 nm)	-0.002868 u	ppm	0.001421	49.55	15.222600	Y 377.433
Se (196.026 nm)	-0.001668 u	ppm	0.004374	> 100.00	6.959470	Y 242.219
Si (288.158 nm)	0.000970	ppm	0.000330	33.99	375.140000	Y 377.433
Sn (189.925 nm)	0.000655	ppm	0.000423	64.55	0.281078	Y 377.433
Sr (421.552 nm)	-0.000002 u	ppm	0.000101	> 100.00	154.346505	Y_R 488.368
Th (288.505 nm)	-0.010814 u	ppm	0.004455	41.19	-1.950650	Y 377.433
Ti (336.122 nm)	0.000433	ppm	0.000117	27.00	-72.047100	Y 377.433
Tl (190.794 nm)	-0.000566 u	ppm	0.002304	> 100.00	1.333680	Y 377.433
U (409.013 nm)	-0.006207 u	ppm	0.002859	46.07	232.826000	Y 377.433
V (292.401 nm)	0.000576	ppm	0.000085	14.84	-239.227000	Y 377.433
Zn (206.200 nm)	0.002594	ppm	0.000587	22.64	13.068200	Y 377.433
Zr (343.823 nm)	-0.000256 u	ppm	0.000072	28.25	104.067000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093751	11253.283104	0.002476	0.23
Y 377.433	1.084510	461791.843506	0.000973	0.09
Y_R 377.433	1.096960	44133.200000	0.003549	0.32
Y_R 488.368	1.101670	40863.100000	0.000891	0.08
Y_R2 488.368	1.111621	78911.306840	0.007951	0.72
Y_R4	1.109020	38019.200000	0.004209	0.38

Sample Name: LCS 280-430236/2-A

Date: 9/21/2018 6:22:46 PM Rack:Tube: 2:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052346	ppm	0.000225	0.43	1183.600000	Y 377.433
Al (394.401 nm)	2.025480	ppm	0.001428	0.07	22817.300000	Y 377.433
Al H (396.152 nm)	1.978200	ppm	0.005960	0.30	3574.030000	Y_R 377.433
As (188.980 nm)	1.007180	ppm	0.002480	0.25	1303.990000	Y 242.219
B (249.678 nm)	1.032090	ppm	0.006394	0.62	3872.850000	Y 242.219
Ba (493.408 nm)	2.039910	ppm	0.002510	0.12	186872.000000	Y_R 488.368
Be (234.861 nm)	0.050746	ppm	0.000118	0.23	2739.800000	Y_R 488.368
Bi (223.061 nm)	1.921660	ppm	0.004432	0.23	3143.390000	Y 377.433
Ca (315.887 nm)	50.010295	ppm	0.053927	0.11	32972.171892	Y_R 377.433
Cd (214.439 nm)	0.099326	ppm	0.000239	0.24	2510.500000	Y 377.433
Co (228.615 nm)	0.485171	ppm	0.001851	0.38	9666.120000	Y 242.219
Cr (205.560 nm)	0.195839	ppm	0.000187	0.10	945.682000	Y 377.433
Cu (324.754 nm)	0.247991	ppm	0.000198	0.08	10758.400000	Y 377.433
Fe (238.204 nm)	1.008536	ppm	0.002979	0.30	1672.942077	Y_R 377.433
Fe H (259.940 nm)	0.942429 u	ppm	0.004354	0.46	932.148000	Y_R 377.433
K (766.491 nm)	50.826200	ppm	0.010852	0.02	54960.400000	Y_R2 488.368
Li (670.783 nm)	0.991608	ppm	0.002302	0.23	12520.600000	Y_R2 488.368
Mg (279.078 nm)	49.795500	ppm	0.081843	0.16	105671.000000	Y 377.433
Mn (257.610 nm)	0.498093	ppm	0.000797	0.16	88055.300000	Y 377.433
Mo (202.032 nm)	1.003980	ppm	0.000520	0.05	10465.600000	Y 377.433
Na (589.592 nm)	48.453500	ppm	0.170804	0.35	26115.400000	Y_R2 488.368
Na H (589.593 nm)	52.354266	ppm	0.026614	0.05	19872.714869	Y_R4
Ni (231.604 nm)	0.484052	ppm	0.003068	0.63	1811.570000	Y 377.433
P (213.618 nm)	10.418100	ppm	0.005559	0.05	11374.800000	Y 242.219
Pb (220.353 nm)	0.502841	ppm	0.003524	0.70	1058.910000	Y 242.219
S (181.972 nm)	1.991999	ppm	0.006446	0.32	933.574573	Y 377.433
Sb (206.834 nm)	0.517998	ppm	0.002625	0.51	847.518000	Y 377.433
Se (196.026 nm)	2.042690	ppm	0.003832	0.19	2696.830000	Y 242.219
Si (288.158 nm)	10.133300	ppm	0.031630	0.31	41362.900000	Y 377.433
Sn (189.925 nm)	1.996670	ppm	0.003946	0.20	2354.330000	Y 377.433
Sr (421.552 nm)	1.007032	ppm	0.001644	0.16	115773.289641	Y_R 488.368
Th (288.505 nm)	0.969480	ppm	0.007685	0.79	922.468000	Y 377.433
Ti (336.122 nm)	0.995524	ppm	0.000903	0.09	89912.200000	Y 377.433
Tl (190.794 nm)	2.032040	ppm	0.003728	0.18	3633.620000	Y 377.433
U (409.013 nm)	1.979400	ppm	0.009447	0.48	4835.730000	Y 377.433
V (292.401 nm)	0.506062	ppm	0.000737	0.15	20566.900000	Y 377.433
Zn (206.200 nm)	0.489887	ppm	0.001398	0.29	1664.090000	Y 377.433
Zr (343.823 nm)	0.493026	ppm	0.000234	0.05	19346.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045615	10758.023128	0.003580	0.34
Y 377.433	1.050122	447149.482628	0.002505	0.24
Y_R 377.433	1.070810	43080.900000	0.000990	0.09
Y_R 488.368	1.077780	39976.800000	0.000097	0.01
Y_R2 488.368	1.088089	77240.841253	0.004474	0.41
Y_R4	1.086760	37256.100000	0.004462	0.41

Sample Name: 280-114436-A-1-A

Date: 9/21/2018 6:26:19 PM Rack:Tube: 2:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001210	ppm	0.000285	23.57	-57.300400	Y 377.433
Al (394.401 nm)	-0.134795 u	ppm	0.001025	0.76	288.757000	Y 377.433
Al H (396.152 nm)	-1.337130 u	ppm	0.002045	0.15	-148.176000	Y_R 377.433
As (188.980 nm)	0.001416 u	ppm	0.002144	> 100.00	-8.385240	Y 242.219
B (249.678 nm)	0.156603	ppm	0.000364	0.23	587.281000	Y 242.219
Ba (493.408 nm)	0.015764	ppm	0.000342	2.17	1979.180000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000039	> 100.00	-5.811110	Y_R 488.368
Bi (223.061 nm)	0.008469	ppm	0.003354	39.60	71.810400	Y 377.433
Ca (315.887 nm)	371.094848	ppm	0.244595	0.07	244702.960921	Y_R 377.433
Cd (214.439 nm)	0.000133	ppm	0.000079	59.56	-9.716040	Y 377.433
Co (228.615 nm)	-0.000360 u	ppm	0.000090	24.98	-24.906000	Y 242.219
Cr (205.560 nm)	0.000476	ppm	0.000334	70.14	-7.908750	Y 377.433
Cu (324.754 nm)	-0.001015 u	ppm	0.000567	55.82	-88.089900	Y 377.433
Fe (238.204 nm)	-0.004129 u	ppm	0.001696	41.07	21.231666	Y_R 377.433
Fe H (259.940 nm)	-0.085604 u	ppm	0.004147	4.84	1.464810	Y_R 377.433
K (766.491 nm)	2.494570	ppm	0.010441	0.42	4366.970000	Y_R2 488.368
Li (670.783 nm)	0.027572	ppm	0.007630	27.67	-778.587000	Y_R2 488.368
Mg (279.078 nm)	73.579100	ppm	0.691392	0.94	156171.000000	Y 377.433
Mn (257.610 nm)	0.000358	ppm	0.000013	3.63	117.941000	Y 377.433
Mo (202.032 nm)	0.001139	ppm	0.000158	13.88	32.266600	Y 377.433
Na (589.592 nm)	309.402000 o	ppm	1.767770	0.57	167499.000000	Y_R2 488.368
Na H (589.593 nm)	333.253011	ppm	0.583734	0.18	124202.204720	Y_R4
Ni (231.604 nm)	-0.001308 u	ppm	0.000588	44.96	16.822500	Y 377.433
P (213.618 nm)	0.010451	ppm	0.006712	64.23	10.157400	Y 242.219
Pb (220.353 nm)	-0.001091 u	ppm	0.001940	> 100.00	7.070000	Y 242.219
S (181.972 nm)	430.283083 bo	ppm	6.176127	1.44	200267.600231	Y 377.433
Sb (206.834 nm)	-0.006549 u	ppm	0.000953	14.54	9.263360	Y 377.433
Se (196.026 nm)	0.049226	ppm	0.006497	13.20	73.911300	Y 242.219
Si (288.158 nm)	11.130300	ppm	0.032889	0.30	45396.000000	Y 377.433
Sn (189.925 nm)	-0.001215 u	ppm	0.000381	31.35	-1.925040	Y 377.433
Sr (421.552 nm)	7.594434	ppm	0.127305	1.68	872080.982294	Y_R 488.368
Th (288.505 nm)	-0.021363 u	ppm	0.006473	30.30	-12.266800	Y 377.433
Ti (336.122 nm)	-0.000329 u	ppm	0.000196	59.42	729.170000	Y 377.433
Tl (190.794 nm)	0.004441	ppm	0.000892	20.08	10.290500	Y 377.433
U (409.013 nm)	-0.009436 u	ppm	0.003717	39.39	189.506000	Y 377.433
V (292.401 nm)	0.002130	ppm	0.000420	19.72	-173.892000	Y 377.433
Zn (206.200 nm)	0.002118	ppm	0.000671	31.68	11.455200	Y 377.433
Zr (343.823 nm)	0.000378	ppm	0.000257	67.95	128.786000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993281	10219.573436	0.026956	2.71
Y 377.433	0.998400	425125.771173	0.024834	2.49
Y_R 377.433	0.997294	40123.300000	0.005096	0.51
Y_R 488.368	0.992691	36820.800000	0.024051	2.42
Y_R2 488.368	1.002257	71147.854026	0.017619	1.76
Y_R4	1.000140	34286.500000	0.014500	1.45

Sample Name: 280-114420-D-1-A

Date: 9/21/2018 6:29:51 PM Rack:Tube: 2:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000915 u	ppm	0.000644	70.38	-111.075000	Y 377.433
Al (394.401 nm)	-0.006054 u	ppm	0.000074	1.23	-1.553340	Y 377.433
Al H (396.152 nm)	0.125810 u	ppm	0.000408	0.32	7.076950	Y_R 377.433
As (188.980 nm)	0.001776	ppm	0.000210	11.81	-7.952950	Y 242.219
B (249.678 nm)	0.011318	ppm	0.000253	2.24	41.516000	Y 242.219
Ba (493.408 nm)	0.020808	ppm	0.000205	0.99	2441.110000	Y_R 488.368
Be (234.861 nm)	0.000016 u	ppm	0.000053	> 100.00	-12.293200	Y_R 488.368
Bi (223.061 nm)	-0.008839 u	ppm	0.001719	19.45	44.226600	Y 377.433
Ca (315.887 nm)	14.141448	ppm	0.058244	0.41	9319.212438	Y_R 377.433
Cd (214.439 nm)	0.000167	ppm	0.000067	40.26	-8.305360	Y 377.433
Co (228.615 nm)	0.000121 u	ppm	0.000291	> 100.00	-15.360900	Y 242.219
Cr (205.560 nm)	0.000077 u	ppm	0.000307	> 100.00	-9.865020	Y 377.433
Cu (324.754 nm)	0.000228	ppm	0.000104	45.64	146.660000	Y 377.433
Fe (238.204 nm)	1.583048	ppm	0.000745	0.05	2610.000581	Y_R 377.433
Fe H (259.940 nm)	1.522720 u	ppm	0.003017	0.20	1457.480000	Y_R 377.433
K (766.491 nm)	3.155320	ppm	0.114632	3.63	5058.640000	Y_R2 488.368
Li (670.783 nm)	0.006653	ppm	0.000993	14.92	-1067.170000	Y_R2 488.368
Mg (279.078 nm)	8.998620	ppm	0.010745	0.12	19104.100000	Y 377.433
Mn (257.610 nm)	0.263858	ppm	0.000220	0.08	46671.900000	Y 377.433
Mo (202.032 nm)	0.001518	ppm	0.000460	30.32	36.211200	Y 377.433
Na (589.592 nm)	11.024100	ppm	0.029376	0.27	5874.430000	Y_R2 488.368
Na H (589.593 nm)	12.165391 u	ppm	0.007217	0.06	5183.390446	Y_R4
Ni (231.604 nm)	-0.001580 u	ppm	0.001158	73.29	10.755700	Y 377.433
P (213.618 nm)	0.154310	ppm	0.001065	0.69	167.504000	Y 242.219
Pb (220.353 nm)	0.000326 u	ppm	0.000949	> 100.00	10.043500	Y 242.219
S (181.972 nm)	1.135313	ppm	0.007705	0.68	531.241129	Y 377.433
Sb (206.834 nm)	-0.003435 u	ppm	0.001116	32.48	14.420800	Y 377.433
Se (196.026 nm)	-0.001142 u	ppm	0.002563	> 100.00	7.608890	Y 242.219
Si (288.158 nm)	22.911900	ppm	0.197953	0.86	93054.900000	Y 377.433
Sn (189.925 nm)	-0.001311 u	ppm	0.000524	39.95	-2.032600	Y 377.433
Sr (421.552 nm)	0.108143	ppm	0.001116	1.03	12570.751799	Y_R 488.368
Th (288.505 nm)	-0.012214 u	ppm	0.004779	39.12	-0.815366	Y 377.433
Ti (336.122 nm)	0.000211	ppm	0.000088	41.73	-59.492100	Y 377.433
Tl (190.794 nm)	0.000339 u	ppm	0.001159	> 100.00	2.923770	Y 377.433
U (409.013 nm)	-0.014141 u	ppm	0.001356	9.59	213.752000	Y 377.433
V (292.401 nm)	0.000868	ppm	0.000104	12.01	-228.065000	Y 377.433
Zn (206.200 nm)	0.002540	ppm	0.000277	10.92	12.912700	Y 377.433
Zr (343.823 nm)	-0.000260 u	ppm	0.000155	59.80	105.437000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121147	11535.152964	0.000388	0.03
Y 377.433	1.116076	475232.849407	0.001051	0.09
Y_R 377.433	1.132270	45553.600000	0.002075	0.18
Y_R 488.368	1.133580	42046.600000	0.001023	0.09
Y_R2 488.368	1.149943	81631.707455	0.007849	0.68
Y_R4	1.142470	39165.700000	0.002488	0.22

Sample Name: 280-114420-D-1-Asd@5

Date: 9/21/2018 6:33:22 PM Rack:Tube: 2:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001444 u	ppm	0.000191	13.24	-124.416000	Y 377.433
Al (394.401 nm)	-0.010540 u	ppm	0.000615	5.83	-70.314500	Y 377.433
Al H (396.152 nm)	0.140051 u	ppm	0.009687	6.92	5.520950	Y_R 377.433
As (188.980 nm)	0.001660	ppm	0.000955	57.53	-8.074160	Y 242.219
B (249.678 nm)	0.002466	ppm	0.000913	37.01	8.680260	Y 242.219
Ba (493.408 nm)	0.004005	ppm	0.000147	3.66	905.302000	Y_R 488.368
Be (234.861 nm)	0.000010 u	ppm	0.000045	> 100.00	-5.184170	Y_R 488.368
Bi (223.061 nm)	-0.006467 u	ppm	0.001404	21.71	47.868400	Y 377.433
Ca (315.887 nm)	2.891928	ppm	0.009818	0.34	1901.006371	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000006	5.97	-10.645500	Y 377.433
Co (228.615 nm)	0.000055 u	ppm	0.000104	> 100.00	-16.688700	Y 242.219
Cr (205.560 nm)	-0.000365 u	ppm	0.000211	57.89	-12.020200	Y 377.433
Cu (324.754 nm)	0.000396	ppm	0.000159	40.17	157.364000	Y 377.433
Fe (238.204 nm)	0.305048	ppm	0.000403	0.13	525.515594	Y_R 377.433
Fe H (259.940 nm)	0.247636 u	ppm	0.006110	2.47	303.149000	Y_R 377.433
K (766.491 nm)	0.581748	ppm	0.099389	17.08	2364.630000	Y_R2 488.368
Li (670.783 nm)	0.008997	ppm	0.001228	13.64	-1034.830000	Y_R2 488.368
Mg (279.078 nm)	1.797790	ppm	0.028681	1.60	3822.210000	Y 377.433
Mn (257.610 nm)	0.052592	ppm	0.000880	1.67	9346.470000	Y 377.433
Mo (202.032 nm)	-0.000078 u	ppm	0.000269	> 100.00	19.604500	Y 377.433
Na (589.592 nm)	2.488180	ppm	0.016731	0.67	1250.960000	Y_R2 488.368
Na H (589.593 nm)	3.502502 u	ppm	0.013426	0.38	1973.892393	Y_R4
Ni (231.604 nm)	-0.001497 u	ppm	0.000911	60.86	10.715300	Y 377.433
P (213.618 nm)	0.026938	ppm	0.003535	13.12	28.290200	Y 242.219
Pb (220.353 nm)	0.000324 u	ppm	0.000920	> 100.00	10.050400	Y 242.219
S (181.972 nm)	0.233438	ppm	0.001395	0.60	109.960961	Y 377.433
Sb (206.834 nm)	-0.003124 u	ppm	0.000275	8.81	14.828200	Y 377.433
Se (196.026 nm)	-0.001859 u	ppm	0.000876	47.13	6.700440	Y 242.219
Si (288.158 nm)	4.418260	ppm	0.101741	2.30	18244.100000	Y 377.433
Sn (189.925 nm)	0.001003 u	ppm	0.001701	> 100.00	0.692395	Y 377.433
Sr (421.552 nm)	0.021421	ppm	0.000168	0.79	2614.031786	Y_R 488.368
Th (288.505 nm)	-0.012573 u	ppm	0.002533	20.15	-3.168260	Y 377.433
Ti (336.122 nm)	0.000033 u	ppm	0.000164	> 100.00	-101.732000	Y 377.433
Tl (190.794 nm)	0.002621	ppm	0.001480	56.48	7.033270	Y 377.433
U (409.013 nm)	-0.014203 u	ppm	0.005683	40.01	214.003000	Y 377.433
V (292.401 nm)	0.000824	ppm	0.000150	18.25	-229.577000	Y 377.433
Zn (206.200 nm)	0.000931	ppm	0.000069	7.38	7.438520	Y 377.433
Zr (343.823 nm)	-0.000386 u	ppm	0.000209	54.16	99.264100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113789	11459.449847	0.002214	0.20
Y 377.433	1.108783	472127.612753	0.001364	0.12
Y_R 377.433	1.124890	45256.900000	0.008498	0.76
Y_R 488.368	1.133370	42038.600000	0.010556	0.93
Y_R2 488.368	1.134222	80515.713948	0.011153	0.98
Y_R4	1.137170	38984.400000	0.007892	0.69

Sample Name: 280-114420-D-1-B MS

Date: 9/21/2018 6:36:49 PM Rack:Tube: 2:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053077	ppm	0.000332	0.63	1200.080000	Y 377.433
Al (394.401 nm)	2.051010	ppm	0.002217	0.11	23129.400000	Y 377.433
Al H (396.152 nm)	1.983080	ppm	0.012741	0.64	3618.730000	Y_R 377.433
As (188.980 nm)	1.032720	ppm	0.007915	0.77	1337.280000	Y 242.219
B (249.678 nm)	1.057470	ppm	0.003817	0.36	3967.630000	Y 242.219
Ba (493.408 nm)	2.092140	ppm	0.005919	0.28	191644.000000	Y_R 488.368
Be (234.861 nm)	0.050342	ppm	0.000406	0.81	2708.730000	Y_R 488.368
Bi (223.061 nm)	1.973070	ppm	0.001353	0.07	3226.140000	Y 377.433
Ca (315.887 nm)	64.476680	ppm	0.055394	0.09	42511.661047	Y_R 377.433
Cd (214.439 nm)	0.100630	ppm	0.000344	0.34	2544.190000	Y 377.433
Co (228.615 nm)	0.491165	ppm	0.001298	0.26	9785.370000	Y 242.219
Cr (205.560 nm)	0.199773	ppm	0.000288	0.14	964.946000	Y 377.433
Cu (324.754 nm)	0.254871	ppm	0.000244	0.10	11046.700000	Y 377.433
Fe (238.204 nm)	2.578813	ppm	0.011970	0.46	4234.146909	Y_R 377.433
Fe H (259.940 nm)	2.513040 u	ppm	0.003733	0.15	2354.030000	Y_R 377.433
K (766.491 nm)	54.816700	ppm	0.354764	0.65	59137.700000	Y_R2 488.368
Li (670.783 nm)	1.016650	ppm	0.004219	0.41	12866.100000	Y_R2 488.368
Mg (279.078 nm)	59.502000	ppm	0.126524	0.21	126271.000000	Y 377.433
Mn (257.610 nm)	0.761094	ppm	0.000961	0.13	134521.000000	Y 377.433
Mo (202.032 nm)	1.004340	ppm	0.001960	0.20	10469.400000	Y 377.433
Na (589.592 nm)	59.646100 o	ppm	0.280281	0.47	32177.300000	Y_R2 488.368
Na H (589.593 nm)	63.341615	ppm	0.116645	0.18	23939.996305	Y_R4
Ni (231.604 nm)	0.492049	ppm	0.000147	0.03	1841.630000	Y 377.433
P (213.618 nm)	10.731500	ppm	0.021103	0.20	11717.000000	Y 242.219
Pb (220.353 nm)	0.509533	ppm	0.001173	0.23	1072.900000	Y 242.219
S (181.972 nm)	3.124152	ppm	0.007953	0.25	1462.453951	Y 377.433
Sb (206.834 nm)	0.519343	ppm	0.001732	0.33	849.845000	Y 377.433
Se (196.026 nm)	2.075980	ppm	0.002936	0.14	2740.580000	Y 242.219
Si (288.158 nm)	33.160800	ppm	0.257638	0.78	134514.000000	Y 377.433
Sn (189.925 nm)	2.011320	ppm	0.005116	0.25	2371.610000	Y 377.433
Sr (421.552 nm)	1.125276	ppm	0.003721	0.33	129349.238019	Y_R 488.368
Th (288.505 nm)	0.984886	ppm	0.002689	0.27	939.435000	Y 377.433
Ti (336.122 nm)	0.998517	ppm	0.001060	0.11	90216.600000	Y 377.433
Tl (190.794 nm)	2.026060	ppm	0.001451	0.07	3622.900000	Y 377.433
U (409.013 nm)	2.028150	ppm	0.003017	0.15	4949.340000	Y 377.433
V (292.401 nm)	0.513226	ppm	0.000338	0.07	20861.200000	Y 377.433
Zn (206.200 nm)	0.495175	ppm	0.002185	0.44	1682.030000	Y 377.433
Zr (343.823 nm)	0.493875	ppm	0.000032	0.01	19380.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074945	11059.790270	0.003728	0.35
Y 377.433	1.078392	459186.947739	0.004624	0.43
Y_R 377.433	1.118560	45002.000000	0.006229	0.56
Y_R 488.368	1.128920	41873.700000	0.006238	0.55
Y_R2 488.368	1.144887	81272.776647	0.000005	0.00
Y_R4	1.130930	38770.200000	0.001380	0.12

Sample Name: 280-114420-D-1-C MSD

Date: 9/21/2018 6:40:20 PM Rack:Tube: 2:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053196	ppm	0.000261	0.49	1202.070000	Y 377.433
Al (394.401 nm)	2.056450	ppm	0.002187	0.11	23189.100000	Y 377.433
Al H (396.152 nm)	1.974800	ppm	0.008552	0.43	3604.740000	Y_R 377.433
As (188.980 nm)	1.035680	ppm	0.005275	0.51	1341.140000	Y 242.219
B (249.678 nm)	1.044690	ppm	0.005728	0.55	3919.700000	Y 242.219
Ba (493.408 nm)	2.096990	ppm	0.001138	0.05	192087.000000	Y_R 488.368
Be (234.861 nm)	0.050783	ppm	0.000034	0.07	2732.690000	Y_R 488.368
Bi (223.061 nm)	1.979390	ppm	0.004317	0.22	3236.280000	Y 377.433
Ca (315.887 nm)	64.187099	ppm	0.022096	0.03	42320.703883	Y_R 377.433
Cd (214.439 nm)	0.101053	ppm	0.000231	0.23	2554.920000	Y 377.433
Co (228.615 nm)	0.497341	ppm	0.002379	0.48	9907.870000	Y 242.219
Cr (205.560 nm)	0.201030	ppm	0.000525	0.26	971.140000	Y 377.433
Cu (324.754 nm)	0.255884	ppm	0.000851	0.33	11090.800000	Y 377.433
Fe (238.204 nm)	2.570006	ppm	0.007885	0.31	4219.781835	Y_R 377.433
Fe H (259.940 nm)	2.508620 u	ppm	0.009371	0.37	2350.020000	Y_R 377.433
K (766.491 nm)	55.015500	ppm	0.153653	0.28	59345.700000	Y_R2 488.368
Li (670.783 nm)	1.017410	ppm	0.000840	0.08	12876.600000	Y_R2 488.368
Mg (279.078 nm)	59.550000	ppm	0.003515	0.01	126373.000000	Y 377.433
Mn (257.610 nm)	0.759638	ppm	0.000142	0.02	134264.000000	Y 377.433
Mo (202.032 nm)	0.996233	ppm	0.000369	0.04	10385.000000	Y 377.433
Na (589.592 nm)	59.567500 o	ppm	0.030657	0.05	32134.700000	Y_R2 488.368
Na H (589.593 nm)	63.606884	ppm	0.058856	0.09	24037.885553	Y_R4
Ni (231.604 nm)	0.492722	ppm	0.001099	0.22	1844.120000	Y 377.433
P (213.618 nm)	10.739100	ppm	0.038279	0.36	11725.200000	Y 242.219
Pb (220.353 nm)	0.512220	ppm	0.002177	0.43	1078.520000	Y 242.219
S (181.972 nm)	3.097454	ppm	0.001796	0.06	1450.001192	Y 377.433
Sb (206.834 nm)	0.515356	ppm	0.001389	0.27	843.505000	Y 377.433
Se (196.026 nm)	2.081840	ppm	0.000187	0.01	2748.290000	Y 242.219
Si (288.158 nm)	32.834700	ppm	0.108833	0.33	133195.000000	Y 377.433
Sn (189.925 nm)	1.992890	ppm	0.000791	0.04	2349.870000	Y 377.433
Sr (421.552 nm)	1.127987	ppm	0.001130	0.10	129660.468474	Y_R 488.368
Th (288.505 nm)	0.989122	ppm	0.001281	0.13	943.382000	Y 377.433
Ti (336.122 nm)	0.990663	ppm	0.000576	0.06	89506.500000	Y 377.433
Tl (190.794 nm)	2.026050	ppm	0.001411	0.07	3622.980000	Y 377.433
U (409.013 nm)	2.019970	ppm	0.001624	0.08	4930.570000	Y 377.433
V (292.401 nm)	0.514973	ppm	0.000784	0.15	20933.900000	Y 377.433
Zn (206.200 nm)	0.498656	ppm	0.000519	0.10	1693.820000	Y 377.433
Zr (343.823 nm)	0.489848	ppm	0.000977	0.20	19223.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072822	11037.943395	0.004352	0.41
Y 377.433	1.075877	458115.852887	0.002280	0.21
Y_R 377.433	1.114230	44827.900000	0.003376	0.30
Y_R 488.368	1.121200	41587.300000	0.000619	0.06
Y_R2 488.368	1.125651	79907.275822	0.004923	0.44
Y_R4	1.122860	38493.800000	0.004661	0.42

Sample Name: 280-114420-D-2-Apds

Date: 9/21/2018 6:43:54 PM Rack:Tube: 2:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000787 u	ppm	0.000851	> 100.00	-107.923000	Y 377.433
Al (394.401 nm)	-0.006752 u	ppm	0.001142	16.91	0.137216	Y 377.433
Al H (396.152 nm)	0.103994 u	ppm	0.010300	9.90	-21.647400	Y_R 377.433
As (188.980 nm)	0.002667	ppm	0.001385	51.91	-6.768990	Y 242.219
B (249.678 nm)	0.014799	ppm	0.001092	7.38	54.851800	Y 242.219
Ba (493.408 nm)	0.011980	ppm	0.000210	1.75	1634.030000	Y_R 488.368
Be (234.861 nm)	-0.000191 u	ppm	0.000003	1.54	-18.252900	Y_R 488.368
Bi (223.061 nm)	-0.006150 u	ppm	0.002141	34.82	48.428500	Y 377.433
Ca (315.887 nm)	18.827472	ppm	0.019496	0.10	12409.290764	Y_R 377.433
Cd (214.439 nm)	0.000068 u	ppm	0.000134	> 100.00	-11.133500	Y 377.433
Co (228.615 nm)	0.000382	ppm	0.000207	54.23	-10.167100	Y 242.219
Cr (205.560 nm)	0.000274 u	ppm	0.000812	> 100.00	-8.899080	Y 377.433
Cu (324.754 nm)	0.000188	ppm	0.000057	30.55	140.135000	Y 377.433
Fe (238.204 nm)	0.680017	ppm	0.004364	0.64	1137.110057	Y_R 377.433
Fe H (259.940 nm)	0.609716 u	ppm	0.001443	0.24	630.941000	Y_R 377.433
K (766.491 nm)	2.610430	ppm	0.066341	2.54	4488.250000	Y_R2 488.368
Li (670.783 nm)	0.010894	ppm	0.003802	34.90	-1008.660000	Y_R2 488.368
Mg (279.078 nm)	10.482200	ppm	0.003017	0.03	22253.600000	Y 377.433
Mn (257.610 nm)	0.296098	ppm	0.000020	0.01	52367.800000	Y 377.433
Mo (202.032 nm)	0.002643	ppm	0.000111	4.20	47.908600	Y 377.433
Na (589.592 nm)	14.628600	ppm	0.046096	0.32	7827.030000	Y_R2 488.368
Na H (589.593 nm)	15.427045 u	ppm	0.053758	0.35	6393.203085	Y_R4
Ni (231.604 nm)	-0.000697 u	ppm	0.000377	54.09	13.966200	Y 377.433
P (213.618 nm)	0.201534	ppm	0.000071	0.04	219.115000	Y 242.219
Pb (220.353 nm)	0.001244	ppm	0.000158	12.74	11.981600	Y 242.219
S (181.972 nm)	2.066593	ppm	0.009620	0.47	965.109918	Y 377.433
Sb (206.834 nm)	-0.005300 u	ppm	0.000728	13.73	11.326700	Y 377.433
Se (196.026 nm)	-0.000017 u	ppm	0.003153	> 100.00	9.330820	Y 242.219
Si (288.158 nm)	20.629800	ppm	0.119200	0.58	83823.200000	Y 377.433
Sn (189.925 nm)	0.000236 u	ppm	0.001138	> 100.00	-0.210280	Y 377.433
Sr (421.552 nm)	0.137604	ppm	0.000502	0.36	15953.128852	Y_R 488.368
Th (288.505 nm)	-0.016340 u	ppm	0.003911	23.93	-4.409950	Y 377.433
Ti (336.122 nm)	0.000358	ppm	0.000175	48.86	-35.086000	Y 377.433
Tl (190.794 nm)	0.000779	ppm	0.000449	57.69	3.717810	Y 377.433
U (409.013 nm)	-0.008368 u	ppm	0.000264	3.16	226.324000	Y 377.433
V (292.401 nm)	0.000772	ppm	0.000016	2.14	-232.682000	Y 377.433
Zn (206.200 nm)	0.002820	ppm	0.000484	17.15	13.845400	Y 377.433
Zr (343.823 nm)	-0.000335 u	ppm	0.000050	14.93	101.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114562	11467.400123	0.002664	0.24
Y 377.433	1.110877	473019.237994	0.002770	0.25
Y_R 377.433	1.141110	45909.200000	0.001059	0.09
Y_R 488.368	1.135540	42119.200000	0.003555	0.31
Y_R2 488.368	1.158856	82264.388285	0.011215	0.97
Y_R4	1.148970	39388.700000	0.000686	0.06

Sample Name: 280-114420-D-3-A

Date: 9/21/2018 6:47:24 PM Rack:Tube: 2:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000563 u	ppm	0.000436	77.35	-102.041000	Y 377.433
Al (394.401 nm)	-0.008029 u	ppm	0.000190	2.37	-17.980400	Y 377.433
Al H (396.152 nm)	0.116243 u	ppm	0.006743	5.80	-0.583353	Y_R 377.433
As (188.980 nm)	0.002679	ppm	0.002201	82.15	-6.753390	Y 242.219
B (249.678 nm)	0.014934	ppm	0.001395	9.34	55.355800	Y 242.219
Ba (493.408 nm)	0.012135	ppm	0.000127	1.05	1648.170000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000018	> 100.00	-8.256710	Y_R 488.368
Bi (223.061 nm)	-0.007231 u	ppm	0.001471	20.34	46.696100	Y 377.433
Ca (315.887 nm)	19.085059	ppm	0.013640	0.07	12579.149597	Y_R 377.433
Cd (214.439 nm)	0.000079 u	ppm	0.000147	> 100.00	-10.836200	Y 377.433
Co (228.615 nm)	0.000174	ppm	0.000050	29.02	-14.313100	Y 242.219
Cr (205.560 nm)	0.000595	ppm	0.000565	94.87	-7.323400	Y 377.433
Cu (324.754 nm)	-0.000062 u	ppm	0.000292	> 100.00	131.178000	Y 377.433
Fe (238.204 nm)	0.699827	ppm	0.012349	1.76	1169.421305	Y_R 377.433
Fe H (259.940 nm)	0.629184 u	ppm	0.005141	0.82	648.565000	Y_R 377.433
K (766.491 nm)	2.618940	ppm	0.031178	1.19	4497.160000	Y_R2 488.368
Li (670.783 nm)	0.010676	ppm	0.000286	2.68	-1011.670000	Y_R2 488.368
Mg (279.078 nm)	10.562000	ppm	0.001519	0.01	22423.200000	Y 377.433
Mn (257.610 nm)	0.300369	ppm	0.000365	0.12	53122.400000	Y 377.433
Mo (202.032 nm)	0.002491	ppm	0.000003	0.12	46.336400	Y 377.433
Na (589.592 nm)	14.733200	ppm	0.056316	0.38	7883.720000	Y_R2 488.368
Na H (589.593 nm)	15.286604 u	ppm	0.000855	0.01	6341.179930	Y_R4
Ni (231.604 nm)	-0.001444 u	ppm	0.000384	26.60	11.205500	Y 377.433
P (213.618 nm)	0.204407	ppm	0.003069	1.50	222.260000	Y 242.219
Pb (220.353 nm)	-0.000634 u	ppm	0.000048	7.51	8.021780	Y 242.219
S (181.972 nm)	2.072140	ppm	0.024361	1.18	967.724763	Y 377.433
Sb (206.834 nm)	-0.007268 u	ppm	0.003071	42.25	8.147940	Y 377.433
Se (196.026 nm)	-0.002168 u	ppm	0.002355	> 100.00	6.501780	Y 242.219
Si (288.158 nm)	21.060400	ppm	0.115259	0.55	85565.200000	Y 377.433
Sn (189.925 nm)	0.001583	ppm	0.001090	68.89	1.377600	Y 377.433
Sr (421.552 nm)	0.137099	ppm	0.003099	2.26	15895.199460	Y_R 488.368
Th (288.505 nm)	-0.016311 u	ppm	0.004416	27.07	-4.416190	Y 377.433
Ti (336.122 nm)	0.000265	ppm	0.000044	16.71	-42.865200	Y 377.433
Tl (190.794 nm)	-0.000559 u	ppm	0.000701	> 100.00	1.324190	Y 377.433
U (409.013 nm)	-0.005990 u	ppm	0.006313	> 100.00	231.883000	Y 377.433
V (292.401 nm)	0.000807	ppm	0.000208	25.82	-230.020000	Y 377.433
Zn (206.200 nm)	0.001800	ppm	0.000589	32.73	10.390400	Y 377.433
Zr (343.823 nm)	-0.000116 u	ppm	0.000175	> 100.00	110.188000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116044	11482.642577	0.002897	0.26
Y 377.433	1.111385	473235.448130	0.000159	0.01
Y_R 377.433	1.138410	45800.800000	0.001174	0.10
Y_R 488.368	1.145570	42491.400000	0.023951	2.09
Y_R2 488.368	1.153055	81852.641115	0.014161	1.23
Y_R4	1.146980	39320.600000	0.001572	0.14

Sample Name: 280-114420-D-4-A

Date: 9/21/2018 6:50:54 PM Rack:Tube: 2:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000229 u	ppm	0.000388	> 100.00	-93.728700	Y 377.433
Al (394.401 nm)	-0.004803 u	ppm	0.001598	33.27	29.051000	Y 377.433
Al H (396.152 nm)	0.104462 u	ppm	0.000722	0.69	-9.983880	Y_R 377.433
As (188.980 nm)	0.006524	ppm	0.003275	50.20	-1.736440	Y 242.219
B (249.678 nm)	0.028355	ppm	0.000232	0.82	105.730000	Y 242.219
Ba (493.408 nm)	0.009832	ppm	0.000108	1.10	1437.830000	Y_R 488.368
Be (234.861 nm)	-0.000061 u	ppm	0.000008	12.64	-11.256400	Y_R 488.368
Bi (223.061 nm)	-0.005808 u	ppm	0.001399	24.08	48.979000	Y 377.433
Ca (315.887 nm)	31.692468	ppm	0.016376	0.05	20892.781854	Y_R 377.433
Cd (214.439 nm)	0.000166	ppm	0.000083	49.99	-8.643760	Y 377.433
Co (228.615 nm)	0.000163	ppm	0.000142	87.10	-14.524000	Y 242.219
Cr (205.560 nm)	0.000753	ppm	0.000389	51.68	-6.549740	Y 377.433
Cu (324.754 nm)	0.005512	ppm	0.000066	1.19	361.388000	Y 377.433
Fe (238.204 nm)	0.687255	ppm	0.001147	0.17	1148.915166	Y_R 377.433
Fe H (259.940 nm)	0.616056 u	ppm	0.002632	0.43	636.681000	Y_R 377.433
K (766.491 nm)	3.225490	ppm	0.131739	4.08	5132.090000	Y_R2 488.368
Li (670.783 nm)	0.011637	ppm	0.000286	2.46	-998.418000	Y_R2 488.368
Mg (279.078 nm)	13.958800	ppm	0.005513	0.04	29632.500000	Y 377.433
Mn (257.610 nm)	0.280236	ppm	0.000112	0.04	49565.400000	Y 377.433
Mo (202.032 nm)	0.001499	ppm	0.000020	1.34	36.014200	Y 377.433
Na (589.592 nm)	12.343100	ppm	0.002884	0.02	6589.090000	Y_R2 488.368
Na H (589.593 nm)	12.856039 u	ppm	0.074354	0.58	5440.432281	Y_R4
Ni (231.604 nm)	-0.001674 u	ppm	0.000341	20.37	10.541400	Y 377.433
P (213.618 nm)	0.300499	ppm	0.001420	0.47	327.014000	Y 242.219
Pb (220.353 nm)	-0.000831 u	ppm	0.000164	19.73	7.620040	Y 242.219
S (181.972 nm)	9.505243	ppm	0.025357	0.27	4427.756639	Y 377.433
Sb (206.834 nm)	-0.007848 u	ppm	0.000473	6.03	7.215180	Y 377.433
Se (196.026 nm)	-0.001273 u	ppm	0.005255	> 100.00	7.657490	Y 242.219
Si (288.158 nm)	15.761700	ppm	0.070153	0.45	64131.000000	Y 377.433
Sn (189.925 nm)	-0.000204 u	ppm	0.000010	4.87	-0.729390	Y 377.433
Sr (421.552 nm)	0.178280	ppm	0.000220	0.12	20623.201879	Y_R 488.368
Th (288.505 nm)	-0.021062 u	ppm	0.003584	17.02	-9.200200	Y 377.433
Ti (336.122 nm)	0.000266	ppm	0.000163	61.41	-13.285000	Y 377.433
Tl (190.794 nm)	0.000894	ppm	0.001212	> 100.00	3.927290	Y 377.433
U (409.013 nm)	-0.013842 u	ppm	0.001036	7.48	212.266000	Y 377.433
V (292.401 nm)	0.001101	ppm	0.000103	9.37	-218.412000	Y 377.433
Zn (206.200 nm)	0.002004	ppm	0.000351	17.51	11.080200	Y 377.433
Zr (343.823 nm)	-0.000221 u	ppm	0.000171	77.55	106.101000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.107467	11394.398645	0.001122	0.10
Y 377.433	1.104761	470414.912560	0.002465	0.22
Y_R 377.433	1.133990	45623.000000	0.003568	0.31
Y_R 488.368	1.150160	42661.600000	0.005528	0.48
Y_R2 488.368	1.154030	81921.836945	0.005605	0.49
Y_R4	1.128470	38685.900000	0.005706	0.51

Sample Name: CCVH-5320321

Date: 9/21/2018 6:54:26 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000093 u	ppm	0.000467	> 100.00	-187.664000	Y 377.433
Al (394.401 nm)	50.382500 o	ppm	0.026278	0.05	560026.000000	Y 377.433
Al H (396.152 nm)	49.402300	ppm	0.017490	0.04	85330.700000	Y_R 377.433
As (188.980 nm)	-0.000477 u	ppm	0.001354	> 100.00	-12.791700	Y 242.219
B (249.678 nm)	0.004465	ppm	0.002440	54.64	1.212250	Y 242.219
Ba (493.408 nm)	0.000221	ppm	0.000118	53.23	595.657000	Y_R 488.368
Be (234.861 nm)	-0.000514 u	ppm	0.000030	5.78	-321.770000	Y_R 488.368
Bi (223.061 nm)	0.987816	ppm	0.000737	0.07	1650.300000	Y 377.433
Ca (315.887 nm)	-0.001820 u	ppm	0.009027	> 100.00	-3.138072	Y_R 377.433
Cd (214.439 nm)	-0.000552 u	ppm	0.000046	8.35	-9.508970	Y 377.433
Co (228.615 nm)	0.003026	ppm	0.000339	11.19	42.396100	Y 242.219
Cr (205.560 nm)	-0.000437 u	ppm	0.000484	> 100.00	-13.581600	Y 377.433
Cu (324.754 nm)	0.000010 u	ppm	0.000242	> 100.00	532.446000	Y 377.433
Fe (238.204 nm)	49.719334 o	ppm	0.085747	0.17	81122.813139	Y_R 377.433
Fe H (259.940 nm)	49.877300	ppm	0.092471	0.19	45233.100000	Y_R 377.433
K (766.491 nm)	-0.106795 u	ppm	0.169070	> 100.00	1643.860000	Y_R2 488.368
Li (670.783 nm)	0.011265	ppm	0.004799	42.60	-1003.550000	Y_R2 488.368
Mg (279.078 nm)	-0.012372 u	ppm	0.002068	16.72	-163.327000	Y 377.433
Mn (257.610 nm)	0.000280	ppm	0.000027	9.51	104.248000	Y 377.433
Mo (202.032 nm)	-0.000657 u	ppm	0.000243	37.00	13.583000	Y 377.433
Na (589.592 nm)	239.486000 o	ppm	0.062750	0.03	129628.000000	Y_R2 488.368
Na H (589.593 nm)	250.339670	ppm	0.152720	0.06	93470.065373	Y_R4
Ni (231.604 nm)	-0.000872 u	ppm	0.000583	66.94	20.100600	Y 377.433
P (213.618 nm)	-0.020536 u	ppm	0.003069	14.95	-24.746100	Y 242.219
Pb (220.353 nm)	-0.000045 u	ppm	0.002439	> 100.00	19.996700	Y 242.219
S (181.972 nm)	5.106393	ppm	0.004454	0.09	2377.041488	Y 377.433
Sb (206.834 nm)	-0.002486 u	ppm	0.005953	> 100.00	19.846700	Y 377.433
Se (196.026 nm)	-0.004019 u	ppm	0.000974	24.24	-7.279490	Y 242.219
Si (288.158 nm)	0.006049	ppm	0.002475	40.92	396.489000	Y 377.433
Sn (189.925 nm)	-0.001411 u	ppm	0.000059	4.17	-1.980790	Y 377.433
Sr (421.552 nm)	0.000175	ppm	0.000141	80.37	180.357318	Y_R 488.368
Th (288.505 nm)	4.900520	ppm	0.004181	0.09	4761.700000	Y 377.433
Ti (336.122 nm)	0.000923	ppm	0.000018	1.92	-36.695300	Y 377.433
Tl (190.794 nm)	-0.004580 u	ppm	0.000551	12.04	-6.551400	Y 377.433
U (409.013 nm)	9.829120	ppm	0.021247	0.22	23304.800000	Y 377.433
V (292.401 nm)	-0.003186 u	ppm	0.000371	11.66	-423.974000	Y 377.433
Zn (206.200 nm)	0.000025 u	ppm	0.000351	> 100.00	5.204490	Y 377.433
Zr (343.823 nm)	-0.007330 u	ppm	0.000505	6.90	-123.562000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073670	11046.668424	0.002106	0.20
Y 377.433	1.070889	455992.203828	0.002587	0.24
Y_R 377.433	1.125060	45263.800000	0.001768	0.16
Y_R 488.368	1.135400	42114.100000	0.016129	1.42
Y_R2 488.368	1.152306	81799.452111	0.003650	0.32
Y_R4	1.156720	39654.300000	0.000733	0.06

Sample Name: CCV-5305988

Date: 9/21/2018 6:58:09 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.500594	ppm	0.001076	0.21	12503.600000	Y 377.433
Al (394.401 nm)	0.502912	ppm	0.000751	0.15	5737.340000	Y 377.433
Al H (396.152 nm)	0.558328 u	ppm	0.008062	1.44	921.110000	Y_R 377.433
As (188.980 nm)	0.984652	ppm	0.001883	0.19	1274.580000	Y 242.219
B (249.678 nm)	0.496638	ppm	0.000598	0.12	1862.750000	Y 242.219
Ba (493.408 nm)	0.505289	ppm	0.003482	0.69	46695.900000	Y_R 488.368
Be (234.861 nm)	0.490910	ppm	0.002189	0.45	26581.100000	Y_R 488.368
Bi (223.061 nm)	-0.005951 u	ppm	0.003092	51.96	49.053100	Y 377.433
Ca (315.887 nm)	4.918201	ppm	0.016259	0.33	3237.222491	Y_R 377.433
Cd (214.439 nm)	0.492407	ppm	0.000920	0.19	12496.800000	Y 377.433
Co (228.615 nm)	0.492515	ppm	0.006076	1.23	9793.450000	Y 242.219
Cr (205.560 nm)	0.485017	ppm	0.000946	0.20	2364.870000	Y 377.433
Cu (324.754 nm)	0.501711	ppm	0.000115	0.02	21551.800000	Y 377.433
Fe (238.204 nm)	2.499071	ppm	0.001189	0.05	4104.082613	Y_R 377.433
Fe H (259.940 nm)	2.458310 u	ppm	0.001969	0.08	2304.480000	Y_R 377.433
K (766.491 nm)	48.966400	ppm	0.168703	0.34	53013.500000	Y_R2 488.368
Li (670.783 nm)	0.970222	ppm	0.001786	0.18	12225.600000	Y_R2 488.368
Mg (279.078 nm)	19.674000	ppm	0.005539	0.03	41761.100000	Y 377.433
Mn (257.610 nm)	0.494167	ppm	0.000120	0.02	87361.700000	Y 377.433
Mo (202.032 nm)	0.494351	ppm	0.000027	0.01	5163.540000	Y 377.433
Na (589.592 nm)	24.762200	ppm	0.028941	0.12	13308.100000	Y_R2 488.368
Na H (589.593 nm)	26.482685 u	ppm	0.101383	0.38	10440.987991	Y_R4
Ni (231.604 nm)	0.493044	ppm	0.000185	0.04	1843.590000	Y 377.433
P (213.618 nm)	0.996399	ppm	0.007815	0.78	1066.670000	Y 242.219
Pb (220.353 nm)	0.992311	ppm	0.006693	0.67	2078.420000	Y 242.219
S (181.972 nm)	0.029488	ppm	0.003878	13.15	16.603807	Y 377.433
Sb (206.834 nm)	1.020990	ppm	0.000386	0.04	1670.220000	Y 377.433
Se (196.026 nm)	1.000960	ppm	0.004714	0.47	1326.020000	Y 242.219
Si (288.158 nm)	4.988670	ppm	0.014017	0.28	20551.500000	Y 377.433
Sn (189.925 nm)	0.996347	ppm	0.005179	0.52	1174.580000	Y 377.433
Sr (421.552 nm)	0.500403	ppm	0.002297	0.46	57606.808786	Y_R 488.368
Th (288.505 nm)	-0.014288 u	ppm	0.001680	11.76	-33.908800	Y 377.433
Ti (336.122 nm)	0.498225	ppm	0.000052	0.01	44896.400000	Y 377.433
Tl (190.794 nm)	1.009590	ppm	0.004774	0.47	1807.360000	Y 377.433
U (409.013 nm)	-0.012694 u	ppm	0.008857	69.77	173.032000	Y 377.433
V (292.401 nm)	0.494894	ppm	0.000261	0.05	20039.800000	Y 377.433
Zn (206.200 nm)	0.484381	ppm	0.001557	0.32	1645.460000	Y 377.433
Zr (343.823 nm)	0.493858	ppm	0.000193	0.04	19380.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093320	11248.849449	0.001265	0.12
Y 377.433	1.089589	463954.518713	0.000251	0.02
Y_R 377.433	1.127020	45342.400000	0.003103	0.28
Y_R 488.368	1.130140	41919.000000	0.005304	0.47
Y_R2 488.368	1.129426	80175.275938	0.003100	0.27
Y_R4	1.125680	38590.100000	0.008236	0.73

Sample Name: CCB

Date: 9/21/2018 7:01:42 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001637 u	ppm	0.000001	0.09	-129.260000	Y 377.433
Al (394.401 nm)	-0.010202 u	ppm	0.002574	25.23	-71.989900	Y 377.433
Al H (396.152 nm)	0.140512 Zu	ppm	0.000865	0.62	-0.157080 Z	Y_R 377.433
As (188.980 nm)	0.001281	ppm	0.001393	> 100.00	-8.561950	Y 242.219
B (249.678 nm)	0.000905	ppm	0.000415	45.88	2.913910	Y 242.219
Ba (493.408 nm)	-0.000126 u	ppm	0.000344	> 100.00	527.746000	Y_R 488.368
Be (234.861 nm)	0.000032	ppm	0.000006	18.75	-2.180350	Y_R 488.368
Bi (223.061 nm)	-0.006906 u	ppm	0.003619	52.41	47.124600	Y 377.433
Ca (315.887 nm)	0.020457	ppm	0.006441	31.49	7.488659	Y_R 377.433
Cd (214.439 nm)	0.000061 u	ppm	0.000094	> 100.00	-11.554700	Y 377.433
Co (228.615 nm)	0.000015 u	ppm	0.000562	> 100.00	-17.457600	Y 242.219
Cr (205.560 nm)	0.000390	ppm	0.000334	85.47	-8.314180	Y 377.433
Cu (324.754 nm)	0.000515	ppm	0.000202	39.26	164.256000	Y 377.433
Fe (238.204 nm)	-0.004609 u	ppm	0.003433	74.48	20.448368	Y_R 377.433
Fe H (259.940 nm)	-0.070394 u	ppm	0.000318	0.45	15.234400	Y_R 377.433
K (766.491 nm)	-0.118487 u	ppm	0.116236	98.10	1631.630000	Y_R2 488.368
Li (670.783 nm)	0.003888	ppm	0.000772	19.87	-1105.310000	Y_R2 488.368
Mg (279.078 nm)	0.007961	ppm	0.004322	54.29	23.652400	Y 377.433
Mn (257.610 nm)	0.000028 u	ppm	0.000102	> 100.00	59.763000	Y 377.433
Mo (202.032 nm)	-0.000242 u	ppm	0.000055	22.69	17.898500	Y 377.433
Na (589.592 nm)	0.113996	ppm	0.003578	3.14	-35.025700	Y_R2 488.368
Na H (589.593 nm)	0.705923 u	ppm	0.082307	11.66	937.668474	Y_R4
Ni (231.604 nm)	-0.000178 u	ppm	0.000134	75.03	15.511400	Y 377.433
P (213.618 nm)	-0.001555 u	ppm	0.000744	47.83	-2.854970	Y 242.219
Pb (220.353 nm)	-0.001577 u	ppm	0.001355	85.95	6.099560	Y 242.219
S (181.972 nm)	0.021005	ppm	0.009897	47.12	10.712151	Y 377.433
Sb (206.834 nm)	-0.002458 u	ppm	0.000820	33.36	15.885000	Y 377.433
Se (196.026 nm)	-0.000945 u	ppm	0.000454	48.03	7.910590	Y 242.219
Si (288.158 nm)	-0.001920 u	ppm	0.003555	> 100.00	363.453000	Y 377.433
Sn (189.925 nm)	0.001058	ppm	0.000111	10.51	0.756734	Y 377.433
Sr (421.552 nm)	0.000217	ppm	0.000119	55.04	179.522905	Y_R 488.368
Th (288.505 nm)	-0.010582 Zu	ppm	0.001515	14.32	-1.718100 Z	Y 377.433
Ti (336.122 nm)	0.000235	ppm	0.000125	53.08	-89.936000	Y 377.433
Tl (190.794 nm)	-0.000573 u	ppm	0.001551	> 100.00	1.321010	Y 377.433
U (409.013 nm)	-0.010645 u	ppm	0.006623	62.22	222.386000	Y 377.433
V (292.401 nm)	0.000611	ppm	0.000446	73.09	-238.128000	Y 377.433
Zn (206.200 nm)	-0.000598 u	ppm	0.000468	78.34	2.255400	Y 377.433
Zr (343.823 nm)	0.000206	ppm	0.000225	> 100.00	122.085000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093049	11246.054219	0.001823	0.17
Y 377.433	1.090053	464152.268296	0.000114	0.01
Y_R 377.433	1.103290	44387.700000	0.000120	0.01
Y_R 488.368	1.098900	40760.200000	0.002042	0.19
Y_R2 488.368	1.115245	79168.607284	0.000405	0.04
Y_R4	1.115960	38257.200000	0.001283	0.11

Sample Name: CCVL-5320254

Date: 9/21/2018 7:04:54 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008423	ppm	0.000062	0.74	124.318000	Y 377.433
Al (394.401 nm)	0.086977	ppm	0.000643	0.74	1013.500000	Y 377.433
Al H (396.152 nm)	0.236540 u	ppm	0.003785	1.60	170.610000	Y_R 377.433
As (188.980 nm)	0.016079	ppm	0.001537	9.56	10.744500	Y 242.219
B (249.678 nm)	0.098543	ppm	0.001251	1.27	369.343000	Y 242.219
Ba (493.408 nm)	0.009626	ppm	0.000061	0.64	1418.550000	Y_R 488.368
Be (234.861 nm)	0.000936	ppm	0.000043	4.64	46.239300	Y_R 488.368
Bi (223.061 nm)	0.087692	ppm	0.000345	0.39	199.004000	Y 377.433
Ca (315.887 nm)	0.194963	ppm	0.002105	1.08	122.570521	Y_R 377.433
Cd (214.439 nm)	0.005272	ppm	0.000042	0.80	120.868000	Y 377.433
Co (228.615 nm)	0.010472	ppm	0.000040	0.38	190.828000	Y 242.219
Cr (205.560 nm)	0.009937	ppm	0.000357	3.59	38.364000	Y 377.433
Cu (324.754 nm)	0.015986	ppm	0.000202	1.27	824.486000	Y 377.433
Fe (238.204 nm)	0.087790	ppm	0.002365	2.69	171.156137	Y_R 377.433
Fe H (259.940 nm)	0.023349 u	ppm	0.004629	19.82	100.101000	Y_R 377.433
K (766.491 nm)	2.838240	ppm	0.032045	1.13	4726.720000	Y_R2 488.368
Li (670.783 nm)	0.027978 Q	ppm	0.002115	7.56	-772.986000 Q	Y_R2 488.368
Mg (279.078 nm)	0.203364	ppm	0.000644	0.32	437.671000	Y 377.433
Mn (257.610 nm)	0.010308	ppm	0.000017	0.16	1875.940000	Y 377.433
Mo (202.032 nm)	0.019220	ppm	0.000150	0.78	220.374000	Y 377.433
Na (589.592 nm)	1.207440	ppm	0.043016	3.56	557.124000	Y_R2 488.368
Na H (589.593 nm)	1.461883 u	ppm	0.029526	2.02	1216.969638	Y_R4
Ni (231.604 nm)	0.039104	ppm	0.000272	0.69	161.035000	Y 377.433
P (213.618 nm)	2.906440	ppm	0.009998	0.34	3174.780000	Y 242.219
Pb (220.353 nm)	0.008486	ppm	0.000898	10.59	27.137700	Y 242.219
S (181.972 nm)	0.106506	ppm	0.000279	0.26	50.543667	Y 377.433
Sb (206.834 nm)	0.014576	ppm	0.000127	0.87	43.298000	Y 377.433
Se (196.026 nm)	0.020777	ppm	0.000841	4.05	36.479300	Y 242.219
Si (288.158 nm)	0.484142	ppm	0.000060	0.01	2329.680000	Y 377.433
Sn (189.925 nm)	0.096848	ppm	0.000417	0.43	113.729000	Y 377.433
Sr (421.552 nm)	0.009415	ppm	0.000067	0.71	1235.560513	Y_R 488.368
Th (288.505 nm)	0.006880 Qu	ppm	0.011435	> 100.00	14.889000 Q	Y 377.433
Ti (336.122 nm)	0.010209	ppm	0.000041	0.40	811.377000	Y 377.433
Tl (190.794 nm)	0.015146	ppm	0.000750	4.95	29.378900	Y 377.433
U (409.013 nm)	0.058565	ppm	0.002677	4.57	383.292000	Y 377.433
V (292.401 nm)	0.010501	ppm	0.000096	0.91	166.566000	Y 377.433
Zn (206.200 nm)	0.019780	ppm	0.000360	1.82	71.300000	Y 377.433
Zr (343.823 nm)	0.014485	ppm	0.000038	0.26	679.145000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113398	11455.423794	0.003679	0.33
Y 377.433	1.110508	472862.278059	0.003256	0.29
Y_R 377.433	1.126380	45316.700000	0.006071	0.54
Y_R 488.368	1.149800	42648.200000	0.016068	1.40
Y_R2 488.368	1.130552	80255.157671	0.001768	0.16
Y_R4	1.124310	38543.500000	0.007141	0.64

Sample Name: 280-114420-D-5-A

Date: 9/21/2018 7:08:21 PM Rack:Tube: 2:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000924 u	ppm	0.000197	21.30	-111.359000	Y 377.433
Al (394.401 nm)	-0.005703 u	ppm	0.000029	0.50	13.074900	Y 377.433
Al H (396.152 nm)	0.114956 u	ppm	0.009977	8.68	-3.049420	Y_R 377.433
As (188.980 nm)	0.004925	ppm	0.000432	8.76	-3.807210	Y 242.219
B (249.678 nm)	0.027564	ppm	0.001041	3.78	102.958000	Y 242.219
Ba (493.408 nm)	0.009540	ppm	0.000460	4.82	1410.710000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000001	2.56	-6.069840	Y_R 488.368
Bi (223.061 nm)	-0.009325 u	ppm	0.002070	22.20	43.251100	Y 377.433
Ca (315.887 nm)	25.818649	ppm	0.044548	0.17	17019.442540	Y_R 377.433
Cd (214.439 nm)	0.000121	ppm	0.000025	20.56	-10.005600	Y 377.433
Co (228.615 nm)	-0.000044 u	ppm	0.000035	79.97	-18.645800	Y 242.219
Cr (205.560 nm)	0.000284 u	ppm	0.000656	> 100.00	-8.845080	Y 377.433
Cu (324.754 nm)	0.000273	ppm	0.000110	40.21	138.930000	Y 377.433
Fe (238.204 nm)	0.038241	ppm	0.000951	2.49	90.340143	Y_R 377.433
Fe H (259.940 nm)	-0.028499 u	ppm	0.000708	2.48	53.162800	Y_R 377.433
K (766.491 nm)	3.312280	ppm	0.033425	1.01	5222.950000	Y_R2 488.368
Li (670.783 nm)	0.010133	ppm	0.000344	3.40	-1019.170000	Y_R2 488.368
Mg (279.078 nm)	10.833100	ppm	0.018574	0.17	22998.800000	Y 377.433
Mn (257.610 nm)	0.177394	ppm	0.000210	0.12	31395.800000	Y 377.433
Mo (202.032 nm)	0.002666	ppm	0.000181	6.80	48.154900	Y 377.433
Na (589.592 nm)	15.263900	ppm	0.131069	0.86	8171.220000	Y_R2 488.368
Na H (589.593 nm)	15.652818 u	ppm	0.007660	0.05	6477.146931	Y_R4
Ni (231.604 nm)	-0.001703 u	ppm	0.001051	61.72	10.252900	Y 377.433
P (213.618 nm)	0.222142	ppm	0.003529	1.59	241.617000	Y 242.219
Pb (220.353 nm)	-0.001321 u	ppm	0.000131	9.88	6.631470	Y 242.219
S (181.972 nm)	1.631007	ppm	0.002296	0.14	762.604204	Y 377.433
Sb (206.834 nm)	-0.005985 u	ppm	0.002355	39.34	10.168400	Y 377.433
Se (196.026 nm)	-0.001243 u	ppm	0.000828	66.62	7.720460	Y 242.219
Si (288.158 nm)	15.424400	ppm	0.095024	0.62	62766.400000	Y 377.433
Sn (189.925 nm)	-0.000488 u	ppm	0.001010	> 100.00	-1.067440	Y 377.433
Sr (421.552 nm)	0.140233	ppm	0.000058	0.04	16254.958181	Y_R 488.368
Th (288.505 nm)	-0.021309 u	ppm	0.002783	13.06	-10.338200	Y 377.433
Ti (336.122 nm)	0.000251	ppm	0.000109	43.50	-28.214600	Y 377.433
Tl (190.794 nm)	0.001686	ppm	0.001504	89.17	5.351740	Y 377.433
U (409.013 nm)	-0.006710 u	ppm	0.006775	> 100.00	229.184000	Y 377.433
V (292.401 nm)	0.000996	ppm	0.000038	3.77	-223.400000	Y 377.433
Zn (206.200 nm)	0.002305	ppm	0.000542	23.51	12.092000	Y 377.433
Zr (343.823 nm)	-0.000291 u	ppm	0.000142	48.80	102.716000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104634	11365.252207	0.002002	0.18
Y 377.433	1.103491	469874.403915	0.003136	0.28
Y_R 377.433	1.125170	45268.000000	0.005540	0.49
Y_R 488.368	1.141390	42336.200000	0.003216	0.28
Y_R2 488.368	1.133119	80437.437388	0.001880	0.17
Y_R4	1.134150	38880.800000	0.000789	0.07

Sample Name: MB 280-430227/1-A

Date: 9/21/2018 7:11:48 PM Rack:Tube: 2:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001485 u	ppm	0.000418	28.17	-125.476000	Y 377.433
Al (394.401 nm)	-0.012284 u	ppm	0.000627	5.10	-94.887400	Y 377.433
Al H (396.152 nm)	0.141249 u	ppm	0.007112	5.03	0.912623	Y_R 377.433
As (188.980 nm)	0.001478	ppm	0.000674	45.60	-8.304770	Y 242.219
B (249.678 nm)	0.000368 u	ppm	0.001685	> 100.00	0.901417	Y 242.219
Ba (493.408 nm)	-0.001010 u	ppm	0.000031	3.03	446.998000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000025	> 100.00	-3.830120	Y_R 488.368
Bi (223.061 nm)	-0.009332 u	ppm	0.000319	3.41	43.228600	Y 377.433
Ca (315.887 nm)	0.008369 u	ppm	0.013277	> 100.00	-0.483404	Y_R 377.433
Cd (214.439 nm)	0.000021 u	ppm	0.000082	> 100.00	-12.574100	Y 377.433
Co (228.615 nm)	-0.000040 u	ppm	0.000194	> 100.00	-18.561700	Y 242.219
Cr (205.560 nm)	0.000118	ppm	0.000073	61.78	-9.648030	Y 377.433
Cu (324.754 nm)	0.000215	ppm	0.000109	50.97	151.040000	Y 377.433
Fe (238.204 nm)	-0.009635 u	ppm	0.001289	13.38	12.252245	Y_R 377.433
Fe H (259.940 nm)	-0.075796 u	ppm	0.002185	2.88	10.344500	Y_R 377.433
K (766.491 nm)	-0.224591 u	ppm	0.054835	24.42	1520.560000	Y_R2 488.368
Li (670.783 nm)	0.008114	ppm	0.004960	61.13	-1047.010000	Y_R2 488.368
Mg (279.078 nm)	0.003023	ppm	0.000323	10.68	13.203600	Y 377.433
Mn (257.610 nm)	0.000027	ppm	0.000007	26.84	59.617100	Y 377.433
Mo (202.032 nm)	-0.000396 u	ppm	0.000272	68.55	16.291900	Y 377.433
Na (589.592 nm)	0.123499	ppm	0.026417	21.39	-29.863400	Y_R2 488.368
Na H (589.593 nm)	0.087407 u	ppm	0.016288	18.64	708.491775	Y_R4
Ni (231.604 nm)	-0.002114 u	ppm	0.000155	7.34	8.340030	Y 377.433
P (213.618 nm)	-0.003321 u	ppm	0.001479	44.54	-4.750280	Y 242.219
Pb (220.353 nm)	-0.000209 u	ppm	0.001780	> 100.00	8.950800	Y 242.219
S (181.972 nm)	0.019542	ppm	0.003158	16.16	10.030714	Y 377.433
Sb (206.834 nm)	-0.006175 u	ppm	0.002328	37.70	9.872440	Y 377.433
Se (196.026 nm)	-0.000500 u	ppm	0.000319	63.71	8.496860	Y 242.219
Si (288.158 nm)	-0.005003 u	ppm	0.000305	6.09	350.978000	Y 377.433
Sn (189.925 nm)	0.000203 u	ppm	0.000350	> 100.00	-0.252712	Y 377.433
Sr (421.552 nm)	-0.000383 u	ppm	0.000077	20.17	110.619777	Y_R 488.368
Th (288.505 nm)	-0.011797 u	ppm	0.000169	1.44	-2.887330	Y 377.433
Ti (336.122 nm)	0.000251	ppm	0.000104	41.42	-88.512800	Y 377.433
Tl (190.794 nm)	0.000719 u	ppm	0.001314	> 100.00	3.633890	Y 377.433
U (409.013 nm)	-0.007420 u	ppm	0.000828	11.16	229.996000	Y 377.433
V (292.401 nm)	0.000744	ppm	0.000034	4.59	-232.672000	Y 377.433
Zn (206.200 nm)	0.001650	ppm	0.000263	15.94	9.869970	Y 377.433
Zr (343.823 nm)	-0.000162 u	ppm	0.000014	8.63	107.697000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118826	11511.264770	0.003353	0.30
Y 377.433	1.115138	474833.676640	0.004812	0.43
Y_R 377.433	1.128610	45406.600000	0.000254	0.02
Y_R 488.368	1.144010	42433.600000	0.009510	0.83
Y_R2 488.368	1.139018	80856.139854	0.002447	0.21
Y_R4	1.136740	38969.500000	0.001183	0.10

Sample Name: LCS 280-430227/2-A

Date: 9/21/2018 7:14:59 PM Rack:Tube: 2:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052334	ppm	0.000567	1.08	1183.010000	Y 377.433
Al (394.401 nm)	2.021060	ppm	0.003739	0.18	22772.600000	Y 377.433
Al H (396.152 nm)	1.968590	ppm	0.011671	0.59	3559.520000	Y_R 377.433
As (188.980 nm)	1.011190	ppm	0.002105	0.21	1309.230000	Y 242.219
B (249.678 nm)	1.033650	ppm	0.000668	0.06	3878.700000	Y 242.219
Ba (493.408 nm)	2.046110	ppm	0.005728	0.28	187439.000000	Y_R 488.368
Be (234.861 nm)	0.050111	ppm	0.000347	0.69	2705.420000	Y_R 488.368
Bi (223.061 nm)	1.934990	ppm	0.002826	0.15	3164.800000	Y 377.433
Ca (315.887 nm)	49.974214	ppm	0.004111	0.01	32948.379546	Y_R 377.433
Cd (214.439 nm)	0.099521	ppm	0.000434	0.44	2515.470000	Y 377.433
Co (228.615 nm)	0.487890	ppm	0.004902	1.00	9720.440000	Y 242.219
Cr (205.560 nm)	0.197580	ppm	0.001156	0.58	954.195000	Y 377.433
Cu (324.754 nm)	0.250598	ppm	0.000215	0.09	10868.200000	Y 377.433
Fe (238.204 nm)	1.006282	ppm	0.002088	0.21	1669.265092	Y_R 377.433
Fe H (259.940 nm)	0.934071 u	ppm	0.002984	0.32	924.581000	Y_R 377.433
K (766.491 nm)	50.855300	ppm	0.047446	0.09	54990.900000	Y_R2 488.368
Li (670.783 nm)	1.004960	ppm	0.001450	0.14	12704.800000	Y_R2 488.368
Mg (279.078 nm)	49.744700	ppm	0.022274	0.04	105563.000000	Y 377.433
Mn (257.610 nm)	0.500134	ppm	0.000149	0.03	88415.900000	Y 377.433
Mo (202.032 nm)	1.010020	ppm	0.000104	0.01	10528.400000	Y 377.433
Na (589.592 nm)	48.690500	ppm	0.091615	0.19	26243.700000	Y_R2 488.368
Na H (589.593 nm)	51.458195	ppm	0.353612	0.69	19539.956463	Y_R4
Ni (231.604 nm)	0.484285	ppm	0.000436	0.09	1812.440000	Y 377.433
P (213.618 nm)	10.418700	ppm	0.025671	0.25	11375.300000	Y 242.219
Pb (220.353 nm)	0.505947	ppm	0.001046	0.21	1065.420000	Y 242.219
S (181.972 nm)	1.995811	ppm	0.000101	0.01	935.374391	Y 377.433
Sb (206.834 nm)	0.519153	ppm	0.001042	0.20	849.329000	Y 377.433
Se (196.026 nm)	2.035560	ppm	0.009993	0.49	2687.460000	Y 242.219
Si (288.158 nm)	10.171800	ppm	0.011595	0.11	41518.400000	Y 377.433
Sn (189.925 nm)	2.009060	ppm	0.013975	0.70	2368.940000	Y 377.433
Sr (421.552 nm)	1.013678	ppm	0.001992	0.20	116536.356862	Y_R 488.368
Th (288.505 nm)	0.974544	ppm	0.002507	0.26	927.248000	Y 377.433
Ti (336.122 nm)	1.003590	ppm	0.000573	0.06	90641.300000	Y 377.433
Tl (190.794 nm)	2.029530	ppm	0.001216	0.06	3629.090000	Y 377.433
U (409.013 nm)	2.011770	ppm	0.004885	0.24	4911.190000	Y 377.433
V (292.401 nm)	0.508590	ppm	0.000779	0.15	20669.800000	Y 377.433
Zn (206.200 nm)	0.487622	ppm	0.000976	0.20	1656.420000	Y 377.433
Zr (343.823 nm)	0.496503	ppm	0.000568	0.11	19481.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.077573	11086.831624	0.000399	0.04
Y 377.433	1.081628	460564.699750	0.001507	0.14
Y_R 377.433	1.119240	45029.400000	0.002117	0.19
Y_R 488.368	1.126570	41786.500000	0.007230	0.64
Y_R2 488.368	1.129852	80205.476942	0.007010	0.62
Y_R4	1.127260	38644.300000	0.008921	0.79

Sample Name: LCSD 280-430227/3-A

Date: 9/21/2018 7:18:33 PM Rack:Tube: 2:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053227	ppm	0.000315	0.59	1204.700000	Y 377.433
Al (394.401 nm)	2.054390	ppm	0.007463	0.36	23145.700000	Y 377.433
Al H (396.152 nm)	2.013090	ppm	0.006475	0.32	3643.330000	Y_R 377.433
As (188.980 nm)	1.033070	ppm	0.000533	0.05	1337.780000	Y 242.219
B (249.678 nm)	1.051790	ppm	0.001635	0.16	3946.800000	Y 242.219
Ba (493.408 nm)	2.078350	ppm	0.003352	0.16	190383.000000	Y_R 488.368
Be (234.861 nm)	0.050953	ppm	0.000586	1.15	2751.040000	Y_R 488.368
Bi (223.061 nm)	1.971660	ppm	0.012662	0.64	3223.670000	Y 377.433
Ca (315.887 nm)	50.726697	ppm	0.070122	0.14	33444.589909	Y_R 377.433
Cd (214.439 nm)	0.101497	ppm	0.000218	0.22	2565.670000	Y 377.433
Co (228.615 nm)	0.493903	ppm	0.003856	0.78	9840.650000	Y 242.219
Cr (205.560 nm)	0.201404	ppm	0.000037	0.02	972.865000	Y 377.433
Cu (324.754 nm)	0.255900	ppm	0.000682	0.27	11096.200000	Y 377.433
Fe (238.204 nm)	1.007849	ppm	0.009933	0.99	1671.821057	Y_R 377.433
Fe H (259.940 nm)	0.946351 u	ppm	0.012313	1.30	935.699000	Y_R 377.433
K (766.491 nm)	51.721700	ppm	0.332419	0.64	55897.800000	Y_R2 488.368
Li (670.783 nm)	1.018970	ppm	0.002395	0.24	12898.100000	Y_R2 488.368
Mg (279.078 nm)	50.673100	ppm	0.191106	0.38	107534.000000	Y 377.433
Mn (257.610 nm)	0.509121	ppm	0.001919	0.38	90003.700000	Y 377.433
Mo (202.032 nm)	1.028240	ppm	0.002030	0.20	10718.000000	Y 377.433
Na (589.592 nm)	49.538700	ppm	0.158223	0.32	26702.600000	Y_R2 488.368
Na H (589.593 nm)	52.552330	ppm	0.096320	0.18	19942.178720	Y_R4
Ni (231.604 nm)	0.494060	ppm	0.001083	0.22	1848.690000	Y 377.433
P (213.618 nm)	10.553300	ppm	0.025356	0.24	11522.200000	Y 242.219
Pb (220.353 nm)	0.513344	ppm	0.000709	0.14	1080.850000	Y 242.219
S (181.972 nm)	2.026370	ppm	0.009192	0.45	949.685594	Y 377.433
Sb (206.834 nm)	0.530863	ppm	0.005172	0.97	868.086000	Y 377.433
Se (196.026 nm)	2.075080	ppm	0.001592	0.08	2739.460000	Y 242.219
Si (288.158 nm)	10.338600	ppm	0.112489	1.09	42193.300000	Y 377.433
Sn (189.925 nm)	2.042610	ppm	0.007041	0.34	2408.510000	Y 377.433
Sr (421.552 nm)	1.028358	ppm	0.001627	0.16	118221.742194	Y_R 488.368
Th (288.505 nm)	0.995194	ppm	0.010377	1.04	946.791000	Y 377.433
Ti (336.122 nm)	1.020900	ppm	0.002205	0.22	92206.700000	Y 377.433
Tl (190.794 nm)	2.071410	ppm	0.005593	0.27	3703.940000	Y 377.433
U (409.013 nm)	2.041130	ppm	0.007209	0.35	4979.130000	Y 377.433
V (292.401 nm)	0.517489	ppm	0.002155	0.42	21036.600000	Y 377.433
Zn (206.200 nm)	0.497574	ppm	0.000945	0.19	1690.130000	Y 377.433
Zr (343.823 nm)	0.505846	ppm	0.002402	0.47	19846.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072057	11030.073802	0.001134	0.11
Y 377.433	1.075289	457865.791947	0.004575	0.43
Y_R 377.433	1.114560	44841.200000	0.006824	0.61
Y_R 488.368	1.121540	41599.900000	0.006321	0.56
Y_R2 488.368	1.125306	79882.804934	0.002295	0.20
Y_R4	1.123090	38501.600000	0.005656	0.50

Sample Name: 280-114440-A-2-D

Date: 9/21/2018 7:22:08 PM Rack:Tube: 2:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001285 u	ppm	0.000449	34.90	-119.639000	Y 377.433
Al (394.401 nm)	0.005814	ppm	0.001108	19.06	94.633400	Y 377.433
Al H (396.152 nm)	0.141082 u	ppm	0.006025	4.27	2.271210	Y_R 377.433
As (188.980 nm)	0.006966	ppm	0.000704	10.10	-1.149170	Y 242.219
B (249.678 nm)	0.050136	ppm	0.001595	3.18	187.610000	Y 242.219
Ba (493.408 nm)	0.001136	ppm	0.000390	34.29	643.212000	Y_R 488.368
Be (234.861 nm)	0.000010 u	ppm	0.000032	> 100.00	-4.869480	Y_R 488.368
Bi (223.061 nm)	-0.008156 u	ppm	0.002976	36.48	45.152000	Y 377.433
Ca (315.887 nm)	0.600318	ppm	0.019159	3.19	389.862272	Y_R 377.433
Cd (214.439 nm)	0.000114 u	ppm	0.000228	> 100.00	-10.123100	Y 377.433
Co (228.615 nm)	0.003749	ppm	0.000078	2.09	56.873100	Y 242.219
Cr (205.560 nm)	0.000270	ppm	0.000250	92.35	-9.045380	Y 377.433
Cu (324.754 nm)	0.004224	ppm	0.000032	0.75	328.169000	Y 377.433
Fe (238.204 nm)	0.251606	ppm	0.005448	2.17	438.349201	Y_R 377.433
Fe H (259.940 nm)	0.187582 u	ppm	0.004413	2.35	248.782000	Y_R 377.433
K (766.491 nm)	1.636620	ppm	0.115683	7.07	3468.870000	Y_R2 488.368
Li (670.783 nm)	0.012779	ppm	0.005590	43.75	-982.661000	Y_R2 488.368
Mg (279.078 nm)	0.799937	ppm	0.004656	0.58	1705.100000	Y 377.433
Mn (257.610 nm)	0.043892	ppm	0.000143	0.33	7809.330000	Y 377.433
Mo (202.032 nm)	0.019028	ppm	0.000071	0.37	218.378000	Y 377.433
Na (589.592 nm)	523.257000 o	ppm	0.325412	0.06	283341.000000	Y_R2 488.368
Na H (589.593 nm)	574.813872	ppm	2.587004	0.45	213743.691138	Y_R4
Ni (231.604 nm)	0.052560	ppm	0.001663	3.16	210.893000	Y 377.433
P (213.618 nm)	68.210500 bo	ppm	0.245013	0.36	74550.100000	Y 242.219
Pb (220.353 nm)	0.002052	ppm	0.002501	> 100.00	13.519600	Y 242.219
S (181.972 nm)	32.295870	ppm	0.048770	0.15	15030.304433	Y 377.433
Sb (206.834 nm)	-0.004081 u	ppm	0.000552	13.51	13.158200	Y 377.433
Se (196.026 nm)	-0.001300 u	ppm	0.002333	> 100.00	7.440010	Y 242.219
Si (288.158 nm)	0.630809	ppm	0.000273	0.04	2922.980000	Y 377.433
Sn (189.925 nm)	0.000719	ppm	0.000845	> 100.00	0.357199	Y 377.433
Sr (421.552 nm)	0.000746	ppm	0.000594	79.62	240.252575	Y_R 488.368
Th (288.505 nm)	-0.006817 u	ppm	0.004910	72.02	2.119570	Y 377.433
Ti (336.122 nm)	0.000805	ppm	0.000125	15.58	-37.065000	Y 377.433
Tl (190.794 nm)	-0.000401 u	ppm	0.001258	> 100.00	1.554460	Y 377.433
U (409.013 nm)	-0.060333 u	ppm	0.010700	17.73	106.059000	Y 377.433
V (292.401 nm)	0.000697	ppm	0.000221	31.75	-232.038000	Y 377.433
Zn (206.200 nm)	0.009835	ppm	0.000102	1.04	37.607900	Y 377.433
Zr (343.823 nm)	0.000193	ppm	0.000106	54.80	121.826000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062212	10928.781814	0.005063	0.48
Y 377.433	1.070107	455659.262341	0.005487	0.51
Y_R 377.433	1.124590	45244.800000	0.001003	0.09
Y_R 488.368	1.143810	42426.200000	0.001200	0.10
Y_R2 488.368	1.128112	80081.974717	0.003117	0.28
Y_R4	1.120680	38418.800000	0.005493	0.49

Sample Name: 280-114440-A-2-Dsd@5

Date: 9/21/2018 7:25:37 PM Rack:Tube: 2:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001344 u	ppm	0.000190	14.18	-121.741000	Y 377.433
Al (394.401 nm)	-0.008379 u	ppm	0.000071	0.85	-55.568400	Y 377.433
Al H (396.152 nm)	0.145904 u	ppm	0.006432	4.41	9.336300	Y_R 377.433
As (188.980 nm)	0.003077	ppm	0.002051	66.65	-6.219380	Y 242.219
B (249.678 nm)	0.009671	ppm	0.000374	3.87	35.802300	Y 242.219
Ba (493.408 nm)	-0.000327 u	ppm	0.000545	> 100.00	509.444000	Y_R 488.368
Be (234.861 nm)	0.000005 u	ppm	0.000032	> 100.00	-3.884310	Y_R 488.368
Bi (223.061 nm)	-0.010587 u	ppm	0.001439	13.59	41.220200	Y 377.433
Ca (315.887 nm)	0.112234	ppm	0.005970	5.32	68.008341	Y_R 377.433
Cd (214.439 nm)	0.000070	ppm	0.000088	> 100.00	-11.312600	Y 377.433
Co (228.615 nm)	0.000900	ppm	0.000035	3.93	0.152333	Y 242.219
Cr (205.560 nm)	0.000127	ppm	0.000142	> 100.00	-9.635880	Y 377.433
Cu (324.754 nm)	0.001002	ppm	0.000323	32.19	186.924000	Y 377.433
Fe (238.204 nm)	0.036189	ppm	0.000467	1.29	86.993633	Y_R 377.433
Fe H (259.940 nm)	-0.025993 u	ppm	0.004517	17.38	55.431000	Y_R 377.433
K (766.491 nm)	0.133229	ppm	0.055686	41.80	1895.120000	Y_R2 488.368
Li (670.783 nm)	0.013917	ppm	0.001233	8.86	-966.962000	Y_R2 488.368
Mg (279.078 nm)	0.160628	ppm	0.004124	2.57	347.882000	Y 377.433
Mn (257.610 nm)	0.008686	ppm	0.000127	1.46	1589.320000	Y 377.433
Mo (202.032 nm)	0.003684	ppm	0.000247	6.70	58.743300	Y 377.433
Na (589.592 nm)	111.045000 o	ppm	0.530854	0.48	60054.100000	Y_R2 488.368
Na H (589.593 nm)	117.961233	ppm	0.170147	0.14	44401.022432	Y_R4
Ni (231.604 nm)	0.009635	ppm	0.000586	6.08	51.865200	Y 377.433
P (213.618 nm)	13.109200	ppm	0.187357	1.43	14326.700000	Y 242.219
Pb (220.353 nm)	0.000441 u	ppm	0.002402	> 100.00	10.266800	Y 242.219
S (181.972 nm)	6.267412	ppm	0.092985	1.48	2917.569400	Y 377.433
Sb (206.834 nm)	-0.005873 u	ppm	0.001301	22.15	10.342100	Y 377.433
Se (196.026 nm)	-0.001055 u	ppm	0.000581	55.12	7.767730	Y 242.219
Si (288.158 nm)	0.114911	ppm	0.001887	1.64	836.058000	Y 377.433
Sn (189.925 nm)	-0.000312 u	ppm	0.000834	> 100.00	-0.859245	Y 377.433
Sr (421.552 nm)	-0.000190 u	ppm	0.000043	22.57	132.759519	Y_R 488.368
Th (288.505 nm)	-0.007226 u	ppm	0.001665	23.04	1.534100	Y 377.433
Ti (336.122 nm)	0.000127	ppm	0.000156	> 100.00	-99.511900	Y 377.433
Tl (190.794 nm)	-0.000699 u	ppm	0.000019	2.71	1.079190	Y 377.433
U (409.013 nm)	-0.025620 u	ppm	0.008267	32.27	187.372000	Y 377.433
V (292.401 nm)	0.000827	ppm	0.000188	22.78	-228.231000	Y 377.433
Zn (206.200 nm)	0.001310	ppm	0.000267	20.36	8.718420	Y 377.433
Zr (343.823 nm)	-0.000322 u	ppm	0.000125	38.72	101.499000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089540	11209.955555	0.000943	0.09
Y 377.433	1.090652	464407.468149	0.003994	0.37
Y_R 377.433	1.120690	45087.700000	0.002938	0.26
Y_R 488.368	1.114900	41353.900000	0.012996	1.17
Y_R2 488.368	1.150917	81700.853595	0.007157	0.62
Y_R4	1.140780	39108.100000	0.004034	0.35

Sample Name: 280-114440-A-2-E MS

Date: 9/21/2018 7:29:03 PM Rack:Tube: 2:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052898	ppm	0.000491	0.93	1199.900000	Y 377.433
Al (394.401 nm)	2.030410	ppm	0.007112	0.35	22852.000000	Y 377.433
Al H (396.152 nm)	1.981230	ppm	0.004273	0.22	3577.820000	Y_R 377.433
As (188.980 nm)	1.021380	ppm	0.005120	0.50	1322.520000	Y 242.219
B (249.678 nm)	1.078300	ppm	0.000165	0.02	4046.220000	Y 242.219
Ba (493.408 nm)	2.030960	ppm	0.002981	0.15	186055.000000	Y_R 488.368
Be (234.861 nm)	0.048172	ppm	0.000460	0.95	2598.930000	Y_R 488.368
Bi (223.061 nm)	1.954850	ppm	0.000299	0.02	3196.710000	Y 377.433
Ca (315.887 nm)	49.963285	ppm	0.023865	0.05	32941.173261	Y_R 377.433
Cd (214.439 nm)	0.097980	ppm	0.000257	0.26	2476.390000	Y 377.433
Co (228.615 nm)	0.501741	ppm	0.001835	0.37	9996.020000	Y 242.219
Cr (205.560 nm)	0.193604	ppm	0.002557	1.32	934.621000	Y 377.433
Cu (324.754 nm)	0.263376	ppm	0.001577	0.60	11422.500000	Y 377.433
Fe (238.204 nm)	1.245360	ppm	0.003856	0.31	2059.214314	Y_R 377.433
Fe H (259.940 nm)	1.178920 u	ppm	0.007455	0.63	1146.240000	Y_R 377.433
K (766.491 nm)	54.242000	ppm	0.141528	0.26	58536.100000	Y_R2 488.368
Li (670.783 nm)	1.030960	ppm	0.001065	0.10	13063.500000	Y_R2 488.368
Mg (279.078 nm)	49.764800	ppm	0.153901	0.31	105608.000000	Y 377.433
Mn (257.610 nm)	0.538826	ppm	0.002201	0.41	95251.700000	Y 377.433
Mo (202.032 nm)	1.010270	ppm	0.003214	0.32	10531.100000	Y 377.433
Na (589.592 nm)	536.180000 o	ppm	0.181244	0.03	290307.000000	Y_R2 488.368
Na H (589.593 nm)	594.931383	ppm	1.049730	0.18	220991.989794	Y_R4
Ni (231.604 nm)	0.541814	ppm	0.000483	0.09	2025.470000	Y 377.433
P (213.618 nm)	75.848000 bo	ppm	0.798733	1.05	82886.400000	Y 242.219
Pb (220.353 nm)	0.495950	ppm	0.002566	0.52	1044.270000	Y 242.219
S (181.972 nm)	32.850803	ppm	0.039425	0.12	15294.155242	Y 377.433
Sb (206.834 nm)	0.518404	ppm	0.003600	0.69	848.102000	Y 377.433
Se (196.026 nm)	2.000120	ppm	0.002190	0.11	2640.830000	Y 242.219
Si (288.158 nm)	10.431600	ppm	0.111903	1.07	42569.400000	Y 377.433
Sn (189.925 nm)	1.967220	ppm	0.005663	0.29	2319.600000	Y 377.433
Sr (421.552 nm)	0.999524	ppm	0.001677	0.17	114911.331091	Y_R 488.368
Th (288.505 nm)	0.968542	ppm	0.004758	0.49	921.743000	Y 377.433
Ti (336.122 nm)	1.006290	ppm	0.004552	0.45	90884.700000	Y 377.433
Tl (190.794 nm)	1.932600	ppm	0.000288	0.01	3455.610000	Y 377.433
U (409.013 nm)	1.958330	ppm	0.000553	0.03	4786.380000	Y 377.433
V (292.401 nm)	0.501777	ppm	0.001779	0.35	20396.400000	Y 377.433
Zn (206.200 nm)	0.507329	ppm	0.002123	0.42	1723.190000	Y 377.433
Zr (343.823 nm)	0.494135	ppm	0.001873	0.38	19389.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044339	10744.891733	0.003688	0.35
Y 377.433	1.053488	448582.484301	0.000903	0.09
Y_R 377.433	1.123900	45216.800000	0.001932	0.17
Y_R 488.368	1.134120	42066.800000	0.004789	0.42
Y_R2 488.368	1.131992	80357.430668	0.005693	0.50
Y_R4	1.141360	39128.000000	0.006396	0.56

Sample Name: 280-114440-A-2-F MSD

Date: 9/21/2018 7:32:36 PM Rack:Tube: 2:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051978	ppm	0.000036	0.07	1175.540000	Y 377.433
Al (394.401 nm)	2.012500	ppm	0.004947	0.25	22651.300000	Y 377.433
Al H (396.152 nm)	1.955150	ppm	0.001577	0.08	3529.270000	Y_R 377.433
As (188.980 nm)	1.022380	ppm	0.005600	0.55	1323.820000	Y 242.219
B (249.678 nm)	1.064660	ppm	0.001642	0.15	3995.030000	Y 242.219
Ba (493.408 nm)	2.022600	ppm	0.004558	0.23	185291.000000	Y_R 488.368
Be (234.861 nm)	0.047592	ppm	0.000276	0.58	2567.610000	Y_R 488.368
Bi (223.061 nm)	1.935300	ppm	0.005997	0.31	3165.320000	Y 377.433
Ca (315.887 nm)	49.573467	ppm	0.049688	0.10	32684.116523	Y_R 377.433
Cd (214.439 nm)	0.097249	ppm	0.000185	0.19	2457.810000	Y 377.433
Co (228.615 nm)	0.498304	ppm	0.000792	0.16	9926.870000	Y 242.219
Cr (205.560 nm)	0.192059	ppm	0.001011	0.53	927.126000	Y 377.433
Cu (324.754 nm)	0.261405	ppm	0.000684	0.26	11338.300000	Y 377.433
Fe (238.204 nm)	1.231175	ppm	0.007266	0.59	2036.078212	Y_R 377.433
Fe H (259.940 nm)	1.177550 u	ppm	0.000209	0.02	1145.010000	Y_R 377.433
K (766.491 nm)	53.851000	ppm	0.308868	0.57	58126.700000	Y_R2 488.368
Li (670.783 nm)	1.023090	ppm	0.007434	0.73	12955.000000	Y_R2 488.368
Mg (279.078 nm)	49.425300	ppm	0.059985	0.12	104887.000000	Y 377.433
Mn (257.610 nm)	0.534294	ppm	0.000855	0.16	94451.100000	Y 377.433
Mo (202.032 nm)	0.988737	ppm	0.000058	0.01	10307.000000	Y 377.433
Na (589.592 nm)	538.665000 o	ppm	3.471560	0.64	291653.000000	Y_R2 488.368
Na H (589.593 nm)	603.289193	ppm	4.192075	0.69	224091.432046	Y_R4
Ni (231.604 nm)	0.539796	ppm	0.000178	0.03	2017.980000	Y 377.433
P (213.618 nm)	76.449400 bo	ppm	0.811232	1.06	83543.900000	Y 242.219
Pb (220.353 nm)	0.495410	ppm	0.001616	0.33	1043.190000	Y 242.219
S (181.972 nm)	33.214278	ppm	0.084078	0.25	15463.246270	Y 377.433
Sb (206.834 nm)	0.505359	ppm	0.001612	0.32	827.247000	Y 377.433
Se (196.026 nm)	1.988410	ppm	0.004607	0.23	2625.420000	Y 242.219
Si (288.158 nm)	10.321300	ppm	0.131004	1.27	42123.100000	Y 377.433
Sn (189.925 nm)	1.927030	ppm	0.009246	0.48	2272.200000	Y 377.433
Sr (421.552 nm)	0.993728	ppm	0.001955	0.20	114245.849141	Y_R 488.368
Th (288.505 nm)	0.963323	ppm	0.001453	0.15	916.865000	Y 377.433
Ti (336.122 nm)	0.984663	ppm	0.001630	0.17	88930.900000	Y 377.433
Tl (190.794 nm)	1.926330	ppm	0.005435	0.28	3444.550000	Y 377.433
U (409.013 nm)	1.942000	ppm	0.007974	0.41	4749.280000	Y 377.433
V (292.401 nm)	0.497825	ppm	0.001849	0.37	20234.300000	Y 377.433
Zn (206.200 nm)	0.501134	ppm	0.001161	0.23	1702.200000	Y 377.433
Zr (343.823 nm)	0.481812	ppm	0.000631	0.13	18909.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046489	10767.018075	0.003195	0.31
Y 377.433	1.059271	451044.976348	0.001562	0.15
Y_R 377.433	1.135540	45685.100000	0.000960	0.08
Y_R 488.368	1.147480	42562.100000	0.002773	0.24
Y_R2 488.368	1.135529	80608.494781	0.000673	0.06
Y_R4	1.135480	38926.200000	0.006470	0.57

Sample Name: 280-114440-A-2-Dpds

Date: 9/21/2018 7:36:10 PM Rack:Tube: 2:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049531	ppm	0.001108	2.24	1154.190000	Y 377.433
Al (394.401 nm)	1.020530	ppm	0.007501	0.73	11402.200000	Y 377.433
Al H (396.152 nm)	1.132950	ppm	0.005811	0.51	1736.790000	Y_R 377.433
As (188.980 nm)	0.211610	ppm	0.003433	1.62	265.853000	Y 242.219
B (249.678 nm)	0.152619	ppm	0.002485	1.63	571.945000	Y 242.219
Ba (493.408 nm)	0.103509	ppm	0.000298	0.29	9995.020000	Y_R 488.368
Be (234.861 nm)	0.048362	ppm	0.000277	0.57	2609.190000	Y_R 488.368
Bi (223.061 nm)	-0.004659 u	ppm	0.004382	94.05	50.927200	Y 377.433
Ca (315.887 nm)	20.236830	ppm	0.007260	0.04	13338.737994	Y_R 377.433
Cd (214.439 nm)	0.050111	ppm	0.000361	0.72	1260.340000	Y 377.433
Co (228.615 nm)	0.053484	ppm	0.000305	0.57	1047.500000	Y 242.219
Cr (205.560 nm)	0.048396	ppm	0.000759	1.57	226.603000	Y 377.433
Cu (324.754 nm)	0.056560	ppm	0.000705	1.25	2557.630000	Y 377.433
Fe (238.204 nm)	1.253892	ppm	0.005477	0.44	2073.130123	Y_R 377.433
Fe H (259.940 nm)	1.198650 u	ppm	0.005162	0.43	1164.110000	Y_R 377.433
K (766.491 nm)	22.693400	ppm	0.052937	0.23	25511.000000	Y_R2 488.368
Li (670.783 nm)	0.113683	ppm	0.002789	2.45	409.353000	Y_R2 488.368
Mg (279.078 nm)	20.299300	ppm	0.188746	0.93	43084.600000	Y 377.433
Mn (257.610 nm)	0.093436	ppm	0.000649	0.69	16562.600000	Y 377.433
Mo (202.032 nm)	0.067616	ppm	0.000302	0.45	723.873000	Y 377.433
Na (589.592 nm)	526.502000 o	ppm	1.789510	0.34	285097.000000	Y_R2 488.368
Na H (589.593 nm)	582.554009	ppm	0.891814	0.15	216602.578225	Y_R4
Ni (231.604 nm)	0.101142	ppm	0.000297	0.29	391.425000	Y 377.433
P (213.618 nm)	69.814400 bo	ppm	0.618045	0.89	76300.900000	Y 242.219
Pb (220.353 nm)	0.099480	ppm	0.003872	3.89	217.335000	Y 242.219
S (181.972 nm)	31.929048	ppm	0.290518	0.91	14861.359309	Y 377.433
Sb (206.834 nm)	0.097881	ppm	0.000967	0.99	178.017000	Y 377.433
Se (196.026 nm)	0.198366	ppm	0.001700	0.86	269.944000	Y 242.219
Si (288.158 nm)	5.675830	ppm	0.051862	0.91	23331.200000	Y 377.433
Sn (189.925 nm)	0.095533	ppm	0.003765	3.94	112.182000	Y 377.433
Sr (421.552 nm)	0.051001	ppm	0.000065	0.13	6010.181602	Y_R 488.368
Th (288.505 nm)	0.182627	ppm	0.008094	4.43	183.412000	Y 377.433
Ti (336.122 nm)	0.050779	ppm	0.000388	0.76	4522.180000	Y 377.433
Tl (190.794 nm)	0.193990	ppm	0.001590	0.82	349.314000	Y 377.433
U (409.013 nm)	0.442217	ppm	0.001379	0.31	1277.600000	Y 377.433
V (292.401 nm)	0.050791	ppm	0.000325	0.64	1818.280000	Y 377.433
Zn (206.200 nm)	0.211209	ppm	0.002457	1.16	719.902000	Y 377.433
Zr (343.823 nm)	0.050107	ppm	0.000426	0.85	2069.750000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056349	10868.458955	0.001697	0.16
Y 377.433	1.060683	451646.149696	0.006510	0.61
Y_R 377.433	1.130920	45499.200000	0.004158	0.37
Y_R 488.368	1.130680	41938.900000	0.007325	0.65
Y_R2 488.368	1.140986	80995.893176	0.001180	0.10
Y_R4	1.145200	39259.300000	0.010562	0.92

Sample Name: CCVH-5320321

Date: 9/21/2018 7:39:43 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000831	ppm	0.000115	13.82	-164.070000	Y 377.433
Al (394.401 nm)	50.133000 o	ppm	0.054286	0.11	557237.000000	Y 377.433
Al H (396.152 nm)	49.382100	ppm	0.081155	0.16	85295.700000	Y_R 377.433
As (188.980 nm)	-0.000939 u	ppm	0.000491	52.35	-13.396700	Y 242.219
B (249.678 nm)	0.003255	ppm	0.000775	23.79	-3.364800	Y 242.219
Ba (493.408 nm)	-0.000309 u	ppm	0.000026	8.38	547.328000	Y_R 488.368
Be (234.861 nm)	-0.000713 u	ppm	0.000282	39.60	-333.202000	Y_R 488.368
Bi (223.061 nm)	0.975220	ppm	0.007431	0.76	1630.100000	Y 377.433
Ca (315.887 nm)	0.001296	ppm	0.000441	34.04	-1.083417	Y_R 377.433
Cd (214.439 nm)	-0.000492 u	ppm	0.000041	8.26	-7.932740	Y 377.433
Co (228.615 nm)	0.003343	ppm	0.000008	0.24	48.699100	Y 242.219
Cr (205.560 nm)	0.000519	ppm	0.000405	78.01	-8.896610	Y 377.433
Cu (324.754 nm)	0.000004 u	ppm	0.000030	> 100.00	542.555000	Y 377.433
Fe (238.204 nm)	49.642500 o	ppm	0.222913	0.45	80997.492584	Y_R 377.433
Fe H (259.940 nm)	49.815700	ppm	0.030194	0.06	45177.400000	Y_R 377.433
K (766.491 nm)	0.010318 u	ppm	0.071157	> 100.00	1766.460000	Y_R2 488.368
Li (670.783 nm)	0.005372	ppm	0.000189	3.53	-1084.840000	Y_R2 488.368
Mg (279.078 nm)	-0.012308 u	ppm	0.000096	0.78	-162.900000	Y 377.433
Mn (257.610 nm)	0.000259	ppm	0.000012	4.50	100.554000	Y 377.433
Mo (202.032 nm)	-0.000071 u	ppm	0.000293	> 100.00	19.676300	Y 377.433
Na (589.592 nm)	240.585000 o	ppm	0.140388	0.06	130223.000000	Y_R2 488.368
Na H (589.593 nm)	255.211304	ppm	1.478009	0.58	95275.854535	Y_R4
Ni (231.604 nm)	-0.000012 u	ppm	0.000336	> 100.00	23.300800	Y 377.433
P (213.618 nm)	-0.010827 u	ppm	0.000715	6.60	-14.125800	Y 242.219
Pb (220.353 nm)	0.004344	ppm	0.000843	19.41	29.093800	Y 242.219
S (181.972 nm)	5.185970	ppm	0.009006	0.17	2414.073755	Y 377.433
Sb (206.834 nm)	-0.003681 u	ppm	0.003414	92.77	17.927000	Y 377.433
Se (196.026 nm)	-0.003246 u	ppm	0.000448	13.79	-6.288360	Y 242.219
Si (288.158 nm)	0.004136	ppm	0.001979	47.85	388.752000	Y 377.433
Sn (189.925 nm)	0.001050	ppm	0.000364	34.65	0.921929	Y 377.433
Sr (421.552 nm)	-0.000064 u	ppm	0.000072	> 100.00	152.992273	Y_R 488.368
Th (288.505 nm)	4.918180	ppm	0.006401	0.13	4778.610000	Y 377.433
Ti (336.122 nm)	0.001049	ppm	0.000118	11.26	-25.366900	Y 377.433
Tl (190.794 nm)	-0.005662 u	ppm	0.001177	20.78	-8.491680	Y 377.433
U (409.013 nm)	9.825750	ppm	0.009268	0.09	23296.900000	Y 377.433
V (292.401 nm)	-0.003241 u	ppm	0.000351	10.82	-421.120000	Y 377.433
Zn (206.200 nm)	0.000787	ppm	0.000015	1.88	7.786700	Y 377.433
Zr (343.823 nm)	-0.007179 u	ppm	0.000032	0.45	-117.565000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074578	11056.016985	0.001941	0.18
Y 377.433	1.072571	456708.141654	0.004206	0.39
Y_R 377.433	1.097910	44171.500000	0.003270	0.30
Y_R 488.368	1.099270	40774.100000	0.018840	1.71
Y_R2 488.368	1.103078	78304.894947	0.008920	0.81
Y_R4	1.101870	37774.200000	0.003821	0.35

Sample Name: CCV-5305988

Date: 9/21/2018 7:43:24 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498255	ppm	0.001070	0.21	12445.100000	Y 377.433
Al (394.401 nm)	0.491645	ppm	0.001893	0.39	5612.310000	Y 377.433
Al H (396.152 nm)	0.569998 u	ppm	0.013572	2.38	940.125000	Y_R 377.433
As (188.980 nm)	0.979939	ppm	0.004892	0.50	1268.430000	Y 242.219
B (249.678 nm)	0.496901	ppm	0.001728	0.35	1863.730000	Y 242.219
Ba (493.408 nm)	0.501165	ppm	0.001420	0.28	46319.200000	Y_R 488.368
Be (234.861 nm)	0.491130	ppm	0.001315	0.27	26593.000000	Y_R 488.368
Bi (223.061 nm)	-0.008285 u	ppm	0.004653	56.16	45.305800	Y 377.433
Ca (315.887 nm)	4.922003	ppm	0.005943	0.12	3239.730866	Y_R 377.433
Cd (214.439 nm)	0.491452	ppm	0.001098	0.22	12472.500000	Y 377.433
Co (228.615 nm)	0.494313	ppm	0.002987	0.60	9829.110000	Y 242.219
Cr (205.560 nm)	0.485267	ppm	0.001514	0.31	2366.100000	Y 377.433
Cu (324.754 nm)	0.500158	ppm	0.000719	0.14	21485.100000	Y 377.433
Fe (238.204 nm)	2.500598	ppm	0.001255	0.05	4106.573614	Y_R 377.433
Fe H (259.940 nm)	2.445630 u	ppm	0.010962	0.45	2293.010000	Y_R 377.433
K (766.491 nm)	48.874100	ppm	0.166717	0.34	52916.900000	Y_R2 488.368
Li (670.783 nm)	0.967540	ppm	0.002969	0.31	12188.600000	Y_R2 488.368
Mg (279.078 nm)	19.543600	ppm	0.021346	0.11	41484.300000	Y 377.433
Mn (257.610 nm)	0.491249	ppm	0.000204	0.04	86846.100000	Y 377.433
Mo (202.032 nm)	0.492472	ppm	0.000376	0.08	5143.990000	Y 377.433
Na (589.592 nm)	24.942100	ppm	0.074673	0.30	13405.600000	Y_R2 488.368
Na H (589.593 nm)	29.650241 u	ppm	0.290227	0.98	11615.555116	Y_R4
Ni (231.604 nm)	0.492916	ppm	0.000325	0.07	1843.100000	Y 377.433
P (213.618 nm)	0.988427	ppm	0.004488	0.45	1058.020000	Y 242.219
Pb (220.353 nm)	0.990777	ppm	0.003748	0.38	2075.230000	Y 242.219
S (181.972 nm)	0.046098	ppm	0.003496	7.58	24.326539	Y 377.433
Sb (206.834 nm)	1.013760	ppm	0.001585	0.16	1658.520000	Y 377.433
Se (196.026 nm)	0.996737	ppm	0.000058	0.01	1320.460000	Y 242.219
Si (288.158 nm)	4.956290	ppm	0.019974	0.40	20420.500000	Y 377.433
Sn (189.925 nm)	0.987028	ppm	0.008592	0.87	1163.590000	Y 377.433
Sr (421.552 nm)	0.496749	ppm	0.001315	0.26	57187.246746	Y_R 488.368
Th (288.505 nm)	-0.015055 u	ppm	0.007015	46.60	-34.509900	Y 377.433
Ti (336.122 nm)	0.496677	ppm	0.000449	0.09	44756.600000	Y 377.433
Tl (190.794 nm)	1.001960	ppm	0.003385	0.34	1793.740000	Y 377.433
U (409.013 nm)	-0.005639 u	ppm	0.009771	> 100.00	189.598000	Y 377.433
V (292.401 nm)	0.491725	ppm	0.000060	0.01	19909.400000	Y 377.433
Zn (206.200 nm)	0.483829	ppm	0.000506	0.10	1643.590000	Y 377.433
Zr (343.823 nm)	0.493540	ppm	0.000655	0.13	19367.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.075260	11063.029778	0.000454	0.04
Y 377.433	1.075466	457941.165681	0.000691	0.06
Y_R 377.433	1.099770	44246.100000	0.000675	0.06
Y_R 488.368	1.108310	41109.400000	0.002126	0.19
Y_R2 488.368	1.109270	78744.425342	0.010062	0.91
Y_R4	1.128470	38686.000000	0.002726	0.24

Sample Name: CCB

Date: 9/21/2018 7:46:57 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001101 u	ppm	0.000193	17.51	-115.715000	Y 377.433
Al (394.401 nm)	-0.010343 u	ppm	0.000996	9.63	-73.416500	Y 377.433
Al H (396.152 nm)	0.157338 Zu	ppm	0.017789	11.31	29.070500 Z	Y_R 377.433
As (188.980 nm)	0.002219	ppm	0.001235	55.67	-7.338500	Y 242.219
B (249.678 nm)	-0.000254 u	ppm	0.003691	> 100.00	-1.438570	Y 242.219
Ba (493.408 nm)	0.000306	ppm	0.000038	12.46	567.229000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000053	> 100.00	-4.171640	Y_R 488.368
Bi (223.061 nm)	-0.008165 u	ppm	0.003091	37.86	45.102400	Y 377.433
Ca (315.887 nm)	0.014564	ppm	0.002111	14.49	3.603397	Y_R 377.433
Cd (214.439 nm)	-0.000005 u	ppm	0.000139	> 100.00	-13.227700	Y 377.433
Co (228.615 nm)	-0.000019 u	ppm	0.000057	> 100.00	-18.137700	Y 242.219
Cr (205.560 nm)	0.000097 u	ppm	0.000174	> 100.00	-9.757240	Y 377.433
Cu (324.754 nm)	0.000398	ppm	0.000150	37.77	159.275000	Y 377.433
Fe (238.204 nm)	-0.001855 u	ppm	0.000590	31.77	24.940506	Y_R 377.433
Fe H (259.940 nm)	-0.062881 u	ppm	0.001488	2.37	22.036200	Y_R 377.433
K (766.491 nm)	-0.071702 u	ppm	0.029044	40.51	1680.600000	Y_R2 488.368
Li (670.783 nm)	0.005853	ppm	0.006270	> 100.00	-1078.210000	Y_R2 488.368
Mg (279.078 nm)	0.002062	ppm	0.001573	76.32	11.109000	Y 377.433
Mn (257.610 nm)	-0.000055 u	ppm	0.000012	21.70	45.118700	Y 377.433
Mo (202.032 nm)	0.000237	ppm	0.000292	> 100.00	22.881400	Y 377.433
Na (589.592 nm)	0.312176	ppm	0.015088	4.83	72.318000	Y_R2 488.368
Na H (589.593 nm)	2.146882 u	ppm	0.021690	1.01	1471.754618	Y_R4
Ni (231.604 nm)	-0.000880 u	ppm	0.000393	44.61	12.913600	Y 377.433
P (213.618 nm)	-0.001748 u	ppm	0.000475	27.15	-3.067020	Y 242.219
Pb (220.353 nm)	-0.000006 u	ppm	0.001161	> 100.00	9.377990	Y 242.219
S (181.972 nm)	0.026909	ppm	0.002380	8.85	13.459730	Y 377.433
Sb (206.834 nm)	-0.002673 u	ppm	0.001455	54.44	15.534100	Y 377.433
Se (196.026 nm)	-0.002186 u	ppm	0.001876	85.82	6.277350	Y 242.219
Si (288.158 nm)	-0.002674 u	ppm	0.001539	57.55	360.399000	Y 377.433
Sn (189.925 nm)	-0.000655 u	ppm	0.000663	> 100.00	-1.264420	Y 377.433
Sr (421.552 nm)	0.000365	ppm	0.000086	23.71	196.475085	Y_R 488.368
Th (288.505 nm)	-0.007345 u	ppm	0.004691	63.86	1.413110	Y 377.433
Ti (336.122 nm)	0.000135	ppm	0.000110	81.13	-98.932000	Y 377.433
Tl (190.794 nm)	0.002557	ppm	0.000204	7.98	6.921760	Y 377.433
U (409.013 nm)	-0.011844 u	ppm	0.008947	75.54	219.563000	Y 377.433
V (292.401 nm)	0.000521	ppm	0.000243	46.72	-241.878000	Y 377.433
Zn (206.200 nm)	-0.000775 u	ppm	0.000437	56.41	1.654650	Y 377.433
Zr (343.823 nm)	0.000119 u	ppm	0.000263	> 100.00	118.675000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073887	11048.903365	0.003421	0.32
Y 377.433	1.071212	456129.729401	0.001704	0.16
Y_R 377.433	1.080580	43473.900000	0.007205	0.67
Y_R 488.368	1.083480	40188.100000	0.017031	1.57
Y_R2 488.368	1.095524	77768.651377	0.002156	0.20
Y_R4	1.107460	37965.600000	0.001099	0.10

Sample Name: CCVL-5320254

Date: 9/21/2018 7:50:08 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008327	ppm	0.000300	3.61	121.933000	Y 377.433
Al (394.401 nm)	0.087593	ppm	0.000236	0.27	1021.530000	Y 377.433
Al H (396.152 nm)	0.247639 u	ppm	0.001915	0.77	190.119000	Y_R 377.433
As (188.980 nm)	0.015606	ppm	0.001053	6.75	10.126300	Y 242.219
B (249.678 nm)	0.098183	ppm	0.000302	0.31	367.989000	Y 242.219
Ba (493.408 nm)	0.010466	ppm	0.000261	2.49	1495.300000	Y_R 488.368
Be (234.861 nm)	0.000959	ppm	0.000050	5.23	47.457600	Y_R 488.368
Bi (223.061 nm)	0.088511	ppm	0.001039	1.17	200.322000	Y 377.433
Ca (315.887 nm)	0.205711	ppm	0.010221	4.97	129.658101	Y_R 377.433
Cd (214.439 nm)	0.005082	ppm	0.000058	1.14	116.045000	Y 377.433
Co (228.615 nm)	0.010434	ppm	0.000224	2.15	190.070000	Y 242.219
Cr (205.560 nm)	0.009751	ppm	0.000478	4.90	37.445700	Y 377.433
Cu (324.754 nm)	0.015615	ppm	0.000067	0.43	807.783000	Y 377.433
Fe (238.204 nm)	0.097082	ppm	0.005784	5.96	186.312891	Y_R 377.433
Fe H (259.940 nm)	0.030432 u	ppm	0.000418	1.37	106.513000	Y_R 377.433
K (766.491 nm)	3.004210	ppm	0.031645	1.05	4900.450000	Y_R2 488.368
Li (670.783 nm)	0.024950	ppm	0.004016	16.10	-814.761000	Y_R2 488.368
Mg (279.078 nm)	0.207334	ppm	0.000995	0.48	446.121000	Y 377.433
Mn (257.610 nm)	0.010338	ppm	0.000009	0.09	1881.250000	Y 377.433
Mo (202.032 nm)	0.019558	ppm	0.000200	1.02	223.892000	Y 377.433
Na (589.592 nm)	1.453850 Q	ppm	0.074832	5.15	690.573000 Q	Y_R2 488.368
Na H (589.593 nm)	2.727121 u	ppm	0.034499	1.27	1685.810355	Y_R4
Ni (231.604 nm)	0.040009	ppm	0.000141	0.35	164.388000	Y 377.433
P (213.618 nm)	2.877740	ppm	0.000686	0.02	3143.440000	Y 242.219
Pb (220.353 nm)	0.009900	ppm	0.000863	8.72	30.081900	Y 242.219
S (181.972 nm)	0.121397	ppm	0.002524	2.08	57.474261	Y 377.433
Sb (206.834 nm)	0.015767	ppm	0.003625	22.99	45.221500	Y 377.433
Se (196.026 nm)	0.015050	ppm	0.002566	17.05	28.943600	Y 242.219
Si (288.158 nm)	0.480669	ppm	0.000243	0.05	2315.630000	Y 377.433
Sn (189.925 nm)	0.097752	ppm	0.000830	0.85	114.794000	Y 377.433
Sr (421.552 nm)	0.010270	ppm	0.000136	1.33	1333.702650	Y_R 488.368
Th (288.505 nm)	0.002783 Qu	ppm	0.004470	> 100.00	10.925800 Q	Y 377.433
Ti (336.122 nm)	0.010030	ppm	0.000116	1.15	795.155000	Y 377.433
Tl (190.794 nm)	0.016458	ppm	0.000342	2.08	31.725400	Y 377.433
U (409.013 nm)	0.049078	ppm	0.003649	7.43	361.064000	Y 377.433
V (292.401 nm)	0.010210	ppm	0.000234	2.29	154.188000	Y 377.433
Zn (206.200 nm)	0.019935	ppm	0.000762	3.82	71.823800	Y 377.433
Zr (343.823 nm)	0.014511	ppm	0.000107	0.73	680.171000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090820	11223.127397	0.001235	0.11
Y 377.433	1.085692	462295.289988	0.001692	0.16
Y_R 377.433	1.092210	43942.000000	0.000790	0.07
Y_R 488.368	1.087570	40340.100000	0.003642	0.33
Y_R2 488.368	1.091608	77490.677451	0.012356	1.13
Y_R4	1.115410	38238.200000	0.015919	1.43

Sample Name: MB 280-429322/1-E

Date: 9/21/2018 7:53:34 PM Rack:Tube: 2:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001276 u	ppm	0.000099	7.77	-120.211000	Y 377.433
Al (394.401 nm)	-0.010980 u	ppm	0.000688	6.27	-81.617600	Y 377.433
Al H (396.152 nm)	0.122316 u	ppm	0.013729	11.22	-31.853800	Y_R 377.433
As (188.980 nm)	0.001832	ppm	0.000096	5.24	-7.842490	Y 242.219
B (249.678 nm)	0.001212	ppm	0.000262	21.60	4.068590	Y 242.219
Ba (493.408 nm)	-0.000257 u	ppm	0.000319	> 100.00	515.761000	Y_R 488.368
Be (234.861 nm)	-0.000029 u	ppm	0.000053	> 100.00	-5.456930	Y_R 488.368
Bi (223.061 nm)	-0.010075 u	ppm	0.003007	29.85	42.035100	Y 377.433
Ca (315.887 nm)	-0.010587 u	ppm	0.006717	63.45	-12.983980	Y_R 377.433
Cd (214.439 nm)	-0.000028 u	ppm	0.000024	85.14	-13.827800	Y 377.433
Co (228.615 nm)	-0.000027 u	ppm	0.000184	> 100.00	-18.314800	Y 242.219
Cr (205.560 nm)	0.000270	ppm	0.000081	30.01	-8.901210	Y 377.433
Cu (324.754 nm)	0.000035	ppm	0.000018	52.45	144.613000	Y 377.433
Fe (238.204 nm)	-0.012232 u	ppm	0.000736	6.02	8.016039	Y_R 377.433
Fe H (259.940 nm)	-0.077091 u	ppm	0.001130	1.47	9.172050	Y_R 377.433
K (766.491 nm)	-0.105930 u	ppm	0.109344	> 100.00	1644.770000	Y_R2 488.368
Li (670.783 nm)	0.007532	ppm	0.004099	54.42	-1055.040000	Y_R2 488.368
Mg (279.078 nm)	0.002503	ppm	0.001317	52.59	12.039700	Y 377.433
Mn (257.610 nm)	-0.000052 u	ppm	0.000002	4.51	45.515800	Y 377.433
Mo (202.032 nm)	-0.000613 u	ppm	0.000109	17.80	14.034500	Y 377.433
Na (589.592 nm)	0.184032	ppm	0.029787	16.19	2.913410	Y_R2 488.368
Na H (589.593 nm)	1.810638 u	ppm	0.006067	0.34	1347.168408	Y_R4
Ni (231.604 nm)	-0.000712 u	ppm	0.000199	27.89	13.533200	Y 377.433
P (213.618 nm)	-0.000133 u	ppm	0.003127	> 100.00	-1.305820	Y 242.219
Pb (220.353 nm)	0.001144 u	ppm	0.001652	> 100.00	11.784900	Y 242.219
S (181.972 nm)	0.017231	ppm	0.000770	4.47	8.953106	Y 377.433
Sb (206.834 nm)	-0.004635 u	ppm	0.000584	12.60	12.367400	Y 377.433
Se (196.026 nm)	-0.000024 u	ppm	0.000348	> 100.00	9.123830	Y 242.219
Si (288.158 nm)	-0.004622 u	ppm	0.000148	3.20	352.518000	Y 377.433
Sn (189.925 nm)	0.000195	ppm	0.000208	> 100.00	-0.261857	Y 377.433
Sr (421.552 nm)	-0.000291 u	ppm	0.000148	50.69	121.153517	Y_R 488.368
Th (288.505 nm)	-0.007027 u	ppm	0.002687	38.24	1.730550	Y 377.433
Ti (336.122 nm)	0.000274	ppm	0.000009	3.36	-86.449500	Y 377.433
Tl (190.794 nm)	-0.001439 u	ppm	0.000093	6.46	-0.228767	Y 377.433
U (409.013 nm)	-0.010193 u	ppm	0.001407	13.80	223.469000	Y 377.433
V (292.401 nm)	0.000431	ppm	0.000042	9.76	-245.246000	Y 377.433
Zn (206.200 nm)	0.000727	ppm	0.000621	85.47	6.743410	Y 377.433
Zr (343.823 nm)	-0.000159 u	ppm	0.000052	32.91	107.826000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097099	11287.729866	0.003274	0.30
Y 377.433	1.093237	465508.120712	0.001938	0.18
Y_R 377.433	1.104320	44429.200000	0.005947	0.54
Y_R 488.368	1.095820	40646.000000	0.003691	0.34
Y_R2 488.368	1.117413	79322.492420	0.011386	1.02
Y_R4	1.119010	38361.700000	0.008658	0.77

Sample Name: LCS 280-429322/2-E

Date: 9/21/2018 7:56:44 PM Rack:Tube: 2:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051971	ppm	0.000208	0.40	1174.720000	Y 377.433
Al (394.401 nm)	2.038790	ppm	0.001691	0.08	22968.600000	Y 377.433
Al H (396.152 nm)	2.006100	ppm	0.002330	0.12	3626.810000	Y_R 377.433
As (188.980 nm)	1.007000	ppm	0.001082	0.11	1303.750000	Y 242.219
B (249.678 nm)	1.049250	ppm	0.000139	0.01	3937.270000	Y 242.219
Ba (493.408 nm)	2.055340	ppm	0.002531	0.12	188282.000000	Y_R 488.368
Be (234.861 nm)	0.050962	ppm	0.000204	0.40	2751.470000	Y_R 488.368
Bi (223.061 nm)	1.939090	ppm	0.006487	0.33	3171.370000	Y 377.433
Ca (315.887 nm)	50.284006	ppm	0.027883	0.06	33152.666838	Y_R 377.433
Cd (214.439 nm)	0.100152	ppm	0.000077	0.08	2531.500000	Y 377.433
Co (228.615 nm)	0.486955	ppm	0.001554	0.32	9702.380000	Y 242.219
Cr (205.560 nm)	0.199164	ppm	0.000083	0.04	961.911000	Y 377.433
Cu (324.754 nm)	0.251995	ppm	0.000491	0.19	10929.500000	Y 377.433
Fe (238.204 nm)	1.010593	ppm	0.004615	0.46	1676.297175	Y_R 377.433
Fe H (259.940 nm)	0.938367 u	ppm	0.001744	0.19	928.470000	Y_R 377.433
K (766.491 nm)	50.882700	ppm	0.178780	0.35	55019.600000	Y_R2 488.368
Li (670.783 nm)	1.000250	ppm	0.003386	0.34	12639.800000	Y_R2 488.368
Mg (279.078 nm)	50.014400	ppm	0.065952	0.13	106136.000000	Y 377.433
Mn (257.610 nm)	0.501879	ppm	0.000771	0.15	88724.200000	Y 377.433
Mo (202.032 nm)	1.022960	ppm	0.001778	0.17	10663.100000	Y 377.433
Na (589.592 nm)	49.053700	ppm	0.053796	0.11	26440.300000	Y_R2 488.368
Na H (589.593 nm)	52.769163	ppm	0.181524	0.34	20024.891482	Y_R4
Ni (231.604 nm)	0.486730	ppm	0.000294	0.06	1821.500000	Y 377.433
P (213.618 nm)	10.429800	ppm	0.010470	0.10	11387.400000	Y 242.219
Pb (220.353 nm)	0.509369	ppm	0.003157	0.62	1072.530000	Y 242.219
S (181.972 nm)	2.016315	ppm	0.011265	0.56	944.915605	Y 377.433
Sb (206.834 nm)	0.525253	ppm	0.004439	0.85	859.037000	Y 377.433
Se (196.026 nm)	2.048500	ppm	0.010545	0.51	2704.490000	Y 242.219
Si (288.158 nm)	10.350700	ppm	0.036388	0.35	42242.200000	Y 377.433
Sn (189.925 nm)	2.035190	ppm	0.000261	0.01	2399.760000	Y 377.433
Sr (421.552 nm)	1.015057	ppm	0.001144	0.11	116694.693726	Y_R 488.368
Th (288.505 nm)	0.987061	ppm	0.005496	0.56	939.210000	Y 377.433
Ti (336.122 nm)	1.017770	ppm	0.001753	0.17	91921.900000	Y 377.433
Tl (190.794 nm)	2.046570	ppm	0.007570	0.37	3659.470000	Y 377.433
U (409.013 nm)	2.019720	ppm	0.002678	0.13	4929.110000	Y 377.433
V (292.401 nm)	0.510728	ppm	0.000913	0.18	20758.300000	Y 377.433
Zn (206.200 nm)	0.491572	ppm	0.001695	0.34	1669.800000	Y 377.433
Zr (343.823 nm)	0.504480	ppm	0.000559	0.11	19793.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061867	10925.236533	0.005463	0.51
Y 377.433	1.062414	452383.286978	0.001524	0.14
Y_R 377.433	1.088710	43801.300000	0.002088	0.19
Y_R 488.368	1.095920	40649.600000	0.001549	0.14
Y_R2 488.368	1.108855	78714.980290	0.007831	0.71
Y_R4	1.120900	38426.500000	0.002493	0.22

Sample Name: LCSD 280-429322/3-D

Date: 9/21/2018 8:00:16 PM Rack:Tube: 2:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053191	ppm	0.000239	0.45	1205.210000	Y 377.433
Al (394.401 nm)	2.044920	ppm	0.008238	0.40	23037.100000	Y 377.433
Al H (396.152 nm)	1.994380	ppm	0.000383	0.02	3606.500000	Y_R 377.433
As (188.980 nm)	1.014890	ppm	0.003591	0.35	1314.050000	Y 242.219
B (249.678 nm)	1.056160	ppm	0.001871	0.18	3963.210000	Y 242.219
Ba (493.408 nm)	2.056000	ppm	0.000707	0.03	188342.000000	Y_R 488.368
Be (234.861 nm)	0.050780	ppm	0.000018	0.04	2741.700000	Y_R 488.368
Bi (223.061 nm)	1.953610	ppm	0.009675	0.50	3194.690000	Y 377.433
Ca (315.887 nm)	50.327625	ppm	0.064339	0.13	33181.429588	Y_R 377.433
Cd (214.439 nm)	0.100574	ppm	0.000568	0.56	2542.210000	Y 377.433
Co (228.615 nm)	0.489977	ppm	0.001396	0.28	9762.390000	Y 242.219
Cr (205.560 nm)	0.199373	ppm	0.002253	1.13	962.928000	Y 377.433
Cu (324.754 nm)	0.252649	ppm	0.001460	0.58	10957.300000	Y 377.433
Fe (238.204 nm)	0.997918	ppm	0.003350	0.34	1655.622720	Y_R 377.433
Fe H (259.940 nm)	0.939382 u	ppm	0.005058	0.54	929.390000	Y_R 377.433
K (766.491 nm)	51.226400	ppm	0.113233	0.22	55379.400000	Y_R2 488.368
Li (670.783 nm)	1.008450	ppm	0.006729	0.67	12753.000000	Y_R2 488.368
Mg (279.078 nm)	50.124300	ppm	0.299410	0.60	106369.000000	Y 377.433
Mn (257.610 nm)	0.502909	ppm	0.003345	0.67	88906.200000	Y 377.433
Mo (202.032 nm)	1.024740	ppm	0.006275	0.61	10681.600000	Y 377.433
Na (589.592 nm)	49.069700	ppm	0.207561	0.42	26448.900000	Y_R2 488.368
Na H (589.593 nm)	53.045826	ppm	0.118020	0.22	20127.388144	Y_R4
Ni (231.604 nm)	0.488789	ppm	0.002560	0.52	1829.120000	Y 377.433
P (213.618 nm)	10.502700	ppm	0.020126	0.19	11467.000000	Y 242.219
Pb (220.353 nm)	0.509241	ppm	0.003832	0.75	1072.270000	Y 242.219
S (181.972 nm)	2.024460	ppm	0.003322	0.16	948.726654	Y 377.433
Sb (206.834 nm)	0.528883	ppm	0.002396	0.45	864.912000	Y 377.433
Se (196.026 nm)	2.066770	ppm	0.000883	0.04	2728.530000	Y 242.219
Si (288.158 nm)	10.429800	ppm	0.002632	0.03	42561.900000	Y 377.433
Sn (189.925 nm)	2.033130	ppm	0.012952	0.64	2397.330000	Y 377.433
Sr (421.552 nm)	1.014904	ppm	0.000841	0.08	116677.041085	Y_R 488.368
Th (288.505 nm)	0.987124	ppm	0.005349	0.54	939.290000	Y 377.433
Ti (336.122 nm)	1.015450	ppm	0.005814	0.57	91712.800000	Y 377.433
Tl (190.794 nm)	2.052380	ppm	0.012302	0.60	3669.890000	Y 377.433
U (409.013 nm)	2.018600	ppm	0.001345	0.07	4926.510000	Y 377.433
V (292.401 nm)	0.510990	ppm	0.002606	0.51	20768.700000	Y 377.433
Zn (206.200 nm)	0.491386	ppm	0.003175	0.65	1669.170000	Y 377.433
Zr (343.823 nm)	0.503927	ppm	0.002623	0.52	19771.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065462	10962.227165	0.000459	0.04
Y 377.433	1.067126	454389.665501	0.006022	0.56
Y_R 377.433	1.097870	44169.900000	0.002049	0.19
Y_R 488.368	1.106780	41052.700000	0.000550	0.05
Y_R2 488.368	1.099759	78069.248543	0.010804	0.98
Y_R4	1.101700	37768.300000	0.007063	0.64

Sample Name: 280-114110-A-4-E

Date: 9/21/2018 8:03:48 PM Rack:Tube: 2:23

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000216 u	ppm	0.000397	> 100.00	-93.297200	Y 377.433
Al (394.401 nm)	0.003695	ppm	0.000017	0.46	113.512000	Y 377.433
Al H (396.152 nm)	0.106401 u	ppm	0.001411	1.33	-24.037700	Y_R 377.433
As (188.980 nm)	0.002225	ppm	0.001523	68.46	-7.329930	Y 242.219
B (249.678 nm)	0.027950	ppm	0.000424	1.52	104.419000	Y 242.219
Ba (493.408 nm)	0.015194	ppm	0.000277	1.82	1927.090000	Y_R 488.368
Be (234.861 nm)	0.000032 u	ppm	0.000058	> 100.00	-2.164360	Y_R 488.368
Bi (223.061 nm)	-0.002587 u	ppm	0.003295	> 100.00	54.061200	Y 377.433
Ca (315.887 nm)	59.771370	ppm	0.009949	0.02	39408.692922	Y_R 377.433
Cd (214.439 nm)	0.001046	ppm	0.000078	7.49	13.470300	Y 377.433
Co (228.615 nm)	0.000086 u	ppm	0.000600	> 100.00	-16.042700	Y 242.219
Cr (205.560 nm)	0.001473	ppm	0.000464	31.47	-3.020910	Y 377.433
Cu (324.754 nm)	0.004529	ppm	0.000138	3.04	305.188000	Y 377.433
Fe (238.204 nm)	-0.006497 u	ppm	0.003769	58.01	17.369760	Y_R 377.433
Fe H (259.940 nm)	-0.082409 u	ppm	0.002655	3.22	4.357510	Y_R 377.433
K (766.491 nm)	2.311910	ppm	0.018799	0.81	4175.760000	Y_R2 488.368
Li (670.783 nm)	0.007063	ppm	0.000186	2.63	-1061.510000	Y_R2 488.368
Mg (279.078 nm)	16.284700	ppm	0.014814	0.09	34569.500000	Y 377.433
Mn (257.610 nm)	0.042212	ppm	0.000020	0.05	7512.610000	Y 377.433
Mo (202.032 nm)	0.000827	ppm	0.000080	9.72	29.016300	Y 377.433
Na (589.592 nm)	69.381100 o	ppm	0.152973	0.22	37485.300000	Y_R2 488.368
Na H (589.593 nm)	72.328593	ppm	0.214423	0.30	27484.747875	Y_R4
Ni (231.604 nm)	0.007306	ppm	0.000000	0.00	44.113200	Y 377.433
P (213.618 nm)	0.004383	ppm	0.003309	75.48	3.374760	Y 242.219
Pb (220.353 nm)	-0.001201 u	ppm	0.001045	87.04	6.849760	Y 242.219
S (181.972 nm)	5.754461	ppm	0.001595	0.03	2683.830943	Y 377.433
Sb (206.834 nm)	-0.005007 u	ppm	0.001120	22.38	11.765900	Y 377.433
Se (196.026 nm)	-0.003827 u	ppm	0.001480	38.68	4.168920	Y 242.219
Si (288.158 nm)	6.381680	ppm	0.025176	0.39	26186.600000	Y 377.433
Sn (189.925 nm)	-0.000912 u	ppm	0.000124	13.63	-1.567530	Y 377.433
Sr (421.552 nm)	0.140313	ppm	0.000408	0.29	16264.120913	Y_R 488.368
Th (288.505 nm)	-0.027016 u	ppm	0.000105	0.39	-17.255900	Y 377.433
Ti (336.122 nm)	0.000250	ppm	0.000014	5.74	51.066200	Y 377.433
Tl (190.794 nm)	0.002309	ppm	0.000411	17.82	6.474150	Y 377.433
U (409.013 nm)	-0.013603 u	ppm	0.001152	8.47	209.709000	Y 377.433
V (292.401 nm)	0.001017	ppm	0.000126	12.43	-221.343000	Y 377.433
Zn (206.200 nm)	0.012264	ppm	0.000603	4.91	45.832700	Y 377.433
Zr (343.823 nm)	0.000038 u	ppm	0.000281	> 100.00	115.514000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069028	10998.907904	0.001993	0.19
Y 377.433	1.069652	455465.499362	0.003231	0.30
Y_R 377.433	1.089770	43843.700000	0.009646	0.89
Y_R 488.368	1.095110	40619.800000	0.008314	0.76
Y_R2 488.368	1.088244	77251.822800	0.003804	0.35
Y_R4	1.081520	37076.300000	0.001844	0.17

Sample Name: 280-114110-A-4-Esd@5

Date: 9/21/2018 8:07:17 PM Rack:Tube: 2:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001072 u	ppm	0.000268	24.97	-115.040000	Y 377.433
Al (394.401 nm)	-0.004178 u	ppm	0.002038	48.79	0.097336	Y 377.433
Al H (396.152 nm)	0.138324 u	ppm	0.009578	6.92	3.262450	Y_R 377.433
As (188.980 nm)	0.001542 u	ppm	0.002555	> 100.00	-8.221000	Y 242.219
B (249.678 nm)	0.008512	ppm	0.000176	2.07	31.467300	Y 242.219
Ba (493.408 nm)	0.003493	ppm	0.000061	1.76	858.272000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000070	88.13	0.429964	Y_R 488.368
Bi (223.061 nm)	-0.005085 u	ppm	0.001640	32.26	50.047200	Y 377.433
Ca (315.887 nm)	12.288728	ppm	0.002469	0.02	8097.484069	Y_R 377.433
Cd (214.439 nm)	0.000407	ppm	0.000194	47.59	-2.765590	Y 377.433
Co (228.615 nm)	-0.000027 u	ppm	0.000093	> 100.00	-18.289800	Y 242.219
Cr (205.560 nm)	-0.000329 u	ppm	0.000344	> 100.00	-11.847600	Y 377.433
Cu (324.754 nm)	0.001380	ppm	0.000167	12.07	195.851000	Y 377.433
Fe (238.204 nm)	-0.010583 u	ppm	0.000440	4.16	10.704526	Y_R 377.433
Fe H (259.940 nm)	-0.072198 u	ppm	0.001003	1.39	13.601200	Y_R 377.433
K (766.491 nm)	0.359431	ppm	0.083492	23.23	2131.910000	Y_R2 488.368
Li (670.783 nm)	0.006819	ppm	0.004589	67.30	-1064.880000	Y_R2 488.368
Mg (279.078 nm)	3.324820	ppm	0.021307	0.64	7063.390000	Y 377.433
Mn (257.610 nm)	0.008756	ppm	0.000124	1.42	1601.810000	Y 377.433
Mo (202.032 nm)	0.000657	ppm	0.000186	28.34	27.248400	Y 377.433
Na (589.592 nm)	14.556700	ppm	0.033515	0.23	7788.240000	Y_R2 488.368
Na H (589.593 nm)	15.375144 u	ppm	0.093355	0.61	6374.788584	Y_R4
Ni (231.604 nm)	-0.000964 u	ppm	0.002213	> 100.00	12.780100	Y 377.433
P (213.618 nm)	0.007294	ppm	0.004154	56.96	6.732080	Y 242.219
Pb (220.353 nm)	0.000647	ppm	0.000288	44.59	10.733100	Y 242.219
S (181.972 nm)	1.127744	ppm	0.011091	0.98	526.767994	Y 377.433
Sb (206.834 nm)	-0.002075 u	ppm	0.001121	54.00	16.494800	Y 377.433
Se (196.026 nm)	0.001124 u	ppm	0.003954	> 100.00	10.643300	Y 242.219
Si (288.158 nm)	1.232900	ppm	0.013215	1.07	5358.590000	Y 377.433
Sn (189.925 nm)	0.001189	ppm	0.001214	> 100.00	0.910273	Y 377.433
Sr (421.552 nm)	0.028622	ppm	0.000177	0.62	3440.745740	Y_R 488.368
Th (288.505 nm)	-0.006649 u	ppm	0.005813	87.42	2.137800	Y 377.433
Ti (336.122 nm)	0.000362	ppm	0.000115	31.72	-49.864900	Y 377.433
Tl (190.794 nm)	0.000321	ppm	0.000325	> 100.00	2.915640	Y 377.433
U (409.013 nm)	-0.003945 u	ppm	0.007020	> 100.00	236.927000	Y 377.433
V (292.401 nm)	0.000593	ppm	0.000141	23.85	-238.366000	Y 377.433
Zn (206.200 nm)	0.002451	ppm	0.000083	3.38	12.583500	Y 377.433
Zr (343.823 nm)	0.000137 u	ppm	0.000221	> 100.00	119.357000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065891	10966.634563	0.005309	0.50
Y 377.433	1.065356	453636.222434	0.004128	0.39
Y_R 377.433	1.073410	43185.600000	0.001611	0.15
Y_R 488.368	1.084720	40234.400000	0.001445	0.13
Y_R2 488.368	1.091750	77500.689652	0.004559	0.42
Y_R4	1.091490	37418.100000	0.004934	0.45

Sample Name: 280-114110-A-4-F MS

Date: 9/21/2018 8:10:28 PM Rack:Tube: 2:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053841	ppm	0.000305	0.57	1222.470000	Y 377.433
Al (394.401 nm)	2.056670	ppm	0.001034	0.05	23195.700000	Y 377.433
Al H (396.152 nm)	1.980530	ppm	0.008166	0.41	3620.670000	Y_R 377.433
As (188.980 nm)	1.035530	ppm	0.008023	0.77	1340.990000	Y 242.219
B (249.678 nm)	1.099970	ppm	0.001472	0.13	4127.630000	Y 242.219
Ba (493.408 nm)	2.078480	ppm	0.003662	0.18	190395.000000	Y_R 488.368
Be (234.861 nm)	0.051506	ppm	0.000157	0.31	2780.970000	Y_R 488.368
Bi (223.061 nm)	1.957750	ppm	0.007558	0.39	3201.330000	Y 377.433
Ca (315.887 nm)	109.774244	ppm	0.175542	0.16	72381.977513	Y_R 377.433
Cd (214.439 nm)	0.100407	ppm	0.000231	0.23	2537.970000	Y 377.433
Co (228.615 nm)	0.493071	ppm	0.002652	0.54	9824.160000	Y 242.219
Cr (205.560 nm)	0.198859	ppm	0.000326	0.16	960.389000	Y 377.433
Cu (324.754 nm)	0.258158	ppm	0.000392	0.15	11164.500000	Y 377.433
Fe (238.204 nm)	1.006356	ppm	0.003299	0.33	1669.386210	Y_R 377.433
Fe H (259.940 nm)	0.941249 u	ppm	0.001013	0.11	931.079000	Y_R 377.433
K (766.491 nm)	54.738400	ppm	0.223326	0.41	59055.700000	Y_R2 488.368
Li (670.783 nm)	1.018680	ppm	0.001471	0.14	12894.100000	Y_R2 488.368
Mg (279.078 nm)	66.238500	ppm	0.059607	0.09	140570.000000	Y 377.433
Mn (257.610 nm)	0.541292	ppm	0.000011	0.00	95687.400000	Y 377.433
Mo (202.032 nm)	1.029220	ppm	0.000136	0.01	10728.200000	Y 377.433
Na (589.592 nm)	117.197000 o	ppm	0.048743	0.04	63351.500000	Y_R2 488.368
Na H (589.593 nm)	126.921697	ppm	0.624576	0.49	47508.787929	Y_R4
Ni (231.604 nm)	0.493044	ppm	0.001218	0.25	1845.750000	Y 377.433
P (213.618 nm)	10.693500	ppm	0.021293	0.20	11675.300000	Y 242.219
Pb (220.353 nm)	0.508626	ppm	0.002397	0.47	1070.890000	Y 242.219
S (181.972 nm)	7.916142	ppm	0.012902	0.16	3695.484299	Y 377.433
Sb (206.834 nm)	0.533559	ppm	0.003685	0.69	872.411000	Y 377.433
Se (196.026 nm)	2.079530	ppm	0.008370	0.40	2745.350000	Y 242.219
Si (288.158 nm)	16.912200	ppm	0.092089	0.54	68785.000000	Y 377.433
Sn (189.925 nm)	2.028780	ppm	0.000242	0.01	2392.200000	Y 377.433
Sr (421.552 nm)	1.163410	ppm	0.001464	0.13	133727.196751	Y_R 488.368
Th (288.505 nm)	0.985051	ppm	0.000215	0.02	937.420000	Y 377.433
Ti (336.122 nm)	1.023390	ppm	0.000647	0.06	92569.600000	Y 377.433
Tl (190.794 nm)	2.014360	ppm	0.000741	0.04	3601.800000	Y 377.433
U (409.013 nm)	2.031520	ppm	0.007245	0.36	4950.660000	Y 377.433
V (292.401 nm)	0.512612	ppm	0.000169	0.03	20837.800000	Y 377.433
Zn (206.200 nm)	0.497449	ppm	0.002325	0.47	1689.710000	Y 377.433
Zr (343.823 nm)	0.507559	ppm	0.000186	0.04	19913.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.035957	10658.655712	0.001646	0.16
Y 377.433	1.046281	445513.856476	0.000332	0.03
Y_R 377.433	1.076840	43323.700000	0.001971	0.18
Y_R 488.368	1.080590	40081.000000	0.004435	0.41
Y_R2 488.368	1.092534	77556.384005	0.001094	0.10
Y_R4	1.081470	37074.800000	0.009104	0.84

Sample Name: 280-114110-A-4-G MSD

Date: 9/21/2018 8:14:01 PM Rack:Tube: 2:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053234	ppm	0.000090	0.17	1207.250000	Y 377.433
Al (394.401 nm)	2.039360	ppm	0.003171	0.16	22999.600000	Y 377.433
Al H (396.152 nm)	1.950880	ppm	0.010191	0.52	3562.280000	Y_R 377.433
As (188.980 nm)	1.029140	ppm	0.004780	0.46	1332.650000	Y 242.219
B (249.678 nm)	1.086150	ppm	0.003265	0.30	4075.760000	Y 242.219
Ba (493.408 nm)	2.044190	ppm	0.008436	0.41	187263.000000	Y_R 488.368
Be (234.861 nm)	0.050334	ppm	0.000162	0.32	2717.490000	Y_R 488.368
Bi (223.061 nm)	1.936780	ppm	0.000315	0.02	3167.670000	Y 377.433
Ca (315.887 nm)	108.050839	ppm	0.214337	0.20	71245.518921	Y_R 377.433
Cd (214.439 nm)	0.099653	ppm	0.000090	0.09	2518.820000	Y 377.433
Co (228.615 nm)	0.488079	ppm	0.002308	0.47	9724.420000	Y 242.219
Cr (205.560 nm)	0.196955	ppm	0.000860	0.44	951.097000	Y 377.433
Cu (324.754 nm)	0.255340	ppm	0.000275	0.11	11044.000000	Y 377.433
Fe (238.204 nm)	1.009809	ppm	0.002543	0.25	1675.017846	Y_R 377.433
Fe H (259.940 nm)	0.943544 u	ppm	0.000595	0.06	933.157000	Y_R 377.433
K (766.491 nm)	54.138900	ppm	0.021374	0.04	58428.100000	Y_R2 488.368
Li (670.783 nm)	1.012020	ppm	0.001190	0.12	12802.300000	Y_R2 488.368
Mg (279.078 nm)	65.610200	ppm	0.132752	0.20	139237.000000	Y 377.433
Mn (257.610 nm)	0.536532	ppm	0.000532	0.10	94846.500000	Y 377.433
Mo (202.032 nm)	1.018640	ppm	0.002230	0.22	10618.100000	Y 377.433
Na (589.592 nm)	116.532000 o	ppm	0.172615	0.15	62991.800000	Y_R2 488.368
Na H (589.593 nm)	125.016398	ppm	0.360012	0.29	46806.052890	Y_R4
Ni (231.604 nm)	0.487679	ppm	0.000917	0.19	1825.850000	Y 377.433
P (213.618 nm)	10.557800	ppm	0.029042	0.28	11527.100000	Y 242.219
Pb (220.353 nm)	0.501469	ppm	0.000242	0.05	1055.970000	Y 242.219
S (181.972 nm)	7.780225	ppm	0.024928	0.32	3632.074404	Y 377.433
Sb (206.834 nm)	0.527925	ppm	0.001578	0.30	863.417000	Y 377.433
Se (196.026 nm)	2.059530	ppm	0.001291	0.06	2719.030000	Y 242.219
Si (288.158 nm)	16.645000	ppm	0.089468	0.54	67703.800000	Y 377.433
Sn (189.925 nm)	2.017610	ppm	0.000710	0.04	2379.030000	Y 377.433
Sr (421.552 nm)	1.143508	ppm	0.001008	0.09	131442.221715	Y_R 488.368
Th (288.505 nm)	0.973691	ppm	0.004850	0.50	926.709000	Y 377.433
Ti (336.122 nm)	1.010930	ppm	0.000352	0.03	91440.500000	Y 377.433
Tl (190.794 nm)	2.001690	ppm	0.007458	0.37	3579.190000	Y 377.433
U (409.013 nm)	2.009930	ppm	0.000050	0.00	4900.860000	Y 377.433
V (292.401 nm)	0.507223	ppm	0.001379	0.27	20615.500000	Y 377.433
Zn (206.200 nm)	0.493754	ppm	0.000800	0.16	1677.190000	Y 377.433
Zr (343.823 nm)	0.501587	ppm	0.000003	0.00	19680.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029406	10591.255002	0.006158	0.60
Y 377.433	1.038752	442307.778279	0.003827	0.37
Y_R 377.433	1.081160	43497.500000	0.003507	0.32
Y_R 488.368	1.088720	40382.800000	0.004959	0.46
Y_R2 488.368	1.081480	76771.660015	0.004643	0.43
Y_R4	1.084840	37190.400000	0.003881	0.36

Sample Name: 280-114110-A-4-Epds

Date: 9/21/2018 8:17:34 PM Rack:Tube: 2:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048334	ppm	0.000005	0.01	1123.220000	Y 377.433
Al (394.401 nm)	0.989881	ppm	0.004268	0.43	11102.000000	Y 377.433
Al H (396.152 nm)	1.073500	ppm	0.012403	1.16	1666.800000	Y_R 377.433
As (188.980 nm)	0.199458	ppm	0.003734	1.87	250.003000	Y 242.219
B (249.678 nm)	0.128307	ppm	0.000540	0.42	480.786000	Y 242.219
Ba (493.408 nm)	0.113415	ppm	0.001359	1.20	10899.700000	Y_R 488.368
Be (234.861 nm)	0.049276	ppm	0.000344	0.70	2660.350000	Y_R 488.368
Bi (223.061 nm)	0.002276	ppm	0.000824	36.20	62.024000	Y 377.433
Ca (315.887 nm)	77.627872	ppm	0.094027	0.12	51183.784982	Y_R 377.433
Cd (214.439 nm)	0.049319	ppm	0.000107	0.22	1240.120000	Y 377.433
Co (228.615 nm)	0.047692	ppm	0.000068	0.14	932.147000	Y 242.219
Cr (205.560 nm)	0.048774	ppm	0.000063	0.13	228.589000	Y 377.433
Cu (324.754 nm)	0.053710	ppm	0.000105	0.19	2402.170000	Y 377.433
Fe (238.204 nm)	0.973131	ppm	0.005166	0.53	1615.194758	Y_R 377.433
Fe H (259.940 nm)	0.908909 u	ppm	0.006768	0.74	901.802000	Y_R 377.433
K (766.491 nm)	22.180400	ppm	0.051494	0.23	24974.000000	Y_R2 488.368
Li (670.783 nm)	0.105293	ppm	0.003730	3.54	293.610000	Y_R2 488.368
Mg (279.078 nm)	35.007100	ppm	0.038711	0.11	74300.000000	Y 377.433
Mn (257.610 nm)	0.089825	ppm	0.000253	0.28	15924.500000	Y 377.433
Mo (202.032 nm)	0.049010	ppm	0.000260	0.53	530.301000	Y 377.433
Na (589.592 nm)	87.204600 o	ppm	0.059532	0.07	47138.300000	Y_R2 488.368
Na H (589.593 nm)	91.009290	ppm	0.543467	0.60	34399.396599	Y_R4
Ni (231.604 nm)	0.052015	ppm	0.000105	0.20	210.277000	Y 377.433
P (213.618 nm)	2.053320	ppm	0.012165	0.59	2240.650000	Y 242.219
Pb (220.353 nm)	0.096075	ppm	0.001014	1.06	210.365000	Y 242.219
S (181.972 nm)	5.633398	ppm	0.009151	0.16	2629.124941	Y 377.433
Sb (206.834 nm)	0.093985	ppm	0.000490	0.52	171.841000	Y 377.433
Se (196.026 nm)	0.198389	ppm	0.002974	1.50	270.030000	Y 242.219
Si (288.158 nm)	11.173800	ppm	0.014020	0.13	45571.900000	Y 377.433
Sn (189.925 nm)	0.092825	ppm	0.002689	2.90	108.987000	Y 377.433
Sr (421.552 nm)	0.187416	ppm	0.001890	1.01	21672.146303	Y_R 488.368
Th (288.505 nm)	0.177630	ppm	0.000250	0.14	178.766000	Y 377.433
Ti (336.122 nm)	0.048546	ppm	0.000097	0.20	4455.230000	Y 377.433
Tl (190.794 nm)	0.197736	ppm	0.000250	0.13	356.092000	Y 377.433
U (409.013 nm)	0.488727	ppm	0.006148	1.26	1381.050000	Y 377.433
V (292.401 nm)	0.049859	ppm	0.000434	0.87	1777.670000	Y 377.433
Zn (206.200 nm)	0.200899	ppm	0.001608	0.80	684.965000	Y 377.433
Zr (343.823 nm)	0.048126	ppm	0.000040	0.08	1992.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049119	10794.077148	0.003146	0.30
Y 377.433	1.056561	449891.224686	0.006486	0.61
Y_R 377.433	1.085430	43669.200000	0.002987	0.28
Y_R 488.368	1.087930	40353.400000	0.008575	0.79
Y_R2 488.368	1.079625	76640.013886	0.008031	0.74
Y_R4	1.088230	37306.600000	0.003335	0.31

Sample Name: 280-114110-A-4-H DU

Date: 9/21/2018 8:21:05 PM Rack:Tube: 2:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000402 u	ppm	0.000446	> 100.00	-98.019000	Y 377.433
Al (394.401 nm)	0.002499	ppm	0.000575	23.02	100.337000	Y 377.433
Al H (396.152 nm)	0.108301 u	ppm	0.003119	2.88	-20.582900	Y_R 377.433
As (188.980 nm)	-0.001518 u	ppm	0.000966	63.67	-12.213800	Y 242.219
B (249.678 nm)	0.026862	ppm	0.000371	1.38	100.337000	Y 242.219
Ba (493.408 nm)	0.015176	ppm	0.000658	4.33	1925.490000	Y_R 488.368
Be (234.861 nm)	0.000076	ppm	0.000030	39.19	0.188630	Y_R 488.368
Bi (223.061 nm)	-0.000415 u	ppm	0.001808	> 100.00	57.548000	Y 377.433
Ca (315.887 nm)	60.710958	ppm	0.040002	0.07	40028.281103	Y_R 377.433
Cd (214.439 nm)	0.001196	ppm	0.000048	4.03	17.281900	Y 377.433
Co (228.615 nm)	-0.000181 u	ppm	0.000012	6.36	-21.349300	Y 242.219
Cr (205.560 nm)	0.001362	ppm	0.000136	9.98	-3.568440	Y 377.433
Cu (324.754 nm)	0.003670	ppm	0.000325	8.87	268.235000	Y 377.433
Fe (238.204 nm)	-0.005804 u	ppm	0.003891	67.04	18.500416	Y_R 377.433
Fe H (259.940 nm)	-0.074004 u	ppm	0.000181	0.24	11.966400	Y_R 377.433
K (766.491 nm)	2.262610	ppm	0.049583	2.19	4124.150000	Y_R2 488.368
Li (670.783 nm)	0.009692	ppm	0.001447	14.93	-1025.250000	Y_R2 488.368
Mg (279.078 nm)	16.547500	ppm	0.000059	0.00	35127.200000	Y 377.433
Mn (257.610 nm)	0.069760	ppm	0.000053	0.08	12379.600000	Y 377.433
Mo (202.032 nm)	0.000340	ppm	0.000300	88.09	23.953200	Y 377.433
Na (589.592 nm)	74.523700 o	ppm	0.091122	0.12	40270.900000	Y_R2 488.368
Na H (589.593 nm)	77.309288	ppm	0.121805	0.16	29330.972589	Y_R4
Ni (231.604 nm)	0.006496	ppm	0.000358	5.51	41.131400	Y 377.433
P (213.618 nm)	0.000064 u	ppm	0.001373	> 100.00	-1.294300	Y 242.219
Pb (220.353 nm)	-0.001162 u	ppm	0.002321	> 100.00	6.937400	Y 242.219
S (181.972 nm)	5.923662	ppm	0.008872	0.15	2762.756911	Y 377.433
Sb (206.834 nm)	-0.006906 u	ppm	0.001289	18.67	8.694210	Y 377.433
Se (196.026 nm)	-0.004700 u	ppm	0.003041	64.70	3.053190	Y 242.219
Si (288.158 nm)	6.350670	ppm	0.007103	0.11	26061.100000	Y 377.433
Sn (189.925 nm)	0.000946	ppm	0.000421	44.48	0.624467	Y 377.433
Sr (421.552 nm)	0.141483	ppm	0.001610	1.14	16398.406278	Y_R 488.368
Th (288.505 nm)	-0.022625 u	ppm	0.007335	32.42	-12.729700	Y 377.433
Ti (336.122 nm)	0.000178	ppm	0.000125	70.50	47.376100	Y 377.433
Tl (190.794 nm)	-0.000248 u	ppm	0.002771	> 100.00	1.899850	Y 377.433
U (409.013 nm)	-0.008010 u	ppm	0.002068	25.82	222.705000	Y 377.433
V (292.401 nm)	0.001269	ppm	0.000036	2.86	-210.710000	Y 377.433
Zn (206.200 nm)	0.012232	ppm	0.000211	1.73	45.723100	Y 377.433
Zr (343.823 nm)	0.000225	ppm	0.000173	77.09	122.798000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.058871	10894.409201	0.000517	0.05
Y 377.433	1.062795	452545.582669	0.002070	0.19
Y_R 377.433	1.086770	43723.000000	0.006349	0.58
Y_R 488.368	1.102620	40898.300000	0.024391	2.21
Y_R2 488.368	1.081514	76774.112464	0.005877	0.54
Y_R4	1.082400	37106.700000	0.007520	0.69

Sample Name: CCVH-5320321

Date: 9/21/2018 8:24:34 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000756	ppm	0.000238	31.49	-165.503000	Y 377.433
Al (394.401 nm)	50.324800 o	ppm	0.024345	0.05	559360.000000	Y 377.433
Al H (396.152 nm)	49.464100	ppm	0.060792	0.12	85437.700000	Y_R 377.433
As (188.980 nm)	0.001064 u	ppm	0.004795	> 100.00	-10.788700	Y 242.219
B (249.678 nm)	0.005013	ppm	0.000213	4.26	3.177230	Y 242.219
Ba (493.408 nm)	0.000605	ppm	0.000178	29.47	630.965000	Y_R 488.368
Be (234.861 nm)	-0.000700 u	ppm	0.000134	19.16	-333.595000	Y_R 488.368
Bi (223.061 nm)	0.979774	ppm	0.000119	0.01	1637.430000	Y 377.433
Ca (315.887 nm)	-0.002493 u	ppm	0.012272	> 100.00	-3.578570	Y_R 377.433
Cd (214.439 nm)	-0.000438 u	ppm	0.000100	22.88	-6.505910	Y 377.433
Co (228.615 nm)	0.003311	ppm	0.000029	0.89	48.066600	Y 242.219
Cr (205.560 nm)	-0.000212 u	ppm	0.000054	25.52	-12.483500	Y 377.433
Cu (324.754 nm)	-0.000520 u	ppm	0.000368	70.72	525.559000	Y 377.433
Fe (238.204 nm)	49.837866 o	ppm	0.012205	0.02	81316.144382	Y_R 377.433
Fe H (259.940 nm)	50.027300	ppm	0.064042	0.13	45368.900000	Y_R 377.433
K (766.491 nm)	0.122152	ppm	0.070924	58.06	1883.530000	Y_R2 488.368
Li (670.783 nm)	0.005783	ppm	0.003017	52.16	-1079.170000	Y_R2 488.368
Mg (279.078 nm)	-0.009847 u	ppm	0.002449	24.87	-157.447000	Y 377.433
Mn (257.610 nm)	0.000277	ppm	0.000038	13.79	103.671000	Y 377.433
Mo (202.032 nm)	-0.000318 u	ppm	0.000098	30.88	17.105000	Y 377.433
Na (589.592 nm)	241.253000 o	ppm	1.154160	0.48	130585.000000	Y_R2 488.368
Na H (589.593 nm)	251.019696	ppm	0.838365	0.33	93722.010968	Y_R4
Ni (231.604 nm)	-0.000714 u	ppm	0.001424	> 100.00	20.728100	Y 377.433
P (213.618 nm)	-0.017815 u	ppm	0.003225	18.10	-21.782900	Y 242.219
Pb (220.353 nm)	0.000588 u	ppm	0.004412	> 100.00	21.192700	Y 242.219
S (181.972 nm)	5.032702	ppm	0.002675	0.05	2342.747124	Y 377.433
Sb (206.834 nm)	-0.001398 u	ppm	0.003147	> 100.00	21.629700	Y 377.433
Se (196.026 nm)	-0.002161 u	ppm	0.000043	1.97	-4.902630	Y 242.219
Si (288.158 nm)	0.009822	ppm	0.001602	16.31	411.757000	Y 377.433
Sn (189.925 nm)	-0.000348 u	ppm	0.000150	43.04	-0.726128	Y 377.433
Sr (421.552 nm)	0.000056	ppm	0.000056	99.63	166.800107	Y_R 488.368
Th (288.505 nm)	4.915820	ppm	0.009881	0.20	4776.220000	Y 377.433
Ti (336.122 nm)	0.001017	ppm	0.000079	7.76	-28.280000	Y 377.433
Tl (190.794 nm)	-0.004303 u	ppm	0.001226	28.50	-6.061300	Y 377.433
U (409.013 nm)	9.770830	ppm	0.016521	0.17	23168.300000	Y 377.433
V (292.401 nm)	-0.003530 u	ppm	0.000018	0.51	-429.950000	Y 377.433
Zn (206.200 nm)	0.000637	ppm	0.000465	73.04	7.282910	Y 377.433
Zr (343.823 nm)	-0.007180 u	ppm	0.000230	3.20	-117.414000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.035654	10655.532578	0.004193	0.40
Y 377.433	1.031864	439374.943614	0.004604	0.45
Y_R 377.433	1.065010	42847.600000	0.005419	0.51
Y_R 488.368	1.064440	39481.900000	0.011952	1.12
Y_R2 488.368	1.073236	76186.433823	0.000853	0.08
Y_R4	1.101170	37749.900000	0.001277	0.12

Sample Name: CCV-5305988

Date: 9/21/2018 8:28:14 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497651	ppm	0.001920	0.39	12429.500000	Y 377.433
Al (394.401 nm)	0.495801	ppm	0.000385	0.08	5660.300000	Y 377.433
Al H (396.152 nm)	0.577542 u	ppm	0.000898	0.16	954.459000	Y_R 377.433
As (188.980 nm)	0.984742	ppm	0.004704	0.48	1274.700000	Y 242.219
B (249.678 nm)	0.496211	ppm	0.002782	0.56	1861.140000	Y 242.219
Ba (493.408 nm)	0.504796	ppm	0.000594	0.12	46650.800000	Y_R 488.368
Be (234.861 nm)	0.495054	ppm	0.003536	0.71	26805.600000	Y_R 488.368
Bi (223.061 nm)	-0.012862 u	ppm	0.005364	41.71	37.959600	Y 377.433
Ca (315.887 nm)	4.963786	ppm	0.006052	0.12	3267.283600	Y_R 377.433
Cd (214.439 nm)	0.493748	ppm	0.000876	0.18	12530.800000	Y 377.433
Co (228.615 nm)	0.494995	ppm	0.004727	0.95	9842.640000	Y 242.219
Cr (205.560 nm)	0.482292	ppm	0.001791	0.37	2351.510000	Y 377.433
Cu (324.754 nm)	0.499510	ppm	0.001433	0.29	21456.900000	Y 377.433
Fe (238.204 nm)	2.497810	ppm	0.002802	0.11	4102.025425	Y_R 377.433
Fe H (259.940 nm)	2.460830 u	ppm	0.002827	0.11	2306.760000	Y_R 377.433
K (766.491 nm)	49.055200	ppm	0.246791	0.50	53106.600000	Y_R2 488.368
Li (670.783 nm)	0.978530	ppm	0.004849	0.50	12340.200000	Y_R2 488.368
Mg (279.078 nm)	19.611700	ppm	0.030600	0.16	41628.700000	Y 377.433
Mn (257.610 nm)	0.492768	ppm	0.001248	0.25	87114.400000	Y 377.433
Mo (202.032 nm)	0.493736	ppm	0.000972	0.20	5157.140000	Y 377.433
Na (589.592 nm)	25.038100	ppm	0.007369	0.03	13457.500000	Y_R2 488.368
Na H (589.593 nm)	26.717198 u	ppm	0.001307	0.00	10528.031198	Y_R4
Ni (231.604 nm)	0.493394	ppm	0.001453	0.29	1844.870000	Y 377.433
P (213.618 nm)	0.989343	ppm	0.000215	0.02	1059.040000	Y 242.219
Pb (220.353 nm)	0.993682	ppm	0.004689	0.47	2081.310000	Y 242.219
S (181.972 nm)	0.006232	ppm	0.006258	> 100.00	5.784348	Y 377.433
Sb (206.834 nm)	1.014760	ppm	0.002242	0.22	1660.100000	Y 377.433
Se (196.026 nm)	1.002690	ppm	0.001624	0.16	1328.290000	Y 242.219
Si (288.158 nm)	4.982200	ppm	0.004487	0.09	20525.400000	Y 377.433
Sn (189.925 nm)	0.997220	ppm	0.004278	0.43	1175.610000	Y 377.433
Sr (421.552 nm)	0.500451	ppm	0.000651	0.13	57612.240787	Y_R 488.368
Th (288.505 nm)	-0.014642 u	ppm	0.002459	16.80	-34.157700	Y 377.433
Ti (336.122 nm)	0.496242	ppm	0.000857	0.17	44717.400000	Y 377.433
Tl (190.794 nm)	1.003900	ppm	0.005156	0.51	1797.200000	Y 377.433
U (409.013 nm)	-0.004993 u	ppm	0.003018	60.45	191.176000	Y 377.433
V (292.401 nm)	0.492471	ppm	0.000767	0.16	19940.700000	Y 377.433
Zn (206.200 nm)	0.486620	ppm	0.001735	0.36	1653.040000	Y 377.433
Zr (343.823 nm)	0.492697	ppm	0.000506	0.10	19334.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064035	10947.538185	0.002482	0.23
Y 377.433	1.065477	453687.453143	0.004895	0.46
Y_R 377.433	1.092170	43940.300000	0.006881	0.63
Y_R 488.368	1.091540	40487.200000	0.009115	0.84
Y_R2 488.368	1.110805	78853.427875	0.019194	1.73
Y_R4	1.115010	38224.500000	0.008582	0.77

Sample Name: CCB

Date: 9/21/2018 8:31:47 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001479 u	ppm	0.000177	11.97	-125.276000	Y 377.433
Al (394.401 nm)	-0.012801 u	ppm	0.001233	9.63	-101.162000	Y 377.433
Al H (396.152 nm)	0.141395 Zu	ppm	0.009208	6.51	1.248770 Z	Y_R 377.433
As (188.980 nm)	0.003619	ppm	0.000565	15.61	-5.511320	Y 242.219
B (249.678 nm)	0.001343	ppm	0.001001	74.53	4.561380	Y 242.219
Ba (493.408 nm)	-0.000347 u	ppm	0.000212	61.13	507.526000	Y_R 488.368
Be (234.861 nm)	0.000025 u	ppm	0.000091	> 100.00	-2.541480	Y_R 488.368
Bi (223.061 nm)	-0.010696 u	ppm	0.003705	34.64	41.038900	Y 377.433
Ca (315.887 nm)	-0.013762 u	ppm	0.015288	> 100.00	-15.077062	Y_R 377.433
Cd (214.439 nm)	0.000013 u	ppm	0.000036	> 100.00	-12.774800	Y 377.433
Co (228.615 nm)	-0.000104 u	ppm	0.000170	> 100.00	-19.822500	Y 242.219
Cr (205.560 nm)	0.000014 u	ppm	0.000047	> 100.00	-10.160800	Y 377.433
Cu (324.754 nm)	0.000283	ppm	0.000182	64.34	154.843000	Y 377.433
Fe (238.204 nm)	-0.012120 u	ppm	0.002090	17.24	8.197750	Y_R 377.433
Fe H (259.940 nm)	-0.078212 u	ppm	0.000445	0.57	8.157420	Y_R 377.433
K (766.491 nm)	-0.064087 u	ppm	0.026503	41.36	1688.570000	Y_R2 488.368
Li (670.783 nm)	0.005574	ppm	0.002143	38.45	-1082.060000	Y_R2 488.368
Mg (279.078 nm)	0.005891	ppm	0.001962	33.31	19.191300	Y 377.433
Mn (257.610 nm)	-0.000073 u	ppm	0.000044	59.79	41.870700	Y 377.433
Mo (202.032 nm)	-0.000043 u	ppm	0.000392	> 100.00	19.963100	Y 377.433
Na (589.592 nm)	0.142409	ppm	0.031086	21.83	-19.628000	Y_R2 488.368
Na H (589.593 nm)	1.058998 u	ppm	0.015511	1.46	1068.587297	Y_R4
Ni (231.604 nm)	-0.001025 u	ppm	0.000864	84.29	12.374200	Y 377.433
P (213.618 nm)	-0.004087 u	ppm	0.002611	63.89	-5.621890	Y 242.219
Pb (220.353 nm)	-0.000215 u	ppm	0.001074	> 100.00	8.954000	Y 242.219
S (181.972 nm)	0.009611	ppm	0.006200	64.52	5.408406	Y 377.433
Sb (206.834 nm)	-0.001709 u	ppm	0.001463	85.59	17.092300	Y 377.433
Se (196.026 nm)	-0.000351 u	ppm	0.000091	26.06	8.693290	Y 242.219
Si (288.158 nm)	-0.002498 u	ppm	0.001023	40.96	361.111000	Y 377.433
Sn (189.925 nm)	0.000432	ppm	0.000482	> 100.00	0.018280	Y 377.433
Sr (421.552 nm)	-0.000338 u	ppm	0.000331	97.66	115.732468	Y_R 488.368
Th (288.505 nm)	-0.002999 u	ppm	0.001055	35.18	5.631010	Y 377.433
Ti (336.122 nm)	0.000046	ppm	0.000041	89.03	-107.068000	Y 377.433
Tl (190.794 nm)	0.000358 u	ppm	0.001011	> 100.00	2.986190	Y 377.433
U (409.013 nm)	-0.003824 u	ppm	0.002530	66.17	238.365000	Y 377.433
V (292.401 nm)	0.000274	ppm	0.000238	86.70	-251.882000	Y 377.433
Zn (206.200 nm)	-0.000539 u	ppm	0.000229	42.55	2.454450	Y 377.433
Zr (343.823 nm)	0.000061 u	ppm	0.000307	> 100.00	116.423000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065507	10962.689754	0.002161	0.20
Y 377.433	1.067649	454612.249721	0.002942	0.28
Y_R 377.433	1.077080	43333.300000	0.001399	0.13
Y_R 488.368	1.078010	39985.600000	0.003673	0.34
Y_R2 488.368	1.081906	76801.903269	0.009080	0.84
Y_R4	1.083050	37129.000000	0.006130	0.57

Sample Name: CCVL-5320254

Date: 9/21/2018 8:34:59 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008751	ppm	0.000582	6.66	132.592000	Y 377.433
Al (394.401 nm)	0.086981	ppm	0.000871	1.00	1015.200000	Y 377.433
Al H (396.152 nm)	0.243785 u	ppm	0.001593	0.65	183.254000	Y_R 377.433
As (188.980 nm)	0.016661	ppm	0.001682	10.09	11.503600	Y 242.219
B (249.678 nm)	0.097776	ppm	0.000235	0.24	366.465000	Y 242.219
Ba (493.408 nm)	0.009696	ppm	0.000125	1.29	1424.970000	Y_R 488.368
Be (234.861 nm)	0.000950	ppm	0.000026	2.70	46.991900	Y_R 488.368
Bi (223.061 nm)	0.087197	ppm	0.001914	2.19	198.210000	Y 377.433
Ca (315.887 nm)	0.194313	ppm	0.007301	3.76	122.141976	Y_R 377.433
Cd (214.439 nm)	0.005096	ppm	0.000035	0.68	116.374000	Y 377.433
Co (228.615 nm)	0.010565	ppm	0.000221	2.09	192.679000	Y 242.219
Cr (205.560 nm)	0.009983	ppm	0.000199	1.99	38.588300	Y 377.433
Cu (324.754 nm)	0.015704	ppm	0.000102	0.65	811.379000	Y 377.433
Fe (238.204 nm)	0.086205	ppm	0.002419	2.81	168.571359	Y_R 377.433
Fe H (259.940 nm)	0.023047 u	ppm	0.002518	10.92	99.827000	Y_R 377.433
K (766.491 nm)	2.869290	ppm	0.011166	0.39	4759.220000	Y_R2 488.368
Li (670.783 nm)	0.025352	ppm	0.004567	18.01	-809.214000	Y_R2 488.368
Mg (279.078 nm)	0.206760	ppm	0.000784	0.38	444.852000	Y 377.433
Mn (257.610 nm)	0.010345	ppm	0.000045	0.44	1882.440000	Y 377.433
Mo (202.032 nm)	0.019262	ppm	0.000448	2.33	220.811000	Y 377.433
Na (589.592 nm)	1.230700	ppm	0.002865	0.23	569.719000	Y_R2 488.368
Na H (589.593 nm)	1.563543 u	ppm	0.041136	2.63	1254.654823	Y_R4
Ni (231.604 nm)	0.039732	ppm	0.000822	2.07	163.359000	Y 377.433
P (213.618 nm)	2.892910	ppm	0.026317	0.91	3160.000000	Y 242.219
Pb (220.353 nm)	0.010393	ppm	0.001057	10.17	31.121200	Y 242.219
S (181.972 nm)	0.104374	ppm	0.000280	0.27	49.552017	Y 377.433
Sb (206.834 nm)	0.014803	ppm	0.002331	15.75	43.664200	Y 377.433
Se (196.026 nm)	0.015919	ppm	0.002941	18.47	30.088500	Y 242.219
Si (288.158 nm)	0.486159	ppm	0.001452	0.30	2337.840000	Y 377.433
Sn (189.925 nm)	0.098490	ppm	0.000514	0.52	115.666000	Y 377.433
Sr (421.552 nm)	0.009792	ppm	0.000036	0.37	1278.813607	Y_R 488.368
Th (288.505 nm)	0.007226 Q	ppm	0.008526	> 100.00	15.225700 Q	Y 377.433
Ti (336.122 nm)	0.010129	ppm	0.000050	0.49	804.102000	Y 377.433
Tl (190.794 nm)	0.016522	ppm	0.002306	13.96	31.841200	Y 377.433
U (409.013 nm)	0.056265	ppm	0.009877	17.56	377.875000	Y 377.433
V (292.401 nm)	0.010428	ppm	0.000084	0.81	163.005000	Y 377.433
Zn (206.200 nm)	0.019438	ppm	0.000092	0.47	70.140100	Y 377.433
Zr (343.823 nm)	0.014560	ppm	0.000030	0.20	682.055000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.084706	11160.216344	0.003043	0.28
Y 377.433	1.080600	460127.086392	0.000359	0.03
Y_R 377.433	1.087200	43740.300000	0.001891	0.17
Y_R 488.368	1.094290	40589.200000	0.009490	0.87
Y_R2 488.368	1.106025	78514.057502	0.004127	0.37
Y_R4	1.096280	37582.500000	0.006610	0.60

Sample Name: MB 280-429597/1-D

Date: 9/21/2018 8:38:27 PM Rack:Tube: 2:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001143 u	ppm	0.000239	20.88	-116.996000	Y 377.433
Al (394.401 nm)	-0.009893 u	ppm	0.000653	6.60	-66.530600	Y 377.433
Al H (396.152 nm)	0.141649 u	ppm	0.001112	0.79	1.747740	Y_R 377.433
As (188.980 nm)	0.000015 u	ppm	0.000878	> 100.00	-10.213300	Y 242.219
B (249.678 nm)	0.001655	ppm	0.000175	10.57	5.727290	Y 242.219
Ba (493.408 nm)	-0.000190 u	ppm	0.000374	> 100.00	521.921000	Y_R 488.368
Be (234.861 nm)	-0.000061 u	ppm	0.000023	38.20	-7.212950	Y_R 488.368
Bi (223.061 nm)	-0.009348 u	ppm	0.001434	15.34	43.203700	Y 377.433
Ca (315.887 nm)	0.001460 u	ppm	0.007994	> 100.00	-5.038628	Y_R 377.433
Cd (214.439 nm)	-0.000037 u	ppm	0.000221	> 100.00	-14.039700	Y 377.433
Co (228.615 nm)	0.000504	ppm	0.000048	9.47	-7.733290	Y 242.219
Cr (205.560 nm)	-0.000221 u	ppm	0.000032	14.40	-11.316700	Y 377.433
Cu (324.754 nm)	0.000291	ppm	0.000301	> 100.00	153.836000	Y 377.433
Fe (238.204 nm)	-0.005034 u	ppm	0.004330	86.02	19.755776	Y_R 377.433
Fe H (259.940 nm)	-0.074711 u	ppm	0.003405	4.56	11.326500	Y_R 377.433
K (766.491 nm)	-0.156755 u	ppm	0.139765	89.16	1591.570000	Y_R2 488.368
Li (670.783 nm)	0.006755	ppm	0.006135	90.82	-1065.760000	Y_R2 488.368
Mg (279.078 nm)	0.001954 u	ppm	0.005124	> 100.00	10.738000	Y 377.433
Mn (257.610 nm)	0.000115	ppm	0.000008	6.68	75.160000	Y 377.433
Mo (202.032 nm)	-0.000276 u	ppm	0.000316	> 100.00	17.543600	Y 377.433
Na (589.592 nm)	0.090166	ppm	0.015446	17.13	-47.928800	Y_R2 488.368
Na H (589.593 nm)	0.255420 u	ppm	0.029608	11.59	770.712471	Y_R4
Ni (231.604 nm)	0.000965	ppm	0.000530	54.92	19.747700	Y 377.433
P (213.618 nm)	-0.001982 u	ppm	0.001210	61.04	-3.323970	Y 242.219
Pb (220.353 nm)	-0.001249 u	ppm	0.000958	76.67	6.808840	Y 242.219
S (181.972 nm)	0.011796	ppm	0.003854	32.67	6.426179	Y 377.433
Sb (206.834 nm)	-0.003836 u	ppm	0.000421	10.99	13.655900	Y 377.433
Se (196.026 nm)	-0.002178 u	ppm	0.000375	17.22	6.288150	Y 242.219
Si (288.158 nm)	-0.001702 u	ppm	0.002806	> 100.00	364.332000	Y 377.433
Sn (189.925 nm)	-0.000832 u	ppm	0.001927	> 100.00	-1.473400	Y 377.433
Sr (421.552 nm)	-0.000230 u	ppm	0.000109	47.17	128.139762	Y_R 488.368
Th (288.505 nm)	-0.009719 u	ppm	0.008400	86.43	-0.838235	Y 377.433
Ti (336.122 nm)	0.000336	ppm	0.000154	45.91	-80.787800	Y 377.433
Tl (190.794 nm)	0.000771	ppm	0.000823	> 100.00	3.726910	Y 377.433
U (409.013 nm)	-0.001600 u	ppm	0.007085	> 100.00	243.606000	Y 377.433
V (292.401 nm)	0.000620	ppm	0.000318	51.36	-238.375000	Y 377.433
Zn (206.200 nm)	0.001791	ppm	0.000182	10.18	10.348700	Y 377.433
Zr (343.823 nm)	-0.000073 u	ppm	0.000025	33.91	111.183000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090798	11222.901278	0.000034	0.00
Y 377.433	1.086609	462685.927560	0.000892	0.08
Y_R 377.433	1.096260	44104.700000	0.001253	0.11
Y_R 488.368	1.103430	40928.200000	0.001166	0.11
Y_R2 488.368	1.120740	79558.662929	0.000420	0.04
Y_R4	1.091140	37406.400000	0.008188	0.75

Sample Name: LCS 280-429597/2-D

Date: 9/21/2018 8:41:38 PM Rack:Tube: 2:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051298	ppm	0.000216	0.42	1159.120000	Y 377.433
Al (394.401 nm)	1.992700	ppm	0.007278	0.37	22448.700000	Y 377.433
Al H (396.152 nm)	1.949550	ppm	0.001901	0.10	3519.190000	Y_R 377.433
As (188.980 nm)	0.991482	ppm	0.007562	0.76	1283.510000	Y 242.219
B (249.678 nm)	1.027520	ppm	0.001311	0.13	3855.730000	Y 242.219
Ba (493.408 nm)	1.998270	ppm	0.002276	0.11	183069.000000	Y_R 488.368
Be (234.861 nm)	0.049359	ppm	0.000321	0.65	2664.800000	Y_R 488.368
Bi (223.061 nm)	1.891970	ppm	0.004585	0.24	3095.720000	Y 377.433
Ca (315.887 nm)	48.856575	ppm	0.023939	0.05	32211.379687	Y_R 377.433
Cd (214.439 nm)	0.097786	ppm	0.000360	0.37	2471.370000	Y 377.433
Co (228.615 nm)	0.476696	ppm	0.002500	0.52	9497.330000	Y 242.219
Cr (205.560 nm)	0.194383	ppm	0.001783	0.92	938.580000	Y 377.433
Cu (324.754 nm)	0.244266	ppm	0.001244	0.51	10599.200000	Y 377.433
Fe (238.204 nm)	0.979821	ppm	0.008505	0.87	1626.106967	Y_R 377.433
Fe H (259.940 nm)	0.914466 u	ppm	0.000833	0.09	906.833000	Y_R 377.433
K (766.491 nm)	49.861000	ppm	0.248605	0.50	53950.100000	Y_R2 488.368
Li (670.783 nm)	0.983634	ppm	0.008643	0.88	12410.600000	Y_R2 488.368
Mg (279.078 nm)	48.733700	ppm	0.197302	0.40	103418.000000	Y 377.433
Mn (257.610 nm)	0.489412	ppm	0.002657	0.54	86521.600000	Y 377.433
Mo (202.032 nm)	0.998376	ppm	0.005217	0.52	10407.300000	Y 377.433
Na (589.592 nm)	47.882700	ppm	0.114297	0.24	25806.900000	Y_R2 488.368
Na H (589.593 nm)	50.642089	ppm	0.170508	0.34	19242.230342	Y_R4
Ni (231.604 nm)	0.477199	ppm	0.003254	0.68	1786.140000	Y 377.433
P (213.618 nm)	10.177900	ppm	0.003042	0.03	11112.400000	Y 242.219
Pb (220.353 nm)	0.494384	ppm	0.000423	0.09	1041.240000	Y 242.219
S (181.972 nm)	1.961644	ppm	0.024749	1.26	919.351850	Y 377.433
Sb (206.834 nm)	0.513126	ppm	0.005410	1.05	839.687000	Y 377.433
Se (196.026 nm)	2.000870	ppm	0.002375	0.12	2641.820000	Y 242.219
Si (288.158 nm)	10.036700	ppm	0.095601	0.95	40972.000000	Y 377.433
Sn (189.925 nm)	1.985710	ppm	0.013122	0.66	2341.410000	Y 377.433
Sr (421.552 nm)	0.989180	ppm	0.000716	0.07	113723.715073	Y_R 488.368
Th (288.505 nm)	0.952549	ppm	0.003348	0.35	906.495000	Y 377.433
Ti (336.122 nm)	0.989974	ppm	0.006001	0.61	89408.900000	Y 377.433
Tl (190.794 nm)	1.994520	ppm	0.009785	0.49	3566.480000	Y 377.433
U (409.013 nm)	1.955450	ppm	0.001205	0.06	4779.820000	Y 377.433
V (292.401 nm)	0.496951	ppm	0.002183	0.44	20191.500000	Y 377.433
Zn (206.200 nm)	0.480433	ppm	0.003892	0.81	1632.060000	Y 377.433
Zr (343.823 nm)	0.491483	ppm	0.002237	0.46	19286.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054590	10850.361762	0.006199	0.59
Y 377.433	1.057327	450217.306084	0.001560	0.15
Y_R 377.433	1.086440	43709.900000	0.001336	0.12
Y_R 488.368	1.091540	40487.100000	0.000627	0.06
Y_R2 488.368	1.086242	77109.748771	0.009031	0.83
Y_R4	1.089270	37342.100000	0.005283	0.49

Sample Name: 280-114225-C-1-J

Date: 9/21/2018 8:45:11 PM Rack:Tube: 2:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000197	ppm	0.000018	9.26	-83.155400	Y 377.433
Al (394.401 nm)	0.003388	ppm	0.002620	77.33	175.843000	Y 377.433
Al H (396.152 nm)	0.067571 u	ppm	0.014868	22.00	-0.461551	Y_R 377.433
As (188.980 nm)	0.002431	ppm	0.000208	8.57	-7.065480	Y 242.219
B (249.678 nm)	0.080582	ppm	0.001002	1.24	301.903000	Y 242.219
Ba (493.408 nm)	0.070986	ppm	0.000500	0.70	7023.480000	Y_R 488.368
Be (234.861 nm)	0.000082	ppm	0.000044	53.16	-0.567200	Y_R 488.368
Bi (223.061 nm)	-0.002323 u	ppm	0.001488	64.04	54.510600	Y 377.433
Ca (315.887 nm)	60.820307	ppm	0.049047	0.08	40100.387902	Y_R 377.433
Cd (214.439 nm)	0.000335	ppm	0.000060	17.96	-4.523740	Y 377.433
Co (228.615 nm)	0.000017 u	ppm	0.000175	> 100.00	-17.420100	Y 242.219
Cr (205.560 nm)	0.000394	ppm	0.000403	> 100.00	-8.343380	Y 377.433
Cu (324.754 nm)	0.001669	ppm	0.000450	26.97	182.148000	Y 377.433
Fe (238.204 nm)	0.180970	ppm	0.004010	2.22	323.138973	Y_R 377.433
Fe H (259.940 nm)	0.117085 u	ppm	0.001205	1.03	184.960000	Y_R 377.433
K (766.491 nm)	3.447100	ppm	0.036423	1.06	5364.070000	Y_R2 488.368
Li (670.783 nm)	0.019412	ppm	0.004150	21.38	-891.156000	Y_R2 488.368
Mg (279.078 nm)	12.741000	ppm	0.003485	0.03	27048.000000	Y 377.433
Mn (257.610 nm)	0.005658	ppm	0.000016	0.28	1054.490000	Y 377.433
Mo (202.032 nm)	0.012820	ppm	0.000288	2.25	153.787000	Y 377.433
Na (589.592 nm)	57.456200 o	ppm	0.144857	0.25	31024.900000	Y_R2 488.368
Na H (589.593 nm)	58.846626	ppm	0.171130	0.29	22481.835325	Y_R4
Ni (231.604 nm)	-0.000322 u	ppm	0.000304	94.37	15.907300	Y 377.433
P (213.618 nm)	0.128123	ppm	0.001883	1.47	138.779000	Y 242.219
Pb (220.353 nm)	0.000763 u	ppm	0.002418	> 100.00	10.956600	Y 242.219
S (181.972 nm)	31.977519	ppm	0.032617	0.10	14886.974095	Y 377.433
Sb (206.834 nm)	-0.007011 u	ppm	0.001962	27.98	8.454050	Y 377.433
Se (196.026 nm)	0.001433 u	ppm	0.002104	> 100.00	11.005200	Y 242.219
Si (288.158 nm)	2.823750	ppm	0.006402	0.23	11793.900000	Y 377.433
Sn (189.925 nm)	0.000777	ppm	0.000218	28.11	0.425662	Y 377.433
Sr (421.552 nm)	0.415969	ppm	0.000509	0.12	47912.519978	Y_R 488.368
Th (288.505 nm)	-0.021133 u	ppm	0.001049	4.96	-11.912200	Y 377.433
Ti (336.122 nm)	0.000448	ppm	0.000071	15.83	71.997000	Y 377.433
Tl (190.794 nm)	0.002041	ppm	0.000506	24.77	5.942160	Y 377.433
U (409.013 nm)	0.006460	ppm	0.008531	> 100.00	256.684000	Y 377.433
V (292.401 nm)	0.002195	ppm	0.000054	2.44	-173.756000	Y 377.433
Zn (206.200 nm)	0.014778	ppm	0.000114	0.77	54.352400	Y 377.433
Zr (343.823 nm)	0.000310	ppm	0.000076	24.53	126.299000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069184	11000.518797	0.001042	0.10
Y 377.433	1.068340	454906.871469	0.000988	0.09
Y_R 377.433	1.098060	44177.500000	0.001994	0.18
Y_R 488.368	1.098680	40752.000000	0.000982	0.09
Y_R2 488.368	1.097200	77887.588917	0.018992	1.73
Y_R4	1.094560	37523.600000	0.008739	0.80

Sample Name: 280-114225-C-1-J SD@5

Date: 9/21/2018 8:48:40 PM Rack:Tube: 2:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000811 u	ppm	0.000108	13.28	-108.489000	Y 377.433
Al (394.401 nm)	-0.007021 u	ppm	0.001785	25.43	-16.527500	Y 377.433
Al H (396.152 nm)	0.121564 u	ppm	0.008785	7.23	-7.957790	Y_R 377.433
As (188.980 nm)	0.000467 u	ppm	0.001426	> 100.00	-9.624940	Y 242.219
B (249.678 nm)	0.016172	ppm	0.000210	1.30	60.203000	Y 242.219
Ba (493.408 nm)	0.013829	ppm	0.000006	0.04	1802.420000	Y_R 488.368
Be (234.861 nm)	0.000021 u	ppm	0.000080	> 100.00	-2.993100	Y_R 488.368
Bi (223.061 nm)	-0.007474 u	ppm	0.001502	20.09	46.218500	Y 377.433
Ca (315.887 nm)	12.305533	ppm	0.008277	0.07	8108.565334	Y_R 377.433
Cd (214.439 nm)	0.000213	ppm	0.000078	36.42	-7.684070	Y 377.433
Co (228.615 nm)	0.000103	ppm	0.000041	40.01	-15.720800	Y 242.219
Cr (205.560 nm)	-0.000055 u	ppm	0.000063	> 100.00	-10.511300	Y 377.433
Cu (324.754 nm)	0.000559	ppm	0.000359	64.28	159.269000	Y 377.433
Fe (238.204 nm)	0.031300	ppm	0.000762	2.43	79.018810	Y_R 377.433
Fe H (259.940 nm)	-0.034460 u	ppm	0.000397	1.15	47.765900	Y_R 377.433
K (766.491 nm)	0.684976	ppm	0.021732	3.17	2472.690000	Y_R2 488.368
Li (670.783 nm)	0.009476	ppm	0.001729	18.25	-1028.230000	Y_R2 488.368
Mg (279.078 nm)	2.589400	ppm	0.011239	0.43	5502.440000	Y 377.433
Mn (257.610 nm)	0.001219	ppm	0.000017	1.42	270.082000	Y 377.433
Mo (202.032 nm)	0.002374	ppm	0.000094	3.97	45.111500	Y 377.433
Na (589.592 nm)	11.686200	ppm	0.053213	0.46	6233.170000	Y_R2 488.368
Na H (589.593 nm)	12.020556 u	ppm	0.023576	0.20	5130.352284	Y_R4
Ni (231.604 nm)	-0.000850 u	ppm	0.000171	20.12	13.211700	Y 377.433
P (213.618 nm)	0.025321	ppm	0.000013	0.05	26.491600	Y 242.219
Pb (220.353 nm)	-0.001067 u	ppm	0.001336	> 100.00	7.161250	Y 242.219
S (181.972 nm)	6.290391	ppm	0.057221	0.91	2929.232993	Y 377.433
Sb (206.834 nm)	-0.002697 u	ppm	0.000377	13.99	15.484900	Y 377.433
Se (196.026 nm)	0.000581	ppm	0.000020	3.46	9.910860	Y 242.219
Si (288.158 nm)	0.545471	ppm	0.004154	0.76	2577.770000	Y 377.433
Sn (189.925 nm)	0.000369 u	ppm	0.000574	> 100.00	-0.055871	Y 377.433
Sr (421.552 nm)	0.082510	ppm	0.000495	0.60	9627.643664	Y_R 488.368
Th (288.505 nm)	-0.018579 u	ppm	0.000622	3.35	-9.434670	Y 377.433
Ti (336.122 nm)	0.000213	ppm	0.000159	74.61	-63.319800	Y 377.433
Tl (190.794 nm)	-0.001207 u	ppm	0.000668	55.36	0.173065	Y 377.433
U (409.013 nm)	0.002265 u	ppm	0.004171	> 100.00	251.469000	Y 377.433
V (292.401 nm)	0.000845	ppm	0.000175	20.76	-228.967000	Y 377.433
Zn (206.200 nm)	0.003845	ppm	0.000274	7.13	17.309700	Y 377.433
Zr (343.823 nm)	0.000050 u	ppm	0.000243	> 100.00	116.025000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074768	11057.972286	0.000131	0.01
Y 377.433	1.071261	456150.614032	0.002498	0.23
Y_R 377.433	1.085360	43666.200000	0.003536	0.33
Y_R 488.368	1.101260	40847.900000	0.011208	1.02
Y_R2 488.368	1.094109	77668.185308	0.007269	0.66
Y_R4	1.093820	37498.200000	0.002009	0.18

Sample Name: 280-114225-C-1-K MS

Date: 9/21/2018 8:52:07 PM Rack:Tube: 2:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052933	ppm	0.000047	0.09	1199.490000	Y 377.433
Al (394.401 nm)	2.031810	ppm	0.004773	0.23	22986.500000	Y 377.433
Al H (396.152 nm)	1.894810	ppm	0.007097	0.37	3563.720000	Y_R 377.433
As (188.980 nm)	1.034220	ppm	0.004634	0.45	1339.250000	Y 242.219
B (249.678 nm)	1.146130	ppm	0.003843	0.34	4300.630000	Y 242.219
Ba (493.408 nm)	2.111940	ppm	0.001364	0.06	193453.000000	Y_R 488.368
Be (234.861 nm)	0.050712	ppm	0.000178	0.35	2733.450000	Y_R 488.368
Bi (223.061 nm)	1.930700	ppm	0.000709	0.04	3158.010000	Y 377.433
Ca (315.887 nm)	111.749774	ppm	0.157264	0.14	73684.687137	Y_R 377.433
Cd (214.439 nm)	0.098999	ppm	0.000012	0.01	2502.460000	Y 377.433
Co (228.615 nm)	0.486420	ppm	0.000924	0.19	9691.660000	Y 242.219
Cr (205.560 nm)	0.198050	ppm	0.000660	0.33	956.395000	Y 377.433
Cu (324.754 nm)	0.251550	ppm	0.000252	0.10	10880.800000	Y 377.433
Fe (238.204 nm)	1.778765	ppm	0.007998	0.45	2929.225625	Y_R 377.433
Fe H (259.940 nm)	1.722820 u	ppm	0.006505	0.38	1638.640000	Y_R 377.433
K (766.491 nm)	54.682200	ppm	0.117678	0.22	58996.900000	Y_R2 488.368
Li (670.783 nm)	1.014110	ppm	0.000975	0.10	12831.100000	Y_R2 488.368
Mg (279.078 nm)	62.525000	ppm	0.040590	0.06	132688.000000	Y 377.433
Mn (257.610 nm)	0.501264	ppm	0.000307	0.06	88615.500000	Y 377.433
Mo (202.032 nm)	1.041970	ppm	0.000474	0.05	10860.900000	Y 377.433
Na (589.592 nm)	105.674000 o	ppm	0.463733	0.44	57109.300000	Y_R2 488.368
Na H (589.593 nm)	113.159501	ppm	0.500598	0.44	42404.025150	Y_R4
Ni (231.604 nm)	0.482929	ppm	0.001583	0.33	1808.420000	Y 377.433
P (213.618 nm)	10.577700	ppm	0.058479	0.55	11548.900000	Y 242.219
Pb (220.353 nm)	0.505922	ppm	0.002038	0.40	1065.240000	Y 242.219
S (181.972 nm)	35.398270	ppm	0.004182	0.01	16484.568138	Y 377.433
Sb (206.834 nm)	0.533475	ppm	0.001639	0.31	872.262000	Y 377.433
Se (196.026 nm)	2.058440	ppm	0.000405	0.02	2717.390000	Y 242.219
Si (288.158 nm)	13.286200	ppm	0.110512	0.83	54117.100000	Y 377.433
Sn (189.925 nm)	2.046080	ppm	0.004992	0.24	2412.600000	Y 377.433
Sr (421.552 nm)	1.438573	ppm	0.000148	0.01	165319.140967	Y_R 488.368
Th (288.505 nm)	0.974155	ppm	0.001755	0.18	926.682000	Y 377.433
Ti (336.122 nm)	1.017820	ppm	0.001760	0.17	92070.800000	Y 377.433
Tl (190.794 nm)	2.004540	ppm	0.001205	0.06	3584.170000	Y 377.433
U (409.013 nm)	2.024860	ppm	0.005530	0.27	4935.630000	Y 377.433
V (292.401 nm)	0.508991	ppm	0.000034	0.01	20686.800000	Y 377.433
Zn (206.200 nm)	0.530831	ppm	0.000536	0.10	1802.820000	Y 377.433
Zr (343.823 nm)	0.504276	ppm	0.000628	0.12	19785.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.026974	10566.231613	0.006913	0.67
Y 377.433	1.034219	440377.884233	0.005085	0.49
Y_R 377.433	1.067250	42937.800000	0.007566	0.71
Y_R 488.368	1.070940	39723.100000	0.007668	0.72
Y_R2 488.368	1.070897	76020.424484	0.002836	0.26
Y_R4	1.081570	37078.300000	0.004174	0.39

Sample Name: 280-114225-C-1-L MSD

Date: 9/21/2018 8:55:40 PM Rack:Tube: 2:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052503	ppm	0.000531	1.01	1188.560000	Y 377.433
Al (394.401 nm)	2.013980	ppm	0.001153	0.06	22780.900000	Y 377.433
Al H (396.152 nm)	1.873520	ppm	0.004596	0.25	3517.970000	Y_R 377.433
As (188.980 nm)	1.021850	ppm	0.001560	0.15	1323.130000	Y 242.219
B (249.678 nm)	1.126740	ppm	0.000146	0.01	4228.120000	Y 242.219
Ba (493.408 nm)	2.085150	ppm	0.000113	0.01	191004.000000	Y_R 488.368
Be (234.861 nm)	0.049830	ppm	0.000209	0.42	2690.160000	Y_R 488.368
Bi (223.061 nm)	1.920150	ppm	0.002275	0.12	3140.970000	Y 377.433
Ca (315.887 nm)	109.548171	ppm	0.125443	0.11	72232.894524	Y_R 377.433
Cd (214.439 nm)	0.098069	ppm	0.000109	0.11	2478.570000	Y 377.433
Co (228.615 nm)	0.481260	ppm	0.004052	0.84	9588.470000	Y 242.219
Cr (205.560 nm)	0.196920	ppm	0.000648	0.33	950.927000	Y 377.433
Cu (324.754 nm)	0.250625	ppm	0.000396	0.16	10841.800000	Y 377.433
Fe (238.204 nm)	1.008805	ppm	0.004271	0.42	1673.380295	Y_R 377.433
Fe H (259.940 nm)	0.930898 u	ppm	0.000016	0.00	921.709000	Y_R 377.433
K (766.491 nm)	54.148900	ppm	0.082558	0.15	58438.600000	Y_R2 488.368
Li (670.783 nm)	1.016660	ppm	0.001484	0.15	12866.300000	Y_R2 488.368
Mg (279.078 nm)	61.635100	ppm	0.005861	0.01	130800.000000	Y 377.433
Mn (257.610 nm)	0.495252	ppm	0.000345	0.07	87553.300000	Y 377.433
Mo (202.032 nm)	1.022970	ppm	0.001950	0.19	10663.100000	Y 377.433
Na (589.592 nm)	103.981000 o	ppm	0.152639	0.15	56193.000000	Y_R2 488.368
Na H (589.593 nm)	111.517639	ppm	0.454494	0.41	41798.189128	Y_R4
Ni (231.604 nm)	0.479412	ppm	0.000941	0.20	1795.230000	Y 377.433
P (213.618 nm)	10.459400	ppm	0.019618	0.19	11419.700000	Y 242.219
Pb (220.353 nm)	0.495228	ppm	0.003808	0.77	1042.940000	Y 242.219
S (181.972 nm)	34.775967	ppm	0.027278	0.08	16194.776100	Y 377.433
Sb (206.834 nm)	0.523746	ppm	0.004835	0.92	856.667000	Y 377.433
Se (196.026 nm)	2.038580	ppm	0.003576	0.18	2691.420000	Y 242.219
Si (288.158 nm)	13.099500	ppm	0.026232	0.20	53361.800000	Y 377.433
Sn (189.925 nm)	2.008970	ppm	0.002466	0.12	2368.840000	Y 377.433
Sr (421.552 nm)	1.414933	ppm	0.001850	0.13	162604.923362	Y_R 488.368
Th (288.505 nm)	0.961906	ppm	0.011171	1.16	915.068000	Y 377.433
Ti (336.122 nm)	1.002160	ppm	0.000488	0.05	90651.400000	Y 377.433
Tl (190.794 nm)	1.985310	ppm	0.001642	0.08	3549.880000	Y 377.433
U (409.013 nm)	2.002540	ppm	0.015988	0.80	4883.920000	Y 377.433
V (292.401 nm)	0.504050	ppm	0.000350	0.07	20484.400000	Y 377.433
Zn (206.200 nm)	0.487758	ppm	0.000559	0.11	1656.880000	Y 377.433
Zr (343.823 nm)	0.496434	ppm	0.000248	0.05	19479.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045097	10752.688491	0.006607	0.63
Y 377.433	1.051264	447635.462248	0.006251	0.59
Y_R 377.433	1.091940	43931.300000	0.001586	0.15
Y_R 488.368	1.099300	40775.200000	0.000320	0.03
Y_R2 488.368	1.103926	78365.100052	0.003820	0.35
Y_R4	1.126300	38611.400000	0.001148	0.10

Sample Name: 280-114225-C-2-D

Date: 9/21/2018 8:59:14 PM Rack:Tube: 2:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000155 u	ppm	0.000878	> 100.00	-84.222300	Y 377.433
Al (394.401 nm)	0.005335	ppm	0.000292	5.48	177.500000	Y 377.433
Al H (396.152 nm)	0.062760 u	ppm	0.003753	5.98	-38.980200	Y_R 377.433
As (188.980 nm)	0.001133	ppm	0.000792	69.86	-8.754880	Y 242.219
B (249.678 nm)	0.274559	ppm	0.001034	0.38	1029.990000	Y 242.219
Ba (493.408 nm)	0.033008	ppm	0.000181	0.55	3554.300000	Y_R 488.368
Be (234.861 nm)	0.000015 u	ppm	0.000024	> 100.00	-3.111300	Y_R 488.368
Bi (223.061 nm)	-0.000539 u	ppm	0.006844	> 100.00	57.351400	Y 377.433
Ca (315.887 nm)	86.613966	ppm	0.015143	0.02	57109.353304	Y_R 377.433
Cd (214.439 nm)	0.000353	ppm	0.000194	54.90	-4.125040	Y 377.433
Co (228.615 nm)	0.000108 u	ppm	0.000162	> 100.00	-15.606800	Y 242.219
Cr (205.560 nm)	0.000980	ppm	0.000005	0.46	-5.449130	Y 377.433
Cu (324.754 nm)	0.003369	ppm	0.000205	6.08	242.503000	Y 377.433
Fe (238.204 nm)	0.000228 u	ppm	0.002336	> 100.00	28.338190	Y_R 377.433
Fe H (259.940 nm)	-0.077678 u	ppm	0.000429	0.55	8.640300	Y_R 377.433
K (766.491 nm)	3.528440	ppm	0.098458	2.79	5449.220000	Y_R2 488.368
Li (670.783 nm)	0.041163	ppm	0.001637	3.98	-591.092000	Y_R2 488.368
Mg (279.078 nm)	22.017200	ppm	0.093165	0.42	46736.300000	Y 377.433
Mn (257.610 nm)	0.011749	ppm	0.000066	0.56	2130.480000	Y 377.433
Mo (202.032 nm)	0.005295	ppm	0.000106	2.00	75.503500	Y 377.433
Na (589.592 nm)	190.211000 o	ppm	0.443051	0.23	102936.000000	Y_R2 488.368
Na H (589.593 nm)	197.874204	ppm	1.204681	0.61	74019.339184	Y_R4
Ni (231.604 nm)	0.002381	ppm	0.001058	44.45	26.271700	Y 377.433
P (213.618 nm)	0.009066	ppm	0.002077	22.91	8.563210	Y 242.219
Pb (220.353 nm)	0.000855 u	ppm	0.002650	> 100.00	11.142500	Y 242.219
S (181.972 nm)	70.432287	ppm	0.273612	0.39	32784.374599	Y 377.433
Sb (206.834 nm)	-0.005851 u	ppm	0.003492	59.68	10.368900	Y 377.433
Se (196.026 nm)	0.004786	ppm	0.000338	7.06	15.463000	Y 242.219
Si (288.158 nm)	4.221410	ppm	0.012497	0.30	17447.800000	Y 377.433
Sn (189.925 nm)	-0.001321 u	ppm	0.001190	90.11	-2.049110	Y 377.433
Sr (421.552 nm)	0.338950	ppm	0.001954	0.58	39069.898857	Y_R 488.368
Th (288.505 nm)	-0.015832 u	ppm	0.011134	70.33	-6.804140	Y 377.433
Ti (336.122 nm)	0.000314	ppm	0.000037	11.93	119.849000	Y 377.433
Tl (190.794 nm)	0.001233	ppm	0.000581	47.11	4.530000	Y 377.433
U (409.013 nm)	0.008126	ppm	0.007278	89.56	258.038000	Y 377.433
V (292.401 nm)	0.002782	ppm	0.000141	5.06	-148.384000	Y 377.433
Zn (206.200 nm)	0.004139	ppm	0.000213	5.15	18.303600	Y 377.433
Zr (343.823 nm)	0.000290	ppm	0.000224	77.11	125.357000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056970	10874.853473	0.000297	0.03
Y 377.433	1.063434	452817.582492	0.004663	0.44
Y_R 377.433	1.100020	44256.300000	0.007576	0.69
Y_R 488.368	1.107540	41080.700000	0.000926	0.08
Y_R2 488.368	1.113046	79012.453849	0.003137	0.28
Y_R4	1.130630	38760.000000	0.002394	0.21

Sample Name: CCVH-5320321

Date: 9/21/2018 9:02:45 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000384 u	ppm	0.000619	> 100.00	-175.875000	Y 377.433
Al (394.401 nm)	50.265700 o	ppm	0.029572	0.06	558717.000000	Y 377.433
Al H (396.152 nm)	49.685500	ppm	0.173506	0.35	85821.300000	Y_R 377.433
As (188.980 nm)	-0.000123 u	ppm	0.001504	> 100.00	-12.339200	Y 242.219
B (249.678 nm)	0.003903	ppm	0.001658	42.47	-0.965974	Y 242.219
Ba (493.408 nm)	0.000294	ppm	0.000130	44.31	602.477000	Y_R 488.368
Be (234.861 nm)	-0.000853 u	ppm	0.000161	18.84	-341.429000	Y_R 488.368
Bi (223.061 nm)	0.980475	ppm	0.002571	0.26	1638.550000	Y 377.433
Ca (315.887 nm)	0.009367	ppm	0.010109	> 100.00	4.263547	Y_R 377.433
Cd (214.439 nm)	-0.000506 u	ppm	0.000072	14.30	-8.250190	Y 377.433
Co (228.615 nm)	0.003340	ppm	0.000261	7.83	48.638400	Y 242.219
Cr (205.560 nm)	0.000376 u	ppm	0.000876	> 100.00	-9.606500	Y 377.433
Cu (324.754 nm)	0.000492	ppm	0.000110	22.45	562.631000	Y 377.433
Fe (238.204 nm)	49.711677 o	ppm	0.149804	0.30	81110.324253	Y_R 377.433
Fe H (259.940 nm)	50.064300	ppm	0.085737	0.17	45402.400000	Y_R 377.433
K (766.491 nm)	-0.011468 u	ppm	0.084345	> 100.00	1743.650000	Y_R2 488.368
Li (670.783 nm)	0.005831	ppm	0.004573	78.42	-1078.500000	Y_R2 488.368
Mg (279.078 nm)	-0.009668 u	ppm	0.000109	1.13	-158.046000	Y 377.433
Mn (257.610 nm)	0.000273	ppm	0.000021	7.52	102.994000	Y 377.433
Mo (202.032 nm)	-0.000485 u	ppm	0.000253	52.09	15.365100	Y 377.433
Na (589.592 nm)	241.970000 o	ppm	0.481810	0.20	130973.000000	Y_R2 488.368
Na H (589.593 nm)	249.910132	ppm	1.055063	0.42	93310.783668	Y_R4
Ni (231.604 nm)	-0.000450 u	ppm	0.000301	66.81	21.695100	Y 377.433
P (213.618 nm)	-0.021060 u	ppm	0.000788	3.74	-25.342600	Y 242.219
Pb (220.353 nm)	0.000235 u	ppm	0.001768	> 100.00	20.593700	Y 242.219
S (181.972 nm)	5.072596	ppm	0.031590	0.62	2361.313608	Y 377.433
Sb (206.834 nm)	0.004703 u	ppm	0.006789	> 100.00	31.497000	Y 377.433
Se (196.026 nm)	-0.002996 u	ppm	0.002080	69.44	-5.983320	Y 242.219
Si (288.158 nm)	0.005638	ppm	0.000348	6.17	394.829000	Y 377.433
Sn (189.925 nm)	0.000837	ppm	0.000681	81.39	0.671353	Y 377.433
Sr (421.552 nm)	0.000123 u	ppm	0.000315	> 100.00	174.460892	Y_R 488.368
Th (288.505 nm)	4.925350	ppm	0.036359	0.74	4785.710000	Y 377.433
Ti (336.122 nm)	0.000987	ppm	0.000159	16.15	-30.988000	Y 377.433
Tl (190.794 nm)	-0.003043 u	ppm	0.000121	3.99	-3.801620	Y 377.433
U (409.013 nm)	9.868970	ppm	0.028654	0.29	23398.200000	Y 377.433
V (292.401 nm)	-0.003055 u	ppm	0.000257	8.42	-414.880000	Y 377.433
Zn (206.200 nm)	0.000182 u	ppm	0.000333	> 100.00	5.740230	Y 377.433
Zr (343.823 nm)	-0.007072 u	ppm	0.000112	1.59	-113.296000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052700	10830.918487	0.000856	0.08
Y 377.433	1.053722	448682.378329	0.001136	0.11
Y_R 377.433	1.086590	43715.800000	0.011889	1.09
Y_R 488.368	1.079890	40055.200000	0.025624	2.37
Y_R2 488.368	1.092058	77522.590493	0.003251	0.30
Y_R4	1.125880	38597.200000	0.002208	0.20

Sample Name: CCV-5305988

Date: 9/21/2018 9:06:24 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498674	ppm	0.000600	0.12	12455.200000	Y 377.433
Al (394.401 nm)	0.493668	ppm	0.000604	0.12	5632.630000	Y 377.433
Al H (396.152 nm)	0.551908 u	ppm	0.000144	0.03	909.668000	Y_R 377.433
As (188.980 nm)	0.989456	ppm	0.003808	0.38	1280.850000	Y 242.219
B (249.678 nm)	0.497404	ppm	0.001089	0.22	1865.620000	Y 242.219
Ba (493.408 nm)	0.501201	ppm	0.004396	0.88	46322.400000	Y_R 488.368
Be (234.861 nm)	0.497434	ppm	0.003370	0.68	26934.600000	Y_R 488.368
Bi (223.061 nm)	-0.005086 u	ppm	0.000001	0.01	50.442000	Y 377.433
Ca (315.887 nm)	4.931795	ppm	0.005811	0.12	3246.186444	Y_R 377.433
Cd (214.439 nm)	0.495351	ppm	0.000743	0.15	12571.600000	Y 377.433
Co (228.615 nm)	0.497099	ppm	0.002129	0.43	9884.480000	Y 242.219
Cr (205.560 nm)	0.488412	ppm	0.000395	0.08	2381.500000	Y 377.433
Cu (324.754 nm)	0.500025	ppm	0.000942	0.19	21480.900000	Y 377.433
Fe (238.204 nm)	2.499831	ppm	0.000933	0.04	4105.322347	Y_R 377.433
Fe H (259.940 nm)	2.457360 u	ppm	0.000957	0.04	2303.620000	Y_R 377.433
K (766.491 nm)	49.232800	ppm	0.224203	0.46	53292.400000	Y_R2 488.368
Li (670.783 nm)	0.978159	ppm	0.005230	0.53	12335.100000	Y_R2 488.368
Mg (279.078 nm)	19.679600	ppm	0.026340	0.13	41773.000000	Y 377.433
Mn (257.610 nm)	0.493665	ppm	0.000297	0.06	87272.900000	Y 377.433
Mo (202.032 nm)	0.495584	ppm	0.000695	0.14	5176.370000	Y 377.433
Na (589.592 nm)	24.923000	ppm	0.107641	0.43	13395.200000	Y_R2 488.368
Na H (589.593 nm)	26.947169 u	ppm	0.236637	0.88	10613.560110	Y_R4
Ni (231.604 nm)	0.496940	ppm	0.000259	0.05	1858.020000	Y 377.433
P (213.618 nm)	1.000210	ppm	0.003934	0.39	1070.880000	Y 242.219
Pb (220.353 nm)	0.999255	ppm	0.002872	0.29	2092.900000	Y 242.219
S (181.972 nm)	0.008873	ppm	0.010051	> 100.00	7.015563	Y 377.433
Sb (206.834 nm)	1.015350	ppm	0.002216	0.22	1661.100000	Y 377.433
Se (196.026 nm)	1.004640	ppm	0.008373	0.83	1330.860000	Y 242.219
Si (288.158 nm)	4.999000	ppm	0.027358	0.55	20593.300000	Y 377.433
Sn (189.925 nm)	0.996802	ppm	0.002070	0.21	1175.120000	Y 377.433
Sr (421.552 nm)	0.497739	ppm	0.002574	0.52	57300.883662	Y_R 488.368
Th (288.505 nm)	-0.015710 u	ppm	0.000711	4.53	-35.362200	Y 377.433
Ti (336.122 nm)	0.497104	ppm	0.000531	0.11	44795.300000	Y 377.433
Tl (190.794 nm)	1.009120	ppm	0.008261	0.82	1806.560000	Y 377.433
U (409.013 nm)	-0.004736 u	ppm	0.000937	19.79	191.659000	Y 377.433
V (292.401 nm)	0.494219	ppm	0.000525	0.11	20012.700000	Y 377.433
Zn (206.200 nm)	0.489172	ppm	0.000285	0.06	1661.690000	Y 377.433
Zr (343.823 nm)	0.493809	ppm	0.000184	0.04	19378.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065579	10963.430911	0.000804	0.08
Y 377.433	1.066373	454069.218925	0.000875	0.08
Y_R 377.433	1.079640	43436.400000	0.001354	0.13
Y_R 488.368	1.087610	40341.500000	0.005516	0.51
Y_R2 488.368	1.077500	76489.124893	0.004239	0.39
Y_R4	1.087360	37276.700000	0.001050	0.10

Sample Name: CCB

Date: 9/21/2018 9:09:58 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000944 u	ppm	0.000334	35.36	-111.877000	Y 377.433
Al (394.401 nm)	-0.011318 u	ppm	0.001485	13.12	-84.897000	Y 377.433
Al H (396.152 nm)	0.144081 Zu	ppm	0.011784	8.18	6.008820 Z	Y_R 377.433
As (188.980 nm)	0.002719	ppm	0.000877	32.23	-6.684410	Y 242.219
B (249.678 nm)	0.001672	ppm	0.000370	22.14	5.797120	Y 242.219
Ba (493.408 nm)	-0.000390 u	ppm	0.000579	> 100.00	503.603000	Y_R 488.368
Be (234.861 nm)	0.000022 u	ppm	0.000046	> 100.00	-2.666280	Y_R 488.368
Bi (223.061 nm)	-0.009555 u	ppm	0.002602	27.23	42.869600	Y 377.433
Ca (315.887 nm)	-0.008143 u	ppm	0.004433	54.45	-11.371468	Y_R 377.433
Cd (214.439 nm)	0.000069	ppm	0.000044	63.37	-11.345800	Y 377.433
Co (228.615 nm)	0.000028 u	ppm	0.000139	> 100.00	-17.216700	Y 242.219
Cr (205.560 nm)	0.000204 u	ppm	0.000884	> 100.00	-9.233470	Y 377.433
Cu (324.754 nm)	0.000195	ppm	0.000017	8.59	151.266000	Y 377.433
Fe (238.204 nm)	-0.013413 u	ppm	0.001140	8.50	6.089171	Y_R 377.433
Fe H (259.940 nm)	-0.081522 u	ppm	0.001086	1.33	5.160620	Y_R 377.433
K (766.491 nm)	-0.049810 u	ppm	0.056457	> 100.00	1703.520000	Y_R2 488.368
Li (670.783 nm)	0.005166	ppm	0.000285	5.51	-1087.670000	Y_R2 488.368
Mg (279.078 nm)	0.002343 u	ppm	0.004012	> 100.00	11.666800	Y 377.433
Mn (257.610 nm)	-0.000080 u	ppm	0.000018	22.05	40.710200	Y 377.433
Mo (202.032 nm)	0.000413	ppm	0.000232	56.26	24.713300	Y 377.433
Na (589.592 nm)	0.128146	ppm	0.007514	5.86	-27.353900	Y_R2 488.368
Na H (589.593 nm)	0.970695 u	ppm	0.016436	1.69	1035.855748	Y_R4
Ni (231.604 nm)	-0.001463 u	ppm	0.000841	57.49	10.753300	Y 377.433
P (213.618 nm)	-0.001230 u	ppm	0.000452	36.75	-2.500330	Y 242.219
Pb (220.353 nm)	-0.000870 u	ppm	0.004175	> 100.00	7.585400	Y 242.219
S (181.972 nm)	0.008453	ppm	0.000143	1.69	4.869753	Y 377.433
Sb (206.834 nm)	-0.003749 u	ppm	0.000142	3.79	13.789800	Y 377.433
Se (196.026 nm)	0.002198	ppm	0.001787	81.31	12.046800	Y 242.219
Si (288.158 nm)	-0.005354 u	ppm	0.001178	22.00	349.557000	Y 377.433
Sn (189.925 nm)	-0.000220 u	ppm	0.001372	> 100.00	-0.750893	Y 377.433
Sr (421.552 nm)	-0.000085 u	ppm	0.000378	> 100.00	144.811473	Y_R 488.368
Th (288.505 nm)	-0.005990 u	ppm	0.002172	36.27	2.733420	Y 377.433
Ti (336.122 nm)	0.000057	ppm	0.000036	61.97	-105.989000	Y 377.433
Tl (190.794 nm)	0.000816	ppm	0.000068	8.27	3.804170	Y 377.433
U (409.013 nm)	-0.013137 u	ppm	0.003416	26.00	216.553000	Y 377.433
V (292.401 nm)	0.000263	ppm	0.000032	12.01	-252.307000	Y 377.433
Zn (206.200 nm)	-0.000195 u	ppm	0.000132	67.52	3.619640	Y 377.433
Zr (343.823 nm)	0.000145 u	ppm	0.000345	> 100.00	119.695000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062727	10934.088412	0.006961	0.66
Y 377.433	1.062957	452614.380353	0.008485	0.80
Y_R 377.433	1.064660	42833.500000	0.000096	0.01
Y_R 488.368	1.070860	39720.000000	0.012446	1.16
Y_R2 488.368	1.059808	75233.248040	0.002893	0.27
Y_R4	1.076880	36917.200000	0.002171	0.20

Sample Name: CCVL-5320254

Date: 9/21/2018 9:13:10 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008954	ppm	0.000433	4.83	137.729000	Y 377.433
Al (394.401 nm)	0.085734	ppm	0.000011	0.01	1000.540000	Y 377.433
Al H (396.152 nm)	0.240640 u	ppm	0.014187	5.90	177.786000	Y_R 377.433
As (188.980 nm)	0.014235	ppm	0.001418	9.96	8.337810	Y 242.219
B (249.678 nm)	0.100229	ppm	0.000231	0.23	375.670000	Y 242.219
Ba (493.408 nm)	0.009754	ppm	0.000042	0.43	1430.270000	Y_R 488.368
Be (234.861 nm)	0.000950	ppm	0.000038	4.02	46.991500	Y_R 488.368
Bi (223.061 nm)	0.087917	ppm	0.001702	1.94	199.366000	Y 377.433
Ca (315.887 nm)	0.189983	ppm	0.014758	7.77	119.286870	Y_R 377.433
Cd (214.439 nm)	0.005252	ppm	0.000072	1.37	120.361000	Y 377.433
Co (228.615 nm)	0.010640	ppm	0.000082	0.77	194.166000	Y 242.219
Cr (205.560 nm)	0.010432	ppm	0.000059	0.57	40.786800	Y 377.433
Cu (324.754 nm)	0.015128	ppm	0.000166	1.10	787.330000	Y 377.433
Fe (238.204 nm)	0.087898	ppm	0.000766	0.87	171.332997	Y_R 377.433
Fe H (259.940 nm)	0.026852 u	ppm	0.004672	17.40	103.272000	Y_R 377.433
K (766.491 nm)	2.995230	ppm	0.059988	2.00	4891.050000	Y_R2 488.368
Li (670.783 nm)	0.024799	ppm	0.000276	1.11	-816.833000	Y_R2 488.368
Mg (279.078 nm)	0.206436	ppm	0.001956	0.95	444.184000	Y 377.433
Mn (257.610 nm)	0.010390	ppm	0.000028	0.27	1890.490000	Y 377.433
Mo (202.032 nm)	0.019213	ppm	0.000183	0.95	220.304000	Y 377.433
Na (589.592 nm)	1.185540	ppm	0.017191	1.45	545.255000	Y_R2 488.368
Na H (589.593 nm)	1.456934 u	ppm	0.038450	2.64	1215.100863	Y_R4
Ni (231.604 nm)	0.040518	ppm	0.000024	0.06	166.272000	Y 377.433
P (213.618 nm)	2.889090	ppm	0.002686	0.09	3155.830000	Y 242.219
Pb (220.353 nm)	0.008572	ppm	0.000092	1.07	27.317100	Y 242.219
S (181.972 nm)	0.101089	ppm	0.002844	2.81	48.022189	Y 377.433
Sb (206.834 nm)	0.018622	ppm	0.000475	2.55	49.844500	Y 377.433
Se (196.026 nm)	0.015856	ppm	0.000894	5.64	30.006800	Y 242.219
Si (288.158 nm)	0.482878	ppm	0.001627	0.34	2324.570000	Y 377.433
Sn (189.925 nm)	0.097772	ppm	0.000991	1.01	114.818000	Y 377.433
Sr (421.552 nm)	0.009721	ppm	0.000036	0.38	1270.698531	Y_R 488.368
Th (288.505 nm)	0.003996 Q	ppm	0.002207	55.24	12.105300 Q	Y 377.433
Ti (336.122 nm)	0.009986	ppm	0.000103	1.03	791.209000	Y 377.433
Tl (190.794 nm)	0.015709	ppm	0.000004	0.02	30.387600	Y 377.433
U (409.013 nm)	0.052431	ppm	0.010809	20.62	368.899000	Y 377.433
V (292.401 nm)	0.010263	ppm	0.000255	2.48	156.365000	Y 377.433
Zn (206.200 nm)	0.019352	ppm	0.000348	1.80	69.849200	Y 377.433
Zr (343.823 nm)	0.014452	ppm	0.000133	0.92	677.841000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.077847	11089.644322	0.001979	0.18
Y 377.433	1.074795	457655.311458	0.000882	0.08
Y_R 377.433	1.073150	43175.200000	0.000430	0.04
Y_R 488.368	1.083210	40178.300000	0.001545	0.14
Y_R2 488.368	1.087211	77178.521160	0.005510	0.51
Y_R4	1.081620	37080.000000	0.011740	1.09

Sample Name: 280-114225-C-3-D

Date: 9/21/2018 9:16:37 PM Rack:Tube: 2:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000083 u	ppm	0.001084	> 100.00	-90.505600	Y 377.433
Al (394.401 nm)	0.004573	ppm	0.000166	3.64	128.400000	Y 377.433
Al H (396.152 nm)	0.105771 u	ppm	0.005853	5.53	-20.008200	Y_R 377.433
As (188.980 nm)	0.003404	ppm	0.000526	15.46	-5.791940	Y 242.219
B (249.678 nm)	0.104692	ppm	0.000456	0.44	392.446000	Y 242.219
Ba (493.408 nm)	0.021718	ppm	0.000596	2.74	2523.040000	Y_R 488.368
Be (234.861 nm)	0.000043 u	ppm	0.000091	> 100.00	-1.618650	Y_R 488.368
Bi (223.061 nm)	-0.004182 u	ppm	0.003505	83.80	51.501200	Y 377.433
Ca (315.887 nm)	52.857913	ppm	0.145505	0.28	34849.791360	Y_R 377.433
Cd (214.439 nm)	0.000288	ppm	0.000080	27.83	-5.780110	Y 377.433
Co (228.615 nm)	0.000179	ppm	0.000205	> 100.00	-14.203500	Y 242.219
Cr (205.560 nm)	0.000258	ppm	0.000244	94.64	-8.976640	Y 377.433
Cu (324.754 nm)	0.001409	ppm	0.000052	3.70	174.647000	Y 377.433
Fe (238.204 nm)	0.001346	ppm	0.001892	> 100.00	30.162282	Y_R 377.433
Fe H (259.940 nm)	-0.072651 u	ppm	0.003061	4.21	13.191800	Y_R 377.433
K (766.491 nm)	2.282920	ppm	0.141138	6.18	4145.410000	Y_R2 488.368
Li (670.783 nm)	0.024693	ppm	0.000825	3.34	-818.305000	Y_R2 488.368
Mg (279.078 nm)	11.017600	ppm	0.011668	0.11	23390.400000	Y 377.433
Mn (257.610 nm)	0.009141	ppm	0.000054	0.59	1669.680000	Y 377.433
Mo (202.032 nm)	0.003122	ppm	0.000096	3.09	52.893800	Y 377.433
Na (589.592 nm)	84.584200 o	ppm	0.069852	0.08	45720.400000	Y_R2 488.368
Na H (589.593 nm)	87.146908	ppm	0.458058	0.53	32976.823375	Y_R4
Ni (231.604 nm)	-0.001068 u	ppm	0.001577	> 100.00	13.001000	Y 377.433
P (213.618 nm)	0.016249	ppm	0.002413	14.85	16.513400	Y 242.219
Pb (220.353 nm)	-0.002390 u	ppm	0.000430	18.00	4.402050	Y 242.219
S (181.972 nm)	26.105282	ppm	0.036271	0.14	12153.632726	Y 377.433
Sb (206.834 nm)	-0.004092 u	ppm	0.000318	7.77	13.220900	Y 377.433
Se (196.026 nm)	-0.001303 u	ppm	0.002492	> 100.00	7.449800	Y 242.219
Si (288.158 nm)	3.489990	ppm	0.012931	0.37	14489.000000	Y 377.433
Sn (189.925 nm)	0.000395 u	ppm	0.000806	> 100.00	-0.025547	Y 377.433
Sr (421.552 nm)	0.151445	ppm	0.001337	0.88	17542.193287	Y_R 488.368
Th (288.505 nm)	-0.023089 u	ppm	0.002883	12.49	-13.800400	Y 377.433
Ti (336.122 nm)	0.000369	ppm	0.000002	0.48	46.210700	Y 377.433
Tl (190.794 nm)	0.000892 u	ppm	0.002343	> 100.00	3.926670	Y 377.433
U (409.013 nm)	0.012494	ppm	0.004196	33.59	271.522000	Y 377.433
V (292.401 nm)	0.003100	ppm	0.000118	3.80	-135.853000	Y 377.433
Zn (206.200 nm)	0.002778	ppm	0.000340	12.25	13.692500	Y 377.433
Zr (343.823 nm)	0.000051	ppm	0.000047	91.37	116.031000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054050	10844.807253	0.001017	0.10
Y 377.433	1.056978	450068.659417	0.000842	0.08
Y_R 377.433	1.076300	43302.000000	0.005193	0.48
Y_R 488.368	1.073800	39829.200000	0.012888	1.20
Y_R2 488.368	1.081900	76801.468281	0.000249	0.02
Y_R4	1.088900	37329.500000	0.002853	0.26

Sample Name: 280-114225-C-4-D

Date: 9/21/2018 9:20:05 PM Rack:Tube: 2:37

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000508 u	ppm	0.000109	21.50	-101.159000	Y 377.433
Al (394.401 nm)	0.004551	ppm	0.000302	6.64	148.843000	Y 377.433
Al H (396.152 nm)	0.093111 u	ppm	0.000786	0.84	-14.010200	Y_R 377.433
As (188.980 nm)	0.001027	ppm	0.001224	> 100.00	-8.893840	Y 242.219
B (249.678 nm)	0.121808	ppm	0.001232	1.01	456.682000	Y 242.219
Ba (493.408 nm)	0.031642	ppm	0.000429	1.36	3429.560000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000068	> 100.00	-5.879070	Y_R 488.368
Bi (223.061 nm)	-0.001156 u	ppm	0.000262	22.68	56.364300	Y 377.433
Ca (315.887 nm)	62.254037	ppm	0.109547	0.18	41045.824010	Y_R 377.433
Cd (214.439 nm)	0.000225	ppm	0.000008	3.55	-7.374030	Y 377.433
Co (228.615 nm)	0.000099 u	ppm	0.000272	> 100.00	-15.795100	Y 242.219
Cr (205.560 nm)	-0.000050 u	ppm	0.000233	> 100.00	-10.486800	Y 377.433
Cu (324.754 nm)	0.001547	ppm	0.000357	23.05	175.734000	Y 377.433
Fe (238.204 nm)	0.020971	ppm	0.001365	6.51	62.172221	Y_R 377.433
Fe H (259.940 nm)	-0.045134 u	ppm	0.005190	11.50	38.103000	Y_R 377.433
K (766.491 nm)	3.294930	ppm	0.098712	3.00	5204.780000	Y_R2 488.368
Li (670.783 nm)	0.046810	ppm	0.003256	6.96	-513.184000	Y_R2 488.368
Mg (279.078 nm)	9.056230	ppm	0.045301	0.50	19227.700000	Y 377.433
Mn (257.610 nm)	0.016926	ppm	0.000042	0.25	3045.090000	Y 377.433
Mo (202.032 nm)	0.003026	ppm	0.000557	18.41	51.902200	Y 377.433
Na (589.592 nm)	119.705000 o	ppm	0.998045	0.83	64744.400000	Y_R2 488.368
Na H (589.593 nm)	125.079849	ppm	0.181018	0.14	47036.585040	Y_R4
Ni (231.604 nm)	-0.001234 u	ppm	0.000533	43.24	12.529000	Y 377.433
P (213.618 nm)	0.109897	ppm	0.000712	0.65	118.857000	Y 242.219
Pb (220.353 nm)	0.000976 u	ppm	0.001496	> 100.00	11.419700	Y 242.219
S (181.972 nm)	33.096542	ppm	0.186027	0.56	15407.876934	Y 377.433
Sb (206.834 nm)	-0.003348 u	ppm	0.000081	2.41	14.425700	Y 377.433
Se (196.026 nm)	-0.001675 u	ppm	0.004088	> 100.00	6.964830	Y 242.219
Si (288.158 nm)	3.466180	ppm	0.003516	0.10	14392.700000	Y 377.433
Sn (189.925 nm)	-0.000465 u	ppm	0.000623	> 100.00	-1.040430	Y 377.433
Sr (421.552 nm)	0.242431	ppm	0.003636	1.50	27988.347866	Y_R 488.368
Th (288.505 nm)	-0.018671 u	ppm	0.002211	11.84	-9.479770	Y 377.433
Ti (336.122 nm)	0.000159	ppm	0.000019	12.09	49.292400	Y 377.433
Tl (190.794 nm)	0.000745	ppm	0.000963	> 100.00	3.665140	Y 377.433
U (409.013 nm)	0.011866	ppm	0.011961	> 100.00	269.138000	Y 377.433
V (292.401 nm)	0.003401	ppm	0.000171	5.04	-123.295000	Y 377.433
Zn (206.200 nm)	0.004476	ppm	0.000184	4.12	19.445000	Y 377.433
Zr (343.823 nm)	0.000317	ppm	0.000039	12.36	126.439000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050022	10803.365133	0.000362	0.03
Y 377.433	1.049024	446681.983644	0.004005	0.38
Y_R 377.433	1.067920	42964.900000	0.002325	0.22
Y_R 488.368	1.070780	39717.300000	0.019196	1.79
Y_R2 488.368	1.087908	77227.963493	0.008813	0.81
Y_R4	1.100700	37734.000000	0.006965	0.63

Sample Name: 280-114225-C-5-D

Date: 9/21/2018 9:23:35 PM Rack:Tube: 2:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000054 u	ppm	0.000088	> 100.00	-87.090000	Y 377.433
Al (394.401 nm)	-0.002678 u	ppm	0.001702	63.56	127.698000	Y 377.433
Al H (396.152 nm)	0.035280 u	ppm	0.002280	6.46	-37.295700	Y_R 377.433
As (188.980 nm)	0.000640 u	ppm	0.001814	> 100.00	-9.398680	Y 242.219
B (249.678 nm)	0.161657	ppm	0.001654	1.02	606.249000	Y 242.219
Ba (493.408 nm)	0.046636	ppm	0.000394	0.85	4799.140000	Y_R 488.368
Be (234.861 nm)	-0.000013 u	ppm	0.000004	33.84	-4.624780	Y_R 488.368
Bi (223.061 nm)	-0.000004 u	ppm	0.002898	> 100.00	58.208500	Y 377.433
Ca (315.887 nm)	93.947907	ppm	0.173168	0.18	61945.532289	Y_R 377.433
Cd (214.439 nm)	0.000282	ppm	0.000070	24.62	-5.932030	Y 377.433
Co (228.615 nm)	0.000338	ppm	0.000315	93.34	-11.045000	Y 242.219
Cr (205.560 nm)	0.000717	ppm	0.000415	57.86	-6.735670	Y 377.433
Cu (324.754 nm)	0.001051	ppm	0.000091	8.68	138.171000	Y 377.433
Fe (238.204 nm)	-0.004522 u	ppm	0.001581	34.95	20.590392	Y_R 377.433
Fe H (259.940 nm)	-0.073691 u	ppm	0.003483	4.73	12.250100	Y_R 377.433
K (766.491 nm)	2.931500	ppm	0.072331	2.47	4824.350000	Y_R2 488.368
Li (670.783 nm)	0.045628	ppm	0.004062	8.90	-529.488000	Y_R2 488.368
Mg (279.078 nm)	16.533100	ppm	0.040497	0.24	35096.500000	Y 377.433
Mn (257.610 nm)	0.016795	ppm	0.000015	0.09	3021.970000	Y 377.433
Mo (202.032 nm)	0.004588	ppm	0.000164	3.58	68.151600	Y 377.433
Na (589.592 nm)	139.378000 o	ppm	1.253530	0.90	75400.500000	Y_R2 488.368
Na H (589.593 nm)	147.333541	ppm	0.456036	0.31	55283.879029	Y_R4
Ni (231.604 nm)	0.001516	ppm	0.001057	69.73	23.174700	Y 377.433
P (213.618 nm)	0.023491	ppm	0.002833	12.06	24.420300	Y 242.219
Pb (220.353 nm)	-0.002467 u	ppm	0.000729	29.53	4.244150	Y 242.219
S (181.972 nm)	52.638162	ppm	0.167809	0.32	24504.321041	Y 377.433
Sb (206.834 nm)	-0.004341 u	ppm	0.000652	15.01	12.810400	Y 377.433
Se (196.026 nm)	0.001040 u	ppm	0.004347	> 100.00	10.542700	Y 242.219
Si (288.158 nm)	6.909610	ppm	0.043724	0.63	28322.100000	Y 377.433
Sn (189.925 nm)	0.000475	ppm	0.000664	> 100.00	0.068512	Y 377.433
Sr (421.552 nm)	0.494405	ppm	0.004015	0.81	56917.828852	Y_R 488.368
Th (288.505 nm)	-0.023098 u	ppm	0.001630	7.06	-13.750800	Y 377.433
Ti (336.122 nm)	0.000012 u	ppm	0.000053	> 100.00	109.593000	Y 377.433
Tl (190.794 nm)	0.000051 u	ppm	0.000094	> 100.00	2.417900	Y 377.433
U (409.013 nm)	0.008614	ppm	0.002575	29.90	258.458000	Y 377.433
V (292.401 nm)	0.003919	ppm	0.000135	3.45	-102.386000	Y 377.433
Zn (206.200 nm)	0.003172	ppm	0.000377	11.88	15.028400	Y 377.433
Zr (343.823 nm)	0.000189 u	ppm	0.000309	> 100.00	121.389000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054415	10848.562732	0.001630	0.15
Y 377.433	1.060484	451561.494957	0.000841	0.08
Y_R 377.433	1.083970	43610.700000	0.004011	0.37
Y_R 488.368	1.081630	40119.600000	0.003943	0.36
Y_R2 488.368	1.095245	77748.853104	0.001989	0.18
Y_R4	1.109790	38045.600000	0.006434	0.58

Sample Name: 280-114225-C-6-D

Date: 9/21/2018 9:27:06 PM Rack:Tube: 2:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000204 u	ppm	0.000167	81.63	-93.543000	Y 377.433
Al (394.401 nm)	0.002063	ppm	0.001745	84.57	173.692000	Y 377.433
Al H (396.152 nm)	0.039668 u	ppm	0.016712	42.13	-35.123700	Y_R 377.433
As (188.980 nm)	0.003566	ppm	0.000116	3.25	-5.580180	Y 242.219
B (249.678 nm)	0.156419	ppm	0.000494	0.32	586.590000	Y 242.219
Ba (493.408 nm)	0.044989	ppm	0.000792	1.76	4648.690000	Y_R 488.368
Be (234.861 nm)	0.000035 u	ppm	0.000053	> 100.00	-2.045300	Y_R 488.368
Bi (223.061 nm)	-0.001474 u	ppm	0.004053	> 100.00	55.849000	Y 377.433
Ca (315.887 nm)	91.085176	ppm	0.005401	0.01	60057.777878	Y_R 377.433
Cd (214.439 nm)	0.000140	ppm	0.000039	27.77	-9.539880	Y 377.433
Co (228.615 nm)	0.000142 u	ppm	0.000330	> 100.00	-14.944000	Y 242.219
Cr (205.560 nm)	0.000161 u	ppm	0.000251	> 100.00	-9.455490	Y 377.433
Cu (324.754 nm)	0.001718	ppm	0.000189	10.97	169.603000	Y 377.433
Fe (238.204 nm)	0.003369	ppm	0.000096	2.86	33.462281	Y_R 377.433
Fe H (259.940 nm)	-0.076181 u	ppm	0.001351	1.77	9.995690	Y_R 377.433
K (766.491 nm)	2.726580	ppm	0.069999	2.57	4609.840000	Y_R2 488.368
Li (670.783 nm)	0.053427	ppm	0.002935	5.49	-421.906000	Y_R2 488.368
Mg (279.078 nm)	16.024400	ppm	0.025226	0.16	34016.900000	Y 377.433
Mn (257.610 nm)	0.016256	ppm	0.000068	0.42	2926.790000	Y 377.433
Mo (202.032 nm)	0.003965	ppm	0.000671	16.93	61.671300	Y 377.433
Na (589.592 nm)	134.943000 o	ppm	0.751662	0.56	72998.200000	Y_R2 488.368
Na H (589.593 nm)	142.704624	ppm	0.376760	0.26	53568.268844	Y_R4
Ni (231.604 nm)	-0.000677 u	ppm	0.000442	65.26	15.012300	Y 377.433
P (213.618 nm)	0.023782	ppm	0.000489	2.06	24.726700	Y 242.219
Pb (220.353 nm)	-0.000433 u	ppm	0.002256	> 100.00	8.476900	Y 242.219
S (181.972 nm)	51.079571	ppm	0.281665	0.55	23778.782756	Y 377.433
Sb (206.834 nm)	-0.006364 u	ppm	0.002220	34.89	9.539580	Y 377.433
Se (196.026 nm)	0.001689 u	ppm	0.003377	> 100.00	11.393100	Y 242.219
Si (288.158 nm)	6.663270	ppm	0.035268	0.53	27325.600000	Y 377.433
Sn (189.925 nm)	0.000254 u	ppm	0.000379	> 100.00	-0.192225	Y 377.433
Sr (421.552 nm)	0.475804	ppm	0.003996	0.84	54782.193286	Y_R 488.368
Th (288.505 nm)	-0.019173 u	ppm	0.001639	8.55	-10.001300	Y 377.433
Ti (336.122 nm)	0.000301	ppm	0.000120	39.83	129.075000	Y 377.433
Tl (190.794 nm)	0.001550	ppm	0.000317	20.43	5.101580	Y 377.433
U (409.013 nm)	0.005926	ppm	0.004285	72.30	252.434000	Y 377.433
V (292.401 nm)	0.003818	ppm	0.000198	5.19	-105.558000	Y 377.433
Zn (206.200 nm)	0.003908	ppm	0.000152	3.90	17.520300	Y 377.433
Zr (343.823 nm)	0.000497	ppm	0.000078	15.62	133.421000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056351	10868.486124	0.000065	0.01
Y 377.433	1.061508	451997.478107	0.000463	0.04
Y_R 377.433	1.093280	43985.100000	0.000018	0.00
Y_R 488.368	1.098890	40759.700000	0.007291	0.66
Y_R2 488.368	1.113272	79028.546352	0.007588	0.68
Y_R4	1.116610	38279.200000	0.005095	0.46

Sample Name: CCVH-5320321

Date: 9/21/2018 9:30:37 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000707	ppm	0.000793	> 100.00	-168.195000	Y 377.433
Al (394.401 nm)	50.376900 o	ppm	0.008147	0.02	559951.000000	Y 377.433
Al H (396.152 nm)	49.265200	ppm	0.002612	0.01	85093.300000	Y_R 377.433
As (188.980 nm)	0.000930 u	ppm	0.003579	> 100.00	-10.955600	Y 242.219
B (249.678 nm)	0.004126	ppm	0.000229	5.54	-0.076428	Y 242.219
Ba (493.408 nm)	0.000544	ppm	0.000025	4.63	625.172000	Y_R 488.368
Be (234.861 nm)	-0.000707 u	ppm	0.000147	20.79	-332.461000	Y_R 488.368
Bi (223.061 nm)	0.986984	ppm	0.006250	0.63	1648.970000	Y 377.433
Ca (315.887 nm)	0.079391	ppm	0.002403	3.03	50.404372	Y_R 377.433
Cd (214.439 nm)	-0.000458 u	ppm	0.000152	33.09	-7.098030	Y 377.433
Co (228.615 nm)	0.003383	ppm	0.000478	14.11	49.498900	Y 242.219
Cr (205.560 nm)	0.000516	ppm	0.000124	24.07	-8.910100	Y 377.433
Cu (324.754 nm)	0.000347	ppm	0.000080	23.07	558.705000	Y 377.433
Fe (238.204 nm)	49.536784 o	ppm	0.069475	0.14	80825.064260	Y_R 377.433
Fe H (259.940 nm)	49.966800	ppm	0.017112	0.03	45314.100000	Y_R 377.433
K (766.491 nm)	0.000195 u	ppm	0.113660	> 100.00	1755.860000	Y_R2 488.368
Li (670.783 nm)	0.014561	ppm	0.000767	5.27	-958.080000	Y_R2 488.368
Mg (279.078 nm)	-0.010336 u	ppm	0.003198	30.94	-159.724000	Y 377.433
Mn (257.610 nm)	0.000223	ppm	0.000015	6.88	94.248800	Y 377.433
Mo (202.032 nm)	-0.000440 u	ppm	0.000226	51.42	15.835100	Y 377.433
Na (589.592 nm)	240.714000 o	ppm	0.512166	0.21	130293.000000	Y_R2 488.368
Na H (589.593 nm)	249.615912	ppm	0.274519	0.11	93201.763243	Y_R4
Ni (231.604 nm)	0.000024 u	ppm	0.001393	> 100.00	23.425200	Y 377.433
P (213.618 nm)	-0.019563 u	ppm	0.000787	4.02	-23.695000	Y 242.219
Pb (220.353 nm)	-0.001506 u	ppm	0.003288	> 100.00	17.060600	Y 242.219
S (181.972 nm)	5.106363	ppm	0.016407	0.32	2377.032167	Y 377.433
Sb (206.834 nm)	-0.002810 u	ppm	0.000311	11.06	19.332000	Y 377.433
Se (196.026 nm)	-0.002447 u	ppm	0.003351	> 100.00	-5.221630	Y 242.219
Si (288.158 nm)	0.005461	ppm	0.001609	29.46	394.110000	Y 377.433
Sn (189.925 nm)	0.000431	ppm	0.000260	60.42	0.192032	Y 377.433
Sr (421.552 nm)	0.000523	ppm	0.000224	42.76	220.333835	Y_R 488.368
Th (288.505 nm)	4.948990	ppm	0.047528	0.96	4808.640000	Y 377.433
Ti (336.122 nm)	0.000919	ppm	0.000299	32.57	-36.931200	Y 377.433
Tl (190.794 nm)	-0.005549 u	ppm	0.000519	9.34	-8.286290	Y 377.433
U (409.013 nm)	9.904460	ppm	0.006689	0.07	23481.300000	Y 377.433
V (292.401 nm)	-0.003169 u	ppm	0.000040	1.27	-418.949000	Y 377.433
Zn (206.200 nm)	0.000281 u	ppm	0.000425	> 100.00	6.071790	Y 377.433
Zr (343.823 nm)	-0.007138 u	ppm	0.000276	3.87	-116.023000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069456	11003.315234	0.006005	0.56
Y 377.433	1.066513	454128.899887	0.003354	0.31
Y_R 377.433	1.119450	45037.800000	0.002737	0.24
Y_R 488.368	1.124240	41700.300000	0.009228	0.82
Y_R2 488.368	1.122407	79676.978390	0.004972	0.44
Y_R4	1.155750	39621.100000	0.006305	0.55

Sample Name: CCV-5305988

Date: 9/21/2018 9:34:20 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.500234	ppm	0.000761	0.15	12494.700000	Y 377.433
Al (394.401 nm)	0.500811	ppm	0.004579	0.91	5714.090000	Y 377.433
Al H (396.152 nm)	0.579637 u	ppm	0.004329	0.75	956.470000	Y_R 377.433
As (188.980 nm)	0.988436	ppm	0.002303	0.23	1279.520000	Y 242.219
B (249.678 nm)	0.496464	ppm	0.002926	0.59	1862.090000	Y 242.219
Ba (493.408 nm)	0.497955	ppm	0.007220	1.45	46025.900000	Y_R 488.368
Be (234.861 nm)	0.491357	ppm	0.001793	0.36	26605.300000	Y_R 488.368
Bi (223.061 nm)	-0.008852 u	ppm	0.000415	4.69	44.397600	Y 377.433
Ca (315.887 nm)	4.962411	ppm	0.010478	0.21	3266.377214	Y_R 377.433
Cd (214.439 nm)	0.493234	ppm	0.000677	0.14	12517.800000	Y 377.433
Co (228.615 nm)	0.495484	ppm	0.001926	0.39	9852.450000	Y 242.219
Cr (205.560 nm)	0.486272	ppm	0.002830	0.58	2371.020000	Y 377.433
Cu (324.754 nm)	0.501814	ppm	0.001136	0.23	21555.600000	Y 377.433
Fe (238.204 nm)	2.504728	ppm	0.011962	0.48	4113.310423	Y_R 377.433
Fe H (259.940 nm)	2.460330 u	ppm	0.005795	0.24	2306.310000	Y_R 377.433
K (766.491 nm)	48.867600	ppm	0.129736	0.27	52910.100000	Y_R2 488.368
Li (670.783 nm)	0.980557	ppm	0.005658	0.58	12368.200000	Y_R2 488.368
Mg (279.078 nm)	19.628500	ppm	0.063740	0.32	41664.500000	Y 377.433
Mn (257.610 nm)	0.494241	ppm	0.001378	0.28	87374.600000	Y 377.433
Mo (202.032 nm)	0.494904	ppm	0.000151	0.03	5169.300000	Y 377.433
Na (589.592 nm)	25.050900	ppm	0.039331	0.16	13464.500000	Y_R2 488.368
Na H (589.593 nm)	26.588099 u	ppm	0.039992	0.15	10480.797153	Y_R4
Ni (231.604 nm)	0.494711	ppm	0.001592	0.32	1849.770000	Y 377.433
P (213.618 nm)	0.998977	ppm	0.004972	0.50	1069.460000	Y 242.219
Pb (220.353 nm)	0.992684	ppm	0.002986	0.30	2079.210000	Y 242.219
S (181.972 nm)	0.020332	ppm	0.002589	12.73	12.354127	Y 377.433
Sb (206.834 nm)	1.017610	ppm	0.004937	0.49	1664.720000	Y 377.433
Se (196.026 nm)	1.003730	ppm	0.000114	0.01	1329.660000	Y 242.219
Si (288.158 nm)	4.981350	ppm	0.015423	0.31	20521.900000	Y 377.433
Sn (189.925 nm)	0.993564	ppm	0.003634	0.37	1171.300000	Y 377.433
Sr (421.552 nm)	0.494121	ppm	0.004791	0.97	56885.545444	Y_R 488.368
Th (288.505 nm)	-0.014430 u	ppm	0.002308	15.99	-34.037600	Y 377.433
Ti (336.122 nm)	0.498860	ppm	0.001465	0.29	44953.900000	Y 377.433
Tl (190.794 nm)	1.006170	ppm	0.001295	0.13	1801.280000	Y 377.433
U (409.013 nm)	-0.003691 u	ppm	0.000388	10.50	193.985000	Y 377.433
V (292.401 nm)	0.494000	ppm	0.001510	0.31	20003.700000	Y 377.433
Zn (206.200 nm)	0.486052	ppm	0.000428	0.09	1651.120000	Y 377.433
Zr (343.823 nm)	0.495499	ppm	0.001880	0.38	19444.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072471	11034.335614	0.005800	0.54
Y 377.433	1.073026	456902.138134	0.000024	0.00
Y_R 377.433	1.093040	43975.400000	0.001777	0.16
Y_R 488.368	1.107890	41093.700000	0.007456	0.67
Y_R2 488.368	1.097314	77895.722014	0.000959	0.09
Y_R4	1.112190	38127.800000	0.005343	0.48

Sample Name: CCB

Date: 9/21/2018 9:37:54 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001282 u	ppm	0.000086	6.74	-120.326000	Y 377.433
Al (394.401 nm)	-0.012557 u	ppm	0.001051	8.37	-99.765600	Y 377.433
Al H (396.152 nm)	0.142312 Zu	ppm	0.006550	4.60	2.882480 Z	Y_R 377.433
As (188.980 nm)	0.001999	ppm	0.001829	91.46	-7.624290	Y 242.219
B (249.678 nm)	0.002134	ppm	0.000419	19.63	7.527020	Y 242.219
Ba (493.408 nm)	-0.000367 u	ppm	0.000436	> 100.00	505.713000	Y_R 488.368
Be (234.861 nm)	0.000061	ppm	0.000033	54.55	-0.583296	Y_R 488.368
Bi (223.061 nm)	-0.008306 u	ppm	0.001188	14.31	44.875600	Y 377.433
Ca (315.887 nm)	-0.009220 u	ppm	0.000429	4.65	-12.081813	Y_R 377.433
Cd (214.439 nm)	0.000167	ppm	0.000051	30.49	-8.856410	Y 377.433
Co (228.615 nm)	0.000129	ppm	0.000051	39.21	-15.195800	Y 242.219
Cr (205.560 nm)	0.000030 u	ppm	0.000512	> 100.00	-10.084600	Y 377.433
Cu (324.754 nm)	0.000319	ppm	0.000062	19.47	156.735000	Y 377.433
Fe (238.204 nm)	-0.008090 u	ppm	0.000579	7.16	14.771540	Y_R 377.433
Fe H (259.940 nm)	-0.079562 u	ppm	0.001374	1.73	6.935260	Y_R 377.433
K (766.491 nm)	-0.091636 u	ppm	0.049455	53.97	1659.730000	Y_R2 488.368
Li (670.783 nm)	0.008407	ppm	0.002455	29.21	-1042.970000	Y_R2 488.368
Mg (279.078 nm)	0.002503	ppm	0.001724	68.91	12.145300	Y 377.433
Mn (257.610 nm)	-0.000055 u	ppm	0.000003	5.74	45.053300	Y 377.433
Mo (202.032 nm)	0.000322	ppm	0.000120	37.37	23.766700	Y 377.433
Na (589.592 nm)	0.143192	ppm	0.016416	11.46	-19.207400	Y_R2 488.368
Na H (589.593 nm)	0.866006 u	ppm	0.005327	0.62	997.028186	Y_R4
Ni (231.604 nm)	-0.000831 u	ppm	0.000179	21.54	13.091700	Y 377.433
P (213.618 nm)	-0.002236 u	ppm	0.000109	4.86	-3.605440	Y 242.219
Pb (220.353 nm)	-0.001015 u	ppm	0.001339	> 100.00	7.260360	Y 242.219
S (181.972 nm)	0.007945	ppm	0.002180	27.44	4.632665	Y 377.433
Sb (206.834 nm)	-0.004776 u	ppm	0.002218	46.44	12.131400	Y 377.433
Se (196.026 nm)	0.001532	ppm	0.001569	> 100.00	11.170000	Y 242.219
Si (288.158 nm)	-0.003800 u	ppm	0.000781	20.54	355.845000	Y 377.433
Sn (189.925 nm)	-0.000546 u	ppm	0.000463	84.73	-1.135900	Y 377.433
Sr (421.552 nm)	-0.000206 u	ppm	0.000233	> 100.00	130.900147	Y_R 488.368
Th (288.505 nm)	-0.010097 Zu	ppm	0.000702	6.96	-1.275710 Z	Y 377.433
Ti (336.122 nm)	0.000053 u	ppm	0.000145	> 100.00	-106.371000	Y 377.433
Tl (190.794 nm)	0.000409 u	ppm	0.001184	> 100.00	3.076150	Y 377.433
U (409.013 nm)	-0.020975 u	ppm	0.007715	36.78	198.218000	Y 377.433
V (292.401 nm)	0.000575	ppm	0.000006	1.03	-239.104000	Y 377.433
Zn (206.200 nm)	-0.000743 u	ppm	0.000050	6.76	1.761950	Y 377.433
Zr (343.823 nm)	-0.000130 u	ppm	0.000227	> 100.00	108.967000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068382	10992.266382	0.000842	0.08
Y 377.433	1.066170	453982.797269	0.002014	0.19
Y_R 377.433	1.071960	43127.300000	0.003566	0.33
Y_R 488.368	1.076760	39939.200000	0.010821	1.00
Y_R2 488.368	1.078196	76538.571009	0.002498	0.23
Y_R4	1.089620	37354.100000	0.009748	0.89

Sample Name: CCVL-5320254

Date: 9/21/2018 9:41:04 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

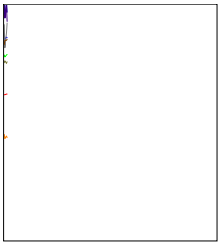
Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008769	ppm	0.000095	1.09	133.134000	Y 377.433
Al (394.401 nm)	0.088076	ppm	0.000467	0.53	1025.740000	Y 377.433
Al H (396.152 nm)	0.238803 u	ppm	0.011320	4.74	174.650000	Y_R 377.433
As (188.980 nm)	0.015175	ppm	0.002153	14.19	9.564640	Y 242.219
B (249.678 nm)	0.099086	ppm	0.000853	0.86	371.379000	Y 242.219
Ba (493.408 nm)	0.009649	ppm	0.000012	0.13	1420.720000	Y_R 488.368
Be (234.861 nm)	0.000947	ppm	0.000019	1.99	46.829900	Y_R 488.368
Bi (223.061 nm)	0.087308	ppm	0.003638	4.17	198.389000	Y 377.433
Ca (315.887 nm)	0.206843	ppm	0.007839	3.79	130.404148	Y_R 377.433
Cd (214.439 nm)	0.005064	ppm	0.000102	2.01	115.585000	Y 377.433
Co (228.615 nm)	0.010313	ppm	0.000037	0.35	187.666000	Y 242.219
Cr (205.560 nm)	0.009767	ppm	0.000410	4.19	37.523500	Y 377.433
Cu (324.754 nm)	0.015657	ppm	0.000593	3.79	810.653000	Y 377.433
Fe (238.204 nm)	0.089058	ppm	0.002730	3.07	173.225141	Y_R 377.433
Fe H (259.940 nm)	0.022549 u	ppm	0.000231	1.02	99.376700	Y_R 377.433
K (766.491 nm)	2.935780	ppm	0.028259	0.96	4828.820000	Y_R2 488.368
Li (670.783 nm)	0.026854 Q	ppm	0.003676	13.69	-788.487000 Q	Y_R2 488.368
Mg (279.078 nm)	0.202731	ppm	0.004761	2.35	436.290000	Y 377.433
Mn (257.610 nm)	0.010330	ppm	0.000033	0.32	1879.820000	Y 377.433
Mo (202.032 nm)	0.019555	ppm	0.000132	0.68	223.858000	Y 377.433
Na (589.592 nm)	1.169500	ppm	0.008404	0.72	536.566000	Y_R2 488.368
Na H (589.593 nm)	1.375135 u	ppm	0.066669	4.85	1184.783200	Y_R4
Ni (231.604 nm)	0.040162	ppm	0.000077	0.19	164.955000	Y 377.433
P (213.618 nm)	2.888150	ppm	0.003519	0.12	3154.820000	Y 242.219
Pb (220.353 nm)	0.007704	ppm	0.000863	11.21	25.511000	Y 242.219
S (181.972 nm)	0.100446	ppm	0.003179	3.16	47.724470	Y 377.433
Sb (206.834 nm)	0.015624	ppm	0.000867	5.55	44.991000	Y 377.433
Se (196.026 nm)	0.016173	ppm	0.004743	29.32	30.422700	Y 242.219
Si (288.158 nm)	0.483378	ppm	0.003013	0.62	2326.590000	Y 377.433
Sn (189.925 nm)	0.097842	ppm	0.000179	0.18	114.901000	Y 377.433
Sr (421.552 nm)	0.009743	ppm	0.000242	2.48	1273.255463	Y_R 488.368
Th (288.505 nm)	0.009070 Q	ppm	0.001695	18.69	17.018900 Q	Y 377.433
Ti (336.122 nm)	0.010005	ppm	0.000114	1.14	792.942000	Y 377.433
Tl (190.794 nm)	0.015988	ppm	0.002314	14.47	30.884400	Y 377.433
U (409.013 nm)	0.054148	ppm	0.001663	3.07	372.890000	Y 377.433
V (292.401 nm)	0.010437	ppm	0.000234	2.24	163.931000	Y 377.433
Zn (206.200 nm)	0.019052	ppm	0.000240	1.26	68.831300	Y 377.433
Zr (343.823 nm)	0.014854	ppm	0.000178	1.20	693.533000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086554	11179.230261	0.002209	0.20
Y 377.433	1.081930	460693.191172	0.000935	0.09
Y_R 377.433	1.090410	43869.600000	0.003241	0.30
Y_R 488.368	1.098550	40747.300000	0.007767	0.71
Y_R2 488.368	1.100943	78153.338193	0.005349	0.49
Y_R4	1.100940	37742.100000	0.011117	1.01

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	31052	30991.8	0.38
9	50000	39552	39245.5	0.71
59	50000	43006	43140.8	1.14
66	10000	4352	4395.3	1.77
70	1000	1465	1486.2	2.80
75	5000	2533	2639.6	3.88
89	50000	63756	63743.4	0.57
105	500	461	441.6	5.46
118	500	537	532.6	1.43
137	10000	8512	8459.4	1.00
140	1E+05	75650	75583.9	0.71
205	50000	58596	57969.2	1.13
6	5000	11113	11261.5	1.42
70/140	2	1.936 %	1.967 %	3.49
156/140	2	1.862 %	1.972 %	6.58

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.00
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-40	V	Deflect	14.6	V
Extract 2	-165.0	V	Omega Lens	7.8	V	Cell Exit	-48	V	Plate Bias	-50	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94	Axis Gain	0.9906	QP Bias	-5.0	V
Mass Offset	126	Axis Offset	-0.03			

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

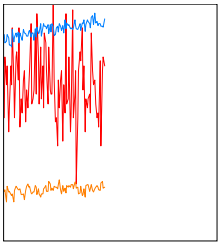
Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587	V

Meters

IF/BK Press	2.13E+2	Pa	TMP Revolution	100.0	%	Reflected Power	5	W
Analyzer Press	1.58E-4	Pa	Carrier Gas	0.90	L/min			

Current Signal

[HMI He]



Mass Range		Count	Avg. Count	RSD [%]
7	50	37	33.0	21.98
51	200	47	38.3	17.91
59	5000	3387	3311.2	4.29
66	1000	224	215.2	8.65
70	200	113	87.0	14.87
75	20	4	1.8	88.29
78	20	0	0.1	407.73
115	5000	1777	1591.9	6.23
118	50	17	18.5	24.13
137	500	266	227.9	9.45
140	10000	6432	6199.8	4.95
205	10000	11029	10206.8	3.90
238	20000	18792	17903.7	3.24
70/140	2	1.757 %	1.404 %	14.33
156/140	1	0.140 %	0.136 %	39.63

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.23
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-28	V	Deflect	0.6	V
Extract 2	-170.0	V	Omega Lens	8.6	V	Cell Exit	-60	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94		Axis Gain	0.9906		QP Bias	-15.0	V
Mass Offset	126		Axis Offset	-0.03				

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587	V

Meters

IF/BK Press	2.12E+2	Pa	TMP Revolution	100.0	%	Reflected Power	5	W
Analyzer Press	2.91E-4	Pa	Carrier Gas	0.66	L/min			

US EPA Tune Check Sample Report

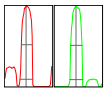
Batch Folder D:\MassHunter Data\li091918.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	4588	0.72	5.00	
9	15747	0.46	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	4611	4572	4636	4567	4558
9	15704	15642	15823	15793	15772

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	720	6.90	6.9 - 7.1		0.794	0.750	[F]
9	2416	8.90	8.9 - 9.1		0.791	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.1	V	Deflect	1.2	V
Extract 2	-165.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-70	V	Cell Exit	-62	V			

 # # Cell Parameters # #

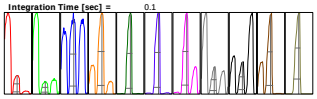
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CollP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
CollP RF	180	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	8237	2.80	5.00	
25	1221	4.98	5.00	
26	1504	3.79	5.00	
59	22004	2.46	5.00	
103	58873	2.39	5.00	
115	10488	3.95	5.00	
205	60638	2.38	5.00	
206	20307	2.31	5.00	
207	17550	2.70	5.00	
208	42379	2.37	5.00	
238	107170	2.11	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	8543	8230	7896	8234	8280
25	1310	1229	1147	1188	1233
26	1529	1542	1478	1554	1416
59	21235	21765	22004	22431	22586
103	56820	58287	59032	59760	60467
115	9978	10192	10540	10706	11025
205	58633	59803	61124	61253	62377
206	19782	19865	20429	20589	20870
207	16976	17351	17367	17891	18166
208	41101	41780	42282	43155	43575
238	104661	105494	106855	108681	110158

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	1322	23.950	23.9 - 24.1		0.760	0.750	[F]
25	193	24.950	24.9 - 25.1		0.793	0.750	[F]
26	233	26.000	25.9 - 26.1		0.779	0.750	[F]
59	3677	59.000	58.9 - 59.1		0.749	0.750	
103	10833	103.050	102.9 - 103.1		0.724	0.750	
115	1903	115.050	114.9 - 115.1		0.731	0.750	
205	11384	205.050	204.9 - 205.1		0.750	0.750	[F]
206	3786	206.000	205.9 - 206.1		0.750	0.750	[F]
207	3226	207.000	206.9 - 207.1		0.741	0.750	
208	8098	208.000	207.9 - 208.1		0.738	0.750	
238	19779	238.000	237.9 - 238.1		0.750	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.6	V	Deflect	0.6	V
Extract 2	-170.0	V	Cell Entrance	-28	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-60	V			

 # # Cell Parameters # #

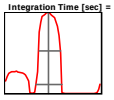
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CollP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
CollP RF	180	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	207393	3.80	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	219535	210399	205452	201621	199960

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	32359	6.900	6.9 - 7.1		0.797	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

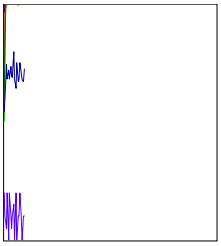
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.8	V	Deflect	14.6	V
Extract 2	-165.0	V	Cell Entrance	-40	V	Plate Bias	-50	V
Omega Bias	-75	V	Cell Exit	-48	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CollP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
CollP RF	180	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

Current Signal

[HMI H2]



Mass	Range	Count	Avg. Count	RSD [%]
7	500	687	670.8	17.93
9	2000	2356	2294.7	15.31
59	5000	6198	6019.9	14.05
63	500	625	553.4	14.52
70	500	596	542.0	13.15
78	20	2	2.1	69.84
89	20000	43501	42495.9	8.88
115	20000	47457	46979.7	7.50
118	200	381	363.2	7.21
137	5000	6134	6040.2	5.41
140	20000	41005	38880.0	7.84
205	10000	36713	35289.5	1.86
238	20000	47020	45516.8	3.79
70/140	2	1.454 %	1.389 %	8.12
156/140	1	1.207 %	1.140 %	7.07

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.14
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-70	V	Cell Entrance	-40	V	Deflect	1.2	V
Extract 2	-165.0	V	Omega Lens	8.1	V	Cell Exit	-62	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94		Axis Gain	0.9906		QP Bias	-15.0 V
Mass Offset	126		Axis Offset	-0.03			

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587 V

Meters

IF/BK Press	2.13E+2	Pa	TMP Revolution	100.0	%	Reflected Power	5	W
Analyzer Press	1.63E-4	Pa	Carrier Gas	0.91	L/min			

Mass	Element Name	Current Value
7	Li	Signal too low
9	Be	0.106849643372781
23	Na	0.116306212018188
24	Mg	0.122301651667964
27	Al	0.126193542983393
39	K	0.126583568417488
45	Sc	0.128651583413861
51	V	0.128406333123359
55	Mn	0.136749503584667
56	Fe	0.125961480334851
59	Co	0.141146390247581
60	Ni	0.14228082347433
63	Cu	0.144199415572867
66	Zn	0.143581700427496
72	Ge	0.141782026462084
75	As	0.141826233493117
77	Se	Signal too low
82	Se	Signal too low
89	Y	0.142605511232955
95	Mo	0.141435761153312
100	Ru	0.144179473808789
101	Ru	0.145661699333929
102	Ru	0.147287325118903
104	Ru	0.147650173235894
105	Pd	0.150113581554898
106	Pd	0.150198046972903

	Mass	Element Name	Current Value
	111	Cd	0.151374221659803
	114	Cd	0.152707277754154
	115	In	0.151942219683667
	118	Sn	0.151474532640346
	121	Sb	0.150923880881717
	137	Ba	0.150010931209879
	175	Lu	0.157905074555723
	193	Ir	0.15979419365857
	205	Tl	0.160450281083449
	208	Pb	0.161598331446213
	209	Bi	0.161105552213821
	232	Th	0.160898840614335
	238	U	0.161772126847902

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:02:25-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:06:12-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:09:59-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:13:52-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:17:39-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	006WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:21:27-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	icis-5314921
Data File Name	007CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:25:15-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	211860	0.00
Li	7	2	HMI He	8929	0.01
Li	7	3	No Gas	10029149	0.00
Be	9	1	HMI H2	7	1299.04
B	11	1	HMI H2	3070	0.31
Na	23	1	HMI H2	537689	0.00
Na	23	2	HMI He	28956	0.01
Mg	24	2	HMI He	497	1.92
Al	27	2	HMI He	70	93.52
K	39	2	HMI He	10470	0.05
Ca	44	2	HMI He	77	25.99
Ti	47	2	HMI He	3	5196.15
V	51	2	HMI He	837	2.73
Cr	52	2	HMI He	380	3.66
Mn	55	2	HMI He	107	18.30
Fe	57	2	HMI He	177	8.06
Co	59	2	HMI He	20	250.00
Ni	60	2	HMI He	280	13.25
Cu	63	2	HMI He	2267	0.90
Zn	66	2	HMI He	963	1.90
As	75	2	HMI He	25	66.14
Se	78	1	HMI H2	25	156.85
Sr	88	2	HMI He	20	500.00
Zr	90	2	HMI He	103	14.30
Nb	93	2	HMI He	300	11.11
Mo	95	2	HMI He	110	8.26
Pd	105	2	HMI He	97	6.18
Ag	107	2	HMI He	17	415.69
Cd	111	2	HMI He	7	2598.08
Sn	120	2	HMI He	147	10.73
Sb	121	2	HMI He	30	293.97
Ba	137	2	HMI He	17	415.69
W	182	2	HMI He	667	2.04
Pt	195	2	HMI He	30	111.11
Tl	205	2	HMI He	137	22.29
Pb	208	2	HMI He	1300	0.12
Th	232	2	HMI He	417	3.37
U	238	2	HMI He	103	19.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1781134	2.33
Sc (IS)	45	1	HMI H2	42109280	0.52
Sc (IS)	45	2	HMI He	819334	0.80
Sc (IS)	45	3	No Gas	109237925	0.48
Ge Internal Standard	72	1	HMI H2	19440162	0.55
Ge Internal Standard	72	2	HMI He	1083920	0.55
In Internal Standard	115	2	HMI He	3072235	0.99
Ho-165	165	2	HMI He	19842548	0.82

Calibration Standard Report

Sample Table

Sample Name	ic-5314899
Data File Name	008CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:29:03-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	800976	0.00
Li	7	2	HMI He	35177	0.00
Li	7	3	No Gas	36461398	0.00
Be	9	1	HMI H2	55802	0.00
B	11	1	HMI H2	64767	0.00
Na	23	1	HMI H2	46707713	0.00
Na	23	2	HMI He	2392081	0.00
Mg	24	2	HMI He	1028692	0.00
Al	27	2	HMI He	223949	0.00
K	39	1	HMI H2	52527066	0.00
K	39	2	HMI He	436098	0.00
Ca	40	1	HMI H2	69525716	0.00
Ca	44	2	HMI He	26188	0.01
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	125371	0.00
Cr	52	2	HMI He	169124	0.00
Mn	55	2	HMI He	53414	0.00
Fe	57	2	HMI He	307187	0.00
Co	59	2	HMI He	329596	0.00
Ni	60	2	HMI He	97404	0.00
Cu	63	2	HMI He	286729	0.00
Zn	66	2	HMI He	29044	0.01
As	75	2	HMI He	17453	0.00
Se	78	1	HMI H2	51472	0.00
Sr	88	2	HMI He	47662	0.00
Zr	90	2	HMI He	640	0.73
Nb	93	2	HMI He	820049	0.00
Mo	95	2	HMI He	115502	0.00
Pd	105	2	HMI He	202612	0.00
Ag	107	2	HMI He	434202	0.00
Cd	111	2	HMI He	45376	0.01
Sn	120	2	HMI He	107114	0.00
Sb	121	2	HMI He	85639	0.00
Ba	137	2	HMI He	27108	0.01
Nd	146	2	HMI He	127156	0.00
Sm	147	2	HMI He	113355	0.00
Sm	150	2	HMI He	109169	0.00
Gd	156	1	HMI H2	1317649	0.00
Gd	157	1	HMI H2	1013774	0.00
W	182	2	HMI He	677737	0.00
Pt	195	2	HMI He	629910	0.00
Tl	205	2	HMI He	1088332	0.00
Pb	208	2	HMI He	1390929	0.00
Th	232	2	HMI He	1764455	0.00
U	238	2	HMI He	2017292	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1713645	0.01	1781134	96.21	60	120	
Sc (IS)	45	1	HMI H2	41984548	0.82	42109280	99.70	60	120	
Sc (IS)	45	2	HMI He	811623	0.79	819334	99.06	60	120	
Sc (IS)	45	3	No Gas	105675355	0.98	109237925	96.74	60	120	
Ge Internal Standard	72	1	HMI H2	19226991	0.99	19440162	98.90	60	120	
Ge Internal Standard	72	2	HMI He	1077820	0.11	1083920	99.44	60	120	
In Internal Standard	115	2	HMI He	3023891	0.91	3072235	98.43	60	120	
Ho-165	165	2	HMI He	19818384	0.81	19842548	99.88	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5314915
Data File Name	009_ICV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:32:51-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	445.339	ppb	1.199	469733	400	111.3	90	110	>+\-10%
Li	7	2	45	440.151	ppb	2.763	20503	400	110.0	90	110	>+\-10%
Li	7	3	45	443.474	ppb	1.985	21302846	400	110.9	90	110	>+\-10%
Be	9	1	6	38.930	ppb	2.653	21531	40	97.3	90	110	
B	11	1	6	35.417	ppb	1.085	24618	40	88.5	90	110	>+\-10%
Na	23	1	45	3976.674	ppb	0.819	18732604	4000	99.4	90	110	>+\-10%
Na	23	2	45	3902.050	ppb	0.995	954045	4000	97.6	90	110	
Mg	24	2	45	4013.217	ppb	1.148	414503	4000	100.3	90	110	
Al	27	2	45	7992.392	ppb	0.552	179603	4000	199.8	90	110	>+\-10%
K	39	1	45	3979.929	ppb	0.933	26224200	4000	99.5	90	110	
K	39	2	45	3961.987	ppb	1.709	179652	4000	99.0	90	110	
Ca	40	1	45	4021.160	ppb	0.030	27845105	4000	100.5	90	110	
Ca	44	2	45	4001.141	ppb	2.710	10560	4000	100.0	90	110	
Ti	47	2	45	-30860.836	ppb	-13.501	1017	40	-77152.1	90	110	>+\-10%
V	51	2	72	39.614	ppb	1.702	50261	40	99.0	90	110	
Cr	52	2	72	40.233	ppb	0.727	68396	40	100.6	90	110	
Mn	55	2	72	41.025	ppb	1.407	22015	40	102.6	90	110	
Fe	57	2	72	7914.801	ppb	1.460	243610	4000	197.9	90	110	>+\-10%
Co	59	2	72	39.853	ppb	0.683	131609	40	99.6	90	110	
Ni	60	2	72	40.779	ppb	0.814	39960	40	101.9	90	110	
Cu	63	2	72	40.360	ppb	0.569	117285	40	100.9	90	110	
Zn	66	2	72	40.179	ppb	4.267	12265	40	100.4	90	110	
As	75	2	72	37.033	ppb	0.488	6491	40	92.6	90	110	
Se	78	1	72	39.953	ppb	1.673	20328	40	99.9	90	110	
Sr	88	2	72	40.994	ppb	1.662	19586	40	102.5	90	110	
Zr	90	2	72	21.756	ppb	39.665	220	40	54.4	90	110	>+\-10%
Nb	93	2	72	74.154	ppb	1.072	304801	80	92.7	90	110	
Mo	95	2	115	39.925	ppb	2.466	47214	40	99.8	90	110	
Pd	105	2	115	39.333	ppb	2.537	81529	40	98.3	90	110	
Ag	107	2	115	37.240	ppb	1.110	165325	40	93.1	90	110	
Cd	111	2	115	38.799	ppb	2.329	18008	40	97.0	90	110	
Sn	120	2	115	39.103	ppb	2.641	42920	40	97.8	90	110	
Sb	121	2	115	40.485	ppb	1.329	35465	40	101.2	90	110	
Ba	137	2	115	40.583	ppb	2.293	11258	40	101.5	90	110	
W	182	2	165	80.218	ppb	1.060	544416	40	200.5	90	110	>+\-10%
Pt	195	2	165	38.800	ppb	0.999	244699	40	97.0	90	110	
Tl	205	2	165	40.145	ppb	1.279	437471	40	100.4	90	110	
Pb	208	2	165	40.444	ppb	0.393	563940	40	101.1	90	110	
Th	232	2	165	37.634	ppb	0.168	665054	40	94.1	90	110	
U	238	2	165	37.867	ppb	1.121	764781	40	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1698035	0.72	1781134	95.33	60	120	
Sc (IS)	45	1	HMI H2	41618372	0.33	42109280	98.83	60	120	
Sc (IS)	45	2	HMI He	814375	0.82	819334	99.39	60	120	
Sc (IS)	45	3	No Gas	104366795	0.33	109237925	95.54	60	120	
Ge Internal Standard	72	1	HMI H2	18991921	0.13	19440162	97.69	60	120	
Ge Internal Standard	72	2	HMI He	1079824	0.51	1083920	99.62	60	120	
In Internal Standard	115	2	HMI He	3091486	0.82	3072235	100.63	60	120	
Ho-165	165	2	HMI He	19839752	0.43	19842548	99.99	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5314921
Data File Name	010_ICB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:36:38-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-7.668	ppb	-52.5	9606553	10	
Be	9	1	0.024	ppb	147.5	20	0.5	
B	11	1	0.682	ppb	79.2	3404	0.5	>RL
Na	23	1	-4.981	ppb	-18.9	513426	25	
Na	23	2	-3.569	ppb	-36.3	28214	25	
Mg	24	2	-1.011	ppb	-22.5	393	25	
Al	27	2	2.346	ppb	76.3	123	15	
K	39	1	-10.470	ppb	-269.2	9178685	50	
K	39	2	-6.670	ppb	-184.2	10224	50	
Ca	40	1	-2.279	ppb	-12.7	205224	50	
Ca	44	2	3.696	ppb	236.1	87	25	
Ti	47	2	-101.626	ppb	-343.6	7	0.5	
V	51	2	0.323	ppb	24.7	1250	1	
Cr	52	2	0.020	ppb	95.9	417	1	
Mn	55	2	-0.044	ppb	-87.5	83	0.5	
Fe	57	2	2.748	ppb	18.2	263	25	
Co	59	2	0.010	ppb	106.3	53	0.5	
Ni	60	2	0.124	ppb	89.1	403	1	
Cu	63	2	-0.002	ppb	-2501.8	2277	1	
Zn	66	2	-0.399	ppb	-28.4	857	5	
As	75	2	0.010	ppb	496.7	27	1	
Se	78	1	-0.007	ppb	-227.8	21	1	
Sr	88	2	0.007	ppb	354.6	23	0.5	
Zr	90	2	4.770	ppb	103.0	130	1	>RL
Nb	93	2	4.627	ppb	8.5	19513	2	>RL
Mo	95	2	0.062	ppb	52.2	187	0.5	
Pd	105	2	0.089	ppb	22.0	287	1	
Ag	107	2	0.021	ppb	10.4	113	1	
Cd	111	2	0.007	ppb	5.1	10	0.5	
Sn	120	2	0.152	ppb	66.9	320	1	
Sb	121	2	0.623	ppb	32.9	587	0.6	>RL
Ba	137	2	-0.013	ppb	-312.7	13	0.5	
W	182	2	0.164	ppb	17.6	1817	1	
Pt	195	2	0.025	ppb	44.8	190	1	
Tl	205	2	0.018	ppb	48.2	337	0.1	
Pb	208	2	-0.010	ppb	-97.2	1187	0.5	
Th	232	2	0.110	ppb	4.7	2400	1	
U	238	2	0.033	ppb	16.1	790	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1728874	0.68	1781134	97.07	60	120	
Sc (IS)	45	1	HMI H2	42013601	1.29	42109280	99.77	60	120	
Sc (IS)	45	2	HMI He	822493	0.37	819334	100.39	60	120	
Sc (IS)	45	3	No Gas	106897845	0.65	109237925	97.86	60	120	
Ge Internal Standard	72	1	HMI H2	19183379	0.80	19440162	98.68	60	120	
Ge Internal Standard	72	2	HMI He	1091363	0.55	1083920	100.69	60	120	
In Internal Standard	115	2	HMI He	3142926	1.61	3072235	102.30	60	120	
Ho-165	165	2	HMI He	20228473	1.08	19842548	101.94	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	icvl-5314916
Data File Name	011LICV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:40:26-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	7.827	ppb	79.824	10292093	50	15.7	70	130	>+/-30%
Be	9	1	6	0.997	ppb	17.116	570	1	99.7	70	130	
Na	23	2	45	42.343	ppb	9.415	40005	50	84.7	70	130	>+/-30%
Mg	24	2	45	46.029	ppb	1.900	5401	50	92.1	70	130	
Al	27	2	45	30.912	ppb	12.027	787	30	103.0	70	130	
K	39	2	45	89.715	ppb	11.800	14670	100	89.7	70	130	
Ca	44	2	45	43.910	ppb	85.684	197	50	87.8	70	130	
V	51	2	72	4.937	ppb	2.255	7189	5	98.7	70	130	
Cr	52	2	72	1.906	ppb	10.480	3701	2	95.3	70	130	
Mn	55	2	72	1.126	ppb	14.727	727	1	112.6	70	130	
Fe	57	2	72	47.623	ppb	7.364	1687	50	95.2	70	130	
Co	59	2	72	0.990	ppb	3.931	3381	1	99.0	70	130	
Ni	60	2	72	1.991	ppb	4.557	2277	2	99.5	70	130	
Cu	63	2	72	1.848	ppb	7.560	7735	2	92.4	70	130	
Zn	66	2	72	10.024	ppb	16.891	3884	10	100.2	70	130	
As	75	2	72	4.804	ppb	0.666	888	5	96.1	70	130	
Se	78	1	72	4.842	ppb	1.861	2550	5	96.8	70	130	
Sr	88	2	72	0.991	ppb	12.854	507	1	99.1	70	130	
Zr	90	2	72	15.215	ppb	12.014	190	0.5	3043.0	70	130	>+/-30%
Nb	93	2	72	9.085	ppb	7.012	38658	2	454.2	70	130	>+/-30%
Mo	95	2	115	1.856	ppb	4.539	2377	2	92.8	70	130	
Pd	105	2	115	0.056	ppb	35.747	220	1	5.6	70	130	>+/-30%
Ag	107	2	115	5.095	ppb	3.038	23391	5	101.9	70	130	
Cd	111	2	115	0.918	ppb	29.601	447	1	91.8	70	130	
Sn	120	2	115	9.839	ppb	5.793	11274	10	98.4	70	130	
Sb	121	2	115	2.375	ppb	14.982	2180	2	118.8	70	130	
Ba	137	2	115	0.975	ppb	42.358	297	1	97.5	70	130	
W	182	2	165	4.823	ppb	2.377	34390	1	482.3	70	130	>+/-30%
Pt	195	2	165	0.030	ppb	18.441	223	1	3.0	70	130	>+/-30%
Tl	205	2	165	1.000	ppb	2.441	11375	1	100.0	70	130	
Pb	208	2	165	0.955	ppb	2.199	15037	1	95.5	70	130	
Th	232	2	165	2.077	ppb	2.330	38248	2	103.9	70	130	
U	238	2	165	0.969	ppb	1.660	20288	1	96.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1734809	2.91	1781134	97.40	60	120	
Sc (IS)	45	1	HMI H2	41751204	0.72	42109280	99.15	60	120	
Sc (IS)	45	2	HMI He	839117	0.88	819334	102.41	60	120	
Sc (IS)	45	3	No Gas	109743838	1.48	109237925	100.46	60	120	
Ge Internal Standard	72	1	HMI H2	19481423	1.17	19440162	100.21	60	120	
Ge Internal Standard	72	2	HMI He	1109804	0.63	1083920	102.39	60	120	
In Internal Standard	115	2	HMI He	3194720	0.52	3072235	103.99	60	120	
Ho-165	165	2	HMI He	20453127	0.76	19842548	103.08	60	120	

CRI Report

Sample Table

Sample Name	cri-5314917
Data File Name	012RLST.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:44:52-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	6.751	ppb	105.242	220483	10	67.5	80	120	>+\-20%
Li	7	2	45	8.718	ppb	230.525	9550	10	87.2	80	120	
Li	7	3	45	7.621	ppb	61.283	10299468	10	76.2	80	120	>+\-20%
Be	9	1	6	0.906	ppb	29.258	523	1	90.6	80	120	
B	11	1	6	0.726	ppb	39.009	3484	1	72.6	80	120	>+\-20%
Na	23	1	45	96.600	ppb	3.176	1006195	100	96.6	80	120	
Na	23	2	45	92.225	ppb	6.797	53108	100	92.2	80	120	
Mg	24	2	45	102.794	ppb	7.094	11634	100	102.8	80	120	
Al	27	2	45	90.314	ppb	3.333	2200	100	90.3	80	120	
K	39	2	45	87.585	ppb	13.286	14834	100	87.6	80	120	
Ca	40	1	45	101.530	ppb	1.764	947229	100	101.5	80	120	
Ca	44	2	45	86.200	ppb	15.045	317	100	86.2	80	120	
Ti	47	2	45	100.000	ppb	0.000	0	1	10000.0	80	120	>+\-20%
V	51	2	72	1.131	ppb	15.590	2344	1	113.1	80	120	
Cr	52	2	72	0.974	ppb	9.500	2114	1	97.4	80	120	
Mn	55	2	72	1.296	ppb	21.452	833	1	129.6	80	120	>+\-20%
Fe	57	2	72	107.047	ppb	5.948	3621	100	107.0	80	120	
Co	59	2	72	0.969	ppb	7.466	3360	1	96.9	80	120	
Ni	60	2	72	1.145	ppb	18.558	1453	1	114.5	80	120	
Cu	63	2	72	0.971	ppb	6.818	5244	1	97.1	80	120	
Zn	66	2	72	0.607	ppb	35.036	1180	1	60.7	80	120	>+\-20%
As	75	2	72	0.977	ppb	7.390	204	1	97.7	80	120	
Se	78	1	72	0.903	ppb	16.274	503	1	90.3	80	120	
Sr	88	2	72	0.962	ppb	3.752	500	1	96.2	80	120	
Zr	90	2	72	5.201	ppb	87.384	137	1	520.1	80	120	>+\-20%
Nb	93	2	72	2.584	ppb	4.223	11388	2	129.2	80	120	>+\-20%
Mo	95	2	115	1.069	ppb	2.931	1443	1	106.9	80	120	
Pd	105	2	115	0.948	ppb	3.360	2167	1	94.8	80	120	
Ag	107	2	115	0.975	ppb	6.654	4571	1	97.5	80	120	
Cd	111	2	115	0.846	ppb	11.577	420	1	84.6	80	120	
Sn	120	2	115	1.168	ppb	5.214	1500	1	116.8	80	120	
Sb	121	2	115	1.160	ppb	5.364	1100	1	116.0	80	120	
Ba	137	2	115	0.979	ppb	18.661	303	1	97.9	80	120	
W	182	2	165	1.030	ppb	6.629	7926	1	103.0	80	120	
Pt	195	2	165	0.957	ppb	5.950	6285	1	95.7	80	120	
Tl	205	2	165	0.971	ppb	4.284	11105	1	97.1	80	120	
Pb	208	2	165	0.983	ppb	0.783	15531	1	98.3	80	120	
Th	232	2	165	0.827	ppb	3.191	15562	1	82.7	80	120	
U	238	2	165	0.915	ppb	1.958	19267	1	91.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1754639	0.96	1781134	98.51	60	120	
Sc (IS)	45	1	HMI H2	43017926	1.19	42109280	102.16	60	120	
Sc (IS)	45	2	HMI He	854041	1.14	819334	104.24	60	120	
Sc (IS)	45	3	No Gas	109875512	0.78	109237925	100.58	60	120	
Ge Internal Standard	72	1	HMI H2	19720788	0.85	19440162	101.44	60	120	
Ge Internal Standard	72	2	HMI He	1127145	0.37	1083920	103.99	60	120	
In Internal Standard	115	2	HMI He	3253823	1.03	3072235	105.91	60	120	
Ho-165	165	2	HMI He	20567555	1.13	19842548	103.65	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	013RLST.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:50:15-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-5.924	ppb	-21.320	217655	10	-59.2	80	120	>+\-20%
Li	7	2	45	-10.421	ppb	-117.357	9220	10	-104.2	80	120	>+\-20%
Li	7	3	45	-2.311	ppb	-132.328	10371181	10	-23.1	80	120	>+\-20%
Be	9	1	6	-0.011	ppb	0.000	0	1	-1.1	80	120	>+\-20%
B	11	1	6	-0.826	ppb	-60.454	2547	1	-82.6	80	120	>+\-20%
Na	23	1	45	-8.865	ppb	-4.607	518793	100	-8.9	80	120	>+\-20%
Na	23	2	45	-6.668	ppb	-55.346	29159	100	-6.7	80	120	>+\-20%
Mg	24	2	45	-0.536	ppb	-72.252	470	100	-0.5	80	120	>+\-20%
Al	27	2	45	0.922	ppb	113.954	97	100	0.9	80	120	>+\-20%
K	39	2	45	-13.374	ppb	-46.406	10544	100	-13.4	80	120	>+\-20%
Ca	40	1	45	-0.758	ppb	-37.045	225921	100	-0.8	80	120	>+\-20%
Ca	44	2	45	16.012	ppb	198.772	127	100	16.0	80	120	>+\-20%
Ti	47	2	45	100.000	ppb	0.000	0	1	10000.0	80	120	>+\-20%
V	51	2	72	0.202	ppb	47.172	1160	1	20.2	80	120	>+\-20%
Cr	52	2	72	-0.037	ppb	-94.296	337	1	-3.7	80	120	>+\-20%
Mn	55	2	72	1.140	ppb	18.269	763	1	114.0	80	120	
Fe	57	2	72	-0.145	ppb	-1534.588	183	100	-0.1	80	120	>+\-20%
Co	59	2	72	0.005	ppb	52.852	40	1	0.5	80	120	>+\-20%
Ni	60	2	72	-0.017	ppb	-409.260	280	1	-1.7	80	120	>+\-20%
Cu	63	2	72	0.015	ppb	576.032	2457	1	1.5	80	120	>+\-20%
Zn	66	2	72	10.483	ppb	6.300	4174	1	1048.3	80	120	>+\-20%
As	75	2	72	0.013	ppb	492.086	29	1	1.3	80	120	>+\-20%
Se	78	1	72	-0.011	ppb	-117.101	20	1	-1.1	80	120	>+\-20%
Sr	88	2	72	0.011	ppb	281.066	27	1	1.1	80	120	>+\-20%
Zr	90	2	72	4.644	ppb	76.894	137	1	464.4	80	120	>+\-20%
Nb	93	2	72	0.634	ppb	15.852	3097	2	31.7	80	120	>+\-20%
Mo	95	2	115	-0.039	ppb	-0.963	70	1	-3.9	80	120	>+\-20%
Pd	105	2	115	-0.005	ppb	-326.044	93	1	-0.5	80	120	>+\-20%
Ag	107	2	115	0.003	ppb	151.155	33	1	0.3	80	120	>+\-20%
Cd	111	2	115	0.005	ppb	364.103	10	1	0.5	80	120	>+\-20%
Sn	120	2	115	0.040	ppb	82.154	207	1	4.0	80	120	>+\-20%
Sb	121	2	115	0.142	ppb	34.064	167	1	14.2	80	120	>+\-20%
Ba	137	2	115	0.029	ppb	353.573	27	1	2.9	80	120	>+\-20%
W	182	2	165	0.010	ppb	131.044	780	1	1.0	80	120	>+\-20%
Pt	195	2	165	0.011	ppb	62.408	107	1	1.1	80	120	>+\-20%
Tl	205	2	165	0.007	ppb	110.028	227	1	0.7	80	120	>+\-20%
Pb	208	2	165	-0.015	ppb	-17.481	1147	1	-1.5	80	120	>+\-20%
Th	232	2	165	0.019	ppb	30.775	797	1	1.9	80	120	>+\-20%
U	238	2	165	0.004	ppb	90.426	193	1	0.4	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1787900	0.81	1781134	100.38	60	120	
Sc (IS)	45	1	HMI H2	43987918	0.64	42109280	104.46	60	120	
Sc (IS)	45	2	HMI He	873003	0.18	819334	106.55	60	120	
Sc (IS)	45	3	No Gas	113688872	0.59	109237925	104.07	60	120	
Ge Internal Standard	72	1	HMI H2	19883394	0.08	19440162	102.28	60	120	
Ge Internal Standard	72	2	HMI He	1152851	0.31	1083920	106.36	60	120	
In Internal Standard	115	2	HMI He	3332080	0.68	3072235	108.46	60	120	
Ho-165	165	2	HMI He	20965741	0.50	19842548	105.66	60	120	

CRI Report

Sample Table

Sample Name	cri5314918
Data File Name	014_CRI.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:54:24-06:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.246	ppb	44.502	153	0.2	122.8	80	120	AFCRI Main CR1 Failed
Na	23	2	45	10.009	ppb	36.947	33708	20	50.0	80	120	AFCRI Main CR1 Failed
Mg	24	2	45	19.708	ppb	11.859	2734	20	98.5	80	120	
Al	27	2	45	26.810	ppb	14.009	727	20	134.1	80	120	AFCRI Main CR1 Failed
K	39	2	45	15.479	ppb	46.039	11975	20	77.4	80	120	AFCRI Main CR1 Failed
Ca	44	2	45	20.355	ppb	154.306	140	20	101.8	80	120	
V	51	2	72	0.455	ppb	26.301	1507	0.2	227.3	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.194	ppb	3.919	760	0.2	97.1	80	120	
(Cr)	53	2	72	0.430	ppb	95.183	527	0.2	214.9	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.411	ppb	9.226	350	0.2	205.4	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	22.594	ppb	13.658	937	20	113.0	80	120	
Co	59	2	72	0.192	ppb	19.046	703	0.2	96.0	80	120	
Ni	60	2	72	0.312	ppb	42.499	627	0.2	156.1	80	120	AFCRI Main CR1 Failed
Cu	63	2	72	0.111	ppb	34.351	2767	0.2	55.4	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.688	ppb	56.404	1240	0.2	343.8	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.199	ppb	39.201	64	0.2	99.6	80	120	
Se	78	1	72	0.198	ppb	44.721	132	0.2	98.9	80	120	
(Se)	82	1	72	-1.121	ppb	-65.313	4037	0.2	-560.6	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	0.863	ppb	4.984	4131	0.4	215.7	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.240	ppb	21.281	423	0.2	120.1	80	120	AFCRI Main CR1 Failed
Pd	105	2	115	0.124	ppb	8.787	380	0.2	62.0	80	120	AFCRI Main CR1 Failed
Ag	107	2	115	0.179	ppb	4.744	873	0.2	89.7	80	120	
Cd	111	2	115	0.167	ppb	21.760	90	0.2	83.3	80	120	
(Cd)	114	2	115	0.213	ppb	6.344	317	0.2	106.3	80	120	
Sn	120	2	115	0.189	ppb	9.848	380	0.2	94.3	80	120	
Sb	121	2	115	0.338	ppb	6.640	350	0.2	169.1	80	120	AFCRI Main CR1 Failed
Ba	137	2	115	0.243	ppb	73.536	90	0.2	121.7	80	120	AFCRI Main CR1 Failed
W	182	2	165	0.207	ppb	23.207	2187	0.2	103.7	80	120	
Pt	195	2	165	0.214	ppb	8.593	1457	0.2	107.1	80	120	
Tl	205	2	165	0.206	ppb	7.902	2507	0.2	102.8	80	120	
(Pb)	206	2	165	0.177	ppb	9.513	923	0.2	88.5	80	120	
(Pb)	207	2	165	0.128	ppb	20.345	767	0.2	64.2	80	120	AFCRI Main CR1 Failed
Pb	208	2	165	0.179	ppb	18.878	3994	0.2	89.4	80	120	
Th	232	2	165	0.169	ppb	5.694	3597	0.2	84.7	80	120	
U	238	2	165	0.186	ppb	12.021	4067	0.2	92.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1836342	1.51	1781134	103.10	60	120	
Sc (IS)	45	1	HMI H2	44090391	0.72	42109280	104.70	60	120	
Sc (IS)	45	2	HMI He	881085	0.15	819334	107.54	60	120	
Sc (IS)	45	3	No Gas	113930262	0.51	109237925	104.30	60	120	
Ge Internal Standard	72	1	HMI H2	20061298	1.44	19440162	103.20	60	120	
Ge Internal Standard	72	2	HMI He	1161049	0.51	1083920	107.12	60	120	
In Internal Standard	115	2	HMI He	3318409	1.11	3072235	108.01	60	120	
Ho-165	165	2	HMI He	20931873	0.40	19842548	105.49	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5311606
Data File Name	015ICSA.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T12:58:12-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.871	ppb	-86.1	9318140	1	
Be	9	1	6	0.001	ppb	3500.7	7	1	
B	11	1	6	-0.429	ppb	-59.5	2684	1	
Na	23	1	45	98508.073	ppb	0.4	445659220	100000	
K	39	1	45	98228.442	ppb	0.7	425353180	100000	
Ca	40	1	45	97835.862	ppb	0.4	663830203	100000	
Ti	47	2	45	-1429541.263	ppb	-1.1	47188	1	
V	51	2	72	0.554	ppb	14.3	1503	1	
Cr	52	2	72	0.224	ppb	45.4	747	1	
Mn	55	2	72	0.789	ppb	28.0	520	1	
Co	59	2	72	0.009	ppb	170.8	50	1	
Ni	60	2	72	0.232	ppb	33.4	497	1	
Cu	63	2	72	0.338	ppb	36.4	3174	1	
Zn	66	2	72	0.328	ppb	140.2	1037	1	
As	75	2	72	0.018	ppb	278.5	27	1	
Se	78	1	72	0.046	ppb	120.6	47	1	
Sr	88	2	72	0.759	ppb	34.6	377	1	
Zr	90	2	72	13.544	ppb	45.0	173	1	>RL or LOD
Nb	93	2	72	0.799	ppb	11.8	3527	1	
Mo	95	2	115	2006.836	ppb	0.9	2315946	2000	>RL or LOD
Pd	105	2	115	-0.009	ppb	-122.2	77	1	
Ag	107	2	115	0.017	ppb	13.4	90	1	
Cd	111	2	115	0.228	ppb	41.3	110	1	
Sn	120	2	115	0.033	ppb	45.2	180	1	
Sb	121	2	115	0.145	ppb	25.3	153	1	
Ba	137	2	115	0.087	ppb	41.5	40	1	
W	182	2	165	0.195	ppb	9.2	2014	1	
Pt	195	2	165	0.016	ppb	20.3	133	1	
Tl	205	2	165	0.006	ppb	42.2	207	1	
Pb	208	2	165	0.072	ppb	10.1	2327	1	
Th	232	2	165	0.053	ppb	12.4	1363	1	
U	238	2	165	0.005	ppb	15.4	203	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1711187	0.29	1781134	96.07	60	120	
Sc (IS)	45	1	HMI H2	41089070	1.00	42109280	97.58	60	120	
Sc (IS)	45	2	HMI He	818068	0.96	819334	99.85	60	120	
Sc (IS)	45	3	No Gas	103171425	1.18	109237925	94.45	60	120	
Ge Internal Standard	72	1	HMI H2	18462379	0.43	19440162	94.97	60	120	
Ge Internal Standard	72	2	HMI He	1064318	0.28	1083920	98.19	60	120	
In Internal Standard	115	2	HMI He	3023789	0.75	3072235	98.42	60	120	
Ho-165	165	2	HMI He	20117358	0.10	19842548	101.38	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5311608
Data File Name	016ICSB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:01:58-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	1042.420	ppb	2.291	796023	100	1042.4	80	120	
Li	7	2	45	971.898	ppb	1.292	34876	100	971.9	80	120	
Li	7	3	45	1045.618	ppb	1.595	36854381	100	1045.6	80	120	
Be	9	1	6	97.915	ppb	1.932	52468	100	97.9	80	120	
B	11	1	6	83.988	ppb	4.194	52686	100	84.0	80	120	
Na	23	1	45	106346.147	ppb	0.130	473747713	100	106346.1	80	120	>+\-20%
K	39	1	45	106660.660	ppb	0.526	454082420	100	106660.7	80	120	
Ca	40	1	45	107442.932	ppb	0.755	717858523	100	107442.9	80	120	
V	51	2	72	98.791	ppb	1.670	121930	100	98.8	80	120	
Cr	52	2	72	97.676	ppb	1.125	162620	100	97.7	80	120	
Mn	55	2	72	99.550	ppb	2.012	52344	100	99.5	80	120	
Co	59	2	72	97.859	ppb	0.279	317502	100	97.9	80	120	
Ni	60	2	72	96.945	ppb	2.479	92963	100	96.9	80	120	
Cu	63	2	72	93.417	ppb	1.914	263818	100	93.4	80	120	
Zn	66	2	72	96.184	ppb	2.526	27534	100	96.2	80	120	
As	75	2	72	92.901	ppb	1.296	15963	100	92.9	80	120	
Se	78	1	72	98.581	ppb	1.091	47456	100	98.6	80	120	
Sr	88	2	72	109.090	ppb	3.494	51179	100	109.1	80	120	
Zr	90	2	72	9.864	ppb	61.925	153	100	9.9	80	120	>+\-20%
Nb	93	2	72	175.250	ppb	3.149	707368	100	175.2	80	120	
Mo	95	2	115	2119.554	ppb	0.899	2465287	100	2119.6	80	120	
Pd	105	2	115	89.660	ppb	2.777	183078	100	89.7	80	120	
Ag	107	2	115	89.742	ppb	0.668	392717	100	89.7	80	120	
Cd	111	2	115	91.753	ppb	2.426	41970	100	91.8	80	120	
Sn	120	2	115	95.137	ppb	2.367	102705	100	95.1	80	120	
Sb	121	2	115	103.610	ppb	0.603	89418	100	103.6	80	120	
Ba	137	2	115	100.210	ppb	1.140	27378	100	100.2	80	120	
W	182	2	165	94.312	ppb	0.454	644434	100	94.3	80	120	
Pt	195	2	165	90.294	ppb	1.875	573342	100	90.3	80	120	
Tl	205	2	165	93.276	ppb	1.134	1023356	100	93.3	80	120	
Pb	208	2	165	93.508	ppb	0.952	1311198	100	93.5	80	120	
Th	232	2	165	95.044	ppb	1.291	1690560	100	95.0	80	120	
U	238	2	165	95.006	ppb	0.660	1932098	100	95.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1645697	0.67	1781134	92.40	60	120	
Sc (IS)	45	1	HMI H2	40462844	0.40	42109280	96.09	60	120	
Sc (IS)	45	2	HMI He	822040	0.77	819334	100.33	60	120	
Sc (IS)	45	3	No Gas	103359822	0.90	109237925	94.62	60	120	
Ge Internal Standard	72	1	HMI H2	17981766	0.83	19440162	92.50	60	120	
Ge Internal Standard	72	2	HMI He	1060984	0.10	1083920	97.88	60	120	
In Internal Standard	115	2	HMI He	3047529	0.69	3072235	99.20	60	120	
Ho-165	165	2	HMI He	19979413	1.30	19842548	100.69	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	017SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:05:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.597	ppb	-4.597	-126.52	209534	500000	
Li	7	2	45	0.179	ppb	0.179	7187.14	9363	500000	
Li	7	3	45	-11.718	ppb	-11.718	-21.76	9489085	50000	
Be	9	1	6	0.064	ppb	0.064	15.97	43	2000	
B	11	1	6	-0.724	ppb	-0.724	-57.05	2574	2000	
Na	23	1	45	56.074	ppb	56.074	8.66	798771	2000	
Na	23	2	45	34.493	ppb	34.493	14.23	38963	400000	
Mg	24	2	45	10.853	ppb	10.853	16.90	1700	400000	
Al	27	2	45	14.941	ppb	14.941	41.76	427	400000	
K	39	1	45	87.737	ppb	87.737	32.02	9645027	400000	
K	39	2	45	5.234	ppb	5.234	112.25	11208	400000	
Ca	40	1	45	22.846	ppb	22.846	20.65	380909	400000	
Ca	44	2	45	2.339	ppb	2.339	765.53	87	400000	
Ti	47	2	45	-382.219	ppb	-382.219	-88.08	17	4000	
V	51	2	72	0.453	ppb	0.453	4.89	1477	2000	
Cr	52	2	72	-0.071	ppb	-0.071	-45.69	273	5000	
Mn	55	2	72	-0.027	ppb	-0.027	-100.14	97	10000	
Fe	57	2	72	17.181	ppb	17.181	10.11	743	400000	
Co	59	2	72	0.012	ppb	0.012	72.59	63	2000	
Ni	60	2	72	0.009	ppb	0.009	644.50	303	5000	
Cu	63	2	72	0.218	ppb	0.218	31.73	3037	5000	
Zn	66	2	72	-0.010	ppb	-0.010	-8158.53	1010	5000	
As	75	2	72	-0.042	ppb	-0.042	-88.98	18	2000	
Se	78	1	72	0.049	ppb	0.049	64.69	51	2000	
Sr	88	2	72	0.018	ppb	0.018	110.49	30	4000	
Zr	90	2	72	3.744	ppb	3.744	91.47	130	1000	
Nb	93	2	72	2.799	ppb	2.799	7.16	12449	200	
Mo	95	2	115	2.285	ppb	2.285	2.79	3007	2000	
Pd	105	2	115	0.095	ppb	0.095	46.06	313	100	
Ag	107	2	115	0.011	ppb	0.011	48.92	70	100	
Cd	111	2	115	0.012	ppb	0.012	251.51	13	2000	
Sn	120	2	115	0.050	ppb	0.050	119.42	217	2000	
Sb	121	2	115	0.051	ppb	0.051	17.99	80	1000	
Ba	137	2	115	0.019	ppb	0.019	286.23	23	5000	
W	182	2	165	0.068	ppb	0.068	30.01	1190	100	
Pt	195	2	165	0.010	ppb	0.010	16.15	100	100	
Tl	205	2	165	0.064	ppb	0.064	4.58	877	2000	
Pb	208	2	165	-0.013	ppb	-0.013	-57.30	1173	5000	
Th	232	2	165	0.098	ppb	0.098	2.99	2267	2000	
U	238	2	165	0.059	ppb	0.059	9.50	1367	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1760965	1.70	1781134	98.87	60	120	
Sc (IS)	45	1	HMI H2	42191864	1.25	42109280	100.20	60	120	
Sc (IS)	45	2	HMI He	858539	0.53	819334	104.78	60	120	
Sc (IS)	45	3	No Gas	106807242	0.61	109237925	97.77	60	120	
Ge Internal Standard	72	1	HMI H2	19486996	0.61	19440162	100.24	60	120	
Ge Internal Standard	72	2	HMI He	1139509	0.43	1083920	105.13	60	120	
In Internal Standard	115	2	HMI He	3312358	1.83	3072235	107.82	60	120	
Ho-165	165	2	HMI He	20914610	1.13	19842548	105.40	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-5291681
Data File Name	018_LR.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:09:30-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	2039.724	ppb	2.905	1137091	2000	102.0	90	110	
V	51	2	72	1953.176	ppb	1.599	2475969	2000	97.7	90	110	
Cr	52	2	72	4875.496	ppb	0.338	8372273	5000	97.5	90	110	
(Cr)	53	2	72	4958.253	ppb	0.790	1030464	5000	99.2	90	110	
Mn	55	2	72	10201.170	ppb	0.734	5533733	10000	102.0	90	110	
Co	59	2	72	2042.722	ppb	0.650	6850864	2000	102.1	90	110	
Ni	60	2	72	5081.532	ppb	0.649	5022575	5000	101.6	90	110	
Cu	63	2	72	4884.651	ppb	0.475	14142213	5000	97.7	90	110	
Zn	66	2	72	5281.636	ppb	0.966	1510364	5000	105.6	90	110	
As	75	2	72	1860.352	ppb	0.393	329962	2000	93.0	90	110	
Se	78	1	72	1983.914	ppb	0.564	1016674	2000	99.2	90	110	
(Se)	82	1	72	1814.531	ppb	0.848	442227	2000	90.7	90	110	
Mo	95	2	115	1992.657	ppb	1.185	2408038	2000	99.6	90	110	
Cd	111	2	115	1921.242	ppb	0.287	912878	2000	96.1	90	110	
(Cd)	114	2	115	2041.388	ppb	0.852	2507148	2000	102.1	90	110	
Sn	120	2	115	1996.996	ppb	1.520	2237063	2000	99.8	90	110	
Sb	121	2	115	959.910	ppb	0.960	860455	1000	96.0	90	110	
Ba	137	2	115	5054.779	ppb	2.067	1434110	5000	101.1	90	110	
Tl	205	2	165	984.744	ppb	0.999	10968933	2000	49.2	90	110	LRS Main CR1 Failed
(Pb)	206	2	165	5003.506	ppb	1.350	17019910	5000	100.1	90	110	
(Pb)	207	2	165	4979.323	ppb	1.566	15728313	5000	99.6	90	110	
Pb	208	2	165	4981.012	ppb	1.289	70848608	5000	99.6	90	110	
Th	232	2	165	890.808	ppb	1.013	16085626	2000	44.5	90	110	LRS Main CR1 Failed
U	238	2	165	1836.467	ppb	1.230	37918962	2000	91.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1712396	0.74	1781134	96.14	60	120	
Sc (IS)	45	1	HMI H2	41587818	0.61	42109280	98.76	60	120	
Sc (IS)	45	2	HMI He	830488	0.62	819334	101.36	60	120	
Sc (IS)	45	3	No Gas	103348375	0.67	109237925	94.61	60	120	
Ge Internal Standard	72	1	HMI H2	19152007	0.79	19440162	98.52	60	120	
Ge Internal Standard	72	2	HMI He	1096794	0.72	1083920	101.19	60	120	
In Internal Standard	115	2	HMI He	3166390	0.48	3072235	103.06	60	120	
Ho-165	165	2	HMI He	20286836	1.36	19842548	102.24	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	019SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:13:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.197	ppb	0.197	1617.32	209010	500000	
Li	7	2	45	4.607	ppb	4.607	186.90	9263	500000	
Li	7	3	45	-9.398	ppb	-9.398	-38.23	9586949	50000	
Be	9	1	6	0.845	ppb	0.845	16.80	483	2000	
B	11	1	6	-1.370	ppb	-1.370	-15.73	2127	2000	
Na	23	1	45	-20.008	ppb	-20.008	-2.48	438803	2000	
Na	23	2	45	-20.229	ppb	-20.229	-8.79	24689	400000	
Mg	24	2	45	-0.924	ppb	-0.924	-4.50	410	400000	
Al	27	2	45	2.660	ppb	2.660	97.07	133	400000	
K	39	1	45	52.622	ppb	52.622	19.58	9341847	400000	
K	39	2	45	-15.792	ppb	-15.792	-43.78	10017	400000	
Ca	40	1	45	-0.750	ppb	-0.750	-36.41	213302	400000	
Ca	44	2	45	1.767	ppb	1.767	928.93	83	400000	
Ti	47	2	45	-99.064	ppb	-99.064	-348.05	7	4000	
V	51	2	72	0.547	ppb	0.547	25.75	1560	2000	
Cr	52	2	72	0.598	ppb	0.598	30.35	1430	5000	
Mn	55	2	72	1.360	ppb	1.360	14.94	857	10000	
Fe	57	2	72	2.489	ppb	2.489	75.53	260	400000	
Co	59	2	72	0.236	ppb	0.236	25.66	823	2000	
Ni	60	2	72	0.526	ppb	0.526	24.63	813	5000	
Cu	63	2	72	0.621	ppb	0.621	11.23	4144	5000	
Zn	66	2	72	0.849	ppb	0.849	35.91	1233	5000	
As	75	2	72	0.262	ppb	0.262	52.17	73	2000	
Se	78	1	72	0.647	ppb	0.647	22.27	359	2000	
Sr	88	2	72	0.006	ppb	0.006	532.36	23	4000	
Zr	90	2	72	-1.071	ppb	-1.071	-1028.63	100	1000	
Nb	93	2	72	0.719	ppb	0.719	11.59	3344	200	
Mo	95	2	115	3.193	ppb	3.193	5.11	4064	2000	
Pd	105	2	115	0.008	ppb	0.008	344.59	120	100	
Ag	107	2	115	0.000	ppb	0.000	-1435.29	17	100	
Cd	111	2	115	0.231	ppb	0.231	100.12	120	2000	
Sn	120	2	115	3.952	ppb	3.952	2.74	4684	2000	
Sb	121	2	115	6.185	ppb	6.185	10.63	5701	1000	
Ba	137	2	115	0.513	ppb	0.513	43.98	167	5000	
W	182	2	165	0.012	ppb	0.012	176.90	773	100	
Pt	195	2	165	0.011	ppb	0.011	61.13	103	100	
Tl	205	2	165	0.142	ppb	0.142	13.94	1740	2000	
Pb	208	2	165	0.520	ppb	0.520	21.42	8815	5000	
Th	232	2	165	1.897	ppb	1.897	7.41	34977	2000	
U	238	2	165	1.032	ppb	1.032	1.80	21610	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1731304	1.64	1781134	97.20	60	120	
Sc (IS)	45	1	HMI H2	41519358	0.21	42109280	98.60	60	120	
Sc (IS)	45	2	HMI He	838297	1.08	819334	102.31	60	120	
Sc (IS)	45	3	No Gas	107202805	0.71	109237925	98.14	60	120	
Ge Internal Standard	72	1	HMI H2	19280069	0.16	19440162	99.18	60	120	
Ge Internal Standard	72	2	HMI He	1111172	0.21	1083920	102.51	60	120	
In Internal Standard	115	2	HMI He	3239833	0.79	3072235	105.46	60	120	
Ho-165	165	2	HMI He	20470150	1.17	19842548	103.16	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	020_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:17:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	491.711	ppb	0.603	504616	500	98.3	90	110	
Li	7	2	45	465.758	ppb	2.922	22058	500	93.2	90	110	
Li	7	3	45	480.624	ppb	2.051	22685456	500	96.1	90	110	
Be	9	1	6	48.902	ppb	3.384	27853	50	97.8	90	110	
B	11	1	6	50.926	ppb	3.628	35144	50	101.9	90	110	
Na	23	1	45	4971.530	ppb	1.075	23650177	5000	99.4	90	110	
Na	23	2	45	4949.174	ppb	2.628	1252196	5000	99.0	90	110	
Mg	24	2	45	4903.444	ppb	1.640	527357	5000	98.1	90	110	
Al	27	2	45	4919.202	ppb	1.351	115154	5000	98.4	90	110	
K	39	1	45	5006.299	ppb	0.407	31109748	5000	100.1	90	110	
K	39	2	45	4934.245	ppb	1.166	230374	5000	98.7	90	110	
Ca	40	1	45	5027.515	ppb	0.375	35302563	5000	100.6	90	110	
Ca	44	2	45	5133.858	ppb	1.207	14090	5000	102.7	90	110	
Ti	47	2	45	-388.348	ppb	-217.806	17	50	-776.7	90	110	>+\-10%
V	51	2	72	49.241	ppb	1.171	64778	50	98.5	90	110	
Cr	52	2	72	49.259	ppb	0.757	87019	50	98.5	90	110	
Mn	55	2	72	51.311	ppb	2.520	28612	50	102.6	90	110	
Fe	57	2	72	4852.200	ppb	2.100	155413	5000	97.0	90	110	
Co	59	2	72	49.472	ppb	0.964	169936	50	98.9	90	110	
Ni	60	2	72	49.120	ppb	0.828	50007	50	98.2	90	110	
Cu	63	2	72	48.706	ppb	1.810	146727	50	97.4	90	110	
Zn	66	2	72	50.449	ppb	2.913	15762	50	100.9	90	110	
As	75	2	72	48.774	ppb	4.165	8885	50	97.5	90	110	
Se	78	1	72	50.229	ppb	1.566	25909	50	100.5	90	110	
Sr	88	2	72	49.176	ppb	1.805	24439	50	98.4	90	110	
Zr	90	2	72	135.634	ppb	8.054	867	50	271.3	90	110	>+\-10%
Nb	93	2	72	93.897	ppb	1.128	401366	100	93.9	90	110	
Mo	95	2	115	49.671	ppb	1.058	60713	50	99.3	90	110	
Pd	105	2	115	49.497	ppb	1.270	106072	50	99.0	90	110	
Ag	107	2	115	48.302	ppb	0.090	221733	50	96.6	90	110	
Cd	111	2	115	48.498	ppb	1.105	23271	50	97.0	90	110	
Sn	120	2	115	49.358	ppb	2.192	55974	50	98.7	90	110	
Sb	121	2	115	50.699	ppb	1.821	45912	50	101.4	90	110	
Ba	137	2	115	49.519	ppb	0.853	14201	50	99.0	90	110	
W	182	2	165	47.750	ppb	0.611	335438	50	95.5	90	110	
Pt	195	2	165	47.634	ppb	0.488	310695	50	95.3	90	110	
Tl	205	2	165	49.117	ppb	0.687	553546	50	98.2	90	110	
Pb	208	2	165	49.401	ppb	0.568	712109	50	98.8	90	110	
Th	232	2	165	47.608	ppb	1.158	869971	50	95.2	90	110	
U	238	2	165	45.936	ppb	1.053	959500	50	91.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1749107	0.45	1781134	98.20	60	120	
Sc (IS)	45	1	HMI H2	42269104	0.19	42109280	100.38	60	120	
Sc (IS)	45	2	HMI He	848169	0.50	819334	103.52	60	120	
Sc (IS)	45	3	No Gas	106252852	0.92	109237925	97.27	60	120	
Ge Internal Standard	72	1	HMI H2	19257942	0.58	19440162	99.06	60	120	
Ge Internal Standard	72	2	HMI He	1123252	0.97	1083920	103.63	60	120	
In Internal Standard	115	2	HMI He	3196695	0.18	3072235	104.05	60	120	
Ho-165	165	2	HMI He	20518936	0.26	19842548	103.41	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	021_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:20:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.041	ppb	-62.8	9865448	10	
Be	9	1	6	0.103	ppb	78.3	67	0.5	
B	11	1	6	-0.417	ppb	-109.9	2837	0.5	
Na	23	1	45	-22.320	ppb	-3.1	440226	25	
Na	23	2	45	-26.033	ppb	-5.1	23871	25	
Mg	24	2	45	-1.388	ppb	-35.3	370	25	
Al	27	2	45	3.095	ppb	136.7	147	15	
K	39	1	45	61.486	ppb	16.6	9642402	50	>RL
K	39	2	45	0.688	ppb	1215.5	11017	50	
Ca	40	1	45	0.763	ppb	60.8	229915	50	
Ca	44	2	45	4.716	ppb	321.6	93	25	
Ti	47	2	45	3.844	ppb	4332.9	3	0.5	>RL
V	51	2	72	0.330	ppb	54.2	1310	1	
Cr	52	2	72	0.050	ppb	44.0	487	1	
Mn	55	2	72	0.152	ppb	49.0	197	0.5	
Fe	57	2	72	5.209	ppb	18.7	353	25	
Co	59	2	72	0.024	ppb	14.3	103	0.5	
Ni	60	2	72	0.046	ppb	151.3	340	1	
Cu	63	2	72	0.100	ppb	25.4	2670	1	
Zn	66	2	72	-0.051	ppb	-779.9	993	5	
As	75	2	72	0.072	ppb	141.2	39	1	
Se	78	1	72	0.084	ppb	47.7	69	1	
Sr	88	2	72	0.018	ppb	331.1	30	0.5	
Zr	90	2	72	9.152	ppb	1.2	160	1	>RL
Nb	93	2	72	2.883	ppb	13.2	12756	2	>RL
Mo	95	2	115	0.320	ppb	2.9	520	0.5	
Pd	105	2	115	0.083	ppb	25.1	287	1	
Ag	107	2	115	0.014	ppb	39.1	83	1	
Cd	111	2	115	0.033	ppb	128.3	23	0.5	
Sn	120	2	115	0.604	ppb	35.7	860	1	
Sb	121	2	115	1.222	ppb	4.3	1170	0.6	>RL
Ba	137	2	115	0.019	ppb	279.0	23	0.5	
W	182	2	165	0.075	ppb	37.6	1230	1	
Pt	195	2	165	0.017	ppb	66.2	143	1	
Tl	205	2	165	0.030	ppb	15.0	480	0.1	
Pb	208	2	165	0.021	ppb	46.5	1667	0.5	
Th	232	2	165	0.096	ppb	6.3	2200	1	
U	238	2	165	0.095	ppb	4.3	2110	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1805102	1.64	1781134	101.35	60	120	
Sc (IS)	45	1	HMI H2	42682449	1.04	42109280	101.36	60	120	
Sc (IS)	45	2	HMI He	859804	0.35	819334	104.94	60	120	
Sc (IS)	45	3	No Gas	109580452	0.52	109237925	100.31	60	120	
Ge Internal Standard	72	1	HMI H2	19639468	1.30	19440162	101.03	60	120	
Ge Internal Standard	72	2	HMI He	1134861	0.40	1083920	104.70	60	120	
In Internal Standard	115	2	HMI He	3289615	0.51	3072235	107.08	60	120	
Ho-165	165	2	HMI He	20694515	0.82	19842548	104.29	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	022LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:24:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	2.969	ppb	71.995	10185106	50	5.9	70	130	>+/-30%
Be	9	1	6	0.900	ppb	26.818	543	1	90.0	70	130	
Na	23	2	45	21.810	ppb	10.977	36263	50	43.6	70	130	>+/-30%
Mg	24	2	45	48.514	ppb	4.627	5875	50	97.0	70	130	
Al	27	2	45	31.645	ppb	10.658	833	30	105.5	70	130	
K	39	2	45	90.457	ppb	4.998	15241	100	90.5	70	130	
Ca	44	2	45	61.593	ppb	30.516	253	50	123.2	70	130	
V	51	2	72	4.898	ppb	3.715	7372	5	98.0	70	130	
Cr	52	2	72	2.127	ppb	3.035	4217	2	106.3	70	130	
Mn	55	2	72	1.012	ppb	15.862	687	1	101.2	70	130	
Fe	57	2	72	53.324	ppb	14.423	1927	50	106.6	70	130	
Co	59	2	72	1.036	ppb	4.997	3651	1	103.6	70	130	
Ni	60	2	72	1.795	ppb	6.052	2150	2	89.8	70	130	
Cu	63	2	72	1.931	ppb	10.525	8236	2	96.6	70	130	
Zn	66	2	72	10.954	ppb	2.967	4291	10	109.5	70	130	
As	75	2	72	4.536	ppb	8.564	867	5	90.7	70	130	
Se	78	1	72	4.952	ppb	3.994	2642	5	99.0	70	130	
Sr	88	2	72	0.971	ppb	21.555	513	1	97.1	70	130	
Zr	90	2	72	11.747	ppb	95.383	177	0.5	2349.4	70	130	>+/-30%
Nb	93	2	72	6.064	ppb	5.115	26753	2	303.2	70	130	>+/-30%
Mo	95	2	115	1.986	ppb	7.257	2617	2	99.3	70	130	
Pd	105	2	115	0.004	ppb	321.057	113	1	0.4	70	130	>+/-30%
Ag	107	2	115	4.883	ppb	3.603	23128	5	97.7	70	130	
Cd	111	2	115	0.915	ppb	11.311	460	1	91.5	70	130	
Sn	120	2	115	10.269	ppb	4.863	12135	10	102.7	70	130	
Sb	121	2	115	2.648	ppb	2.672	2504	2	132.4	70	130	>+/-30%
Ba	137	2	115	0.911	ppb	26.892	287	1	91.1	70	130	
W	182	2	165	4.826	ppb	1.238	34979	1	482.6	70	130	>+/-30%
Pt	195	2	165	0.029	ppb	21.146	220	1	2.9	70	130	>+/-30%
Tl	205	2	165	0.988	ppb	3.831	11425	1	98.8	70	130	
Pb	208	2	165	1.011	ppb	4.555	16104	1	101.1	70	130	
Th	232	2	165	2.176	ppb	0.316	40705	2	108.8	70	130	
U	238	2	165	0.961	ppb	1.887	20452	1	96.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1826127	1.62	1781134	102.53	60	120	
Sc (IS)	45	1	HMI H2	43420918	0.61	42109280	103.11	60	120	
Sc (IS)	45	2	HMI He	869778	1.04	819334	106.16	60	120	
Sc (IS)	45	3	No Gas	110032828	0.38	109237925	100.73	60	120	
Ge Internal Standard	72	1	HMI H2	19740828	0.53	19440162	101.55	60	120	
Ge Internal Standard	72	2	HMI He	1146207	0.62	1083920	105.75	60	120	
In Internal Standard	115	2	HMI He	3296570	0.59	3072235	107.30	60	120	
Ho-165	165	2	HMI He	20790142	0.36	19842548	104.78	60	120	

Blank Report

Sample Table

Sample Name	mb 280-429568/1-a
Data File Name	023_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:28:25-06:00
Sample Type	Blank
Dilution	1
Comment	429568 6020A dod5
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-2.781	ppb	-52.15253833	220542	0.5
Li	7	2	45	-12.158	ppb	-149.6707599	9500	0.5
Li	7	3	45	-10.494	ppb	-56.21870212	10358805	10
Be	9	1	6	0.078	ppb	45.35531247	53	0.5
B	11	1	6	-1.162	ppb	-30.62246177	2407	0.5
Na	23	1	45	58.530	ppb	27.15265441	848702	25
Na	23	2	45	49.260	ppb	20.06594629	44921	25
Mg	24	2	45	0.512	ppb	80.0656343	607	25
Al	27	2	45	3.052	ppb	32.02026651	153	15
K	39	1	45	-923.074	ppb	-0.67130332	5493250	50
K	39	2	45	14.343	ppb	77.63304935	12235	50
Ca	40	1	45	6.421	ppb	1.569362017	279245	50
Ca	44	2	45	7.553	ppb	168.5268682	107	25
Ti	47	2	45	9.307	ppb	1687.761401	3	0.5
V	51	2	72	-0.035	ppb	-76.00024899	863	1
Cr	52	2	72	0.065	ppb	27.9009374	533	1
Mn	55	2	72	0.297	ppb	44.05901069	290	0.5
Fe	57	2	72	5.388	ppb	47.58934129	373	25
Co	59	2	72	0.015	ppb	84.61090941	77	0.5
Ni	60	2	72	0.848	ppb	23.05073758	1207	1
Cu	63	2	72	0.077	ppb	115.4977256	2704	1
Zn	66	2	72	2.438	ppb	42.68731487	1800	5
As	75	2	72	0.006	ppb	399.236881	28	1
Se	78	1	72	0.048	ppb	72.71434961	52	1
Sr	88	2	72	0.048	ppb	123.0919925	47	0.5
Zr	90	2	72	3.020	ppb	399.5369496	130	1
Nb	93	2	72	0.685	ppb	13.35640216	3404	2
Mo	95	2	115	0.088	ppb	20.29004168	233	0.5
Pd	105	2	115	-0.017	ppb	-54.56319795	67	1
Ag	107	2	115	0.007	ppb	17.20397772	53	1
Cd	111	2	115	0.012	ppb	93.54785768	13	0.5
Sn	120	2	115	0.310	ppb	12.8798224	530	1
Sb	121	2	115	0.421	ppb	20.92207343	433	0.6
Ba	137	2	115	0.061	ppb	83.95405325	37	0.5
W	182	2	165	0.039	ppb	12.17520119	993	1
Pt	195	2	165	0.015	ppb	26.80559102	133	1
Tl	205	2	165	0.019	ppb	21.16399732	363	0.1
Pb	208	2	165	0.042	ppb	34.84289669	2013	0.5
Th	232	2	165	0.064	ppb	1.049491526	1657	1
U	238	2	165	0.043	ppb	7.069962929	1030	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1844923	0.75	1781134	103.58	60	120	
Sc (IS)	45	1	HMI H2	44176006	0.71	42109280	104.91	60	120	
Sc (IS)	45	2	HMI He	904217	0.70	819334	110.36	60	120	
Sc (IS)	45	3	No Gas	116212568	2.12	109237925	106.38	60	120	
Ge Internal Standard	72	1	HMI H2	20080159	1.09	19440162	103.29	60	120	
Ge Internal Standard	72	2	HMI He	1179953	0.90	1083920	108.86	60	120	
In Internal Standard	115	2	HMI He	3364690	1.02	3072235	109.52	60	120	
Ho-165	165	2	HMI He	21219336	1.68	19842548	106.94	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-429568/2-a
Data File Name	024_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:32:15-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429568 6020A dod5
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	69.043	69.043	ppb	1.337	270626	400	17.3	80	120	>+/-20%
Li	7	2	45	62.242	62.242	ppb	22.898	11801	400	15.6	80	120	>+/-20%
Li	7	3	45	66.062	66.062	ppb	3.127	12797042	400	16.5	80	120	>+/-20%
Be	9	1	6	38.409	38.409	ppb	1.800	22613	40	96.0	80	120	
Na	23	2	45	3.432	3.432	ppb	5.071	33193	40	8.6	80	120	>+/-20%
Mg	24	2	45	1.465	1.465	ppb	86.092	723	40	3.7	80	120	>+/-20%
Al	27	2	45	406.494	406.494	ppb	2.807	10320	40	1016.2	80	120	>+/-20%
K	39	2	45	0.401	0.401	ppb	2431.335	11691	40	1.0	80	120	>+/-20%
Ca	44	2	45	289.651	289.651	ppb	24.272	937	40	724.1	80	120	>+/-20%
V	51	2	72	39.702	39.702	ppb	1.683	55925	40	99.3	80	120	
Cr	52	2	72	40.644	40.644	ppb	1.145	76715	40	101.6	80	120	
Mn	55	2	72	42.591	42.591	ppb	2.104	25374	40	106.5	80	120	
Fe	57	2	72	399.189	399.189	ppb	5.191	13826	40	998.0	80	120	>+/-20%
Co	59	2	72	40.955	40.955	ppb	0.600	150173	40	102.4	80	120	
Ni	60	2	72	40.070	40.070	ppb	2.316	43599	40	100.2	80	120	
Cu	63	2	72	39.800	39.800	ppb	1.950	128459	40	99.5	80	120	
Zn	66	2	72	39.350	39.350	ppb	0.875	13359	40	98.4	80	120	
As	75	2	72	36.547	36.547	ppb	2.338	7113	40	91.4	80	120	
Se	78	1	72	37.872	37.872	ppb	1.170	20657	40	94.7	80	120	
Nb	93	2	72	0.578	0.578	ppb	15.587	2967	40	1.4	80	120	>+/-20%
Mo	95	2	115	36.475	36.475	ppb	1.957	47789	40	91.2	80	120	
Pd	105	2	115	-0.012	-0.012	ppb	-143.484	80	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.285	40.285	ppb	2.070	198094	40	100.7	80	120	
Cd	111	2	115	38.354	38.354	ppb	5.116	19713	40	95.9	80	120	
Sn	120	2	115	37.633	37.633	ppb	0.889	45754	40	94.1	80	120	
Sb	121	2	115	38.053	38.053	ppb	1.560	36921	40	95.1	80	120	
Ba	137	2	115	39.789	39.789	ppb	4.987	12225	40	99.5	80	120	
W	182	2	165	11.309	11.309	ppb	1.594	82781	40	28.3	80	120	>+/-20%
Pt	195	2	165	0.020	0.020	ppb	26.579	167	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.003	40.003	ppb	0.850	466732	40	100.0	80	120	
Pb	208	2	165	40.618	40.618	ppb	2.474	606302	40	101.5	80	120	
Th	232	2	165	36.012	36.012	ppb	1.112	681352	40	90.0	80	120	
U	238	2	165	36.777	36.777	ppb	2.053	795181	40	91.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1807561	1.05	1781134	101.48	60	120	
Sc (IS)	45	1	HMI H2	45095603	0.40	42109280	107.09	60	120	
Sc (IS)	45	2	HMI He	913348	1.08	819334	111.47	60	120	
Sc (IS)	45	3	No Gas	117900085	0.42	109237925	107.93	60	120	
Ge Internal Standard	72	1	HMI H2	20358898	0.49	19440162	104.73	60	120	
Ge Internal Standard	72	2	HMI He	1198968	0.45	1083920	110.61	60	120	
In Internal Standard	115	2	HMI He	3424344	0.43	3072235	111.46	60	120	
Ho-165	165	2	HMI He	21242503	1.30	19842548	107.06	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-1-b
Data File Name	025SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:36:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	758.716	ppb	758.716	1.67	350437	500000	
Li	7	2	45	398.962	ppb	398.962	6.10	19879	500000	
Li	7	3	45	539.300	ppb	539.300	0.92	22440255	50000	
Be	9	1	6	0.114	ppb	0.114	38.00	50	2000	
B	11	1	6	992.215	ppb	992.215	0.15	440892	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	1960978.059	ppb	1960978.059	0.21	476111300	400000	
Mg	24	2	45	709819.376	ppb	709819.376	0.69	74972546	400000	
Al	27	2	45	11.981	ppb	11.981	10.41	347	400000	
K	39	1	45	2878.506	ppb	2878.506	1.49	11537780	400000	
K	39	2	45	4707.702	ppb	4707.702	0.44	216554	400000	
Ca	40	1	45	509921.100	ppb	509921.100	1.46	1880318745	400000	
Ca	44	2	45	718376.666	ppb	718376.666	1.49	1927335	400000	
Ti	47	2	45	-98.399	ppb	-98.399	-174.62	7	4000	
V	51	2	72	1.366	ppb	1.366	12.46	2364	2000	
Cr	52	2	72	0.198	ppb	0.198	25.01	663	5000	
Mn	55	2	72	1693.170	ppb	1693.170	0.35	841808	10000	
Fe	57	2	72	4815.552	ppb	4815.552	1.17	138023	400000	
Co	59	2	72	2.078	ppb	2.078	2.20	6405	2000	
Ni	60	2	72	3.399	ppb	3.399	14.31	3337	5000	
Cu	63	2	72	0.142	ppb	0.142	121.82	2477	5000	
Zn	66	2	72	3.139	ppb	3.139	17.59	1717	5000	
As	75	2	72	16.076	ppb	16.076	1.67	2636	2000	
Se	78	1	72	0.361	ppb	0.361	31.04	137	2000	
Sr	88	2	72	13422.603	ppb	13422.603	0.37	5963715	4000	
Zr	90	2	72	1098.780	ppb	1098.780	6.06	5601	1000	
Nb	93	2	72	0.974	ppb	0.974	17.74	4007	200	
Mo	95	2	115	4.332	ppb	4.332	5.67	4851	2000	
Pd	105	2	115	0.094	ppb	0.094	49.91	270	100	
Ag	107	2	115	0.019	ppb	0.019	46.30	93	100	
Cd	111	2	115	0.078	ppb	0.078	76.37	40	2000	
Sn	120	2	115	0.571	ppb	0.571	9.72	717	2000	
Sb	121	2	115	1.095	ppb	1.095	14.39	917	1000	
Ba	137	2	115	15.117	ppb	15.117	13.11	3901	5000	
W	182	2	165	0.223	ppb	0.223	2.84	1984	100	
Pt	195	2	165	0.013	ppb	0.013	84.59	103	100	
Tl	205	2	165	0.026	ppb	0.026	14.00	380	2000	
Pb	208	2	165	0.683	ppb	0.683	7.25	9838	5000	
Th	232	2	165	0.401	ppb	0.401	2.88	6832	2000	
U	238	2	165	108.461	ppb	108.461	1.40	1995206	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1225951	0.53	1781134	68.83	60	120	
Sc (IS)	45	1	HMI H2	22337907	0.61	42109280	53.05	60	120	IS Failed
Sc (IS)	45	2	HMI He	833752	0.27	819334	101.76	60	120	
Sc (IS)	45	3	No Gas	98263245	0.90	109237925	89.95	60	120	
Ge Internal Standard	72	1	HMI H2	12529736	0.30	19440162	64.45	60	120	
Ge Internal Standard	72	2	HMI He	1005133	1.27	1083920	92.73	60	120	
In Internal Standard	115	2	HMI He	2870252	1.69	3072235	93.43	60	120	
Ho-165	165	2	HMI He	18071636	0.12	19842548	91.08	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-11-d
Data File Name	026SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:39:57-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	135.220	ppb	135.220	7.44	273147	500000	
Li	7	2	45	40.664	ppb	40.664	8.42	14917	500000	
Li	7	3	45	29.767	ppb	29.767	24.49	17318818	50000	
Be	9	1	6	-0.007	ppb	-0.007	-93.76	3	2000	
B	11	1	6	4.218	ppb	4.218	25.95	8242	2000	
Na	23	1	45	3445.946	ppb	3445.946	82.37	15580757	2000	
Na	23	2	45	414023.893	ppb	414023.893	136.62	139610834	400000	
Mg	24	2	45	125054.681	ppb	125054.681	136.02	18340829	400000	
Al	27	2	45	7.443	ppb	7.443	153.61	340	400000	
K	39	1	45	-1475.717	ppb	-1475.717	-2.28	2657027	400000	
K	39	2	45	1089.065	ppb	1089.065	153.28	81285	400000	
Ca	40	1	45	774.649	ppb	774.649	80.63	5292298	400000	
Ca	44	2	45	127977.376	ppb	127977.376	138.65	476712	400000	
Ti	47	2	45	38.286	ppb	38.286	279.20	3	4000	
V	51	2	72	4.615	ppb	4.615	150.99	8763	2000	
Cr	52	2	72	-0.026	ppb	-0.026	-357.86	473	5000	
Mn	55	2	72	0.148	ppb	0.148	84.59	267	10000	
Fe	57	2	72	3.632	ppb	3.632	125.24	407	400000	
Co	59	2	72	0.008	ppb	0.008	264.42	60	2000	
Ni	60	2	72	-0.018	ppb	-0.018	-499.49	373	5000	
Cu	63	2	72	-0.099	ppb	-0.099	-138.88	2850	5000	
Zn	66	2	72	-0.495	ppb	-0.495	-92.90	1190	5000	
As	75	2	72	0.894	ppb	0.894	150.55	241	2000	
Se	78	1	72	0.001	ppb	0.001	461.20	31	2000	
Sr	88	2	72	2749.144	ppb	2749.144	139.18	1732535	4000	
Zr	90	2	72	641.104	ppb	641.104	167.72	4650	1000	
Nb	93	2	72	0.175	ppb	0.175	149.44	1377	200	
Mo	95	2	115	2.350	ppb	2.350	142.00	3625	2000	
Pd	105	2	115	0.038	ppb	0.038	317.04	220	100	
Ag	107	2	115	0.025	ppb	0.025	122.96	160	100	
Cd	111	2	115	0.018	ppb	0.018	102.26	20	2000	
Sn	120	2	115	0.500	ppb	0.500	129.03	890	2000	
Sb	121	2	115	0.555	ppb	0.555	134.25	653	1000	
Ba	137	2	115	2.235	ppb	2.235	137.87	800	5000	
W	182	2	165	-0.002	ppb	-0.002	-1334.90	893	100	
Pt	195	2	165	0.008	ppb	0.008	121.41	103	100	
Tl	205	2	165	0.007	ppb	0.007	119.00	297	2000	
Pb	208	2	165	-0.015	ppb	-0.015	-153.54	1507	5000	
Th	232	2	165	0.064	ppb	0.064	147.24	2000	2000	
U	238	2	165	7.435	ppb	7.435	140.58	190271	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2541517	3.01	1781134	142.69	60	120	IS Failed
Sc (IS)	45	1	HMI H2	39435284	4.60	42109280	93.65	60	120	
Sc (IS)	45	2	HMI He	1221445	8.34	819334	149.08	60	120	IS Failed
Sc (IS)	45	3	No Gas	174417094	4.45	109237925	159.67	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	23037377	5.21	19440162	118.50	60	120	
Ge Internal Standard	72	2	HMI He	1582038	11.97	1083920	145.96	60	120	IS Failed
In Internal Standard	115	2	HMI He	4202864	9.72	3072235	136.80	60	120	IS Failed
Ho-165	165	2	HMI He	27705094	10.93	19842548	139.62	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114200-a-11-dsd@5
Data File Name	027SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:43:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	173.715	ppb	173.715	2.51	169292	500000	
Li	7	2	45	18.158	ppb	18.158	144.46	9260	500000	
Li	7	3	45	54.170	ppb	54.170	4.62	9655060	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	96.343	ppb	96.343	4.35	45321	2000	
Na	23	1	45	1190004.728	ppb	1190004.728	0.54	2965640702	2000	>LDR
Na	23	2	45	1160900.036	ppb	1160900.036	1.37	272553949	400000	
Mg	24	2	45	355235.611	ppb	355235.611	0.89	36282564	400000	
Al	27	2	45	4.409	ppb	4.409	39.98	167	400000	
K	39	1	45	2640.660	ppb	2640.660	0.15	11147552	400000	
K	39	2	45	3530.631	ppb	3530.631	1.61	159618	400000	
Ca	40	1	45	273884.938	ppb	273884.938	0.53	1024555985	400000	
Ca	44	2	45	362299.730	ppb	362299.730	0.57	939982	400000	
Ti	47	2	45	-204.198	ppb	-204.198	-258.03	10	4000	
V	51	2	72	14.388	ppb	14.388	1.87	17563	2000	
Cr	52	2	72	0.073	ppb	0.073	89.69	470	5000	
Mn	55	2	72	0.168	ppb	0.168	24.21	183	10000	
Fe	57	2	72	9.818	ppb	9.818	39.46	447	400000	
Co	59	2	72	0.007	ppb	0.007	168.14	40	2000	
Ni	60	2	72	0.168	ppb	0.168	49.43	413	5000	
Cu	63	2	72	0.312	ppb	0.312	28.07	2942	5000	
Zn	66	2	72	1.290	ppb	1.290	39.16	1237	5000	
As	75	2	72	2.993	ppb	2.993	13.59	512	2000	
Se	78	1	72	2.220	ppb	2.220	7.88	789	2000	
Sr	88	2	72	8230.506	ppb	8230.506	0.56	3672892	4000	
Zr	90	2	72	872.804	ppb	872.804	10.01	4487	1000	
Nb	93	2	72	0.281	ppb	0.281	17.24	1360	200	
Mo	95	2	115	8.362	ppb	8.362	1.06	9336	2000	
Pd	105	2	115	0.094	ppb	0.094	24.26	273	100	
Ag	107	2	115	0.079	ppb	0.079	13.52	343	100	
Cd	111	2	115	0.009	ppb	0.009	1.77	10	2000	
Sn	120	2	115	0.249	ppb	0.249	28.78	393	2000	
Sb	121	2	115	0.364	ppb	0.364	36.11	327	1000	
Ba	137	2	115	5.661	ppb	5.661	14.76	1483	5000	
W	182	2	165	0.050	ppb	0.050	6.38	943	100	
Pt	195	2	165	0.005	ppb	0.005	142.36	57	100	
Tl	205	2	165	0.019	ppb	0.019	46.55	323	2000	
Pb	208	2	165	0.000	ppb	0.000	-1862798.22	1217	5000	
Th	232	2	165	0.018	ppb	0.018	19.65	680	2000	
U	238	2	165	21.079	ppb	21.079	0.25	398668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1243046	2.01	1781134	69.79	60	120	
Sc (IS)	45	1	HMI H2	22659078	0.63	42109280	53.81	60	120	IS Failed
Sc (IS)	45	2	HMI He	806269	0.97	819334	98.41	60	120	
Sc (IS)	45	3	No Gas	91493349	0.76	109237925	83.76	60	120	
Ge Internal Standard	72	1	HMI H2	13004167	0.45	19440162	66.89	60	120	
Ge Internal Standard	72	2	HMI He	1009568	0.41	1083920	93.14	60	120	
In Internal Standard	115	2	HMI He	2893078	0.66	3072235	94.17	60	120	
Ho-165	165	2	HMI He	18576673	0.57	19842548	93.62	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-11-e ms
Data File Name	028SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:47:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	648.549	ppb	648.549	0.61	230945	500000	
Li	7	2	45	269.343	ppb	269.343	8.99	13389	500000	
Li	7	3	45	409.421	ppb	409.421	1.06	15209299	50000	
Be	9	1	6	40.916	ppb	40.916	4.71	9510	2000	
B	11	1	6	557.301	ppb	557.301	1.81	144710	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5655862.043	ppb	5655862.043	1.43	1122860143	400000	>LDR
Mg	24	2	45	1709974.621	ppb	1709974.621	1.10	147696334	400000	
Al	27	2	45	393.240	ppb	393.240	1.97	7455	400000	
K	39	1	45	15891.317	ppb	15891.317	0.56	30357087	400000	
K	39	2	45	18088.093	ppb	18088.093	0.86	655702	400000	
Ca	40	1	45	1316258.829	ppb	1316258.829	0.91	3548543840	400000	
Ca	44	2	45	1843191.880	ppb	1843191.880	0.21	4044069	400000	
Ti	47	2	45	-3188.913	ppb	-3188.913	-70.96	90	4000	
V	51	2	72	118.234	ppb	118.234	2.41	107819	2000	
Cr	52	2	72	40.814	ppb	40.814	1.48	50428	5000	
Mn	55	2	72	43.211	ppb	43.211	4.26	16846	10000	
Fe	57	2	72	515.139	ppb	515.139	6.84	11651	400000	
Co	59	2	72	37.651	ppb	37.651	1.06	90384	2000	
Ni	60	2	72	37.059	ppb	37.059	1.22	26419	5000	
Cu	63	2	72	35.768	ppb	35.768	2.76	75725	5000	
Zn	66	2	72	37.906	ppb	37.906	5.75	8449	5000	
As	75	2	72	54.774	ppb	54.774	2.16	6970	2000	
Se	78	1	72	48.052	ppb	48.052	1.89	11560	2000	
Sr	88	2	72	43493.885	ppb	43493.885	0.55	15090896	4000	>LDR
Zr	90	2	72	13147.898	ppb	13147.898	1.11	51514	1000	>LDR
Nb	93	2	72	0.522	ppb	0.522	12.34	1777	200	
Mo	95	2	115	74.598	ppb	74.598	2.00	63955	2000	
Pd	105	2	115	0.352	ppb	0.352	8.68	600	100	
Ag	107	2	115	33.322	ppb	33.322	0.49	107348	100	
Cd	111	2	115	32.304	ppb	32.304	1.93	10877	2000	
Sn	120	2	115	37.903	ppb	37.903	3.55	30183	2000	
Sb	121	2	115	39.580	ppb	39.580	4.57	25158	1000	
Ba	137	2	115	72.793	ppb	72.793	1.25	14644	5000	
W	182	2	165	10.852	ppb	10.852	0.83	53406	100	
Pt	195	2	165	0.006	ppb	0.006	45.87	47	100	
Tl	205	2	165	34.109	ppb	34.109	0.35	267485	2000	
Pb	208	2	165	34.082	ppb	34.082	0.64	342100	5000	
Th	232	2	165	35.037	ppb	35.037	0.71	445521	2000	
U	238	2	165	147.061	ppb	147.061	1.26	2137045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	713735	0.49	1781134	40.07	60	120	IS Failed
Sc (IS)	45	1	HMI H2	16331324	0.27	42109280	38.78	60	120	IS Failed
Sc (IS)	45	2	HMI He	681864	1.25	819334	83.22	60	120	
Sc (IS)	45	3	No Gas	77803929	0.67	109237925	71.22	60	120	
Ge Internal Standard	72	1	HMI H2	8982700	0.54	19440162	46.21	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	784995	1.74	1083920	72.42	60	120	
In Internal Standard	115	2	HMI He	2243258	1.11	3072235	73.02	60	120	
Ho-165	165	2	HMI He	14276249	1.62	19842548	71.95	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-11-f msd
Data File Name	029SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:51:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	557.272	ppb	557.272	2.42	218473	500000	
Li	7	2	45	193.648	ppb	193.648	8.81	11831	500000	
Li	7	3	45	349.251	ppb	349.251	2.34	13967134	50000	
Be	9	1	6	42.067	ppb	42.067	6.16	9230	2000	
B	11	1	6	560.984	ppb	560.984	1.02	137485	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5438193.247	ppb	5438193.247	1.04	1090475770	400000	>LDR
Mg	24	2	45	1640841.079	ppb	1640841.079	0.90	143141371	400000	
Al	27	2	45	353.611	ppb	353.611	6.05	6775	400000	
K	39	1	45	15613.145	ppb	15613.145	0.61	31094070	400000	
K	39	2	45	18163.155	ppb	18163.155	0.82	664917	400000	
Ca	40	1	45	1296803.190	ppb	1296803.190	0.15	3637165172	400000	
Ca	44	2	45	1825478.072	ppb	1825478.072	0.34	4044888	400000	
Ti	47	2	45	-1100.225	ppb	-1100.225	-132.31	33	4000	
V	51	2	72	115.931	ppb	115.931	0.72	108836	2000	
Cr	52	2	72	40.477	ppb	40.477	1.72	51474	5000	
Mn	55	2	72	41.116	ppb	41.116	4.11	16509	10000	
Fe	57	2	72	466.815	ppb	466.815	6.44	10874	400000	
Co	59	2	72	36.795	ppb	36.795	2.52	90915	2000	
Ni	60	2	72	34.995	ppb	34.995	3.46	25681	5000	
Cu	63	2	72	34.449	ppb	34.449	0.40	75139	5000	
Zn	66	2	72	34.113	ppb	34.113	4.35	7899	5000	
As	75	2	72	54.282	ppb	54.282	1.84	7109	2000	
Se	78	1	72	47.562	ppb	47.562	2.95	12219	2000	
Sr	88	2	72	43363.539	ppb	43363.539	0.55	15484149	4000	>LDR
Zr	90	2	72	13117.203	ppb	13117.203	3.02	52891	1000	>LDR
Nb	93	2	72	0.325	ppb	0.325	20.24	1223	200	
Mo	95	2	115	72.589	ppb	72.589	0.59	64517	2000	
Pd	105	2	115	0.304	ppb	0.304	31.05	547	100	
Ag	107	2	115	32.314	ppb	32.314	0.94	107938	100	
Cd	111	2	115	32.386	ppb	32.386	4.55	11311	2000	
Sn	120	2	115	36.667	ppb	36.667	3.58	30280	2000	
Sb	121	2	115	38.775	ppb	38.775	0.91	25555	1000	
Ba	137	2	115	72.534	ppb	72.534	1.32	15128	5000	
W	182	2	165	10.285	ppb	10.285	2.82	50767	100	
Pt	195	2	165	0.004	ppb	0.004	196.41	40	100	
Tl	205	2	165	33.456	ppb	33.456	1.01	262961	2000	
Pb	208	2	165	33.074	ppb	33.074	0.37	332783	5000	
Th	232	2	165	34.225	ppb	34.225	1.09	436220	2000	
U	238	2	165	143.007	ppb	143.007	0.73	2082945	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	673682	0.11	1781134	37.82	60	120	IS Failed
Sc (IS)	45	1	HMI H2	16990033	0.22	42109280	40.35	60	120	IS Failed
Sc (IS)	45	2	HMI He	688613	0.21	819334	84.05	60	120	
Sc (IS)	45	3	No Gas	77490551	0.64	109237925	70.94	60	120	
Ge Internal Standard	72	1	HMI H2	9591819	0.55	19440162	49.34	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	807822	0.67	1083920	74.53	60	120	
In Internal Standard	115	2	HMI He	2325909	0.77	3072235	75.71	60	120	
Ho-165	165	2	HMI He	14309196	0.55	19842548	72.11	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-11-d pds
Data File Name	030SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:55:32-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	465.297	ppb	465.297	1.21	186299	500000	
Li	7	2	45	169.891	ppb	169.891	12.86	10514	500000	
Li	7	3	45	257.298	ppb	257.298	1.73	11140904	50000	
Be	9	1	6	217.796	ppb	217.796	1.06	44432	2000	
B	11	1	6	538.095	ppb	538.095	1.62	122688	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5394208.199	ppb	5394208.199	0.75	1006598785	400000	>LDR
Mg	24	2	45	1621629.507	ppb	1621629.507	0.56	131651971	400000	
Al	27	2	45	1904.974	ppb	1904.974	2.87	33725	400000	
K	39	1	45	15962.302	ppb	15962.302	0.42	30056159	400000	
K	39	2	45	18277.018	ppb	18277.018	0.32	622638	400000	
Ca	40	1	45	1305597.534	ppb	1305597.534	0.32	3471289548	400000	
Ca	44	2	45	1831286.771	ppb	1831286.771	1.28	3776245	400000	
Ti	47	2	45	-7884.984	ppb	-7884.984	-26.34	207	4000	
V	51	2	72	298.822	ppb	298.822	0.87	261414	2000	
Cr	52	2	72	215.179	ppb	215.179	1.37	254758	5000	
Mn	55	2	72	217.751	ppb	217.751	0.82	81431	10000	
Fe	57	2	72	2044.100	ppb	2044.100	1.18	44107	400000	
Co	59	2	72	196.387	ppb	196.387	0.64	453650	2000	
Ni	60	2	72	186.224	ppb	186.224	2.04	126963	5000	
Cu	63	2	72	180.712	ppb	180.712	0.89	361887	5000	
Zn	66	2	72	180.972	ppb	180.972	2.20	36294	5000	
As	75	2	72	220.673	ppb	220.673	1.76	26973	2000	
Se	78	1	72	203.583	ppb	203.583	0.19	50054	2000	
Sr	88	2	72	44137.718	ppb	44137.718	1.16	14738072	4000	>LDR
Zr	90	2	72	74301.872	ppb	74301.872	0.93	279841	1000	>LDR
Nb	93	2	72	3.791	ppb	3.791	2.84	11101	200	
Mo	95	2	115	245.341	ppb	245.341	0.54	204592	2000	
Pd	105	2	115	0.404	ppb	0.404	11.28	660	100	
Ag	107	2	115	42.184	ppb	42.184	0.77	132320	100	
Cd	111	2	115	170.663	ppb	170.663	1.64	55936	2000	
Sn	120	2	115	196.637	ppb	196.637	0.16	152048	2000	
Sb	121	2	115	207.381	ppb	207.381	0.45	128249	1000	
Ba	137	2	115	247.844	ppb	247.844	2.95	48507	5000	
W	182	2	165	190.019	ppb	190.019	0.64	881052	100	
Pt	195	2	165	0.042	ppb	0.042	10.66	200	100	
Tl	205	2	165	179.461	ppb	179.461	0.59	1336731	2000	
Pb	208	2	165	176.060	ppb	176.060	0.36	1675410	5000	
Th	232	2	165	13.490	ppb	13.490	0.57	163161	2000	
U	238	2	165	292.314	ppb	292.314	1.27	4035708	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	626539	0.23	1781134	35.18	60	120	IS Failed
Sc (IS)	45	1	HMI H2	16105949	0.24	42109280	38.25	60	120	IS Failed
Sc (IS)	45	2	HMI He	640871	1.02	819334	78.22	60	120	
Sc (IS)	45	3	No Gas	70980452	1.40	109237925	64.98	60	120	
Ge Internal Standard	72	1	HMI H2	9186488	0.53	19440162	47.26	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	755416	0.11	1083920	69.69	60	120	
In Internal Standard	115	2	HMI He	2184197	0.85	3072235	71.09	60	120	
Ho-165	165	2	HMI He	13564390	1.04	19842548	68.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	031_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T13:59:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	524.416	ppb	0.241	276836	500	104.9	90	110	
Li	7	2	45	327.742	ppb	7.731	15674	500	65.5	90	110	>+\-10%
Li	7	3	45	271.060	ppb	0.886	13466884	500	54.2	90	110	>+\-10%
Be	9	1	6	42.761	ppb	2.121	15117	50	85.5	90	110	>+\-10%
B	11	1	6	47.439	ppb	4.004	20443	50	94.9	90	110	
Na	23	1	45	9575.213	ppb	3.008	23799220	5000	191.5	90	110	>+\-10%
Na	23	2	45	9361.291	ppb	2.345	2010217	5000	187.2	90	110	>+\-10%
Mg	24	2	45	4856.865	ppb	1.887	448409	5000	97.1	90	110	
Al	27	2	45	4771.505	ppb	2.082	95882	5000	95.4	90	110	
K	39	1	45	3139.009	ppb	0.628	12133478	5000	62.8	90	110	>+\-10%
K	39	2	45	5054.462	ppb	0.500	202362	5000	101.1	90	110	
Ca	40	1	45	4514.109	ppb	2.612	16756964	5000	90.3	90	110	
Ca	44	2	45	4952.848	ppb	3.555	11675	5000	99.1	90	110	
Ti	47	2	45	-12.276	ppb	-1584.151	3	50	-24.6	90	110	>+\-10%
V	51	2	72	46.993	ppb	1.954	55013	50	94.0	90	110	
Cr	52	2	72	46.950	ppb	0.891	73778	50	93.9	90	110	
Mn	55	2	72	51.109	ppb	2.299	25350	50	102.2	90	110	
Fe	57	2	72	4637.921	ppb	0.961	132132	5000	92.8	90	110	
Co	59	2	72	47.702	ppb	0.439	145729	50	95.4	90	110	
Ni	60	2	72	48.216	ppb	0.283	43662	50	96.4	90	110	
Cu	63	2	72	47.455	ppb	0.424	127208	50	94.9	90	110	
Zn	66	2	72	45.952	ppb	1.676	12849	50	91.9	90	110	
As	75	2	72	49.755	ppb	3.098	8060	50	99.5	90	110	
Se	78	1	72	46.083	ppb	1.113	17010	50	92.2	90	110	
Sr	88	2	72	57.147	ppb	3.174	25251	50	114.3	90	110	>+\-10%
Zr	90	2	72	182.406	ppb	9.832	1003	50	364.8	90	110	>+\-10%
Nb	93	2	72	92.239	ppb	0.442	350679	100	92.2	90	110	
Mo	95	2	115	47.476	ppb	1.655	53915	50	95.0	90	110	
Pd	105	2	115	47.185	ppb	1.200	93940	50	94.4	90	110	
Ag	107	2	115	45.629	ppb	2.194	194577	50	91.3	90	110	
Cd	111	2	115	45.887	ppb	1.607	20454	50	91.8	90	110	
Sn	120	2	115	48.075	ppb	1.896	50646	50	96.1	90	110	
Sb	121	2	115	48.114	ppb	0.914	40480	50	96.2	90	110	
Ba	137	2	115	51.088	ppb	4.280	13610	50	102.2	90	110	
W	182	2	165	46.418	ppb	2.213	289846	50	92.8	90	110	
Pt	195	2	165	45.198	ppb	0.900	262054	50	90.4	90	110	
Tl	205	2	165	48.112	ppb	1.152	481975	50	96.2	90	110	
Pb	208	2	165	48.494	ppb	0.750	621396	50	97.0	90	110	
Th	232	2	165	44.714	ppb	1.856	726289	50	89.4	90	110	>+\-10%
U	238	2	165	44.576	ppb	2.348	827575	50	89.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1085660	1.30	1781134	60.95	60	120	
Sc (IS)	45	1	HMI H2	22329871	0.13	42109280	53.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	728126	1.03	819334	88.87	60	120	
Sc (IS)	45	3	No Gas	83932404	0.44	109237925	76.83	60	120	
Ge Internal Standard	72	1	HMI H2	13780206	0.49	19440162	70.89	60	120	
Ge Internal Standard	72	2	HMI He	998966	0.29	1083920	92.16	60	120	
In Internal Standard	115	2	HMI He	2969789	0.81	3072235	96.67	60	120	
Ho-165	165	2	HMI He	18240085	1.03	19842548	91.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	032_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:03:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-89.892	ppb	-2.0	5930134	10	
Be	9	1	6	0.024	ppb	126.9	13	0.5	
B	11	1	6	1.890	ppb	28.8	2737	0.5	>RL
Na	23	1	45	3867.668	ppb	0.4	9959239	25	>RL
Na	23	2	45	4163.615	ppb	1.2	944516	25	>RL
Mg	24	2	45	71.812	ppb	8.8	7345	25	>RL
Al	27	2	45	1.379	ppb	191.8	93	15	
K	39	1	45	-746.266	ppb	-1.0	3241324	50	
K	39	2	45	119.106	ppb	6.7	14403	50	>RL
Ca	40	1	45	40.228	ppb	4.5	270569	50	
Ca	44	2	45	48.955	ppb	58.7	190	25	>RL
Ti	47	2	45	-9.108	ppb	-2074.9	3	0.5	
V	51	2	72	-0.012	ppb	-827.8	793	1	
Cr	52	2	72	0.045	ppb	27.8	440	1	
Mn	55	2	72	0.091	ppb	128.6	150	0.5	
Fe	57	2	72	1.883	ppb	160.5	227	25	
Co	59	2	72	0.017	ppb	75.0	73	0.5	
Ni	60	2	72	-0.011	ppb	-854.0	260	1	
Cu	63	2	72	0.627	ppb	13.7	3917	1	
Zn	66	2	72	0.161	ppb	31.9	973	5	
As	75	2	72	0.040	ppb	188.7	31	1	
Se	78	1	72	0.498	ppb	21.0	205	1	
Sr	88	2	72	1.033	ppb	8.5	497	0.5	>RL
Zr	90	2	72	8.376	ppb	126.6	143	1	>RL
Nb	93	2	72	2.626	ppb	8.8	10734	2	>RL
Mo	95	2	115	0.117	ppb	41.9	250	0.5	
Pd	105	2	115	0.032	ppb	57.6	163	1	
Ag	107	2	115	0.019	ppb	27.7	103	1	
Cd	111	2	115	0.007	ppb	309.1	10	0.5	
Sn	120	2	115	0.171	ppb	44.5	337	1	
Sb	121	2	115	0.470	ppb	19.7	443	0.6	
Ba	137	2	115	0.096	ppb	95.9	43	0.5	
W	182	2	165	0.096	ppb	14.7	1260	1	
Pt	195	2	165	0.014	ppb	38.1	113	1	
Tl	205	2	165	0.025	ppb	13.4	390	0.1	
Pb	208	2	165	0.009	ppb	118.0	1367	0.5	
Th	232	2	165	0.061	ppb	14.5	1437	1	
U	238	2	165	0.074	ppb	22.3	1537	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1138489	1.23	1781134	63.92	60	120	
Sc (IS)	45	1	HMI H2	22732126	0.42	42109280	53.98	60	120	IS Failed
Sc (IS)	45	2	HMI He	756994	0.13	819334	92.39	60	120	
Sc (IS)	45	3	No Gas	85883935	0.64	109237925	78.62	60	120	
Ge Internal Standard	72	1	HMI H2	14023159	0.42	19440162	72.13	60	120	
Ge Internal Standard	72	2	HMI He	1045775	0.23	1083920	96.48	60	120	
In Internal Standard	115	2	HMI He	3103903	0.79	3072235	101.03	60	120	
Ho-165	165	2	HMI He	18991790	0.37	19842548	95.71	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	033LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:07:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-83.373	ppb	-1.446	6259492	50	-166.7	70	130	>+/-30%
Be	9	1	6	0.802	ppb	8.726	313	1	80.2	70	130	
Na	23	2	45	3055.110	ppb	1.749	726447	50	6110.2	70	130	>+/-30%
Mg	24	2	45	100.913	ppb	0.531	10517	50	201.8	70	130	>+/-30%
Al	27	2	45	28.152	ppb	25.877	677	30	93.8	70	130	
K	39	2	45	200.184	ppb	11.485	18281	100	200.2	70	130	>+/-30%
Ca	44	2	45	85.840	ppb	49.414	290	50	171.7	70	130	>+/-30%
V	51	2	72	4.597	ppb	3.560	6605	5	91.9	70	130	
Cr	52	2	72	1.784	ppb	12.514	3414	2	89.2	70	130	
Mn	55	2	72	1.180	ppb	9.066	740	1	118.0	70	130	
Fe	57	2	72	45.920	ppb	6.494	1597	50	91.8	70	130	
Co	59	2	72	0.924	ppb	4.702	3087	1	92.4	70	130	
Ni	60	2	72	1.830	ppb	4.109	2070	2	91.5	70	130	
Cu	63	2	72	2.345	ppb	2.434	8989	2	117.3	70	130	
Zn	66	2	72	10.424	ppb	5.523	3914	10	104.2	70	130	
As	75	2	72	4.446	ppb	8.893	805	5	88.9	70	130	
Se	78	1	72	5.325	ppb	5.713	2060	5	106.5	70	130	
Sr	88	2	72	1.285	ppb	9.563	637	1	128.5	70	130	
Zr	90	2	72	31.990	ppb	31.666	277	0.5	6398.1	70	130	>+/-30%
Nb	93	2	72	4.925	ppb	3.760	20634	2	246.3	70	130	>+/-30%
Mo	95	2	115	1.910	ppb	2.186	2474	2	95.5	70	130	
Pd	105	2	115	-0.010	ppb	-184.281	80	1	-1.0	70	130	>+/-30%
Ag	107	2	115	4.592	ppb	3.139	21338	5	91.8	70	130	
Cd	111	2	115	0.782	ppb	32.533	387	1	78.2	70	130	
Sn	120	2	115	9.776	ppb	3.182	11338	10	97.8	70	130	
Sb	121	2	115	2.103	ppb	8.097	1957	2	105.1	70	130	
Ba	137	2	115	1.090	ppb	7.990	333	1	109.0	70	130	
W	182	2	165	4.589	ppb	1.940	31490	1	458.9	70	130	>+/-30%
Pt	195	2	165	0.017	ppb	26.712	137	1	1.7	70	130	>+/-30%
Tl	205	2	165	0.983	ppb	3.385	10754	1	98.3	70	130	
Pb	208	2	165	0.973	ppb	4.477	14700	1	97.3	70	130	
Th	232	2	165	1.874	ppb	1.961	33216	2	93.7	70	130	
U	238	2	165	0.905	ppb	5.191	18212	1	90.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1183225	0.71	1781134	66.43	60	120	
Sc (IS)	45	1	HMI H2	23421664	0.47	42109280	55.62	60	120	IS Failed
Sc (IS)	45	2	HMI He	785447	0.72	819334	95.86	60	120	
Sc (IS)	45	3	No Gas	88534475	0.49	109237925	81.05	60	120	
Ge Internal Standard	72	1	HMI H2	14330666	0.30	19440162	73.72	60	120	
Ge Internal Standard	72	2	HMI He	1085625	0.35	1083920	100.16	60	120	
In Internal Standard	115	2	HMI He	3233859	0.37	3072235	105.26	60	120	
Ho-165	165	2	HMI He	19664339	0.25	19842548	99.10	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-13-b
Data File Name	034SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:10:48-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	355.589	ppb	355.589	0.81	177063	500000	
Li	7	2	45	102.732	ppb	102.732	13.70	9903	500000	
Li	7	3	45	161.029	ppb	161.029	1.06	9843543	50000	
Be	9	1	6	0.060	ppb	0.060	41.00	17	2000	
B	11	1	6	222.242	ppb	222.242	2.79	58465	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3483577.417	ppb	3483577.417	1.00	705843563	400000	>LDR
Mg	24	2	45	950940.951	ppb	950940.951	0.49	83827154	400000	
Al	27	2	45	9.057	ppb	9.057	38.65	233	400000	
K	39	1	45	14025.023	ppb	14025.023	0.57	29427300	400000	
K	39	2	45	17286.488	ppb	17286.488	0.39	639888	400000	
Ca	40	1	45	1152486.415	ppb	1152486.415	0.28	3359894883	400000	
Ca	44	2	45	1614660.902	ppb	1614660.902	1.41	3615358	400000	
Ti	47	2	45	-19.580	ppb	-19.580	-1057.82	3	4000	
V	51	2	72	36.728	ppb	36.728	1.94	36561	2000	
Cr	52	2	72	1.283	ppb	1.283	6.31	1997	5000	
Mn	55	2	72	1.434	ppb	1.434	22.40	683	10000	
Fe	57	2	72	66.479	ppb	66.479	10.25	1740	400000	
Co	59	2	72	0.066	ppb	0.066	14.90	187	2000	
Ni	60	2	72	0.654	ppb	0.654	33.78	717	5000	
Cu	63	2	72	0.246	ppb	0.246	40.81	2317	5000	
Zn	66	2	72	2.350	ppb	2.350	22.13	1270	5000	
As	75	2	72	11.486	ppb	11.486	6.06	1591	2000	
Se	78	1	72	10.379	ppb	10.379	1.11	2819	2000	
Sr	88	2	72	34324.355	ppb	34324.355	0.34	12837405	4000	>LDR
Zr	90	2	72	11.700	ppb	11.700	54.11	130	1000	
Nb	93	2	72	1.065	ppb	1.065	5.38	3661	200	
Mo	95	2	115	18.311	ppb	18.311	4.41	17150	2000	
Pd	105	2	115	0.314	ppb	0.314	14.71	590	100	
Ag	107	2	115	0.201	ppb	0.201	12.65	717	100	
Cd	111	2	115	0.067	ppb	0.067	80.61	30	2000	
Sn	120	2	115	0.301	ppb	0.301	30.18	377	2000	
Sb	121	2	115	0.626	ppb	0.626	4.23	457	1000	
Ba	137	2	115	23.740	ppb	23.740	4.83	5208	5000	
W	182	2	165	0.102	ppb	0.102	14.32	1037	100	
Pt	195	2	165	0.004	ppb	0.004	56.39	43	100	
Tl	205	2	165	0.036	ppb	0.036	31.03	407	2000	
Pb	208	2	165	0.007	ppb	0.007	101.98	1067	5000	
Th	232	2	165	0.050	ppb	0.050	15.46	993	2000	
U	238	2	165	20.203	ppb	20.203	0.98	311618	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	713998	0.51	1781134	40.09	60	120	IS Failed
Sc (IS)	45	1	HMI H2	17660158	0.31	42109280	41.94	60	120	IS Failed
Sc (IS)	45	2	HMI He	695848	0.63	819334	84.93	60	120	
Sc (IS)	45	3	No Gas	74241436	0.17	109237925	67.96	60	120	
Ge Internal Standard	72	1	HMI H2	10103671	0.33	19440162	51.97	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	846125	0.23	1083920	78.06	60	120	
In Internal Standard	115	2	HMI He	2441901	1.10	3072235	79.48	60	120	
Ho-165	165	2	HMI He	15150006	0.25	19842548	76.35	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-15-b
Data File Name	035SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:14:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	379.005	ppb	379.005	2.03	171192	500000	
Li	7	2	45	125.662	ppb	125.662	13.04	9633	500000	
Li	7	3	45	156.000	ppb	156.000	3.24	9076248	50000	
Be	9	1	6	0.020	ppb	0.020	136.23	7	2000	
B	11	1	6	313.952	ppb	313.952	1.95	75065	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	4104758.401	ppb	4104758.401	0.41	768821749	400000	>LDR
Mg	24	2	45	989485.540	ppb	989485.540	0.49	80625800	400000	
Al	27	2	45	5.360	ppb	5.360	20.66	150	400000	
K	39	1	45	15357.046	ppb	15357.046	0.23	29819745	400000	
K	39	2	45	19487.655	ppb	19487.655	0.62	665743	400000	
Ca	40	1	45	807557.028	ppb	807557.028	0.52	2203986794	400000	
Ca	44	2	45	1157798.929	ppb	1157798.929	1.60	2396236	400000	
Ti	47	2	45	-28.389	ppb	-28.389	-783.31	3	4000	
V	51	2	72	56.017	ppb	56.017	3.09	51454	2000	
Cr	52	2	72	0.243	ppb	0.243	37.81	573	5000	
Mn	55	2	72	15.658	ppb	15.658	4.51	6161	10000	
Fe	57	2	72	61.308	ppb	61.308	7.09	1500	400000	
Co	59	2	72	0.095	ppb	0.095	24.63	243	2000	
Ni	60	2	72	1.029	ppb	1.029	32.78	930	5000	
Cu	63	2	72	0.423	ppb	0.423	18.89	2520	5000	
Zn	66	2	72	3.347	ppb	3.347	7.66	1383	5000	
As	75	2	72	12.776	ppb	12.776	2.13	1641	2000	
Se	78	1	72	11.944	ppb	11.944	4.99	3066	2000	
Sr	88	2	72	26474.405	ppb	26474.405	0.82	9193808	4000	>LDR
Zr	90	2	72	168.155	ppb	168.155	5.93	733	1000	
Nb	93	2	72	0.755	ppb	0.755	9.14	2474	200	
Mo	95	2	115	8.685	ppb	8.685	5.83	7796	2000	
Pd	105	2	115	0.254	ppb	0.254	22.27	470	100	
Ag	107	2	115	0.010	ppb	0.010	89.27	47	100	
Cd	111	2	115	-0.005	ppb	-0.005	-332.65	3	2000	
Sn	120	2	115	0.290	ppb	0.290	9.35	350	2000	
Sb	121	2	115	0.310	ppb	0.310	8.25	227	1000	
Ba	137	2	115	16.471	ppb	16.471	1.99	3447	5000	
W	182	2	165	0.125	ppb	0.125	9.87	1090	100	
Pt	195	2	165	0.005	ppb	0.005	191.95	43	100	
Tl	205	2	165	0.037	ppb	0.037	38.07	387	2000	
Pb	208	2	165	0.002	ppb	0.002	263.31	960	5000	
Th	232	2	165	0.031	ppb	0.031	22.80	690	2000	
U	238	2	165	100.025	ppb	100.025	0.72	1455253	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	653033	1.66	1781134	36.66	60	120	IS Failed
Sc (IS)	45	1	HMI H2	16532330	0.15	42109280	39.26	60	120	IS Failed
Sc (IS)	45	2	HMI He	643205	0.49	819334	78.50	60	120	
Sc (IS)	45	3	No Gas	69118067	0.89	109237925	63.27	60	120	
Ge Internal Standard	72	1	HMI H2	9554535	0.44	19440162	49.15	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	785662	0.55	1083920	72.48	60	120	
In Internal Standard	115	2	HMI He	2327525	0.79	3072235	75.76	60	120	
Ho-165	165	2	HMI He	14292474	0.05	19842548	72.03	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	036_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:18:35-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	482.748	ppb	0.839	248024	500	96.5	90	110	
Li	7	2	45	275.238	ppb	15.884	13966	500	55.0	90	110	>+\-10%
Li	7	3	45	229.807	ppb	2.590	11167704	500	46.0	90	110	>+\-10%
Be	9	1	6	47.428	ppb	5.820	13603	50	94.9	90	110	
B	11	1	6	52.372	ppb	12.504	18080	50	104.7	90	110	
Na	23	1	45	8588.573	ppb	2.570	20101334	5000	171.8	90	110	>+\-10%
Na	23	2	45	8243.716	ppb	1.655	1715954	5000	164.9	90	110	>+\-10%
Mg	24	2	45	4726.446	ppb	1.532	422251	5000	94.5	90	110	
Al	27	2	45	4729.839	ppb	0.990	91967	5000	94.6	90	110	
K	39	1	45	3158.314	ppb	1.063	11451066	5000	63.2	90	110	>+\-10%
K	39	2	45	5121.243	ppb	0.759	198257	5000	102.4	90	110	
Ca	40	1	45	4421.635	ppb	0.917	15436408	5000	88.4	90	110	>+\-10%
Ca	44	2	45	5239.074	ppb	5.646	11945	5000	104.8	90	110	
Ti	47	2	45	100.000	ppb	0.000	0	50	200.0	90	110	>+\-10%
V	51	2	72	45.734	ppb	4.024	52494	50	91.5	90	110	
Cr	52	2	72	46.901	ppb	2.050	72238	50	93.8	90	110	
Mn	55	2	72	48.194	ppb	4.614	23434	50	96.4	90	110	
Fe	57	2	72	4634.772	ppb	2.566	129414	5000	92.7	90	110	
Co	59	2	72	46.858	ppb	0.711	140306	50	93.7	90	110	
Ni	60	2	72	46.922	ppb	2.030	41653	50	93.8	90	110	
Cu	63	2	72	46.115	ppb	0.560	121217	50	92.2	90	110	
Zn	66	2	72	48.628	ppb	3.170	13276	50	97.3	90	110	
As	75	2	72	49.094	ppb	0.701	7795	50	98.2	90	110	
Se	78	1	72	47.493	ppb	0.808	16606	50	95.0	90	110	
Sr	88	2	72	55.804	ppb	2.780	24169	50	111.6	90	110	>+\-10%
Zr	90	2	72	133.180	ppb	29.257	743	50	266.4	90	110	>+\-10%
Nb	93	2	72	92.050	ppb	0.406	343013	100	92.1	90	110	
Mo	95	2	115	45.483	ppb	1.518	50818	50	91.0	90	110	
Pd	105	2	115	45.911	ppb	2.081	89904	50	91.8	90	110	
Ag	107	2	115	45.625	ppb	2.188	191361	50	91.3	90	110	
Cd	111	2	115	46.356	ppb	3.552	20321	50	92.7	90	110	
Sn	120	2	115	47.526	ppb	2.557	49245	50	95.1	90	110	
Sb	121	2	115	47.948	ppb	1.291	39681	50	95.9	90	110	
Ba	137	2	115	52.174	ppb	1.823	13670	50	104.3	90	110	
W	182	2	165	45.019	ppb	1.258	279364	50	90.0	90	110	
Pt	195	2	165	44.279	ppb	0.431	255099	50	88.6	90	110	>+\-10%
Tl	205	2	165	47.670	ppb	0.672	474517	50	95.3	90	110	
Pb	208	2	165	48.106	ppb	0.913	612507	50	96.2	90	110	
Th	232	2	165	44.430	ppb	0.348	717151	50	88.9	90	110	>+\-10%
U	238	2	165	43.899	ppb	0.393	809929	50	87.8	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	882522	8.51	1781134	49.55	60	120	IS Failed
Sc (IS)	45	1	HMI H2	20997221	0.39	42109280	49.86	60	120	IS Failed
Sc (IS)	45	2	HMI He	704487	0.87	819334	85.98	60	120	
Sc (IS)	45	3	No Gas	74445952	0.61	109237925	68.15	60	120	
Ge Internal Standard	72	1	HMI H2	13054031	0.25	19440162	67.15	60	120	
Ge Internal Standard	72	2	HMI He	979115	0.29	1083920	90.33	60	120	
In Internal Standard	115	2	HMI He	2921274	1.44	3072235	95.09	60	120	
Ho-165	165	2	HMI He	18123775	0.70	19842548	91.34	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	037_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:22:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-111.224	ppb	-1.9	4803845	10	
Be	9	1	6	-0.001	ppb	-1899.9	3	0.5	
B	11	1	6	1.136	ppb	76.8	2114	0.5	>RL
Na	23	1	45	2580.967	ppb	1.2	6263516	25	>RL
Na	23	2	45	2842.472	ppb	0.2	628518	25	>RL
Mg	24	2	45	58.598	ppb	6.5	5848	25	>RL
Al	27	2	45	1.714	ppb	145.1	97	15	
K	39	1	45	-799.146	ppb	-0.6	2896000	50	
K	39	2	45	36.371	ppb	40.5	10697	50	
Ca	40	1	45	30.221	ppb	3.0	216450	50	
Ca	44	2	45	46.323	ppb	61.2	177	25	>RL
Ti	47	2	45	-3877.475	ppb	-177.7	117	0.5	
V	51	2	72	0.201	ppb	77.4	1007	1	
Cr	52	2	72	-0.060	ppb	-75.5	257	1	
Mn	55	2	72	0.044	ppb	123.7	120	0.5	
Fe	57	2	72	2.110	ppb	86.1	223	25	
Co	59	2	72	0.012	ppb	40.1	57	0.5	
Ni	60	2	72	0.024	ppb	322.9	280	1	
Cu	63	2	72	0.546	ppb	11.4	3534	1	
Zn	66	2	72	-0.268	ppb	-125.0	820	5	
As	75	2	72	0.044	ppb	229.8	30	1	
Se	78	1	72	0.005	ppb	601.8	19	1	
Sr	88	2	72	0.840	ppb	5.6	390	0.5	>RL
Zr	90	2	72	5.569	ppb	161.4	123	1	>RL
Nb	93	2	72	2.894	ppb	9.7	11294	2	>RL
Mo	95	2	115	0.013	ppb	322.9	127	0.5	
Pd	105	2	115	0.039	ppb	85.3	180	1	
Ag	107	2	115	0.010	ppb	23.2	60	1	
Cd	111	2	115	0.036	ppb	152.9	23	0.5	
Sn	120	2	115	0.113	ppb	64.4	273	1	
Sb	121	2	115	0.488	ppb	21.4	460	0.6	
Ba	137	2	115	-0.012	ppb	-336.3	13	0.5	
W	182	2	165	0.096	ppb	12.2	1230	1	
Pt	195	2	165	0.004	ppb	77.4	50	1	
Tl	205	2	165	0.015	ppb	32.9	277	0.1	
Pb	208	2	165	-0.001	ppb	-550.8	1203	0.5	
Th	232	2	165	0.056	ppb	26.1	1310	1	
U	238	2	165	0.055	ppb	10.0	1133	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	991485	0.64	1781134	55.67	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21118153	0.87	42109280	50.15	60	120	IS Failed
Sc (IS)	45	2	HMI He	728267	0.38	819334	88.89	60	120	
Sc (IS)	45	3	No Gas	75476427	1.07	109237925	69.09	60	120	
Ge Internal Standard	72	1	HMI H2	13042439	0.18	19440162	67.09	60	120	
Ge Internal Standard	72	2	HMI He	1001148	0.20	1083920	92.36	60	120	
In Internal Standard	115	2	HMI He	3113176	1.29	3072235	101.33	60	120	
Ho-165	165	2	HMI He	18555863	1.25	19842548	93.52	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	038LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:26:27-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-99.759	ppb	-3.277	4940865	50	-199.5	70	130	>+/-30%
Be	9	1	6	1.029	ppb	35.844	340	1	102.9	70	130	
Na	23	2	45	2490.049	ppb	0.842	562217	50	4980.1	70	130	>+/-30%
Mg	24	2	45	96.990	ppb	5.037	9533	50	194.0	70	130	>+/-30%
Al	27	2	45	35.332	ppb	10.447	783	30	117.8	70	130	
K	39	2	45	135.920	ppb	2.487	14720	100	135.9	70	130	>+/-30%
Ca	44	2	45	71.791	ppb	19.739	240	50	143.6	70	130	>+/-30%
V	51	2	72	4.811	ppb	4.847	6455	5	96.2	70	130	
Cr	52	2	72	1.700	ppb	5.707	3070	2	85.0	70	130	
Mn	55	2	72	0.951	ppb	6.864	580	1	95.1	70	130	
Fe	57	2	72	45.580	ppb	7.043	1490	50	91.2	70	130	
Co	59	2	72	0.916	ppb	8.879	2874	1	91.6	70	130	
Ni	60	2	72	1.811	ppb	19.669	1927	2	90.5	70	130	
Cu	63	2	72	2.114	ppb	5.454	7819	2	105.7	70	130	
Zn	66	2	72	11.020	ppb	3.809	3834	10	110.2	70	130	
As	75	2	72	4.330	ppb	1.671	737	5	86.6	70	130	
Se	78	1	72	4.805	ppb	4.102	1700	5	96.1	70	130	
Sr	88	2	72	1.682	ppb	13.035	777	1	168.2	70	130	>+/-30%
Zr	90	2	72	20.236	ppb	45.097	200	0.5	4047.2	70	130	>+/-30%
Nb	93	2	72	5.411	ppb	6.397	21258	2	270.5	70	130	>+/-30%
Mo	95	2	115	1.721	ppb	6.925	2160	2	86.1	70	130	
Pd	105	2	115	0.044	ppb	48.439	190	1	4.4	70	130	>+/-30%
Ag	107	2	115	4.660	ppb	2.008	20881	5	93.2	70	130	
Cd	111	2	115	0.769	ppb	17.163	367	1	76.9	70	130	
Sn	120	2	115	9.605	ppb	1.157	10744	10	96.0	70	130	
Sb	121	2	115	2.292	ppb	2.218	2054	2	114.6	70	130	
Ba	137	2	115	1.013	ppb	26.665	300	1	101.3	70	130	
W	182	2	165	4.571	ppb	3.166	30322	1	457.1	70	130	>+/-30%
Pt	195	2	165	0.015	ppb	29.752	120	1	1.5	70	130	>+/-30%
Tl	205	2	165	0.949	ppb	2.918	10037	1	94.9	70	130	
Pb	208	2	165	0.963	ppb	0.904	14083	1	96.3	70	130	
Th	232	2	165	1.891	ppb	1.708	32387	2	94.5	70	130	
U	238	2	165	0.923	ppb	2.736	17949	1	92.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1005715	1.66	1781134	56.46	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21298042	0.26	42109280	50.58	60	120	IS Failed
Sc (IS)	45	2	HMI He	739388	0.77	819334	90.24	60	120	
Sc (IS)	45	3	No Gas	74245062	0.58	109237925	67.97	60	120	
Ge Internal Standard	72	1	HMI H2	13091646	0.20	19440162	67.34	60	120	
Ge Internal Standard	72	2	HMI He	1019536	0.39	1083920	94.06	60	120	
In Internal Standard	115	2	HMI He	3118043	0.70	3072235	101.49	60	120	
Ho-165	165	2	HMI He	19005064	0.64	19842548	95.78	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	039WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:30:15-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.009	ppb	390.3261624	7	0.5
Na	23	2	45	2067.128	ppb	1.123286355	469724	25
Mg	24	2	45	53.694	ppb	3.175513837	5461	25
Al	27	2	45	-0.634	ppb	-154.6310082	50	15
K	39	2	45	27.790	ppb	32.86800552	10494	50
Ca	44	2	45	8.854	ppb	170.3242959	90	25
V	51	2	72	0.262	ppb	15.64613255	1100	1
Cr	52	2	72	-0.022	ppb	-238.6516335	323	1
Mn	55	2	72	0.032	ppb	354.196054	117	0.5
Fe	57	2	72	-1.719	ppb	-12.1728696	117	25
Co	59	2	72	0.012	ppb	39.94017763	57	0.5
Ni	60	2	72	-0.001	ppb	-6669.66894	263	1
Cu	63	2	72	0.200	ppb	49.09696665	2677	1
Zn	66	2	72	-0.235	ppb	-123.4976772	847	5
As	75	2	72	0.000	ppb	13658.16505	24	1
Se	78	1	72	0.001	ppb	3334.29667	17	1
Nb	93	2	72	0.449	ppb	16.6291255	2030	2
Mo	95	2	115	-0.042	ppb	-29.47996228	63	0.5
Pd	105	2	115	0.000	ppb	-3245.309653	100	1
Ag	107	2	115	0.003	ppb	137.2770211	30	1
Cd	111	2	115	0.006	ppb	328.9650994	10	0.5
Sn	120	2	115	0.071	ppb	69.35818322	233	1
Sb	121	2	115	0.094	ppb	82.38386814	117	0.6
Ba	137	2	115	0.044	ppb	235.4665541	30	0.5
W	182	2	165	0.038	ppb	46.21295983	900	1
Pt	195	2	165	0.002	ppb	160.6953868	40	1
Tl	205	2	165	0.001	ppb	290.7788314	140	0.1
Pb	208	2	165	-0.014	ppb	-22.86771745	1073	0.5
Th	232	2	165	-0.001	ppb	-343.9749178	387	1
U	238	2	165	0.015	ppb	5.753126529	387	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1012712	1.32	1781134	56.86	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21173427	0.13	42109280	50.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	737098	0.43	819334	89.96	60	120	
Sc (IS)	45	3	No Gas	74325626	1.01	109237925	68.04	60	120	
Ge Internal Standard	72	1	HMI H2	13052391	0.72	19440162	67.14	60	120	
Ge Internal Standard	72	2	HMI He	1022903	0.36	1083920	94.37	60	120	
In Internal Standard	115	2	HMI He	3189923	0.94	3072235	103.83	60	120	
Ho-165	165	2	HMI He	19308236	0.42	19842548	97.31	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	040WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:34:02-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.011	ppb	0	0	0.5
Na	23	2	45	1715.661	ppb	2.034367337	394123	25
Mg	24	2	45	47.351	ppb	5.548325243	4866	25
Al	27	2	45	0.022	ppb	2557.703515	63	15
K	39	2	45	22.735	ppb	33.45268294	10294	50
Ca	44	2	45	6.093	ppb	79.21337255	83	25
V	51	2	72	0.117	ppb	83.03624604	927	1
Cr	52	2	72	-0.063	ppb	-99.56364265	257	1
Mn	55	2	72	0.045	ppb	102.0252282	123	0.5
Fe	57	2	72	0.231	ppb	1195.945198	173	25
Co	59	2	72	-0.001	ppb	-1337.880484	17	0.5
Ni	60	2	72	0.025	ppb	377.1600038	287	1
Cu	63	2	72	0.128	ppb	54.36469006	2480	1
Zn	66	2	72	-0.305	ppb	-280.8510598	827	5
As	75	2	72	-0.031	ppb	-21.45380648	18	1
Se	78	1	72	-0.002	ppb	-2282.692498	16	1
Nb	93	2	72	0.338	ppb	11.72507279	1597	2
Mo	95	2	115	-0.025	ppb	-21.2091673	83	0.5
Pd	105	2	115	-0.025	ppb	-39.81588305	47	1
Ag	107	2	115	0.001	ppb	738.7125921	20	1
Cd	111	2	115	0.013	ppb	359.8603592	13	0.5
Sn	120	2	115	0.089	ppb	112.2008655	253	1
Sb	121	2	115	0.080	ppb	29.26132223	103	0.6
Ba	137	2	115	0.021	ppb	344.8050075	23	0.5
W	182	2	165	0.021	ppb	22.93879993	780	1
Pt	195	2	165	-0.001	ppb	-396.0599144	23	1
Tl	205	2	165	0.001	ppb	537.5494748	143	0.1
Pb	208	2	165	-0.024	ppb	-50.98512709	937	0.5
Th	232	2	165	-0.002	ppb	-143.2134509	377	1
U	238	2	165	0.007	ppb	49.350057	227	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1010688	1.13	1781134	56.74	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21067391	0.35	42109280	50.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	736852	0.69	819334	89.93	60	120	
Sc (IS)	45	3	No Gas	73524802	0.28	109237925	67.31	60	120	
Ge Internal Standard	72	1	HMI H2	12916939	0.52	19440162	66.44	60	120	
Ge Internal Standard	72	2	HMI He	1021427	0.21	1083920	94.23	60	120	
In Internal Standard	115	2	HMI He	3187427	0.98	3072235	103.75	60	120	
Ho-165	165	2	HMI He	19166359	1.06	19842548	96.59	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	041WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:42:49-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.009	ppb	395.1716935	7	0.5
Na	23	2	45	1051.265	ppb	2.124485269	256925	25
Mg	24	2	45	36.798	ppb	14.55069227	3964	25
Al	27	2	45	1.248	ppb	169.9279563	90	15
K	39	2	45	7.870	ppb	108.937646	9927	50
Ca	44	2	45	16.357	ppb	65.98168543	110	25
V	51	2	72	0.184	ppb	98.3901482	1020	1
Cr	52	2	72	-0.082	ppb	-23.06832229	230	1
Mn	55	2	72	0.048	ppb	169.0347657	127	0.5
Fe	57	2	72	-1.661	ppb	-187.1396815	120	25
Co	59	2	72	0.009	ppb	83.48087452	47	0.5
Ni	60	2	72	0.017	ppb	583.976969	283	1
Cu	63	2	72	-0.035	ppb	-82.80876546	2070	1
Zn	66	2	72	-0.723	ppb	-120.528953	727	5
As	75	2	72	-0.076	ppb	-72.46094035	11	1
Se	78	1	72	-0.022	ppb	-83.02679691	9	1
Nb	93	2	72	0.286	ppb	26.14132621	1413	2
Mo	95	2	115	-0.029	ppb	-129.7244769	80	0.5
Pd	105	2	115	-0.013	ppb	-20.85535777	73	1
Ag	107	2	115	0.003	ppb	212.2757873	30	1
Cd	111	2	115	-0.001	ppb	-3711.985862	7	0.5
Sn	120	2	115	0.050	ppb	79.16085026	210	1
Sb	121	2	115	0.090	ppb	45.81990302	113	0.6
Ba	137	2	115	0.021	ppb	196.4614991	23	0.5
W	182	2	165	0.039	ppb	59.11468793	923	1
Pt	195	2	165	0.007	ppb	35.89406665	73	1
Tl	205	2	165	0.002	ppb	223.0704992	160	0.1
Pb	208	2	165	-0.011	ppb	-62.92170376	1137	0.5
Th	232	2	165	-0.004	ppb	-153.2177067	340	1
U	238	2	165	0.005	ppb	113.9746113	197	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1016476	1.07	1781134	57.07	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21070084	0.30	42109280	50.04	60	120	IS Failed
Sc (IS)	45	2	HMI He	752460	0.38	819334	91.84	60	120	
Sc (IS)	45	3	No Gas	72239364	0.35	109237925	66.13	60	120	
Ge Internal Standard	72	1	HMI H2	12841519	0.44	19440162	66.06	60	120	
Ge Internal Standard	72	2	HMI He	1036440	0.53	1083920	95.62	60	120	
In Internal Standard	115	2	HMI He	3216584	0.62	3072235	104.70	60	120	
Ho-165	165	2	HMI He	19642007	0.88	19842548	98.99	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5314921
Data File Name	042CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:46:36-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	103589	0.00
Li	7	2	HMI He	6085	0.06
Li	7	3	No Gas	4887162	0.00
Be	9	1	HMI H2	20	500.00
B	11	1	HMI H2	1227	0.71
Na	23	1	HMI H2	2268995	0.00
Na	23	2	HMI He	221732	0.00
Mg	24	2	HMI He	3397	0.32
Al	27	2	HMI He	47	115.56
K	39	2	HMI He	10964	0.04
Ca	44	2	HMI He	93	28.89
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	913	2.29
Cr	52	2	HMI He	340	9.52
Mn	55	2	HMI He	70	81.64
Fe	57	2	HMI He	133	3.25
Co	59	2	HMI He	17	415.69
Ni	60	2	HMI He	220	9.47
Cu	63	2	HMI He	2100	0.33
Zn	66	2	HMI He	780	1.48
As	75	2	HMI He	20	263.11
Se	78	1	HMI H2	40	25.00
Sr	88	2	HMI He	100	55.68
Zr	90	2	HMI He	107	22.12
Nb	93	2	HMI He	1043	0.78
Mo	95	2	HMI He	40	165.36
Pd	105	2	HMI He	87	73.33
Ag	107	2	HMI He	7	2598.08
Cd	111	2	HMI He	7	2598.08
Sn	120	2	HMI He	217	11.73
Sb	121	2	HMI He	113	39.95
Ba	137	2	HMI He	10	0.00
W	182	2	HMI He	870	0.74
Pt	195	2	HMI He	27	292.73
Tl	205	2	HMI He	203	20.28
Pb	208	2	HMI He	1380	0.65
Th	232	2	HMI He	313	9.19
U	238	2	HMI He	213	20.77

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	976566	1.59
Sc (IS)	45	1	HMI H2	20729192	0.74
Sc (IS)	45	2	HMI He	741009	0.39
Sc (IS)	45	3	No Gas	72650699	0.54
Ge Internal Standard	72	1	HMI H2	12651414	0.23
Ge Internal Standard	72	2	HMI He	1022415	0.31
In Internal Standard	115	2	HMI He	3205401	0.52
Ho-165	165	2	HMI He	19582867	0.13

Calibration Standard Report

Sample Table

Sample Name	ic-5314899
Data File Name	043CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:50:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	396559	0.00
Li	7	2	HMI He	23520	0.02
Li	7	3	No Gas	18862584	0.00
Be	9	1	HMI H2	27333	0.01
B	11	1	HMI H2	30952	0.00
Na	23	1	HMI H2	22154154	0.00
Na	23	2	HMI He	2090019	0.00
Mg	24	2	HMI He	853942	0.00
Al	27	2	HMI He	196405	0.00
K	39	1	HMI H2	19988343	0.00
K	39	2	HMI He	401191	0.00
Ca	40	1	HMI H2	28345874	0.00
Ca	44	2	HMI He	24339	0.01
Ti	47	2	HMI He	23	212.09
V	51	2	HMI He	106968	0.00
Cr	52	2	HMI He	144458	0.00
Mn	55	2	HMI He	49706	0.00
Fe	57	2	HMI He	268030	0.00
Co	59	2	HMI He	284935	0.00
Ni	60	2	HMI He	83204	0.00
Cu	63	2	HMI He	242850	0.00
Zn	66	2	HMI He	25454	0.01
As	75	2	HMI He	16215	0.00
Se	78	1	HMI H2	31923	0.00
Sr	88	2	HMI He	48498	0.00
Zr	90	2	HMI He	663	3.61
Nb	93	2	HMI He	761182	0.00
Mo	95	2	HMI He	105610	0.00
Pd	105	2	HMI He	174260	0.00
Ag	107	2	HMI He	388503	0.00
Cd	111	2	HMI He	42829	0.01
Sn	120	2	HMI He	106398	0.00
Sb	121	2	HMI He	86032	0.00
Ba	137	2	HMI He	28951	0.01
Nd	146	2	HMI He	127517	0.00
Sm	147	2	HMI He	112051	0.00
Sm	150	2	HMI He	107950	0.00
Gd	156	1	HMI H2	956988	0.00
Gd	157	1	HMI H2	735698	0.00
W	182	2	HMI He	598317	0.00
Pt	195	2	HMI He	536779	0.00
Tl	205	2	HMI He	1026527	0.00
Pb	208	2	HMI He	1326082	0.00
Th	232	2	HMI He	1610400	0.00
U	238	2	HMI He	1872677	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	980843	3.07	976566	100.44	60	120	
Sc (IS)	45	1	HMI H2	20784500	0.09	20729192	100.27	60	120	
Sc (IS)	45	2	HMI He	742117	0.67	741009	100.15	60	120	
Sc (IS)	45	3	No Gas	71825207	0.28	72650699	98.86	60	120	
Ge Internal Standard	72	1	HMI H2	12607286	0.32	12651414	99.65	60	120	
Ge Internal Standard	72	2	HMI He	1024534	0.49	1022415	100.21	60	120	
In Internal Standard	115	2	HMI He	3121203	0.81	3205401	97.37	60	120	
Ho-165	165	2	HMI He	19575932	0.48	19582867	99.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	044_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:55:08-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	509.380	ppb	1.734	253504	500	101.9	90	110	
Li	7	2	45	485.931	ppb	2.978	14520	500	97.2	90	110	
Li	7	3	45	495.861	ppb	0.859	11833069	500	99.2	90	110	
Be	9	1	6	48.713	ppb	6.180	13676	50	97.4	90	110	
B	11	1	6	54.219	ppb	2.087	17810	50	108.4	90	110	
Na	23	1	45	4853.746	ppb	0.832	11949420	5000	97.1	90	110	
Na	23	2	45	4863.973	ppb	1.853	1127343	5000	97.3	90	110	
Mg	24	2	45	5030.983	ppb	0.997	430013	5000	100.6	90	110	
Al	27	2	45	5036.266	ppb	1.384	98644	5000	100.7	90	110	
K	39	1	45	4949.023	ppb	1.115	11391242	5000	99.0	90	110	
K	39	2	45	4965.548	ppb	0.282	204136	5000	99.3	90	110	
Ca	40	1	45	4980.878	ppb	0.394	14206446	5000	99.6	90	110	
Ca	44	2	45	4971.046	ppb	3.640	12108	5000	99.4	90	110	
Ti	47	2	45	14.259	ppb	173.205	3	50	28.5	90	110	>+\-10%
V	51	2	72	49.950	ppb	0.623	53695	50	99.9	90	110	
Cr	52	2	72	49.728	ppb	1.038	71753	50	99.5	90	110	
Mn	55	2	72	50.516	ppb	2.384	25053	50	101.0	90	110	
Fe	57	2	72	4989.708	ppb	1.000	133335	5000	99.8	90	110	
Co	59	2	72	50.130	ppb	2.134	142342	50	100.3	90	110	
Ni	60	2	72	49.570	ppb	2.111	41210	50	99.1	90	110	
Cu	63	2	72	50.445	ppb	2.038	123112	50	100.9	90	110	
Zn	66	2	72	52.530	ppb	2.183	13693	50	105.1	90	110	
As	75	2	72	49.229	ppb	1.500	7964	50	98.5	90	110	
Se	78	1	72	50.477	ppb	1.306	16064	50	101.0	90	110	
Sr	88	2	72	50.384	ppb	2.383	24399	50	100.8	90	110	
Zr	90	2	72	119.772	ppb	11.855	770	50	239.5	90	110	>+\-10%
Nb	93	2	72	100.958	ppb	0.510	383391	100	101.0	90	110	
Mo	95	2	115	49.298	ppb	2.473	53055	50	98.6	90	110	
Pd	105	2	115	52.626	ppb	2.121	93437	50	105.3	90	110	
Ag	107	2	115	49.322	ppb	1.814	195160	50	98.6	90	110	
Cd	111	2	115	48.782	ppb	5.675	21275	50	97.6	90	110	
Sn	120	2	115	49.234	ppb	1.751	53468	50	98.5	90	110	
Sb	121	2	115	49.939	ppb	0.315	43822	50	99.9	90	110	
Ba	137	2	115	48.935	ppb	3.083	14437	50	97.9	90	110	
W	182	2	165	49.622	ppb	0.712	297328	50	99.2	90	110	
Pt	195	2	165	49.979	ppb	1.544	268262	50	100.0	90	110	
Tl	205	2	165	50.131	ppb	1.524	514657	50	100.3	90	110	
Pb	208	2	165	50.202	ppb	1.073	666365	50	100.4	90	110	
Th	232	2	165	47.763	ppb	1.006	769310	50	95.5	90	110	
U	238	2	165	46.457	ppb	1.276	870039	50	92.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1006696	1.08	976566	103.09	60	120	
Sc (IS)	45	1	HMI H2	20829180	0.48	20729192	100.48	60	120	
Sc (IS)	45	2	HMI He	739907	0.51	741009	99.85	60	120	
Sc (IS)	45	3	No Gas	72092439	0.35	72650699	99.23	60	120	
Ge Internal Standard	72	1	HMI H2	12552789	0.61	12651414	99.22	60	120	
Ge Internal Standard	72	2	HMI He	1020890	0.13	1022415	99.85	60	120	
In Internal Standard	115	2	HMI He	3179467	1.46	3205401	99.19	60	120	
Ho-165	165	2	HMI He	19575738	0.92	19582867	99.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	045_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T14:58:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	17.979	ppb	17.8	5110813	10	>RL
Be	9	1	6	0.032	ppb	289.8	30	0.5	
B	11	1	6	1.072	ppb	40.6	1620	0.5	>RL
Na	23	1	45	-270.754	ppb	-2.4	1745710	25	
Na	23	2	45	-274.204	ppb	-3.6	172176	25	
Mg	24	2	45	-20.355	ppb	-4.9	1683	25	
Al	27	2	45	2.331	ppb	140.2	93	15	
K	39	1	45	-3.934	ppb	-465.4	2927899	50	
K	39	2	45	-20.893	ppb	-81.2	10247	50	
Ca	40	1	45	-2.802	ppb	-10.5	107024	50	
Ca	44	2	45	-1.773	ppb	-789.5	90	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.026	ppb	-348.9	893	1	
Cr	52	2	72	0.012	ppb	50.4	360	1	
Mn	55	2	72	0.099	ppb	105.9	120	0.5	
Fe	57	2	72	3.415	ppb	44.1	227	25	
Co	59	2	72	0.009	ppb	43.2	43	0.5	
Ni	60	2	72	0.097	ppb	111.2	303	1	
Cu	63	2	72	0.187	ppb	55.2	2574	1	
Zn	66	2	72	0.036	ppb	1663.4	797	5	
As	75	2	72	0.007	ppb	166.4	22	1	
Se	78	1	72	0.012	ppb	645.5	44	1	
Sr	88	2	72	-0.016	ppb	-590.8	93	0.5	
Zr	90	2	72	1.029	ppb	664.5	113	1	>RL
Nb	93	2	72	3.347	ppb	5.8	13863	2	>RL
Mo	95	2	115	0.064	ppb	87.8	110	0.5	
Pd	105	2	115	0.122	ppb	13.7	307	1	
Ag	107	2	115	0.034	ppb	17.2	143	1	
Cd	111	2	115	0.030	ppb	151.2	20	0.5	
Sn	120	2	115	0.135	ppb	34.5	367	1	
Sb	121	2	115	0.652	ppb	6.2	693	0.6	>RL
Ba	137	2	115	0.066	ppb	133.0	30	0.5	
W	182	2	165	0.068	ppb	28.9	1283	1	
Pt	195	2	165	0.020	ppb	48.0	133	1	
Tl	205	2	165	0.021	ppb	46.0	420	0.1	
Pb	208	2	165	-0.015	ppb	-90.0	1190	0.5	
Th	232	2	165	0.056	ppb	3.2	1227	1	
U	238	2	165	0.042	ppb	8.8	1010	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1024509	0.66	976566	104.91	60	120	
Sc (IS)	45	1	HMI H2	20890105	0.20	20729192	100.78	60	120	
Sc (IS)	45	2	HMI He	747933	0.55	741009	100.93	60	120	
Sc (IS)	45	3	No Gas	72203614	0.88	72650699	99.38	60	120	
Ge Internal Standard	72	1	HMI H2	12689245	0.38	12651414	100.30	60	120	
Ge Internal Standard	72	2	HMI He	1031747	0.46	1022415	100.91	60	120	
In Internal Standard	115	2	HMI He	3225907	0.61	3205401	100.64	60	120	
Ho-165	165	2	HMI He	19665513	0.75	19582867	100.42	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	046LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:02:41-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	20.996	ppb	10.510	5219536	50	42.0	70	130	>+/-30%
Be	9	1	6	0.837	ppb	37.385	260	1	83.7	70	130	
Na	23	2	45	-273.159	ppb	-5.615	174052	50	-546.3	70	130	>+/-30%
Mg	24	2	45	35.040	ppb	1.434	6495	50	70.1	70	130	
Al	27	2	45	37.833	ppb	7.935	803	30	126.1	70	130	
K	39	2	45	67.972	ppb	19.562	13876	100	68.0	70	130	>+/-30%
Ca	44	2	45	50.723	ppb	57.220	220	50	101.4	70	130	
V	51	2	72	5.060	ppb	4.765	6382	5	101.2	70	130	
Cr	52	2	72	1.974	ppb	11.019	3237	2	98.7	70	130	
Mn	55	2	72	1.226	ppb	16.417	690	1	122.6	70	130	
Fe	57	2	72	46.939	ppb	2.590	1413	50	93.9	70	130	
Co	59	2	72	0.980	ppb	12.787	2854	1	98.0	70	130	
Ni	60	2	72	2.360	ppb	4.807	2214	2	118.0	70	130	
Cu	63	2	72	2.088	ppb	4.257	7245	2	104.4	70	130	
Zn	66	2	72	10.759	ppb	13.429	3491	10	107.6	70	130	
As	75	2	72	4.816	ppb	3.533	813	5	96.3	70	130	
Se	78	1	72	4.880	ppb	4.702	1619	5	97.6	70	130	
Sr	88	2	72	0.965	ppb	16.403	577	1	96.5	70	130	
Zr	90	2	72	10.851	ppb	26.844	170	0.5	2170.3	70	130	>+/-30%
Nb	93	2	72	7.143	ppb	2.943	28650	2	357.2	70	130	>+/-30%
Mo	95	2	115	2.124	ppb	8.912	2374	2	106.2	70	130	
Pd	105	2	115	0.042	ppb	91.569	163	1	4.2	70	130	>+/-30%
Ag	107	2	115	5.319	ppb	0.989	21509	5	106.4	70	130	
Cd	111	2	115	1.061	ppb	12.478	480	1	106.1	70	130	
Sn	120	2	115	10.044	ppb	2.447	11318	10	100.4	70	130	
Sb	121	2	115	2.090	ppb	3.287	1984	2	104.5	70	130	
Ba	137	2	115	1.317	ppb	11.230	407	1	131.7	70	130	>+/-30%
W	182	2	165	4.938	ppb	2.475	30652	1	493.8	70	130	>+/-30%
Pt	195	2	165	0.025	ppb	26.116	163	1	2.5	70	130	>+/-30%
Tl	205	2	165	1.020	ppb	3.519	10768	1	102.0	70	130	
Pb	208	2	165	1.017	ppb	5.157	14987	1	101.7	70	130	
Th	232	2	165	2.034	ppb	0.315	33369	2	101.7	70	130	
U	238	2	165	0.966	ppb	1.681	18469	1	96.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1027958	2.06	976566	105.26	60	120	
Sc (IS)	45	1	HMI H2	21012783	0.24	20729192	101.37	60	120	
Sc (IS)	45	2	HMI He	755256	0.73	741009	101.92	60	120	
Sc (IS)	45	3	No Gas	73129556	0.90	72650699	100.66	60	120	
Ge Internal Standard	72	1	HMI H2	12791101	0.79	12651414	101.10	60	120	
Ge Internal Standard	72	2	HMI He	1040994	0.53	1022415	101.82	60	120	
In Internal Standard	115	2	HMI He	3247910	0.77	3205401	101.33	60	120	
Ho-165	165	2	HMI He	19757838	0.31	19582867	100.89	60	120	

Blank Report

Sample Table

Sample Name	mb 280-429568/1-a
Data File Name	047_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:06:29-06:00
Sample Type	Blank
Dilution	1
Comment	429568 6020A dod5
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	3.105	ppb	105.9648049	106133	0.5
Li	7	2	45	20.956	ppb	136.4156571	6588	0.5
Li	7	3	45	8.623	ppb	90.18662402	4904303	10
Be	9	1	6	-0.061	ppb	-34.37588337	3	0.5
B	11	1	6	0.191	ppb	304.94307	1307	0.5
Na	23	1	45	-202.071	ppb	-23.02263684	1897288	25
Na	23	2	45	-232.743	ppb	-12.24178579	182200	25
Mg	24	2	45	-15.327	ppb	-4.730030903	2140	25
Al	27	2	45	1.612	ppb	160.8715401	80	15
K	39	1	45	-754.234	ppb	-1.449218232	1653386	50
K	39	2	45	-13.297	ppb	-81.50508749	10674	50
Ca	40	1	45	-0.215	ppb	-113.722852	115249	50
Ca	44	2	45	8.650	ppb	180.056137	117	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.254	ppb	-21.48225592	657	1
Cr	52	2	72	-0.029	ppb	-74.31672042	303	1
Mn	55	2	72	0.050	ppb	99.96320917	97	0.5
Fe	57	2	72	0.280	ppb	280.0548035	143	25
Co	59	2	72	0.014	ppb	76.4694284	57	0.5
Ni	60	2	72	0.074	ppb	123.1907805	287	1
Cu	63	2	72	0.159	ppb	12.70722079	2527	1
Zn	66	2	72	1.858	ppb	10.8684839	1260	5
As	75	2	72	0.054	ppb	98.36362414	29	1
Se	78	1	72	-0.054	ppb	-92.52348247	23	1
Sr	88	2	72	-0.126	ppb	-32.48686777	40	0.5
Zr	90	2	72	-3.295	ppb	-143.8172482	90	1
Nb	93	2	72	0.706	ppb	16.00206529	3787	2
Mo	95	2	115	0.006	ppb	344.8931816	47	0.5
Pd	105	2	115	-0.010	ppb	-52.75666825	70	1
Ag	107	2	115	0.011	ppb	61.73539792	53	1
Cd	111	2	115	0.014	ppb	355.6697964	13	0.5
Sn	120	2	115	0.085	ppb	97.78039994	313	1
Sb	121	2	115	0.058	ppb	90.65865198	167	0.6
Ba	137	2	115	0.066	ppb	1.134513153	30	0.5
W	182	2	165	0.009	ppb	139.1607628	947	1
Pt	195	2	165	0.010	ppb	105.2936328	80	1
Tl	205	2	165	-0.005	ppb	-27.95832961	157	0.1
Pb	208	2	165	-0.007	ppb	-105.2555761	1317	0.5
Th	232	2	165	0.025	ppb	33.45304006	737	1
U	238	2	165	0.005	ppb	51.98603537	307	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	995154	1.62	976566	101.90	60	120	
Sc (IS)	45	1	HMI H2	21052232	0.45	20729192	101.56	60	120	
Sc (IS)	45	2	HMI He	757041	0.60	741009	102.16	60	120	
Sc (IS)	45	3	No Gas	71121264	0.10	72650699	97.89	60	120	
Ge Internal Standard	72	1	HMI H2	12705479	0.12	12651414	100.43	60	120	
Ge Internal Standard	72	2	HMI He	1041120	0.39	1022415	101.83	60	120	
In Internal Standard	115	2	HMI He	3252604	0.75	3205401	101.47	60	120	
Ho-165	165	2	HMI He	20010931	0.64	19582867	102.19	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-429568/2-a
Data File Name	048_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:10:17-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429568 6020A dod5
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	86.077	86.077	ppb	3.535	130879	400	21.5	80	120	>+/-20%
Li	7	2	45	70.912	70.912	ppb	23.134	7552	400	17.7	80	120	>+/-20%
Li	7	3	45	80.076	80.076	ppb	3.277	5940627	400	20.0	80	120	>+/-20%
Be	9	1	6	38.059	38.059	ppb	2.021	10904	40	95.1	80	120	
Na	23	2	45	-487.666	-487.666	ppb	-1.567	134936	40	-1219.2	80	120	>+/-20%
Mg	24	2	45	-20.892	-20.892	ppb	-6.928	1673	40	-52.2	80	120	>+/-20%
Al	27	2	45	414.403	414.403	ppb	3.408	8432	40	1036.0	80	120	>+/-20%
K	39	2	45	-35.066	-35.066	ppb	-14.473	9903	40	-87.7	80	120	>+/-20%
Ca	44	2	45	313.521	313.521	ppb	23.418	880	40	783.8	80	120	>+/-20%
V	51	2	72	39.996	39.996	ppb	2.458	44451	40	100.0	80	120	
Cr	52	2	72	40.424	40.424	ppb	2.343	60114	40	101.1	80	120	
Mn	55	2	72	39.276	39.276	ppb	1.686	20069	40	98.2	80	120	
Fe	57	2	72	406.302	406.302	ppb	2.465	11304	40	1015.8	80	120	>+/-20%
Co	59	2	72	40.314	40.314	ppb	0.442	117853	40	100.8	80	120	
Ni	60	2	72	41.001	41.001	ppb	0.928	35132	40	102.5	80	120	
Cu	63	2	72	40.170	40.170	ppb	0.456	101368	40	100.4	80	120	
Zn	66	2	72	42.304	42.304	ppb	7.816	11511	40	105.8	80	120	
As	75	2	72	36.985	36.985	ppb	3.371	6165	40	92.5	80	120	
Se	78	1	72	38.661	38.661	ppb	1.459	12492	40	96.7	80	120	
Nb	93	2	72	0.538	0.538	ppb	9.905	3170	40	1.3	80	120	>+/-20%
Mo	95	2	115	37.043	37.043	ppb	1.367	41007	40	92.6	80	120	
Pd	105	2	115	0.012	0.012	ppb	93.779	110	40	0.0	80	120	>+/-20%
Ag	107	2	115	41.088	41.088	ppb	0.912	167210	40	102.7	80	120	
Cd	111	2	115	39.296	39.296	ppb	1.717	17634	40	98.2	80	120	
Sn	120	2	115	38.108	38.108	ppb	2.085	42615	40	95.3	80	120	
Sb	121	2	115	37.819	37.819	ppb	1.651	34155	40	94.5	80	120	
Ba	137	2	115	40.134	40.134	ppb	1.529	12179	40	100.3	80	120	
W	182	2	165	11.643	11.643	ppb	1.785	72124	40	29.1	80	120	>+/-20%
Pt	195	2	165	0.003	0.003	ppb	94.273	43	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.783	40.783	ppb	0.391	428837	40	102.0	80	120	
Pb	208	2	165	40.605	40.605	ppb	0.802	552235	40	101.5	80	120	
Th	232	2	165	37.771	37.771	ppb	1.148	623109	40	94.4	80	120	
U	238	2	165	37.193	37.193	ppb	0.728	713387	40	93.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1026466	0.93	976566	105.11	60	120	
Sc (IS)	45	1	HMI H2	21076319	0.32	20729192	101.67	60	120	
Sc (IS)	45	2	HMI He	764634	0.49	741009	103.19	60	120	
Sc (IS)	45	3	No Gas	71644154	0.88	72650699	98.61	60	120	
Ge Internal Standard	72	1	HMI H2	12736086	0.84	12651414	100.67	60	120	
Ge Internal Standard	72	2	HMI He	1051034	0.43	1022415	102.80	60	120	
In Internal Standard	115	2	HMI He	3269521	0.30	3205401	102.00	60	120	
Ho-165	165	2	HMI He	20046500	0.44	19582867	102.37	60	120	

Sample Report

Sample Table

Sample Name	280-114372-C-10-C
Data File Name	049SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:14:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.658	ppb	2.658	124.03	106339	500000	
Li	7	2	45	-4.556	ppb	-4.556	-308.99	6188	500000	
Li	7	3	45	0.568	ppb	0.568	1327.44	4808409	50000	
Be	9	1	6	-0.025	ppb	-0.025	-219.81	13	2000	
B	11	1	6	0.847	ppb	0.847	83.49	1503	2000	
Na	23	1	45	-462.361	ppb	-462.361	-0.67	1377907	2000	
Na	23	2	45	-500.541	ppb	-500.541	-0.56	132242	400000	
Mg	24	2	45	-10.570	ppb	-10.570	-21.69	2574	400000	
Al	27	2	45	5.049	ppb	5.049	45.12	150	400000	
K	39	1	45	-777.026	ppb	-777.026	-0.86	1619291	400000	
K	39	2	45	-30.434	ppb	-30.434	-27.55	10073	400000	
Ca	40	1	45	89.108	ppb	89.108	1.95	371852	400000	
Ca	44	2	45	65.820	ppb	65.820	45.17	260	400000	
Ti	47	2	45	69.053	ppb	69.053	124.83	17	4000	
V	51	2	72	-0.224	ppb	-0.224	-41.32	690	2000	
Cr	52	2	72	0.295	ppb	0.295	48.70	780	5000	
Mn	55	2	72	0.623	ppb	0.623	12.65	387	10000	
Fe	57	2	72	9.411	ppb	9.411	32.67	393	400000	
Co	59	2	72	0.014	ppb	0.014	63.98	57	2000	
Ni	60	2	72	0.121	ppb	0.121	65.12	327	5000	
Cu	63	2	72	2.257	ppb	2.257	6.61	7685	5000	
Zn	66	2	72	3.632	ppb	3.632	1.92	1710	5000	
As	75	2	72	-0.022	ppb	-0.022	-299.14	17	2000	
Se	78	1	72	-0.034	ppb	-0.034	-118.75	29	2000	
Sr	88	2	72	0.455	ppb	0.455	25.19	327	4000	
Zr	90	2	72	340.159	ppb	340.159	2.71	2037	1000	
Nb	93	2	72	0.580	ppb	0.580	18.85	3314	200	
Mo	95	2	115	0.081	ppb	0.081	19.29	130	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-48.41	57	100	
Ag	107	2	115	0.027	ppb	0.027	27.15	117	100	
Cd	111	2	115	0.022	ppb	0.022	155.67	17	2000	
Sn	120	2	115	0.218	ppb	0.218	4.72	463	2000	
Sb	121	2	115	0.560	ppb	0.560	5.42	620	1000	
Ba	137	2	115	0.649	ppb	0.649	25.70	207	5000	
W	182	2	165	0.033	ppb	0.033	100.37	1107	100	
Pt	195	2	165	0.006	ppb	0.006	55.83	60	100	
Tl	205	2	165	0.011	ppb	0.011	30.92	333	2000	
Pb	208	2	165	0.035	ppb	0.035	46.71	1910	5000	
Th	232	2	165	0.386	ppb	0.386	5.19	6765	2000	
U	238	2	165	0.035	ppb	0.035	4.23	903	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	993261	0.82	976566	101.71	60	120	
Sc (IS)	45	1	HMI H2	21120255	0.61	20729192	101.89	60	120	
Sc (IS)	45	2	HMI He	763378	0.73	741009	103.02	60	120	
Sc (IS)	45	3	No Gas	71366436	0.84	72650699	98.23	60	120	
Ge Internal Standard	72	1	HMI H2	12691458	0.56	12651414	100.32	60	120	
Ge Internal Standard	72	2	HMI He	1044328	0.49	1022415	102.14	60	120	
In Internal Standard	115	2	HMI He	3269488	0.70	3205401	102.00	60	120	
Ho-165	165	2	HMI He	20300902	1.24	19582867	103.67	60	120	

Sample Report

Sample Table

Sample Name	280-114372-E-11-C
Data File Name	050SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:17:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	42.187	ppb	42.187	15.36	115581	500000	
Li	7	2	45	32.291	ppb	32.291	10.38	6772	500000	
Li	7	3	45	42.352	ppb	42.352	14.49	5251133	50000	
Be	9	1	6	0.133	ppb	0.133	87.43	50	2000	
B	11	1	6	251.952	ppb	251.952	8.55	69305	2000	
Na	23	1	45	54331.589	ppb	54331.589	0.48	109677278	2000	>LDR
Na	23	2	45	52596.118	ppb	52596.118	0.57	10219869	400000	
Mg	24	2	45	21567.125	ppb	21567.125	0.91	1869375	400000	
Al	27	2	45	2208.657	ppb	2208.657	1.68	44166	400000	
K	39	1	45	7806.836	ppb	7806.836	1.09	16155925	400000	
K	39	2	45	8502.191	ppb	8502.191	1.65	348644	400000	
Ca	40	1	45	114867.002	ppb	114867.002	0.15	322626835	400000	
Ca	44	2	45	113156.976	ppb	113156.976	0.66	279164	400000	
Ti	47	2	45	5991.975	ppb	5991.975	6.68	1423	4000	
V	51	2	72	9.695	ppb	9.695	1.47	11194	2000	
Cr	52	2	72	2.449	ppb	2.449	10.38	3867	5000	
Mn	55	2	72	234.594	ppb	234.594	0.26	116482	10000	
Fe	57	2	72	1963.958	ppb	1963.958	1.37	52735	400000	
Co	59	2	72	0.845	ppb	0.845	7.18	2424	2000	
Ni	60	2	72	2.580	ppb	2.580	9.86	2360	5000	
Cu	63	2	72	6.136	ppb	6.136	0.57	16873	5000	
Zn	66	2	72	31.007	ppb	31.007	3.76	8429	5000	
As	75	2	72	2.511	ppb	2.511	5.29	427	2000	
Se	78	1	72	0.992	ppb	0.992	13.04	349	2000	
Sr	88	2	72	775.741	ppb	775.741	1.49	375465	4000	
Zr	90	2	72	1351.418	ppb	1351.418	3.91	7619	1000	
Nb	93	2	72	0.858	ppb	0.858	16.39	4304	200	
Mo	95	2	115	2.146	ppb	2.146	5.06	2367	2000	
Pd	105	2	115	-0.026	ppb	-0.026	-0.15	40	100	
Ag	107	2	115	0.040	ppb	0.040	9.71	167	100	
Cd	111	2	115	0.106	ppb	0.106	86.74	53	2000	
Sn	120	2	115	0.920	ppb	0.920	7.95	1220	2000	
Sb	121	2	115	0.529	ppb	0.529	11.98	580	1000	
Ba	137	2	115	260.371	ppb	260.371	1.56	77423	5000	
W	182	2	165	0.402	ppb	0.402	17.06	3337	100	
Pt	195	2	165	0.001	ppb	0.001	339.52	33	100	
Tl	205	2	165	0.032	ppb	0.032	12.47	540	2000	
Pb	208	2	165	11.078	ppb	11.078	0.50	151196	5000	
Th	232	2	165	0.670	ppb	0.670	2.43	11338	2000	
U	238	2	165	7.220	ppb	7.220	0.66	138208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	896436	7.49	976566	91.79	60	120	
Sc (IS)	45	1	HMI H2	20670720	0.55	20729192	99.72	60	120	
Sc (IS)	45	2	HMI He	754881	0.24	741009	101.87	60	120	
Sc (IS)	45	3	No Gas	69511267	0.46	72650699	95.68	60	120	
Ge Internal Standard	72	1	HMI H2	12362958	0.60	12651414	97.72	60	120	
Ge Internal Standard	72	2	HMI He	1024303	0.54	1022415	100.18	60	120	
In Internal Standard	115	2	HMI He	3206064	0.18	3205401	100.02	60	120	
Ho-165	165	2	HMI He	19981400	0.28	19582867	102.04	60	120	

Sample Report

Sample Table

Sample Name	280-114372-E-12-G
Data File Name	051SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:21:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	35.537	ppb	35.537	2.83	113738	500000	
Li	7	2	45	17.193	ppb	17.193	59.47	6495	500000	
Li	7	3	45	33.005	ppb	33.005	2.66	5084504	50000	
Be	9	1	6	0.106	ppb	0.106	105.53	43	2000	
B	11	1	6	164.331	ppb	164.331	9.77	45595	2000	
Na	23	1	45	45307.766	ppb	45307.766	0.71	91907925	2000	>LDR
Na	23	2	45	43827.444	ppb	43827.444	1.08	8541842	400000	
Mg	24	2	45	18668.779	ppb	18668.779	0.53	1616467	400000	
Al	27	2	45	735.144	ppb	735.144	1.68	14714	400000	
K	39	1	45	5799.419	ppb	5799.419	1.51	12757851	400000	
K	39	2	45	6617.367	ppb	6617.367	0.93	273457	400000	
Ca	40	1	45	106739.511	ppb	106739.511	0.25	300046582	400000	
Ca	44	2	45	104240.388	ppb	104240.388	0.58	256823	400000	
Ti	47	2	45	1659.347	ppb	1659.347	23.17	393	4000	
V	51	2	72	2.169	ppb	2.169	16.91	3214	2000	
Cr	52	2	72	0.532	ppb	0.532	16.28	1107	5000	
Mn	55	2	72	1752.562	ppb	1752.562	0.79	869532	10000	
Fe	57	2	72	1847.108	ppb	1847.108	1.54	49595	400000	
Co	59	2	72	0.488	ppb	0.488	26.55	1407	2000	
Ni	60	2	72	1.000	ppb	1.000	6.85	1050	5000	
Cu	63	2	72	0.367	ppb	0.367	21.77	2987	5000	
Zn	66	2	72	4.833	ppb	4.833	8.78	1974	5000	
As	75	2	72	6.953	ppb	6.953	7.11	1146	2000	
Se	78	1	72	0.067	ppb	0.067	68.50	60	2000	
Sr	88	2	72	690.679	ppb	690.679	0.93	334232	4000	
Zr	90	2	72	489.481	ppb	489.481	6.52	2827	1000	
Nb	93	2	72	0.488	ppb	0.488	12.86	2897	200	
Mo	95	2	115	4.401	ppb	4.401	9.29	4794	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-123.49	57	100	
Ag	107	2	115	0.002	ppb	0.002	227.85	13	100	
Cd	111	2	115	0.008	ppb	0.008	3.05	10	2000	
Sn	120	2	115	0.255	ppb	0.255	38.49	493	2000	
Sb	121	2	115	0.318	ppb	0.318	15.69	393	1000	
Ba	137	2	115	407.316	ppb	407.316	0.40	120706	5000	
W	182	2	165	1.469	ppb	1.469	5.77	9810	100	
Pt	195	2	165	0.003	ppb	0.003	95.33	43	100	
Tl	205	2	165	0.004	ppb	0.004	22.24	253	2000	
Pb	208	2	165	0.487	ppb	0.487	4.16	7965	5000	
Th	232	2	165	0.237	ppb	0.237	6.96	4201	2000	
U	238	2	165	1.444	ppb	1.444	0.62	27727	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	897740	8.92	976566	91.93	60	120	
Sc (IS)	45	1	HMI H2	20687466	0.89	20729192	99.80	60	120	
Sc (IS)	45	2	HMI He	753878	0.98	741009	101.74	60	120	
Sc (IS)	45	3	No Gas	68970316	0.51	72650699	94.93	60	120	
Ge Internal Standard	72	1	HMI H2	12366427	0.22	12651414	97.75	60	120	
Ge Internal Standard	72	2	HMI He	1024092	0.46	1022415	100.16	60	120	
In Internal Standard	115	2	HMI He	3195324	1.02	3205401	99.69	60	120	
Ho-165	165	2	HMI He	19911346	0.58	19582867	101.68	60	120	

Sample Report

Sample Table

Sample Name	280-114372-E-12-H MS
Data File Name	052SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:25:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	113.461	ppb	113.461	5.25	135239	500000	
Li	7	2	45	101.434	ppb	101.434	5.88	7946	500000	
Li	7	3	45	110.886	ppb	110.886	2.53	6050823	50000	
Be	9	1	6	42.963	ppb	42.963	4.09	11107	2000	
B	11	1	6	178.795	ppb	178.795	10.00	51214	2000	
Na	23	1	45	43506.197	ppb	43506.197	1.32	87566085	2000	>LDR
Na	23	2	45	42244.844	ppb	42244.844	0.60	8199907	400000	
Mg	24	2	45	17901.343	ppb	17901.343	0.88	1542253	400000	
Al	27	2	45	1147.963	ppb	1147.963	1.65	22830	400000	
K	39	1	45	5560.769	ppb	5560.769	1.10	12244526	400000	
K	39	2	45	6233.565	ppb	6233.565	0.53	256931	400000	
Ca	40	1	45	102365.488	ppb	102365.488	0.63	285222296	400000	
Ca	44	2	45	100503.565	ppb	100503.565	1.10	246353	400000	
Ti	47	2	45	1808.207	ppb	1808.207	9.65	427	4000	
V	51	2	72	42.853	ppb	42.853	0.97	46262	2000	
Cr	52	2	72	41.150	ppb	41.150	2.88	59518	5000	
Mn	55	2	72	1721.486	ppb	1721.486	0.57	852680	10000	
Fe	57	2	72	2204.282	ppb	2204.282	1.26	59060	400000	
Co	59	2	72	39.945	ppb	39.945	1.03	113587	2000	
Ni	60	2	72	40.220	ppb	40.220	1.60	33525	5000	
Cu	63	2	72	39.155	ppb	39.155	0.11	96165	5000	
Zn	66	2	72	43.399	ppb	43.399	2.84	11464	5000	
As	75	2	72	44.116	ppb	44.116	1.65	7149	2000	
Se	78	1	72	37.298	ppb	37.298	0.72	11654	2000	
Sr	88	2	72	691.296	ppb	691.296	1.58	333968	4000	
Zr	90	2	72	10503.139	ppb	10503.139	2.88	58377	1000	>LDR
Nb	93	2	72	0.455	ppb	0.455	4.28	2770	200	
Mo	95	2	115	41.260	ppb	41.260	1.64	45011	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-83.56	57	100	
Ag	107	2	115	39.720	ppb	39.720	1.25	159310	100	
Cd	111	2	115	38.395	ppb	38.395	2.50	16980	2000	
Sn	120	2	115	36.946	ppb	36.946	1.24	40730	2000	
Sb	121	2	115	39.961	ppb	39.961	2.18	35571	1000	
Ba	137	2	115	423.005	ppb	423.005	1.53	126414	5000	
W	182	2	165	12.785	ppb	12.785	1.01	78559	100	
Pt	195	2	165	0.003	ppb	0.003	154.03	43	100	
Tl	205	2	165	39.595	ppb	39.595	1.45	413380	2000	
Pb	208	2	165	40.112	ppb	40.112	1.00	541684	5000	
Th	232	2	165	38.267	ppb	38.267	1.08	626796	2000	
U	238	2	165	39.036	ppb	39.036	0.52	743439	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	928109	7.69	976566	95.04	60	120	
Sc (IS)	45	1	HMI H2	20505733	0.64	20729192	98.92	60	120	
Sc (IS)	45	2	HMI He	750018	0.47	741009	101.22	60	120	
Sc (IS)	45	3	No Gas	68038276	0.71	72650699	93.65	60	120	
Ge Internal Standard	72	1	HMI H2	12313679	0.28	12651414	97.33	60	120	
Ge Internal Standard	72	2	HMI He	1022346	0.31	1022415	99.99	60	120	
In Internal Standard	115	2	HMI He	3222607	1.36	3205401	100.54	60	120	
Ho-165	165	2	HMI He	19905077	0.86	19582867	101.65	60	120	

Sample Report

Sample Table

Sample Name	280-114372-E-12-I MSD
Data File Name	053SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:29:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	105.855	ppb	105.855	4.64	132028	500000	
Li	7	2	45	97.031	ppb	97.031	8.79	7855	500000	
Li	7	3	45	111.369	ppb	111.369	0.95	6008225	50000	
Be	9	1	6	43.976	ppb	43.976	9.20	11287	2000	
B	11	1	6	182.958	ppb	182.958	8.23	52207	2000	
Na	23	1	45	43315.876	ppb	43315.876	0.20	86530839	2000	>LDR
Na	23	2	45	41859.662	ppb	41859.662	0.45	8113615	400000	
Mg	24	2	45	17941.909	ppb	17941.909	1.15	1543196	400000	
Al	27	2	45	1139.479	ppb	1139.479	3.95	22623	400000	
K	39	1	45	5495.238	ppb	5495.238	0.74	12041704	400000	
K	39	2	45	6238.095	ppb	6238.095	1.17	256682	400000	
Ca	40	1	45	103085.973	ppb	103085.973	0.75	285040976	400000	
Ca	44	2	45	98727.557	ppb	98727.557	0.97	241613	400000	
Ti	47	2	45	1372.320	ppb	1372.320	4.55	323	4000	
V	51	2	72	43.083	ppb	43.083	2.64	46490	2000	
Cr	52	2	72	41.006	ppb	41.006	1.61	59301	5000	
Mn	55	2	72	1713.675	ppb	1713.675	0.91	848588	10000	
Fe	57	2	72	2146.488	ppb	2146.488	1.19	57501	400000	
Co	59	2	72	40.240	ppb	40.240	0.48	114399	2000	
Ni	60	2	72	39.653	ppb	39.653	1.44	33047	5000	
Cu	63	2	72	39.914	ppb	39.914	1.28	97961	5000	
Zn	66	2	72	44.144	ppb	44.144	6.23	11645	5000	
As	75	2	72	42.437	ppb	42.437	2.46	6876	2000	
Se	78	1	72	37.523	ppb	37.523	0.93	11616	2000	
Sr	88	2	72	694.923	ppb	694.923	0.88	335640	4000	
Zr	90	2	72	11072.685	ppb	11072.685	0.74	61522	1000	>LDR
Nb	93	2	72	0.338	ppb	0.338	18.44	2324	200	
Mo	95	2	115	42.041	ppb	42.041	2.08	45038	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-72.44	57	100	
Ag	107	2	115	40.533	ppb	40.533	0.35	159654	100	
Cd	111	2	115	38.426	ppb	38.426	0.84	16690	2000	
Sn	120	2	115	39.024	ppb	39.024	2.35	42224	2000	
Sb	121	2	115	41.942	ppb	41.942	0.22	36650	1000	
Ba	137	2	115	440.784	ppb	440.784	1.81	129352	5000	
W	182	2	165	12.778	ppb	12.778	0.97	78871	100	
Pt	195	2	165	0.007	ppb	0.007	142.16	63	100	
Tl	205	2	165	39.946	ppb	39.946	0.53	418987	2000	
Pb	208	2	165	40.321	ppb	40.321	0.40	547002	5000	
Th	232	2	165	38.529	ppb	38.529	0.28	634004	2000	
U	238	2	165	39.234	ppb	39.234	0.18	750620	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	924347	7.93	976566	94.65	60	120	
Sc (IS)	45	1	HMI H2	20349040	0.04	20729192	98.17	60	120	
Sc (IS)	45	2	HMI He	748776	0.28	741009	101.05	60	120	
Sc (IS)	45	3	No Gas	67486697	0.52	72650699	92.89	60	120	
Ge Internal Standard	72	1	HMI H2	12201005	0.83	12651414	96.44	60	120	
Ge Internal Standard	72	2	HMI He	1022117	0.56	1022415	99.97	60	120	
In Internal Standard	115	2	HMI He	3164507	0.94	3205401	98.72	60	120	
Ho-165	165	2	HMI He	19996004	0.20	19582867	102.11	60	120	

Sample Report

Sample Table

Sample Name	280-114372-C-13-C
Data File Name	054SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:33:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429898 6020
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	26.344	ppb	26.344	29.89	110226	500000	
Li	7	2	45	21.399	ppb	21.399	9.51	6575	500000	
Li	7	3	45	23.051	ppb	23.051	31.36	4929222	50000	
Be	9	1	6	0.052	ppb	0.052	142.62	30	2000	
B	11	1	6	47.582	ppb	47.582	7.94	13689	2000	
Na	23	1	45	21875.127	ppb	21875.127	0.53	45206991	2000	>LDR
Na	23	2	45	21246.090	ppb	21246.090	1.11	4260378	400000	
Mg	24	2	45	9557.471	ppb	9557.471	0.68	829860	400000	
Al	27	2	45	264.789	ppb	264.789	4.72	5334	400000	
K	39	1	45	3318.828	ppb	3318.828	0.11	8480804	400000	
K	39	2	45	4046.864	ppb	4046.864	2.10	171694	400000	
Ca	40	1	45	76495.302	ppb	76495.302	0.88	213455223	400000	
Ca	44	2	45	74265.900	ppb	74265.900	0.67	183142	400000	
Ti	47	2	45	631.205	ppb	631.205	30.04	150	4000	
V	51	2	72	11.528	ppb	11.528	2.78	13219	2000	
Cr	52	2	72	0.748	ppb	0.748	19.37	1427	5000	
Mn	55	2	72	136.808	ppb	136.808	2.16	68382	10000	
Fe	57	2	72	670.519	ppb	670.519	1.63	18207	400000	
Co	59	2	72	0.279	ppb	0.279	2.96	817	2000	
Ni	60	2	72	0.405	ppb	0.405	28.42	560	5000	
Cu	63	2	72	0.227	ppb	0.227	25.60	2667	5000	
Zn	66	2	72	2.740	ppb	2.740	11.60	1467	5000	
As	75	2	72	5.924	ppb	5.924	5.28	986	2000	
Se	78	1	72	0.703	ppb	0.703	17.78	259	2000	
Sr	88	2	72	542.693	ppb	542.693	1.31	264351	4000	
Zr	90	2	72	497.530	ppb	497.530	2.94	2890	1000	
Nb	93	2	72	0.101	ppb	0.101	69.95	1437	200	
Mo	95	2	115	1.320	ppb	1.320	3.92	1483	2000	
Pd	105	2	115	-0.024	ppb	-0.024	-57.56	43	100	
Ag	107	2	115	0.031	ppb	0.031	56.05	130	100	
Cd	111	2	115	0.030	ppb	0.030	151.28	20	2000	
Sn	120	2	115	0.180	ppb	0.180	15.92	417	2000	
Sb	121	2	115	0.025	ppb	0.025	71.20	137	1000	
Ba	137	2	115	176.614	ppb	176.614	0.76	52938	5000	
W	182	2	165	0.073	ppb	0.073	21.41	1340	100	
Pt	195	2	165	0.002	ppb	0.002	61.97	37	100	
Tl	205	2	165	0.003	ppb	0.003	250.07	237	2000	
Pb	208	2	165	0.156	ppb	0.156	5.82	3530	5000	
Th	232	2	165	0.345	ppb	0.345	8.93	6018	2000	
U	238	2	165	7.367	ppb	7.367	0.35	141638	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	874733	4.58	976566	89.57	60	120	
Sc (IS)	45	1	HMI H2	20533264	0.48	20729192	99.05	60	120	
Sc (IS)	45	2	HMI He	754456	0.64	741009	101.81	60	120	
Sc (IS)	45	3	No Gas	68677932	0.53	72650699	94.53	60	120	
Ge Internal Standard	72	1	HMI H2	12364801	0.54	12651414	97.73	60	120	
Ge Internal Standard	72	2	HMI He	1030747	0.31	1022415	100.81	60	120	
In Internal Standard	115	2	HMI He	3231431	0.55	3205401	100.81	60	120	
Ho-165	165	2	HMI He	20070502	0.83	19582867	102.49	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	055_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:36:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	517.133	ppb	1.655	256040	500	103.4	90	110	
Li	7	2	45	469.494	ppb	2.083	14510	500	93.9	90	110	
Li	7	3	45	520.733	ppb	1.113	11968791	500	104.1	90	110	
Be	9	1	6	49.822	ppb	1.397	14173	50	99.6	90	110	
B	11	1	6	57.407	ppb	0.920	19025	50	114.8	90	110	>+\-10%
Na	23	1	45	4580.384	ppb	1.732	11416400	5000	91.6	90	110	
Na	23	2	45	4262.652	ppb	0.515	1034976	5000	85.3	90	110	>+\-10%
Mg	24	2	45	4967.956	ppb	1.063	432914	5000	99.4	90	110	
Al	27	2	45	5020.531	ppb	1.185	100247	5000	100.4	90	110	
K	39	1	45	5012.258	ppb	0.730	11511683	5000	100.2	90	110	
K	39	2	45	4953.488	ppb	0.664	207617	5000	99.1	90	110	
Ca	40	1	45	5079.516	ppb	1.357	14500231	5000	101.6	90	110	
Ca	44	2	45	4861.892	ppb	6.811	12075	5000	97.2	90	110	
Ti	47	2	45	14.032	ppb	173.205	3	50	28.1	90	110	>+\-10%
V	51	2	72	50.293	ppb	2.350	54317	50	100.6	90	110	
Cr	52	2	72	51.355	ppb	1.973	74448	50	102.7	90	110	
Mn	55	2	72	51.529	ppb	0.571	25677	50	103.1	90	110	
Fe	57	2	72	5094.804	ppb	1.632	136800	5000	101.9	90	110	
Co	59	2	72	49.561	ppb	0.759	141405	50	99.1	90	110	
Ni	60	2	72	50.689	ppb	1.048	42339	50	101.4	90	110	
Cu	63	2	72	49.428	ppb	1.456	121249	50	98.9	90	110	
Zn	66	2	72	50.952	ppb	4.232	13369	50	101.9	90	110	
As	75	2	72	49.646	ppb	0.870	8070	50	99.3	90	110	
Se	78	1	72	50.928	ppb	2.334	16159	50	101.9	90	110	
Sr	88	2	72	50.741	ppb	2.647	24690	50	101.5	90	110	
Zr	90	2	72	504.215	ppb	3.720	2914	50	1008.4	90	110	>+\-10%
Nb	93	2	72	92.343	ppb	0.617	352458	100	92.3	90	110	
Mo	95	2	115	48.307	ppb	2.993	52557	50	96.6	90	110	
Pd	105	2	115	52.202	ppb	1.179	93726	50	104.4	90	110	
Ag	107	2	115	49.407	ppb	0.725	197684	50	98.8	90	110	
Cd	111	2	115	48.392	ppb	3.060	21349	50	96.8	90	110	
Sn	120	2	115	49.325	ppb	2.325	54171	50	98.6	90	110	
Sb	121	2	115	49.193	ppb	1.961	43642	50	98.4	90	110	
Ba	137	2	115	49.605	ppb	2.003	14798	50	99.2	90	110	
W	182	2	165	50.473	ppb	0.839	306689	50	100.9	90	110	
Pt	195	2	165	49.922	ppb	0.279	271762	50	99.8	90	110	
Tl	205	2	165	50.111	ppb	0.263	521761	50	100.2	90	110	
Pb	208	2	165	50.610	ppb	0.340	681272	50	101.2	90	110	
Th	232	2	165	47.531	ppb	0.305	776411	50	95.1	90	110	
U	238	2	165	46.675	ppb	0.430	886510	50	93.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1019667	2.26	976566	104.41	60	120	
Sc (IS)	45	1	HMI H2	20851172	0.58	20729192	100.59	60	120	
Sc (IS)	45	2	HMI He	754250	0.11	741009	101.79	60	120	
Sc (IS)	45	3	No Gas	70826119	1.26	72650699	97.49	60	120	
Ge Internal Standard	72	1	HMI H2	12516073	0.40	12651414	98.93	60	120	
Ge Internal Standard	72	2	HMI He	1025808	0.25	1022415	100.33	60	120	
In Internal Standard	115	2	HMI He	3214545	0.77	3205401	100.29	60	120	
Ho-165	165	2	HMI He	19851795	0.24	19582867	101.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	056_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:40:38-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	23.393	ppb	25.4	5136705	10	>RL
Be	9	1	6	-0.014	ppb	-289.5	17	0.5	
B	11	1	6	1.310	ppb	26.2	1700	0.5	>RL
Na	23	1	45	-715.937	ppb	-0.2	849803	25	
Na	23	2	45	-724.886	ppb	-1.5	87452	25	
Mg	24	2	45	-22.591	ppb	-5.7	1493	25	
Al	27	2	45	5.527	ppb	38.2	157	15	
K	39	1	45	-41.198	ppb	-40.9	2842421	50	
K	39	2	45	-30.596	ppb	-38.5	9877	50	
Ca	40	1	45	-3.721	ppb	-14.5	103630	50	
Ca	44	2	45	-7.238	ppb	-162.8	77	25	
Ti	47	2	45	14.183	ppb	173.2	3	0.5	>RL
V	51	2	72	0.305	ppb	47.6	1233	1	
Cr	52	2	72	-0.013	ppb	-356.7	320	1	
Mn	55	2	72	0.176	ppb	58.5	157	0.5	
Fe	57	2	72	3.131	ppb	17.5	217	25	
Co	59	2	72	0.021	ppb	47.6	77	0.5	
Ni	60	2	72	0.021	ppb	289.8	237	1	
Cu	63	2	72	0.088	ppb	104.0	2307	1	
Zn	66	2	72	0.074	ppb	381.9	797	5	
As	75	2	72	-0.016	ppb	-275.1	18	1	
Se	78	1	72	-0.057	ppb	-78.0	21	1	
Sr	88	2	72	-0.090	ppb	-66.1	57	0.5	
Zr	90	2	72	6.033	ppb	118.4	140	1	>RL
Nb	93	2	72	2.996	ppb	7.1	12385	2	>RL
Mo	95	2	115	0.079	ppb	47.6	127	0.5	
Pd	105	2	115	0.051	ppb	1.3	180	1	
Ag	107	2	115	0.022	ppb	71.8	97	1	
Cd	111	2	115	0.037	ppb	125.5	23	0.5	
Sn	120	2	115	0.125	ppb	55.9	357	1	
Sb	121	2	115	0.547	ppb	6.7	603	0.6	
Ba	137	2	115	0.022	ppb	316.1	17	0.5	
W	182	2	165	0.092	ppb	38.1	1457	1	
Pt	195	2	165	0.007	ppb	53.7	67	1	
Tl	205	2	165	0.015	ppb	64.0	367	0.1	
Pb	208	2	165	-0.024	ppb	-4.2	1083	0.5	
Th	232	2	165	0.069	ppb	14.7	1457	1	
U	238	2	165	0.033	ppb	12.0	857	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1028725	1.61	976566	105.34	60	120	
Sc (IS)	45	1	HMI H2	20732735	0.36	20729192	100.02	60	120	
Sc (IS)	45	2	HMI He	748954	0.25	741009	101.07	60	120	
Sc (IS)	45	3	No Gas	71501334	0.34	72650699	98.42	60	120	
Ge Internal Standard	72	1	HMI H2	12390515	0.43	12651414	97.94	60	120	
Ge Internal Standard	72	2	HMI He	1020538	0.35	1022415	99.82	60	120	
In Internal Standard	115	2	HMI He	3244267	0.64	3205401	101.21	60	120	
Ho-165	165	2	HMI He	20068270	0.96	19582867	102.48	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	057LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:44:27-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	36.118	ppb	14.524	5252158	50	72.2	70	130	
Be	9	1	6	1.014	ppb	23.016	307	1	101.4	70	130	
Na	23	2	45	-698.468	ppb	-1.582	93052	50	-1396.9	70	130	>+/-30%
Mg	24	2	45	36.870	ppb	6.793	6642	50	73.7	70	130	
Al	27	2	45	31.870	ppb	6.383	683	30	106.2	70	130	
K	39	2	45	69.447	ppb	8.183	13910	100	69.4	70	130	>+/-30%
Ca	44	2	45	46.696	ppb	60.302	210	50	93.4	70	130	
V	51	2	72	5.362	ppb	12.957	6618	5	107.2	70	130	
Cr	52	2	72	1.795	ppb	15.906	2934	2	89.8	70	130	
Mn	55	2	72	1.293	ppb	6.105	713	1	129.3	70	130	
Fe	57	2	72	58.456	ppb	8.122	1704	50	116.9	70	130	
Co	59	2	72	1.008	ppb	4.033	2897	1	100.8	70	130	
Ni	60	2	72	1.981	ppb	11.878	1870	2	99.1	70	130	
Cu	63	2	72	1.834	ppb	8.271	6535	2	91.7	70	130	
Zn	66	2	72	11.629	ppb	2.543	3661	10	116.3	70	130	
As	75	2	72	4.786	ppb	2.805	797	5	95.7	70	130	
Se	78	1	72	4.783	ppb	6.812	1565	5	95.7	70	130	
Sr	88	2	72	0.824	ppb	11.583	500	1	82.4	70	130	
Zr	90	2	72	88.406	ppb	2.672	600	0.5	17681.3	70	130	>+/-30%
Nb	93	2	72	5.332	ppb	4.567	21368	2	266.6	70	130	>+/-30%
Mo	95	2	115	1.866	ppb	1.037	2110	2	93.3	70	130	
Pd	105	2	115	0.019	ppb	103.778	123	1	1.9	70	130	>+/-30%
Ag	107	2	115	5.013	ppb	2.773	20461	5	100.3	70	130	
Cd	111	2	115	0.971	ppb	13.739	443	1	97.1	70	130	
Sn	120	2	115	10.054	ppb	2.842	11435	10	100.5	70	130	
Sb	121	2	115	2.162	ppb	11.063	2067	2	108.1	70	130	
Ba	137	2	115	1.172	ppb	8.573	367	1	117.2	70	130	
W	182	2	165	5.009	ppb	1.153	31728	1	500.9	70	130	>+/-30%
Pt	195	2	165	0.021	ppb	35.042	143	1	2.1	70	130	>+/-30%
Tl	205	2	165	0.999	ppb	6.782	10771	1	99.9	70	130	
Pb	208	2	165	0.992	ppb	2.295	14964	1	99.2	70	130	
Th	232	2	165	2.020	ppb	3.672	33834	2	101.0	70	130	
U	238	2	165	0.951	ppb	1.059	18569	1	95.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1012622	1.06	976566	103.69	60	120	
Sc (IS)	45	1	HMI H2	20733266	0.27	20729192	100.02	60	120	
Sc (IS)	45	2	HMI He	753977	0.25	741009	101.75	60	120	
Sc (IS)	45	3	No Gas	70660892	0.09	72650699	97.26	60	120	
Ge Internal Standard	72	1	HMI H2	12609720	0.73	12651414	99.67	60	120	
Ge Internal Standard	72	2	HMI He	1027144	0.78	1022415	100.46	60	120	
In Internal Standard	115	2	HMI He	3278359	0.90	3205401	102.28	60	120	
Ho-165	165	2	HMI He	20170457	0.88	19582867	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-11-d
Data File Name	058SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:48:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	490.499	ppb	490.499	0.93	170348	500000	
Li	7	2	45	384.895	ppb	384.895	10.59	10607	500000	
Li	7	3	45	458.683	ppb	458.683	2.36	9222539	50000	
Be	9	1	6	-0.053	ppb	-0.053	-67.28	3	2000	
B	11	1	6	604.735	ppb	604.735	1.08	109667	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	6288483.498	ppb	6288483.498	0.72	973549879	400000	>LDR
Mg	24	2	45	1820121.273	ppb	1820121.273	1.02	128278481	400000	
Al	27	2	45	4.588	ppb	4.588	78.62	113	400000	
K	39	1	45	21565.995	ppb	21565.995	0.52	27352291	400000	
K	39	2	45	18317.357	ppb	18317.357	0.75	601387	400000	
Ca	40	1	45	1636329.704	ppb	1636329.704	0.54	3180468219	400000	
Ca	44	2	45	1854926.798	ppb	1854926.798	0.27	3726723	400000	
Ti	47	2	45	34.187	ppb	34.187	173.21	7	4000	
V	51	2	72	82.137	ppb	82.137	2.13	62308	2000	
Cr	52	2	72	0.572	ppb	0.572	23.55	823	5000	
Mn	55	2	72	0.249	ppb	0.249	67.24	137	10000	
Fe	57	2	72	97.561	ppb	97.561	12.64	1944	400000	
Co	59	2	72	0.083	ppb	0.083	20.26	180	2000	
Ni	60	2	72	0.944	ppb	0.944	10.73	710	5000	
Cu	63	2	72	0.975	ppb	0.975	22.71	3150	5000	
Zn	66	2	72	3.226	ppb	3.226	20.32	1117	5000	
As	75	2	72	16.567	ppb	16.567	3.24	1914	2000	
Se	78	1	72	13.218	ppb	13.218	5.58	2683	2000	
Sr	88	2	72	42985.579	ppb	42985.579	1.19	14726481	4000	>LDR
Zr	90	2	72	19.738	ppb	19.738	79.23	153	1000	
Nb	93	2	72	0.889	ppb	0.889	18.25	3134	200	
Mo	95	2	115	38.863	ppb	38.863	1.63	28994	2000	
Pd	105	2	115	0.443	ppb	0.443	20.50	603	100	
Ag	107	2	115	0.401	ppb	0.401	14.04	1103	100	
Cd	111	2	115	0.106	ppb	0.106	36.56	37	2000	
Sn	120	2	115	0.350	ppb	0.350	35.32	410	2000	
Sb	121	2	115	0.866	ppb	0.866	20.03	603	1000	
Ba	137	2	115	29.503	ppb	29.503	2.21	6035	5000	
W	182	2	165	0.125	ppb	0.125	24.59	1147	100	
Pt	195	2	165	0.009	ppb	0.009	16.81	53	100	
Tl	205	2	165	0.083	ppb	0.083	17.16	750	2000	
Pb	208	2	165	0.009	ppb	0.009	197.10	1063	5000	
Th	232	2	165	0.068	ppb	0.068	12.89	997	2000	
U	238	2	165	108.499	ppb	108.499	0.21	1438831	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	594172	1.12	976566	60.84	60	120	
Sc (IS)	45	1	HMI H2	14309294	0.19	20729192	69.03	60	120	
Sc (IS)	45	2	HMI He	614947	0.77	741009	82.99	60	120	
Sc (IS)	45	3	No Gas	58790656	0.54	72650699	80.92	60	120	
Ge Internal Standard	72	1	HMI H2	7949581	0.67	12651414	62.84	60	120	
Ge Internal Standard	72	2	HMI He	725259	0.97	1022415	70.94	60	120	
In Internal Standard	115	2	HMI He	2203150	1.85	3205401	68.73	60	120	
Ho-165	165	2	HMI He	13862644	0.03	19582867	70.79	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-9-b
Data File Name	059SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:52:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	338.108	ppb	338.108	2.48	145864	500000	
Li	7	2	45	262.996	ppb	262.996	2.81	8566	500000	
Li	7	3	45	279.237	ppb	279.237	2.29	6843714	50000	
Be	9	1	6	-0.032	ppb	-0.032	-112.91	7	2000	
B	11	1	6	300.596	ppb	300.596	0.74	53752	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	4395688.954	ppb	4395688.954	1.24	658877897	400000	>LDR
Mg	24	2	45	1142325.403	ppb	1142325.403	1.20	77944479	400000	
Al	27	2	45	3.333	ppb	3.333	68.58	90	400000	
K	39	1	45	19324.458	ppb	19324.458	0.43	25820306	400000	
K	39	2	45	17845.211	ppb	17845.211	1.07	567431	400000	
Ca	40	1	45	1299158.375	ppb	1299158.375	0.22	2637737987	400000	
Ca	44	2	45	1484360.881	ppb	1484360.881	0.91	2887125	400000	
Ti	47	2	45	53.722	ppb	53.722	173.21	10	4000	
V	51	2	72	41.753	ppb	41.753	3.92	32099	2000	
Cr	52	2	72	1.337	ppb	1.337	4.49	1610	5000	
Mn	55	2	72	0.246	ppb	0.246	47.13	137	10000	
Fe	57	2	72	89.475	ppb	89.475	17.88	1797	400000	
Co	59	2	72	0.045	ppb	0.045	17.28	103	2000	
Ni	60	2	72	0.599	ppb	0.599	19.99	510	5000	
Cu	63	2	72	0.003	ppb	0.003	4095.45	1500	5000	
Zn	66	2	72	5.009	ppb	5.009	10.74	1433	5000	
As	75	2	72	10.667	ppb	10.667	10.74	1241	2000	
Se	78	1	72	15.196	ppb	15.196	6.41	3284	2000	
Sr	88	2	72	30337.136	ppb	30337.136	0.90	10429469	4000	>LDR
Zr	90	2	72	22.126	ppb	22.126	56.45	163	1000	
Nb	93	2	72	0.518	ppb	0.518	11.86	2140	200	
Mo	95	2	115	32.628	ppb	32.628	1.79	24617	2000	
Pd	105	2	115	0.319	ppb	0.319	23.51	457	100	
Ag	107	2	115	0.259	ppb	0.259	7.48	723	100	
Cd	111	2	115	0.018	ppb	0.018	185.02	10	2000	
Sn	120	2	115	0.167	ppb	0.167	33.23	277	2000	
Sb	121	2	115	0.322	ppb	0.322	17.33	277	1000	
Ba	137	2	115	18.749	ppb	18.749	1.87	3881	5000	
W	182	2	165	0.066	ppb	0.066	31.42	910	100	
Pt	195	2	165	0.003	ppb	0.003	91.20	30	100	
Tl	205	2	165	0.026	ppb	0.026	35.37	337	2000	
Pb	208	2	165	-0.030	ppb	-0.030	-12.48	707	5000	
Th	232	2	165	0.029	ppb	0.029	25.97	557	2000	
U	238	2	165	21.673	ppb	21.673	1.52	291990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	581864	1.17	976566	59.58	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14947294	0.33	20729192	72.11	60	120	
Sc (IS)	45	2	HMI He	595350	0.56	741009	80.34	60	120	
Sc (IS)	45	3	No Gas	56178772	0.14	72650699	77.33	60	120	
Ge Internal Standard	72	1	HMI H2	8476651	0.21	12651414	67.00	60	120	
Ge Internal Standard	72	2	HMI He	727731	0.51	1022415	71.18	60	120	
In Internal Standard	115	2	HMI He	2228293	1.49	3205401	69.52	60	120	
Ho-165	165	2	HMI He	14078180	0.80	19582867	71.89	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-3-b
Data File Name	060SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:56:01-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	423.350	ppb	423.350	3.02	163074	500000	
Li	7	2	45	350.155	ppb	350.155	6.51	9426	500000	
Li	7	3	45	339.735	ppb	339.735	2.22	7016312	50000	
Be	9	1	6	-0.005	ppb	-0.005	-1227.46	10	2000	
B	11	1	6	463.094	ppb	463.094	1.77	75956	2000	
Na	23	1	45	2086084.282	ppb	2086084.282	0.25	2970355049	2000	>LDR
Na	23	2	45	2047112.260	ppb	2047112.260	0.15	295736836	400000	>LDR
Mg	24	2	45	706256.184	ppb	706256.184	0.58	46431784	400000	
Al	27	2	45	3.985	ppb	3.985	41.24	97	400000	
K	39	1	45	13583.759	ppb	13583.759	0.68	18688116	400000	
K	39	2	45	13121.267	ppb	13121.267	0.57	404240	400000	
Ca	40	1	45	1122210.064	ppb	1122210.064	0.93	2268064233	400000	
Ca	44	2	45	1281887.335	ppb	1281887.335	0.14	2402275	400000	
Ti	47	2	45	74.238	ppb	74.238	173.21	13	4000	
V	51	2	72	3.119	ppb	3.119	11.06	3000	2000	
Cr	52	2	72	0.525	ppb	0.525	13.60	780	5000	
Mn	55	2	72	1648.880	ppb	1648.880	0.15	581668	10000	
Fe	57	2	72	66.452	ppb	66.452	5.65	1360	400000	
Co	59	2	72	0.062	ppb	0.062	9.71	137	2000	
Ni	60	2	72	0.622	ppb	0.622	29.68	523	5000	
Cu	63	2	72	0.300	ppb	0.300	49.96	2010	5000	
Zn	66	2	72	2.803	ppb	2.803	42.91	1047	5000	
As	75	2	72	1.790	ppb	1.790	25.71	220	2000	
Se	78	1	72	0.214	ppb	0.214	32.25	75	2000	
Sr	88	2	72	26341.919	ppb	26341.919	0.30	9060742	4000	>LDR
Zr	90	2	72	88.801	ppb	88.801	18.86	427	1000	
Nb	93	2	72	0.623	ppb	0.623	6.54	2427	200	
Mo	95	2	115	0.063	ppb	0.063	43.38	77	2000	
Pd	105	2	115	0.303	ppb	0.303	17.54	443	100	
Ag	107	2	115	0.009	ppb	0.009	104.51	30	100	
Cd	111	2	115	-0.004	ppb	-0.004	-421.89	3	2000	
Sn	120	2	115	0.170	ppb	0.170	72.98	283	2000	
Sb	121	2	115	-0.011	ppb	-0.011	-746.76	73	1000	
Ba	137	2	115	24.554	ppb	24.554	6.59	5158	5000	
W	182	2	165	1.526	ppb	1.526	8.13	7442	100	
Pt	195	2	165	0.004	ppb	0.004	34.86	37	100	
Tl	205	2	165	-0.005	ppb	-0.005	-102.11	117	2000	
Pb	208	2	165	-0.016	ppb	-0.016	-43.05	867	5000	
Th	232	2	165	0.021	ppb	0.021	23.50	487	2000	
U	238	2	165	0.048	ppb	0.048	11.52	830	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	536205	1.12	976566	54.91	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14879434	0.67	20729192	71.78	60	120	
Sc (IS)	45	2	HMI He	573598	0.48	741009	77.41	60	120	
Sc (IS)	45	3	No Gas	52504381	0.94	72650699	72.27	60	120	
Ge Internal Standard	72	1	HMI H2	8708012	0.37	12651414	68.83	60	120	
Ge Internal Standard	72	2	HMI He	728118	0.40	1022415	71.22	60	120	
In Internal Standard	115	2	HMI He	2261950	0.29	3205401	70.57	60	120	
Ho-165	165	2	HMI He	14592005	0.35	19582867	74.51	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-5-b
Data File Name	061SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T15:59:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	389.977	ppb	389.977	0.68	144785	500000	
Li	7	2	45	325.398	ppb	325.398	5.40	8459	500000	
Li	7	3	45	309.431	ppb	309.431	3.40	5962739	50000	
Be	9	1	6	-0.048	ppb	-0.048	-90.62	3	2000	
B	11	1	6	483.256	ppb	483.256	0.64	69917	2000	
Na	23	1	45	2066843.884	ppb	2066843.884	0.54	2730077399	2000	>LDR
Na	23	2	45	2057177.431	ppb	2057177.431	0.16	276478836	400000	>LDR
Mg	24	2	45	704094.983	ppb	704094.983	0.75	43063299	400000	
Al	27	2	45	9.665	ppb	9.665	40.97	170	400000	
K	39	1	45	13567.253	ppb	13567.253	0.33	17318127	400000	
K	39	2	45	13229.887	ppb	13229.887	0.85	379102	400000	
Ca	40	1	45	1119408.762	ppb	1119408.762	0.55	2098825782	400000	
Ca	44	2	45	1301959.057	ppb	1301959.057	1.49	2269737	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	2.879	ppb	2.879	2.74	2654	2000	
Cr	52	2	72	0.494	ppb	0.494	30.82	703	5000	
Mn	55	2	72	1651.869	ppb	1651.869	0.95	548239	10000	
Fe	57	2	72	65.558	ppb	65.558	6.57	1263	400000	
Co	59	2	72	0.052	ppb	0.052	36.93	110	2000	
Ni	60	2	72	0.197	ppb	0.197	76.37	257	5000	
Cu	63	2	72	-0.104	ppb	-0.104	-49.10	1240	5000	
Zn	66	2	72	3.456	ppb	3.456	25.08	1093	5000	
As	75	2	72	1.734	ppb	1.734	3.19	201	2000	
Se	78	1	72	0.078	ppb	0.078	139.58	41	2000	
Sr	88	2	72	26883.851	ppb	26883.851	1.09	8699949	4000	>LDR
Zr	90	2	72	79.373	ppb	79.373	11.28	367	1000	
Nb	93	2	72	0.317	ppb	0.317	13.97	1503	200	
Mo	95	2	115	0.115	ppb	0.115	40.74	110	2000	
Pd	105	2	115	0.292	ppb	0.292	9.51	407	100	
Ag	107	2	115	0.005	ppb	0.005	47.16	17	100	
Cd	111	2	115	0.019	ppb	0.019	312.38	10	2000	
Sn	120	2	115	0.089	ppb	0.089	230.38	210	2000	
Sb	121	2	115	0.104	ppb	0.104	32.31	137	1000	
Ba	137	2	115	24.127	ppb	24.127	4.87	4788	5000	
W	182	2	165	1.632	ppb	1.632	1.14	7596	100	
Pt	195	2	165	-0.001	ppb	-0.001	-102.74	13	100	
Tl	205	2	165	-0.001	ppb	-0.001	-533.79	137	2000	
Pb	208	2	165	-0.021	ppb	-0.021	-69.18	790	5000	
Th	232	2	165	0.029	ppb	0.029	10.94	553	2000	
U	238	2	165	0.026	ppb	0.026	32.40	500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	473191	0.87	976566	48.45	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13803144	0.34	20729192	66.59	60	120	
Sc (IS)	45	2	HMI He	533619	0.46	741009	72.01	60	120	
Sc (IS)	45	3	No Gas	46688363	0.53	72650699	64.26	60	120	
Ge Internal Standard	72	1	HMI H2	8075318	0.69	12651414	63.83	60	120	
Ge Internal Standard	72	2	HMI He	685056	0.61	1022415	67.00	60	120	
In Internal Standard	115	2	HMI He	2137452	1.03	3205401	66.68	60	120	
Ho-165	165	2	HMI He	14002961	0.79	19582867	71.51	60	120	

Sample Table

Sample Name	280-114200-a-7-b
Data File Name	062SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:03:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	276.616	ppb	276.616	1.94	117806	500000	
Li	7	2	45	242.446	ppb	242.446	11.37	7035	500000	
Li	7	3	45	218.255	ppb	218.255	3.42	4593993	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	584.875	ppb	584.875	2.09	77476	2000	
Na	23	1	45	949888.561	ppb	949888.561	0.39	1204893555	2000	>LDR
Na	23	2	45	929249.017	ppb	929249.017	1.31	118476768	400000	
Mg	24	2	45	551491.341	ppb	551491.341	0.22	31977490	400000	
Al	27	2	45	11.810	ppb	11.810	25.04	190	400000	
K	39	1	45	34508.020	ppb	34508.020	0.56	39399963	400000	
K	39	2	45	35390.262	ppb	35390.262	0.62	948864	400000	
Ca	40	1	45	946619.326	ppb	946619.326	0.67	1703267495	400000	
Ca	44	2	45	1067759.951	ppb	1067759.951	1.74	1764747	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	76.230	ppb	76.230	0.49	52996	2000	
Cr	52	2	72	0.688	ppb	0.688	5.87	863	5000	
Mn	55	2	72	2.790	ppb	2.790	12.25	943	10000	
Fe	57	2	72	54.707	ppb	54.707	4.94	1037	400000	
Co	59	2	72	0.088	ppb	0.088	42.94	173	2000	
Ni	60	2	72	1.742	ppb	1.742	8.80	1080	5000	
Cu	63	2	72	3.741	ppb	3.741	6.76	7202	5000	
Zn	66	2	72	3.272	ppb	3.272	5.41	1030	5000	
As	75	2	72	8.081	ppb	8.081	2.97	861	2000	
Se	78	1	72	4.088	ppb	4.088	6.65	840	2000	
Sr	88	2	72	19322.271	ppb	19322.271	1.17	6062099	4000	
Zr	90	2	72	33.493	ppb	33.493	36.22	190	1000	
Nb	93	2	72	0.193	ppb	0.193	32.94	1153	200	
Mo	95	2	115	69.757	ppb	69.757	1.16	50140	2000	
Pd	105	2	115	0.202	ppb	0.202	21.69	297	100	
Ag	107	2	115	1.775	ppb	1.775	3.69	4694	100	
Cd	111	2	115	0.008	ppb	0.008	523.43	7	2000	
Sn	120	2	115	0.093	ppb	0.093	78.89	210	2000	
Sb	121	2	115	0.099	ppb	0.099	38.19	133	1000	
Ba	137	2	115	18.805	ppb	18.805	2.68	3711	5000	
W	182	2	165	0.085	ppb	0.085	36.46	990	100	
Pt	195	2	165	-0.001	ppb	-0.001	-233.85	17	100	
Tl	205	2	165	0.015	ppb	0.015	21.90	253	2000	
Pb	208	2	165	-0.012	ppb	-0.012	-99.34	880	5000	
Th	232	2	165	0.018	ppb	0.018	20.28	433	2000	
U	238	2	165	138.456	ppb	138.456	1.50	1860086	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	433854	1.10	976566	44.43	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13246696	0.79	20729192	63.90	60	120	
Sc (IS)	45	2	HMI He	505877	0.28	741009	68.27	60	120	
Sc (IS)	45	3	No Gas	41799334	0.47	72650699	57.53	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	7883137	0.69	12651414	62.31	60	120	
Ge Internal Standard	72	2	HMI He	664122	0.38	1022415	64.96	60	120	
In Internal Standard	115	2	HMI He	2123807	1.37	3205401	66.26	60	120	
Ho-165	165	2	HMI He	14044916	0.64	19582867	71.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	063_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:07:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	335.811	ppb	1.420	138620	500	67.2	90	110	>+\-10%
Li	7	2	45	392.051	ppb	7.911	9193	500	78.4	90	110	>+\-10%
Li	7	3	45	306.243	ppb	0.393	5516727	500	61.2	90	110	>+\-10%
Be	9	1	6	63.294	ppb	1.127	8122	50	126.6	90	110	>+\-10%
B	11	1	6	76.988	ppb	1.150	11318	50	154.0	90	110	>+\-10%
Na	23	1	45	6225.573	ppb	1.589	10045592	5000	124.5	90	110	>+\-10%
Na	23	2	45	5951.811	ppb	0.987	948414	5000	119.0	90	110	>+\-10%
Mg	24	2	45	4935.354	ppb	0.679	300905	5000	98.7	90	110	
Al	27	2	45	4953.198	ppb	1.316	69192	5000	99.1	90	110	
K	39	1	45	5031.021	ppb	0.784	7890064	5000	100.6	90	110	
K	39	2	45	5005.758	ppb	1.126	146705	5000	100.1	90	110	
Ca	40	1	45	5512.314	ppb	1.487	10748876	5000	110.2	90	110	>+\-10%
Ca	44	2	45	4994.164	ppb	0.927	8676	5000	99.9	90	110	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
V	51	2	72	48.641	ppb	3.669	38335	50	97.3	90	110	
Cr	52	2	72	50.326	ppb	2.030	53217	50	100.7	90	110	
Mn	55	2	72	49.272	ppb	2.461	17910	50	98.5	90	110	
Fe	57	2	72	4982.828	ppb	2.151	97584	5000	99.7	90	110	
Co	59	2	72	49.305	ppb	1.841	102599	50	98.6	90	110	
Ni	60	2	72	49.919	ppb	1.017	30413	50	99.8	90	110	
Cu	63	2	72	49.656	ppb	1.014	88834	50	99.3	90	110	
Zn	66	2	72	52.893	ppb	1.395	10100	50	105.8	90	110	
As	75	2	72	47.933	ppb	0.729	5683	50	95.9	90	110	
Se	78	1	72	49.973	ppb	1.889	11441	50	99.9	90	110	
Sr	88	2	72	54.114	ppb	7.003	19202	50	108.2	90	110	
Zr	90	2	72	150.751	ppb	7.864	690	50	301.5	90	110	>+\-10%
Nb	93	2	72	93.321	ppb	0.460	259777	100	93.3	90	110	
Mo	95	2	115	47.877	ppb	0.649	39861	50	95.8	90	110	
Pd	105	2	115	51.981	ppb	1.365	71398	50	104.0	90	110	
Ag	107	2	115	48.726	ppb	1.630	149141	50	97.5	90	110	
Cd	111	2	115	47.247	ppb	3.650	15945	50	94.5	90	110	
Sn	120	2	115	48.573	ppb	2.054	40804	50	97.1	90	110	
Sb	121	2	115	47.395	ppb	3.013	32174	50	94.8	90	110	
Ba	137	2	115	47.086	ppb	1.040	10747	50	94.2	90	110	
W	182	2	165	50.840	ppb	0.105	241852	50	101.7	90	110	
Pt	195	2	165	50.957	ppb	0.741	217175	50	101.9	90	110	
Tl	205	2	165	51.327	ppb	0.185	418401	50	102.7	90	110	
Pb	208	2	165	51.156	ppb	0.349	539127	50	102.3	90	110	
Th	232	2	165	49.192	ppb	0.313	629111	50	98.4	90	110	
U	238	2	165	47.997	ppb	0.044	713718	50	96.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	460125	0.43	976566	47.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14251551	0.42	20729192	68.75	60	120	
Sc (IS)	45	2	HMI He	527680	0.58	741009	71.21	60	120	
Sc (IS)	45	3	No Gas	43406009	0.51	72650699	59.75	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	9031279	0.53	12651414	71.39	60	120	
Ge Internal Standard	72	2	HMI He	748176	0.41	1022415	73.18	60	120	
In Internal Standard	115	2	HMI He	2459347	1.24	3205401	76.73	60	120	
Ho-165	165	2	HMI He	15542249	0.15	19582867	79.37	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	064_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:11:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-60.872	ppb	-2.5	2401780	10	
Be	9	1	6	-0.073	ppb	0.0	0	0.5	
B	11	1	6	6.212	ppb	4.2	1477	0.5	>RL
Na	23	1	45	724.131	ppb	0.9	2551119	25	>RL
Na	23	2	45	863.956	ppb	4.6	275555	25	>RL
Mg	24	2	45	16.731	ppb	17.0	3467	25	
Al	27	2	45	3.290	ppb	37.8	80	15	
K	39	1	45	-30.810	ppb	-53.5	1969081	50	
K	39	2	45	-0.708	ppb	-1516.2	7872	50	
Ca	40	1	45	31.494	ppb	3.9	139619	50	
Ca	44	2	45	66.680	ppb	32.8	183	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.467	ppb	31.3	1047	1	
Cr	52	2	72	-0.077	ppb	-64.0	170	1	
Mn	55	2	72	0.121	ppb	56.3	97	0.5	
Fe	57	2	72	2.557	ppb	68.0	150	25	
Co	59	2	72	0.011	ppb	125.7	37	0.5	
Ni	60	2	72	0.032	ppb	278.7	183	1	
Cu	63	2	72	0.137	ppb	66.5	1807	1	
Zn	66	2	72	0.545	ppb	85.1	680	5	
As	75	2	72	0.000	ppb	-9720.5	15	1	
Se	78	1	72	-0.042	ppb	-63.8	19	1	
Sr	88	2	72	0.544	ppb	36.8	270	0.5	>RL
Zr	90	2	72	0.158	ppb	4062.2	80	1	
Nb	93	2	72	3.161	ppb	10.4	9693	2	>RL
Mo	95	2	115	0.118	ppb	31.5	133	0.5	
Pd	105	2	115	0.038	ppb	45.7	123	1	
Ag	107	2	115	0.019	ppb	51.8	67	1	
Cd	111	2	115	0.033	ppb	184.2	17	0.5	
Sn	120	2	115	0.090	ppb	36.1	250	1	
Sb	121	2	115	0.295	ppb	17.9	297	0.6	
Ba	137	2	115	0.023	ppb	107.6	13	0.5	
W	182	2	165	0.081	ppb	3.9	1113	1	
Pt	195	2	165	0.010	ppb	33.5	67	1	
Tl	205	2	165	0.005	ppb	59.5	213	0.1	
Pb	208	2	165	-0.009	ppb	-82.8	1030	0.5	
Th	232	2	165	0.064	ppb	16.2	1097	1	
U	238	2	165	0.052	ppb	12.6	977	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	470253	0.69	976566	48.15	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14274459	0.49	20729192	68.86	60	120	
Sc (IS)	45	2	HMI He	533353	0.90	741009	71.98	60	120	
Sc (IS)	45	3	No Gas	43367969	0.58	72650699	59.69	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8930515	0.07	12651414	70.59	60	120	
Ge Internal Standard	72	2	HMI He	760334	0.10	1022415	74.37	60	120	
In Internal Standard	115	2	HMI He	2543419	1.83	3205401	79.35	60	120	
Ho-165	165	2	HMI He	16074433	0.88	19582867	82.08	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	065LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:18:39-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-47.704	ppb	-8.169	2478784	50	-95.4	70	130	>+/-30%
Be	9	1	6	0.680	ppb	40.444	100	1	68.0	70	130	>+/-30%
Na	23	2	45	671.472	ppb	4.054	256300	50	1342.9	70	130	>+/-30%
Mg	24	2	45	53.274	ppb	5.583	5851	50	106.5	70	130	
Al	27	2	45	31.430	ppb	19.493	490	30	104.8	70	130	
K	39	2	45	90.716	ppb	4.904	10711	100	90.7	70	130	
Ca	44	2	45	52.723	ppb	25.701	163	50	105.4	70	130	
V	51	2	72	4.987	ppb	7.061	4721	5	99.7	70	130	
Cr	52	2	72	1.746	ppb	3.189	2174	2	87.3	70	130	
Mn	55	2	72	1.041	ppb	22.104	447	1	104.1	70	130	
Fe	57	2	72	54.883	ppb	19.312	1220	50	109.8	70	130	
Co	59	2	72	0.983	ppb	5.266	2144	1	98.3	70	130	
Ni	60	2	72	1.957	ppb	4.953	1403	2	97.9	70	130	
Cu	63	2	72	1.850	ppb	12.824	4991	2	92.5	70	130	
Zn	66	2	72	10.630	ppb	3.842	2590	10	106.3	70	130	
As	75	2	72	4.691	ppb	3.651	593	5	93.8	70	130	
Se	78	1	72	4.949	ppb	3.280	1156	5	99.0	70	130	
Sr	88	2	72	1.132	ppb	7.846	493	1	113.2	70	130	
Zr	90	2	72	16.235	ppb	81.467	150	0.5	3247.0	70	130	>+/-30%
Nb	93	2	72	5.145	ppb	4.007	15675	2	257.3	70	130	>+/-30%
Mo	95	2	115	1.755	ppb	6.738	1580	2	87.8	70	130	
Pd	105	2	115	0.004	ppb	174.312	77	1	0.4	70	130	>+/-30%
Ag	107	2	115	5.021	ppb	1.357	16296	5	100.4	70	130	
Cd	111	2	115	0.882	ppb	42.300	320	1	88.2	70	130	
Sn	120	2	115	9.579	ppb	6.253	8676	10	95.8	70	130	
Sb	121	2	115	2.273	ppb	1.591	1724	2	113.6	70	130	
Ba	137	2	115	1.031	ppb	38.834	257	1	103.1	70	130	
W	182	2	165	5.107	ppb	2.172	26371	1	510.7	70	130	>+/-30%
Pt	195	2	165	0.019	ppb	20.040	110	1	1.9	70	130	>+/-30%
Tl	205	2	165	1.008	ppb	5.370	8866	1	100.8	70	130	
Pb	208	2	165	1.007	ppb	1.320	12373	1	100.7	70	130	
Th	232	2	165	2.087	ppb	1.587	28496	2	104.3	70	130	
U	238	2	165	0.976	ppb	1.303	15529	1	97.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477569	0.46	976566	48.90	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14346251	0.40	20729192	69.21	60	120	
Sc (IS)	45	2	HMI He	547369	0.57	741009	73.87	60	120	
Sc (IS)	45	3	No Gas	42770923	0.80	72650699	58.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	9009690	0.82	12651414	71.21	60	120	
Ge Internal Standard	72	2	HMI He	779577	0.28	1022415	76.25	60	120	
In Internal Standard	115	2	HMI He	2607034	1.26	3205401	81.33	60	120	
Ho-165	165	2	HMI He	16449735	0.24	19582867	84.00	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	066WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:22:29-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.073	ppb	0	0	0.5
Na	23	2	45	559.679	ppb	2.872325848	242275	25
Mg	24	2	45	5.868	ppb	48.08547405	2894	25
Al	27	2	45	1.506	ppb	146.2749632	57	15
K	39	2	45	-21.067	ppb	-18.36009004	7535	50
Ca	44	2	45	24.405	ppb	72.17590991	113	25
V	51	2	72	0.142	ppb	59.63685168	813	1
Cr	52	2	72	-0.112	ppb	-25.30197404	137	1
Mn	55	2	72	0.149	ppb	63.07715652	110	0.5
Fe	57	2	72	2.349	ppb	55.15802992	150	25
Co	59	2	72	0.005	ppb	55.27751438	23	0.5
Ni	60	2	72	-0.040	ppb	-231.1408427	143	1
Cu	63	2	72	0.086	ppb	83.64798886	1764	1
Zn	66	2	72	0.814	ppb	44.88948461	750	5
As	75	2	72	-0.025	ppb	-98.92328021	12	1
Se	78	1	72	-0.090	ppb	-19.71792692	8	1
Nb	93	2	72	0.275	ppb	5.395909128	1597	2
Mo	95	2	115	0.019	ppb	201.9232083	50	0.5
Pd	105	2	115	-0.012	ppb	-119.3554011	53	1
Ag	107	2	115	0.011	ppb	58.19076972	40	1
Cd	111	2	115	0.022	ppb	147.2620991	13	0.5
Sn	120	2	115	-0.027	ppb	-99.69958351	153	1
Sb	121	2	115	-0.027	ppb	-205.3380942	73	0.6
Ba	137	2	115	0.062	ppb	101.4248101	23	0.5
W	182	2	165	-0.008	ppb	-190.7209912	700	1
Pt	195	2	165	0.001	ppb	722.4330074	27	1
Tl	205	2	165	-0.003	ppb	-88.02950678	147	0.1
Pb	208	2	165	-0.027	ppb	-8.505542318	867	0.5
Th	232	2	165	0.006	ppb	45.79620914	343	1
U	238	2	165	0.000	ppb	2076.91195	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	482541	1.25	976566	49.41	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14272817	0.52	20729192	68.85	60	120	
Sc (IS)	45	2	HMI He	550501	0.37	741009	74.29	60	120	
Sc (IS)	45	3	No Gas	42755056	0.95	72650699	58.85	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8944353	0.16	12651414	70.70	60	120	
Ge Internal Standard	72	2	HMI He	781932	0.47	1022415	76.48	60	120	
In Internal Standard	115	2	HMI He	2627824	0.65	3205401	81.98	60	120	
Ho-165	165	2	HMI He	16658523	0.17	19582867	85.07	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	067WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:26:19-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.073	ppb	0	0	0.5
Na	23	2	45	526.006	ppb	3.533853109	236433	25
Mg	24	2	45	0.538	ppb	690.5538949	2544	25
Al	27	2	45	0.832	ppb	206.3782889	47	15
K	39	2	45	-29.048	ppb	-1.533476517	7269	50
Ca	44	2	45	20.969	ppb	91.94760688	107	25
V	51	2	72	0.357	ppb	56.34510918	990	1
Cr	52	2	72	-0.070	ppb	-27.57059905	183	1
Mn	55	2	72	0.131	ppb	42.34229239	103	0.5
Fe	57	2	72	1.189	ppb	64.16728078	127	25
Co	59	2	72	0.006	ppb	83.67335177	27	0.5
Ni	60	2	72	0.018	ppb	386.1945437	180	1
Cu	63	2	72	0.041	ppb	93.63441681	1687	1
Zn	66	2	72	0.802	ppb	49.0429735	750	5
As	75	2	72	-0.051	ppb	-64.44435227	9	1
Se	78	1	72	-0.090	ppb	-34.22185528	8	1
Nb	93	2	72	0.142	ppb	70.95987774	1213	2
Mo	95	2	115	-0.004	ppb	-942.6426157	30	0.5
Pd	105	2	115	-0.026	ppb	-29.86935849	33	1
Ag	107	2	115	0.010	ppb	28.22673418	40	1
Cd	111	2	115	0.012	ppb	389.9742313	10	0.5
Sn	120	2	115	-0.010	ppb	-314.0993159	170	1
Sb	121	2	115	0.013	ppb	358.4349204	103	0.6
Ba	137	2	115	0.062	ppb	39.00290549	23	0.5
W	182	2	165	0.001	ppb	654.4355158	757	1
Pt	195	2	165	0.009	ppb	60.55466907	63	1
Tl	205	2	165	-0.004	ppb	-149.9736159	137	0.1
Pb	208	2	165	-0.032	ppb	-45.12434666	820	0.5
Th	232	2	165	0.002	ppb	118.9815534	293	1
U	238	2	165	-0.002	ppb	-114.0444447	157	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	487585	0.63	976566	49.93	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14280867	0.43	20729192	68.89	60	120	
Sc (IS)	45	2	HMI He	547787	0.64	741009	73.92	60	120	
Sc (IS)	45	3	No Gas	42583018	0.27	72650699	58.61	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8944556	0.20	12651414	70.70	60	120	
Ge Internal Standard	72	2	HMI He	784540	0.31	1022415	76.73	60	120	
In Internal Standard	115	2	HMI He	2645722	0.68	3205401	82.54	60	120	
Ho-165	165	2	HMI He	16874251	1.26	19582867	86.17	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	068WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:30:06-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.024	ppb	-179.0368417	7	0.5
Na	23	2	45	442.321	ppb	4.953187718	225806	25
Mg	24	2	45	-2.872	ppb	-55.67034376	2340	25
Al	27	2	45	3.336	ppb	61.78067314	83	15
K	39	2	45	-26.948	ppb	-69.20735113	7362	50
Ca	44	2	45	4.047	ppb	706.4062751	77	25
V	51	2	72	0.190	ppb	131.843288	857	1
Cr	52	2	72	0.035	ppb	383.5881247	300	1
Mn	55	2	72	0.165	ppb	36.77132015	117	0.5
Fe	57	2	72	0.035	ppb	3453.16895	103	25
Co	59	2	72	0.009	ppb	122.6857349	33	0.5
Ni	60	2	72	0.085	ppb	156.6073027	223	1
Cu	63	2	72	0.021	ppb	372.8795445	1653	1
Zn	66	2	72	0.280	ppb	237.585823	653	5
As	75	2	72	-0.046	ppb	-101.9856891	10	1
Se	78	1	72	-0.089	ppb	-34.43844177	8	1
Nb	93	2	72	0.038	ppb	179.2356413	913	2
Mo	95	2	115	-0.003	ppb	-356.9343017	30	0.5
Pd	105	2	115	-0.028	ppb	-72.52889422	30	1
Ag	107	2	115	-0.001	ppb	-282.2035876	3	1
Cd	111	2	115	-0.006	ppb	-258.1354598	3	0.5
Sn	120	2	115	-0.005	ppb	-600.8214781	173	1
Sb	121	2	115	0.005	ppb	728.9487276	97	0.6
Ba	137	2	115	0.007	ppb	1040.219268	10	0.5
W	182	2	165	0.014	ppb	124.8790323	820	1
Pt	195	2	165	0.008	ppb	47.32939138	60	1
Tl	205	2	165	-0.004	ppb	-76.83354523	140	0.1
Pb	208	2	165	-0.037	ppb	-9.23076805	763	0.5
Th	232	2	165	0.005	ppb	39.49950728	333	1
U	238	2	165	-0.001	ppb	-255.8076968	160	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486634	0.63	976566	49.83	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14371926	0.39	20729192	69.33	60	120	
Sc (IS)	45	2	HMI He	550031	0.91	741009	74.23	60	120	
Sc (IS)	45	3	No Gas	42575976	0.55	72650699	58.60	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8913160	0.27	12651414	70.45	60	120	
Ge Internal Standard	72	2	HMI He	786596	0.16	1022415	76.94	60	120	
In Internal Standard	115	2	HMI He	2635132	1.33	3205401	82.21	60	120	
Ho-165	165	2	HMI He	16811716	0.78	19582867	85.85	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	069WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:33:57-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.048	ppb	-88.54210339	3	0.5
Na	23	2	45	320.567	ppb	4.655226831	210584	25
Mg	24	2	45	-3.782	ppb	-126.890152	2300	25
Al	27	2	45	1.250	ppb	174.1009033	53	15
K	39	2	45	-21.813	ppb	-75.4000547	7565	50
Ca	44	2	45	0.043	ppb	33582.46878	70	25
V	51	2	72	0.224	ppb	48.61507123	887	1
Cr	52	2	72	-0.023	ppb	-93.16650659	237	1
Mn	55	2	72	0.208	ppb	48.05490971	133	0.5
Fe	57	2	72	0.834	ppb	201.504151	120	25
Co	59	2	72	-0.003	ppb	-186.0839482	7	0.5
Ni	60	2	72	-0.005	ppb	-1193.27962	167	1
Cu	63	2	72	0.065	ppb	101.2792992	1740	1
Zn	66	2	72	0.677	ppb	87.62894736	730	5
As	75	2	72	0.048	ppb	65.319985	22	1
Se	78	1	72	-0.113	ppb	-8.985270399	3	1
Nb	93	2	72	-0.016	ppb	-353.2322188	757	2
Mo	95	2	115	-0.022	ppb	-28.68922335	13	0.5
Pd	105	2	115	-0.024	ppb	-31.77096878	37	1
Ag	107	2	115	0.006	ppb	97.79947152	27	1
Cd	111	2	115	-0.015	ppb	0	0	0.5
Sn	120	2	115	-0.008	ppb	-900.9369535	173	1
Sb	121	2	115	-0.074	ppb	-54.78115375	40	0.6
Ba	137	2	115	0.047	ppb	84.92721882	20	0.5
W	182	2	165	-0.017	ppb	-52.61004628	670	1
Pt	195	2	165	0.003	ppb	86.83653613	37	1
Tl	205	2	165	-0.002	ppb	-361.2012621	157	0.1
Pb	208	2	165	-0.035	ppb	-34.68300838	800	0.5
Th	232	2	165	0.001	ppb	528.8270236	280	1
U	238	2	165	-0.007	ppb	-42.94078009	77	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	488697	0.71	976566	50.04	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14385404	0.08	20729192	69.40	60	120	
Sc (IS)	45	2	HMI He	554296	0.44	741009	74.80	60	120	
Sc (IS)	45	3	No Gas	42946699	0.95	72650699	59.11	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8968049	0.65	12651414	70.89	60	120	
Ge Internal Standard	72	2	HMI He	788325	0.26	1022415	77.10	60	120	
In Internal Standard	115	2	HMI He	2665884	0.92	3205401	83.17	60	120	
Ho-165	165	2	HMI He	17023565	0.45	19582867	86.93	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	070WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:37:47-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	042CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.073	ppb	0	0	0.5
Na	23	2	45	171.315	ppb	10.04284136	189164	25
Mg	24	2	45	-6.088	ppb	-52.75860971	2147	25
Al	27	2	45	1.951	ppb	20.17059494	63	15
K	39	2	45	-25.255	ppb	-30.65731025	7442	50
Ca	44	2	45	5.748	ppb	96.37517788	80	25
V	51	2	72	0.238	ppb	70.29822821	907	1
Cr	52	2	72	-0.040	ppb	-171.828944	220	1
Mn	55	2	72	0.196	ppb	82.30947822	130	0.5
Fe	57	2	72	0.456	ppb	642.292317	113	25
Co	59	2	72	-0.003	ppb	-91.37587342	7	0.5
Ni	60	2	72	-0.048	ppb	-114.0971706	140	1
Cu	63	2	72	-0.088	ppb	-14.75249219	1470	1
Zn	66	2	72	0.935	ppb	107.6751167	787	5
As	75	2	72	-0.042	ppb	-128.8566632	10	1
Se	78	1	72	-0.084	ppb	-43.73660864	9	1
Nb	93	2	72	-0.040	ppb	-121.8446005	693	2
Mo	95	2	115	-0.011	ppb	-308.908647	23	0.5
Pd	105	2	115	-0.031	ppb	-65.28638881	27	1
Ag	107	2	115	0.007	ppb	70.94549954	30	1
Cd	111	2	115	-0.015	ppb	0	0	0.5
Sn	120	2	115	0.030	ppb	60.73298161	210	1
Sb	121	2	115	-0.075	ppb	-17.87752523	40	0.6
Ba	137	2	115	0.126	ppb	84.00158881	40	0.5
W	182	2	165	-0.013	ppb	-102.6468561	697	1
Pt	195	2	165	0.003	ppb	114.1834628	37	1
Tl	205	2	165	0.001	ppb	1566.463255	183	0.1
Pb	208	2	165	-0.026	ppb	-47.61862441	903	0.5
Th	232	2	165	0.002	ppb	246.0032982	300	1
U	238	2	165	-0.005	ppb	-114.0491091	113	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	492751	0.79	976566	50.46	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14349378	0.78	20729192	69.22	60	120	
Sc (IS)	45	2	HMI He	552542	0.07	741009	74.57	60	120	
Sc (IS)	45	3	No Gas	43019576	0.74	72650699	59.21	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8990796	0.37	12651414	71.07	60	120	
Ge Internal Standard	72	2	HMI He	795610	0.38	1022415	77.82	60	120	
In Internal Standard	115	2	HMI He	2704104	0.40	3205401	84.36	60	120	
Ho-165	165	2	HMI He	17176578	0.61	19582867	87.71	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5314921
Data File Name	071CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:41:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	61658	0.00
Li	7	2	HMI He	3991	0.08
Li	7	3	No Gas	2542224	0.00
Be	9	1	HMI H2	7	2598.08
B	11	1	HMI H2	680	1.50
Na	23	1	HMI H2	1623375	0.00
Na	23	2	HMI He	168153	0.00
Mg	24	2	HMI He	2257	0.20
Al	27	2	HMI He	53	162.38
K	39	2	HMI He	7248	0.00
Ca	44	2	HMI He	30	222.22
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	980	1.16
Cr	52	2	HMI He	163	15.15
Mn	55	2	HMI He	113	16.21
Fe	57	2	HMI He	87	38.44
Co	59	2	HMI He	13	1299.04
Ni	60	2	HMI He	200	11.46
Cu	63	2	HMI He	1500	1.20
Zn	66	2	HMI He	423	5.42
As	75	2	HMI He	11	91.73
Se	78	1	HMI H2	11	884.75
Sr	88	2	HMI He	100	26.46
Zr	90	2	HMI He	67	79.02
Nb	93	2	HMI He	710	1.98
Mo	95	2	HMI He	37	85.89
Pd	105	2	HMI He	50	40.00
Ag	107	2	HMI He	13	1299.04
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	140	27.00
Sb	121	2	HMI He	23	280.57
Ba	137	2	HMI He	10	1000.00
W	182	2	HMI He	657	2.48
Pt	195	2	HMI He	37	281.60
Tl	205	2	HMI He	163	12.05
Pb	208	2	HMI He	930	0.76
Th	232	2	HMI He	330	8.00
U	238	2	HMI He	87	7.68

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	493663	0.31
Sc (IS)	45	1	HMI H2	14385099	0.86
Sc (IS)	45	2	HMI He	557211	0.16
Sc (IS)	45	3	No Gas	42934053	0.44
Ge Internal Standard	72	1	HMI H2	8983404	0.64
Ge Internal Standard	72	2	HMI He	803089	0.27
In Internal Standard	115	2	HMI He	2728997	0.92
Ho-165	165	2	HMI He	17228414	1.09

Calibration Standard Report

Sample Table

Sample Name	ic-5314899
Data File Name	072CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:45:24-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	225917	0.00
Li	7	2	HMI He	14473	0.03
Li	7	3	No Gas	9733302	0.00
Be	9	1	HMI H2	16215	0.01
B	11	1	HMI H2	19391	0.01
Na	23	1	HMI H2	14733986	0.00
Na	23	2	HMI He	1501352	0.00
Mg	24	2	HMI He	616135	0.00
Al	27	2	HMI He	148503	0.00
K	39	1	HMI H2	13983686	0.00
K	39	2	HMI He	302605	0.00
Ca	40	1	HMI H2	19810729	0.00
Ca	44	2	HMI He	18404	0.02
Ti	47	2	HMI He	3	5196.15
V	51	2	HMI He	79263	0.00
Cr	52	2	HMI He	106615	0.00
Mn	55	2	HMI He	38907	0.00
Fe	57	2	HMI He	203133	0.00
Co	59	2	HMI He	209242	0.00
Ni	60	2	HMI He	60793	0.00
Cu	63	2	HMI He	178198	0.00
Zn	66	2	HMI He	19796	0.00
As	75	2	HMI He	12037	0.03
Se	78	1	HMI H2	22806	0.01
Sr	88	2	HMI He	40235	0.00
Zr	90	2	HMI He	690	2.03
Nb	93	2	HMI He	593553	0.00
Mo	95	2	HMI He	84088	0.00
Pd	105	2	HMI He	145682	0.00
Ag	107	2	HMI He	310113	0.00
Cd	111	2	HMI He	34238	0.00
Sn	120	2	HMI He	88539	0.00
Sb	121	2	HMI He	71771	0.00
Ba	137	2	HMI He	24460	0.02
Nd	146	2	HMI He	111282	0.00
Sm	147	2	HMI He	95314	0.00
Sm	150	2	HMI He	92538	0.00
Gd	156	1	HMI H2	729058	0.00
Gd	157	1	HMI H2	559336	0.00
W	182	2	HMI He	528614	0.00
Pt	195	2	HMI He	467339	0.00
Tl	205	2	HMI He	920705	0.00
Pb	208	2	HMI He	1184786	0.00
Th	232	2	HMI He	1388754	0.00
U	238	2	HMI He	1697232	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486257	0.60	493663	98.50	60	120	
Sc (IS)	45	1	HMI H2	14206171	0.40	14385099	98.76	60	120	
Sc (IS)	45	2	HMI He	556422	0.18	557211	99.86	60	120	
Sc (IS)	45	3	No Gas	43824994	0.08	42934053	102.08	60	120	
Ge Internal Standard	72	1	HMI H2	8801725	0.75	8983404	97.98	60	120	
Ge Internal Standard	72	2	HMI He	792279	0.41	803089	98.65	60	120	
In Internal Standard	115	2	HMI He	2684038	0.90	2728997	98.35	60	120	
Ho-165	165	2	HMI He	17066954	0.17	17228414	99.06	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	073_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:49:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	515.968	ppb	0.879	148133	500	103.2	90	110	
Li	7	2	45	499.231	ppb	5.137	9243	500	99.8	90	110	
Li	7	3	45	525.390	ppb	1.529	6254884	500	105.1	90	110	
Be	9	1	6	48.024	ppb	2.672	7979	50	96.0	90	110	
B	11	1	6	45.467	ppb	10.964	9403	50	90.9	90	110	
Na	23	1	45	4688.755	ppb	0.603	7871066	5000	93.8	90	110	
Na	23	2	45	4453.889	ppb	0.281	763588	5000	89.1	90	110	>+\-10%
Mg	24	2	45	4948.668	ppb	2.137	306733	5000	99.0	90	110	
Al	27	2	45	4988.318	ppb	0.623	74277	5000	99.8	90	110	
K	39	1	45	4947.520	ppb	1.098	8048795	5000	99.0	90	110	
K	39	2	45	4839.634	ppb	1.481	150531	5000	96.8	90	110	
Ca	40	1	45	4962.868	ppb	0.230	10010548	5000	99.3	90	110	
Ca	44	2	45	4752.900	ppb	2.654	8783	5000	95.1	90	110	
Ti	47	2	45	197.953	ppb	173.205	7	50	395.9	90	110	>+\-10%
V	51	2	72	49.115	ppb	2.358	39575	50	98.2	90	110	
Cr	52	2	72	48.846	ppb	2.457	52360	50	97.7	90	110	
Mn	55	2	72	49.215	ppb	4.500	19279	50	98.4	90	110	
Fe	57	2	72	4906.240	ppb	1.131	100096	5000	98.1	90	110	
Co	59	2	72	49.410	ppb	1.170	103799	50	98.8	90	110	
Ni	60	2	72	49.632	ppb	2.982	30389	50	99.3	90	110	
Cu	63	2	72	49.123	ppb	0.704	88639	50	98.2	90	110	
Zn	66	2	72	49.677	ppb	2.414	10084	50	99.4	90	110	
As	75	2	72	47.921	ppb	2.123	5796	50	95.8	90	110	
Se	78	1	72	47.914	ppb	2.641	11068	50	95.8	90	110	
Sr	88	2	72	47.552	ppb	0.853	19259	50	95.1	90	110	
Zr	90	2	72	47.445	ppb	10.415	363	50	94.9	90	110	
Nb	93	2	72	101.663	ppb	0.572	303245	100	101.7	90	110	
Mo	95	2	115	49.001	ppb	0.642	40974	50	98.0	90	110	
Pd	105	2	115	51.681	ppb	2.631	74863	50	103.4	90	110	
Ag	107	2	115	50.744	ppb	1.409	156408	50	101.5	90	110	
Cd	111	2	115	50.932	ppb	0.608	17333	50	101.9	90	110	
Sn	120	2	115	50.240	ppb	2.822	44280	50	100.5	90	110	
Sb	121	2	115	52.334	ppb	0.765	37349	50	104.7	90	110	
Ba	137	2	115	48.617	ppb	4.748	11825	50	97.2	90	110	
W	182	2	165	48.896	ppb	0.333	262718	50	97.8	90	110	
Pt	195	2	165	49.229	ppb	0.921	233563	50	98.5	90	110	
Tl	205	2	165	48.742	ppb	0.682	455640	50	97.5	90	110	
Pb	208	2	165	48.934	ppb	0.407	589011	50	97.9	90	110	
Th	232	2	165	48.655	ppb	0.872	686086	50	97.3	90	110	
U	238	2	165	45.158	ppb	0.824	778085	50	90.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498039	0.19	493663	100.89	60	120	
Sc (IS)	45	1	HMI H2	14409672	0.64	14385099	100.17	60	120	
Sc (IS)	45	2	HMI He	557719	0.64	557211	100.09	60	120	
Sc (IS)	45	3	No Gas	43197881	0.62	42934053	100.61	60	120	
Ge Internal Standard	72	1	HMI H2	8911171	0.20	8983404	99.20	60	120	
Ge Internal Standard	72	2	HMI He	795378	0.35	803089	99.04	60	120	
In Internal Standard	115	2	HMI He	2667766	0.89	2728997	97.76	60	120	
Ho-165	165	2	HMI He	17325063	0.15	17228414	100.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	074_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:53:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	11.839	ppb	108.1	2652948	10	>RL
Be	9	1	6	0.058	ppb	155.4	17	0.5	
B	11	1	6	1.300	ppb	54.8	950	0.5	>RL
Na	23	1	45	-570.014	ppb	-1.2	866465	25	
Na	23	2	45	-556.607	ppb	-3.0	94272	25	
Mg	24	2	45	-20.577	ppb	-12.7	997	25	
Al	27	2	45	-0.687	ppb	-53.9	43	15	
K	39	1	45	-5.580	ppb	-444.9	2033426	50	
K	39	2	45	-6.364	ppb	-120.0	7095	50	
Ca	40	1	45	-0.654	ppb	-69.7	73941	50	
Ca	44	2	45	21.552	ppb	66.6	70	25	
Ti	47	2	45	299.175	ppb	173.2	10	0.5	>RL
V	51	2	72	0.187	ppb	40.5	1120	1	
Cr	52	2	72	0.042	ppb	105.8	207	1	
Mn	55	2	72	-0.049	ppb	-79.2	93	0.5	
Fe	57	2	72	2.315	ppb	67.9	133	25	
Co	59	2	72	0.010	ppb	28.6	33	0.5	
Ni	60	2	72	-0.014	ppb	-114.9	190	1	
Cu	63	2	72	0.121	ppb	54.4	1703	1	
Zn	66	2	72	1.367	ppb	11.4	687	5	
As	75	2	72	0.082	ppb	143.4	21	1	
Se	78	1	72	0.086	ppb	30.7	31	1	
Sr	88	2	72	-0.097	ppb	-67.2	60	0.5	
Zr	90	2	72	7.512	ppb	116.6	113	1	>RL
Nb	93	2	72	3.604	ppb	11.5	11455	2	>RL
Mo	95	2	115	0.171	ppb	21.2	183	0.5	
Pd	105	2	115	0.070	ppb	28.2	153	1	
Ag	107	2	115	0.015	ppb	64.1	60	1	
Cd	111	2	115	0.029	ppb	99.5	10	0.5	
Sn	120	2	115	0.099	ppb	17.7	230	1	
Sb	121	2	115	0.689	ppb	24.0	527	0.6	>RL
Ba	137	2	115	0.014	ppb	455.9	13	0.5	
W	182	2	165	0.110	ppb	22.2	1260	1	
Pt	195	2	165	0.031	ppb	43.3	187	1	
Tl	205	2	165	0.011	ppb	85.9	267	0.1	
Pb	208	2	165	0.003	ppb	269.8	977	0.5	
Th	232	2	165	0.052	ppb	10.5	1067	1	
U	238	2	165	0.044	ppb	11.6	847	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	506120	1.00	493663	102.52	60	120	
Sc (IS)	45	1	HMI H2	14400496	0.65	14385099	100.11	60	120	
Sc (IS)	45	2	HMI He	559895	0.57	557211	100.48	60	120	
Sc (IS)	45	3	No Gas	43391803	0.66	42934053	101.07	60	120	
Ge Internal Standard	72	1	HMI H2	8983125	0.32	8983404	100.00	60	120	
Ge Internal Standard	72	2	HMI He	797199	0.08	803089	99.27	60	120	
In Internal Standard	115	2	HMI He	2733950	0.72	2728997	100.18	60	120	
Ho-165	165	2	HMI He	17464681	0.61	17228414	101.37	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	075LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T16:56:48-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	19.963	ppb	28.760	2707492	50	39.9	70	130	>+/-30%
Be	9	1	6	0.715	ppb	34.880	127	1	71.5	70	130	
Na	23	2	45	-465.336	ppb	-2.599	107043	50	-930.7	70	130	>+/-30%
Mg	24	2	45	32.185	ppb	13.636	4277	50	64.4	70	130	>+/-30%
Al	27	2	45	35.263	ppb	15.871	583	30	117.5	70	130	
K	39	2	45	89.827	ppb	16.511	10003	100	89.8	70	130	
Ca	44	2	45	78.801	ppb	26.113	177	50	157.6	70	130	>+/-30%
V	51	2	72	5.388	ppb	2.410	5258	5	107.8	70	130	
Cr	52	2	72	2.005	ppb	7.696	2327	2	100.2	70	130	
Mn	55	2	72	1.017	ppb	16.427	513	1	101.7	70	130	
Fe	57	2	72	50.521	ppb	4.276	1127	50	101.0	70	130	
Co	59	2	72	0.984	ppb	14.305	2100	1	98.4	70	130	
Ni	60	2	72	2.143	ppb	3.992	1517	2	107.1	70	130	
Cu	63	2	72	2.110	ppb	5.488	5281	2	105.5	70	130	
Zn	66	2	72	12.504	ppb	1.583	2880	10	125.0	70	130	
As	75	2	72	4.347	ppb	5.460	541	5	86.9	70	130	
Se	78	1	72	4.869	ppb	7.566	1140	5	97.4	70	130	
Sr	88	2	72	0.967	ppb	15.368	493	1	96.7	70	130	
Zr	90	2	72	9.996	ppb	83.141	130	0.5	1999.3	70	130	>+/-30%
Nb	93	2	72	7.337	ppb	5.216	22764	2	366.9	70	130	>+/-30%
Mo	95	2	115	2.075	ppb	6.247	1824	2	103.8	70	130	
Pd	105	2	115	0.015	ppb	93.095	73	1	1.5	70	130	>+/-30%
Ag	107	2	115	5.152	ppb	3.579	16372	5	103.0	70	130	
Cd	111	2	115	0.988	ppb	7.471	347	1	98.8	70	130	
Sn	120	2	115	10.213	ppb	2.322	9390	10	102.1	70	130	
Sb	121	2	115	2.469	ppb	6.446	1837	2	123.4	70	130	
Ba	137	2	115	1.158	ppb	2.437	300	1	115.8	70	130	
W	182	2	165	4.861	ppb	1.123	26952	1	486.1	70	130	>+/-30%
Pt	195	2	165	0.026	ppb	40.849	163	1	2.6	70	130	>+/-30%
Tl	205	2	165	1.003	ppb	1.178	9617	1	100.3	70	130	
Pb	208	2	165	0.989	ppb	2.718	12929	1	98.9	70	130	
Th	232	2	165	2.118	ppb	0.735	30453	2	105.9	70	130	
U	238	2	165	0.946	ppb	2.907	16533	1	94.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503470	0.48	493663	101.99	60	120	
Sc (IS)	45	1	HMI H2	14522186	0.74	14385099	100.95	60	120	
Sc (IS)	45	2	HMI He	562633	0.52	557211	100.97	60	120	
Sc (IS)	45	3	No Gas	43344898	0.59	42934053	100.96	60	120	
Ge Internal Standard	72	1	HMI H2	8958474	0.53	8983404	99.72	60	120	
Ge Internal Standard	72	2	HMI He	803341	0.33	803089	100.03	60	120	
In Internal Standard	115	2	HMI He	2748778	1.46	2728997	100.72	60	120	
Ho-165	165	2	HMI He	17478800	0.13	17228414	101.45	60	120	

Blank Report

Sample Table

Sample Name	MB 280-429779/1-B
Data File Name	076_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:00:37-06:00
Sample Type	Blank
Dilution	1
Comment	429827 6020 Cu
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	1.343	ppb	444.2070654	61722	0.5
Li	7	2	45	-25.830	ppb	-90.35965893	3757	0.5
Li	7	3	45	0.694	ppb	505.3556332	2511430	10
Be	9	1	6	-0.041	ppb	-1.62011E-06	0	0.5
B	11	1	6	-0.223	ppb	-4.437071133	637	0.5
Na	23	1	45	-403.089	ppb	-15.62542888	1084142	25
Na	23	2	45	-367.858	ppb	-2.126014792	120302	25
Mg	24	2	45	-17.663	ppb	-0.381690987	1183	25
Al	27	2	45	13.049	ppb	9.430575949	250	15
K	39	1	45	-805.998	ppb	-0.777291477	1058313	50
K	39	2	45	-4.187	ppb	-232.0685378	7202	50
Ca	40	1	45	6.166	ppb	5.550785464	87268	50
Ca	44	2	45	28.507	ppb	22.05180792	83	25
Ti	47	2	45	197.384	ppb	86.62217881	7	0.5
V	51	2	72	-0.424	ppb	-29.02522027	647	1
Cr	52	2	72	0.128	ppb	39.81548778	303	1
Mn	55	2	72	0.664	ppb	6.397525415	377	0.5
Fe	57	2	72	13.511	ppb	21.29627582	367	25
Co	59	2	72	0.009	ppb	126.1510074	33	0.5
Ni	60	2	72	-0.007	ppb	-573.1622716	197	1
Cu	63	2	72	2.562	ppb	2.487833313	6125	1
Zn	66	2	72	2.452	ppb	13.19916394	910	5
As	75	2	72	0.037	ppb	115.4505369	16	1
Se	78	1	72	-0.017	ppb	-155.4614975	7	1
Sr	88	2	72	-0.034	ppb	-248.2844185	87	0.5
Zr	90	2	72	4.662	ppb	78.00178048	97	1
Nb	93	2	72	0.731	ppb	1.409637315	2924	2
Mo	95	2	115	-0.020	ppb	-103.0746812	20	0.5
Pd	105	2	115	-0.002	ppb	-724.8597575	47	1
Ag	107	2	115	0.014	ppb	13.91971882	57	1
Cd	111	2	115	0.057	ppb	86.14678723	20	0.5
Sn	120	2	115	0.355	ppb	29.91142774	460	1
Sb	121	2	115	0.164	ppb	40.95353889	143	0.6
Ba	137	2	115	0.429	ppb	29.19158163	117	0.5
W	182	2	165	0.042	ppb	54.34351658	893	1
Pt	195	2	165	0.007	ppb	92.39097005	70	1
Tl	205	2	165	-0.001	ppb	-296.4318657	160	0.1
Pb	208	2	165	0.037	ppb	13.45247179	1397	0.5
Th	232	2	165	0.015	ppb	69.83686096	550	1
U	238	2	165	0.008	ppb	33.37001152	227	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493019	2.03	493663	99.87	60	120	
Sc (IS)	45	1	HMI H2	14349103	1.63	14385099	99.75	60	120	
Sc (IS)	45	2	HMI He	563126	1.23	557211	101.06	60	120	
Sc (IS)	45	3	No Gas	42330831	0.80	42934053	98.60	60	120	
Ge Internal Standard	72	1	HMI H2	8874837	0.86	8983404	98.79	60	120	
Ge Internal Standard	72	2	HMI He	807629	0.42	803089	100.57	60	120	
In Internal Standard	115	2	HMI He	2733713	0.58	2728997	100.17	60	120	
Ho-165	165	2	HMI He	17505331	0.21	17228414	101.61	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429779/2-B
Data File Name	077_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:04:25-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429827 6020
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	80.929	80.929	ppb	0.991	74750	400	20.2	80	120	>+/-20%
Li	7	2	45	91.831	91.831	ppb	39.664	4984	400	23.0	80	120	>+/-20%
Li	7	3	45	79.791	79.791	ppb	10.656	3052873	400	19.9	80	120	>+/-20%
Be	9	1	6	39.001	39.001	ppb	6.561	6428	40	97.5	80	120	
Na	23	2	45	-489.746	-489.746	ppb	-2.123	103354	40	-1224.4	80	120	>+/-20%
Mg	24	2	45	-21.345	-21.345	ppb	-7.990	950	40	-53.4	80	120	>+/-20%
Al	27	2	45	425.669	425.669	ppb	4.972	6418	40	1064.2	80	120	>+/-20%
K	39	2	45	-7.799	-7.799	ppb	-69.539	7058	40	-19.5	80	120	>+/-20%
Ca	44	2	45	320.525	320.525	ppb	17.264	623	40	801.3	80	120	>+/-20%
V	51	2	72	39.131	39.131	ppb	1.975	32162	40	97.8	80	120	
Cr	52	2	72	40.224	40.224	ppb	1.036	43736	40	100.6	80	120	
Mn	55	2	72	40.754	40.754	ppb	1.732	16202	40	101.9	80	120	
Fe	57	2	72	414.814	414.814	ppb	10.458	8656	40	1037.0	80	120	>+/-20%
Co	59	2	72	40.400	40.400	ppb	1.348	86028	40	101.0	80	120	
Ni	60	2	72	40.864	40.864	ppb	1.480	25397	40	102.2	80	120	
Cu	63	2	72	40.992	40.992	ppb	2.158	75226	40	102.5	80	120	
Zn	66	2	72	42.047	42.047	ppb	2.318	8716	40	105.1	80	120	
As	75	2	72	36.583	36.583	ppb	1.957	4488	40	91.5	80	120	
Se	78	1	72	38.184	38.184	ppb	5.337	8809	40	95.5	80	120	
Nb	93	2	72	0.612	0.612	ppb	29.131	2557	40	1.5	80	120	>+/-20%
Mo	95	2	115	37.414	37.414	ppb	1.603	32090	40	93.5	80	120	
Pd	105	2	115	-0.002	-0.002	ppb	-1163.839	47	40	0.0	80	120	>+/-20%
Ag	107	2	115	42.730	42.730	ppb	0.966	135079	40	106.8	80	120	
Cd	111	2	115	42.216	42.216	ppb	1.980	14734	40	105.5	80	120	
Sn	120	2	115	40.226	40.226	ppb	1.203	36390	40	100.6	80	120	
Sb	121	2	115	39.738	39.738	ppb	1.388	29088	40	99.3	80	120	
Ba	137	2	115	39.764	39.764	ppb	2.415	9920	40	99.4	80	120	
W	182	2	165	11.404	11.404	ppb	0.406	62286	40	28.5	80	120	>+/-20%
Pt	195	2	165	0.001	0.001	ppb	382.547	40	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.369	40.369	ppb	1.257	380496	40	100.9	80	120	
Pb	208	2	165	41.085	41.085	ppb	0.875	498733	40	102.7	80	120	
Th	232	2	165	39.833	39.833	ppb	0.417	566392	40	99.6	80	120	
U	238	2	165	37.025	37.025	ppb	0.872	643183	40	92.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493981	0.06	493663	100.06	60	120	
Sc (IS)	45	1	HMI H2	14302119	0.63	14385099	99.42	60	120	
Sc (IS)	45	2	HMI He	560446	0.12	557211	100.58	60	120	
Sc (IS)	45	3	No Gas	42278874	0.51	42934053	98.47	60	120	
Ge Internal Standard	72	1	HMI H2	8898637	0.33	8983404	99.06	60	120	
Ge Internal Standard	72	2	HMI He	806213	0.35	803089	100.39	60	120	
In Internal Standard	115	2	HMI He	2735886	0.37	2728997	100.25	60	120	
Ho-165	165	2	HMI He	17467643	0.68	17228414	101.39	60	120	

Blank Report

Sample Table

Sample Name	MB 280-429322/1-D
Data File Name	078_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:08:14-06:00
Sample Type	Blank
Dilution	1
Comment	429435 6020a dod5 Mn
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-8.771	ppb	-97.10147374	60106	0.5
Li	7	2	45	-20.785	ppb	-107.1090698	3817	0.5
Li	7	3	45	6.792	ppb	198.9970083	2569327	10
Be	9	1	6	-0.021	ppb	-168.9490764	3	0.5
B	11	1	6	0.585	ppb	56.86695455	793	0.5
Na	23	1	45	-520.217	ppb	-0.960160024	930374	25
Na	23	2	45	-500.766	ppb	-2.897619033	102472	25
Mg	24	2	45	-22.029	ppb	-3.861193196	913	25
Al	27	2	45	0.624	ppb	61.60675901	63	15
K	39	1	45	-830.420	ppb	-0.153548447	1029879	50
K	39	2	45	2.694	ppb	250.8975915	7415	50
Ca	40	1	45	2.371	ppb	21.35515803	79791	50
Ca	44	2	45	8.731	ppb	153.7724932	47	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.422	ppb	-47.58368069	647	1
Cr	52	2	72	0.212	ppb	19.45801504	393	1
Mn	55	2	72	0.134	ppb	132.3034299	167	0.5
Fe	57	2	72	1.441	ppb	135.7066479	117	25
Co	59	2	72	0.005	ppb	152.8098142	23	0.5
Ni	60	2	72	-0.001	ppb	-17447.69858	200	1
Cu	63	2	72	-0.051	ppb	-83.58624328	1413	1
Zn	66	2	72	2.956	ppb	13.60408616	1007	5
As	75	2	72	0.016	ppb	211.898426	13	1
Se	78	1	72	0.012	ppb	363.1545365	13	1
Sr	88	2	72	-0.131	ppb	-46.83162992	47	0.5
Zr	90	2	72	166.532	ppb	8.473858899	1123	1
Nb	93	2	72	0.351	ppb	19.08124497	1770	2
Mo	95	2	115	0.069	ppb	60.93826253	97	0.5
Pd	105	2	115	-0.007	ppb	-269.4220324	40	1
Ag	107	2	115	0.015	ppb	57.70275984	60	1
Cd	111	2	115	0.019	ppb	173.2050808	7	0.5
Sn	120	2	115	0.214	ppb	17.49867635	333	1
Sb	121	2	115	0.410	ppb	11.59274976	323	0.6
Ba	137	2	115	0.052	ppb	242.5925763	23	0.5
W	182	2	165	0.032	ppb	37.81356533	837	1
Pt	195	2	165	0.003	ppb	137.6748398	50	1
Tl	205	2	165	0.011	ppb	135.3057983	270	0.1
Pb	208	2	165	0.014	ppb	20.14450622	1117	0.5
Th	232	2	165	0.352	ppb	3.078071187	5341	1
U	238	2	165	0.029	ppb	34.79612009	583	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494921	0.58	493663	100.25	60	120	
Sc (IS)	45	1	HMI H2	14363671	0.32	14385099	99.85	60	120	
Sc (IS)	45	2	HMI He	563775	0.60	557211	101.18	60	120	
Sc (IS)	45	3	No Gas	42595514	0.21	42934053	99.21	60	120	
Ge Internal Standard	72	1	HMI H2	8886747	0.33	8983404	98.92	60	120	
Ge Internal Standard	72	2	HMI He	805317	0.11	803089	100.28	60	120	
In Internal Standard	115	2	HMI He	2738507	1.41	2728997	100.35	60	120	
Ho-165	165	2	HMI He	17464750	0.20	17228414	101.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429322/2-D
Data File Name	079_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:12:06-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429435 6020a dod5
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	83.896	83.896	ppb	8.293	75844	400	21.0	80	120	>+/-20%
Li	7	2	45	91.097	91.097	ppb	7.393	5028	400	22.8	80	120	>+/-20%
Li	7	3	45	87.232	87.232	ppb	10.546	3172645	400	21.8	80	120	>+/-20%
Be	9	1	6	39.517	39.517	ppb	1.917	6522	40	98.8	80	120	
Na	23	2	45	-571.596	-571.596	ppb	-0.957	93310	40	-1429.0	80	120	>+/-20%
Mg	24	2	45	-23.209	-23.209	ppb	-10.121	843	40	-58.0	80	120	>+/-20%
Al	27	2	45	400.981	400.981	ppb	5.195	6111	40	1002.5	80	120	>+/-20%
K	39	2	45	-8.885	-8.885	ppb	-93.562	7098	40	-22.2	80	120	>+/-20%
Ca	44	2	45	320.723	320.723	ppb	30.536	630	40	801.8	80	120	>+/-20%
V	51	2	72	39.497	39.497	ppb	2.055	32446	40	98.7	80	120	
Cr	52	2	72	40.507	40.507	ppb	2.774	44033	40	101.3	80	120	
Mn	55	2	72	39.872	39.872	ppb	2.012	15852	40	99.7	80	120	
Fe	57	2	72	414.925	414.925	ppb	5.546	8659	40	1037.3	80	120	>+/-20%
Co	59	2	72	41.503	41.503	ppb	2.334	88360	40	103.8	80	120	
Ni	60	2	72	40.503	40.503	ppb	1.621	25170	40	101.3	80	120	
Cu	63	2	72	40.620	40.620	ppb	2.235	74539	40	101.6	80	120	
Zn	66	2	72	41.223	41.223	ppb	0.927	8553	40	103.1	80	120	
As	75	2	72	38.064	38.064	ppb	2.496	4668	40	95.2	80	120	
Se	78	1	72	38.048	38.048	ppb	1.215	8787	40	95.1	80	120	
Nb	93	2	72	0.360	0.360	ppb	33.435	1797	40	0.9	80	120	>+/-20%
Mo	95	2	115	38.033	38.033	ppb	2.251	32337	40	95.1	80	120	
Pd	105	2	115	-0.009	-0.009	ppb	-199.637	37	40	0.0	80	120	>+/-20%
Ag	107	2	115	43.487	43.487	ppb	0.883	136297	40	108.7	80	120	
Cd	111	2	115	41.835	41.835	ppb	5.224	14470	40	104.6	80	120	
Sn	120	2	115	41.204	41.204	ppb	0.579	36955	40	103.0	80	120	
Sb	121	2	115	39.456	39.456	ppb	2.041	28630	40	98.6	80	120	
Ba	137	2	115	41.588	41.588	ppb	3.753	10291	40	104.0	80	120	
W	182	2	165	11.803	11.803	ppb	0.478	64944	40	29.5	80	120	>+/-20%
Pt	195	2	165	0.003	0.003	ppb	141.071	50	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.662	40.662	ppb	0.957	386233	40	101.7	80	120	
Pb	208	2	165	40.842	40.842	ppb	0.979	499660	40	102.1	80	120	
Th	232	2	165	39.958	39.958	ppb	0.637	572566	40	99.9	80	120	
U	238	2	165	37.378	37.378	ppb	0.863	654392	40	93.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494604	0.30	493663	100.19	60	120	
Sc (IS)	45	1	HMI H2	14417331	0.85	14385099	100.22	60	120	
Sc (IS)	45	2	HMI He	566210	0.12	557211	101.62	60	120	
Sc (IS)	45	3	No Gas	43210151	0.51	42934053	100.64	60	120	
Ge Internal Standard	72	1	HMI H2	8906809	0.66	8983404	99.15	60	120	
Ge Internal Standard	72	2	HMI He	806081	0.29	803089	100.37	60	120	
In Internal Standard	115	2	HMI He	2712572	1.48	2728997	99.40	60	120	
Ho-165	165	2	HMI He	17603263	0.13	17228414	102.18	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-429322/3-C
Data File Name	080SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:15:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	75.361	ppb	75.361	7.60	75225	500000	
Li	7	2	45	61.249	ppb	61.249	22.75	4718	500000	
Li	7	3	45	91.740	ppb	91.740	5.26	3199310	50000	
Be	9	1	6	41.091	ppb	41.091	1.18	6905	2000	
B	11	1	6	28.829	ppb	28.829	7.42	6285	2000	
Na	23	1	45	-616.393	ppb	-616.393	-0.79	814454	2000	
Na	23	2	45	-612.562	ppb	-612.562	-0.30	87904	400000	
Mg	24	2	45	-21.848	ppb	-21.848	-16.84	930	400000	
Al	27	2	45	409.516	ppb	409.516	3.42	6251	400000	
K	39	1	45	-840.443	ppb	-840.443	-0.72	1032695	400000	
K	39	2	45	-3.142	ppb	-3.142	-552.22	7285	400000	
Ca	40	1	45	2.541	ppb	2.541	22.22	81298	400000	
Ca	44	2	45	282.554	ppb	282.554	20.68	560	400000	
Ti	47	2	45	979.453	ppb	979.453	62.39	33	4000	
V	51	2	72	39.525	ppb	39.525	3.17	32777	2000	
Cr	52	2	72	40.328	ppb	40.328	1.45	44253	5000	
Mn	55	2	72	41.283	ppb	41.283	2.74	16562	10000	
Fe	57	2	72	409.111	ppb	409.111	2.77	8619	400000	
Co	59	2	72	40.950	ppb	40.950	0.26	88001	2000	
Ni	60	2	72	41.030	ppb	41.030	0.54	25734	5000	
Cu	63	2	72	40.547	ppb	40.547	1.28	75105	5000	
Zn	66	2	72	41.593	ppb	41.593	0.68	8706	5000	
As	75	2	72	37.439	ppb	37.439	3.39	4634	2000	
Se	78	1	72	37.411	ppb	37.411	2.08	8630	2000	
Sr	88	2	72	38.698	ppb	38.698	2.94	16052	4000	
Zr	90	2	72	7669.989	ppb	7669.989	2.53	49226	1000	>LDR
Nb	93	2	72	0.254	ppb	0.254	30.18	1493	200	
Mo	95	2	115	37.225	ppb	37.225	2.21	32524	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-469.94	47	100	
Ag	107	2	115	41.816	ppb	41.816	0.22	134653	100	
Cd	111	2	115	41.378	ppb	41.378	3.56	14711	2000	
Sn	120	2	115	40.343	ppb	40.343	2.01	37175	2000	
Sb	121	2	115	39.534	ppb	39.534	2.43	29478	1000	
Ba	137	2	115	40.783	ppb	40.783	1.60	10364	5000	
W	182	2	165	11.321	ppb	11.321	1.98	62731	100	
Pt	195	2	165	0.001	ppb	0.001	613.27	43	100	
Tl	205	2	165	40.283	ppb	40.283	1.86	385153	2000	
Pb	208	2	165	40.666	ppb	40.666	1.53	500808	5000	
Th	232	2	165	39.880	ppb	39.880	1.63	575208	2000	
U	238	2	165	36.971	ppb	36.971	1.95	651500	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503658	0.38	493663	102.02	60	120	
Sc (IS)	45	1	HMI H2	14574256	0.73	14385099	101.31	60	120	
Sc (IS)	45	2	HMI He	567197	0.42	557211	101.79	60	120	
Sc (IS)	45	3	No Gas	43144796	1.33	42934053	100.49	60	120	
Ge Internal Standard	72	1	HMI H2	8897414	0.60	8983404	99.04	60	120	
Ge Internal Standard	72	2	HMI He	813626	0.52	803089	101.31	60	120	
In Internal Standard	115	2	HMI He	2786827	0.11	2728997	102.12	60	120	
Ho-165	165	2	HMI He	17722484	1.71	17228414	102.87	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	081_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:19:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	511.566	ppb	2.547	150380	500	102.3	90	110	
Li	7	2	45	517.783	ppb	5.586	9706	500	103.6	90	110	
Li	7	3	45	539.077	ppb	2.115	6422073	500	107.8	90	110	
Be	9	1	6	47.741	ppb	0.975	8166	50	95.5	90	110	
B	11	1	6	42.154	ppb	3.410	9026	50	84.3	90	110	>+\-10%
Na	23	1	45	4564.158	ppb	0.895	7861494	5000	91.3	90	110	
Na	23	2	45	4225.863	ppb	1.288	753970	5000	84.5	90	110	>+\-10%
Mg	24	2	45	4927.756	ppb	0.721	314175	5000	98.6	90	110	
Al	27	2	45	4861.424	ppb	1.777	74445	5000	97.2	90	110	
K	39	1	45	4922.880	ppb	2.139	8181244	5000	98.5	90	110	
K	39	2	45	4934.828	ppb	1.198	157714	5000	98.7	90	110	
Ca	40	1	45	4945.970	ppb	0.498	10179219	5000	98.9	90	110	
Ca	44	2	45	4907.653	ppb	4.407	9326	5000	98.2	90	110	
Ti	47	2	45	386.181	ppb	86.609	13	50	772.4	90	110	>+\-10%
V	51	2	72	48.139	ppb	1.678	39551	50	96.3	90	110	
Cr	52	2	72	50.110	ppb	1.228	54738	50	100.2	90	110	
Mn	55	2	72	50.025	ppb	0.803	19969	50	100.1	90	110	
Fe	57	2	72	5008.895	ppb	1.738	104141	5000	100.2	90	110	
Co	59	2	72	49.016	ppb	1.493	104939	50	98.0	90	110	
Ni	60	2	72	49.992	ppb	1.226	31194	50	100.0	90	110	
Cu	63	2	72	49.011	ppb	1.418	90127	50	98.0	90	110	
Zn	66	2	72	51.364	ppb	2.049	10610	50	102.7	90	110	
As	75	2	72	49.502	ppb	0.694	6101	50	99.0	90	110	
Se	78	1	72	50.338	ppb	0.494	11714	50	100.7	90	110	
Sr	88	2	72	49.241	ppb	3.186	20320	50	98.5	90	110	
Zr	90	2	72	705.279	ppb	3.433	4571	50	1410.6	90	110	>+\-10%
Nb	93	2	72	91.497	ppb	0.166	278202	100	91.5	90	110	
Mo	95	2	115	49.627	ppb	0.990	42811	50	99.3	90	110	
Pd	105	2	115	50.355	ppb	1.111	75262	50	100.7	90	110	
Ag	107	2	115	49.380	ppb	0.823	157048	50	98.8	90	110	
Cd	111	2	115	49.684	ppb	3.318	17444	50	99.4	90	110	
Sn	120	2	115	50.754	ppb	2.514	46152	50	101.5	90	110	
Sb	121	2	115	50.759	ppb	3.394	37369	50	101.5	90	110	
Ba	137	2	115	49.304	ppb	0.656	12372	50	98.6	90	110	
W	182	2	165	48.267	ppb	0.599	263729	50	96.5	90	110	
Pt	195	2	165	48.002	ppb	1.144	231586	50	96.0	90	110	
Tl	205	2	165	48.163	ppb	0.357	457841	50	96.3	90	110	
Pb	208	2	165	49.359	ppb	0.666	604159	50	98.7	90	110	
Th	232	2	165	48.895	ppb	0.197	701127	50	97.8	90	110	
U	238	2	165	45.153	ppb	0.478	791152	50	90.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512712	0.55	493663	103.86	60	120	
Sc (IS)	45	1	HMI H2	14702450	0.96	14385099	102.21	60	120	
Sc (IS)	45	2	HMI He	573613	0.86	557211	102.94	60	120	
Sc (IS)	45	3	No Gas	43683648	0.61	42934053	101.75	60	120	
Ge Internal Standard	72	1	HMI H2	8977123	0.32	8983404	99.93	60	120	
Ge Internal Standard	72	2	HMI He	810574	0.16	803089	100.93	60	120	
In Internal Standard	115	2	HMI He	2752437	0.68	2728997	100.86	60	120	
Ho-165	165	2	HMI He	17618018	0.40	17228414	102.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	082_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:23:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	13.871	ppb	63.2	2741397	10	>RL
Be	9	1	6	0.112	ppb	147.6	27	0.5	
B	11	1	6	-0.046	ppb	-1619.6	713	0.5	
Na	23	1	45	-728.635	ppb	-0.3	667101	25	
Na	23	2	45	-718.487	ppb	-0.6	74022	25	
Mg	24	2	45	-23.581	ppb	-10.9	827	25	
Al	27	2	45	1.663	ppb	39.7	80	15	
K	39	1	45	-1.851	ppb	-289.6	2074498	50	
K	39	2	45	16.679	ppb	110.2	7939	50	
Ca	40	1	45	-2.451	ppb	-35.8	71604	50	
Ca	44	2	45	13.746	ppb	81.2	57	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.122	ppb	67.4	1090	1	
Cr	52	2	72	0.075	ppb	42.1	247	1	
Mn	55	2	72	-0.054	ppb	-57.5	93	0.5	
Fe	57	2	72	3.624	ppb	61.6	163	25	
Co	59	2	72	0.008	ppb	1.6	30	0.5	
Ni	60	2	72	0.098	ppb	76.1	263	1	
Cu	63	2	72	-0.107	ppb	-32.5	1323	1	
Zn	66	2	72	1.201	ppb	62.4	667	5	
As	75	2	72	0.057	ppb	57.0	18	1	
Se	78	1	72	0.062	ppb	88.1	25	1	
Sr	88	2	72	-0.149	ppb	-16.0	40	0.5	
Zr	90	2	72	4.579	ppb	54.0	97	1	>RL
Nb	93	2	72	3.272	ppb	11.8	10661	2	>RL
Mo	95	2	115	0.007	ppb	235.3	43	0.5	
Pd	105	2	115	0.100	ppb	17.8	200	1	
Ag	107	2	115	0.025	ppb	38.6	93	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.153	ppb	41.9	280	1	
Sb	121	2	115	0.721	ppb	15.2	553	0.6	>RL
Ba	137	2	115	0.093	ppb	66.7	33	0.5	
W	182	2	165	0.089	ppb	17.6	1153	1	
Pt	195	2	165	0.027	ppb	37.3	167	1	
Tl	205	2	165	0.013	ppb	12.4	290	0.1	
Pb	208	2	165	0.015	ppb	77.3	1133	0.5	
Th	232	2	165	0.076	ppb	23.8	1420	1	
U	238	2	165	0.040	ppb	12.1	793	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524522	0.25	493663	106.25	60	120	
Sc (IS)	45	1	HMI H2	14658716	0.44	14385099	101.90	60	120	
Sc (IS)	45	2	HMI He	571205	0.87	557211	102.51	60	120	
Sc (IS)	45	3	No Gas	44593698	0.20	42934053	103.87	60	120	
Ge Internal Standard	72	1	HMI H2	9047679	0.28	8983404	100.72	60	120	
Ge Internal Standard	72	2	HMI He	812571	0.88	803089	101.18	60	120	
In Internal Standard	115	2	HMI He	2745937	0.92	2728997	100.62	60	120	
Ho-165	165	2	HMI He	17595517	0.67	17228414	102.13	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	083LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:27:21-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	26.242	ppb	17.469	2800291	50	52.5	70	130	>+/-30%
Be	9	1	6	0.940	ppb	10.484	170	1	94.0	70	130	
Na	23	2	45	-650.395	ppb	-0.383	83687	50	-1300.8	70	130	>+/-30%
Mg	24	2	45	28.676	ppb	25.508	4137	50	57.4	70	130	>+/-30%
Al	27	2	45	38.680	ppb	16.036	647	30	128.9	70	130	
K	39	2	45	96.343	ppb	29.248	10394	100	96.3	70	130	
Ca	44	2	45	52.337	ppb	46.283	130	50	104.7	70	130	
V	51	2	72	5.304	ppb	15.620	5251	5	106.1	70	130	
Cr	52	2	72	1.918	ppb	8.776	2260	2	95.9	70	130	
Mn	55	2	72	0.950	ppb	24.732	493	1	95.0	70	130	
Fe	57	2	72	53.559	ppb	5.528	1203	50	107.1	70	130	
Co	59	2	72	1.091	ppb	5.763	2354	1	109.1	70	130	
Ni	60	2	72	2.229	ppb	20.749	1587	2	111.4	70	130	
Cu	63	2	72	2.050	ppb	5.553	5234	2	102.5	70	130	
Zn	66	2	72	11.850	ppb	5.953	2784	10	118.5	70	130	
As	75	2	72	4.587	ppb	5.244	577	5	91.7	70	130	
Se	78	1	72	4.821	ppb	4.742	1137	5	96.4	70	130	
Sr	88	2	72	0.719	ppb	32.188	397	1	71.9	70	130	
Zr	90	2	72	80.098	ppb	10.808	580	0.5	16019.5	70	130	>+/-30%
Nb	93	2	72	6.121	ppb	2.790	19332	2	306.0	70	130	>+/-30%
Mo	95	2	115	2.004	ppb	8.323	1787	2	100.2	70	130	
Pd	105	2	115	0.070	ppb	71.294	157	1	7.0	70	130	>+/-30%
Ag	107	2	115	5.439	ppb	1.462	17530	5	108.8	70	130	
Cd	111	2	115	1.172	ppb	23.283	417	1	117.2	70	130	
Sn	120	2	115	10.346	ppb	4.550	9643	10	103.5	70	130	
Sb	121	2	115	2.433	ppb	12.868	1837	2	121.6	70	130	
Ba	137	2	115	0.800	ppb	20.686	213	1	80.0	70	130	
W	182	2	165	4.863	ppb	1.534	27239	1	486.3	70	130	>+/-30%
Pt	195	2	165	0.030	ppb	10.414	183	1	3.0	70	130	>+/-30%
Tl	205	2	165	0.978	ppb	2.811	9487	1	97.8	70	130	
Pb	208	2	165	0.972	ppb	1.838	12856	1	97.2	70	130	
Th	232	2	165	2.133	ppb	1.237	30987	2	106.7	70	130	
U	238	2	165	0.929	ppb	2.962	16400	1	92.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	519970	0.33	493663	105.33	60	120	
Sc (IS)	45	1	HMI H2	14717274	0.72	14385099	102.31	60	120	
Sc (IS)	45	2	HMI He	573540	0.11	557211	102.93	60	120	
Sc (IS)	45	3	No Gas	44105636	0.78	42934053	102.73	60	120	
Ge Internal Standard	72	1	HMI H2	9023245	0.39	8983404	100.44	60	120	
Ge Internal Standard	72	2	HMI He	812721	0.70	803089	101.20	60	120	
In Internal Standard	115	2	HMI He	2787777	0.29	2728997	102.15	60	120	
Ho-165	165	2	HMI He	17660722	0.65	17228414	102.51	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-D
Data File Name	084SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:31:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.720	ppb	-1.720	-531.41	60347	500000	
Li	7	2	45	12.781	ppb	12.781	96.85	4117	500000	
Li	7	3	45	-2.846	ppb	-2.846	-169.01	2472492	50000	
Be	9	1	6	0.000	ppb	0.000	72378.66	7	2000	
B	11	1	6	23.907	ppb	23.907	7.68	5178	2000	
Na	23	1	45	41150.152	ppb	41150.152	0.55	55396801	2000	>LDR
Na	23	2	45	39639.452	ppb	39639.452	1.17	5451505	400000	
Mg	24	2	45	2504.836	ppb	2504.836	0.47	155965	400000	
Al	27	2	45	5.394	ppb	5.394	30.81	133	400000	
K	39	1	45	9023.887	ppb	9023.887	0.51	12759873	400000	
K	39	2	45	9703.457	ppb	9703.457	0.16	293742	400000	
Ca	40	1	45	31795.428	ppb	31795.428	0.50	62556997	400000	
Ca	44	2	45	30721.606	ppb	30721.606	2.50	56453	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.304	ppb	-0.304	-42.57	720	2000	
Cr	52	2	72	0.188	ppb	0.188	8.01	357	5000	
Mn	55	2	72	1417.841	ppb	1417.841	0.40	543334	10000	
Fe	57	2	72	10358.429	ppb	10358.429	1.04	207804	400000	
Co	59	2	72	1.443	ppb	1.443	9.25	2994	2000	
Ni	60	2	72	0.995	ppb	0.995	26.73	790	5000	
Cu	63	2	72	0.108	ppb	0.108	87.60	1650	5000	
Zn	66	2	72	3.819	ppb	3.819	14.78	1143	5000	
As	75	2	72	6.821	ppb	6.821	9.60	821	2000	
Se	78	1	72	0.008	ppb	0.008	613.13	12	2000	
Sr	88	2	72	96.817	ppb	96.817	1.77	38474	4000	
Zr	90	2	72	12.730	ppb	12.730	51.87	143	1000	
Nb	93	2	72	0.684	ppb	0.684	9.69	2694	200	
Mo	95	2	115	0.310	ppb	0.310	3.58	297	2000	
Pd	105	2	115	0.003	ppb	0.003	985.38	53	100	
Ag	107	2	115	0.002	ppb	0.002	295.58	20	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.157	ppb	0.157	40.27	277	2000	
Sb	121	2	115	0.205	ppb	0.205	41.03	170	1000	
Ba	137	2	115	18.522	ppb	18.522	2.31	4541	5000	
W	182	2	165	0.030	ppb	0.030	36.92	830	100	
Pt	195	2	165	0.000	ppb	0.000	1100.70	40	100	
Tl	205	2	165	0.005	ppb	0.005	88.79	217	2000	
Pb	208	2	165	0.045	ppb	0.045	29.83	1493	5000	
Th	232	2	165	0.046	ppb	0.046	6.02	993	2000	
U	238	2	165	0.017	ppb	0.017	2.20	377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	489296	0.46	493663	99.12	60	120	
Sc (IS)	45	1	HMI H2	14144979	0.27	14385099	98.33	60	120	
Sc (IS)	45	2	HMI He	556221	0.61	557211	99.82	60	120	
Sc (IS)	45	3	No Gas	42082178	0.72	42934053	98.02	60	120	
Ge Internal Standard	72	1	HMI H2	8647135	0.45	8983404	96.26	60	120	
Ge Internal Standard	72	2	HMI He	782459	0.23	803089	97.43	60	120	
In Internal Standard	115	2	HMI He	2685566	0.74	2728997	98.41	60	120	
Ho-165	165	2	HMI He	17532452	0.32	17228414	101.76	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-Dsd@5
Data File Name	085SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:34:57-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	13.108	ppb	13.108	23.70	63352	500000	
Li	7	2	45	13.047	ppb	13.047	133.21	4141	500000	
Li	7	3	45	15.906	ppb	15.906	34.64	2685114	50000	
Be	9	1	6	-0.041	ppb	-0.041	0.00	0	2000	
B	11	1	6	4.915	ppb	4.915	21.62	1640	2000	
Na	23	1	45	7625.524	ppb	7625.524	0.39	11670855	2000	
Na	23	2	45	7665.871	ppb	7665.871	0.78	1195543	400000	
Mg	24	2	45	490.289	ppb	490.289	0.91	32499	400000	
Al	27	2	45	1.790	ppb	1.790	151.71	80	400000	
K	39	1	45	1885.406	ppb	1885.406	1.27	4289795	400000	
K	39	2	45	1912.142	ppb	1912.142	1.82	64004	400000	
Ca	40	1	45	6423.747	ppb	6423.747	0.79	12812389	400000	
Ca	44	2	45	6299.085	ppb	6299.085	5.91	11658	400000	
Ti	47	2	45	197.121	ppb	197.121	173.21	7	4000	
V	51	2	72	0.154	ppb	0.154	186.66	1100	2000	
Cr	52	2	72	0.093	ppb	0.093	50.41	263	5000	
Mn	55	2	72	279.713	ppb	279.713	0.97	109853	10000	
Fe	57	2	72	2011.829	ppb	2011.829	2.51	41400	400000	
Co	59	2	72	0.340	ppb	0.340	7.77	733	2000	
Ni	60	2	72	0.115	ppb	0.115	13.64	270	5000	
Cu	63	2	72	-0.030	ppb	-0.030	-432.75	1443	5000	
Zn	66	2	72	2.316	ppb	2.316	56.08	877	5000	
As	75	2	72	1.419	ppb	1.419	9.41	184	2000	
Se	78	1	72	0.030	ppb	0.030	178.94	17	2000	
Sr	88	2	72	18.506	ppb	18.506	6.28	7612	4000	
Zr	90	2	72	6.902	ppb	6.902	61.42	110	1000	
Nb	93	2	72	0.314	ppb	0.314	23.08	1650	200	
Mo	95	2	115	0.089	ppb	0.089	52.02	113	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-299.94	43	100	
Ag	107	2	115	0.009	ppb	0.009	52.28	43	100	
Cd	111	2	115	0.028	ppb	0.028	99.50	10	2000	
Sn	120	2	115	0.139	ppb	0.139	33.77	267	2000	
Sb	121	2	115	0.209	ppb	0.209	27.50	177	1000	
Ba	137	2	115	3.209	ppb	3.209	5.44	813	5000	
W	182	2	165	0.017	ppb	0.017	50.55	760	100	
Pt	195	2	165	0.003	ppb	0.003	146.57	53	100	
Tl	205	2	165	-0.003	ppb	-0.003	-294.56	140	2000	
Pb	208	2	165	0.005	ppb	0.005	7.29	1003	5000	
Th	232	2	165	0.012	ppb	0.012	63.70	503	2000	
U	238	2	165	0.006	ppb	0.006	28.36	200	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	501786	0.48	493663	101.65	60	120	
Sc (IS)	45	1	HMI H2	14272886	0.27	14385099	99.22	60	120	
Sc (IS)	45	2	HMI He	558966	0.71	557211	100.32	60	120	
Sc (IS)	45	3	No Gas	43445821	0.58	42934053	101.19	60	120	
Ge Internal Standard	72	1	HMI H2	8836995	0.33	8983404	98.37	60	120	
Ge Internal Standard	72	2	HMI He	801251	0.27	803089	99.77	60	120	
In Internal Standard	115	2	HMI He	2748081	0.76	2728997	100.70	60	120	
Ho-165	165	2	HMI He	17576678	0.85	17228414	102.02	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-E MS
Data File Name	086SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:38:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	74.026	ppb	74.026	3.01	72501	500000	
Li	7	2	45	52.494	ppb	52.494	30.19	4517	500000	
Li	7	3	45	93.115	ppb	93.115	10.70	3151220	50000	
Be	9	1	6	44.716	ppb	44.716	6.17	7179	2000	
B	11	1	6	53.082	ppb	53.082	1.76	10497	2000	
Na	23	1	45	40860.119	ppb	40860.119	0.90	54795484	2000	>LDR
Na	23	2	45	39702.857	ppb	39702.857	0.94	5439653	400000	
Mg	24	2	45	2530.936	ppb	2530.936	0.76	156984	400000	
Al	27	2	45	400.284	ppb	400.284	3.78	5971	400000	
K	39	1	45	8947.297	ppb	8947.297	1.73	12617044	400000	
K	39	2	45	9599.977	ppb	9599.977	0.60	289607	400000	
Ca	40	1	45	31494.782	ppb	31494.782	0.45	61715822	400000	
Ca	44	2	45	31057.389	ppb	31057.389	1.39	56864	400000	
Ti	47	2	45	601.704	ppb	601.704	86.60	20	4000	
V	51	2	72	40.314	ppb	40.314	1.27	32573	2000	
Cr	52	2	72	43.222	ppb	43.222	1.03	46229	5000	
Mn	55	2	72	1440.226	ppb	1440.226	0.54	559530	10000	
Fe	57	2	72	10832.090	ppb	10832.090	0.59	220306	400000	
Co	59	2	72	41.547	ppb	41.547	1.77	87049	2000	
Ni	60	2	72	41.324	ppb	41.324	2.04	25270	5000	
Cu	63	2	72	45.771	ppb	45.771	1.85	82470	5000	
Zn	66	2	72	43.400	ppb	43.400	5.53	8839	5000	
As	75	2	72	43.912	ppb	43.912	2.51	5298	2000	
Se	78	1	72	37.763	ppb	37.763	4.78	8470	2000	
Sr	88	2	72	136.303	ppb	136.303	0.89	54874	4000	
Zr	90	2	72	6982.801	ppb	6982.801	0.79	43704	1000	>LDR
Nb	93	2	72	0.387	ppb	0.387	30.64	1850	200	
Mo	95	2	115	38.693	ppb	38.693	2.74	32878	2000	
Pd	105	2	115	0.014	ppb	0.014	148.25	70	100	
Ag	107	2	115	41.147	ppb	41.147	0.68	128858	100	
Cd	111	2	115	41.580	ppb	41.580	3.74	14377	2000	
Sn	120	2	115	40.132	ppb	40.132	2.68	35962	2000	
Sb	121	2	115	38.923	ppb	38.923	0.53	28226	1000	
Ba	137	2	115	59.283	ppb	59.283	5.55	14644	5000	
W	182	2	165	11.690	ppb	11.690	0.88	64335	100	
Pt	195	2	165	0.005	ppb	0.005	195.85	63	100	
Tl	205	2	165	39.719	ppb	39.719	0.76	377315	2000	
Pb	208	2	165	40.361	ppb	40.361	1.17	493816	5000	
Th	232	2	165	39.909	ppb	39.909	0.33	571911	2000	
U	238	2	165	37.142	ppb	37.142	0.18	650316	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	481216	0.18	493663	97.48	60	120	
Sc (IS)	45	1	HMI H2	14088022	0.51	14385099	97.93	60	120	
Sc (IS)	45	2	HMI He	554150	0.37	557211	99.45	60	120	
Sc (IS)	45	3	No Gas	42367596	0.70	42934053	98.68	60	120	
Ge Internal Standard	72	1	HMI H2	8651691	0.41	8983404	96.31	60	120	
Ge Internal Standard	72	2	HMI He	793266	0.36	803089	98.78	60	120	
In Internal Standard	115	2	HMI He	2710263	0.49	2728997	99.31	60	120	
Ho-165	165	2	HMI He	17604963	0.48	17228414	102.19	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-F MSD
Data File Name	087SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:42:32-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	81.727	ppb	81.727	2.67	73498	500000	
Li	7	2	45	68.248	ppb	68.248	14.93	4728	500000	
Li	7	3	45	86.155	ppb	86.155	15.46	3134007	50000	
Be	9	1	6	40.214	ppb	40.214	2.65	6482	2000	
B	11	1	6	53.686	ppb	53.686	0.50	10650	2000	
Na	23	1	45	41328.903	ppb	41328.903	0.83	55207799	2000	>LDR
Na	23	2	45	40087.414	ppb	40087.414	0.43	5544212	400000	
Mg	24	2	45	2503.250	ppb	2503.250	1.82	156799	400000	
Al	27	2	45	373.000	ppb	373.000	5.08	5621	400000	
K	39	1	45	8950.858	ppb	8950.858	0.91	12576335	400000	
K	39	2	45	9771.036	ppb	9771.036	0.58	297499	400000	
Ca	40	1	45	31884.365	ppb	31884.365	0.31	62254361	400000	
Ca	44	2	45	31343.221	ppb	31343.221	2.11	57945	400000	
Ti	47	2	45	1093.645	ppb	1093.645	83.60	37	4000	
V	51	2	72	40.804	ppb	40.804	1.80	33151	2000	
Cr	52	2	72	40.563	ppb	40.563	2.41	43649	5000	
Mn	55	2	72	1448.629	ppb	1448.629	0.79	566111	10000	
Fe	57	2	72	10814.142	ppb	10814.142	1.37	221229	400000	
Co	59	2	72	41.748	ppb	41.748	0.30	87988	2000	
Ni	60	2	72	41.362	ppb	41.362	0.88	25440	5000	
Cu	63	2	72	39.529	ppb	39.529	1.01	71848	5000	
Zn	66	2	72	41.380	ppb	41.380	5.20	8496	5000	
As	75	2	72	43.670	ppb	43.670	2.04	5300	2000	
Se	78	1	72	38.158	ppb	38.158	1.60	8449	2000	
Sr	88	2	72	137.374	ppb	137.374	0.21	55630	4000	
Zr	90	2	72	7495.220	ppb	7495.220	2.29	47183	1000	>LDR
Nb	93	2	72	0.264	ppb	0.264	4.91	1493	200	
Mo	95	2	115	38.413	ppb	38.413	1.35	32684	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-159.32	37	100	
Ag	107	2	115	41.020	ppb	41.020	1.26	128641	100	
Cd	111	2	115	40.955	ppb	40.955	1.63	14180	2000	
Sn	120	2	115	39.815	ppb	39.815	1.98	35732	2000	
Sb	121	2	115	39.454	ppb	39.454	0.51	28650	1000	
Ba	137	2	115	58.556	ppb	58.556	4.25	14487	5000	
W	182	2	165	11.566	ppb	11.566	1.05	63963	100	
Pt	195	2	165	0.002	ppb	0.002	345.88	47	100	
Tl	205	2	165	39.318	ppb	39.318	0.98	375299	2000	
Pb	208	2	165	39.778	ppb	39.778	0.31	489027	5000	
Th	232	2	165	39.836	ppb	39.836	0.18	573590	2000	
U	238	2	165	37.039	ppb	37.039	0.57	651603	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	483105	0.50	493663	97.86	60	120	
Sc (IS)	45	1	HMI H2	14037406	0.33	14385099	97.58	60	120	
Sc (IS)	45	2	HMI He	559541	0.33	557211	100.42	60	120	
Sc (IS)	45	3	No Gas	42788949	0.37	42934053	99.66	60	120	
Ge Internal Standard	72	1	HMI H2	8539740	0.12	8983404	95.06	60	120	
Ge Internal Standard	72	2	HMI He	797947	0.37	803089	99.36	60	120	
In Internal Standard	115	2	HMI He	2714030	0.19	2728997	99.45	60	120	
Ho-165	165	2	HMI He	17688802	0.85	17228414	102.67	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-D pds
Data File Name	088SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:46:17-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.573	ppb	0.573	1102.47	60484	500000	
Li	7	2	45	-3.559	ppb	-3.559	-565.56	4014	500000	
Li	7	3	45	10.988	ppb	10.988	92.67	2619918	50000	
Be	9	1	6	212.910	ppb	212.910	1.62	34579	2000	
B	11	1	6	25.115	ppb	25.115	5.66	5381	2000	
Na	23	1	45	40269.047	ppb	40269.047	0.93	54029343	2000	>LDR
Na	23	2	45	38207.667	ppb	38207.667	1.70	5351098	400000	
Mg	24	2	45	2446.387	ppb	2446.387	1.44	154997	400000	
Al	27	2	45	2166.000	ppb	2166.000	1.74	32749	400000	
K	39	1	45	8781.086	ppb	8781.086	0.87	12420974	400000	
K	39	2	45	9370.124	ppb	9370.124	0.13	288781	400000	
Ca	40	1	45	31063.638	ppb	31063.638	0.79	60875962	400000	
Ca	44	2	45	29748.395	ppb	29748.395	1.01	55611	400000	
Ti	47	2	45	6870.449	ppb	6870.449	13.69	233	4000	
V	51	2	72	213.436	ppb	213.436	0.26	168925	2000	
Cr	52	2	72	213.297	ppb	213.297	1.32	228346	5000	
Mn	55	2	72	1583.229	ppb	1583.229	0.93	617382	10000	
Fe	57	2	72	12201.294	ppb	12201.294	0.66	249069	400000	
Co	59	2	72	212.593	ppb	212.593	0.30	447061	2000	
Ni	60	2	72	211.924	ppb	211.924	1.00	129254	5000	
Cu	63	2	72	210.037	ppb	210.037	0.75	374522	5000	
Zn	66	2	72	217.369	ppb	217.369	0.36	42753	5000	
As	75	2	72	201.723	ppb	201.723	1.02	24389	2000	
Se	78	1	72	202.639	ppb	202.639	1.08	44967	2000	
Sr	88	2	72	94.569	ppb	94.569	0.62	38246	4000	
Zr	90	2	72	42900.250	ppb	42900.250	0.58	269171	1000	>LDR
Nb	93	2	72	4.799	ppb	4.799	1.96	15001	200	
Mo	95	2	115	212.851	ppb	212.851	1.50	180935	2000	
Pd	105	2	115	0.002	ppb	0.002	1076.18	53	100	
Ag	107	2	115	51.523	ppb	51.523	0.90	161577	100	
Cd	111	2	115	215.239	ppb	215.239	1.75	74522	2000	
Sn	120	2	115	216.845	ppb	216.845	1.41	193982	2000	
Sb	121	2	115	211.304	ppb	211.304	2.66	153327	1000	
Ba	137	2	115	232.327	ppb	232.327	1.87	57454	5000	
W	182	2	165	211.588	ppb	211.588	1.08	1155485	100	
Pt	195	2	165	0.057	ppb	0.057	25.34	313	100	
Tl	205	2	165	223.393	ppb	223.393	0.85	2126075	2000	
Pb	208	2	165	208.802	ppb	208.802	0.46	2556392	5000	
Th	232	2	165	15.968	ppb	15.968	0.91	229532	2000	
U	238	2	165	209.319	ppb	209.319	0.50	3672632	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	487174	0.48	493663	98.69	60	120	
Sc (IS)	45	1	HMI H2	14088956	0.38	14385099	97.94	60	120	
Sc (IS)	45	2	HMI He	565785	0.33	557211	101.54	60	120	
Sc (IS)	45	3	No Gas	42942234	0.48	42934053	100.02	60	120	
Ge Internal Standard	72	1	HMI H2	8566692	0.26	8983404	95.36	60	120	
Ge Internal Standard	72	2	HMI He	796252	0.60	803089	99.15	60	120	
In Internal Standard	115	2	HMI He	2714208	0.91	2728997	99.46	60	120	
Ho-165	165	2	HMI He	17643849	0.69	17228414	102.41	60	120	

Sample Report

Sample Table

Sample Name	280-114110-A-4-C
Data File Name	089SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:50:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.881	ppb	4.881	115.39	61541	500000	
Li	7	2	45	19.351	ppb	19.351	45.39	4334	500000	
Li	7	3	45	18.420	ppb	18.420	91.99	2708147	50000	
Be	9	1	6	0.203	ppb	0.203	51.98	40	2000	
B	11	1	6	19.600	ppb	19.600	6.39	4391	2000	
Na	23	1	45	74511.679	ppb	74511.679	0.99	99185479	2000	>LDR
Na	23	2	45	71367.909	ppb	71367.909	0.97	10022293	400000	
Mg	24	2	45	17171.379	ppb	17171.379	0.34	1093276	400000	
Al	27	2	45	2.271	ppb	2.271	28.43	90	400000	
K	39	1	45	1757.797	ppb	1757.797	2.04	4106219	400000	
K	39	2	45	2425.638	ppb	2425.638	1.19	81636	400000	
Ca	40	1	45	61682.558	ppb	61682.558	1.12	121501135	400000	
Ca	44	2	45	58914.966	ppb	58914.966	1.23	112062	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.142	ppb	-0.142	-52.96	877	2000	
Cr	52	2	72	0.913	ppb	0.913	0.18	1160	5000	
Mn	55	2	72	43.670	ppb	43.670	1.42	17470	10000	
Fe	57	2	72	10.692	ppb	10.692	35.09	310	400000	
Co	59	2	72	0.132	ppb	0.132	14.84	297	2000	
Ni	60	2	72	8.156	ppb	8.156	7.50	5264	5000	
Cu	63	2	72	4.677	ppb	4.677	6.04	9983	5000	
Zn	66	2	72	14.891	ppb	14.891	2.24	3384	5000	
As	75	2	72	0.360	ppb	0.360	39.77	56	2000	
Se	78	1	72	0.238	ppb	0.238	32.87	64	2000	
Sr	88	2	72	140.223	ppb	140.223	0.81	57755	4000	
Zr	90	2	72	36.906	ppb	36.906	23.25	303	1000	
Nb	93	2	72	-0.117	ppb	-0.117	-26.41	363	200	
Mo	95	2	115	0.764	ppb	0.764	8.18	693	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-65.38	20	100	
Ag	107	2	115	0.029	ppb	0.029	25.96	107	100	
Cd	111	2	115	0.981	ppb	0.981	9.32	343	2000	
Sn	120	2	115	0.574	ppb	0.574	16.38	660	2000	
Sb	121	2	115	2.077	ppb	2.077	5.58	1547	1000	
Ba	137	2	115	16.836	ppb	16.836	9.22	4219	5000	
W	182	2	165	0.198	ppb	0.198	13.00	1780	100	
Pt	195	2	165	0.013	ppb	0.013	37.13	103	100	
Tl	205	2	165	0.036	ppb	0.036	10.07	517	2000	
Pb	208	2	165	0.049	ppb	0.049	24.15	1573	5000	
Th	232	2	165	0.019	ppb	0.019	40.12	623	2000	
U	238	2	165	0.271	ppb	0.271	1.91	4931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	492100	0.33	493663	99.68	60	120	
Sc (IS)	45	1	HMI H2	14169381	0.37	14385099	98.50	60	120	
Sc (IS)	45	2	HMI He	575858	0.67	557211	103.35	60	120	
Sc (IS)	45	3	No Gas	43526953	0.41	42934053	101.38	60	120	
Ge Internal Standard	72	1	HMI H2	8697605	1.08	8983404	96.82	60	120	
Ge Internal Standard	72	2	HMI He	811631	0.15	803089	101.06	60	120	
In Internal Standard	115	2	HMI He	2742489	1.16	2728997	100.49	60	120	
Ho-165	165	2	HMI He	17936386	1.08	17228414	104.11	60	120	

Sample Report

Sample Table

Sample Name	280-114110-A-4-D DU
Data File Name	090SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:53:51-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.856	ppb	4.856	126.32	62120	500000	
Li	7	2	45	-21.987	ppb	-21.987	-108.12	3891	500000	
Li	7	3	45	11.114	ppb	11.114	54.05	2675704	50000	
Be	9	1	6	-0.021	ppb	-0.021	-169.55	3	2000	
B	11	1	6	18.289	ppb	18.289	2.77	4152	2000	
Na	23	1	45	79930.651	ppb	79930.651	0.59	107295875	2000	>LDR
Na	23	2	45	77232.691	ppb	77232.691	1.76	10847574	400000	
Mg	24	2	45	17614.075	ppb	17614.075	0.24	1123023	400000	
Al	27	2	45	4.223	ppb	4.223	96.70	120	400000	
K	39	1	45	1646.211	ppb	1646.211	1.64	4010952	400000	
K	39	2	45	2329.887	ppb	2329.887	0.35	78826	400000	
Ca	40	1	45	63269.879	ppb	63269.879	0.25	125813688	400000	
Ca	44	2	45	59807.008	ppb	59807.008	0.57	113925	400000	
Ti	47	2	45	95.960	ppb	95.960	173.21	3	4000	
V	51	2	72	-0.450	ppb	-0.450	-15.26	630	2000	
Cr	52	2	72	0.773	ppb	0.773	10.38	1010	5000	
Mn	55	2	72	72.634	ppb	72.634	0.87	29023	10000	
Fe	57	2	72	8.107	ppb	8.107	23.48	257	400000	
Co	59	2	72	0.081	ppb	0.081	25.79	187	2000	
Ni	60	2	72	8.583	ppb	8.583	2.28	5538	5000	
Cu	63	2	72	4.028	ppb	4.028	3.50	8823	5000	
Zn	66	2	72	12.365	ppb	12.365	8.59	2887	5000	
As	75	2	72	0.152	ppb	0.152	95.78	30	2000	
Se	78	1	72	0.155	ppb	0.155	6.61	45	2000	
Sr	88	2	72	146.191	ppb	146.191	0.54	60297	4000	
Zr	90	2	72	13.939	ppb	13.939	72.21	157	1000	
Nb	93	2	72	-0.126	ppb	-0.126	-17.82	337	200	
Mo	95	2	115	0.522	ppb	0.522	34.00	487	2000	
Pd	105	2	115	0.004	ppb	0.004	337.33	57	100	
Ag	107	2	115	0.005	ppb	0.005	220.90	30	100	
Cd	111	2	115	0.976	ppb	0.976	14.53	343	2000	
Sn	120	2	115	0.457	ppb	0.457	24.26	557	2000	
Sb	121	2	115	1.284	ppb	1.284	15.97	970	1000	
Ba	137	2	115	15.644	ppb	15.644	1.14	3944	5000	
W	182	2	165	0.054	ppb	0.054	26.69	990	100	
Pt	195	2	165	0.008	ppb	0.008	71.96	80	100	
Tl	205	2	165	0.011	ppb	0.011	10.44	280	2000	
Pb	208	2	165	0.009	ppb	0.009	125.10	1093	5000	
Th	232	2	165	0.016	ppb	0.016	12.39	587	2000	
U	238	2	165	0.164	ppb	0.164	7.74	3044	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493291	0.79	493663	99.92	60	120	
Sc (IS)	45	1	HMI H2	14304641	0.41	14385099	99.44	60	120	
Sc (IS)	45	2	HMI He	576688	0.39	557211	103.50	60	120	
Sc (IS)	45	3	No Gas	43846018	0.32	42934053	102.12	60	120	
Ge Internal Standard	72	1	HMI H2	8711514	0.27	8983404	96.97	60	120	
Ge Internal Standard	72	2	HMI He	812825	0.29	803089	101.21	60	120	
In Internal Standard	115	2	HMI He	2760253	1.41	2728997	101.15	60	120	
Ho-165	165	2	HMI He	18094218	0.48	17228414	105.03	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	091_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T17:57:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	527.970	ppb	0.720	150574	500	105.6	90	110	
Li	7	2	45	522.150	ppb	10.096	9766	500	104.4	90	110	
Li	7	3	45	552.213	ppb	1.872	6656724	500	110.4	90	110	>+\-10%
Be	9	1	6	46.862	ppb	2.468	7955	50	93.7	90	110	
B	11	1	6	43.778	ppb	5.364	9276	50	87.6	90	110	>+\-10%
Na	23	1	45	4608.523	ppb	0.594	7786429	5000	92.2	90	110	
Na	23	2	45	4216.566	ppb	1.357	753535	5000	84.3	90	110	>+\-10%
Mg	24	2	45	4982.570	ppb	0.727	317994	5000	99.7	90	110	
Al	27	2	45	5021.894	ppb	1.806	76996	5000	100.4	90	110	
K	39	1	45	4958.164	ppb	0.325	8084948	5000	99.2	90	110	
K	39	2	45	4877.199	ppb	1.767	156130	5000	97.5	90	110	
Ca	40	1	45	5047.873	ppb	0.245	10209856	5000	101.0	90	110	
Ca	44	2	45	4763.120	ppb	1.503	9063	5000	95.3	90	110	
Ti	47	2	45	288.238	ppb	99.542	10	50	576.5	90	110	>+\-10%
V	51	2	72	48.183	ppb	0.998	39682	50	96.4	90	110	
Cr	52	2	72	49.239	ppb	1.640	53916	50	98.5	90	110	
Mn	55	2	72	49.333	ppb	3.318	19739	50	98.7	90	110	
Fe	57	2	72	4957.368	ppb	1.159	103313	5000	99.1	90	110	
Co	59	2	72	49.644	ppb	2.160	106527	50	99.3	90	110	
Ni	60	2	72	48.309	ppb	2.081	30222	50	96.6	90	110	
Cu	63	2	72	49.069	ppb	0.907	90445	50	98.1	90	110	
Zn	66	2	72	49.827	ppb	1.085	10330	50	99.7	90	110	
As	75	2	72	49.063	ppb	3.017	6062	50	98.1	90	110	
Se	78	1	72	49.068	ppb	1.306	11312	50	98.1	90	110	
Sr	88	2	72	47.662	ppb	0.814	19720	50	95.3	90	110	
Zr	90	2	72	84.748	ppb	10.740	610	50	169.5	90	110	>+\-10%
Nb	93	2	72	88.846	ppb	2.051	270789	100	88.8	90	110	>+\-10%
Mo	95	2	115	48.776	ppb	1.788	42548	50	97.6	90	110	
Pd	105	2	115	50.313	ppb	1.356	76039	50	100.6	90	110	
Ag	107	2	115	49.150	ppb	1.265	158061	50	98.3	90	110	
Cd	111	2	115	50.626	ppb	4.416	17974	50	101.3	90	110	
Sn	120	2	115	49.595	ppb	1.396	45607	50	99.2	90	110	
Sb	121	2	115	49.795	ppb	0.696	37075	50	99.6	90	110	
Ba	137	2	115	47.549	ppb	3.211	12065	50	95.1	90	110	
W	182	2	165	48.571	ppb	0.410	269010	50	97.1	90	110	
Pt	195	2	165	48.511	ppb	0.859	237237	50	97.0	90	110	
Tl	205	2	165	49.074	ppb	0.470	472868	50	98.1	90	110	
Pb	208	2	165	49.574	ppb	0.812	615077	50	99.1	90	110	
Th	232	2	165	48.551	ppb	0.750	705695	50	97.1	90	110	
U	238	2	165	44.793	ppb	0.856	795533	50	89.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	508955	0.90	493663	103.10	60	120	
Sc (IS)	45	1	HMI H2	14450746	0.10	14385099	100.46	60	120	
Sc (IS)	45	2	HMI He	574266	1.01	557211	103.06	60	120	
Sc (IS)	45	3	No Gas	44629049	0.34	42934053	103.95	60	120	
Ge Internal Standard	72	1	HMI H2	8893486	0.55	8983404	99.00	60	120	
Ge Internal Standard	72	2	HMI He	812504	0.59	803089	101.17	60	120	
In Internal Standard	115	2	HMI He	2783158	0.25	2728997	101.98	60	120	
Ho-165	165	2	HMI He	17858723	0.64	17228414	103.66	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	092_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:01:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	33.121	ppb	17.6	2885750	10	>RL
Be	9	1	6	0.075	ppb	76.5	20	0.5	
B	11	1	6	0.139	ppb	364.0	743	0.5	
Na	23	1	45	-849.556	ppb	-0.7	498322	25	
Na	23	2	45	-862.039	ppb	-0.8	54217	25	
Mg	24	2	45	-26.896	ppb	-5.4	617	25	
Al	27	2	45	2.555	ppb	39.0	93	15	
K	39	1	45	-7.803	ppb	-122.7	2046912	50	
K	39	2	45	-20.309	ppb	-15.3	6795	50	
Ca	40	1	45	-1.134	ppb	-96.6	73559	50	
Ca	44	2	45	17.379	ppb	107.8	63	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.300	ppb	28.8	1237	1	
Cr	52	2	72	0.025	ppb	169.4	193	1	
Mn	55	2	72	0.021	ppb	387.6	123	0.5	
Fe	57	2	72	3.603	ppb	39.7	163	25	
Co	59	2	72	0.032	ppb	57.6	83	0.5	
Ni	60	2	72	0.001	ppb	18671.1	203	1	
Cu	63	2	72	-0.088	ppb	-178.6	1363	1	
Zn	66	2	72	1.254	ppb	35.7	680	5	
As	75	2	72	0.062	ppb	169.9	19	1	
Se	78	1	72	0.081	ppb	32.9	29	1	
Sr	88	2	72	-0.044	ppb	-136.3	83	0.5	
Zr	90	2	72	18.540	ppb	27.2	187	1	>RL
Nb	93	2	72	3.494	ppb	11.7	11378	2	>RL
Mo	95	2	115	0.063	ppb	10.5	93	0.5	
Pd	105	2	115	0.064	ppb	56.1	150	1	
Ag	107	2	115	0.024	ppb	41.4	93	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.153	ppb	72.6	287	1	
Sb	121	2	115	0.910	ppb	9.7	710	0.6	>RL
Ba	137	2	115	0.051	ppb	178.2	23	0.5	
W	182	2	165	0.086	ppb	37.7	1157	1	
Pt	195	2	165	0.030	ppb	13.3	183	1	
Tl	205	2	165	0.016	ppb	17.7	323	0.1	
Pb	208	2	165	0.017	ppb	29.0	1180	0.5	
Th	232	2	165	0.081	ppb	6.2	1520	1	
U	238	2	165	0.053	ppb	12.8	1033	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	519684	0.72	493663	105.27	60	120	
Sc (IS)	45	1	HMI H2	14515184	0.41	14385099	100.90	60	120	
Sc (IS)	45	2	HMI He	569554	0.15	557211	102.22	60	120	
Sc (IS)	45	3	No Gas	44665883	0.57	42934053	104.03	60	120	
Ge Internal Standard	72	1	HMI H2	8965658	0.40	8983404	99.80	60	120	
Ge Internal Standard	72	2	HMI He	815227	0.44	803089	101.51	60	120	
In Internal Standard	115	2	HMI He	2821585	0.91	2728997	103.39	60	120	
Ho-165	165	2	HMI He	17921841	0.92	17228414	104.02	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	093LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:05:13-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	65.590	ppb	20.554	5233658	50	131.2	70	130	>+/-30%
Be	9	1	6	0.006	ppb	698.950	17	1	0.6	70	130	>+/-30%
Na	23	2	45	-870.743	ppb	-6.381	76690	50	-1741.5	70	130	>+/-30%
Mg	24	2	45	2.364	ppb	451.259	3547	50	4.7	70	130	>+/-30%
Al	27	2	45	9.675	ppb	67.859	290	30	32.3	70	130	>+/-30%
K	39	2	45	-107.100	ppb	-11.531	6035	100	-107.1	70	130	>+/-30%
Ca	44	2	45	126.927	ppb	34.205	390	50	253.9	70	130	>+/-30%
V	51	2	72	-0.440	ppb	-7.130	903	5	-8.8	70	130	>+/-30%
Cr	52	2	72	0.138	ppb	58.639	447	2	6.9	70	130	>+/-30%
Mn	55	2	72	0.713	ppb	56.236	567	1	71.3	70	130	
Fe	57	2	72	27.581	ppb	95.574	925	50	55.2	70	130	>+/-30%
Co	59	2	72	0.085	ppb	50.273	277	1	8.5	70	130	>+/-30%
Ni	60	2	72	0.103	ppb	105.415	377	2	5.1	70	130	>+/-30%
Cu	63	2	72	0.189	ppb	56.484	2634	2	9.5	70	130	>+/-30%
Zn	66	2	72	1.000	ppb	34.036	887	10	10.0	70	130	>+/-30%
As	75	2	72	0.140	ppb	42.973	41	5	2.8	70	130	>+/-30%
Se	78	1	72	-0.004	ppb	-374.007	15	5	-0.1	70	130	>+/-30%
Sr	88	2	72	0.308	ppb	93.879	323	1	30.8	70	130	>+/-30%
Zr	90	2	72	15.189	ppb	48.130	233	0.5	3037.8	70	130	>+/-30%
Nb	93	2	72	0.810	ppb	39.215	4494	2	40.5	70	130	>+/-30%
Mo	95	2	115	0.081	ppb	77.651	147	2	4.0	70	130	>+/-30%
Pd	105	2	115	0.052	ppb	82.146	177	1	5.2	70	130	>+/-30%
Ag	107	2	115	0.075	ppb	45.914	347	5	1.5	70	130	>+/-30%
Cd	111	2	115	0.089	ppb	12.479	43	1	8.9	70	130	>+/-30%
Sn	120	2	115	0.208	ppb	74.366	457	10	2.1	70	130	>+/-30%
Sb	121	2	115	0.412	ppb	32.119	453	2	20.6	70	130	>+/-30%
Ba	137	2	115	0.132	ppb	119.246	60	1	13.2	70	130	>+/-30%
W	182	2	165	0.078	ppb	28.770	1604	1	7.8	70	130	>+/-30%
Pt	195	2	165	0.062	ppb	27.342	493	1	6.2	70	130	>+/-30%
Tl	205	2	165	0.087	ppb	26.516	1447	1	8.7	70	130	>+/-30%
Pb	208	2	165	0.070	ppb	48.527	2647	1	7.0	70	130	>+/-30%
Th	232	2	165	0.066	ppb	33.443	1870	2	3.3	70	130	>+/-30%
U	238	2	165	0.087	ppb	39.420	2347	1	8.7	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1059172	2.33	493663	214.55	60	120	IS Failed
Sc (IS)	45	1	HMI H2	22157084	3.07	14385099	154.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	824128	2.57	557211	147.90	60	120	IS Failed
Sc (IS)	45	3	No Gas	74810466	6.16	42934053	174.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	13465148	3.42	8983404	149.89	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1150811	2.47	803089	143.30	60	120	IS Failed
In Internal Standard	115	2	HMI He	3823161	2.89	2728997	140.09	60	120	IS Failed
Ho-165	165	2	HMI He	25818762	2.45	17228414	149.86	60	120	IS Failed

Blank Report

Sample Table

Sample Name	mb 280-429450/1-a
Data File Name	094_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:09:01-06:00
Sample Type	Blank
Dilution	1
Comment	429450 6020A DOD5 Mn
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	2.803	ppb	314.7783231	61772	0.5
Li	7	2	45	-7.763	ppb	-211.2265527	3994	0.5
Li	7	3	45	13.979	ppb	48.5127181	2688526	10
Be	9	1	6	-0.041	ppb	-1.62011E-06	0	0.5
B	11	1	6	-0.251	ppb	-232.5138335	633	0.5
Na	23	1	45	-796.633	ppb	-3.216953744	560806	25
Na	23	2	45	-780.617	ppb	-2.109666708	65293	25
Mg	24	2	45	-26.045	ppb	-2.644703117	670	25
Al	27	2	45	4.088	ppb	55.77618512	117	15
K	39	1	45	-828.851	ppb	-0.294357657	1027444	50
K	39	2	45	-12.359	ppb	-80.03066708	7032	50
Ca	40	1	45	6.402	ppb	3.959078301	87462	50
Ca	44	2	45	49.309	ppb	40.91007246	123	25
Ti	47	2	45	194.396	ppb	173.2050808	7	0.5
V	51	2	72	-0.337	ppb	-25.39921478	717	1
Cr	52	2	72	0.229	ppb	30.85079482	413	1
Mn	55	2	72	3.817	ppb	9.363791004	1623	0.5
Fe	57	2	72	1.908	ppb	13.76003747	127	25
Co	59	2	72	0.002	ppb	175.4396152	17	0.5
Ni	60	2	72	0.009	ppb	736.1429781	207	1
Cu	63	2	72	0.012	ppb	289.0422134	1530	1
Zn	66	2	72	3.767	ppb	6.443705501	1170	5
As	75	2	72	0.095	ppb	75.08539697	23	1
Se	78	1	72	0.007	ppb	239.8704933	12	1
Sr	88	2	72	-0.173	ppb	-24.55231692	30	0.5
Zr	90	2	72	7.281	ppb	99.79101267	113	1
Nb	93	2	72	1.997	ppb	9.317641373	6748	2
Mo	95	2	115	0.003	ppb	18.16814134	40	0.5
Pd	105	2	115	0.021	ppb	71.44868231	83	1
Ag	107	2	115	0.004	ppb	238.6687767	27	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.097	ppb	75.06417708	233	1
Sb	121	2	115	0.204	ppb	11.0421688	177	0.6
Ba	137	2	115	0.220	ppb	26.2237248	67	0.5
W	182	2	165	0.060	ppb	31.4450882	1027	1
Pt	195	2	165	0.006	ppb	42.06615848	67	1
Tl	205	2	165	0.000	ppb	422.9234713	177	0.1
Pb	208	2	165	0.021	ppb	29.9966011	1243	0.5
Th	232	2	165	0.121	ppb	1.872870801	2134	1
U	238	2	165	0.012	ppb	24.21753426	303	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494514	0.17	493663	100.17	60	120	
Sc (IS)	45	1	HMI H2	14303435	1.09	14385099	99.43	60	120	
Sc (IS)	45	2	HMI He	569269	0.47	557211	102.16	60	120	
Sc (IS)	45	3	No Gas	43719256	0.41	42934053	101.83	60	120	
Ge Internal Standard	72	1	HMI H2	8712922	0.91	8983404	96.99	60	120	
Ge Internal Standard	72	2	HMI He	807724	0.30	803089	100.58	60	120	
In Internal Standard	115	2	HMI He	2805059	1.03	2728997	102.79	60	120	
Ho-165	165	2	HMI He	18152100	0.40	17228414	105.36	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-429450/2-a
Data File Name	095_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:12:49-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429450 6020A DOD5
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	76.769	76.769	ppb	7.824	73615	400	19.2	80	120	>+/-20%
Li	7	2	45	85.415	85.415	ppb	15.804	4984	400	21.4	80	120	>+/-20%
Li	7	3	45	110.144	110.144	ppb	10.936	3299567	400	27.5	80	120	>+/-20%
Be	9	1	6	40.257	40.257	ppb	3.064	6595	40	100.6	80	120	
Na	23	2	45	-852.586	-852.586	ppb	-0.392	55375	40	-2131.5	80	120	>+/-20%
Mg	24	2	45	-26.503	-26.503	ppb	-5.080	640	40	-66.3	80	120	>+/-20%
Al	27	2	45	451.658	451.658	ppb	7.571	6902	40	1129.1	80	120	>+/-20%
K	39	2	45	-3.291	-3.291	ppb	-330.736	7292	40	-8.2	80	120	>+/-20%
Ca	44	2	45	250.192	250.192	ppb	3.819	500	40	625.5	80	120	>+/-20%
V	51	2	72	42.616	42.616	ppb	1.076	34948	40	106.5	80	120	
Cr	52	2	72	43.142	43.142	ppb	2.797	46907	40	107.9	80	120	
Mn	55	2	72	46.026	46.026	ppb	3.470	18287	40	115.1	80	120	
Fe	57	2	72	438.479	438.479	ppb	2.572	9150	40	1096.2	80	120	>+/-20%
Co	59	2	72	43.331	43.331	ppb	1.658	92295	40	108.3	80	120	
Ni	60	2	72	43.628	43.628	ppb	1.740	27110	40	109.1	80	120	
Cu	63	2	72	42.912	42.912	ppb	1.328	78696	40	107.3	80	120	
Zn	66	2	72	45.720	45.720	ppb	2.425	9443	40	114.3	80	120	
As	75	2	72	38.588	38.588	ppb	3.937	4734	40	96.5	80	120	
Se	78	1	72	38.887	38.887	ppb	2.983	8724	40	97.2	80	120	
Nb	93	2	72	1.463	1.463	ppb	16.563	5128	40	3.7	80	120	>+/-20%
Mo	95	2	115	39.343	39.343	ppb	1.588	34528	40	98.4	80	120	
Pd	105	2	115	0.006	0.006	ppb	412.905	60	40	0.0	80	120	>+/-20%
Ag	107	2	115	44.114	44.114	ppb	0.526	142699	40	110.3	80	120	
Cd	111	2	115	43.226	43.226	ppb	0.948	15438	40	108.1	80	120	
Sn	120	2	115	42.629	42.629	ppb	0.397	39451	40	106.6	80	120	
Sb	121	2	115	41.457	41.457	ppb	2.312	31051	40	103.6	80	120	
Ba	137	2	115	41.817	41.817	ppb	4.637	10674	40	104.5	80	120	
W	182	2	165	15.179	15.179	ppb	1.227	85768	40	37.9	80	120	>+/-20%
Pt	195	2	165	0.008	0.008	ppb	86.505	80	40	0.0	80	120	>+/-20%
Tl	205	2	165	42.617	42.617	ppb	1.578	416630	40	106.5	80	120	
Pb	208	2	165	43.070	43.070	ppb	0.798	542290	40	107.7	80	120	
Th	232	2	165	42.206	42.206	ppb	2.213	622402	40	105.5	80	120	
U	238	2	165	38.902	38.902	ppb	1.297	700971	40	97.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491023	0.86	493663	99.47	60	120	
Sc (IS)	45	1	HMI H2	14216300	0.08	14385099	98.83	60	120	
Sc (IS)	45	2	HMI He	568186	0.22	557211	101.97	60	120	
Sc (IS)	45	3	No Gas	42765054	0.43	42934053	99.61	60	120	
Ge Internal Standard	72	1	HMI H2	8652537	0.58	8983404	96.32	60	120	
Ge Internal Standard	72	2	HMI He	806432	0.23	803089	100.42	60	120	
In Internal Standard	115	2	HMI He	2799477	0.29	2728997	102.58	60	120	
Ho-165	165	2	HMI He	18119106	0.90	17228414	105.17	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcsd 280-429450/3-a
Data File Name	096_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:16:37-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429450 6020A DOD5
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	83.362	83.362	ppb	8.482	74225	400	20.8	80	120	>+/-20%
Li	7	2	45	66.578	66.578	ppb	66.079	4781	400	16.6	80	120	>+/-20%
Li	7	3	45	99.169	99.169	ppb	13.529	3229100	400	24.8	80	120	>+/-20%
Be	9	1	6	40.261	40.261	ppb	5.078	6562	40	100.7	80	120	
Na	23	2	45	-878.637	-878.637	ppb	-0.837	51814	40	-2196.6	80	120	>+/-20%
Mg	24	2	45	-28.412	-28.412	ppb	-6.104	520	40	-71.0	80	120	>+/-20%
Al	27	2	45	427.828	427.828	ppb	4.486	6538	40	1069.6	80	120	>+/-20%
K	39	2	45	-31.317	-31.317	ppb	-30.589	6445	40	-78.3	80	120	>+/-20%
Ca	44	2	45	321.364	321.364	ppb	8.294	633	40	803.4	80	120	>+/-20%
V	51	2	72	40.932	40.932	ppb	2.503	33542	40	102.3	80	120	
Cr	52	2	72	42.479	42.479	ppb	0.299	46105	40	106.2	80	120	
Mn	55	2	72	45.474	45.474	ppb	2.746	18037	40	113.7	80	120	
Fe	57	2	72	443.547	443.547	ppb	2.409	9236	40	1108.9	80	120	>+/-20%
Co	59	2	72	42.456	42.456	ppb	1.554	90267	40	106.1	80	120	
Ni	60	2	72	42.276	42.276	ppb	3.592	26229	40	105.7	80	120	
Cu	63	2	72	42.170	42.170	ppb	1.274	77219	40	105.4	80	120	
Zn	66	2	72	44.777	44.777	ppb	2.262	9240	40	111.9	80	120	
As	75	2	72	37.384	37.384	ppb	3.893	4578	40	93.5	80	120	
Se	78	1	72	38.452	38.452	ppb	3.091	8630	40	96.1	80	120	
Nb	93	2	72	0.849	0.849	ppb	14.694	3267	40	2.1	80	120	>+/-20%
Mo	95	2	115	38.969	38.969	ppb	2.152	34264	40	97.4	80	120	
Pd	105	2	115	0.045	0.045	ppb	115.820	120	40	0.1	80	120	>+/-20%
Ag	107	2	115	43.733	43.733	ppb	1.836	141713	40	109.3	80	120	
Cd	111	2	115	42.295	42.295	ppb	2.566	15131	40	105.7	80	120	
Sn	120	2	115	41.769	41.769	ppb	3.719	38725	40	104.4	80	120	
Sb	121	2	115	40.963	40.963	ppb	1.615	30734	40	102.4	80	120	
Ba	137	2	115	41.475	41.475	ppb	4.022	10607	40	103.7	80	120	
W	182	2	165	14.906	14.906	ppb	1.041	84343	40	37.3	80	120	>+/-20%
Pt	195	2	165	0.028	0.028	ppb	61.768	177	40	0.1	80	120	>+/-20%
Tl	205	2	165	42.090	42.090	ppb	0.624	412031	40	105.2	80	120	
Pb	208	2	165	42.620	42.620	ppb	0.832	537321	40	106.6	80	120	
Th	232	2	165	41.830	41.830	ppb	0.418	617706	40	104.6	80	120	
U	238	2	165	38.571	38.571	ppb	0.386	695943	40	96.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	488302	1.01	493663	98.91	60	120	
Sc (IS)	45	1	HMI H2	14125134	0.53	14385099	98.19	60	120	
Sc (IS)	45	2	HMI He	568030	0.13	557211	101.94	60	120	
Sc (IS)	45	3	No Gas	42850198	0.73	42934053	99.80	60	120	
Ge Internal Standard	72	1	HMI H2	8657745	0.87	8983404	96.37	60	120	
Ge Internal Standard	72	2	HMI He	804931	0.40	803089	100.23	60	120	
In Internal Standard	115	2	HMI He	2804631	1.49	2728997	102.77	60	120	
Ho-165	165	2	HMI He	18141971	0.28	17228414	105.30	60	120	

Sample Report

Sample Table

Sample Name	280-114182-a-2-b
Data File Name	097SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:20:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.441	ppb	28.441	18.05	63528	500000	
Li	7	2	45	30.908	ppb	30.908	49.30	4274	500000	
Li	7	3	45	60.768	ppb	60.768	4.50	2838005	50000	
Be	9	1	6	0.087	ppb	0.087	127.27	20	2000	
B	11	1	6	61.419	ppb	61.419	0.38	11821	2000	
Na	23	1	45	29756.656	ppb	29756.656	0.33	39400924	2000	>LDR
Na	23	2	45	28958.947	ppb	28958.947	0.77	3996332	400000	
Mg	24	2	45	16244.881	ppb	16244.881	0.55	991299	400000	
Al	27	2	45	1500.229	ppb	1500.229	2.40	22139	400000	
K	39	1	45	7435.511	ppb	7435.511	0.04	10571467	400000	
K	39	2	45	8224.082	ppb	8224.082	1.40	248112	400000	
Ca	40	1	45	83019.317	ppb	83019.317	0.18	158786281	400000	
Ca	44	2	45	85785.024	ppb	85785.024	0.66	156359	400000	
Ti	47	2	45	11376.112	ppb	11376.112	8.76	377	4000	
V	51	2	72	11.327	ppb	11.327	2.82	9740	2000	
Cr	52	2	72	3.818	ppb	3.818	4.70	4184	5000	
Mn	55	2	72	79.720	ppb	79.720	2.57	30736	10000	
Fe	57	2	72	1094.357	ppb	1094.357	2.68	22089	400000	
Co	59	2	72	0.975	ppb	0.975	4.81	2034	2000	
Ni	60	2	72	1.969	ppb	1.969	8.24	1377	5000	
Cu	63	2	72	4.101	ppb	4.101	4.85	8643	5000	
Zn	66	2	72	13.982	ppb	13.982	8.44	3097	5000	
As	75	2	72	9.097	ppb	9.097	10.29	1094	2000	
Se	78	1	72	10.927	ppb	10.927	5.84	2387	2000	
Sr	88	2	72	1048.457	ppb	1048.457	0.12	416841	4000	
Zr	90	2	72	1159.908	ppb	1159.908	1.43	7235	1000	
Nb	93	2	72	0.843	ppb	0.843	11.47	3167	200	
Mo	95	2	115	5.304	ppb	5.304	3.20	4533	2000	
Pd	105	2	115	0.005	ppb	0.005	701.50	57	100	
Ag	107	2	115	0.027	ppb	0.027	35.16	97	100	
Cd	111	2	115	0.116	ppb	0.116	50.22	40	2000	
Sn	120	2	115	0.393	ppb	0.393	24.04	490	2000	
Sb	121	2	115	0.783	ppb	0.783	9.09	590	1000	
Ba	137	2	115	96.294	ppb	96.294	4.73	23753	5000	
W	182	2	165	0.129	ppb	0.129	15.92	1380	100	
Pt	195	2	165	0.029	ppb	0.029	33.64	177	100	
Tl	205	2	165	0.046	ppb	0.046	5.41	610	2000	
Pb	208	2	165	1.407	ppb	1.407	0.36	18259	5000	
Th	232	2	165	1.267	ppb	1.267	1.88	18616	2000	
U	238	2	165	55.360	ppb	55.360	0.66	975936	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	472412	0.70	493663	95.70	60	120	
Sc (IS)	45	1	HMI H2	13760646	0.42	14385099	95.66	60	120	
Sc (IS)	45	2	HMI He	551865	0.81	557211	99.04	60	120	
Sc (IS)	45	3	No Gas	41062953	0.12	42934053	95.64	60	120	
Ge Internal Standard	72	1	HMI H2	8398628	0.49	8983404	93.49	60	120	
Ge Internal Standard	72	2	HMI He	784630	0.58	803089	97.70	60	120	
In Internal Standard	115	2	HMI He	2706877	0.57	2728997	99.19	60	120	
Ho-165	165	2	HMI He	17727042	0.96	17228414	102.89	60	120	

Sample Report

Sample Table

Sample Name	280-114182-a-3-b
Data File Name	098SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:24:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	51.439	ppb	51.439	14.87	64696	500000	
Li	7	2	45	41.678	ppb	41.678	30.22	4344	500000	
Li	7	3	45	70.288	ppb	70.288	22.94	2813838	50000	
Be	9	1	6	-0.019	ppb	-0.019	-203.86	3	2000	
B	11	1	6	54.085	ppb	54.085	0.28	10080	2000	
Na	23	1	45	41214.975	ppb	41214.975	0.71	51959436	2000	>LDR
Na	23	2	45	39630.018	ppb	39630.018	1.31	5355548	400000	
Mg	24	2	45	43976.639	ppb	43976.639	0.16	2654007	400000	
Al	27	2	45	31.845	ppb	31.845	4.03	517	400000	
K	39	1	45	8827.170	ppb	8827.170	1.07	11730161	400000	
K	39	2	45	9440.748	ppb	9440.748	1.08	281006	400000	
Ca	40	1	45	236114.339	ppb	236114.339	1.04	434605354	400000	
Ca	44	2	45	240637.296	ppb	240637.296	0.25	434341	400000	
Ti	47	2	45	915.034	ppb	915.034	33.54	30	4000	
V	51	2	72	1.310	ppb	1.310	17.38	1924	2000	
Cr	52	2	72	1.413	ppb	1.413	10.17	1607	5000	
Mn	55	2	72	34.263	ppb	34.263	0.40	12939	10000	
Fe	57	2	72	52.420	ppb	52.420	6.59	1110	400000	
Co	59	2	72	0.424	ppb	0.424	11.33	870	2000	
Ni	60	2	72	0.848	ppb	0.848	11.90	687	5000	
Cu	63	2	72	5.162	ppb	5.162	6.92	10234	5000	
Zn	66	2	72	14.955	ppb	14.955	9.30	3200	5000	
As	75	2	72	2.702	ppb	2.702	10.58	324	2000	
Se	78	1	72	81.334	ppb	81.334	0.33	16856	2000	
Sr	88	2	72	3059.049	ppb	3059.049	0.81	1185272	4000	
Zr	90	2	72	209.692	ppb	209.692	6.00	1327	1000	
Nb	93	2	72	0.359	ppb	0.359	11.22	1704	200	
Mo	95	2	115	3.814	ppb	3.814	8.68	3234	2000	
Pd	105	2	115	0.035	ppb	0.035	59.11	100	100	
Ag	107	2	115	0.004	ppb	0.004	171.27	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.181	ppb	0.181	3.16	297	2000	
Sb	121	2	115	0.257	ppb	0.257	23.32	207	1000	
Ba	137	2	115	106.778	ppb	106.778	2.27	26040	5000	
W	182	2	165	0.085	ppb	0.085	55.57	1123	100	
Pt	195	2	165	0.031	ppb	0.031	27.80	187	100	
Tl	205	2	165	0.025	ppb	0.025	20.85	403	2000	
Pb	208	2	165	0.045	ppb	0.045	50.64	1480	5000	
Th	232	2	165	0.095	ppb	0.095	10.34	1680	2000	
U	238	2	165	185.133	ppb	185.133	1.38	3206609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	454071	0.32	493663	91.98	60	120	
Sc (IS)	45	1	HMI H2	13247348	0.72	14385099	92.09	60	120	
Sc (IS)	45	2	HMI He	546551	0.40	557211	98.09	60	120	
Sc (IS)	45	3	No Gas	39823750	0.48	42934053	92.76	60	120	
Ge Internal Standard	72	1	HMI H2	7997778	0.27	8983404	89.03	60	120	
Ge Internal Standard	72	2	HMI He	764788	0.20	803089	95.23	60	120	
In Internal Standard	115	2	HMI He	2676221	0.73	2728997	98.07	60	120	
Ho-165	165	2	HMI He	17419260	1.18	17228414	101.11	60	120	

Sample Report

Sample Table

Sample Name	280-114182-p-1-b
Data File Name	099SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:27:59-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	43.034	ppb	43.034	9.80	63769	500000	
Li	7	2	45	37.605	ppb	37.605	40.67	4274	500000	
Li	7	3	45	48.221	ppb	48.221	6.85	2682662	50000	
Be	9	1	6	-0.018	ppb	-0.018	-207.87	3	2000	
B	11	1	6	128.801	ppb	128.801	3.69	23240	2000	
Na	23	1	45	36937.927	ppb	36937.927	0.63	46992084	2000	>LDR
Na	23	2	45	35804.916	ppb	35804.916	1.70	4823909	400000	
Mg	24	2	45	22037.963	ppb	22037.963	2.92	1322438	400000	
Al	27	2	45	45.642	ppb	45.642	12.55	713	400000	
K	39	1	45	6050.530	ppb	6050.530	0.43	8680574	400000	
K	39	2	45	6835.765	ppb	6835.765	0.73	204132	400000	
Ca	40	1	45	107676.843	ppb	107676.843	0.78	199379677	400000	
Ca	44	2	45	109432.704	ppb	109432.704	0.96	196271	400000	
Ti	47	2	45	409.908	ppb	409.908	44.12	13	4000	
V	51	2	72	10.535	ppb	10.535	4.15	8949	2000	
Cr	52	2	72	2.787	ppb	2.787	5.40	3037	5000	
Mn	55	2	72	27.548	ppb	27.548	3.78	10487	10000	
Fe	57	2	72	54.957	ppb	54.957	7.38	1167	400000	
Co	59	2	72	0.051	ppb	0.051	49.37	117	2000	
Ni	60	2	72	0.666	ppb	0.666	23.35	583	5000	
Cu	63	2	72	2.028	ppb	2.028	5.63	4918	5000	
Zn	66	2	72	7.091	ppb	7.091	5.25	1740	5000	
As	75	2	72	13.398	ppb	13.398	2.11	1575	2000	
Se	78	1	72	53.212	ppb	53.212	2.56	11225	2000	
Sr	88	2	72	1301.806	ppb	1301.806	0.57	507516	4000	
Zr	90	2	72	119.245	ppb	119.245	12.75	787	1000	
Nb	93	2	72	0.296	ppb	0.296	13.69	1533	200	
Mo	95	2	115	4.587	ppb	4.587	1.30	3887	2000	
Pd	105	2	115	0.007	ppb	0.007	335.58	60	100	
Ag	107	2	115	0.012	ppb	0.012	47.35	50	100	
Cd	111	2	115	0.029	ppb	0.029	173.21	10	2000	
Sn	120	2	115	0.120	ppb	0.120	38.76	243	2000	
Sb	121	2	115	0.341	ppb	0.341	31.72	267	1000	
Ba	137	2	115	31.098	ppb	31.098	1.31	7605	5000	
W	182	2	165	0.066	ppb	0.066	34.21	1020	100	
Pt	195	2	165	0.038	ppb	0.038	19.61	220	100	
Tl	205	2	165	0.004	ppb	0.004	56.83	203	2000	
Pb	208	2	165	0.183	ppb	0.183	7.20	3157	5000	
Th	232	2	165	0.089	ppb	0.089	5.15	1603	2000	
U	238	2	165	60.922	ppb	60.922	0.71	1058323	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	456095	0.99	493663	92.39	60	120	
Sc (IS)	45	1	HMI H2	13323385	0.17	14385099	92.62	60	120	
Sc (IS)	45	2	HMI He	543067	0.73	557211	97.46	60	120	
Sc (IS)	45	3	No Gas	39998730	0.60	42934053	93.16	60	120	
Ge Internal Standard	72	1	HMI H2	8138884	0.47	8983404	90.60	60	120	
Ge Internal Standard	72	2	HMI He	769429	0.13	803089	95.81	60	120	
In Internal Standard	115	2	HMI He	2680886	1.71	2728997	98.24	60	120	
Ho-165	165	2	HMI He	17468421	0.57	17228414	101.39	60	120	

Sample Table

Sample Name	280-114182-p-1-bSD@5
Data File Name	100SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:31:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.320	ppb	12.320	27.22	61612	500000	
Li	7	2	45	1.678	ppb	1.678	1458.77	4034	500000	
Li	7	3	45	34.092	ppb	34.092	24.67	2736788	50000	
Be	9	1	6	0.042	ppb	0.042	171.11	13	2000	
B	11	1	6	26.726	ppb	26.726	4.77	5671	2000	
Na	23	1	45	6909.200	ppb	6909.200	0.99	10452486	2000	
Na	23	2	45	6363.364	ppb	6363.364	0.27	1024160	400000	
Mg	24	2	45	4128.111	ppb	4128.111	0.68	257614	400000	
Al	27	2	45	11.348	ppb	11.348	37.54	223	400000	
K	39	1	45	1274.367	ppb	1274.367	0.98	3464339	400000	
K	39	2	45	1345.830	ppb	1345.830	0.99	47348	400000	
Ca	40	1	45	21745.711	ppb	21745.711	1.08	42094459	400000	
Ca	44	2	45	22062.083	ppb	22062.083	1.40	40874	400000	
Ti	47	2	45	98.616	ppb	98.616	173.21	3	4000	
V	51	2	72	1.852	ppb	1.852	8.37	2434	2000	
Cr	52	2	72	0.645	ppb	0.645	1.33	853	5000	
Mn	55	2	72	5.257	ppb	5.257	12.89	2167	10000	
Fe	57	2	72	7.512	ppb	7.512	54.62	240	400000	
Co	59	2	72	0.014	ppb	0.014	49.86	43	2000	
Ni	60	2	72	0.073	ppb	0.073	90.19	243	5000	
Cu	63	2	72	0.421	ppb	0.421	13.50	2240	5000	
Zn	66	2	72	7.470	ppb	7.470	21.97	1877	5000	
As	75	2	72	2.706	ppb	2.706	8.22	339	2000	
Se	78	1	72	11.036	ppb	11.036	3.72	2459	2000	
Sr	88	2	72	255.727	ppb	255.727	1.61	103441	4000	
Zr	90	2	72	28.195	ppb	28.195	42.63	243	1000	
Nb	93	2	72	0.037	ppb	0.037	145.30	817	200	
Mo	95	2	115	0.765	ppb	0.765	20.42	697	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-611.18	47	100	
Ag	107	2	115	0.007	ppb	0.007	108.64	37	100	
Cd	111	2	115	0.028	ppb	0.028	0.41	10	2000	
Sn	120	2	115	0.149	ppb	0.149	31.27	277	2000	
Sb	121	2	115	0.289	ppb	0.289	32.58	237	1000	
Ba	137	2	115	6.059	ppb	6.059	9.73	1530	5000	
W	182	2	165	0.015	ppb	0.015	73.23	757	100	
Pt	195	2	165	0.024	ppb	0.024	11.57	157	100	
Tl	205	2	165	-0.001	ppb	-0.001	-632.23	157	2000	
Pb	208	2	165	0.049	ppb	0.049	32.64	1557	5000	
Th	232	2	165	0.016	ppb	0.016	47.80	573	2000	
U	238	2	165	12.075	ppb	12.075	0.82	213045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486101	0.42	493663	98.47	60	120	
Sc (IS)	45	1	HMI H2	13909707	0.62	14385099	96.70	60	120	
Sc (IS)	45	2	HMI He	560654	0.51	557211	100.62	60	120	
Sc (IS)	45	3	No Gas	42254973	0.45	42934053	98.42	60	120	
Ge Internal Standard	72	1	HMI H2	8568465	0.48	8983404	95.38	60	120	
Ge Internal Standard	72	2	HMI He	797759	0.61	803089	99.34	60	120	
In Internal Standard	115	2	HMI He	2754457	0.40	2728997	100.93	60	120	
Ho-165	165	2	HMI He	17736211	1.18	17228414	102.95	60	120	

Sample Report

Sample Table

Sample Name	280-114182-p-1-c ms
Data File Name	101SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:35:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	127.415	ppb	127.415	10.19	77020	500000	
Li	7	2	45	121.834	ppb	121.834	8.22	5128	500000	
Li	7	3	45	141.273	ppb	141.273	4.61	3283544	50000	
Be	9	1	6	41.026	ppb	41.026	1.08	6251	2000	
B	11	1	6	160.471	ppb	160.471	2.59	28842	2000	
Na	23	1	45	36508.364	ppb	36508.364	1.35	46571453	2000	>LDR
Na	23	2	45	35216.069	ppb	35216.069	0.48	4738683	400000	
Mg	24	2	45	21579.493	ppb	21579.493	0.91	1292843	400000	
Al	27	2	45	424.486	ppb	424.486	4.07	6191	400000	
K	39	1	45	5936.317	ppb	5936.317	0.92	8572527	400000	
K	39	2	45	6567.645	ppb	6567.645	1.46	196053	400000	
Ca	40	1	45	105724.933	ppb	105724.933	1.04	196226590	400000	
Ca	44	2	45	107380.926	ppb	107380.926	0.47	192263	400000	
Ti	47	2	45	1435.330	ppb	1435.330	65.51	47	4000	
V	51	2	72	52.235	ppb	52.235	3.57	40601	2000	
Cr	52	2	72	42.804	ppb	42.804	3.95	44344	5000	
Mn	55	2	72	64.671	ppb	64.671	3.20	24439	10000	
Fe	57	2	72	456.053	ppb	456.053	5.42	9063	400000	
Co	59	2	72	39.731	ppb	39.731	0.64	80631	2000	
Ni	60	2	72	40.213	ppb	40.213	0.91	23822	5000	
Cu	63	2	72	41.425	ppb	41.425	0.48	72430	5000	
Zn	66	2	72	47.294	ppb	47.294	3.64	9293	5000	
As	75	2	72	51.393	ppb	51.393	0.99	6004	2000	
Se	78	1	72	90.834	ppb	90.834	0.73	19109	2000	
Sr	88	2	72	1311.429	ppb	1311.429	0.73	510540	4000	
Zr	90	2	72	7520.557	ppb	7520.557	1.17	45586	1000	>LDR
Nb	93	2	72	0.105	ppb	0.105	29.37	980	200	
Mo	95	2	115	42.695	ppb	42.695	1.14	36095	2000	
Pd	105	2	115	-0.022	ppb	-0.022	-35.47	17	100	
Ag	107	2	115	40.645	ppb	40.645	1.98	126651	100	
Cd	111	2	115	40.420	ppb	40.420	3.24	13907	2000	
Sn	120	2	115	40.220	ppb	40.220	0.48	35868	2000	
Sb	121	2	115	41.837	ppb	41.837	3.59	30183	1000	
Ba	137	2	115	69.054	ppb	69.054	4.11	16973	5000	
W	182	2	165	14.750	ppb	14.750	3.43	80275	100	
Pt	195	2	165	0.014	ppb	0.014	50.49	107	100	
Tl	205	2	165	40.456	ppb	40.456	1.77	380901	2000	
Pb	208	2	165	40.652	ppb	40.652	0.94	492990	5000	
Th	232	2	165	40.268	ppb	40.268	1.16	571950	2000	
U	238	2	165	106.384	ppb	106.384	1.45	1845985	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	456689	0.50	493663	92.51	60	120	
Sc (IS)	45	1	HMI H2	13355145	0.68	14385099	92.84	60	120	
Sc (IS)	45	2	HMI He	542116	0.44	557211	97.29	60	120	
Sc (IS)	45	3	No Gas	39932283	0.34	42934053	93.01	60	120	
Ge Internal Standard	72	1	HMI H2	8119058	0.31	8983404	90.38	60	120	
Ge Internal Standard	72	2	HMI He	768337	0.09	803089	95.67	60	120	
In Internal Standard	115	2	HMI He	2697067	1.11	2728997	98.83	60	120	
Ho-165	165	2	HMI He	17450423	0.95	17228414	101.29	60	120	

Sample Report

Sample Table

Sample Name	280-114182-p-1-d msd
Data File Name	102SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:39:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	125.680	ppb	125.680	4.98	75848	500000	
Li	7	2	45	101.656	ppb	101.656	7.59	4878	500000	
Li	7	3	45	150.256	ppb	150.256	4.21	3275141	50000	
Be	9	1	6	43.797	ppb	43.797	6.31	6572	2000	
B	11	1	6	161.079	ppb	161.079	0.60	28515	2000	
Na	23	1	45	36662.080	ppb	36662.080	0.77	46215874	2000	>LDR
Na	23	2	45	35153.444	ppb	35153.444	0.71	4688144	400000	
Mg	24	2	45	21899.810	ppb	21899.810	1.47	1300249	400000	
Al	27	2	45	495.447	ppb	495.447	6.09	7152	400000	
K	39	1	45	6020.377	ppb	6020.377	0.33	8565932	400000	
K	39	2	45	6753.740	ppb	6753.740	0.77	199598	400000	
Ca	40	1	45	107325.815	ppb	107325.815	0.58	196870350	400000	
Ca	44	2	45	110006.548	ppb	110006.548	0.61	195203	400000	
Ti	47	2	45	1448.458	ppb	1448.458	33.04	47	4000	
V	51	2	72	53.185	ppb	53.185	3.16	41189	2000	
Cr	52	2	72	45.775	ppb	45.775	0.63	47262	5000	
Mn	55	2	72	69.194	ppb	69.194	4.33	26061	10000	
Fe	57	2	72	494.063	ppb	494.063	3.11	9780	400000	
Co	59	2	72	41.374	ppb	41.374	1.80	83696	2000	
Ni	60	2	72	41.867	ppb	41.867	2.70	24716	5000	
Cu	63	2	72	42.232	ppb	42.232	1.12	73578	5000	
Zn	66	2	72	46.803	ppb	46.803	3.65	9173	5000	
As	75	2	72	52.015	ppb	52.015	3.01	6057	2000	
Se	78	1	72	90.352	ppb	90.352	1.65	18890	2000	
Sr	88	2	72	1337.627	ppb	1337.627	0.43	519095	4000	
Zr	90	2	72	8433.693	ppb	8433.693	0.38	50952	1000	>LDR
Nb	93	2	72	0.127	ppb	0.127	26.31	1040	200	
Mo	95	2	115	43.645	ppb	43.645	2.18	36513	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-95.18	37	100	
Ag	107	2	115	42.820	ppb	42.820	1.67	132051	100	
Cd	111	2	115	43.113	ppb	43.113	1.59	14681	2000	
Sn	120	2	115	41.933	ppb	41.933	0.65	37001	2000	
Sb	121	2	115	42.848	ppb	42.848	2.32	30597	1000	
Ba	137	2	115	72.577	ppb	72.577	1.10	17657	5000	
W	182	2	165	15.130	ppb	15.130	1.32	82644	100	
Pt	195	2	165	0.010	ppb	0.010	90.01	83	100	
Tl	205	2	165	41.583	ppb	41.583	1.23	392988	2000	
Pb	208	2	165	41.680	ppb	41.680	0.74	507321	5000	
Th	232	2	165	42.498	ppb	42.498	0.93	605850	2000	
U	238	2	165	107.695	ppb	107.695	0.83	1875735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	449819	0.42	493663	91.12	60	120	
Sc (IS)	45	1	HMI H2	13198764	0.40	14385099	91.75	60	120	
Sc (IS)	45	2	HMI He	537260	0.50	557211	96.42	60	120	
Sc (IS)	45	3	No Gas	39135470	0.39	42934053	91.15	60	120	
Ge Internal Standard	72	1	HMI H2	8068848	0.66	8983404	89.82	60	120	
Ge Internal Standard	72	2	HMI He	765921	0.58	803089	95.37	60	120	
In Internal Standard	115	2	HMI He	2669095	0.61	2728997	97.80	60	120	
Ho-165	165	2	HMI He	17514672	0.51	17228414	101.66	60	120	

Sample Report

Sample Table

Sample Name	280-114182-p-1-bPDS
Data File Name	103SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:43:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	38.563	ppb	38.563	13.37	62495	500000	
Li	7	2	45	42.303	ppb	42.303	36.51	4271	500000	
Li	7	3	45	63.524	ppb	63.524	10.13	2738427	50000	
Be	9	1	6	202.624	ppb	202.624	2.80	30428	2000	
B	11	1	6	125.780	ppb	125.780	0.92	22435	2000	
Na	23	1	45	36276.314	ppb	36276.314	2.46	45741399	2000	>LDR
Na	23	2	45	34922.415	ppb	34922.415	0.32	4652000	400000	
Mg	24	2	45	21435.406	ppb	21435.406	1.36	1270947	400000	
Al	27	2	45	2192.592	ppb	2192.592	3.01	31434	400000	
K	39	1	45	5943.985	ppb	5943.985	1.38	8480791	400000	
K	39	2	45	6677.570	ppb	6677.570	0.99	197153	400000	
Ca	40	1	45	104853.565	ppb	104853.565	1.26	192334270	400000	
Ca	44	2	45	106740.771	ppb	106740.771	0.82	189139	400000	
Ti	47	2	45	2588.861	ppb	2588.861	85.39	83	4000	
V	51	2	72	212.977	ppb	212.977	0.99	162155	2000	
Cr	52	2	72	205.601	ppb	205.601	0.81	211749	5000	
Mn	55	2	72	232.591	ppb	232.591	1.05	87347	10000	
Fe	57	2	72	2103.495	ppb	2103.495	2.32	41373	400000	
Co	59	2	72	198.420	ppb	198.420	0.58	401387	2000	
Ni	60	2	72	196.238	ppb	196.238	1.45	115147	5000	
Cu	63	2	72	196.930	ppb	196.930	0.37	337894	5000	
Zn	66	2	72	209.318	ppb	209.318	2.19	39619	5000	
As	75	2	72	196.444	ppb	196.444	0.65	22848	2000	
Se	78	1	72	236.343	ppb	236.343	1.95	49241	2000	
Sr	88	2	72	1263.243	ppb	1263.243	0.93	490266	4000	
Zr	90	2	72	41378.696	ppb	41378.696	0.94	249760	1000	>LDR
Nb	93	2	72	2.755	ppb	2.755	6.23	8573	200	
Mo	95	2	115	203.228	ppb	203.228	1.24	170604	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-265.05	43	100	
Ag	107	2	115	47.893	ppb	47.893	1.34	148316	100	
Cd	111	2	115	203.184	ppb	203.184	1.14	69473	2000	
Sn	120	2	115	207.702	ppb	207.702	1.62	183490	2000	
Sb	121	2	115	200.636	ppb	200.636	1.86	143782	1000	
Ba	137	2	115	240.380	ppb	240.380	1.58	58699	5000	
W	182	2	165	204.529	ppb	204.529	0.58	1097172	100	
Pt	195	2	165	0.058	ppb	0.058	22.67	313	100	
Tl	205	2	165	216.419	ppb	216.419	1.37	2023100	2000	
Pb	208	2	165	198.927	ppb	198.927	1.01	2392272	5000	
Th	232	2	165	15.172	ppb	15.172	1.22	214224	2000	
U	238	2	165	261.890	ppb	261.890	0.32	4513496	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	450483	0.73	493663	91.25	60	120	
Sc (IS)	45	1	HMI H2	13199446	0.93	14385099	91.76	60	120	
Sc (IS)	45	2	HMI He	536518	0.45	557211	96.29	60	120	
Sc (IS)	45	3	No Gas	39367084	0.29	42934053	91.69	60	120	
Ge Internal Standard	72	1	HMI H2	8043772	0.36	8983404	89.54	60	120	
Ge Internal Standard	72	2	HMI He	765978	0.54	803089	95.38	60	120	
In Internal Standard	115	2	HMI He	2680270	0.61	2728997	98.21	60	120	
Ho-165	165	2	HMI He	17331165	0.95	17228414	100.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	104_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:46:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	519.137	ppb	2.489	143943	500	103.8	90	110	
Li	7	2	45	526.360	ppb	3.158	9476	500	105.3	90	110	
Li	7	3	45	560.705	ppb	2.951	6373152	500	112.1	90	110	>+\-10%
Be	9	1	6	51.215	ppb	3.786	8299	50	102.4	90	110	
B	11	1	6	47.607	ppb	6.309	9573	50	95.2	90	110	
Na	23	1	45	4451.036	ppb	0.995	7314673	5000	89.0	90	110	>+\-10%
Na	23	2	45	4117.937	ppb	1.133	714815	5000	82.4	90	110	>+\-10%
Mg	24	2	45	5077.167	ppb	0.199	312974	5000	101.5	90	110	
Al	27	2	45	5063.384	ppb	0.435	74987	5000	101.3	90	110	
K	39	1	45	4900.194	ppb	0.326	7737944	5000	98.0	90	110	
K	39	2	45	5017.904	ppb	1.397	154969	5000	100.4	90	110	
Ca	40	1	45	5058.418	ppb	1.508	9877710	5000	101.2	90	110	
Ca	44	2	45	5025.570	ppb	4.124	9236	5000	100.5	90	110	
Ti	47	2	45	299.697	ppb	99.610	10	50	599.4	90	110	>+\-10%
V	51	2	72	49.024	ppb	1.882	39384	50	98.0	90	110	
Cr	52	2	72	49.060	ppb	0.912	52430	50	98.1	90	110	
Mn	55	2	72	48.161	ppb	7.008	18811	50	96.3	90	110	
Fe	57	2	72	4967.345	ppb	2.031	101033	5000	99.3	90	110	
Co	59	2	72	49.443	ppb	1.472	103551	50	98.9	90	110	
Ni	60	2	72	49.536	ppb	2.779	30239	50	99.1	90	110	
Cu	63	2	72	48.864	ppb	1.295	87909	50	97.7	90	110	
Zn	66	2	72	49.612	ppb	2.432	10040	50	99.2	90	110	
As	75	2	72	48.003	ppb	1.835	5788	50	96.0	90	110	
Se	78	1	72	49.714	ppb	2.518	10999	50	99.4	90	110	
Sr	88	2	72	49.111	ppb	3.113	19826	50	98.2	90	110	
Zr	90	2	72	91.394	ppb	26.322	637	50	182.8	90	110	>+\-10%
Nb	93	2	72	88.812	ppb	0.538	264189	100	88.8	90	110	>+\-10%
Mo	95	2	115	47.596	ppb	3.482	40994	50	95.2	90	110	
Pd	105	2	115	49.700	ppb	2.960	74157	50	99.4	90	110	
Ag	107	2	115	48.707	ppb	1.716	154655	50	97.4	90	110	
Cd	111	2	115	49.247	ppb	3.727	17267	50	98.5	90	110	
Sn	120	2	115	49.723	ppb	1.604	45146	50	99.4	90	110	
Sb	121	2	115	50.732	ppb	1.435	37295	50	101.5	90	110	
Ba	137	2	115	49.249	ppb	1.927	12342	50	98.5	90	110	
W	182	2	165	48.507	ppb	0.411	265573	50	97.0	90	110	
Pt	195	2	165	48.302	ppb	0.600	233509	50	96.6	90	110	
Tl	205	2	165	48.766	ppb	0.770	464505	50	97.5	90	110	
Pb	208	2	165	49.244	ppb	0.574	603976	50	98.5	90	110	
Th	232	2	165	48.482	ppb	0.601	696616	50	97.0	90	110	
U	238	2	165	45.209	ppb	0.179	793729	50	90.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	485717	0.48	493663	98.39	60	120	
Sc (IS)	45	1	HMI H2	13952491	0.56	14385099	96.99	60	120	
Sc (IS)	45	2	HMI He	554716	0.59	557211	99.55	60	120	
Sc (IS)	45	3	No Gas	42336838	0.51	42934053	98.61	60	120	
Ge Internal Standard	72	1	HMI H2	8534503	0.50	8983404	95.00	60	120	
Ge Internal Standard	72	2	HMI He	792950	0.05	803089	98.74	60	120	
In Internal Standard	115	2	HMI He	2748289	1.21	2728997	100.71	60	120	
Ho-165	165	2	HMI He	17653560	0.21	17228414	102.47	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	105_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:50:43-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	18.797	ppb	82.8	2704584	10	>RL
Be	9	1	6	0.080	ppb	199.8	20	0.5	
B	11	1	6	1.106	ppb	59.8	897	0.5	>RL
Na	23	1	45	-942.519	ppb	-0.2	363238	25	
Na	23	2	45	-955.889	ppb	-0.6	40730	25	
Mg	24	2	45	-23.608	ppb	-5.0	810	25	
Al	27	2	45	2.658	ppb	38.4	93	15	
K	39	1	45	-1.723	ppb	-642.2	1997257	50	
K	39	2	45	-16.251	ppb	-36.2	6805	50	
Ca	40	1	45	3.659	ppb	7.8	80916	50	
Ca	44	2	45	8.940	ppb	213.2	47	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.009	ppb	-1194.2	970	1	
Cr	52	2	72	0.019	ppb	55.9	183	1	
Mn	55	2	72	-0.093	ppb	-69.9	77	0.5	
Fe	57	2	72	0.993	ppb	200.5	107	25	
Co	59	2	72	0.027	ppb	30.1	70	0.5	
Ni	60	2	72	-0.005	ppb	-1437.2	197	1	
Cu	63	2	72	-0.097	ppb	-28.1	1323	1	
Zn	66	2	72	1.400	ppb	31.5	697	5	
As	75	2	72	0.070	ppb	128.8	20	1	
Se	78	1	72	0.043	ppb	110.1	20	1	
Sr	88	2	72	-0.049	ppb	-148.9	80	0.5	
Zr	90	2	72	1.100	ppb	510.2	73	1	>RL
Nb	93	2	72	3.297	ppb	8.6	10587	2	>RL
Mo	95	2	115	0.164	ppb	31.0	180	0.5	
Pd	105	2	115	0.035	ppb	93.6	103	1	
Ag	107	2	115	0.014	ppb	56.6	60	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.149	ppb	25.1	280	1	
Sb	121	2	115	1.093	ppb	7.3	837	0.6	>RL
Ba	137	2	115	0.052	ppb	43.3	23	0.5	
W	182	2	165	0.132	ppb	28.5	1410	1	
Pt	195	2	165	0.029	ppb	19.5	180	1	
Tl	205	2	165	0.018	ppb	61.9	343	0.1	
Pb	208	2	165	0.011	ppb	223.4	1097	0.5	
Th	232	2	165	0.078	ppb	21.1	1470	1	
U	238	2	165	0.067	ppb	10.7	1283	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497525	0.48	493663	100.78	60	120	
Sc (IS)	45	1	HMI H2	14111690	0.35	14385099	98.10	60	120	
Sc (IS)	45	2	HMI He	560250	0.32	557211	100.55	60	120	
Sc (IS)	45	3	No Gas	43437683	1.17	42934053	101.17	60	120	
Ge Internal Standard	72	1	HMI H2	8685813	0.59	8983404	96.69	60	120	
Ge Internal Standard	72	2	HMI He	800888	0.55	803089	99.73	60	120	
In Internal Standard	115	2	HMI He	2782003	0.65	2728997	101.94	60	120	
Ho-165	165	2	HMI He	17838206	1.17	17228414	103.54	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	106LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:54:31-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	65.055	ppb	11.523	5485778	50	130.1	70	130	>+/-30%
Be	9	1	6	-0.001	ppb	-1112.305	13	1	-0.1	70	130	>+/-30%
Na	23	2	45	-995.979	ppb	-3.204	50061	50	-1992.0	70	130	>+/-30%
Mg	24	2	45	9.770	ppb	155.951	4061	50	19.5	70	130	>+/-30%
Al	27	2	45	5.512	ppb	40.133	193	30	18.4	70	130	>+/-30%
K	39	2	45	-104.953	ppb	-12.497	5908	100	-105.0	70	130	>+/-30%
Ca	44	2	45	164.626	ppb	44.509	473	50	329.3	70	130	>+/-30%
V	51	2	72	-0.416	ppb	-17.717	910	5	-8.3	70	130	>+/-30%
Cr	52	2	72	0.183	ppb	58.596	507	2	9.1	70	130	>+/-30%
Mn	55	2	72	0.147	ppb	58.007	240	1	14.7	70	130	>+/-30%
Fe	57	2	72	4.018	ppb	58.072	237	50	8.0	70	130	>+/-30%
Co	59	2	72	0.167	ppb	48.985	513	1	16.7	70	130	>+/-30%
Ni	60	2	72	0.169	ppb	77.000	427	2	8.5	70	130	>+/-30%
Cu	63	2	72	0.109	ppb	121.834	2370	2	5.4	70	130	>+/-30%
Zn	66	2	72	1.069	ppb	26.885	887	10	10.7	70	130	>+/-30%
As	75	2	72	0.120	ppb	55.221	36	5	2.4	70	130	>+/-30%
Se	78	1	72	0.019	ppb	243.534	21	5	0.4	70	130	>+/-30%
Sr	88	2	72	2.195	ppb	54.565	1387	1	219.5	70	130	>+/-30%
Zr	90	2	72	10.222	ppb	31.130	183	0.5	2044.3	70	130	>+/-30%
Nb	93	2	72	0.826	ppb	40.088	4458	2	41.3	70	130	>+/-30%
Mo	95	2	115	0.206	ppb	82.660	293	2	10.3	70	130	>+/-30%
Pd	105	2	115	0.049	ppb	34.230	170	1	4.9	70	130	>+/-30%
Ag	107	2	115	0.099	ppb	48.418	453	5	2.0	70	130	>+/-30%
Cd	111	2	115	0.214	ppb	53.573	103	1	21.4	70	130	>+/-30%
Sn	120	2	115	0.241	ppb	24.976	493	10	2.4	70	130	>+/-30%
Sb	121	2	115	0.471	ppb	41.248	507	2	23.5	70	130	>+/-30%
Ba	137	2	115	0.114	ppb	103.146	53	1	11.4	70	130	>+/-30%
W	182	2	165	0.137	ppb	46.297	2007	1	13.7	70	130	>+/-30%
Pt	195	2	165	0.031	ppb	67.838	267	1	3.1	70	130	>+/-30%
Tl	205	2	165	0.173	ppb	42.615	2567	1	17.3	70	130	>+/-30%
Pb	208	2	165	0.181	ppb	44.725	4481	1	18.1	70	130	>+/-30%
Th	232	2	165	0.084	ppb	38.322	2177	2	4.2	70	130	>+/-30%
U	238	2	165	0.242	ppb	43.653	6115	1	24.2	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1016792	15.69	493663	205.97	60	120	IS Failed
Sc (IS)	45	1	HMI H2	22119770	18.41	14385099	153.77	60	120	IS Failed
Sc (IS)	45	2	HMI He	793899	2.32	557211	142.48	60	120	IS Failed
Sc (IS)	45	3	No Gas	78642899	7.42	42934053	183.17	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	13598031	18.30	8983404	151.37	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1123484	2.49	803089	139.90	60	120	IS Failed
In Internal Standard	115	2	HMI He	3770801	2.77	2728997	138.18	60	120	IS Failed
Ho-165	165	2	HMI He	24976836	1.72	17228414	144.97	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114182-a-4-b@50
Data File Name	107SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T18:58:19-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.685	ppb	4.685	166.65	61157	500000	
Li	7	2	45	10.318	ppb	10.318	346.31	4137	500000	
Li	7	3	45	31.526	ppb	31.526	10.05	2771815	50000	
Be	9	1	6	-0.041	ppb	-0.041	0.00	0	2000	
B	11	1	6	0.292	ppb	0.292	117.17	743	2000	
Na	23	1	45	403.861	ppb	403.861	5.20	2116153	2000	
Na	23	2	45	260.916	ppb	260.916	8.30	204991	400000	
Mg	24	2	45	704.392	ppb	704.392	1.49	46010	400000	
Al	27	2	45	6.648	ppb	6.648	48.63	153	400000	
K	39	1	45	264.256	ppb	264.256	4.71	2309872	400000	
K	39	2	45	178.802	ppb	178.802	10.87	12659	400000	
Ca	40	1	45	3871.199	ppb	3871.199	0.50	7651323	400000	
Ca	44	2	45	3858.103	ppb	3858.103	2.84	7199	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.031	ppb	-0.031	-309.02	963	2000	
Cr	52	2	72	3.444	ppb	3.444	3.82	3911	5000	
Mn	55	2	72	983.123	ppb	983.123	1.26	389826	10000	
Fe	57	2	72	4.460	ppb	4.460	27.63	180	400000	
Co	59	2	72	0.012	ppb	0.012	64.58	40	2000	
Ni	60	2	72	0.223	ppb	0.223	1.31	340	5000	
Cu	63	2	72	0.034	ppb	0.034	164.09	1573	5000	
Zn	66	2	72	1.701	ppb	1.701	27.51	763	5000	
As	75	2	72	-0.001	ppb	-0.001	-4457.36	11	2000	
Se	78	1	72	0.884	ppb	0.884	14.10	209	2000	
Sr	88	2	72	45.081	ppb	45.081	2.28	18588	4000	
Zr	90	2	72	8.832	ppb	8.832	88.97	123	1000	
Nb	93	2	72	1.162	ppb	1.162	11.67	4234	200	
Mo	95	2	115	0.098	ppb	0.098	63.80	123	2000	
Pd	105	2	115	0.024	ppb	0.024	44.92	87	100	
Ag	107	2	115	0.012	ppb	0.012	82.28	53	100	
Cd	111	2	115	0.047	ppb	0.047	91.22	17	2000	
Sn	120	2	115	0.120	ppb	0.120	62.16	253	2000	
Sb	121	2	115	0.442	ppb	0.442	9.80	353	1000	
Ba	137	2	115	1.600	ppb	1.600	10.98	417	5000	
W	182	2	165	0.034	ppb	0.034	13.38	870	100	
Pt	195	2	165	0.012	ppb	0.012	86.45	97	100	
Tl	205	2	165	-0.001	ppb	-0.001	-678.85	163	2000	
Pb	208	2	165	0.018	ppb	0.018	31.67	1193	5000	
Th	232	2	165	0.050	ppb	0.050	39.16	1067	2000	
U	238	2	165	3.805	ppb	3.805	0.40	67695	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498783	0.62	493663	101.04	60	120	
Sc (IS)	45	1	HMI H2	14089531	0.64	14385099	97.95	60	120	
Sc (IS)	45	2	HMI He	562743	1.01	557211	100.99	60	120	
Sc (IS)	45	3	No Gas	43072764	0.43	42934053	100.32	60	120	
Ge Internal Standard	72	1	HMI H2	8691508	0.05	8983404	96.75	60	120	
Ge Internal Standard	72	2	HMI He	809586	0.53	803089	100.81	60	120	
In Internal Standard	115	2	HMI He	2787591	0.93	2728997	102.15	60	120	
Ho-165	165	2	HMI He	17869545	0.20	17228414	103.72	60	120	

Sample Report

Sample Table

Sample Name	280-114182-a-5-b@50
Data File Name	108SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:02:10-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.648	ppb	2.648	187.86	60839	500000	
Li	7	2	45	-1.050	ppb	-1.050	-500.76	3984	500000	
Li	7	3	45	24.252	ppb	24.252	16.90	2719789	50000	
Be	9	1	6	-0.041	ppb	-0.041	0.00	0	2000	
B	11	1	6	-0.243	ppb	-0.243	-106.85	637	2000	
Na	23	1	45	1157.105	ppb	1157.105	2.60	3097735	2000	
Na	23	2	45	1008.903	ppb	1008.903	1.21	303206	400000	
Mg	24	2	45	1605.525	ppb	1605.525	1.76	101071	400000	
Al	27	2	45	11.191	ppb	11.191	52.12	220	400000	
K	39	1	45	336.783	ppb	336.783	5.42	2396556	400000	
K	39	2	45	197.498	ppb	197.498	8.26	13106	400000	
Ca	40	1	45	8558.924	ppb	8558.924	0.34	16831204	400000	
Ca	44	2	45	8602.012	ppb	8602.012	2.96	15875	400000	
Ti	47	2	45	99.291	ppb	99.291	173.21	3	4000	
V	51	2	72	0.086	ppb	0.086	261.82	1047	2000	
Cr	52	2	72	1.172	ppb	1.172	8.45	1427	5000	
Mn	55	2	72	1638.961	ppb	1638.961	1.43	643879	10000	
Fe	57	2	72	3.573	ppb	3.573	14.10	160	400000	
Co	59	2	72	0.047	ppb	0.047	77.44	113	2000	
Ni	60	2	72	0.120	ppb	0.120	64.15	273	5000	
Cu	63	2	72	0.396	ppb	0.396	12.69	2207	5000	
Zn	66	2	72	3.877	ppb	3.877	3.02	1183	5000	
As	75	2	72	0.032	ppb	0.032	58.23	15	2000	
Se	78	1	72	0.683	ppb	0.683	11.32	164	2000	
Sr	88	2	72	103.687	ppb	103.687	2.81	42233	4000	
Zr	90	2	72	15.848	ppb	15.848	30.82	167	1000	
Nb	93	2	72	0.766	ppb	0.766	17.22	3007	200	
Mo	95	2	115	0.079	ppb	0.079	53.84	107	2000	
Pd	105	2	115	0.026	ppb	0.026	116.30	90	100	
Ag	107	2	115	0.006	ppb	0.006	57.59	33	100	
Cd	111	2	115	0.028	ppb	0.028	173.21	10	2000	
Sn	120	2	115	0.172	ppb	0.172	24.88	300	2000	
Sb	121	2	115	0.393	ppb	0.393	33.73	317	1000	
Ba	137	2	115	1.263	ppb	1.263	21.71	330	5000	
W	182	2	165	0.102	ppb	0.102	2.10	1227	100	
Pt	195	2	165	0.009	ppb	0.009	24.76	80	100	
Tl	205	2	165	0.032	ppb	0.032	7.07	467	2000	
Pb	208	2	165	0.037	ppb	0.037	40.10	1407	5000	
Th	232	2	165	0.047	ppb	0.047	20.16	1010	2000	
U	238	2	165	3.621	ppb	3.621	2.84	63570	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495989	0.55	493663	100.47	60	120	
Sc (IS)	45	1	HMI H2	14092662	0.26	14385099	97.97	60	120	
Sc (IS)	45	2	HMI He	557814	0.36	557211	100.11	60	120	
Sc (IS)	45	3	No Gas	43057811	0.15	42934053	100.29	60	120	
Ge Internal Standard	72	1	HMI H2	8682954	0.71	8983404	96.66	60	120	
Ge Internal Standard	72	2	HMI He	802167	0.22	803089	99.89	60	120	
In Internal Standard	115	2	HMI He	2780676	0.99	2728997	101.89	60	120	
Ho-165	165	2	HMI He	17633362	0.93	17228414	102.35	60	120	

Sample Report

Sample Table

Sample Name	280-114182-a-6-b@50
Data File Name	109SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:05:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.629	ppb	11.629	47.79	61836	500000	
Li	7	2	45	-5.168	ppb	-5.168	-721.58	3967	500000	
Li	7	3	45	32.602	ppb	32.602	34.45	2741187	50000	
Be	9	1	6	-0.020	ppb	-0.020	-172.64	3	2000	
B	11	1	6	0.039	ppb	0.039	814.35	693	2000	
Na	23	1	45	1968.217	ppb	1968.217	0.68	4122726	2000	
Na	23	2	45	1698.531	ppb	1698.531	0.76	398186	400000	
Mg	24	2	45	414.419	ppb	414.419	2.59	27957	400000	
Al	27	2	45	2.631	ppb	2.631	178.14	93	400000	
K	39	1	45	299.419	ppb	299.419	3.35	2334315	400000	
K	39	2	45	150.326	ppb	150.326	3.11	11791	400000	
Ca	40	1	45	2372.093	ppb	2372.093	1.18	4682052	400000	
Ca	44	2	45	2448.876	ppb	2448.876	9.37	4574	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.121	ppb	0.121	43.70	1073	2000	
Cr	52	2	72	4.736	ppb	4.736	5.92	5261	5000	
Mn	55	2	72	864.647	ppb	864.647	0.96	339405	10000	
Fe	57	2	72	3.092	ppb	3.092	14.81	150	400000	
Co	59	2	72	0.009	ppb	0.009	103.49	33	2000	
Ni	60	2	72	0.610	ppb	0.610	11.42	573	5000	
Cu	63	2	72	0.470	ppb	0.470	28.81	2337	5000	
Zn	66	2	72	2.982	ppb	2.982	12.93	1007	5000	
As	75	2	72	0.043	ppb	0.043	205.03	16	2000	
Se	78	1	72	0.933	ppb	0.933	10.16	219	2000	
Sr	88	2	72	25.727	ppb	25.727	0.83	10544	4000	
Zr	90	2	72	12.165	ppb	12.165	26.47	143	1000	
Nb	93	2	72	0.500	ppb	0.500	10.23	2207	200	
Mo	95	2	115	0.030	ppb	0.030	58.43	63	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-269.35	40	100	
Ag	107	2	115	0.003	ppb	0.003	239.26	23	100	
Cd	111	2	115	0.019	ppb	0.019	173.21	7	2000	
Sn	120	2	115	0.091	ppb	0.091	36.46	227	2000	
Sb	121	2	115	0.233	ppb	0.233	18.88	197	1000	
Ba	137	2	115	2.402	ppb	2.402	22.79	620	5000	
W	182	2	165	0.008	ppb	0.008	210.83	720	100	
Pt	195	2	165	0.011	ppb	0.011	99.09	93	100	
Tl	205	2	165	0.000	ppb	0.000	-2014.72	163	2000	
Pb	208	2	165	0.006	ppb	0.006	156.20	1030	5000	
Th	232	2	165	0.015	ppb	0.015	74.05	560	2000	
U	238	2	165	2.068	ppb	2.068	1.51	36547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497846	1.72	493663	100.85	60	120	
Sc (IS)	45	1	HMI H2	13985683	0.30	14385099	97.22	60	120	
Sc (IS)	45	2	HMI He	561768	0.75	557211	100.82	60	120	
Sc (IS)	45	3	No Gas	42481024	0.66	42934053	98.94	60	120	
Ge Internal Standard	72	1	HMI H2	8626005	0.52	8983404	96.02	60	120	
Ge Internal Standard	72	2	HMI He	801372	0.41	803089	99.79	60	120	
In Internal Standard	115	2	HMI He	2783503	1.08	2728997	102.00	60	120	
Ho-165	165	2	HMI He	17730031	0.50	17228414	102.91	60	120	

Sample Report

Sample Table

Sample Name	280-114141-a-1-c@50
Data File Name	110SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:09:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.227	ppb	3.227	15.90	60993	500000	
Li	7	2	45	3.301	ppb	3.301	419.01	4054	500000	
Li	7	3	45	26.288	ppb	26.288	42.87	2690661	50000	
Be	9	1	6	0.019	ppb	0.019	309.13	10	2000	
B	11	1	6	-0.561	ppb	-0.561	-72.62	580	2000	
Na	23	1	45	825.686	ppb	825.686	2.90	2668406	2000	
Na	23	2	45	667.495	ppb	667.495	1.29	259096	400000	
Mg	24	2	45	1204.912	ppb	1204.912	2.19	76872	400000	
Al	27	2	45	11.125	ppb	11.125	61.59	220	400000	
K	39	1	45	471.322	ppb	471.322	4.07	2558655	400000	
K	39	2	45	322.364	ppb	322.364	3.41	16903	400000	
Ca	40	1	45	6538.640	ppb	6538.640	1.57	12887023	400000	
Ca	44	2	45	6597.850	ppb	6597.850	5.60	12255	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.017	ppb	0.017	1988.42	993	2000	
Cr	52	2	72	1.419	ppb	1.419	20.73	1693	5000	
Mn	55	2	72	1148.257	ppb	1148.257	0.18	451262	10000	
Fe	57	2	72	22.401	ppb	22.401	27.84	547	400000	
Co	59	2	72	0.019	ppb	0.019	29.37	53	2000	
Ni	60	2	72	0.147	ppb	0.147	95.31	290	5000	
Cu	63	2	72	0.673	ppb	0.673	24.99	2704	5000	
Zn	66	2	72	3.992	ppb	3.992	26.50	1207	5000	
As	75	2	72	-0.011	ppb	-0.011	-511.34	10	2000	
Se	78	1	72	0.537	ppb	0.537	11.16	132	2000	
Sr	88	2	72	78.107	ppb	78.107	0.46	31849	4000	
Zr	90	2	72	9.510	ppb	9.510	67.19	127	1000	
Nb	93	2	72	0.279	ppb	0.279	38.40	1547	200	
Mo	95	2	115	0.117	ppb	0.117	51.16	140	2000	
Pd	105	2	115	0.028	ppb	0.028	77.06	93	100	
Ag	107	2	115	0.007	ppb	0.007	50.87	37	100	
Cd	111	2	115	0.028	ppb	0.028	99.97	10	2000	
Sn	120	2	115	0.039	ppb	0.039	118.79	180	2000	
Sb	121	2	115	0.227	ppb	0.227	39.65	193	1000	
Ba	137	2	115	13.531	ppb	13.531	7.11	3464	5000	
W	182	2	165	0.028	ppb	0.028	70.86	827	100	
Pt	195	2	165	0.013	ppb	0.013	57.29	100	100	
Tl	205	2	165	0.002	ppb	0.002	475.94	187	2000	
Pb	208	2	165	0.004	ppb	0.004	143.65	1007	5000	
Th	232	2	165	0.027	ppb	0.027	21.77	720	2000	
U	238	2	165	4.381	ppb	4.381	1.18	77223	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	499117	0.61	493663	101.10	60	120	
Sc (IS)	45	1	HMI H2	14106174	0.74	14385099	98.06	60	120	
Sc (IS)	45	2	HMI He	561138	0.57	557211	100.70	60	120	
Sc (IS)	45	3	No Gas	42377289	0.43	42934053	98.70	60	120	
Ge Internal Standard	72	1	HMI H2	8734335	1.16	8983404	97.23	60	120	
Ge Internal Standard	72	2	HMI He	802402	0.67	803089	99.91	60	120	
In Internal Standard	115	2	HMI He	2801230	0.43	2728997	102.65	60	120	
Ho-165	165	2	HMI He	17706253	0.67	17228414	102.77	60	120	

Sample Report

Sample Table

Sample Name	280-114141-a-2-c@50
Data File Name	111SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:13:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.895	ppb	3.895	293.12	60558	500000	
Li	7	2	45	-5.827	ppb	-5.827	-386.38	3937	500000	
Li	7	3	45	30.094	ppb	30.094	39.78	2691375	50000	
Be	9	1	6	0.000	ppb	0.000	-41464.77	7	2000	
B	11	1	6	-0.214	ppb	-0.214	-217.64	643	2000	
Na	23	1	45	855.578	ppb	855.578	0.88	2683200	2000	
Na	23	2	45	678.310	ppb	678.310	1.55	259241	400000	
Mg	24	2	45	1219.086	ppb	1219.086	1.75	77357	400000	
Al	27	2	45	8.046	ppb	8.046	26.28	173	400000	
K	39	1	45	449.943	ppb	449.943	4.24	2510616	400000	
K	39	2	45	263.570	ppb	263.570	1.90	15074	400000	
Ca	40	1	45	6661.171	ppb	6661.171	0.88	13010075	400000	
Ca	44	2	45	6744.352	ppb	6744.352	4.08	12465	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.235	ppb	0.235	15.19	1163	2000	
Cr	52	2	72	0.756	ppb	0.756	23.16	977	5000	
Mn	55	2	72	1860.370	ppb	1860.370	0.56	729751	10000	
Fe	57	2	72	8.779	ppb	8.779	55.48	267	400000	
Co	59	2	72	0.008	ppb	0.008	103.92	30	2000	
Ni	60	2	72	0.044	ppb	0.044	225.86	227	5000	
Cu	63	2	72	1.031	ppb	1.031	14.84	3337	5000	
Zn	66	2	72	4.004	ppb	4.004	10.41	1207	5000	
As	75	2	72	0.033	ppb	0.033	125.47	15	2000	
Se	78	1	72	0.401	ppb	0.401	20.89	100	2000	
Sr	88	2	72	79.835	ppb	79.835	1.88	32494	4000	
Zr	90	2	72	6.895	ppb	6.895	104.91	110	1000	
Nb	93	2	72	0.218	ppb	0.218	49.68	1360	200	
Mo	95	2	115	0.076	ppb	0.076	83.61	103	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-152.82	43	100	
Ag	107	2	115	0.001	ppb	0.001	383.28	17	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.088	ppb	0.088	50.83	223	2000	
Sb	121	2	115	0.165	ppb	0.165	75.43	147	1000	
Ba	137	2	115	13.658	ppb	13.658	7.79	3467	5000	
W	182	2	165	0.025	ppb	0.025	84.39	810	100	
Pt	195	2	165	0.010	ppb	0.010	47.24	87	100	
Tl	205	2	165	0.011	ppb	0.011	27.87	277	2000	
Pb	208	2	165	0.002	ppb	0.002	765.49	973	5000	
Th	232	2	165	0.015	ppb	0.015	21.93	553	2000	
U	238	2	165	4.476	ppb	4.476	0.90	78748	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497060	0.66	493663	100.69	60	120	
Sc (IS)	45	1	HMI H2	13979560	0.38	14385099	97.18	60	120	
Sc (IS)	45	2	HMI He	558312	0.37	557211	100.20	60	120	
Sc (IS)	45	3	No Gas	41979934	0.54	42934053	97.78	60	120	
Ge Internal Standard	72	1	HMI H2	8643278	0.52	8983404	96.21	60	120	
Ge Internal Standard	72	2	HMI He	800977	0.27	803089	99.74	60	120	
In Internal Standard	115	2	HMI He	2778580	0.29	2728997	101.82	60	120	
Ho-165	165	2	HMI He	17672128	0.05	17228414	102.58	60	120	

Sample Report

Sample Table

Sample Name	280-114141-a-3-c@50
Data File Name	112SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:17:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429450 6020A DOD5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.434	ppb	0.434	929.85	60180	500000	
Li	7	2	45	-10.931	ppb	-10.931	-156.94	3894	500000	
Li	7	3	45	35.387	ppb	35.387	41.46	2752374	50000	
Be	9	1	6	0.000	ppb	0.000	-24072.86	7	2000	
B	11	1	6	0.373	ppb	0.373	68.74	747	2000	
Na	23	1	45	9657.412	ppb	9657.412	0.91	14099570	2000	
Na	23	2	45	9520.981	ppb	9520.981	2.04	1446227	400000	
Mg	24	2	45	877.296	ppb	877.296	1.84	56455	400000	
Al	27	2	45	3.771	ppb	3.771	60.74	110	400000	
K	39	1	45	288.684	ppb	288.684	6.27	2327880	400000	
K	39	2	45	137.029	ppb	137.029	5.42	11354	400000	
Ca	40	1	45	4717.157	ppb	4717.157	1.25	9262849	400000	
Ca	44	2	45	4751.053	ppb	4751.053	2.82	8813	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.148	ppb	0.148	34.76	1093	2000	
Cr	52	2	72	0.354	ppb	0.354	16.17	543	5000	
Mn	55	2	72	2033.373	ppb	2033.373	0.49	797050	10000	
Fe	57	2	72	6.359	ppb	6.359	62.84	217	400000	
Co	59	2	72	0.014	ppb	0.014	50.83	43	2000	
Ni	60	2	72	0.012	ppb	0.012	354.64	207	5000	
Cu	63	2	72	0.483	ppb	0.483	12.83	2357	5000	
Zn	66	2	72	2.900	ppb	2.900	15.44	990	5000	
As	75	2	72	0.006	ppb	0.006	760.74	12	2000	
Se	78	1	72	0.527	ppb	0.527	40.13	128	2000	
Sr	88	2	72	60.076	ppb	60.076	0.77	24459	4000	
Zr	90	2	72	7.383	ppb	7.383	158.75	113	1000	
Nb	93	2	72	0.119	ppb	0.119	22.41	1063	200	
Mo	95	2	115	0.017	ppb	0.017	327.37	53	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-1195.57	50	100	
Ag	107	2	115	0.002	ppb	0.002	325.25	20	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.038	ppb	0.038	113.81	180	2000	
Sb	121	2	115	0.154	ppb	0.154	52.38	140	1000	
Ba	137	2	115	1.387	ppb	1.387	13.17	367	5000	
W	182	2	165	0.012	ppb	0.012	190.83	740	100	
Pt	195	2	165	0.011	ppb	0.011	21.42	93	100	
Tl	205	2	165	0.001	ppb	0.001	271.19	180	2000	
Pb	208	2	165	0.009	ppb	0.009	81.68	1063	5000	
Th	232	2	165	0.004	ppb	0.004	64.03	400	2000	
U	238	2	165	1.870	ppb	1.870	1.32	32995	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491106	0.89	493663	99.48	60	120	
Sc (IS)	45	1	HMI H2	14022834	0.47	14385099	97.48	60	120	
Sc (IS)	45	2	HMI He	559835	0.48	557211	100.47	60	120	
Sc (IS)	45	3	No Gas	42364324	0.93	42934053	98.67	60	120	
Ge Internal Standard	72	1	HMI H2	8632281	0.76	8983404	96.09	60	120	
Ge Internal Standard	72	2	HMI He	800413	0.78	803089	99.67	60	120	
In Internal Standard	115	2	HMI He	2819407	0.16	2728997	103.31	60	120	
Ho-165	165	2	HMI He	17691561	0.90	17228414	102.69	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	113_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:21:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	522.779	ppb	1.573	144769	500	104.6	90	110	
Li	7	2	45	487.756	ppb	3.990	9229	500	97.6	90	110	
Li	7	3	45	552.043	ppb	0.851	6463933	500	110.4	90	110	>+\-10%
Be	9	1	6	50.112	ppb	4.339	8196	50	100.2	90	110	
B	11	1	6	44.030	ppb	2.971	8986	50	88.1	90	110	>+\-10%
Na	23	1	45	4439.126	ppb	1.468	7310881	5000	88.8	90	110	>+\-10%
Na	23	2	45	4003.831	ppb	1.181	711694	5000	80.1	90	110	>+\-10%
Mg	24	2	45	5022.179	ppb	0.767	314948	5000	100.4	90	110	
Al	27	2	45	4965.882	ppb	1.958	74809	5000	99.3	90	110	
K	39	1	45	5012.923	ppb	1.126	7882946	5000	100.3	90	110	
K	39	2	45	4968.869	ppb	2.299	156166	5000	99.4	90	110	
Ca	40	1	45	4977.644	ppb	0.118	9737329	5000	99.6	90	110	
Ca	44	2	45	4872.456	ppb	0.711	9110	5000	97.4	90	110	
Ti	47	2	45	492.314	ppb	91.411	17	50	984.6	90	110	>+\-10%
V	51	2	72	49.370	ppb	1.500	40066	50	98.7	90	110	
Cr	52	2	72	48.797	ppb	1.405	52688	50	97.6	90	110	
Mn	55	2	72	47.961	ppb	2.517	18928	50	95.9	90	110	
Fe	57	2	72	4928.480	ppb	0.971	101276	5000	98.6	90	110	
Co	59	2	72	48.628	ppb	1.740	102894	50	97.3	90	110	
Ni	60	2	72	48.577	ppb	2.979	29965	50	97.2	90	110	
Cu	63	2	72	47.570	ppb	2.094	86505	50	95.1	90	110	
Zn	66	2	72	52.317	ppb	0.360	10674	50	104.6	90	110	
As	75	2	72	48.414	ppb	2.013	5898	50	96.8	90	110	
Se	78	1	72	48.925	ppb	1.445	10853	50	97.9	90	110	
Sr	88	2	72	49.714	ppb	2.922	20277	50	99.4	90	110	
Zr	90	2	72	72.377	ppb	9.784	523	50	144.8	90	110	>+\-10%
Nb	93	2	72	90.610	ppb	1.048	272301	100	90.6	90	110	
Mo	95	2	115	46.834	ppb	1.933	40860	50	93.7	90	110	
Pd	105	2	115	49.223	ppb	1.391	74394	50	98.4	90	110	
Ag	107	2	115	48.079	ppb	1.670	154618	50	96.2	90	110	
Cd	111	2	115	49.886	ppb	1.886	17714	50	99.8	90	110	
Sn	120	2	115	49.788	ppb	0.376	45788	50	99.6	90	110	
Sb	121	2	115	48.301	ppb	5.504	35955	50	96.6	90	110	
Ba	137	2	115	49.428	ppb	4.782	12542	50	98.9	90	110	
W	182	2	165	48.319	ppb	0.873	267716	50	96.6	90	110	
Pt	195	2	165	47.754	ppb	0.668	233631	50	95.5	90	110	
Tl	205	2	165	48.775	ppb	1.292	470151	50	97.6	90	110	
Pb	208	2	165	49.448	ppb	1.053	613729	50	98.9	90	110	
Th	232	2	165	48.559	ppb	0.932	706064	50	97.1	90	110	
U	238	2	165	44.867	ppb	0.409	797170	50	89.7	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	490263	0.28	493663	99.31	60	120	
Sc (IS)	45	1	HMI H2	13975014	0.77	14385099	97.15	60	120	
Sc (IS)	45	2	HMI He	564281	0.58	557211	101.27	60	120	
Sc (IS)	45	3	No Gas	43343851	0.97	42934053	100.95	60	120	
Ge Internal Standard	72	1	HMI H2	8557599	0.21	8983404	95.26	60	120	
Ge Internal Standard	72	2	HMI He	801141	0.30	803089	99.76	60	120	
In Internal Standard	115	2	HMI He	2783452	0.83	2728997	102.00	60	120	
Ho-165	165	2	HMI He	17865665	0.77	17228414	103.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	114_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:25:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	24.702	ppb	56.3	2730745	10	>RL
Be	9	1	6	0.019	ppb	314.8	10	0.5	
B	11	1	6	-1.049	ppb	-17.5	493	0.5	
Na	23	1	45	-960.613	ppb	-0.3	339933	25	
Na	23	2	45	-979.528	ppb	-0.6	38097	25	
Mg	24	2	45	-19.794	ppb	-13.9	1060	25	
Al	27	2	45	2.125	ppb	124.9	87	15	
K	39	1	45	42.927	ppb	24.7	2052156	50	
K	39	2	45	-22.227	ppb	-71.4	6722	50	
Ca	40	1	45	-3.664	ppb	-11.1	66618	50	
Ca	44	2	45	26.298	ppb	19.4	80	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.197	ppb	99.6	1147	1	
Cr	52	2	72	0.005	ppb	834.5	170	1	
Mn	55	2	72	0.157	ppb	136.8	177	0.5	
Fe	57	2	72	4.777	ppb	55.8	187	25	
Co	59	2	72	0.017	ppb	47.6	50	0.5	
Ni	60	2	72	0.051	ppb	174.8	233	1	
Cu	63	2	72	-0.104	ppb	-14.9	1327	1	
Zn	66	2	72	0.720	ppb	27.3	570	5	
As	75	2	72	0.026	ppb	378.8	14	1	
Se	78	1	72	0.025	ppb	211.0	16	1	
Sr	88	2	72	-0.157	ppb	-8.9	37	0.5	
Zr	90	2	72	1.992	ppb	271.9	80	1	>RL
Nb	93	2	72	3.252	ppb	8.6	10581	2	>RL
Mo	95	2	115	0.032	ppb	106.0	67	0.5	
Pd	105	2	115	0.087	ppb	75.4	187	1	
Ag	107	2	115	0.015	ppb	50.5	63	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.102	ppb	126.3	240	1	
Sb	121	2	115	0.554	ppb	7.5	443	0.6	
Ba	137	2	115	0.024	ppb	244.6	17	0.5	
W	182	2	165	0.071	ppb	26.0	1080	1	
Pt	195	2	165	0.009	ppb	68.5	83	1	
Tl	205	2	165	0.013	ppb	46.8	293	0.1	
Pb	208	2	165	0.008	ppb	65.1	1073	0.5	
Th	232	2	165	0.067	ppb	18.3	1327	1	
U	238	2	165	0.034	ppb	21.6	707	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	507002	1.16	493663	102.70	60	120	
Sc (IS)	45	1	HMI H2	14123993	0.34	14385099	98.18	60	120	
Sc (IS)	45	2	HMI He	568269	0.54	557211	101.98	60	120	
Sc (IS)	45	3	No Gas	43179063	0.44	42934053	100.57	60	120	
Ge Internal Standard	72	1	HMI H2	8712071	0.94	8983404	96.98	60	120	
Ge Internal Standard	72	2	HMI He	810592	0.22	803089	100.93	60	120	
In Internal Standard	115	2	HMI He	2832777	0.78	2728997	103.80	60	120	
Ho-165	165	2	HMI He	18027893	0.21	17228414	104.64	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	115LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:28:48-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	70.344	ppb	4.156	5834737	50	140.7	70	130	>+/-30%
Be	9	1	6	-0.032	ppb	-49.642	3	1	-3.2	70	130	>+/-30%
Na	23	2	45	-1067.344	ppb	-0.716	37252	50	-2134.7	70	130	>+/-30%
Mg	24	2	45	-19.139	ppb	-17.362	1573	50	-38.3	70	130	>+/-30%
Al	27	2	45	2.553	ppb	105.982	133	30	8.5	70	130	>+/-30%
K	39	2	45	-114.570	ppb	-5.935	5611	100	-114.6	70	130	>+/-30%
Ca	44	2	45	14.867	ppb	52.119	83	50	29.7	70	130	>+/-30%
V	51	2	72	-0.504	ppb	-25.309	820	5	-10.1	70	130	>+/-30%
Cr	52	2	72	-0.010	ppb	-553.240	217	2	-0.5	70	130	>+/-30%
Mn	55	2	72	1.140	ppb	20.219	793	1	114.0	70	130	
Fe	57	2	72	5.840	ppb	81.230	293	50	11.7	70	130	>+/-30%
Co	59	2	72	0.038	ppb	53.990	133	1	3.8	70	130	>+/-30%
Ni	60	2	72	-0.057	ppb	-167.424	233	2	-2.9	70	130	>+/-30%
Cu	63	2	72	-0.039	ppb	-290.563	2020	2	-1.9	70	130	>+/-30%
Zn	66	2	72	1.402	ppb	40.930	983	10	14.0	70	130	>+/-30%
As	75	2	72	0.043	ppb	177.203	23	5	0.9	70	130	>+/-30%
Se	78	1	72	-0.016	ppb	-205.176	11	5	-0.3	70	130	>+/-30%
Sr	88	2	72	-0.089	ppb	-82.800	90	1	-8.9	70	130	>+/-30%
Zr	90	2	72	9.404	ppb	100.784	177	0.5	1880.9	70	130	>+/-30%
Nb	93	2	72	0.769	ppb	41.984	4278	2	38.4	70	130	>+/-30%
Mo	95	2	115	0.035	ppb	53.468	93	2	1.8	70	130	>+/-30%
Pd	105	2	115	0.049	ppb	101.530	173	1	4.9	70	130	>+/-30%
Ag	107	2	115	0.053	ppb	47.568	253	5	1.1	70	130	>+/-30%
Cd	111	2	115	0.062	ppb	2.683	30	1	6.2	70	130	>+/-30%
Sn	120	2	115	0.054	ppb	109.402	263	10	0.5	70	130	>+/-30%
Sb	121	2	115	0.317	ppb	32.509	357	2	15.8	70	130	>+/-30%
Ba	137	2	115	0.045	ppb	167.686	30	1	4.5	70	130	>+/-30%
W	182	2	165	0.045	ppb	100.878	1333	1	4.5	70	130	>+/-30%
Pt	195	2	165	0.042	ppb	49.456	347	1	4.2	70	130	>+/-30%
Tl	205	2	165	0.035	ppb	28.686	720	1	3.5	70	130	>+/-30%
Pb	208	2	165	0.029	ppb	73.097	1890	1	2.9	70	130	>+/-30%
Th	232	2	165	0.046	ppb	56.534	1447	2	2.3	70	130	>+/-30%
U	238	2	165	0.045	ppb	29.528	1270	1	4.5	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1033457	8.33	493663	209.34	60	120	IS Failed
Sc (IS)	45	1	HMI H2	22001093	6.98	14385099	152.94	60	120	IS Failed
Sc (IS)	45	2	HMI He	809510	2.09	557211	145.28	60	120	IS Failed
Sc (IS)	45	3	No Gas	82571274	3.55	42934053	192.32	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	13484964	5.92	8983404	150.11	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1132439	2.22	803089	141.01	60	120	IS Failed
In Internal Standard	115	2	HMI He	3823131	2.64	2728997	140.09	60	120	IS Failed
Ho-165	165	2	HMI He	25482379	2.12	17228414	147.91	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114200-A-11-D@5
Data File Name	116SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:32:34-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5 Be
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	107.687	ppb	107.687	9.53	69264	500000	
Li	7	2	45	46.222	ppb	46.222	65.45	4331	500000	
Li	7	3	45	117.919	ppb	117.919	2.77	3218379	50000	
Be	9	1	6	0.026	ppb	0.026	444.33	10	2000	
B	11	1	6	111.222	ppb	111.222	4.41	19742	2000	
Na	23	1	45	1386493.776	ppb	1386493.776	0.24	1604483923	2000	>LDR
Na	23	2	45	1306857.485	ppb	1306857.485	0.62	169072737	400000	
Mg	24	2	45	392001.594	ppb	392001.594	1.09	23327200	400000	
Al	27	2	45	1.051	ppb	1.051	167.09	67	400000	
K	39	1	45	4535.731	ppb	4535.731	0.29	6553295	400000	
K	39	2	45	3618.991	ppb	3618.991	1.11	110634	400000	
Ca	40	1	45	345548.903	ppb	345548.903	0.75	600573964	400000	
Ca	44	2	45	374145.460	ppb	374145.460	1.06	666363	400000	
Ti	47	2	45	102.080	ppb	102.080	173.21	3	4000	
V	51	2	72	15.154	ppb	15.154	5.09	11671	2000	
Cr	52	2	72	0.214	ppb	0.214	9.83	353	5000	
Mn	55	2	72	0.155	ppb	0.155	127.91	157	10000	
Fe	57	2	72	23.618	ppb	23.618	21.63	513	400000	
Co	59	2	72	0.015	ppb	0.015	94.42	40	2000	
Ni	60	2	72	0.140	ppb	0.140	29.11	257	5000	
Cu	63	2	72	0.111	ppb	0.111	52.87	1523	5000	
Zn	66	2	72	1.987	ppb	1.987	13.99	730	5000	
As	75	2	72	3.513	ppb	3.513	4.62	394	2000	
Se	78	1	72	2.402	ppb	2.402	14.13	475	2000	
Sr	88	2	72	8694.105	ppb	8694.105	0.51	3173230	4000	
Zr	90	2	72	8.269	ppb	8.269	101.35	107	1000	
Nb	93	2	72	1.854	ppb	1.854	3.84	5635	200	
Mo	95	2	115	7.645	ppb	7.645	1.19	5935	2000	
Pd	105	2	115	0.096	ppb	0.096	47.33	173	100	
Ag	107	2	115	0.077	ppb	0.077	16.62	230	100	
Cd	111	2	115	0.053	ppb	0.053	91.38	17	2000	
Sn	120	2	115	0.086	ppb	0.086	57.20	197	2000	
Sb	121	2	115	0.383	ppb	0.383	8.77	273	1000	
Ba	137	2	115	6.312	ppb	6.312	9.08	1427	5000	
W	182	2	165	0.032	ppb	0.032	52.29	773	100	
Pt	195	2	165	0.009	ppb	0.009	106.45	73	100	
Tl	205	2	165	0.010	ppb	0.010	107.96	240	2000	
Pb	208	2	165	0.010	ppb	0.010	78.13	980	5000	
Th	232	2	165	0.080	ppb	0.080	15.71	1353	2000	
U	238	2	165	22.150	ppb	22.150	0.81	354381	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	446803	0.94	493663	90.51	60	120	
Sc (IS)	45	1	HMI H2	12509008	0.50	14385099	86.96	60	120	
Sc (IS)	45	2	HMI He	539354	1.08	557211	96.80	60	120	
Sc (IS)	45	3	No Gas	41039033	0.53	42934053	95.59	60	120	
Ge Internal Standard	72	1	HMI H2	7487967	0.16	8983404	83.35	60	120	
Ge Internal Standard	72	2	HMI He	720478	0.77	803089	89.71	60	120	
In Internal Standard	115	2	HMI He	2465135	0.64	2728997	90.33	60	120	
Ho-165	165	2	HMI He	16086089	0.66	17228414	93.37	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-Dsd@25
Data File Name	117SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:36:26-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.440	ppb	9.440	59.50	60715	500000	
Li	7	2	45	9.806	ppb	9.806	115.09	4167	500000	
Li	7	3	45	28.419	ppb	28.419	50.84	2681303	50000	
Be	9	1	6	-0.041	ppb	-0.041	0.00	0	2000	
B	11	1	6	22.644	ppb	22.644	13.56	4734	2000	
Na	23	1	45	282667.916	ppb	282667.916	0.15	362385208	2000	>LDR
Na	23	2	45	270913.512	ppb	270913.512	1.28	36992322	400000	
Mg	24	2	45	82390.583	ppb	82390.583	0.78	5158015	400000	
Al	27	2	45	0.160	ppb	0.160	1459.67	57	400000	
K	39	1	45	1004.069	ppb	1004.069	0.19	3125103	400000	
K	39	2	45	722.095	ppb	722.095	4.22	29116	400000	
Ca	40	1	45	71772.659	ppb	71772.659	0.73	137777321	400000	
Ca	44	2	45	78351.027	ppb	78351.027	0.22	146777	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	2.736	ppb	2.736	6.36	3090	2000	
Cr	52	2	72	0.057	ppb	0.057	57.19	220	5000	
Mn	55	2	72	0.196	ppb	0.196	53.13	187	10000	
Fe	57	2	72	4.543	ppb	4.543	6.62	177	400000	
Co	59	2	72	0.003	ppb	0.003	286.80	20	2000	
Ni	60	2	72	0.012	ppb	0.012	317.85	203	5000	
Cu	63	2	72	-0.031	ppb	-0.031	-80.55	1417	5000	
Zn	66	2	72	1.393	ppb	1.393	40.25	683	5000	
As	75	2	72	0.767	ppb	0.767	10.86	103	2000	
Se	78	1	72	0.593	ppb	0.593	17.88	139	2000	
Sr	88	2	72	1635.547	ppb	1635.547	0.93	652615	4000	
Zr	90	2	72	1.823	ppb	1.823	100.88	77	1000	
Nb	93	2	72	0.865	ppb	0.865	22.95	3244	200	
Mo	95	2	115	1.302	ppb	1.302	8.51	1133	2000	
Pd	105	2	115	0.028	ppb	0.028	44.60	90	100	
Ag	107	2	115	0.018	ppb	0.018	1.37	70	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.024	ppb	0.024	364.44	160	2000	
Sb	121	2	115	0.172	ppb	0.172	41.13	147	1000	
Ba	137	2	115	1.320	ppb	1.320	10.49	333	5000	
W	182	2	165	0.018	ppb	0.018	133.46	760	100	
Pt	195	2	165	0.013	ppb	0.013	85.04	100	100	
Tl	205	2	165	0.007	ppb	0.007	238.26	227	2000	
Pb	208	2	165	-0.007	ppb	-0.007	-261.37	857	5000	
Th	232	2	165	0.012	ppb	0.012	16.92	503	2000	
U	238	2	165	4.567	ppb	4.567	0.74	79062	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	468768	0.66	493663	94.96	60	120	
Sc (IS)	45	1	HMI H2	13810460	0.63	14385099	96.01	60	120	
Sc (IS)	45	2	HMI He	567172	0.52	557211	101.79	60	120	
Sc (IS)	45	3	No Gas	42002489	0.55	42934053	97.83	60	120	
Ge Internal Standard	72	1	HMI H2	8378703	0.21	8983404	93.27	60	120	
Ge Internal Standard	72	2	HMI He	787536	0.22	803089	98.06	60	120	
In Internal Standard	115	2	HMI He	2691321	1.12	2728997	98.62	60	120	
Ho-165	165	2	HMI He	17391288	0.51	17228414	100.95	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-E MS@5
Data File Name	118SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:40:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	99.681	ppb	99.681	2.98	68119	500000	
Li	7	2	45	54.466	ppb	54.466	39.80	4387	500000	
Li	7	3	45	100.941	ppb	100.941	2.76	3069776	50000	
Be	9	1	6	7.770	ppb	7.770	7.72	1113	2000	
B	11	1	6	117.074	ppb	117.074	4.10	19866	2000	
Na	23	1	45	1328388.372	ppb	1328388.372	0.77	1537635017	2000	>LDR
Na	23	2	45	1266545.007	ppb	1266545.007	0.52	162785238	400000	
Mg	24	2	45	377210.239	ppb	377210.239	0.42	22299896	400000	
Al	27	2	45	74.085	ppb	74.085	15.61	1110	400000	
K	39	1	45	4368.422	ppb	4368.422	0.14	6378436	400000	
K	39	2	45	3520.841	ppb	3520.841	1.05	107108	400000	
Ca	40	1	45	333711.596	ppb	333711.596	0.65	580135605	400000	
Ca	44	2	45	361558.148	ppb	361558.148	1.09	639735	400000	
Ti	47	2	45	103.627	ppb	103.627	173.21	3	4000	
V	51	2	72	22.810	ppb	22.810	1.38	16876	2000	
Cr	52	2	72	8.072	ppb	8.072	2.49	7845	5000	
Mn	55	2	72	7.678	ppb	7.678	11.78	2770	10000	
Fe	57	2	72	102.246	ppb	102.246	13.90	1937	400000	
Co	59	2	72	7.683	ppb	7.683	2.11	14420	2000	
Ni	60	2	72	7.882	ppb	7.882	4.57	4457	5000	
Cu	63	2	72	7.311	ppb	7.311	5.83	12909	5000	
Zn	66	2	72	8.115	ppb	8.115	11.70	1784	5000	
As	75	2	72	10.891	ppb	10.891	1.96	1184	2000	
Se	78	1	72	9.685	ppb	9.685	3.96	1873	2000	
Sr	88	2	72	8429.828	ppb	8429.828	0.57	3032815	4000	
Zr	90	2	72	1398.843	ppb	1398.843	3.27	7886	1000	
Nb	93	2	72	0.738	ppb	0.738	6.43	2590	200	
Mo	95	2	115	15.033	ppb	15.033	3.81	11468	2000	
Pd	105	2	115	0.138	ppb	0.138	14.22	227	100	
Ag	107	2	115	7.466	ppb	7.466	5.71	20968	100	
Cd	111	2	115	7.540	ppb	7.540	6.46	2337	2000	
Sn	120	2	115	7.817	ppb	7.817	1.51	6378	2000	
Sb	121	2	115	8.969	ppb	8.969	7.31	5845	1000	
Ba	137	2	115	14.346	ppb	14.346	8.58	3184	5000	
W	182	2	165	2.331	ppb	2.331	6.12	12122	100	
Pt	195	2	165	0.010	ppb	0.010	48.55	77	100	
Tl	205	2	165	7.196	ppb	7.196	2.26	62121	2000	
Pb	208	2	165	7.219	ppb	7.219	1.71	80826	5000	
Th	232	2	165	7.553	ppb	7.553	2.40	98405	2000	
U	238	2	165	28.311	ppb	28.311	1.26	449594	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	427695	0.32	493663	86.64	60	120	
Sc (IS)	45	1	HMI H2	12511920	0.58	14385099	86.98	60	120	
Sc (IS)	45	2	HMI He	535783	0.26	557211	96.15	60	120	
Sc (IS)	45	3	No Gas	40574523	0.25	42934053	94.50	60	120	
Ge Internal Standard	72	1	HMI H2	7434298	0.73	8983404	82.76	60	120	
Ge Internal Standard	72	2	HMI He	710167	0.60	803089	88.43	60	120	
In Internal Standard	115	2	HMI He	2428736	0.60	2728997	89.00	60	120	
Ho-165	165	2	HMI He	15968272	0.96	17228414	92.69	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-F MSD@5
Data File Name	119SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:44:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	97.120	ppb	97.120	4.39	67296	500000	
Li	7	2	45	57.527	ppb	57.527	30.48	4391	500000	
Li	7	3	45	92.609	ppb	92.609	13.05	2946731	50000	
Be	9	1	6	6.824	ppb	6.824	3.78	953	2000	
B	11	1	6	114.484	ppb	114.484	1.44	18938	2000	
Na	23	1	45	1315943.139	ppb	1315943.139	0.31	1513097364	2000	>LDR
Na	23	2	45	1253861.335	ppb	1253861.335	0.49	160144691	400000	
Mg	24	2	45	373841.445	ppb	373841.445	0.34	21962005	400000	
Al	27	2	45	72.231	ppb	72.231	15.11	1077	400000	
K	39	1	45	4399.580	ppb	4399.580	1.16	6368479	400000	
K	39	2	45	3523.925	ppb	3523.925	1.31	106521	400000	
Ca	40	1	45	332321.685	ppb	332321.685	0.17	573873111	400000	
Ca	44	2	45	363314.716	ppb	363314.716	0.15	638808	400000	
Ti	47	2	45	312.244	ppb	312.244	173.21	10	4000	
V	51	2	72	22.140	ppb	22.140	1.74	16412	2000	
Cr	52	2	72	8.120	ppb	8.120	5.63	7896	5000	
Mn	55	2	72	8.126	ppb	8.126	5.35	2927	10000	
Fe	57	2	72	110.579	ppb	110.579	4.47	2090	400000	
Co	59	2	72	7.809	ppb	7.809	2.29	14664	2000	
Ni	60	2	72	7.785	ppb	7.785	5.12	4407	5000	
Cu	63	2	72	7.083	ppb	7.083	4.33	12552	5000	
Zn	66	2	72	8.895	ppb	8.895	2.13	1920	5000	
As	75	2	72	11.140	ppb	11.140	3.51	1211	2000	
Se	78	1	72	9.249	ppb	9.249	5.75	1773	2000	
Sr	88	2	72	8326.298	ppb	8326.298	0.68	2996758	4000	
Zr	90	2	72	1432.289	ppb	1432.289	3.43	8076	1000	
Nb	93	2	72	0.492	ppb	0.492	8.60	1937	200	
Mo	95	2	115	14.935	ppb	14.935	1.58	11338	2000	
Pd	105	2	115	0.134	ppb	0.134	20.61	220	100	
Ag	107	2	115	7.304	ppb	7.304	2.62	20414	100	
Cd	111	2	115	7.261	ppb	7.261	6.54	2240	2000	
Sn	120	2	115	7.841	ppb	7.841	2.53	6368	2000	
Sb	121	2	115	8.356	ppb	8.356	3.02	5421	1000	
Ba	137	2	115	13.838	ppb	13.838	6.93	3057	5000	
W	182	2	165	2.289	ppb	2.289	2.33	11722	100	
Pt	195	2	165	0.002	ppb	0.002	157.85	43	100	
Tl	205	2	165	7.209	ppb	7.209	1.89	61228	2000	
Pb	208	2	165	7.265	ppb	7.265	0.49	80008	5000	
Th	232	2	165	7.516	ppb	7.516	0.63	96345	2000	
U	238	2	165	28.273	ppb	28.273	0.43	441725	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416636	0.64	493663	84.40	60	120	
Sc (IS)	45	1	HMI H2	12428339	0.34	14385099	86.40	60	120	
Sc (IS)	45	2	HMI He	532425	0.23	557211	95.55	60	120	
Sc (IS)	45	3	No Gas	39665286	0.83	42934053	92.39	60	120	
Ge Internal Standard	72	1	HMI H2	7369305	0.69	8983404	82.03	60	120	
Ge Internal Standard	72	2	HMI He	710450	0.32	803089	88.46	60	120	
In Internal Standard	115	2	HMI He	2417423	0.81	2728997	88.58	60	120	
Ho-165	165	2	HMI He	15708237	0.37	17228414	91.18	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-Dpds@5
Data File Name	120SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:47:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	84.151	ppb	84.151	9.26	64194	500000	
Li	7	2	45	14.896	ppb	14.896	147.48	3921	500000	
Li	7	3	45	77.179	ppb	77.179	15.20	2753036	50000	
Be	9	1	6	199.640	ppb	199.640	3.45	27039	2000	
B	11	1	6	114.000	ppb	114.000	2.35	18391	2000	
Na	23	1	45	1338431.386	ppb	1338431.386	0.59	1510010858	2000	>LDR
Na	23	2	45	1264419.690	ppb	1264419.690	0.65	159767831	400000	
Mg	24	2	45	377692.818	ppb	377692.818	0.84	21950386	400000	
Al	27	2	45	1981.559	ppb	1981.559	0.61	27897	400000	
K	39	1	45	4509.721	ppb	4509.721	1.48	6362065	400000	
K	39	2	45	3527.959	ppb	3527.959	0.63	105498	400000	
Ca	40	1	45	339250.685	ppb	339250.685	0.71	574825085	400000	
Ca	44	2	45	364574.470	ppb	364574.470	0.13	634164	400000	
Ti	47	2	45	3059.696	ppb	3059.696	26.33	97	4000	
V	51	2	72	229.646	ppb	229.646	1.27	158557	2000	
Cr	52	2	72	208.240	ppb	208.240	0.17	194567	5000	
Mn	55	2	72	205.159	ppb	205.159	1.37	69905	10000	
Fe	57	2	72	2046.915	ppb	2046.915	1.30	36528	400000	
Co	59	2	72	196.279	ppb	196.279	0.66	360212	2000	
Ni	60	2	72	188.332	ppb	188.332	0.30	100265	5000	
Cu	63	2	72	187.450	ppb	187.450	0.61	291847	5000	
Zn	66	2	72	195.885	ppb	195.885	2.27	33659	5000	
As	75	2	72	193.168	ppb	193.168	1.66	20382	2000	
Se	78	1	72	187.094	ppb	187.094	1.70	35081	2000	
Sr	88	2	72	8475.474	ppb	8475.474	0.91	2983640	4000	
Zr	90	2	72	42549.324	ppb	42549.324	0.67	232994	1000	>LDR
Nb	93	2	72	5.532	ppb	5.532	2.26	14998	200	
Mo	95	2	115	212.506	ppb	212.506	0.93	158359	2000	
Pd	105	2	115	0.093	ppb	0.093	40.26	163	100	
Ag	107	2	115	44.812	ppb	44.812	0.77	123195	100	
Cd	111	2	115	187.478	ppb	187.478	1.39	56903	2000	
Sn	120	2	115	201.435	ppb	201.435	0.79	157978	2000	
Sb	121	2	115	202.387	ppb	202.387	2.43	128743	1000	
Ba	137	2	115	213.688	ppb	213.688	1.92	46330	5000	
W	182	2	165	198.197	ppb	198.197	0.49	949474	100	
Pt	195	2	165	0.050	ppb	0.050	7.28	247	100	
Tl	205	2	165	198.617	ppb	198.617	0.51	1658120	2000	
Pb	208	2	165	182.046	ppb	182.046	0.68	1955168	5000	
Th	232	2	165	14.261	ppb	14.261	0.41	179851	2000	
U	238	2	165	216.573	ppb	216.573	0.22	3333126	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	406261	0.80	493663	82.30	60	120	
Sc (IS)	45	1	HMI H2	12194879	0.34	14385099	84.77	60	120	
Sc (IS)	45	2	HMI He	526729	0.57	557211	94.53	60	120	
Sc (IS)	45	3	No Gas	38352279	0.35	42934053	89.33	60	120	
Ge Internal Standard	72	1	HMI H2	7238582	0.30	8983404	80.58	60	120	
Ge Internal Standard	72	2	HMI He	694898	0.24	803089	86.53	60	120	
In Internal Standard	115	2	HMI He	2379312	0.96	2728997	87.19	60	120	
Ho-165	165	2	HMI He	15476424	0.13	17228414	89.83	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	121_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:51:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	464.979	ppb	2.389	129426	500	93.0	90	110	
Li	7	2	45	486.272	ppb	12.416	8756	500	97.3	90	110	
Li	7	3	45	495.878	ppb	1.099	5550950	500	99.2	90	110	
Be	9	1	6	49.904	ppb	5.349	7179	50	99.8	90	110	
B	11	1	6	42.016	ppb	5.094	7569	50	84.0	90	110	>+\-10%
Na	23	1	45	4778.743	ppb	1.254	7408512	5000	95.6	90	110	
Na	23	2	45	4349.875	ppb	2.365	720774	5000	87.0	90	110	>+\-10%
Mg	24	2	45	5004.944	ppb	1.154	298270	5000	100.1	90	110	
Al	27	2	45	5008.748	ppb	0.225	71713	5000	100.2	90	110	
K	39	1	45	5067.949	ppb	1.301	7597917	5000	101.4	90	110	
K	39	2	45	4964.486	ppb	1.247	148289	5000	99.3	90	110	
Ca	40	1	45	5063.591	ppb	0.535	9467998	5000	101.3	90	110	
Ca	44	2	45	4900.278	ppb	4.748	8706	5000	98.0	90	110	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	50	0.0	90	110	>+\-10%
V	51	2	72	48.906	ppb	2.768	37804	50	97.8	90	110	
Cr	52	2	72	49.449	ppb	4.113	50842	50	98.9	90	110	
Mn	55	2	72	49.259	ppb	1.533	18511	50	98.5	90	110	
Fe	57	2	72	4918.713	ppb	0.343	96260	5000	98.4	90	110	
Co	59	2	72	48.843	ppb	1.453	98423	50	97.7	90	110	
Ni	60	2	72	48.222	ppb	0.998	28329	50	96.4	90	110	
Cu	63	2	72	48.125	ppb	1.068	83328	50	96.2	90	110	
Zn	66	2	72	48.520	ppb	3.710	9456	50	97.0	90	110	
As	75	2	72	48.956	ppb	1.522	5679	50	97.9	90	110	
Se	78	1	72	49.714	ppb	3.009	10573	50	99.4	90	110	
Sr	88	2	72	49.218	ppb	1.873	19119	50	98.4	90	110	
Zr	90	2	72	80.454	ppb	19.411	547	50	160.9	90	110	>+\-10%
Nb	93	2	72	89.052	ppb	0.599	254883	100	89.1	90	110	>+\-10%
Mo	95	2	115	48.677	ppb	3.764	40155	50	97.4	90	110	
Pd	105	2	115	49.855	ppb	0.522	71260	50	99.7	90	110	
Ag	107	2	115	48.154	ppb	0.117	146456	50	96.3	90	110	
Cd	111	2	115	49.449	ppb	6.878	16606	50	98.9	90	110	
Sn	120	2	115	49.651	ppb	0.949	43180	50	99.3	90	110	
Sb	121	2	115	50.961	ppb	1.903	35885	50	101.9	90	110	
Ba	137	2	115	48.814	ppb	1.137	11715	50	97.6	90	110	
W	182	2	165	47.314	ppb	0.530	250080	50	94.6	90	110	
Pt	195	2	165	46.530	ppb	1.272	217141	50	93.1	90	110	
Tl	205	2	165	48.115	ppb	1.054	442422	50	96.2	90	110	
Pb	208	2	165	48.277	ppb	0.804	571598	50	96.6	90	110	
Th	232	2	165	47.495	ppb	0.158	658795	50	95.0	90	110	
U	238	2	165	43.891	ppb	0.784	743867	50	87.8	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	431202	0.60	493663	87.35	60	120	
Sc (IS)	45	1	HMI H2	13359712	0.52	14385099	92.87	60	120	
Sc (IS)	45	2	HMI He	536278	1.24	557211	96.24	60	120	
Sc (IS)	45	3	No Gas	39654502	0.88	42934053	92.36	60	120	
Ge Internal Standard	72	1	HMI H2	8204959	0.52	8983404	91.33	60	120	
Ge Internal Standard	72	2	HMI He	762965	0.32	803089	95.00	60	120	
In Internal Standard	115	2	HMI He	2632173	0.45	2728997	96.45	60	120	
Ho-165	165	2	HMI He	17042043	0.79	17228414	98.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	122_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:55:38-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.692	ppb	-1027.3	2360979	10	
Be	9	1	6	0.094	ppb	143.6	20	0.5	
B	11	1	6	-0.446	ppb	-83.5	540	0.5	
Na	23	1	45	-775.348	ppb	-0.3	551362	25	
Na	23	2	45	-788.846	ppb	-1.1	61730	25	
Mg	24	2	45	-9.009	ppb	-17.0	1673	25	
Al	27	2	45	2.575	ppb	95.9	90	15	
K	39	1	45	47.655	ppb	36.5	1950138	50	
K	39	2	45	-19.539	ppb	-42.5	6555	50	
Ca	40	1	45	1.707	ppb	57.5	73117	50	
Ca	44	2	45	13.189	ppb	48.8	53	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.247	ppb	37.2	1137	1	
Cr	52	2	72	0.078	ppb	103.1	240	1	
Mn	55	2	72	-0.043	ppb	-138.3	93	0.5	
Fe	57	2	72	1.986	ppb	14.9	123	25	
Co	59	2	72	0.010	ppb	56.3	33	0.5	
Ni	60	2	72	0.084	ppb	143.5	243	1	
Cu	63	2	72	-0.157	ppb	-81.1	1180	1	
Zn	66	2	72	1.233	ppb	33.5	643	5	
As	75	2	72	0.087	ppb	78.7	21	1	
Se	78	1	72	0.029	ppb	128.1	16	1	
Sr	88	2	72	-0.068	ppb	-206.8	70	0.5	
Zr	90	2	72	14.536	ppb	57.0	153	1	>RL
Nb	93	2	72	3.161	ppb	11.9	9874	2	>RL
Mo	95	2	115	0.173	ppb	59.2	183	0.5	
Pd	105	2	115	0.048	ppb	62.5	120	1	
Ag	107	2	115	0.018	ppb	30.8	70	1	
Cd	111	2	115	0.019	ppb	86.6	7	0.5	
Sn	120	2	115	0.123	ppb	25.8	250	1	
Sb	121	2	115	0.832	ppb	23.8	627	0.6	>RL
Ba	137	2	115	0.041	ppb	172.2	20	0.5	
W	182	2	165	0.116	ppb	9.6	1287	1	
Pt	195	2	165	0.010	ppb	97.6	83	1	
Tl	205	2	165	0.020	ppb	61.0	350	0.1	
Pb	208	2	165	0.014	ppb	58.2	1103	0.5	
Th	232	2	165	0.069	ppb	2.4	1303	1	
U	238	2	165	0.062	ppb	20.7	1150	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	447867	0.27	493663	90.72	60	120	
Sc (IS)	45	1	HMI H2	13385469	0.36	14385099	93.05	60	120	
Sc (IS)	45	2	HMI He	547577	0.25	557211	98.27	60	120	
Sc (IS)	45	3	No Gas	40067795	1.17	42934053	93.32	60	120	
Ge Internal Standard	72	1	HMI H2	8234109	0.27	8983404	91.66	60	120	
Ge Internal Standard	72	2	HMI He	776689	0.48	803089	96.71	60	120	
In Internal Standard	115	2	HMI He	2717104	0.66	2728997	99.56	60	120	
Ho-165	165	2	HMI He	17372566	0.25	17228414	100.84	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	123LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T19:59:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	17.710	ppb	51.427	2473564	50	35.4	70	130	>+/-30%
Be	9	1	6	0.810	ppb	21.581	127	1	81.0	70	130	
Na	23	2	45	-751.131	ppb	-0.953	67057	50	-1502.3	70	130	>+/-30%
Mg	24	2	45	40.287	ppb	10.503	4678	50	80.6	70	130	
Al	27	2	45	30.224	ppb	11.712	497	30	100.7	70	130	
K	39	2	45	97.814	ppb	6.934	10023	100	97.8	70	130	
Ca	44	2	45	91.824	ppb	28.211	197	50	183.6	70	130	>+/-30%
V	51	2	72	4.598	ppb	4.822	4514	5	92.0	70	130	
Cr	52	2	72	2.200	ppb	8.472	2474	2	110.0	70	130	
Mn	55	2	72	1.103	ppb	5.904	533	1	110.3	70	130	
Fe	57	2	72	57.415	ppb	12.350	1237	50	114.8	70	130	
Co	59	2	72	0.967	ppb	11.048	2014	1	96.7	70	130	
Ni	60	2	72	2.012	ppb	12.513	1400	2	100.6	70	130	
Cu	63	2	72	2.197	ppb	7.683	5301	2	109.9	70	130	
Zn	66	2	72	12.308	ppb	0.362	2770	10	123.1	70	130	
As	75	2	72	4.385	ppb	7.239	532	5	87.7	70	130	
Se	78	1	72	4.902	ppb	9.955	1063	5	98.0	70	130	
Sr	88	2	72	0.796	ppb	21.060	413	1	79.6	70	130	
Zr	90	2	72	20.270	ppb	64.059	190	0.5	4053.9	70	130	>+/-30%
Nb	93	2	72	5.572	ppb	3.840	17020	2	278.6	70	130	>+/-30%
Mo	95	2	115	2.014	ppb	3.908	1777	2	100.7	70	130	
Pd	105	2	115	0.029	ppb	57.775	93	1	2.9	70	130	>+/-30%
Ag	107	2	115	5.000	ppb	2.805	15949	5	100.0	70	130	
Cd	111	2	115	1.070	ppb	10.534	377	1	107.0	70	130	
Sn	120	2	115	10.200	ppb	4.285	9410	10	102.0	70	130	
Sb	121	2	115	2.442	ppb	7.889	1824	2	122.1	70	130	
Ba	137	2	115	1.073	ppb	28.842	280	1	107.3	70	130	
W	182	2	165	4.935	ppb	2.499	27035	1	493.5	70	130	>+/-30%
Pt	195	2	165	0.014	ppb	63.199	103	1	1.4	70	130	>+/-30%
Tl	205	2	165	0.989	ppb	2.101	9383	1	98.9	70	130	
Pb	208	2	165	1.025	ppb	0.797	13220	1	102.5	70	130	
Th	232	2	165	2.095	ppb	2.593	29771	2	104.7	70	130	
U	238	2	165	0.953	ppb	4.724	16460	1	95.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	447467	0.72	493663	90.64	60	120	
Sc (IS)	45	1	HMI H2	13569651	0.25	14385099	94.33	60	120	
Sc (IS)	45	2	HMI He	550685	0.34	557211	98.83	60	120	
Sc (IS)	45	3	No Gas	39831057	0.58	42934053	92.77	60	120	
Ge Internal Standard	72	1	HMI H2	8292585	0.21	8983404	92.31	60	120	
Ge Internal Standard	72	2	HMI He	783113	0.06	803089	97.51	60	120	
In Internal Standard	115	2	HMI He	2758445	0.51	2728997	101.08	60	120	
Ho-165	165	2	HMI He	17279275	0.57	17228414	100.30	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	124WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:03:16-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.004	ppb	2079.672843	7	0.5
Na	23	2	45	-808.261	ppb	-1.149317245	59158	25
Mg	24	2	45	-14.023	ppb	-9.843950867	1370	25
Al	27	2	45	0.533	ppb	470.2134044	60	15
K	39	2	45	-8.113	ppb	-37.12118878	6885	50
Ca	44	2	45	26.054	ppb	79.60037609	77	25
V	51	2	72	0.072	ppb	354.5332547	1013	1
Cr	52	2	72	0.016	ppb	135.7668764	177	1
Mn	55	2	72	-0.097	ppb	-126.7429169	73	0.5
Fe	57	2	72	1.920	ppb	142.1179126	123	25
Co	59	2	72	-0.001	ppb	-330.8728248	10	0.5
Ni	60	2	72	-0.070	ppb	-58.91510331	153	1
Cu	63	2	72	-0.095	ppb	-127.2870151	1300	1
Zn	66	2	72	1.475	ppb	31.96877308	697	5
As	75	2	72	0.008	ppb	376.2811683	12	1
Se	78	1	72	-0.015	ppb	-256.5943418	7	1
Nb	93	2	72	0.346	ppb	11.74945449	1710	2
Mo	95	2	115	-0.008	ppb	-286.9871195	30	0.5
Pd	105	2	115	0.004	ppb	369.0321423	57	1
Ag	107	2	115	0.008	ppb	37.98101506	40	1
Cd	111	2	115	0.009	ppb	173.2050808	3	0.5
Sn	120	2	115	0.160	ppb	31.2666284	287	1
Sb	121	2	115	0.276	ppb	34.39769926	227	0.6
Ba	137	2	115	0.000	ppb	-11036.71666	10	0.5
W	182	2	165	0.018	ppb	45.59021798	753	1
Pt	195	2	165	-0.002	ppb	-54.11462106	27	1
Tl	205	2	165	0.001	ppb	194.0124115	177	0.1
Pb	208	2	165	-0.013	ppb	-79.78954921	783	0.5
Th	232	2	165	0.008	ppb	85.34613077	447	1
U	238	2	165	0.009	ppb	25.42126522	247	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	449762	0.54	493663	91.11	60	120	
Sc (IS)	45	1	HMI H2	13482656	0.82	14385099	93.73	60	120	
Sc (IS)	45	2	HMI He	547394	0.72	557211	98.24	60	120	
Sc (IS)	45	3	No Gas	39597225	0.48	42934053	92.23	60	120	
Ge Internal Standard	72	1	HMI H2	8290586	0.76	8983404	92.29	60	120	
Ge Internal Standard	72	2	HMI He	784776	0.33	803089	97.72	60	120	
In Internal Standard	115	2	HMI He	2751013	0.22	2728997	100.81	60	120	
Ho-165	165	2	HMI He	17305228	0.63	17228414	100.45	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	125WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:07:05-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.018	ppb	-209.9529588	3	0.5
Na	23	2	45	-829.244	ppb	-0.165831184	56609	25
Mg	24	2	45	-13.513	ppb	-20.92560904	1407	25
Al	27	2	45	0.738	ppb	110.024946	63	15
K	39	2	45	0.228	ppb	3624.35448	7152	50
Ca	44	2	45	14.856	ppb	129.7130076	57	25
V	51	2	72	-0.109	ppb	-58.11186099	863	1
Cr	52	2	72	0.031	ppb	81.81313862	190	1
Mn	55	2	72	-0.025	ppb	-630.2714192	100	0.5
Fe	57	2	72	2.325	ppb	171.6632728	130	25
Co	59	2	72	0.008	ppb	116.5471963	30	0.5
Ni	60	2	72	0.022	ppb	218.1610525	207	1
Cu	63	2	72	-0.214	ppb	-25.98522178	1080	1
Zn	66	2	72	1.514	ppb	24.63604352	697	5
As	75	2	72	0.014	ppb	336.5832066	12	1
Se	78	1	72	-0.002	ppb	-3338.793268	9	1
Nb	93	2	72	0.184	ppb	51.4988014	1220	2
Mo	95	2	115	-0.004	ppb	-839.9037279	33	0.5
Pd	105	2	115	-0.005	ppb	-305.2223177	43	1
Ag	107	2	115	0.002	ppb	302.999843	20	1
Cd	111	2	115	0.029	ppb	99.73313028	10	0.5
Sn	120	2	115	0.125	ppb	21.65527588	253	1
Sb	121	2	115	0.128	ppb	63.23154684	117	0.6
Ba	137	2	115	0.040	ppb	264.3342626	20	0.5
W	182	2	165	0.018	ppb	100.2636544	753	1
Pt	195	2	165	0.006	ppb	96.86669434	67	1
Tl	205	2	165	0.004	ppb	71.03616859	200	0.1
Pb	208	2	165	-0.001	ppb	-1009.084809	927	0.5
Th	232	2	165	0.006	ppb	110.9051995	417	1
U	238	2	165	0.005	ppb	5.916135844	173	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445979	0.59	493663	90.34	60	120	
Sc (IS)	45	1	HMI H2	13404951	0.48	14385099	93.19	60	120	
Sc (IS)	45	2	HMI He	549324	0.79	557211	98.58	60	120	
Sc (IS)	45	3	No Gas	39561869	0.33	42934053	92.15	60	120	
Ge Internal Standard	72	1	HMI H2	8215706	0.67	8983404	91.45	60	120	
Ge Internal Standard	72	2	HMI He	776271	0.11	803089	96.66	60	120	
In Internal Standard	115	2	HMI He	2734715	0.69	2728997	100.21	60	120	
Ho-165	165	2	HMI He	17291147	0.69	17228414	100.36	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	126WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:10:54-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.048	ppb	210.9421772	13	0.5
Na	23	2	45	-834.059	ppb	-0.694913831	55652	25
Mg	24	2	45	-13.704	ppb	-22.22233633	1387	25
Al	27	2	45	0.074	ppb	550.6120321	53	15
K	39	2	45	-10.010	ppb	-56.66970916	6815	50
Ca	44	2	45	48.436	ppb	74.90149378	117	25
V	51	2	72	0.103	ppb	83.15953984	1030	1
Cr	52	2	72	0.030	ppb	146.321828	190	1
Mn	55	2	72	0.043	ppb	385.5998851	127	0.5
Fe	57	2	72	3.638	ppb	35.3373093	157	25
Co	59	2	72	0.002	ppb	408.6243283	17	0.5
Ni	60	2	72	-0.035	ppb	-141.0760998	173	1
Cu	63	2	72	-0.193	ppb	-23.47212142	1120	1
Zn	66	2	72	1.536	ppb	10.41759272	703	5
As	75	2	72	0.086	ppb	90.93702345	21	1
Se	78	1	72	0.041	ppb	53.65704155	19	1
Nb	93	2	72	0.110	ppb	5.215683195	1010	2
Mo	95	2	115	0.015	ppb	280.435075	50	0.5
Pd	105	2	115	0.000	ppb	-4259.757277	50	1
Ag	107	2	115	0.012	ppb	55.82417584	50	1
Cd	111	2	115	0.075	ppb	113.5534633	27	0.5
Sn	120	2	115	0.047	ppb	121.4628918	183	1
Sb	121	2	115	0.172	ppb	23.38336825	150	0.6
Ba	137	2	115	0.054	ppb	189.012319	23	0.5
W	182	2	165	0.031	ppb	63.60013404	827	1
Pt	195	2	165	0.005	ppb	123.5368078	63	1
Tl	205	2	165	0.001	ppb	519.0946173	170	0.1
Pb	208	2	165	-0.002	ppb	-475.2818152	920	0.5
Th	232	2	165	0.004	ppb	40.30278009	393	1
U	238	2	165	0.004	ppb	25.22043553	153	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	448874	0.32	493663	90.93	60	120	
Sc (IS)	45	1	HMI H2	13513695	0.68	14385099	93.94	60	120	
Sc (IS)	45	2	HMI He	546171	0.33	557211	98.02	60	120	
Sc (IS)	45	3	No Gas	39753067	0.77	42934053	92.59	60	120	
Ge Internal Standard	72	1	HMI H2	8298252	0.76	8983404	92.37	60	120	
Ge Internal Standard	72	2	HMI He	779088	0.38	803089	97.01	60	120	
In Internal Standard	115	2	HMI He	2750284	1.40	2728997	100.78	60	120	
Ho-165	165	2	HMI He	17405126	0.88	17228414	101.03	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	127WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:14:43-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.004	ppb	2009.055605	7	0.5
Na	23	2	45	-835.873	ppb	-0.519377568	55435	25
Mg	24	2	45	-10.054	ppb	-38.02296973	1607	25
Al	27	2	45	0.756	ppb	276.5713239	63	15
K	39	2	45	-5.111	ppb	-379.3508373	6958	50
Ca	44	2	45	13.282	ppb	245.0701509	53	25
V	51	2	72	0.013	ppb	1044.484731	963	1
Cr	52	2	72	0.084	ppb	92.32030503	247	1
Mn	55	2	72	-0.088	ppb	-75.77409696	77	0.5
Fe	57	2	72	2.277	ppb	75.34251328	130	25
Co	59	2	72	0.003	ppb	142.3716003	20	0.5
Ni	60	2	72	-0.064	ppb	-192.9417985	157	1
Cu	63	2	72	-0.204	ppb	-25.98400206	1103	1
Zn	66	2	72	1.596	ppb	43.51454533	717	5
As	75	2	72	0.002	ppb	3942.006277	11	1
Se	78	1	72	0.010	ppb	476.3926401	12	1
Nb	93	2	72	0.090	ppb	42.06652196	953	2
Mo	95	2	115	-0.031	ppb	-36.97622121	10	0.5
Pd	105	2	115	0.024	ppb	69.2461393	87	1
Ag	107	2	115	0.004	ppb	158.1172291	27	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.035	ppb	118.0870201	173	1
Sb	121	2	115	0.199	ppb	31.08163104	170	0.6
Ba	137	2	115	0.013	ppb	711.4712843	13	0.5
W	182	2	165	-0.005	ppb	-69.12734702	637	1
Pt	195	2	165	0.004	ppb	61.09399147	57	1
Tl	205	2	165	-0.002	ppb	-31.61489187	143	0.1
Pb	208	2	165	-0.005	ppb	-86.52156393	873	0.5
Th	232	2	165	-0.001	ppb	-236.2186379	313	1
U	238	2	165	0.004	ppb	84.150669	157	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	448409	0.33	493663	90.83	60	120	
Sc (IS)	45	1	HMI H2	13345033	0.76	14385099	92.77	60	120	
Sc (IS)	45	2	HMI He	546348	0.16	557211	98.05	60	120	
Sc (IS)	45	3	No Gas	39164357	0.91	42934053	91.22	60	120	
Ge Internal Standard	72	1	HMI H2	8258169	0.49	8983404	91.93	60	120	
Ge Internal Standard	72	2	HMI He	781540	0.42	803089	97.32	60	120	
In Internal Standard	115	2	HMI He	2749929	0.18	2728997	100.77	60	120	
Ho-165	165	2	HMI He	17369211	0.75	17228414	100.82	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	128WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:18:33-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	071CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.018	ppb	-210.2916503	3	0.5
Na	23	2	45	-848.173	ppb	-0.283046613	53736	25
Mg	24	2	45	-8.832	ppb	-38.39626379	1677	25
Al	27	2	45	-1.985	ppb	-19.37844711	23	15
K	39	2	45	-0.884	ppb	-1311.856248	7072	50
Ca	44	2	45	24.353	ppb	56.34602236	73	25
V	51	2	72	0.050	ppb	545.9820873	987	1
Cr	52	2	72	0.043	ppb	89.65631755	203	1
Mn	55	2	72	0.044	ppb	93.88361302	127	0.5
Fe	57	2	72	1.148	ppb	183.9725827	107	25
Co	59	2	72	0.000	ppb	2331.820983	13	0.5
Ni	60	2	72	0.061	ppb	69.70174473	230	1
Cu	63	2	72	-0.096	ppb	-62.57063549	1287	1
Zn	66	2	72	1.367	ppb	27.31884457	670	5
As	75	2	72	-0.019	ppb	-178.3403646	8	1
Se	78	1	72	-0.015	ppb	-198.0102687	7	1
Nb	93	2	72	0.034	ppb	23.63038883	787	2
Mo	95	2	115	-0.008	ppb	-392.2256608	30	0.5
Pd	105	2	115	0.002	ppb	1561.166016	53	1
Ag	107	2	115	0.003	ppb	211.7121465	23	1
Cd	111	2	115	0.009	ppb	173.2050808	3	0.5
Sn	120	2	115	0.164	ppb	69.566192	290	1
Sb	121	2	115	0.054	ppb	37.19181634	63	0.6
Ba	137	2	115	-0.014	ppb	-327.5584626	7	0.5
W	182	2	165	0.028	ppb	65.27694614	807	1
Pt	195	2	165	0.002	ppb	319.1905381	47	1
Tl	205	2	165	-0.004	ppb	-62.76510853	127	0.1
Pb	208	2	165	-0.008	ppb	-37.75063715	833	0.5
Th	232	2	165	0.003	ppb	266.1988288	367	1
U	238	2	165	0.006	ppb	67.18175358	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445153	0.80	493663	90.17	60	120	
Sc (IS)	45	1	HMI H2	13334051	0.21	14385099	92.69	60	120	
Sc (IS)	45	2	HMI He	545469	0.73	557211	97.89	60	120	
Sc (IS)	45	3	No Gas	39017969	0.77	42934053	90.88	60	120	
Ge Internal Standard	72	1	HMI H2	8216127	0.32	8983404	91.46	60	120	
Ge Internal Standard	72	2	HMI He	777734	0.53	803089	96.84	60	120	
In Internal Standard	115	2	HMI He	2754204	1.16	2728997	100.92	60	120	
Ho-165	165	2	HMI He	17317891	0.28	17228414	100.52	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5314921
Data File Name	129CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:22:23-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	54799	0.00
Li	7	2	HMI He	3797	0.10
Li	7	3	No Gas	2331730	0.00
Be	9	1	HMI H2	7	2598.08
B	11	1	HMI H2	287	6.00
Na	23	1	HMI H2	457589	0.00
Na	23	2	HMI He	52228	0.00
Mg	24	2	HMI He	1920	0.10
Al	27	2	HMI He	37	214.72
K	39	2	HMI He	6752	0.04
Ca	44	2	HMI He	77	35.42
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1037	1.24
Cr	52	2	HMI He	167	14.99
Mn	55	2	HMI He	90	65.33
Fe	57	2	HMI He	133	25.36
Co	59	2	HMI He	17	549.91
Ni	60	2	HMI He	173	16.42
Cu	63	2	HMI He	1040	0.79
Zn	66	2	HMI He	580	2.06
As	75	2	HMI He	8	637.76
Se	78	1	HMI H2	5	811.90
Sr	88	2	HMI He	43	30.75
Zr	90	2	HMI He	110	24.79
Nb	93	2	HMI He	723	2.49
Mo	95	2	HMI He	33	137.48
Pd	105	2	HMI He	43	187.02
Ag	107	2	HMI He	17	415.69
Cd	111	2	HMI He	10	1000.00
Sn	120	2	HMI He	250	17.60
Sb	121	2	HMI He	50	80.00
Ba	137	2	HMI He	37	239.10
W	182	2	HMI He	770	3.55
Pt	195	2	HMI He	57	129.65
Tl	205	2	HMI He	113	8.99
Pb	208	2	HMI He	927	0.36
Th	232	2	HMI He	340	9.03
U	238	2	HMI He	120	36.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	446069	0.62
Sc (IS)	45	1	HMI H2	13344586	0.39
Sc (IS)	45	2	HMI He	548684	0.56
Sc (IS)	45	3	No Gas	39087130	0.45
Ge Internal Standard	72	1	HMI H2	8240244	0.59
Ge Internal Standard	72	2	HMI He	783465	0.13
In Internal Standard	115	2	HMI He	2775841	0.71
Ho-165	165	2	HMI He	17360012	0.87

Calibration Standard Report

Sample Table

Sample Name	ic-5314899
Data File Name	130CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:26:13-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	206983	0.00
Li	7	2	HMI He	13809	0.01
Li	7	3	No Gas	8778336	0.00
Be	9	1	HMI H2	15097	0.02
B	11	1	HMI H2	17616	0.02
Na	23	1	HMI H2	13505326	0.00
Na	23	2	HMI He	1415688	0.00
Mg	24	2	HMI He	600796	0.00
Al	27	2	HMI He	148435	0.00
K	39	1	HMI H2	13249426	0.00
K	39	2	HMI He	296650	0.00
Ca	40	1	HMI H2	18620786	0.00
Ca	44	2	HMI He	18101	0.01
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	76032	0.00
Cr	52	2	HMI He	101064	0.00
Mn	55	2	HMI He	36819	0.01
Fe	57	2	HMI He	194266	0.00
Co	59	2	HMI He	196313	0.00
Ni	60	2	HMI He	57715	0.00
Cu	63	2	HMI He	165467	0.00
Zn	66	2	HMI He	19078	0.00
As	75	2	HMI He	11509	0.00
Se	78	1	HMI H2	20521	0.02
Sr	88	2	HMI He	39386	0.00
Zr	90	2	HMI He	577	0.87
Nb	93	2	HMI He	568144	0.00
Mo	95	2	HMI He	81159	0.00
Pd	105	2	HMI He	136863	0.00
Ag	107	2	HMI He	300722	0.00
Cd	111	2	HMI He	34114	0.01
Sn	120	2	HMI He	88974	0.00
Sb	121	2	HMI He	71741	0.00
Ba	137	2	HMI He	24240	0.00
Nd	146	2	HMI He	111500	0.00
Sm	147	2	HMI He	95837	0.00
Sm	150	2	HMI He	94097	0.00
Gd	156	1	HMI H2	664975	0.00
Gd	157	1	HMI H2	510701	0.00
W	182	2	HMI He	517568	0.00
Pt	195	2	HMI He	451077	0.00
Tl	205	2	HMI He	910189	0.00
Pb	208	2	HMI He	1180568	0.00
Th	232	2	HMI He	1397928	0.00
U	238	2	HMI He	1687299	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	437317	0.62	446069	98.04	60	120	
Sc (IS)	45	1	HMI H2	13173952	0.26	13344586	98.72	60	120	
Sc (IS)	45	2	HMI He	539904	0.70	548684	98.40	60	120	
Sc (IS)	45	3	No Gas	38773637	0.65	39087130	99.20	60	120	
Ge Internal Standard	72	1	HMI H2	8096732	0.04	8240244	98.26	60	120	
Ge Internal Standard	72	2	HMI He	768501	0.60	783465	98.09	60	120	
In Internal Standard	115	2	HMI He	2666674	0.34	2775841	96.07	60	120	
Ho-165	165	2	HMI He	17258367	0.41	17360012	99.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	131_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:30:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	493.564	ppb	3.023	130198	500	98.7	90	110	
Li	7	2	45	467.645	ppb	7.578	8522	500	93.5	90	110	
Li	7	3	45	509.105	ppb	1.775	5627554	500	101.8	90	110	
Be	9	1	6	48.698	ppb	2.265	7459	50	97.4	90	110	
B	11	1	6	40.484	ppb	5.149	7402	50	81.0	90	110	>+\-10%
Na	23	1	45	4898.321	ppb	0.193	6880125	5000	98.0	90	110	
Na	23	2	45	4601.840	ppb	0.982	685376	5000	92.0	90	110	
Mg	24	2	45	4947.134	ppb	0.647	300893	5000	98.9	90	110	
Al	27	2	45	4920.745	ppb	1.105	73722	5000	98.4	90	110	
K	39	1	45	4918.113	ppb	1.253	7532473	5000	98.4	90	110	
K	39	2	45	4859.832	ppb	1.898	148923	5000	97.2	90	110	
Ca	40	1	45	4932.998	ppb	0.967	9263225	5000	98.7	90	110	
Ca	44	2	45	5191.947	ppb	5.684	9520	5000	103.8	90	110	
V	51	2	72	47.840	ppb	2.731	37440	50	95.7	90	110	
Cr	52	2	72	49.221	ppb	1.486	50548	50	98.4	90	110	
Mn	55	2	72	50.306	ppb	1.893	18831	50	100.6	90	110	
Fe	57	2	72	4915.837	ppb	1.113	96951	5000	98.3	90	110	
Co	59	2	72	49.435	ppb	1.371	98464	50	98.9	90	110	
Ni	60	2	72	47.747	ppb	1.017	28045	50	95.5	90	110	
Cu	63	2	72	49.935	ppb	1.624	84336	50	99.9	90	110	
Zn	66	2	72	48.743	ppb	3.895	9730	50	97.5	90	110	
As	75	2	72	48.044	ppb	3.067	5613	50	96.1	90	110	
Se	78	1	72	49.741	ppb	0.596	10225	50	99.5	90	110	
Sr	88	2	72	49.313	ppb	0.185	19726	50	98.6	90	110	
Zr	90	2	72	20.436	ppb	79.713	207	50	40.9	90	110	>+\-10%
Nb	93	2	72	99.865	ppb	0.424	288166	100	99.9	90	110	
Mo	95	2	115	48.567	ppb	0.847	39964	50	97.1	90	110	
Pd	105	2	115	52.032	ppb	1.096	72188	50	104.1	90	110	
Ag	107	2	115	48.770	ppb	0.552	148645	50	97.5	90	110	
Cd	111	2	115	49.218	ppb	3.634	17023	50	98.4	90	110	
Sn	120	2	115	48.790	ppb	3.460	44113	50	97.6	90	110	
Sb	121	2	115	50.224	ppb	1.005	36540	50	100.4	90	110	
Ba	137	2	115	49.544	ppb	3.157	12189	50	99.1	90	110	
W	182	2	165	48.958	ppb	0.472	254940	50	97.9	90	110	
Pt	195	2	165	49.050	ppb	0.404	222295	50	98.1	90	110	
Tl	205	2	165	48.964	ppb	0.900	447755	50	97.9	90	110	
Pb	208	2	165	49.346	ppb	0.229	585698	50	98.7	90	110	
Th	232	2	165	48.697	ppb	0.575	684033	50	97.4	90	110	
U	238	2	165	45.286	ppb	0.866	767679	50	90.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	443449	0.28	446069	99.41	60	120	
Sc (IS)	45	1	HMI H2	13239826	0.51	13344586	99.21	60	120	
Sc (IS)	45	2	HMI He	544819	0.69	548684	99.30	60	120	
Sc (IS)	45	3	No Gas	38931232	0.27	39087130	99.60	60	120	
Ge Internal Standard	72	1	HMI H2	8108344	0.12	8240244	98.40	60	120	
Ge Internal Standard	72	2	HMI He	779614	0.16	783465	99.51	60	120	
In Internal Standard	115	2	HMI He	2702583	0.84	2775841	97.36	60	120	
Ho-165	165	2	HMI He	17337261	0.24	17360012	99.87	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	132_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:33:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	14.722	ppb	34.3	2481678	10	>RL
Be	9	1	6	0.020	ppb	546.5	10	0.5	
B	11	1	6	1.163	ppb	2.1	503	0.5	>RL
Na	23	1	45	-36.336	ppb	-7.5	409028	25	
Na	23	2	45	-39.585	ppb	-16.9	46481	25	
Mg	24	2	45	-7.658	ppb	-35.3	1447	25	
Al	27	2	45	1.572	ppb	184.1	60	15	
K	39	1	45	9.314	ppb	66.7	1959615	50	
K	39	2	45	9.057	ppb	216.1	6982	50	
Ca	40	1	45	-0.607	ppb	-120.3	62240	50	
Ca	44	2	45	-12.603	ppb	-164.7	53	25	
V	51	2	72	-0.010	ppb	-921.4	1033	1	
Cr	52	2	72	-0.001	ppb	-16369.9	167	1	
Mn	55	2	72	-0.063	ppb	-121.9	67	0.5	
Fe	57	2	72	1.650	ppb	156.4	167	25	
Co	59	2	72	0.031	ppb	15.9	80	0.5	
Ni	60	2	72	0.027	ppb	409.4	190	1	
Cu	63	2	72	0.152	ppb	91.6	1300	1	
Zn	66	2	72	0.517	ppb	144.4	680	5	
As	75	2	72	0.044	ppb	57.8	13	1	
Se	78	1	72	0.076	ppb	52.3	21	1	
Sr	88	2	72	0.000	ppb	-15111.6	43	0.5	
Zr	90	2	72	-3.558	ppb	-244.0	93	1	
Nb	93	2	72	3.935	ppb	7.4	12152	2	>RL
Mo	95	2	115	0.072	ppb	41.9	93	0.5	
Pd	105	2	115	0.119	ppb	59.8	210	1	
Ag	107	2	115	0.017	ppb	97.8	70	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	-0.048	ppb	-24.0	203	1	
Sb	121	2	115	1.044	ppb	13.5	820	0.6	>RL
Ba	137	2	115	-0.105	ppb	-38.5	10	0.5	
W	182	2	165	0.092	ppb	15.5	1257	1	
Pt	195	2	165	0.004	ppb	99.4	73	1	
Tl	205	2	165	0.013	ppb	87.5	230	0.1	
Pb	208	2	165	0.008	ppb	71.3	1030	0.5	
Th	232	2	165	0.062	ppb	27.6	1223	1	
U	238	2	165	0.048	ppb	9.6	940	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	456015	0.29	446069	102.23	60	120	
Sc (IS)	45	1	HMI H2	13328069	0.13	13344586	99.88	60	120	
Sc (IS)	45	2	HMI He	545650	1.06	548684	99.45	60	120	
Sc (IS)	45	3	No Gas	39953852	0.33	39087130	102.22	60	120	
Ge Internal Standard	72	1	HMI H2	8306910	0.16	8240244	100.81	60	120	
Ge Internal Standard	72	2	HMI He	786469	0.06	783465	100.38	60	120	
In Internal Standard	115	2	HMI He	2743755	1.01	2775841	98.84	60	120	
Ho-165	165	2	HMI He	17475287	1.37	17360012	100.66	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	133LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:37:38-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	21.792	ppb	48.491	2490719	50	43.6	70	130	>+/-30%
Be	9	1	6	1.020	ppb	13.755	167	1	102.0	70	130	
Na	23	2	45	22.436	ppb	45.814	55482	50	44.9	70	130	>+/-30%
Mg	24	2	45	43.131	ppb	13.645	4557	50	86.3	70	130	
Al	27	2	45	33.069	ppb	15.352	537	30	110.2	70	130	
K	39	2	45	92.646	ppb	8.525	9506	100	92.6	70	130	
Ca	44	2	45	59.770	ppb	29.554	187	50	119.5	70	130	
V	51	2	72	5.000	ppb	2.752	4898	5	100.0	70	130	
Cr	52	2	72	2.051	ppb	3.124	2294	2	102.5	70	130	
Mn	55	2	72	1.226	ppb	1.081	553	1	122.6	70	130	
Fe	57	2	72	43.911	ppb	8.430	1010	50	87.8	70	130	
Co	59	2	72	0.992	ppb	5.818	2017	1	99.2	70	130	
Ni	60	2	72	2.215	ppb	8.223	1483	2	110.7	70	130	
Cu	63	2	72	2.334	ppb	2.665	4991	2	116.7	70	130	
Zn	66	2	72	12.622	ppb	5.957	2984	10	126.2	70	130	
As	75	2	72	4.553	ppb	11.225	546	5	91.1	70	130	
Se	78	1	72	5.034	ppb	1.190	1061	5	100.7	70	130	
Sr	88	2	72	1.187	ppb	23.205	523	1	118.7	70	130	
Zr	90	2	72	4.663	ppb	295.408	133	0.5	932.6	70	130	>+/-30%
Nb	93	2	72	8.132	ppb	0.824	24426	2	406.6	70	130	>+/-30%
Mo	95	2	115	2.017	ppb	7.677	1744	2	100.8	70	130	
Pd	105	2	115	0.061	ppb	61.735	130	1	6.1	70	130	>+/-30%
Ag	107	2	115	5.049	ppb	3.207	15879	5	101.0	70	130	
Cd	111	2	115	1.086	ppb	6.292	397	1	108.6	70	130	
Sn	120	2	115	10.115	ppb	2.655	9623	10	101.1	70	130	
Sb	121	2	115	2.729	ppb	6.563	2094	2	136.4	70	130	>+/-30%
Ba	137	2	115	0.780	ppb	40.058	233	1	78.0	70	130	
W	182	2	165	5.089	ppb	0.946	27566	1	508.9	70	130	>+/-30%
Pt	195	2	165	0.018	ppb	95.333	140	1	1.8	70	130	>+/-30%
Tl	205	2	165	1.025	ppb	3.853	9613	1	102.5	70	130	
Pb	208	2	165	1.036	ppb	6.149	13393	1	103.6	70	130	
Th	232	2	165	2.159	ppb	0.661	31078	2	107.9	70	130	
U	238	2	165	0.968	ppb	2.532	16754	1	96.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	454707	0.74	446069	101.94	60	120	
Sc (IS)	45	1	HMI H2	13394916	0.26	13344586	100.38	60	120	
Sc (IS)	45	2	HMI He	550125	0.18	548684	100.26	60	120	
Sc (IS)	45	3	No Gas	39350954	0.16	39087130	100.67	60	120	
Ge Internal Standard	72	1	HMI H2	8280302	1.20	8240244	100.49	60	120	
Ge Internal Standard	72	2	HMI He	789338	0.22	783465	100.75	60	120	
In Internal Standard	115	2	HMI He	2785392	1.34	2775841	100.34	60	120	
Ho-165	165	2	HMI He	17579574	0.57	17360012	101.26	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5311606
Data File Name	134ICSA.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:41:25-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	7.297	ppb	145.0	2358357	1	>RL or LOD
Be	9	1	6	-0.043	ppb	0.0	0	1	
B	11	1	6	0.458	ppb	66.9	357	1	
Na	23	1	45	95472.603	ppb	0.9	119795012	100000	
K	39	1	45	94953.512	ppb	1.0	104816758	100000	
Ca	40	1	45	95165.801	ppb	0.9	169207404	100000	
V	51	2	72	0.084	ppb	106.0	1030	1	
Cr	52	2	72	0.226	ppb	21.1	373	1	
Mn	55	2	72	0.769	ppb	33.0	353	1	
Co	59	2	72	-0.005	ppb	-128.7	7	1	
Ni	60	2	72	0.264	ppb	74.8	307	1	
Cu	63	2	72	0.255	ppb	13.9	1373	1	
Zn	66	2	72	0.910	ppb	95.3	703	1	
As	75	2	72	0.112	ppb	69.8	20	1	
Se	78	1	72	0.057	ppb	72.3	16	1	
Sr	88	2	72	0.727	ppb	14.5	313	1	
Zr	90	2	72	17.986	ppb	43.0	183	1	>RL or LOD
Nb	93	2	72	1.274	ppb	9.6	4124	1	>RL or LOD
Mo	95	2	115	2052.965	ppb	1.6	1575832	2000	>RL or LOD
Pd	105	2	115	0.019	ppb	167.3	63	1	
Ag	107	2	115	0.025	ppb	43.9	87	1	
Cd	111	2	115	0.344	ppb	16.4	120	1	
Sn	120	2	115	0.008	ppb	1197.6	233	1	
Sb	121	2	115	0.248	ppb	12.5	213	1	
Ba	137	2	115	0.000	ppb	-176397.9	33	1	
W	182	2	165	0.225	ppb	13.7	1880	1	
Pt	195	2	165	-0.003	ppb	-303.7	43	1	
Tl	205	2	165	0.006	ppb	21.0	163	1	
Pb	208	2	165	0.085	ppb	4.1	1877	1	
Th	232	2	165	0.037	ppb	0.5	840	1	
U	238	2	165	0.004	ppb	71.1	190	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432379	0.84	446069	96.93	60	120	
Sc (IS)	45	1	HMI H2	12617513	0.42	13344586	94.55	60	120	
Sc (IS)	45	2	HMI He	524697	0.87	548684	95.63	60	120	
Sc (IS)	45	3	No Gas	38737730	0.35	39087130	99.11	60	120	
Ge Internal Standard	72	1	HMI H2	7663139	0.45	8240244	93.00	60	120	
Ge Internal Standard	72	2	HMI He	732826	0.39	783465	93.54	60	120	
In Internal Standard	115	2	HMI He	2523164	1.05	2775841	90.90	60	120	
Ho-165	165	2	HMI He	16840063	0.28	17360012	97.00	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5311608
Data File Name	135ICSB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:45:10-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	1075.157	ppb	1.090	208225	100	1075.2	80	120	
Li	7	2	45	996.900	ppb	3.999	13402	100	996.9	80	120	
Li	7	3	45	1069.745	ppb	1.786	9009270	100	1069.7	80	120	
Be	9	1	6	95.466	ppb	0.391	13883	100	95.5	80	120	
B	11	1	6	77.350	ppb	3.312	13186	100	77.3	80	120	>+\-20%
Na	23	1	45	105886.529	ppb	0.735	132166925	100	105886.5	80	120	
K	39	1	45	105197.075	ppb	0.256	115360975	100	105197.1	80	120	
Ca	40	1	45	105427.931	ppb	0.560	186532777	100	105427.9	80	120	
V	51	2	72	99.946	ppb	1.581	72067	100	99.9	80	120	
Cr	52	2	72	99.277	ppb	1.170	95146	100	99.3	80	120	
Mn	55	2	72	99.380	ppb	0.777	34694	100	99.4	80	120	
Co	59	2	72	97.698	ppb	0.116	181883	100	97.7	80	120	
Ni	60	2	72	94.682	ppb	1.244	51826	100	94.7	80	120	
Cu	63	2	72	97.134	ppb	0.803	152440	100	97.1	80	120	
Zn	66	2	72	99.687	ppb	1.151	18037	100	99.7	80	120	
As	75	2	72	94.024	ppb	1.875	10262	100	94.0	80	120	
Se	78	1	72	99.193	ppb	2.618	19230	100	99.2	80	120	
Sr	88	2	72	110.926	ppb	0.967	41428	100	110.9	80	120	
Zr	90	2	72	6.975	ppb	162.034	133	100	7.0	80	120	>+\-20%
Nb	93	2	72	172.908	ppb	0.353	465903	100	172.9	80	120	
Mo	95	2	115	2196.154	ppb	1.435	1693636	100	2196.2	80	120	>+\-20%
Pd	105	2	115	89.903	ppb	1.644	116958	100	89.9	80	120	
Ag	107	2	115	92.700	ppb	1.579	264979	100	92.7	80	120	
Cd	111	2	115	95.534	ppb	1.762	30978	100	95.5	80	120	
Sn	120	2	115	98.356	ppb	2.580	83180	100	98.4	80	120	
Sb	121	2	115	104.490	ppb	1.340	71258	100	104.5	80	120	
Ba	137	2	115	102.582	ppb	1.165	23635	100	102.6	80	120	
W	182	2	165	96.973	ppb	0.451	486445	100	97.0	80	120	
Pt	195	2	165	93.700	ppb	0.216	409629	100	93.7	80	120	
Tl	205	2	165	94.053	ppb	0.740	829662	100	94.1	80	120	
Pb	208	2	165	94.888	ppb	0.396	1085715	100	94.9	80	120	
Th	232	2	165	98.119	ppb	0.428	1329349	100	98.1	80	120	
U	238	2	165	94.491	ppb	3.679	1545157	100	94.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	421233	0.69	446069	94.43	60	120	
Sc (IS)	45	1	HMI H2	12555803	0.33	13344586	94.09	60	120	
Sc (IS)	45	2	HMI He	525237	0.67	548684	95.73	60	120	
Sc (IS)	45	3	No Gas	37850572	0.56	39087130	96.84	60	120	
Ge Internal Standard	72	1	HMI H2	7649916	0.58	8240244	92.84	60	120	
Ge Internal Standard	72	2	HMI He	728765	0.08	783465	93.02	60	120	
In Internal Standard	115	2	HMI He	2535148	1.63	2775841	91.33	60	120	
Ho-165	165	2	HMI He	16726141	0.18	17360012	96.35	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	136SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:48:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.710	ppb	-1.710	-399.60	53538	500000	
Li	7	2	45	-9.934	ppb	-9.934	-211.94	3607	500000	
Li	7	3	45	10.162	ppb	10.162	88.93	2407802	50000	
Be	9	1	6	0.155	ppb	0.155	128.25	30	2000	
B	11	1	6	0.773	ppb	0.773	62.82	417	2000	
Na	23	1	45	-11.999	ppb	-11.999	-30.30	433679	2000	
Na	23	2	45	-14.584	ppb	-14.584	-64.30	49012	400000	
Mg	24	2	45	1.027	ppb	1.027	716.97	1937	400000	
Al	27	2	45	19.973	ppb	19.973	29.70	330	400000	
K	39	1	45	43.189	ppb	43.189	32.22	1964448	400000	
K	39	2	45	23.354	ppb	23.354	31.81	7262	400000	
Ca	40	1	45	24.861	ppb	24.861	15.88	108190	400000	
Ca	44	2	45	8.488	ppb	8.488	239.27	90	400000	
V	51	2	72	0.136	ppb	0.136	92.49	1123	2000	
Cr	52	2	72	0.085	ppb	0.085	23.78	250	5000	
Mn	55	2	72	0.103	ppb	0.103	93.52	127	10000	
Fe	57	2	72	23.020	ppb	23.020	14.07	580	400000	
Co	59	2	72	0.022	ppb	0.022	46.02	60	2000	
Ni	60	2	72	-0.001	ppb	-0.001	-14955.94	170	5000	
Cu	63	2	72	0.099	ppb	0.099	12.30	1187	5000	
Zn	66	2	72	0.066	ppb	0.066	813.85	583	5000	
As	75	2	72	0.098	ppb	0.098	116.70	19	2000	
Se	78	1	72	0.026	ppb	0.026	112.93	11	2000	
Sr	88	2	72	-0.057	ppb	-0.057	-44.47	20	4000	
Zr	90	2	72	-5.997	ppb	-5.997	-142.78	80	1000	
Nb	93	2	72	3.147	ppb	3.147	8.10	9677	200	
Mo	95	2	115	2.301	ppb	2.301	4.61	1950	2000	
Pd	105	2	115	0.131	ppb	0.131	34.13	227	100	
Ag	107	2	115	0.025	ppb	0.025	20.38	93	100	
Cd	111	2	115	-0.019	ppb	-0.019	-86.97	3	2000	
Sn	120	2	115	0.004	ppb	0.004	1299.29	250	2000	
Sb	121	2	115	0.159	ppb	0.159	42.16	167	1000	
Ba	137	2	115	-0.078	ppb	-0.078	-30.18	17	5000	
W	182	2	165	0.042	ppb	0.042	42.66	977	100	
Pt	195	2	165	0.020	ppb	0.020	16.72	147	100	
Tl	205	2	165	0.057	ppb	0.057	10.23	630	2000	
Pb	208	2	165	0.012	ppb	0.012	112.14	1053	5000	
Th	232	2	165	0.091	ppb	0.091	13.15	1600	2000	
U	238	2	165	0.055	ppb	0.055	10.41	1047	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	438880	0.42	446069	98.39	60	120	
Sc (IS)	45	1	HMI H2	13101788	0.39	13344586	98.18	60	120	
Sc (IS)	45	2	HMI He	535638	0.46	548684	97.62	60	120	
Sc (IS)	45	3	No Gas	39250352	1.01	39087130	100.42	60	120	
Ge Internal Standard	72	1	HMI H2	8124885	0.08	8240244	98.60	60	120	
Ge Internal Standard	72	2	HMI He	771311	0.44	783465	98.45	60	120	
In Internal Standard	115	2	HMI He	2738787	0.63	2775841	98.67	60	120	
Ho-165	165	2	HMI He	17203031	0.62	17360012	99.10	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	137_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:52:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	498.026	ppb	2.440	129344	500	99.6	90	110	
Li	7	2	45	466.488	ppb	5.961	8466	500	93.3	90	110	
Li	7	3	45	497.675	ppb	0.588	5525206	500	99.5	90	110	
Be	9	1	6	47.235	ppb	2.183	7082	50	94.5	90	110	
B	11	1	6	37.948	ppb	3.491	6808	50	75.9	90	110	>+\-10%
Na	23	1	45	4941.124	ppb	0.166	6854495	5000	98.8	90	110	
Na	23	2	45	4613.048	ppb	1.175	683237	5000	92.3	90	110	
Mg	24	2	45	4907.214	ppb	0.634	296891	5000	98.1	90	110	
Al	27	2	45	4923.521	ppb	0.968	73370	5000	98.5	90	110	
K	39	1	45	5052.502	ppb	2.232	7594441	5000	101.1	90	110	
K	39	2	45	4871.928	ppb	0.675	148490	5000	97.4	90	110	
Ca	40	1	45	5009.921	ppb	1.427	9295578	5000	100.2	90	110	
Ca	44	2	45	4930.459	ppb	1.516	8996	5000	98.6	90	110	
V	51	2	72	48.702	ppb	1.929	37968	50	97.4	90	110	
Cr	52	2	72	48.759	ppb	1.783	49903	50	97.5	90	110	
Mn	55	2	72	50.329	ppb	2.766	18775	50	100.7	90	110	
Fe	57	2	72	4953.237	ppb	1.158	97353	5000	99.1	90	110	
Co	59	2	72	49.275	ppb	0.506	97809	50	98.6	90	110	
Ni	60	2	72	48.922	ppb	3.496	28633	50	97.8	90	110	
Cu	63	2	72	49.493	ppb	2.588	83314	50	99.0	90	110	
Zn	66	2	72	50.086	ppb	5.087	9947	50	100.2	90	110	
As	75	2	72	48.831	ppb	3.409	5685	50	97.7	90	110	
Se	78	1	72	49.663	ppb	2.838	10235	50	99.3	90	110	
Sr	88	2	72	49.738	ppb	4.007	19826	50	99.5	90	110	
Zr	90	2	72	26.933	ppb	24.228	237	50	53.9	90	110	>+\-10%
Nb	93	2	72	96.282	ppb	1.217	276897	100	96.3	90	110	
Mo	95	2	115	47.173	ppb	1.501	39313	50	94.3	90	110	
Pd	105	2	115	50.571	ppb	0.504	71063	50	101.1	90	110	
Ag	107	2	115	48.188	ppb	1.877	148726	50	96.4	90	110	
Cd	111	2	115	47.923	ppb	1.659	16783	50	95.8	90	110	
Sn	120	2	115	48.181	ppb	3.116	44123	50	96.4	90	110	
Sb	121	2	115	50.187	ppb	2.745	36985	50	100.4	90	110	
Ba	137	2	115	50.618	ppb	3.978	12609	50	101.2	90	110	
W	182	2	165	48.772	ppb	1.098	256004	50	97.5	90	110	
Pt	195	2	165	48.997	ppb	0.967	223836	50	98.0	90	110	
Tl	205	2	165	49.003	ppb	1.248	451688	50	98.0	90	110	
Pb	208	2	165	49.334	ppb	0.617	590247	50	98.7	90	110	
Th	232	2	165	48.783	ppb	1.019	690731	50	97.6	90	110	
U	238	2	165	45.198	ppb	0.294	772323	50	90.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	434050	0.56	446069	97.31	60	120	
Sc (IS)	45	1	HMI H2	13083720	0.62	13344586	98.05	60	120	
Sc (IS)	45	2	HMI He	541929	1.16	548684	98.77	60	120	
Sc (IS)	45	3	No Gas	38734390	0.23	39087130	99.10	60	120	
Ge Internal Standard	72	1	HMI H2	8131006	0.91	8240244	98.67	60	120	
Ge Internal Standard	72	2	HMI He	776956	0.41	783465	99.17	60	120	
In Internal Standard	115	2	HMI He	2737066	1.18	2775841	98.60	60	120	
Ho-165	165	2	HMI He	17476343	0.55	17360012	100.67	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	138_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T20:56:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	9.030	ppb	54.9	2394118	10	
Be	9	1	6	0.001	ppb	10667.9	7	0.5	
B	11	1	6	1.089	ppb	20.5	473	0.5	>RL
Na	23	1	45	-14.458	ppb	-12.1	432760	25	
Na	23	2	45	-13.210	ppb	-36.8	49731	25	
Mg	24	2	45	-11.794	ppb	-18.9	1187	25	
Al	27	2	45	1.829	ppb	20.9	63	15	
K	39	1	45	6.415	ppb	45.1	1933220	50	
K	39	2	45	18.029	ppb	72.5	7185	50	
Ca	40	1	45	-0.038	ppb	-1283.6	62561	50	
Ca	44	2	45	-21.600	ppb	-64.4	37	25	
V	51	2	72	0.048	ppb	288.5	1063	1	
Cr	52	2	72	-0.018	ppb	-173.0	147	1	
Mn	55	2	72	0.083	ppb	117.1	120	0.5	
Fe	57	2	72	7.546	ppb	18.3	280	25	
Co	59	2	72	0.015	ppb	76.5	47	0.5	
Ni	60	2	72	0.112	ppb	158.5	237	1	
Cu	63	2	72	0.193	ppb	26.1	1350	1	
Zn	66	2	72	0.334	ppb	164.0	637	5	
As	75	2	72	0.040	ppb	64.8	12	1	
Se	78	1	72	0.052	ppb	74.7	16	1	
Sr	88	2	72	-0.024	ppb	-218.4	33	0.5	
Zr	90	2	72	-2.605	ppb	-231.9	97	1	
Nb	93	2	72	3.498	ppb	11.3	10737	2	>RL
Mo	95	2	115	0.243	ppb	32.6	237	0.5	
Pd	105	2	115	0.116	ppb	23.8	207	1	
Ag	107	2	115	0.012	ppb	56.7	53	1	
Cd	111	2	115	0.019	ppb	169.7	17	0.5	
Sn	120	2	115	0.017	ppb	201.8	263	1	
Sb	121	2	115	0.541	ppb	15.8	450	0.6	
Ba	137	2	115	-0.105	ppb	-66.6	10	0.5	
W	182	2	165	0.057	ppb	17.3	1063	1	
Pt	195	2	165	0.001	ppb	488.5	60	1	
Tl	205	2	165	0.017	ppb	19.3	267	0.1	
Pb	208	2	165	0.000	ppb	-2792.9	917	0.5	
Th	232	2	165	0.064	ppb	15.8	1240	1	
U	238	2	165	0.035	ppb	19.0	707	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	440621	0.32	446069	98.78	60	120	
Sc (IS)	45	1	HMI H2	13170911	0.33	13344586	98.70	60	120	
Sc (IS)	45	2	HMI He	541423	0.38	548684	98.68	60	120	
Sc (IS)	45	3	No Gas	39142457	0.79	39087130	100.14	60	120	
Ge Internal Standard	72	1	HMI H2	8146687	0.15	8240244	98.86	60	120	
Ge Internal Standard	72	2	HMI He	776104	0.26	783465	99.06	60	120	
In Internal Standard	115	2	HMI He	2750278	1.40	2775841	99.08	60	120	
Ho-165	165	2	HMI He	17294771	0.75	17360012	99.62	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	139LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:00:22-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	18.719	ppb	26.193	2449169	50	37.4	70	130	>+/-30%
Be	9	1	6	1.080	ppb	58.205	173	1	108.0	70	130	
Na	23	2	45	45.620	ppb	9.810	57535	50	91.2	70	130	
Mg	24	2	45	41.201	ppb	3.930	4351	50	82.4	70	130	
Al	27	2	45	36.265	ppb	15.997	573	30	120.9	70	130	
K	39	2	45	122.809	ppb	7.964	10190	100	122.8	70	130	
Ca	44	2	45	65.536	ppb	29.803	193	50	131.1	70	130	>+/-30%
V	51	2	72	5.078	ppb	8.186	4861	5	101.6	70	130	
Cr	52	2	72	2.091	ppb	9.656	2290	2	104.6	70	130	
Mn	55	2	72	1.363	ppb	16.413	593	1	136.3	70	130	>+/-30%
Fe	57	2	72	61.965	ppb	0.786	1343	50	123.9	70	130	
Co	59	2	72	1.057	ppb	14.756	2107	1	105.7	70	130	
Ni	60	2	72	1.874	ppb	25.482	1257	2	93.7	70	130	
Cu	63	2	72	2.481	ppb	4.917	5138	2	124.1	70	130	
Zn	66	2	72	12.787	ppb	5.575	2957	10	127.9	70	130	
As	75	2	72	4.769	ppb	3.119	560	5	95.4	70	130	
Se	78	1	72	4.685	ppb	10.390	968	5	93.7	70	130	
Sr	88	2	72	1.145	ppb	33.256	497	1	114.5	70	130	
Zr	90	2	72	8.741	ppb	150.734	150	0.5	1748.1	70	130	>+/-30%
Nb	93	2	72	7.419	ppb	6.485	21919	2	370.9	70	130	>+/-30%
Mo	95	2	115	2.009	ppb	6.422	1703	2	100.5	70	130	
Pd	105	2	115	0.069	ppb	55.825	140	1	6.9	70	130	>+/-30%
Ag	107	2	115	4.912	ppb	3.061	15151	5	98.2	70	130	
Cd	111	2	115	0.915	ppb	25.825	330	1	91.5	70	130	
Sn	120	2	115	10.224	ppb	2.952	9540	10	102.2	70	130	
Sb	121	2	115	2.340	ppb	23.298	1770	2	117.0	70	130	
Ba	137	2	115	0.931	ppb	28.816	267	1	93.1	70	130	
W	182	2	165	4.909	ppb	1.390	26374	1	490.9	70	130	>+/-30%
Pt	195	2	165	0.018	ppb	19.541	137	1	1.8	70	130	>+/-30%
Tl	205	2	165	0.992	ppb	2.095	9223	1	99.2	70	130	
Pb	208	2	165	1.033	ppb	3.642	13220	1	103.3	70	130	
Th	232	2	165	2.125	ppb	2.549	30306	2	106.2	70	130	
U	238	2	165	0.957	ppb	2.851	16420	1	95.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	447078	0.36	446069	100.23	60	120	
Sc (IS)	45	1	HMI H2	13062351	0.36	13344586	97.89	60	120	
Sc (IS)	45	2	HMI He	539174	1.01	548684	98.27	60	120	
Sc (IS)	45	3	No Gas	39011288	0.65	39087130	99.81	60	120	
Ge Internal Standard	72	1	HMI H2	8112210	0.44	8240244	98.45	60	120	
Ge Internal Standard	72	2	HMI He	774058	0.28	783465	98.80	60	120	
In Internal Standard	115	2	HMI He	2732132	0.93	2775841	98.43	60	120	
Ho-165	165	2	HMI He	17416146	0.69	17360012	100.32	60	120	

Blank Report

Sample Table

Sample Name	MB 280-429767/1-A
Data File Name	140_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:04:10-06:00
Sample Type	Blank
Dilution	1
Comment	429767 6020b
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	4.768	ppb	217.7582013	52866	0.5
Li	7	2	45	2.654	ppb	1560.206307	3717	0.5
Li	7	3	45	3.429	ppb	451.5085016	2237495	10
Be	9	1	6	-0.020	ppb	-194.6358938	3	0.5
B	11	1	6	0.551	ppb	23.33069659	363	0.5
Na	23	1	45	124.546	ppb	41.70046029	592129	25
Na	23	2	45	155.839	ppb	13.06174437	71773	25
Mg	24	2	45	-10.305	ppb	-49.31421509	1257	25
Al	27	2	45	4.169	ppb	34.37005768	97	15
K	39	1	45	-795.558	ppb	-0.228019888	988984	50
K	39	2	45	26.373	ppb	60.47312411	7319	50
Ca	40	1	45	45.375	ppb	2.825726917	141602	50
Ca	44	2	45	31.073	ppb	100.2065287	130	25
V	51	2	72	-0.275	ppb	-40.76131171	810	1
Cr	52	2	72	0.218	ppb	10.97409798	383	1
Mn	55	2	72	0.278	ppb	81.5739707	190	0.5
Fe	57	2	72	7.355	ppb	5.280510592	273	25
Co	59	2	72	0.005	ppb	242.5282882	27	0.5
Ni	60	2	72	0.088	ppb	174.8253192	220	1
Cu	63	2	72	0.264	ppb	25.85519712	1453	1
Zn	66	2	72	1.814	ppb	29.34410412	903	5
As	75	2	72	0.070	ppb	191.8258452	16	1
Se	78	1	72	0.001	ppb	1709.807175	5	1
Sr	88	2	72	0.036	ppb	105.7069714	57	0.5
Zr	90	2	72	-4.483	ppb	-217.0315643	87	1
Nb	93	2	72	1.008	ppb	15.94421168	3567	2
Mo	95	2	115	0.127	ppb	64.88211574	140	0.5
Pd	105	2	115	0.040	ppb	92.00118625	100	1
Ag	107	2	115	0.010	ppb	51.96882205	47	1
Cd	111	2	115	-0.019	ppb	-88.13976364	3	0.5
Sn	120	2	115	0.030	ppb	388.0508052	277	1
Sb	121	2	115	0.140	ppb	22.91732851	153	0.6
Ba	137	2	115	-0.052	ppb	-192.0325928	23	0.5
W	182	2	165	0.040	ppb	70.03690333	977	1
Pt	195	2	165	0.000	ppb	-5653.718572	57	1
Tl	205	2	165	0.010	ppb	15.59567217	203	0.1
Pb	208	2	165	0.016	ppb	29.15977684	1113	0.5
Th	232	2	165	0.061	ppb	18.7916959	1200	1
U	238	2	165	0.011	ppb	27.53918578	313	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	421909	0.50	446069	94.58	60	120	
Sc (IS)	45	1	HMI H2	12703692	0.59	13344586	95.20	60	120	
Sc (IS)	45	2	HMI He	533397	0.20	548684	97.21	60	120	
Sc (IS)	45	3	No Gas	37152752	1.12	39087130	95.05	60	120	
Ge Internal Standard	72	1	HMI H2	7831633	0.28	8240244	95.04	60	120	
Ge Internal Standard	72	2	HMI He	767828	0.66	783465	98.00	60	120	
In Internal Standard	115	2	HMI He	2759945	0.94	2775841	99.43	60	120	
Ho-165	165	2	HMI He	17390178	0.63	17360012	100.17	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429767/2-A
Data File Name	141_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:07:58-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429767 6020b
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	81.260	81.260	ppb	9.138	64659	400	20.3	80	120	>+/-20%
Li	7	2	45	57.691	57.691	ppb	27.641	4307	400	14.4	80	120	>+/-20%
Li	7	3	45	75.675	75.675	ppb	3.258	2688254	400	18.9	80	120	>+/-20%
Be	9	1	6	39.872	39.872	ppb	3.243	5815	40	99.7	80	120	
Na	23	2	45	24.003	24.003	ppb	74.072	54539	40	60.0	80	120	>+/-20%
Mg	24	2	45	-8.170	-8.170	ppb	-30.751	1397	40	-20.4	80	120	>+/-20%
Al	27	2	45	397.738	397.738	ppb	0.230	5925	40	994.3	80	120	>+/-20%
K	39	2	45	4.613	4.613	ppb	335.075	6762	40	11.5	80	120	>+/-20%
Ca	44	2	45	267.598	267.598	ppb	19.472	557	40	669.0	80	120	>+/-20%
V	51	2	72	39.771	39.771	ppb	2.398	30819	40	99.4	80	120	
Cr	52	2	72	41.133	41.133	ppb	2.621	41620	40	102.8	80	120	
Mn	55	2	72	42.491	42.491	ppb	5.000	15678	40	106.2	80	120	
Fe	57	2	72	429.767	429.767	ppb	3.069	8466	40	1074.4	80	120	>+/-20%
Co	59	2	72	40.131	40.131	ppb	0.871	78712	40	100.3	80	120	
Ni	60	2	72	40.734	40.734	ppb	0.086	23584	40	101.8	80	120	
Cu	63	2	72	40.354	40.354	ppb	0.703	67309	40	100.9	80	120	
Zn	66	2	72	42.064	42.064	ppb	4.409	8346	40	105.2	80	120	
As	75	2	72	36.541	36.541	ppb	3.104	4206	40	91.4	80	120	
Se	78	1	72	37.718	37.718	ppb	0.149	7515	40	94.3	80	120	
Nb	93	2	72	0.878	0.878	ppb	14.358	3197	40	2.2	80	120	>+/-20%
Mo	95	2	115	36.360	36.360	ppb	3.233	30460	40	90.9	80	120	
Pd	105	2	115	0.003	0.003	ppb	537.526	47	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.589	40.589	ppb	0.586	125936	40	101.5	80	120	
Cd	111	2	115	39.141	39.141	ppb	5.260	13777	40	97.9	80	120	
Sn	120	2	115	39.967	39.967	ppb	1.483	36831	40	99.9	80	120	
Sb	121	2	115	38.373	38.373	ppb	0.622	28430	40	95.9	80	120	
Ba	137	2	115	40.480	40.480	ppb	5.204	10147	40	101.2	80	120	
W	182	2	165	12.118	12.118	ppb	0.838	64278	40	30.3	80	120	>+/-20%
Pt	195	2	165	0.000	0.000	ppb	-3467.506	57	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.181	40.181	ppb	0.951	370887	40	100.5	80	120	
Pb	208	2	165	40.590	40.590	ppb	0.558	486430	40	101.5	80	120	
Th	232	2	165	39.821	39.821	ppb	1.619	564611	40	99.6	80	120	
U	238	2	165	37.153	37.153	ppb	0.800	635698	40	92.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	422142	0.10	446069	94.64	60	120	
Sc (IS)	45	1	HMI H2	12804735	0.40	13344586	95.95	60	120	
Sc (IS)	45	2	HMI He	538649	0.31	548684	98.17	60	120	
Sc (IS)	45	3	No Gas	37192720	0.96	39087130	95.15	60	120	
Ge Internal Standard	72	1	HMI H2	7858165	0.46	8240244	95.36	60	120	
Ge Internal Standard	72	2	HMI He	767679	0.33	783465	97.99	60	120	
In Internal Standard	115	2	HMI He	2751041	0.91	2775841	99.11	60	120	
Ho-165	165	2	HMI He	17499677	0.93	17360012	100.80	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-1-B
Data File Name	142SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:11:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	25.611	ppb	25.611	12.60	52220	500000	
Li	7	2	45	18.460	ppb	18.460	146.96	3714	500000	
Li	7	3	45	34.420	ppb	34.420	45.07	2349640	50000	
Be	9	1	6	0.266	ppb	0.266	82.06	43	2000	
B	11	1	6	17.841	ppb	17.841	2.57	3130	2000	
Na	23	1	45	469061.642	ppb	469061.642	0.47	551585952	2000	>LDR
Na	23	2	45	448833.673	ppb	448833.673	0.61	58043561	400000	
Mg	24	2	45	10359.674	ppb	10359.674	0.79	589435	400000	
Al	27	2	45	274.034	ppb	274.034	6.00	3887	400000	
K	39	1	45	121863.756	ppb	121863.756	0.56	125945218	400000	
K	39	2	45	126225.639	ppb	126225.639	1.47	3473280	400000	
Ca	40	1	45	17987.890	ppb	17987.890	0.73	30105271	400000	
Ca	44	2	45	17887.179	ppb	17887.179	1.68	30609	400000	
V	51	2	72	42.858	ppb	42.858	2.15	30572	2000	
Cr	52	2	72	5.019	ppb	5.019	5.71	4818	5000	
Mn	55	2	72	9.706	ppb	9.706	3.41	3367	10000	
Fe	57	2	72	136.117	ppb	136.117	5.64	2557	400000	
Co	59	2	72	0.143	ppb	0.143	22.76	273	2000	
Ni	60	2	72	4.342	ppb	4.342	13.01	2460	5000	
Cu	63	2	72	89.262	ppb	89.262	1.50	136247	5000	
Zn	66	2	72	24.401	ppb	24.401	5.87	4688	5000	
As	75	2	72	61.749	ppb	61.749	0.29	6554	2000	
Se	78	1	72	2.438	ppb	2.438	14.63	444	2000	
Sr	88	2	72	72.646	ppb	72.646	1.28	26386	4000	
Zr	90	2	72	2085.658	ppb	2085.658	4.60	9110	1000	
Nb	93	2	72	1.007	ppb	1.007	6.30	3287	200	
Mo	95	2	115	10.095	ppb	10.095	8.17	7726	2000	
Pd	105	2	115	0.034	ppb	0.034	56.21	83	100	
Ag	107	2	115	2.238	ppb	2.238	6.75	6338	100	
Cd	111	2	115	0.200	ppb	0.200	79.56	73	2000	
Sn	120	2	115	1.193	ppb	1.193	9.67	1220	2000	
Sb	121	2	115	4.219	ppb	4.219	10.70	2887	1000	
Ba	137	2	115	12.727	ppb	12.727	12.83	2927	5000	
W	182	2	165	0.916	ppb	0.916	10.32	5241	100	
Pt	195	2	165	0.005	ppb	0.005	55.93	73	100	
Tl	205	2	165	0.103	ppb	0.103	9.60	1003	2000	
Pb	208	2	165	0.168	ppb	0.168	4.05	2764	5000	
Th	232	2	165	0.239	ppb	0.239	10.54	3504	2000	
U	238	2	165	122.581	ppb	122.581	1.18	1971550	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	405819	0.77	446069	90.98	60	120	
Sc (IS)	45	1	HMI H2	11858648	0.43	13344586	88.86	60	120	
Sc (IS)	45	2	HMI He	511369	0.95	548684	93.20	60	120	
Sc (IS)	45	3	No Gas	35937214	0.99	39087130	91.94	60	120	
Ge Internal Standard	72	1	HMI H2	7112056	0.45	8240244	86.31	60	120	
Ge Internal Standard	72	2	HMI He	708410	0.74	783465	90.42	60	120	
In Internal Standard	115	2	HMI He	2505944	0.35	2775841	90.28	60	120	
Ho-165	165	2	HMI He	16451978	1.05	17360012	94.77	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-2-B
Data File Name	143SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:15:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	27.742	ppb	27.742	27.39	52996	500000	
Li	7	2	45	-6.012	ppb	-6.012	-339.28	3450	500000	
Li	7	3	45	41.638	ppb	41.638	12.47	2396291	50000	
Be	9	1	6	0.120	ppb	0.120	88.46	23	2000	
B	11	1	6	14.982	ppb	14.982	11.30	2717	2000	
Na	23	1	45	460883.623	ppb	460883.623	0.85	546950712	2000	>LDR
Na	23	2	45	443651.135	ppb	443651.135	0.99	56854472	400000	
Mg	24	2	45	10213.913	ppb	10213.913	0.36	575921	400000	
Al	27	2	45	241.478	ppb	241.478	2.77	3397	400000	
K	39	1	45	116283.482	ppb	116283.482	0.94	121360168	400000	
K	39	2	45	122142.461	ppb	122142.461	0.64	3330912	400000	
Ca	40	1	45	17655.803	ppb	17655.803	1.01	29822449	400000	
Ca	44	2	45	16910.443	ppb	16910.443	4.49	28676	400000	
V	51	2	72	42.248	ppb	42.248	0.73	29925	2000	
Cr	52	2	72	4.299	ppb	4.299	2.52	4117	5000	
Mn	55	2	72	6.457	ppb	6.457	11.21	2250	10000	
Fe	57	2	72	122.179	ppb	122.179	12.39	2290	400000	
Co	59	2	72	0.200	ppb	0.200	29.37	373	2000	
Ni	60	2	72	3.992	ppb	3.992	4.28	2257	5000	
Cu	63	2	72	84.673	ppb	84.673	0.49	128311	5000	
Zn	66	2	72	21.383	ppb	21.383	7.10	4141	5000	
As	75	2	72	62.807	ppb	62.807	3.73	6616	2000	
Se	78	1	72	2.300	ppb	2.300	25.20	424	2000	
Sr	88	2	72	69.716	ppb	69.716	2.55	25134	4000	
Zr	90	2	72	1206.925	ppb	1206.925	1.71	5274	1000	
Nb	93	2	72	0.723	ppb	0.723	5.67	2527	200	
Mo	95	2	115	10.006	ppb	10.006	2.05	7575	2000	
Pd	105	2	115	0.059	ppb	0.059	38.72	113	100	
Ag	107	2	115	1.820	ppb	1.820	2.60	5104	100	
Cd	111	2	115	0.108	ppb	0.108	33.68	43	2000	
Sn	120	2	115	0.206	ppb	0.206	23.56	393	2000	
Sb	121	2	115	4.004	ppb	4.004	5.26	2714	1000	
Ba	137	2	115	9.912	ppb	9.912	0.75	2264	5000	
W	182	2	165	0.841	ppb	0.841	2.50	4844	100	
Pt	195	2	165	0.009	ppb	0.009	54.13	90	100	
Tl	205	2	165	0.089	ppb	0.089	11.25	877	2000	
Pb	208	2	165	0.081	ppb	0.081	24.71	1777	5000	
Th	232	2	165	0.057	ppb	0.057	17.57	1077	2000	
U	238	2	165	113.966	ppb	113.966	0.15	1823108	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	412860	0.49	446069	92.56	60	120	
Sc (IS)	45	1	HMI H2	11967719	0.24	13344586	89.68	60	120	
Sc (IS)	45	2	HMI He	506733	0.41	548684	92.35	60	120	
Sc (IS)	45	3	No Gas	35979326	0.08	39087130	92.05	60	120	
Ge Internal Standard	72	1	HMI H2	7192541	0.65	8240244	87.29	60	120	
Ge Internal Standard	72	2	HMI He	703039	0.36	783465	89.73	60	120	
In Internal Standard	115	2	HMI He	2479470	2.05	2775841	89.32	60	120	
Ho-165	165	2	HMI He	16362116	0.27	17360012	94.25	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-3-D
Data File Name	144SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:19:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	13.674	ppb	13.674	39.59	52712	500000	
Li	7	2	45	-7.222	ppb	-7.222	-344.23	3484	500000	
Li	7	3	45	14.399	ppb	14.399	10.82	2200734	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	21.215	ppb	21.215	2.94	3774	2000	
Na	23	1	45	29384.913	ppb	29384.913	0.50	36412134	2000	>LDR
Na	23	2	45	28384.974	ppb	28384.974	1.19	3730541	400000	
Mg	24	2	45	13263.400	ppb	13263.400	0.72	757064	400000	
Al	27	2	45	3.007	ppb	3.007	68.07	77	400000	
K	39	1	45	6981.986	ppb	6981.986	0.68	9224500	400000	
K	39	2	45	7617.821	ppb	7617.821	0.81	216365	400000	
Ca	40	1	45	54525.672	ppb	54525.672	1.10	94991955	400000	
Ca	44	2	45	53174.352	ppb	53174.352	1.12	91193	400000	
V	51	2	72	13.975	ppb	13.975	3.22	10921	2000	
Cr	52	2	72	3.787	ppb	3.787	3.41	3784	5000	
Mn	55	2	72	1.193	ppb	1.193	8.56	500	10000	
Fe	57	2	72	270.692	ppb	270.692	5.39	5114	400000	
Co	59	2	72	0.081	ppb	0.081	39.42	167	2000	
Ni	60	2	72	0.883	ppb	0.883	29.92	643	5000	
Cu	63	2	72	0.383	ppb	0.383	17.77	1567	5000	
Zn	66	2	72	2.183	ppb	2.183	43.90	923	5000	
As	75	2	72	15.018	ppb	15.018	3.44	1647	2000	
Se	78	1	72	2.534	ppb	2.534	7.35	492	2000	
Sr	88	2	72	253.547	ppb	253.547	1.01	94762	4000	
Zr	90	2	72	117.121	ppb	117.121	29.71	623	1000	
Nb	93	2	72	0.344	ppb	0.344	20.47	1600	200	
Mo	95	2	115	5.702	ppb	5.702	1.35	4541	2000	
Pd	105	2	115	0.037	ppb	0.037	81.29	90	100	
Ag	107	2	115	0.062	ppb	0.062	18.59	197	100	
Cd	111	2	115	0.012	ppb	0.012	148.31	13	2000	
Sn	120	2	115	0.200	ppb	0.200	34.92	407	2000	
Sb	121	2	115	0.290	ppb	0.290	39.64	250	1000	
Ba	137	2	115	70.018	ppb	70.018	2.33	16556	5000	
W	182	2	165	0.282	ppb	0.282	8.69	2164	100	
Pt	195	2	165	-0.003	ppb	-0.003	-307.69	43	100	
Tl	205	2	165	0.016	ppb	0.016	39.26	250	2000	
Pb	208	2	165	0.043	ppb	0.043	8.72	1390	5000	
Th	232	2	165	0.027	ppb	0.027	18.79	693	2000	
U	238	2	165	51.840	ppb	51.840	0.10	850655	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416879	0.61	446069	93.46	60	120	
Sc (IS)	45	1	HMI H2	12360261	1.04	13344586	92.62	60	120	
Sc (IS)	45	2	HMI He	513331	0.80	548684	93.56	60	120	
Sc (IS)	45	3	No Gas	35461087	0.01	39087130	90.72	60	120	
Ge Internal Standard	72	1	HMI H2	7589422	0.62	8240244	92.10	60	120	
Ge Internal Standard	72	2	HMI He	729702	0.44	783465	93.14	60	120	
In Internal Standard	115	2	HMI He	2599605	0.84	2775841	93.65	60	120	
Ho-165	165	2	HMI He	16782807	0.32	17360012	96.68	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-3-Dsd@5
Data File Name	145SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:23:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.658	ppb	12.658	15.90	53668	500000	
Li	7	2	45	-20.582	ppb	-20.582	-221.57	3357	500000	
Li	7	3	45	22.188	ppb	22.188	63.08	2325997	50000	
Be	9	1	6	-0.021	ppb	-0.021	-183.06	3	2000	
B	11	1	6	3.181	ppb	3.181	14.87	830	2000	
Na	23	1	45	5875.662	ppb	5875.662	0.93	7779006	2000	
Na	23	2	45	5545.720	ppb	5545.720	0.86	768565	400000	
Mg	24	2	45	2664.272	ppb	2664.272	1.65	153577	400000	
Al	27	2	45	5.372	ppb	5.372	40.20	110	400000	
K	39	1	45	1460.871	ppb	1460.871	1.69	3429495	400000	
K	39	2	45	1551.550	ppb	1551.550	4.61	49117	400000	
Ca	40	1	45	10775.930	ppb	10775.930	0.72	19214368	400000	
Ca	44	2	45	10466.212	ppb	10466.212	2.55	18017	400000	
V	51	2	72	2.584	ppb	2.584	9.47	2834	2000	
Cr	52	2	72	0.865	ppb	0.865	18.29	993	5000	
Mn	55	2	72	0.422	ppb	0.422	28.34	233	10000	
Fe	57	2	72	55.410	ppb	55.410	4.73	1157	400000	
Co	59	2	72	0.011	ppb	0.011	73.01	37	2000	
Ni	60	2	72	0.091	ppb	0.091	109.74	213	5000	
Cu	63	2	72	0.149	ppb	0.149	40.30	1213	5000	
Zn	66	2	72	12.407	ppb	12.407	7.82	2747	5000	
As	75	2	72	3.074	ppb	3.074	13.26	346	2000	
Se	78	1	72	0.476	ppb	0.476	10.21	99	2000	
Sr	88	2	72	50.165	ppb	50.165	1.96	18962	4000	
Zr	90	2	72	10.358	ppb	10.358	56.27	150	1000	
Nb	93	2	72	0.033	ppb	0.033	117.85	770	200	
Mo	95	2	115	1.118	ppb	1.118	10.40	910	2000	
Pd	105	2	115	0.025	ppb	0.025	92.20	73	100	
Ag	107	2	115	0.014	ppb	0.014	14.52	57	100	
Cd	111	2	115	-0.008	ppb	-0.008	-423.77	7	2000	
Sn	120	2	115	-0.072	ppb	-0.072	-75.54	170	2000	
Sb	121	2	115	0.182	ppb	0.182	29.06	173	1000	
Ba	137	2	115	13.403	ppb	13.403	5.58	3180	5000	
W	182	2	165	0.048	ppb	0.048	44.79	970	100	
Pt	195	2	165	-0.006	ppb	-0.006	-77.80	27	100	
Tl	205	2	165	0.011	ppb	0.011	94.35	207	2000	
Pb	208	2	165	0.014	ppb	0.014	38.93	1043	5000	
Th	232	2	165	-0.001	ppb	-0.001	-88.16	307	2000	
U	238	2	165	10.255	ppb	10.255	1.43	165590	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	436007	0.41	446069	97.74	60	120	
Sc (IS)	45	1	HMI H2	12618224	0.35	13344586	94.56	60	120	
Sc (IS)	45	2	HMI He	513567	0.50	548684	93.60	60	120	
Sc (IS)	45	3	No Gas	36710311	0.58	39087130	93.92	60	120	
Ge Internal Standard	72	1	HMI H2	7755713	0.78	8240244	94.12	60	120	
Ge Internal Standard	72	2	HMI He	736740	0.22	783465	94.04	60	120	
In Internal Standard	115	2	HMI He	2586328	0.69	2775841	93.17	60	120	
Ho-165	165	2	HMI He	16506558	0.80	17360012	95.08	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-3-E MS
Data File Name	146SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:26:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	106.859	ppb	106.859	3.02	63953	500000	
Li	7	2	45	65.505	ppb	65.505	23.37	4034	500000	
Li	7	3	45	102.307	ppb	102.307	15.89	2625658	50000	
Be	9	1	6	39.393	ppb	39.393	8.73	5504	2000	
B	11	1	6	51.344	ppb	51.344	5.01	8492	2000	
Na	23	1	45	28946.016	ppb	28946.016	0.59	34718724	2000	>LDR
Na	23	2	45	28236.668	ppb	28236.668	0.88	3581983	400000	
Mg	24	2	45	13287.859	ppb	13287.859	0.33	731991	400000	
Al	27	2	45	401.557	ppb	401.557	5.47	5501	400000	
K	39	1	45	6876.372	ppb	6876.372	0.74	8818711	400000	
K	39	2	45	7598.228	ppb	7598.228	1.61	208291	400000	
Ca	40	1	45	53877.545	ppb	53877.545	0.76	90843155	400000	
Ca	44	2	45	52776.217	ppb	52776.217	1.23	87353	400000	
V	51	2	72	53.623	ppb	53.623	0.88	37707	2000	
Cr	52	2	72	44.773	ppb	44.773	2.23	41453	5000	
Mn	55	2	72	43.143	ppb	43.143	2.57	14567	10000	
Fe	57	2	72	432.328	ppb	432.328	4.46	7792	400000	
Co	59	2	72	39.705	ppb	39.705	1.74	71268	2000	
Ni	60	2	72	39.942	ppb	39.942	4.06	21164	5000	
Cu	63	2	72	42.491	ppb	42.491	1.73	64809	5000	
Zn	66	2	72	42.563	ppb	42.563	4.30	7722	5000	
As	75	2	72	52.353	ppb	52.353	2.23	5512	2000	
Se	78	1	72	38.923	ppb	38.923	3.18	7224	2000	
Sr	88	2	72	290.669	ppb	290.669	0.60	104591	4000	
Zr	90	2	72	9515.407	ppb	9515.407	4.50	40870	1000	>LDR
Nb	93	2	72	0.275	ppb	0.275	22.67	1363	200	
Mo	95	2	115	42.947	ppb	42.947	0.51	32925	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-74.29	23	100	
Ag	107	2	115	40.261	ppb	40.261	1.08	114310	100	
Cd	111	2	115	39.053	ppb	39.053	4.96	12579	2000	
Sn	120	2	115	39.794	ppb	39.794	2.41	33560	2000	
Sb	121	2	115	41.125	ppb	41.125	1.65	27882	1000	
Ba	137	2	115	103.621	ppb	103.621	4.16	23706	5000	
W	182	2	165	12.707	ppb	12.707	2.01	62410	100	
Pt	195	2	165	0.000	ppb	0.000	1374.08	53	100	
Tl	205	2	165	40.965	ppb	40.965	1.03	350308	2000	
Pb	208	2	165	40.933	ppb	40.933	0.81	454451	5000	
Th	232	2	165	40.597	ppb	40.597	0.78	533287	2000	
U	238	2	165	91.857	ppb	91.857	3.05	1456145	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	404472	0.23	446069	90.67	60	120	
Sc (IS)	45	1	HMI H2	11961638	0.09	13344586	89.64	60	120	
Sc (IS)	45	2	HMI He	495406	0.34	548684	90.29	60	120	
Sc (IS)	45	3	No Gas	34227460	0.35	39087130	87.57	60	120	
Ge Internal Standard	72	1	HMI H2	7321194	0.69	8240244	88.85	60	120	
Ge Internal Standard	72	2	HMI He	702574	0.52	783465	89.68	60	120	
In Internal Standard	115	2	HMI He	2517582	1.05	2775841	90.70	60	120	
Ho-165	165	2	HMI He	16212101	0.66	17360012	93.39	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-3-F MSD
Data File Name	147SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:30:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	98.549	ppb	98.549	2.78	61595	500000	
Li	7	2	45	73.165	ppb	73.165	53.76	4097	500000	
Li	7	3	45	105.387	ppb	105.387	13.69	2622150	50000	
Be	9	1	6	40.517	ppb	40.517	1.45	5611	2000	
B	11	1	6	48.338	ppb	48.338	5.98	7939	2000	
Na	23	1	45	29863.898	ppb	29863.898	0.75	35119799	2000	>LDR
Na	23	2	45	28950.180	ppb	28950.180	1.13	3664224	400000	
Mg	24	2	45	13483.037	ppb	13483.037	0.62	741307	400000	
Al	27	2	45	393.764	ppb	393.764	4.74	5384	400000	
K	39	1	45	7145.395	ppb	7145.395	0.41	8920859	400000	
K	39	2	45	7719.327	ppb	7719.327	0.73	211117	400000	
Ca	40	1	45	55373.089	ppb	55373.089	0.45	91572712	400000	
Ca	44	2	45	52719.056	ppb	52719.056	1.48	87094	400000	
V	51	2	72	54.500	ppb	54.500	1.22	38198	2000	
Cr	52	2	72	44.449	ppb	44.449	3.76	41038	5000	
Mn	55	2	72	43.212	ppb	43.212	4.99	14547	10000	
Fe	57	2	72	435.821	ppb	435.821	1.82	7832	400000	
Co	59	2	72	39.600	ppb	39.600	1.29	70877	2000	
Ni	60	2	72	39.041	ppb	39.041	1.23	20634	5000	
Cu	63	2	72	42.395	ppb	42.395	0.95	64484	5000	
Zn	66	2	72	40.246	ppb	40.246	5.70	7309	5000	
As	75	2	72	51.760	ppb	51.760	2.65	5434	2000	
Se	78	1	72	39.542	ppb	39.542	2.45	7216	2000	
Sr	88	2	72	297.238	ppb	297.238	2.11	106645	4000	
Zr	90	2	72	10072.910	ppb	10072.910	0.31	43142	1000	>LDR
Nb	93	2	72	0.175	ppb	0.175	27.94	1100	200	
Mo	95	2	115	43.518	ppb	43.518	1.20	33025	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-96.50	27	100	
Ag	107	2	115	40.605	ppb	40.605	1.90	114118	100	
Cd	111	2	115	40.814	ppb	40.814	2.44	13016	2000	
Sn	120	2	115	38.711	ppb	38.711	1.70	32327	2000	
Sb	121	2	115	39.968	ppb	39.968	3.09	26821	1000	
Ba	137	2	115	109.514	ppb	109.514	3.64	24804	5000	
W	182	2	165	12.396	ppb	12.396	2.20	61302	100	
Pt	195	2	165	0.006	ppb	0.006	187.21	80	100	
Tl	205	2	165	40.245	ppb	40.245	0.93	346460	2000	
Pb	208	2	165	40.368	ppb	40.368	1.08	451190	5000	
Th	232	2	165	40.564	ppb	40.564	0.73	536427	2000	
U	238	2	165	92.281	ppb	92.281	3.67	1472374	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	400902	0.21	446069	89.87	60	120	
Sc (IS)	45	1	HMI H2	11732226	0.10	13344586	87.92	60	120	
Sc (IS)	45	2	HMI He	494466	0.22	548684	90.12	60	120	
Sc (IS)	45	3	No Gas	33950268	0.42	39087130	86.86	60	120	
Ge Internal Standard	72	1	HMI H2	7198368	0.64	8240244	87.36	60	120	
Ge Internal Standard	72	2	HMI He	700574	0.40	783465	89.42	60	120	
In Internal Standard	115	2	HMI He	2492087	0.49	2775841	89.78	60	120	
Ho-165	165	2	HMI He	16320322	0.23	17360012	94.01	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-3-D pds
Data File Name	148SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:34:32-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	225.640	ppb	225.640	3.79	79383	500000	
Li	7	2	45	202.681	ppb	202.681	13.37	5248	500000	
Li	7	3	45	226.884	ppb	226.884	5.27	3327288	50000	
Be	9	1	6	203.385	ppb	203.385	2.60	28031	2000	
B	11	1	6	19.083	ppb	19.083	4.17	3277	2000	
Na	23	1	45	28535.477	ppb	28535.477	0.79	33780548	2000	>LDR
Na	23	2	45	27742.796	ppb	27742.796	1.10	3484116	400000	
Mg	24	2	45	13020.977	ppb	13020.977	0.31	709989	400000	
Al	27	2	45	2121.230	ppb	2121.230	1.43	28622	400000	
K	39	1	45	6761.674	ppb	6761.674	0.18	8586240	400000	
K	39	2	45	7404.018	ppb	7404.018	0.44	201055	400000	
Ca	40	1	45	53037.345	ppb	53037.345	0.46	88248925	400000	
Ca	44	2	45	52513.553	ppb	52513.553	0.95	86032	400000	
V	51	2	72	219.998	ppb	219.998	1.09	150618	2000	
Cr	52	2	72	213.585	ppb	213.585	0.37	195620	5000	
Mn	55	2	72	215.767	ppb	215.767	1.15	71957	10000	
Fe	57	2	72	2381.817	ppb	2381.817	1.80	42061	400000	
Co	59	2	72	203.882	ppb	203.882	1.28	363020	2000	
Ni	60	2	72	198.628	ppb	198.628	1.41	103819	5000	
Cu	63	2	72	206.537	ppb	206.537	0.59	308981	5000	
Zn	66	2	72	215.096	ppb	215.096	2.98	36625	5000	
As	75	2	72	200.350	ppb	200.350	1.54	20907	2000	
Se	78	1	72	196.461	ppb	196.461	1.00	35734	2000	
Sr	88	2	72	455.041	ppb	455.041	0.72	162428	4000	
Zr	90	2	72	54522.313	ppb	54522.313	0.61	231907	1000	>LDR
Nb	93	2	72	3.746	ppb	3.746	7.21	10287	200	
Mo	95	2	115	205.340	ppb	205.340	1.76	158018	2000	
Pd	105	2	115	0.006	ppb	0.006	425.25	47	100	
Ag	107	2	115	48.566	ppb	48.566	1.57	138523	100	
Cd	111	2	115	199.021	ppb	199.021	2.69	64368	2000	
Sn	120	2	115	203.981	ppb	203.981	3.07	171850	2000	
Sb	121	2	115	204.035	ppb	204.035	1.43	138777	1000	
Ba	137	2	115	273.174	ppb	273.174	3.03	62727	5000	
W	182	2	165	210.175	ppb	210.175	0.65	1021235	100	
Pt	195	2	165	0.038	ppb	0.038	24.65	213	100	
Tl	205	2	165	225.496	ppb	225.496	0.18	1928243	2000	
Pb	208	2	165	205.888	ppb	205.888	0.65	2282775	5000	
Th	232	2	165	244.624	ppb	244.624	1.32	3212394	2000	
U	238	2	165	261.659	ppb	261.659	1.06	4147853	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	399329	0.62	446069	89.52	60	120	
Sc (IS)	45	1	HMI H2	11804096	0.45	13344586	88.46	60	120	
Sc (IS)	45	2	HMI He	490346	0.22	548684	89.37	60	120	
Sc (IS)	45	3	No Gas	34128749	0.53	39087130	87.31	60	120	
Ge Internal Standard	72	1	HMI H2	7177351	0.26	8240244	87.10	60	120	
Ge Internal Standard	72	2	HMI He	697057	0.61	783465	88.97	60	120	
In Internal Standard	115	2	HMI He	2529544	2.12	2775841	91.13	60	120	
Ho-165	165	2	HMI He	16215214	0.56	17360012	93.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	149_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:38:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	525.431	ppb	1.931	126167	500	105.1	90	110	
Li	7	2	45	498.159	ppb	4.433	8266	500	99.6	90	110	
Li	7	3	45	553.664	ppb	3.844	5567560	500	110.7	90	110	>+\-10%
Be	9	1	6	49.071	ppb	2.411	7332	50	98.1	90	110	
B	11	1	6	40.952	ppb	10.864	7295	50	81.9	90	110	>+\-10%
Na	23	1	45	5040.252	ppb	0.803	6599052	5000	100.8	90	110	
Na	23	2	45	4732.224	ppb	1.036	658107	5000	94.6	90	110	
Mg	24	2	45	5042.469	ppb	1.462	286933	5000	100.8	90	110	
Al	27	2	45	5007.314	ppb	0.582	70200	5000	100.1	90	110	
K	39	1	45	5030.236	ppb	1.253	7153617	5000	100.6	90	110	
K	39	2	45	4975.113	ppb	1.315	142508	5000	99.5	90	110	
Ca	40	1	45	4962.339	ppb	0.420	8702116	5000	99.2	90	110	
Ca	44	2	45	5174.800	ppb	3.123	8879	5000	103.5	90	110	
V	51	2	72	48.040	ppb	3.191	34998	50	96.1	90	110	
Cr	52	2	72	49.263	ppb	0.836	47101	50	98.5	90	110	
Mn	55	2	72	51.857	ppb	2.276	18071	50	103.7	90	110	
Fe	57	2	72	4957.466	ppb	1.155	91028	5000	99.1	90	110	
Co	59	2	72	49.109	ppb	2.182	91068	50	98.2	90	110	
Ni	60	2	72	47.736	ppb	3.352	26105	50	95.5	90	110	
Cu	63	2	72	49.186	ppb	0.912	77356	50	98.4	90	110	
Zn	66	2	72	49.474	ppb	2.440	9186	50	98.9	90	110	
As	75	2	72	48.299	ppb	1.621	5254	50	96.6	90	110	
Se	78	1	72	49.702	ppb	3.207	9547	50	99.4	90	110	
Sr	88	2	72	48.143	ppb	1.014	17931	50	96.3	90	110	
Zr	90	2	72	89.143	ppb	23.289	497	50	178.3	90	110	>+\-10%
Nb	93	2	72	90.341	ppb	1.234	242764	100	90.3	90	110	
Mo	95	2	115	48.655	ppb	3.031	37565	50	97.3	90	110	
Pd	105	2	115	51.549	ppb	1.673	67112	50	103.1	90	110	
Ag	107	2	115	49.322	ppb	2.510	141050	50	98.6	90	110	
Cd	111	2	115	49.271	ppb	3.213	15989	50	98.5	90	110	
Sn	120	2	115	49.885	ppb	2.373	42321	50	99.8	90	110	
Sb	121	2	115	51.418	ppb	1.782	35103	50	102.8	90	110	
Ba	137	2	115	49.054	ppb	0.222	11325	50	98.1	90	110	
W	182	2	165	49.908	ppb	2.527	246318	50	99.8	90	110	
Pt	195	2	165	49.813	ppb	2.374	213976	50	99.6	90	110	
Tl	205	2	165	50.232	ppb	1.209	435436	50	100.5	90	110	
Pb	208	2	165	50.041	ppb	1.666	562990	50	100.1	90	110	
Th	232	2	165	49.569	ppb	1.309	660027	50	99.1	90	110	
U	238	2	165	46.623	ppb	1.814	749144	50	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432520	1.79	446069	96.96	60	120	
Sc (IS)	45	1	HMI H2	12364468	0.36	13344586	92.66	60	120	
Sc (IS)	45	2	HMI He	509797	0.61	548684	92.91	60	120	
Sc (IS)	45	3	No Gas	36635222	0.48	39087130	93.73	60	120	
Ge Internal Standard	72	1	HMI H2	7577073	0.17	8240244	91.95	60	120	
Ge Internal Standard	72	2	HMI He	725837	0.23	783465	92.64	60	120	
In Internal Standard	115	2	HMI He	2535944	0.59	2775841	91.36	60	120	
Ho-165	165	2	HMI He	16435961	1.16	17360012	94.68	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	150_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:42:07-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	25.064	ppb	46.7	2360433	10	>RL
Be	9	1	6	0.065	ppb	114.9	17	0.5	
B	11	1	6	0.590	ppb	114.3	390	0.5	>RL
Na	23	1	45	-27.786	ppb	-11.4	395551	25	
Na	23	2	45	-33.509	ppb	-15.9	44322	25	
Mg	24	2	45	2.378	ppb	179.5	1924	25	
Al	27	2	45	4.685	ppb	44.8	100	15	
K	39	1	45	37.198	ppb	23.9	1874163	50	
K	39	2	45	22.375	ppb	89.5	6905	50	
Ca	40	1	45	3.371	ppb	13.0	65600	50	
Ca	44	2	45	-14.491	ppb	-163.7	47	25	
V	51	2	72	0.155	ppb	89.9	1077	1	
Cr	52	2	72	-0.009	ppb	-729.6	147	1	
Mn	55	2	72	0.170	ppb	111.2	143	0.5	
Fe	57	2	72	2.117	ppb	38.5	163	25	
Co	59	2	72	0.036	ppb	22.0	83	0.5	
Ni	60	2	72	0.016	ppb	513.1	170	1	
Cu	63	2	72	0.113	ppb	90.9	1147	1	
Zn	66	2	72	0.603	ppb	155.3	647	5	
As	75	2	72	0.071	ppb	14.7	15	1	
Se	78	1	72	0.071	ppb	43.9	19	1	
Sr	88	2	72	0.034	ppb	313.5	53	0.5	
Zr	90	2	72	-1.319	ppb	-425.1	97	1	
Nb	93	2	72	2.947	ppb	8.6	8616	2	>RL
Mo	95	2	115	0.163	ppb	20.7	160	0.5	
Pd	105	2	115	0.044	ppb	28.3	100	1	
Ag	107	2	115	0.034	ppb	25.7	117	1	
Cd	111	2	115	0.012	ppb	145.6	13	0.5	
Sn	120	2	115	-0.024	ppb	-351.2	213	1	
Sb	121	2	115	0.743	ppb	10.4	567	0.6	>RL
Ba	137	2	115	-0.103	ppb	-40.8	10	0.5	
W	182	2	165	0.070	ppb	35.1	1087	1	
Pt	195	2	165	0.007	ppb	48.6	87	1	
Tl	205	2	165	0.022	ppb	19.5	300	0.1	
Pb	208	2	165	0.009	ppb	56.8	987	0.5	
Th	232	2	165	0.080	ppb	16.3	1403	1	
U	238	2	165	0.062	ppb	20.6	1127	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445111	0.37	446069	99.79	60	120	
Sc (IS)	45	1	HMI H2	12542474	0.15	13344586	93.99	60	120	
Sc (IS)	45	2	HMI He	511131	0.70	548684	93.16	60	120	
Sc (IS)	45	3	No Gas	36975762	0.15	39087130	94.60	60	120	
Ge Internal Standard	72	1	HMI H2	7649698	0.78	8240244	92.83	60	120	
Ge Internal Standard	72	2	HMI He	730099	0.43	783465	93.19	60	120	
In Internal Standard	115	2	HMI He	2603588	0.71	2775841	93.79	60	120	
Ho-165	165	2	HMI He	16643871	0.63	17360012	95.87	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-4-B
Data File Name	151SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:45:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.344	ppb	16.344	22.45	50846	500000	
Li	7	2	45	0.479	ppb	0.479	6255.28	3447	500000	
Li	7	3	45	22.396	ppb	22.396	57.46	2170509	50000	
Be	9	1	6	0.030	ppb	0.030	425.89	10	2000	
B	11	1	6	21.453	ppb	21.453	9.14	3664	2000	
Na	23	1	45	29848.943	ppb	29848.943	0.58	35412362	2000	>LDR
Na	23	2	45	28768.032	ppb	28768.032	0.94	3663262	400000	
Mg	24	2	45	13540.851	ppb	13540.851	1.34	748891	400000	
Al	27	2	45	9.523	ppb	9.523	27.05	163	400000	
K	39	1	45	7157.838	ppb	7157.838	0.47	9012324	400000	
K	39	2	45	7759.163	ppb	7759.163	2.24	213425	400000	
Ca	40	1	45	55334.710	ppb	55334.710	1.01	92315932	400000	
Ca	44	2	45	53751.226	ppb	53751.226	2.45	89319	400000	
V	51	2	72	14.585	ppb	14.585	5.00	11027	2000	
Cr	52	2	72	3.070	ppb	3.070	4.25	3007	5000	
Mn	55	2	72	1.295	ppb	1.295	13.35	520	10000	
Fe	57	2	72	29.957	ppb	29.957	14.77	657	400000	
Co	59	2	72	0.119	ppb	0.119	23.64	230	2000	
Ni	60	2	72	0.572	ppb	0.572	29.89	460	5000	
Cu	63	2	72	0.708	ppb	0.708	7.35	2014	5000	
Zn	66	2	72	2.454	ppb	2.454	9.49	943	5000	
As	75	2	72	14.233	ppb	14.233	2.29	1516	2000	
Se	78	1	72	2.645	ppb	2.645	11.71	487	2000	
Sr	88	2	72	261.812	ppb	261.812	1.54	95013	4000	
Zr	90	2	72	-1.422	ppb	-1.422	-374.20	93	1000	
Nb	93	2	72	2.801	ppb	2.801	4.62	7982	200	
Mo	95	2	115	5.385	ppb	5.385	0.97	4237	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-726.03	37	100	
Ag	107	2	115	0.036	ppb	0.036	51.63	120	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.308	ppb	0.308	31.20	493	2000	
Sb	121	2	115	0.769	ppb	0.769	6.36	577	1000	
Ba	137	2	115	68.895	ppb	68.895	1.99	16089	5000	
W	182	2	165	0.287	ppb	0.287	7.19	2144	100	
Pt	195	2	165	0.004	ppb	0.004	222.31	70	100	
Tl	205	2	165	0.023	ppb	0.023	8.61	303	2000	
Pb	208	2	165	0.052	ppb	0.052	6.46	1460	5000	
Th	232	2	165	0.212	ppb	0.212	8.12	3147	2000	
U	238	2	165	53.403	ppb	53.403	1.40	859009	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	400733	0.72	446069	89.84	60	120	
Sc (IS)	45	1	HMI H2	11835992	0.55	13344586	88.70	60	120	
Sc (IS)	45	2	HMI He	497440	0.90	548684	90.66	60	120	
Sc (IS)	45	3	No Gas	34241204	0.76	39087130	87.60	60	120	
Ge Internal Standard	72	1	HMI H2	7195253	0.96	8240244	87.32	60	120	
Ge Internal Standard	72	2	HMI He	708543	0.48	783465	90.44	60	120	
In Internal Standard	115	2	HMI He	2567357	0.83	2775841	92.49	60	120	
Ho-165	165	2	HMI He	16452415	0.56	17360012	94.77	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-5-B
Data File Name	152SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:49:43-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.734	ppb	6.734	34.25	49930	500000	
Li	7	2	45	-0.345	ppb	-0.345	-2915.02	3457	500000	
Li	7	3	45	23.321	ppb	23.321	33.05	2160164	50000	
Be	9	1	6	0.005	ppb	0.005	913.22	7	2000	
B	11	1	6	17.256	ppb	17.256	12.78	3014	2000	
Na	23	1	45	21080.329	ppb	21080.329	0.63	25332385	2000	>LDR
Na	23	2	45	20451.794	ppb	20451.794	0.62	2631889	400000	
Mg	24	2	45	11911.532	ppb	11911.532	0.53	662516	400000	
Al	27	2	45	25.716	ppb	25.716	15.98	387	400000	
K	39	1	45	3831.912	ppb	3831.912	0.54	5674547	400000	
K	39	2	45	4585.297	ppb	4585.297	1.45	129323	400000	
Ca	40	1	45	49668.943	ppb	49668.943	0.91	83541875	400000	
Ca	44	2	45	47533.643	ppb	47533.643	1.27	79423	400000	
V	51	2	72	5.722	ppb	5.722	8.32	4941	2000	
Cr	52	2	72	3.169	ppb	3.169	4.60	3127	5000	
Mn	55	2	72	1.223	ppb	1.223	23.08	500	10000	
Fe	57	2	72	85.716	ppb	85.716	19.10	1670	400000	
Co	59	2	72	0.070	ppb	0.070	36.89	143	2000	
Ni	60	2	72	0.533	ppb	0.533	21.12	443	5000	
Cu	63	2	72	0.870	ppb	0.870	8.55	2280	5000	
Zn	66	2	72	74.995	ppb	74.995	0.75	13446	5000	
As	75	2	72	2.578	ppb	2.578	14.65	283	2000	
Se	78	1	72	2.665	ppb	2.665	10.67	496	2000	
Sr	88	2	72	232.891	ppb	232.891	2.07	85302	4000	
Zr	90	2	72	304.103	ppb	304.103	15.71	1427	1000	
Nb	93	2	72	1.471	ppb	1.471	19.53	4544	200	
Mo	95	2	115	4.175	ppb	4.175	8.47	3294	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-99.52	30	100	
Ag	107	2	115	0.011	ppb	0.011	73.59	47	100	
Cd	111	2	115	-0.018	ppb	-0.018	-95.76	3	2000	
Sn	120	2	115	0.424	ppb	0.424	27.58	593	2000	
Sb	121	2	115	0.459	ppb	0.459	12.47	363	1000	
Ba	137	2	115	78.612	ppb	78.612	2.12	18372	5000	
W	182	2	165	0.242	ppb	0.242	14.43	1920	100	
Pt	195	2	165	0.005	ppb	0.005	133.57	77	100	
Tl	205	2	165	0.019	ppb	0.019	14.23	270	2000	
Pb	208	2	165	0.032	ppb	0.032	28.87	1240	5000	
Th	232	2	165	0.058	ppb	0.058	14.20	1097	2000	
U	238	2	165	50.043	ppb	50.043	0.99	805888	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	402790	0.65	446069	90.30	60	120	
Sc (IS)	45	1	HMI H2	11931967	0.44	13344586	89.41	60	120	
Sc (IS)	45	2	HMI He	500058	0.38	548684	91.14	60	120	
Sc (IS)	45	3	No Gas	33991705	0.29	39087130	86.96	60	120	
Ge Internal Standard	72	1	HMI H2	7280743	1.23	8240244	88.36	60	120	
Ge Internal Standard	72	2	HMI He	715086	0.01	783465	91.27	60	120	
In Internal Standard	115	2	HMI He	2569696	0.70	2775841	92.57	60	120	
Ho-165	165	2	HMI He	16471880	1.49	17360012	94.88	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-6-B
Data File Name	153SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:53:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.745	ppb	6.745	52.73	49793	500000	
Li	7	2	45	-9.665	ppb	-9.665	-144.48	3370	500000	
Li	7	3	45	18.898	ppb	18.898	69.53	2151705	50000	
Be	9	1	6	-0.019	ppb	-0.019	-219.39	3	2000	
B	11	1	6	15.826	ppb	15.826	6.49	2767	2000	
Na	23	1	45	21472.011	ppb	21472.011	0.63	25725260	2000	>LDR
Na	23	2	45	20945.505	ppb	20945.505	1.54	2693664	400000	
Mg	24	2	45	12066.364	ppb	12066.364	1.21	670969	400000	
Al	27	2	45	37.842	ppb	37.842	9.72	553	400000	
K	39	1	45	3962.909	ppb	3962.909	1.91	5793152	400000	
K	39	2	45	4722.017	ppb	4722.017	0.97	132978	400000	
Ca	40	1	45	50936.020	ppb	50936.020	0.39	85439649	400000	
Ca	44	2	45	48397.038	ppb	48397.038	2.18	80856	400000	
V	51	2	72	6.097	ppb	6.097	12.42	5228	2000	
Cr	52	2	72	3.233	ppb	3.233	7.27	3204	5000	
Mn	55	2	72	2.226	ppb	2.226	18.06	847	10000	
Fe	57	2	72	60.293	ppb	60.293	11.19	1217	400000	
Co	59	2	72	0.077	ppb	0.077	31.51	157	2000	
Ni	60	2	72	1.272	ppb	1.272	15.31	843	5000	
Cu	63	2	72	0.741	ppb	0.741	7.39	2094	5000	
Zn	66	2	72	74.700	ppb	74.700	2.94	13463	5000	
As	75	2	72	2.534	ppb	2.534	8.19	280	2000	
Se	78	1	72	2.767	ppb	2.767	9.35	517	2000	
Sr	88	2	72	233.211	ppb	233.211	0.84	85855	4000	
Zr	90	2	72	66.704	ppb	66.704	3.41	393	1000	
Nb	93	2	72	0.813	ppb	0.813	13.05	2820	200	
Mo	95	2	115	4.276	ppb	4.276	1.82	3404	2000	
Pd	105	2	115	0.022	ppb	0.022	135.81	70	100	
Ag	107	2	115	0.023	ppb	0.023	37.07	83	100	
Cd	111	2	115	-0.008	ppb	-0.008	-437.38	7	2000	
Sn	120	2	115	-0.046	ppb	-0.046	-120.18	193	2000	
Sb	121	2	115	0.263	ppb	0.263	14.28	230	1000	
Ba	137	2	115	77.382	ppb	77.382	2.00	18245	5000	
W	182	2	165	0.239	ppb	0.239	16.59	1934	100	
Pt	195	2	165	0.004	ppb	0.004	33.15	73	100	
Tl	205	2	165	0.025	ppb	0.025	31.57	327	2000	
Pb	208	2	165	0.050	ppb	0.050	21.36	1457	5000	
Th	232	2	165	0.046	ppb	0.046	17.55	957	2000	
U	238	2	165	49.332	ppb	49.332	0.63	805528	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	400080	0.81	446069	89.69	60	120	
Sc (IS)	45	1	HMI H2	11899397	0.49	13344586	89.17	60	120	
Sc (IS)	45	2	HMI He	499990	0.87	548684	91.13	60	120	
Sc (IS)	45	3	No Gas	34257736	0.18	39087130	87.64	60	120	
Ge Internal Standard	72	1	HMI H2	7307483	0.93	8240244	88.68	60	120	
Ge Internal Standard	72	2	HMI He	718744	0.42	783465	91.74	60	120	
In Internal Standard	115	2	HMI He	2592947	0.67	2775841	93.41	60	120	
Ho-165	165	2	HMI He	16700611	0.78	17360012	96.20	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-7-B
Data File Name	154SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T21:57:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.726	ppb	8.726	12.90	53130	500000	
Li	7	2	45	-38.892	ppb	-38.892	-54.25	3120	500000	
Li	7	3	45	17.342	ppb	17.342	55.80	2160888	50000	
Be	9	1	6	-0.019	ppb	-0.019	-216.88	3	2000	
B	11	1	6	16.505	ppb	16.505	18.11	3000	2000	
Na	23	1	45	21098.382	ppb	21098.382	11.66	26703972	2000	>LDR
Na	23	2	45	22654.043	ppb	22654.043	0.63	2931727	400000	
Mg	24	2	45	12570.698	ppb	12570.698	0.11	704274	400000	
Al	27	2	45	11.787	ppb	11.787	30.64	197	400000	
K	39	1	45	4582.718	ppb	4582.718	13.35	6792542	400000	
K	39	2	45	5681.965	ppb	5681.965	1.46	159960	400000	
Ca	40	1	45	44618.260	ppb	44618.260	12.89	79003917	400000	
Ca	44	2	45	47361.030	ppb	47361.030	0.81	79724	400000	
V	51	2	72	9.250	ppb	9.250	4.50	7435	2000	
Cr	52	2	72	3.084	ppb	3.084	3.43	3060	5000	
Mn	55	2	72	0.750	ppb	0.750	23.63	340	10000	
Fe	57	2	72	11.085	ppb	11.085	6.37	323	400000	
Co	59	2	72	0.068	ppb	0.068	21.53	140	2000	
Ni	60	2	72	0.281	ppb	0.281	29.13	310	5000	
Cu	63	2	72	0.256	ppb	0.256	21.77	1347	5000	
Zn	66	2	72	23.276	ppb	23.276	6.05	4557	5000	
As	75	2	72	4.275	ppb	4.275	2.36	467	2000	
Se	78	1	72	2.373	ppb	2.373	15.37	461	2000	
Sr	88	2	72	234.583	ppb	234.583	1.10	86298	4000	
Zr	90	2	72	31.025	ppb	31.025	21.82	237	1000	
Nb	93	2	72	0.543	ppb	0.543	14.33	2104	200	
Mo	95	2	115	4.735	ppb	4.735	13.16	3771	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-396.41	37	100	
Ag	107	2	115	0.005	ppb	0.005	184.54	30	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.286	ppb	0.286	62.24	480	2000	
Sb	121	2	115	0.182	ppb	0.182	17.60	173	1000	
Ba	137	2	115	55.076	ppb	55.076	1.70	13013	5000	
W	182	2	165	0.287	ppb	0.287	9.51	2157	100	
Pt	195	2	165	0.000	ppb	0.000	-767.05	53	100	
Tl	205	2	165	0.013	ppb	0.013	26.30	223	2000	
Pb	208	2	165	0.028	ppb	0.028	55.03	1203	5000	
Th	232	2	165	0.024	ppb	0.024	28.96	650	2000	
U	238	2	165	101.766	ppb	101.766	1.43	1649067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	419519	5.67	446069	94.05	60	120	
Sc (IS)	45	1	HMI H2	12626685	6.16	13344586	94.62	60	120	
Sc (IS)	45	2	HMI He	503775	0.42	548684	91.82	60	120	
Sc (IS)	45	3	No Gas	34544166	0.29	39087130	88.38	60	120	
Ge Internal Standard	72	1	HMI H2	7634863	5.68	8240244	92.65	60	120	
Ge Internal Standard	72	2	HMI He	718215	0.42	783465	91.67	60	120	
In Internal Standard	115	2	HMI He	2596435	0.93	2775841	93.54	60	120	
Ho-165	165	2	HMI He	16573671	0.86	17360012	95.47	60	120	

Sample Report

Sample Table

Sample Name	280-114232-A-8-B
Data File Name	155SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:01:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429767 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.284	ppb	8.284	62.15	50154	500000	
Li	7	2	45	14.813	ppb	14.813	277.88	3624	500000	
Li	7	3	45	11.448	ppb	11.448	63.92	2085485	50000	
Be	9	1	6	-0.019	ppb	-0.019	-223.37	3	2000	
B	11	1	6	18.704	ppb	18.704	12.71	3207	2000	
Na	23	1	45	24540.108	ppb	24540.108	0.43	29429485	2000	>LDR
Na	23	2	45	23633.510	ppb	23633.510	1.72	3053566	400000	
Mg	24	2	45	13113.760	ppb	13113.760	0.83	733941	400000	
Al	27	2	45	6.741	ppb	6.741	55.45	127	400000	
K	39	1	45	5394.693	ppb	5394.693	0.43	7278771	400000	
K	39	2	45	6065.443	ppb	6065.443	1.04	170178	400000	
Ca	40	1	45	52273.161	ppb	52273.161	0.49	87939365	400000	
Ca	44	2	45	51089.214	ppb	51089.214	1.24	85912	400000	
V	51	2	72	10.001	ppb	10.001	6.83	7946	2000	
Cr	52	2	72	3.001	ppb	3.001	3.26	2977	5000	
Mn	55	2	72	0.762	ppb	0.762	9.09	343	10000	
Fe	57	2	72	9.290	ppb	9.290	42.35	290	400000	
Co	59	2	72	0.126	ppb	0.126	5.19	247	2000	
Ni	60	2	72	0.220	ppb	0.220	56.55	277	5000	
Cu	63	2	72	0.155	ppb	0.155	51.14	1190	5000	
Zn	66	2	72	23.938	ppb	23.938	5.66	4664	5000	
As	75	2	72	4.385	ppb	4.385	13.00	478	2000	
Se	78	1	72	3.087	ppb	3.087	16.11	579	2000	
Sr	88	2	72	253.122	ppb	253.122	0.51	92934	4000	
Zr	90	2	72	15.878	ppb	15.878	38.72	170	1000	
Nb	93	2	72	0.373	ppb	0.373	16.11	1650	200	
Mo	95	2	115	4.847	ppb	4.847	8.97	3824	2000	
Pd	105	2	115	0.005	ppb	0.005	381.49	47	100	
Ag	107	2	115	0.003	ppb	0.003	75.45	23	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.040	ppb	-0.040	-12.97	197	2000	
Sb	121	2	115	0.150	ppb	0.150	8.61	150	1000	
Ba	137	2	115	56.943	ppb	56.943	1.47	13330	5000	
W	182	2	165	0.288	ppb	0.288	14.55	2167	100	
Pt	195	2	165	0.001	ppb	0.001	838.03	57	100	
Tl	205	2	165	0.012	ppb	0.012	61.00	217	2000	
Pb	208	2	165	0.001	ppb	0.001	763.99	893	5000	
Th	232	2	165	0.023	ppb	0.023	43.33	630	2000	
U	238	2	165	107.647	ppb	107.647	0.28	1747964	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	398016	1.15	446069	89.23	60	120	
Sc (IS)	45	1	HMI H2	11934355	0.30	13344586	89.43	60	120	
Sc (IS)	45	2	HMI He	503325	0.60	548684	91.73	60	120	
Sc (IS)	45	3	No Gas	33869388	0.72	39087130	86.65	60	120	
Ge Internal Standard	72	1	HMI H2	7334365	0.52	8240244	89.01	60	120	
Ge Internal Standard	72	2	HMI He	716830	0.49	783465	91.49	60	120	
In Internal Standard	115	2	HMI He	2572268	0.73	2775841	92.67	60	120	
Ho-165	165	2	HMI He	16608714	0.51	17360012	95.67	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	156_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:04:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	515.104	ppb	1.318	126245	500	103.0	90	110	
Li	7	2	45	457.327	ppb	5.901	8092	500	91.5	90	110	
Li	7	3	45	526.758	ppb	3.018	5391026	500	105.4	90	110	
Be	9	1	6	48.094	ppb	7.316	7035	50	96.2	90	110	
B	11	1	6	38.625	ppb	6.516	6758	50	77.2	90	110	>+\-10%
Na	23	1	45	4943.360	ppb	0.606	6561640	5000	98.9	90	110	
Na	23	2	45	4582.481	ppb	0.086	656290	5000	91.6	90	110	
Mg	24	2	45	4938.507	ppb	1.153	288733	5000	98.8	90	110	
Al	27	2	45	4939.278	ppb	2.233	71137	5000	98.8	90	110	
K	39	1	45	5018.885	ppb	1.179	7231023	5000	100.4	90	110	
K	39	2	45	4886.515	ppb	2.562	143907	5000	97.7	90	110	
Ca	40	1	45	5027.443	ppb	0.594	8925753	5000	100.5	90	110	
Ca	44	2	45	4754.536	ppb	6.548	8386	5000	95.1	90	110	
V	51	2	72	48.350	ppb	1.285	35983	50	96.7	90	110	
Cr	52	2	72	49.796	ppb	2.208	48642	50	99.6	90	110	
Mn	55	2	72	51.077	ppb	3.874	18187	50	102.2	90	110	
Fe	57	2	72	4902.332	ppb	0.673	91969	5000	98.0	90	110	
Co	59	2	72	48.380	ppb	1.478	91664	50	96.8	90	110	
Ni	60	2	72	47.328	ppb	2.861	26445	50	94.7	90	110	
Cu	63	2	72	48.577	ppb	0.950	78069	50	97.2	90	110	
Zn	66	2	72	49.216	ppb	3.519	9340	50	98.4	90	110	
As	75	2	72	49.190	ppb	0.780	5467	50	98.4	90	110	
Se	78	1	72	48.332	ppb	2.301	9434	50	96.7	90	110	
Sr	88	2	72	48.162	ppb	3.844	18328	50	96.3	90	110	
Zr	90	2	72	44.033	ppb	25.035	303	50	88.1	90	110	>+\-10%
Nb	93	2	72	91.031	ppb	1.199	249925	100	91.0	90	110	
Mo	95	2	115	47.835	ppb	2.148	38210	50	95.7	90	110	
Pd	105	2	115	51.005	ppb	2.207	68679	50	102.0	90	110	
Ag	107	2	115	48.282	ppb	1.921	142819	50	96.6	90	110	
Cd	111	2	115	49.363	ppb	0.467	16569	50	98.7	90	110	
Sn	120	2	115	49.024	ppb	2.413	43030	50	98.0	90	110	
Sb	121	2	115	48.962	ppb	1.611	34576	50	97.9	90	110	
Ba	137	2	115	49.054	ppb	3.537	11712	50	98.1	90	110	
W	182	2	165	49.235	ppb	0.785	250404	50	98.5	90	110	
Pt	195	2	165	48.881	ppb	0.328	216359	50	97.8	90	110	
Tl	205	2	165	49.490	ppb	0.222	442009	50	99.0	90	110	
Pb	208	2	165	49.601	ppb	0.958	574980	50	99.2	90	110	
Th	232	2	165	49.077	ppb	1.110	673290	50	98.2	90	110	
U	238	2	165	45.737	ppb	1.211	757221	50	91.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	423644	0.60	446069	94.97	60	120	
Sc (IS)	45	1	HMI H2	12519480	0.93	13344586	93.82	60	120	
Sc (IS)	45	2	HMI He	523719	0.59	548684	95.45	60	120	
Sc (IS)	45	3	No Gas	36553394	0.50	39087130	93.52	60	120	
Ge Internal Standard	72	1	HMI H2	7699038	0.42	8240244	93.43	60	120	
Ge Internal Standard	72	2	HMI He	741599	0.17	783465	94.66	60	120	
In Internal Standard	115	2	HMI He	2623248	1.12	2775841	94.50	60	120	
Ho-165	165	2	HMI He	16932815	0.25	17360012	97.54	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	157_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:08:38-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	19.462	ppb	45.7	2312709	10	>RL
Be	9	1	6	-0.043	ppb	0.0	0	0.5	
B	11	1	6	0.082	ppb	137.1	293	0.5	
Na	23	1	45	-61.331	ppb	-4.5	353622	25	
Na	23	2	45	-63.647	ppb	-7.3	41128	25	
Mg	24	2	45	30.154	ppb	13.6	3557	25	>RL
Al	27	2	45	3.876	ppb	48.6	90	15	
K	39	1	45	32.508	ppb	57.8	1867925	50	
K	39	2	45	21.191	ppb	34.0	6988	50	
Ca	40	1	45	10.243	ppb	11.6	77701	50	
Ca	44	2	45	-11.294	ppb	-227.3	53	25	
V	51	2	72	0.171	ppb	9.6	1120	1	
Cr	52	2	72	0.027	ppb	224.2	187	1	
Mn	55	2	72	0.224	ppb	97.0	167	0.5	
Fe	57	2	72	7.134	ppb	30.2	263	25	
Co	59	2	72	0.039	ppb	13.5	90	0.5	
Ni	60	2	72	0.084	ppb	124.8	213	1	
Cu	63	2	72	0.097	ppb	109.0	1153	1	
Zn	66	2	72	0.444	ppb	75.4	637	5	
As	75	2	72	0.038	ppb	92.7	12	1	
Se	78	1	72	0.022	ppb	234.4	9	1	
Sr	88	2	72	0.117	ppb	71.2	87	0.5	
Zr	90	2	72	-7.738	ppb	-123.2	70	1	
Nb	93	2	72	3.112	ppb	10.1	9330	2	>RL
Mo	95	2	115	0.112	ppb	28.8	123	0.5	
Pd	105	2	115	0.052	ppb	49.7	113	1	
Ag	107	2	115	0.016	ppb	51.9	63	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	0.007	ppb	335.6	247	1	
Sb	121	2	115	0.445	ppb	42.7	367	0.6	
Ba	137	2	115	-0.077	ppb	-81.5	17	0.5	
W	182	2	165	0.065	ppb	21.3	1077	1	
Pt	195	2	165	0.002	ppb	251.9	63	1	
Tl	205	2	165	0.018	ppb	12.4	270	0.1	
Pb	208	2	165	0.008	ppb	87.7	987	0.5	
Th	232	2	165	0.070	ppb	7.9	1283	1	
U	238	2	165	0.059	ppb	10.4	1087	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	434460	0.56	446069	97.40	60	120	
Sc (IS)	45	1	HMI H2	12534558	0.72	13344586	93.93	60	120	
Sc (IS)	45	2	HMI He	519875	0.87	548684	94.75	60	120	
Sc (IS)	45	3	No Gas	36765601	0.33	39087130	94.06	60	120	
Ge Internal Standard	72	1	HMI H2	7790549	0.07	8240244	94.54	60	120	
Ge Internal Standard	72	2	HMI He	751597	0.21	783465	95.93	60	120	
In Internal Standard	115	2	HMI He	2671041	1.04	2775841	96.22	60	120	
Ho-165	165	2	HMI He	16861149	0.46	17360012	97.13	60	120	

Sample Report

Sample Table

Sample Name	280-114244-A-1-C MSD
Data File Name	158SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:12:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429587 200.8
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	237.239	ppb	237.239	1.71	64268	500000	
Li	7	2	45	141.245	ppb	141.245	34.63	4217	500000	
Li	7	3	45	209.784	ppb	209.784	3.42	3388434	50000	
Be	9	1	6	28.216	ppb	28.216	4.38	3367	2000	
B	11	1	6	2156.512	ppb	2156.512	0.61	295422	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	7505278.785	ppb	7505278.785	0.85	837117961	400000	>LDR
Mg	24	2	45	911844.570	ppb	911844.570	0.40	44648176	400000	
Al	27	2	45	290.207	ppb	290.207	4.64	3551	400000	
K	39	1	45	276708.030	ppb	276708.030	0.75	224187090	400000	
K	39	2	45	294402.713	ppb	294402.713	0.69	6985468	400000	
Ca	40	1	45	287963.247	ppb	287963.247	0.24	380097701	400000	
Ca	44	2	45	306700.370	ppb	306700.370	0.54	451980	400000	
V	51	2	72	39.207	ppb	39.207	4.70	21632	2000	
Cr	52	2	72	35.302	ppb	35.302	3.60	25444	5000	
Mn	55	2	72	35.187	ppb	35.187	1.76	9250	10000	
Fe	57	2	72	352.840	ppb	352.840	10.03	4961	400000	
Co	59	2	72	31.961	ppb	31.961	4.30	44625	2000	
Ni	60	2	72	29.844	ppb	29.844	1.87	12329	5000	
Cu	63	2	72	30.249	ppb	30.249	2.09	36091	5000	
Zn	66	2	72	32.150	ppb	32.150	5.01	4634	5000	
As	75	2	72	32.748	ppb	32.748	1.05	2683	2000	
Se	78	1	72	29.495	ppb	29.495	4.01	4061	2000	
Sr	88	2	72	6420.463	ppb	6420.463	0.73	1795884	4000	
Zr	90	2	72	8329.623	ppb	8329.623	3.61	27832	1000	>LDR
Nb	93	2	72	2.791	ppb	2.791	12.28	6138	200	
Mo	95	2	115	38.052	ppb	38.052	1.64	21996	2000	
Pd	105	2	115	0.274	ppb	0.274	16.62	297	100	
Ag	107	2	115	28.115	ppb	28.115	2.54	60182	100	
Cd	111	2	115	27.663	ppb	27.663	5.03	6722	2000	
Sn	120	2	115	30.033	ppb	30.033	1.78	19139	2000	
Sb	121	2	115	32.108	ppb	32.108	3.52	16416	1000	
Ba	137	2	115	36.257	ppb	36.257	0.48	6272	5000	
W	182	2	165	9.004	ppb	9.004	1.08	33281	100	
Pt	195	2	165	0.001	ppb	0.001	413.55	43	100	
Tl	205	2	165	28.303	ppb	28.303	1.02	181314	2000	
Pb	208	2	165	28.046	ppb	28.046	1.27	233437	5000	
Th	232	2	165	30.561	ppb	30.561	0.79	300764	2000	
U	238	2	165	30.501	ppb	30.501	0.37	362169	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	345335	0.52	446069	77.42	60	120	
Sc (IS)	45	1	HMI H2	9368863	0.28	13344586	70.21	60	120	
Sc (IS)	45	2	HMI He	441379	0.36	548684	80.44	60	120	
Sc (IS)	45	3	No Gas	35805757	0.70	39087130	91.60	60	120	
Ge Internal Standard	72	1	HMI H2	5428579	0.14	8240244	65.88	60	120	
Ge Internal Standard	72	2	HMI He	546350	0.68	783465	69.74	60	120	
In Internal Standard	115	2	HMI He	1898029	1.05	2775841	68.38	60	120	
Ho-165	165	2	HMI He	12143172	0.41	17360012	69.95	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	159WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:16:15-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.043	ppb	-2.15248E-06	0	0.5
Na	23	2	45	2244.224	ppb	9.861738508	340555	25
Mg	24	2	45	220.001	ppb	18.61205101	14350	25
Al	27	2	45	0.870	ppb	166.9162133	47	15
K	39	2	45	71.674	ppb	21.37797176	8306	50
Ca	44	2	45	45.550	ppb	71.92407319	150	25
V	51	2	72	-0.084	ppb	-255.5867895	910	1
Cr	52	2	72	-0.003	ppb	-1658.836004	153	1
Mn	55	2	72	0.045	ppb	227.441163	100	0.5
Fe	57	2	72	3.346	ppb	24.86817526	187	25
Co	59	2	72	0.020	ppb	40.11097082	53	0.5
Ni	60	2	72	0.020	ppb	752.3112269	173	1
Cu	63	2	72	0.109	ppb	94.34016077	1143	1
Zn	66	2	72	0.082	ppb	655.490853	557	5
As	75	2	72	0.112	ppb	41.79028429	20	1
Se	78	1	72	0.101	ppb	45.602472	25	1
Nb	93	2	72	0.795	ppb	17.16166829	2827	2
Mo	95	2	115	0.057	ppb	140.7575872	77	0.5
Pd	105	2	115	0.000	ppb	-3800.301933	40	1
Ag	107	2	115	0.012	ppb	50.17143112	50	1
Cd	111	2	115	0.002	ppb	3266.545644	10	0.5
Sn	120	2	115	-0.023	ppb	-274.3186827	213	1
Sb	121	2	115	0.081	ppb	97.20197402	103	0.6
Ba	137	2	115	-0.088	ppb	-112.1345143	13	0.5
W	182	2	165	-0.007	ppb	-186.4912675	693	1
Pt	195	2	165	0.002	ppb	254.0980801	63	1
Tl	205	2	165	0.034	ppb	47.82314718	400	0.1
Pb	208	2	165	0.003	ppb	115.9459137	903	0.5
Th	232	2	165	0.063	ppb	11.01869044	1153	1
U	238	2	165	0.021	ppb	3.041635409	450	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	427585	0.53	446069	95.86	60	120	
Sc (IS)	45	1	HMI H2	12740851	0.03	13344586	95.48	60	120	
Sc (IS)	45	2	HMI He	514181	0.54	548684	93.71	60	120	
Sc (IS)	45	3	No Gas	38110615	0.06	39087130	97.50	60	120	
Ge Internal Standard	72	1	HMI H2	7902071	0.23	8240244	95.90	60	120	
Ge Internal Standard	72	2	HMI He	732793	0.30	783465	93.53	60	120	
In Internal Standard	115	2	HMI He	2599046	0.83	2775841	93.63	60	120	
Ho-165	165	2	HMI He	16374209	0.12	17360012	94.32	60	120	

Sample Report

Sample Table

Sample Name	280-114244-A-2-A
Data File Name	160SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:20:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429587 200.8
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	152.847	ppb	152.847	4.33	56183	500000	
Li	7	2	45	88.765	ppb	88.765	15.75	3694	500000	
Li	7	3	45	123.389	ppb	123.389	8.89	2786041	50000	
Be	9	1	6	0.156	ppb	0.156	33.22	23	2000	
B	11	1	6	2087.611	ppb	2087.611	1.66	281284	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	7211992.680	ppb	7211992.680	0.77	784894495	400000	>LDR
Mg	24	2	45	882511.824	ppb	882511.824	0.54	42163604	400000	
Al	27	2	45	3572.816	ppb	3572.816	0.96	42324	400000	
K	39	1	45	316434.682	ppb	316434.682	0.77	261260529	400000	
K	39	2	45	345818.845	ppb	345818.845	0.76	8005567	400000	
Ca	40	1	45	375341.755	ppb	375341.755	0.55	505249632	400000	
Ca	44	2	45	399995.096	ppb	399995.096	0.41	575169	400000	
V	51	2	72	21.172	ppb	21.172	1.04	11845	2000	
Cr	52	2	72	17.840	ppb	17.840	6.43	12729	5000	
Mn	55	2	72	105.700	ppb	105.700	1.32	27267	10000	
Fe	57	2	72	7892.029	ppb	7892.029	1.68	107468	400000	
Co	59	2	72	3.765	ppb	3.765	3.72	5191	2000	
Ni	60	2	72	14.843	ppb	14.843	8.26	6105	5000	
Cu	63	2	72	33.736	ppb	33.736	1.25	39595	5000	
Zn	66	2	72	311.150	ppb	311.150	0.90	40762	5000	
As	75	2	72	70.969	ppb	70.969	0.46	5726	2000	
Se	78	1	72	8.896	ppb	8.896	6.02	1241	2000	
Sr	88	2	72	6898.443	ppb	6898.443	0.14	1902272	4000	
Zr	90	2	72	399.189	ppb	399.189	6.20	1387	1000	
Nb	93	2	72	2.606	ppb	2.606	8.61	5681	200	
Mo	95	2	115	7.271	ppb	7.271	11.52	4001	2000	
Pd	105	2	115	0.208	ppb	0.208	52.10	220	100	
Ag	107	2	115	2.112	ppb	2.112	4.24	4297	100	
Cd	111	2	115	3.724	ppb	3.724	8.87	863	2000	
Sn	120	2	115	0.320	ppb	0.320	17.19	353	2000	
Sb	121	2	115	2.393	ppb	2.393	2.45	1190	1000	
Ba	137	2	115	30.901	ppb	30.901	7.73	5071	5000	
W	182	2	165	0.062	ppb	0.062	32.92	743	100	
Pt	195	2	165	-0.001	ppb	-0.001	-1317.32	37	100	
Tl	205	2	165	0.087	ppb	0.087	12.89	620	2000	
Pb	208	2	165	2.439	ppb	2.439	4.75	20320	5000	
Th	232	2	165	0.201	ppb	0.201	8.35	2157	2000	
U	238	2	165	2.170	ppb	2.170	1.93	25136	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	339690	1.17	446069	76.15	60	120	
Sc (IS)	45	1	HMI H2	9554881	0.39	13344586	71.60	60	120	
Sc (IS)	45	2	HMI He	430678	0.51	548684	78.49	60	120	
Sc (IS)	45	3	No Gas	34725582	0.30	39087130	88.84	60	120	
Ge Internal Standard	72	1	HMI H2	5490008	0.98	8240244	66.62	60	120	
Ge Internal Standard	72	2	HMI He	538601	0.48	783465	68.75	60	120	
In Internal Standard	115	2	HMI He	1799525	0.68	2775841	64.83	60	120	
Ho-165	165	2	HMI He	11810523	0.44	17360012	68.03	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	161WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:23:48-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.043	ppb	-2.15248E-06	0	0.5
Na	23	2	45	3007.515	ppb	7.589545825	417196	25
Mg	24	2	45	245.819	ppb	8.192327017	15011	25
Al	27	2	45	4.036	ppb	56.39458687	87	15
K	39	2	45	103.951	ppb	5.107789951	8726	50
Ca	44	2	45	64.622	ppb	48.41852848	173	25
V	51	2	72	-0.049	ppb	-275.3970312	893	1
Cr	52	2	72	0.066	ppb	108.1722734	210	1
Mn	55	2	72	0.177	ppb	126.50229	140	0.5
Fe	57	2	72	3.811	ppb	60.27229586	187	25
Co	59	2	72	0.001	ppb	329.4790179	17	0.5
Ni	60	2	72	0.054	ppb	193.8740234	183	1
Cu	63	2	72	0.131	ppb	72.81073666	1127	1
Zn	66	2	72	0.976	ppb	30.27973846	683	5
As	75	2	72	0.052	ppb	179.1583336	12	1
Se	78	1	72	0.144	ppb	54.11039528	33	1
Nb	93	2	72	0.086	ppb	12.84406392	870	2
Mo	95	2	115	0.045	ppb	45.61164024	63	0.5
Pd	105	2	115	0.007	ppb	182.2750434	47	1
Ag	107	2	115	0.001	ppb	1128.932892	17	1
Cd	111	2	115	-0.028	ppb	0	0	0.5
Sn	120	2	115	-0.042	ppb	-211.5121657	187	1
Sb	121	2	115	0.059	ppb	102.9926943	83	0.6
Ba	137	2	115	-0.115	ppb	-22.48111004	7	0.5
W	182	2	165	-0.005	ppb	-159.3364628	680	1
Pt	195	2	165	-0.006	ppb	-47.04448247	27	1
Tl	205	2	165	0.008	ppb	50.87705541	167	0.1
Pb	208	2	165	-0.001	ppb	-977.6572627	833	0.5
Th	232	2	165	0.001	ppb	315.4336897	327	1
U	238	2	165	0.005	ppb	32.77500139	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	413919	0.34	446069	92.79	60	120	
Sc (IS)	45	1	HMI H2	12378576	0.59	13344586	92.76	60	120	
Sc (IS)	45	2	HMI He	487822	0.38	548684	88.91	60	120	
Sc (IS)	45	3	No Gas	38310381	0.62	39087130	98.01	60	120	
Ge Internal Standard	72	1	HMI H2	7773951	0.90	8240244	94.34	60	120	
Ge Internal Standard	72	2	HMI He	700578	0.26	783465	89.42	60	120	
In Internal Standard	115	2	HMI He	2459457	0.29	2775841	88.60	60	120	
Ho-165	165	2	HMI He	15833091	0.78	17360012	91.20	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	162_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:27:35-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	492.295	ppb	1.879	120813	500	98.5	90	110	
Li	7	2	45	515.470	ppb	0.758	8072	500	103.1	90	110	
Li	7	3	45	482.626	ppb	2.181	5250209	500	96.5	90	110	
Be	9	1	6	49.562	ppb	6.956	6932	50	99.1	90	110	
B	11	1	6	52.283	ppb	1.726	8656	50	104.6	90	110	
Na	23	1	45	6082.344	ppb	0.128	7836756	5000	121.6	90	110	>+\-10%
Na	23	2	45	5886.952	ppb	0.862	772532	5000	117.7	90	110	>+\-10%
Mg	24	2	45	5035.050	ppb	1.997	274318	5000	100.7	90	110	
Al	27	2	45	4740.954	ppb	1.714	63634	5000	94.8	90	110	
K	39	1	45	4929.697	ppb	1.144	7011924	5000	98.6	90	110	
K	39	2	45	4892.816	ppb	1.046	134292	5000	97.9	90	110	
Ca	40	1	45	4925.953	ppb	0.941	8595695	5000	98.5	90	110	
Ca	44	2	45	4771.026	ppb	1.600	7842	5000	95.4	90	110	
V	51	2	72	49.855	ppb	1.020	34764	50	99.7	90	110	
Cr	52	2	72	49.700	ppb	3.353	45527	50	99.4	90	110	
Mn	55	2	72	49.182	ppb	4.324	16425	50	98.4	90	110	
Fe	57	2	72	4941.240	ppb	1.976	86926	5000	98.8	90	110	
Co	59	2	72	50.434	ppb	0.840	89607	50	100.9	90	110	
Ni	60	2	72	49.028	ppb	3.540	25681	50	98.1	90	110	
Cu	63	2	72	50.834	ppb	1.035	76566	50	101.7	90	110	
Zn	66	2	72	50.625	ppb	6.389	8993	50	101.3	90	110	
As	75	2	72	50.478	ppb	1.152	5260	50	101.0	90	110	
Se	78	1	72	50.200	ppb	1.829	9780	50	100.4	90	110	
Sr	88	2	72	49.756	ppb	2.724	17754	50	99.5	90	110	
Zr	90	2	72	126.298	ppb	11.320	633	50	252.6	90	110	>+\-10%
Nb	93	2	72	92.587	ppb	0.753	238368	100	92.6	90	110	
Mo	95	2	115	49.629	ppb	0.889	36463	50	99.3	90	110	
Pd	105	2	115	53.221	ppb	2.566	65920	50	106.4	90	110	
Ag	107	2	115	50.343	ppb	2.095	136982	50	100.7	90	110	
Cd	111	2	115	48.588	ppb	5.813	15001	50	97.2	90	110	
Sn	120	2	115	48.915	ppb	2.308	39491	50	97.8	90	110	
Sb	121	2	115	47.827	ppb	2.556	31068	50	95.7	90	110	
Ba	137	2	115	48.974	ppb	2.981	10757	50	97.9	90	110	
W	182	2	165	49.834	ppb	0.251	235117	50	99.7	90	110	
Pt	195	2	165	50.223	ppb	0.498	206233	50	100.4	90	110	
Tl	205	2	165	49.757	ppb	0.784	412250	50	99.5	90	110	
Pb	208	2	165	49.859	ppb	0.868	536170	50	99.7	90	110	
Th	232	2	165	49.094	ppb	1.665	624797	50	98.2	90	110	
U	238	2	165	45.597	ppb	1.685	700283	50	91.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	405141	1.03	446069	90.82	60	120	
Sc (IS)	45	1	HMI H2	12303006	0.29	13344586	92.19	60	120	
Sc (IS)	45	2	HMI He	488103	0.55	548684	88.96	60	120	
Sc (IS)	45	3	No Gas	37467408	0.66	39087130	95.86	60	120	
Ge Internal Standard	72	1	HMI H2	7684732	0.46	8240244	93.26	60	120	
Ge Internal Standard	72	2	HMI He	695427	0.44	783465	88.76	60	120	
In Internal Standard	115	2	HMI He	2412958	0.77	2775841	86.93	60	120	
Ho-165	165	2	HMI He	15708665	0.78	17360012	90.49	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	163_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:31:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-10.769	ppb	-35.1	2205673	10	
Be	9	1	6	-0.020	ppb	-196.9	3	0.5	
B	11	1	6	6.982	ppb	11.0	1420	0.5	>RL
Na	23	1	45	826.774	ppb	1.5	1446144	25	>RL
Na	23	2	45	905.686	ppb	2.6	161045	25	>RL
Mg	24	2	45	83.382	ppb	9.7	6338	25	>RL
Al	27	2	45	2.450	ppb	61.6	67	15	
K	39	1	45	13.223	ppb	23.2	1833852	50	
K	39	2	45	37.705	ppb	18.7	7122	50	
Ca	40	1	45	8.889	ppb	8.6	74758	50	
Ca	44	2	45	4.477	ppb	749.6	77	25	
V	51	2	72	0.003	ppb	2631.1	943	1	
Cr	52	2	72	0.038	ppb	70.4	187	1	
Mn	55	2	72	0.073	ppb	221.2	107	0.5	
Fe	57	2	72	2.354	ppb	60.3	163	25	
Co	59	2	72	0.016	ppb	124.6	43	0.5	
Ni	60	2	72	-0.014	ppb	-413.2	150	1	
Cu	63	2	72	0.153	ppb	15.2	1177	1	
Zn	66	2	72	-0.076	ppb	-928.2	513	5	
As	75	2	72	0.117	ppb	31.1	20	1	
Se	78	1	72	0.056	ppb	167.1	16	1	
Sr	88	2	72	0.185	ppb	22.7	107	0.5	
Zr	90	2	72	-6.875	ppb	-154.1	70	1	
Nb	93	2	72	3.030	ppb	6.4	8613	2	>RL
Mo	95	2	115	0.120	ppb	33.3	123	0.5	
Pd	105	2	115	0.065	ppb	122.0	123	1	
Ag	107	2	115	0.024	ppb	74.2	83	1	
Cd	111	2	115	-0.007	ppb	-489.1	7	0.5	
Sn	120	2	115	-0.021	ppb	-359.5	210	1	
Sb	121	2	115	0.603	ppb	26.7	457	0.6	>RL
Ba	137	2	115	-0.116	ppb	-21.4	7	0.5	
W	182	2	165	0.062	ppb	10.1	1010	1	
Pt	195	2	165	0.018	ppb	66.1	127	1	
Tl	205	2	165	0.022	ppb	35.5	293	0.1	
Pb	208	2	165	-0.005	ppb	-126.8	807	0.5	
Th	232	2	165	0.066	ppb	12.5	1173	1	
U	238	2	165	0.045	ppb	19.7	820	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416506	1.02	446069	93.37	60	120	
Sc (IS)	45	1	HMI H2	12444210	0.61	13344586	93.25	60	120	
Sc (IS)	45	2	HMI He	497031	0.78	548684	90.59	60	120	
Sc (IS)	45	3	No Gas	38118724	0.37	39087130	97.52	60	120	
Ge Internal Standard	72	1	HMI H2	7798323	0.70	8240244	94.64	60	120	
Ge Internal Standard	72	2	HMI He	711273	0.22	783465	90.79	60	120	
In Internal Standard	115	2	HMI He	2532048	1.32	2775841	91.22	60	120	
Ho-165	165	2	HMI He	16092504	0.47	17360012	92.70	60	120	

Blank Report

Sample Table

Sample Name	MB 280-430016/1-A
Data File Name	164_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:35:10-06:00
Sample Type	Blank
Dilution	1
Comment	430016 6020b
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-1.182	ppb	-983.9113217	50963	0.5
Li	7	2	45	-8.626	ppb	-348.6488238	3427	0.5
Li	7	3	45	-6.042	ppb	-146.4644703	2201610	10
Be	9	1	6	-0.043	ppb	-2.15248E-06	0	0.5
B	11	1	6	6.165	ppb	18.09138282	1270	0.5
Na	23	1	45	860.678	ppb	0.641966814	1489261	25
Na	23	2	45	923.092	ppb	1.598452179	166538	25
Mg	24	2	45	82.875	ppb	6.502035443	6438	25
Al	27	2	45	4.277	ppb	51.64528776	93	15
K	39	1	45	-789.843	ppb	-0.979892541	975677	50
K	39	2	45	50.044	ppb	25.92645187	7602	50
Ca	40	1	45	16.119	ppb	9.232814696	87499	50
Ca	44	2	45	-12.239	ppb	-147.5285787	50	25
V	51	2	72	-0.503	ppb	-34.13120157	610	1
Cr	52	2	72	0.198	ppb	53.42130102	347	1
Mn	55	2	72	0.159	ppb	140.3709029	140	0.5
Fe	57	2	72	4.961	ppb	30.62017255	217	25
Co	59	2	72	0.004	ppb	73.69559936	23	0.5
Ni	60	2	72	0.033	ppb	280.8987063	180	1
Cu	63	2	72	0.191	ppb	26.53739638	1273	1
Zn	66	2	72	2.894	ppb	25.64488079	1053	5
As	75	2	72	0.058	ppb	106.2078455	14	1
Se	78	1	72	0.042	ppb	155.5599168	13	1
Sr	88	2	72	0.158	ppb	60.10326885	100	0.5
Zr	90	2	72	-4.381	ppb	-76.614479	83	1
Nb	93	2	72	2.020	ppb	9.688519246	6141	2
Mo	95	2	115	0.011	ppb	295.8142052	40	0.5
Pd	105	2	115	0.017	ppb	65.44835585	63	1
Ag	107	2	115	0.014	ppb	13.73520814	57	1
Cd	111	2	115	-0.008	ppb	-214.892212	7	0.5
Sn	120	2	115	0.028	ppb	83.73485869	257	1
Sb	121	2	115	0.125	ppb	23.67358339	133	0.6
Ba	137	2	115	-0.017	ppb	-426.896223	30	0.5
W	182	2	165	0.001	ppb	519.7520216	737	1
Pt	195	2	165	-0.001	ppb	-459.4316224	50	1
Tl	205	2	165	0.013	ppb	12.48127555	217	0.1
Pb	208	2	165	0.022	ppb	77.2546673	1130	0.5
Th	232	2	165	0.099	ppb	18.94365154	1644	1
U	238	2	165	0.016	ppb	18.35183743	380	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	411424	0.68	446069	92.23	60	120	
Sc (IS)	45	1	HMI H2	12454669	0.81	13344586	93.33	60	120	
Sc (IS)	45	2	HMI He	507094	1.06	548684	92.42	60	120	
Sc (IS)	45	3	No Gas	37541447	0.94	39087130	96.05	60	120	
Ge Internal Standard	72	1	HMI H2	7836855	0.07	8240244	95.10	60	120	
Ge Internal Standard	72	2	HMI He	732893	0.32	783465	93.55	60	120	
In Internal Standard	115	2	HMI He	2582620	0.24	2775841	93.04	60	120	
Ho-165	165	2	HMI He	16506375	0.82	17360012	95.08	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-430016/2-A
Data File Name	165_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:39:01-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	430016 6020b
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	71.537	71.537	ppb	5.644	62725	400	17.9	80	120	>+/-20%
Li	7	2	45	65.597	65.597	ppb	17.270	4191	400	16.4	80	120	>+/-20%
Li	7	3	45	69.549	69.549	ppb	6.003	2710430	400	17.4	80	120	>+/-20%
Be	9	1	6	38.400	38.400	ppb	4.641	5531	40	96.0	80	120	
Na	23	2	45	875.993	875.993	ppb	0.874	162875	40	2190.0	80	120	>+/-20%
Mg	24	2	45	84.171	84.171	ppb	5.079	6605	40	210.4	80	120	>+/-20%
Al	27	2	45	394.079	394.079	ppb	3.441	5608	40	985.2	80	120	>+/-20%
K	39	2	45	29.328	29.328	ppb	4.715	7142	40	73.3	80	120	>+/-20%
Ca	44	2	45	200.769	200.769	ppb	29.374	417	40	501.9	80	120	>+/-20%
V	51	2	72	38.332	38.332	ppb	2.234	28756	40	95.8	80	120	
Cr	52	2	72	40.269	40.269	ppb	1.391	39398	40	100.7	80	120	
Mn	55	2	72	40.713	40.713	ppb	6.431	14524	40	101.8	80	120	
Fe	57	2	72	439.934	439.934	ppb	5.098	8376	40	1099.8	80	120	>+/-20%
Co	59	2	72	40.509	40.509	ppb	0.535	76813	40	101.3	80	120	
Ni	60	2	72	39.490	39.490	ppb	5.170	22112	40	98.7	80	120	
Cu	63	2	72	39.994	39.994	ppb	1.760	64501	40	100.0	80	120	
Zn	66	2	72	42.323	42.323	ppb	5.293	8116	40	105.8	80	120	
As	75	2	72	36.644	36.644	ppb	1.945	4078	40	91.6	80	120	
Se	78	1	72	37.264	37.264	ppb	4.176	7517	40	93.2	80	120	
Nb	93	2	72	1.312	1.312	ppb	11.621	4281	40	3.3	80	120	>+/-20%
Mo	95	2	115	38.123	38.123	ppb	3.563	30099	40	95.3	80	120	
Pd	105	2	115	-0.015	-0.015	ppb	-85.715	20	40	0.0	80	120	>+/-20%
Ag	107	2	115	41.731	41.731	ppb	1.770	121992	40	104.3	80	120	
Cd	111	2	115	39.537	39.537	ppb	2.291	13116	40	98.8	80	120	
Sn	120	2	115	40.588	40.588	ppb	0.948	35241	40	101.5	80	120	
Sb	121	2	115	39.186	39.186	ppb	0.613	27355	40	98.0	80	120	
Ba	137	2	115	39.922	39.922	ppb	2.483	9427	40	99.8	80	120	
W	182	2	165	12.418	12.418	ppb	1.166	62762	40	31.0	80	120	>+/-20%
Pt	195	2	165	-0.001	-0.001	ppb	-451.100	50	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.290	40.290	ppb	0.671	354460	40	100.7	80	120	
Pb	208	2	165	40.588	40.588	ppb	0.789	463601	40	101.5	80	120	
Th	232	2	165	38.940	38.940	ppb	0.679	526276	40	97.3	80	120	
U	238	2	165	36.555	36.555	ppb	1.082	596155	40	91.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416989	0.34	446069	93.48	60	120	
Sc (IS)	45	1	HMI H2	12705956	0.78	13344586	95.21	60	120	
Sc (IS)	45	2	HMI He	514553	0.35	548684	93.78	60	120	
Sc (IS)	45	3	No Gas	38036764	0.60	39087130	97.31	60	120	
Ge Internal Standard	72	1	HMI H2	7958050	1.32	8240244	96.58	60	120	
Ge Internal Standard	72	2	HMI He	742184	0.32	783465	94.73	60	120	
In Internal Standard	115	2	HMI He	2592138	0.53	2775841	93.38	60	120	
Ho-165	165	2	HMI He	16679233	0.69	17360012	96.08	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-1-D
Data File Name	166SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:42:50-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.172	ppb	-0.172	-3337.40	51361	500000	
Li	7	2	45	-15.717	ppb	-15.717	-64.91	3367	500000	
Li	7	3	45	0.462	ppb	0.462	1407.89	2202710	50000	
Be	9	1	6	0.004	ppb	0.004	2083.93	7	2000	
B	11	1	6	23.904	ppb	23.904	11.98	4134	2000	
Na	23	1	45	25820.120	ppb	25820.120	1.46	32445546	2000	>LDR
Na	23	2	45	25584.557	ppb	25584.557	1.81	3332654	400000	
Mg	24	2	45	18627.012	ppb	18627.012	1.51	1051509	400000	
Al	27	2	45	40.525	ppb	40.525	18.71	600	400000	
K	39	1	45	4816.686	ppb	4816.686	1.72	7010683	400000	
K	39	2	45	5615.632	ppb	5615.632	0.59	159502	400000	
Ca	40	1	45	36767.631	ppb	36767.631	1.24	64876156	400000	
Ca	44	2	45	36029.323	ppb	36029.323	3.15	61177	400000	
V	51	2	72	37.900	ppb	37.900	1.12	28081	2000	
Cr	52	2	72	4.308	ppb	4.308	3.97	4301	5000	
Mn	55	2	72	0.759	ppb	0.759	24.43	350	10000	
Fe	57	2	72	22.789	ppb	22.789	17.87	547	400000	
Co	59	2	72	0.026	ppb	0.026	87.32	63	2000	
Ni	60	2	72	0.221	ppb	0.221	107.05	283	5000	
Cu	63	2	72	0.315	ppb	0.315	24.28	1467	5000	
Zn	66	2	72	5.387	ppb	5.387	10.44	1493	5000	
As	75	2	72	4.456	ppb	4.456	2.77	496	2000	
Se	78	1	72	0.408	ppb	0.408	9.79	85	2000	
Sr	88	2	72	202.189	ppb	202.189	1.10	75896	4000	
Zr	90	2	72	572.132	ppb	572.132	5.72	2660	1000	
Nb	93	2	72	0.851	ppb	0.851	13.07	2980	200	
Mo	95	2	115	5.513	ppb	5.513	6.05	4357	2000	
Pd	105	2	115	0.020	ppb	0.020	44.29	67	100	
Ag	107	2	115	0.020	ppb	0.020	25.53	73	100	
Cd	111	2	115	-0.018	ppb	-0.018	-96.83	3	2000	
Sn	120	2	115	0.165	ppb	0.165	60.27	373	2000	
Sb	121	2	115	0.519	ppb	0.519	14.43	407	1000	
Ba	137	2	115	8.803	ppb	8.803	9.62	2094	5000	
W	182	2	165	0.265	ppb	0.265	8.55	2057	100	
Pt	195	2	165	-0.002	ppb	-0.002	-421.92	47	100	
Tl	205	2	165	0.019	ppb	0.019	13.57	277	2000	
Pb	208	2	165	0.044	ppb	0.044	29.80	1383	5000	
Th	232	2	165	0.357	ppb	0.357	8.61	5134	2000	
U	238	2	165	2.450	ppb	2.450	0.88	39940	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408559	0.26	446069	91.59	60	120	
Sc (IS)	45	1	HMI H2	12515402	1.27	13344586	93.79	60	120	
Sc (IS)	45	2	HMI He	508044	0.62	548684	92.59	60	120	
Sc (IS)	45	3	No Gas	36876898	0.73	39087130	94.35	60	120	
Ge Internal Standard	72	1	HMI H2	7772311	0.73	8240244	94.32	60	120	
Ge Internal Standard	72	2	HMI He	732799	0.19	783465	93.53	60	120	
In Internal Standard	115	2	HMI He	2578819	0.73	2775841	92.90	60	120	
Ho-165	165	2	HMI He	16628428	0.32	17360012	95.79	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-2-B
Data File Name	167SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:46:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.605	ppb	6.605	134.01	51826	500000	
Li	7	2	45	-6.770	ppb	-6.770	-380.51	3474	500000	
Li	7	3	45	2.092	ppb	2.092	391.07	2218040	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	21.766	ppb	21.766	6.94	3817	2000	
Na	23	1	45	18216.035	ppb	18216.035	0.81	22788388	2000	>LDR
Na	23	2	45	18048.554	ppb	18048.554	1.32	2380745	400000	
Mg	24	2	45	23696.357	ppb	23696.357	1.08	1345962	400000	
Al	27	2	45	4.448	ppb	4.448	17.74	97	400000	
K	39	1	45	5482.003	ppb	5482.003	1.75	7649243	400000	
K	39	2	45	6203.680	ppb	6203.680	0.59	176702	400000	
Ca	40	1	45	47953.213	ppb	47953.213	0.98	83753434	400000	
Ca	44	2	45	46609.731	ppb	46609.731	1.11	79640	400000	
V	51	2	72	22.745	ppb	22.745	3.23	17236	2000	
Cr	52	2	72	4.268	ppb	4.268	2.73	4261	5000	
Mn	55	2	72	0.530	ppb	0.530	33.07	270	10000	
Fe	57	2	72	8.925	ppb	8.925	25.53	290	400000	
Co	59	2	72	0.017	ppb	0.017	80.96	47	2000	
Ni	60	2	72	0.239	ppb	0.239	9.16	293	5000	
Cu	63	2	72	0.224	ppb	0.224	29.68	1323	5000	
Zn	66	2	72	3.330	ppb	3.330	25.71	1130	5000	
As	75	2	72	1.317	ppb	1.317	17.85	152	2000	
Se	78	1	72	0.460	ppb	0.460	14.88	96	2000	
Sr	88	2	72	272.708	ppb	272.708	1.04	102324	4000	
Zr	90	2	72	180.709	ppb	180.709	9.48	910	1000	
Nb	93	2	72	0.620	ppb	0.620	27.99	2354	200	
Mo	95	2	115	3.412	ppb	3.412	8.82	2727	2000	
Pd	105	2	115	-0.023	ppb	-0.023	-32.59	10	100	
Ag	107	2	115	0.009	ppb	0.009	40.45	43	100	
Cd	111	2	115	-0.018	ppb	-0.018	-94.48	3	2000	
Sn	120	2	115	0.138	ppb	0.138	65.65	353	2000	
Sb	121	2	115	0.105	ppb	0.105	61.56	120	1000	
Ba	137	2	115	7.530	ppb	7.530	6.74	1810	5000	
W	182	2	165	0.195	ppb	0.195	18.55	1714	100	
Pt	195	2	165	0.001	ppb	0.001	905.51	60	100	
Tl	205	2	165	0.006	ppb	0.006	77.98	163	2000	
Pb	208	2	165	0.017	ppb	0.017	77.21	1083	5000	
Th	232	2	165	0.074	ppb	0.074	13.68	1320	2000	
U	238	2	165	4.926	ppb	4.926	0.75	80343	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	411737	0.26	446069	92.30	60	120	
Sc (IS)	45	1	HMI H2	12390438	1.01	13344586	92.85	60	120	
Sc (IS)	45	2	HMI He	511365	0.49	548684	93.20	60	120	
Sc (IS)	45	3	No Gas	36960204	0.39	39087130	94.56	60	120	
Ge Internal Standard	72	1	HMI H2	7808537	0.32	8240244	94.76	60	120	
Ge Internal Standard	72	2	HMI He	732562	0.54	783465	93.50	60	120	
In Internal Standard	115	2	HMI He	2597956	1.00	2775841	93.59	60	120	
Ho-165	165	2	HMI He	16660081	0.91	17360012	95.97	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-2-Bsd@5
Data File Name	168SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:50:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.453	ppb	9.453	16.13	53745	500000	
Li	7	2	45	-1.321	ppb	-1.321	-1112.21	3581	500000	
Li	7	3	45	-0.186	ppb	-0.186	-1843.48	2258120	50000	
Be	9	1	6	-0.021	ppb	-0.021	-190.78	3	2000	
B	11	1	6	6.383	ppb	6.383	3.84	1367	2000	
Na	23	1	45	4192.269	ppb	4192.269	0.36	5732551	2000	
Na	23	2	45	4112.715	ppb	4112.715	0.54	589158	400000	
Mg	24	2	45	4580.152	ppb	4580.152	2.50	265648	400000	
Al	27	2	45	5.037	ppb	5.037	27.40	107	400000	
K	39	1	45	1068.113	ppb	1068.113	2.16	3034297	400000	
K	39	2	45	1228.135	ppb	1228.135	2.38	40654	400000	
Ca	40	1	45	9480.732	ppb	9480.732	0.60	17085491	400000	
Ca	44	2	45	8714.666	ppb	8714.666	5.29	15181	400000	
V	51	2	72	4.243	ppb	4.243	5.67	4071	2000	
Cr	52	2	72	0.888	ppb	0.888	7.92	1027	5000	
Mn	55	2	72	0.275	ppb	0.275	50.49	183	10000	
Fe	57	2	72	1.764	ppb	1.764	51.35	160	400000	
Co	59	2	72	0.013	ppb	0.013	71.38	40	2000	
Ni	60	2	72	0.105	ppb	0.105	69.48	223	5000	
Cu	63	2	72	0.411	ppb	0.411	8.95	1643	5000	
Zn	66	2	72	1.127	ppb	1.127	83.63	753	5000	
As	75	2	72	0.261	ppb	0.261	50.44	37	2000	
Se	78	1	72	0.093	ppb	0.093	36.40	24	2000	
Sr	88	2	72	53.772	ppb	53.772	1.49	20547	4000	
Zr	90	2	72	23.940	ppb	23.940	32.18	213	1000	
Nb	93	2	72	0.276	ppb	0.276	30.49	1447	200	
Mo	95	2	115	0.637	ppb	0.637	13.00	543	2000	
Pd	105	2	115	0.007	ppb	0.007	447.79	50	100	
Ag	107	2	115	0.010	ppb	0.010	81.69	47	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.008	ppb	-0.008	-766.99	230	2000	
Sb	121	2	115	0.163	ppb	0.163	19.88	163	1000	
Ba	137	2	115	1.859	ppb	1.859	19.47	480	5000	
W	182	2	165	0.019	ppb	0.019	79.29	840	100	
Pt	195	2	165	0.001	ppb	0.001	829.68	60	100	
Tl	205	2	165	0.002	ppb	0.002	432.44	130	2000	
Pb	208	2	165	0.012	ppb	0.012	38.78	1030	5000	
Th	232	2	165	0.010	ppb	0.010	28.04	467	2000	
U	238	2	165	0.995	ppb	0.995	4.57	16430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	430740	0.99	446069	96.56	60	120	
Sc (IS)	45	1	HMI H2	12747554	0.34	13344586	95.53	60	120	
Sc (IS)	45	2	HMI He	519349	0.98	548684	94.65	60	120	
Sc (IS)	45	3	No Gas	37868171	0.69	39087130	96.88	60	120	
Ge Internal Standard	72	1	HMI H2	7954605	0.37	8240244	96.53	60	120	
Ge Internal Standard	72	2	HMI He	744844	0.23	783465	95.07	60	120	
In Internal Standard	115	2	HMI He	2638079	0.13	2775841	95.04	60	120	
Ho-165	165	2	HMI He	16772460	0.18	17360012	96.62	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-2-C MS
Data File Name	169SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:54:12-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	92.054	ppb	92.054	6.53	63769	500000	
Li	7	2	45	74.773	ppb	74.773	4.86	4227	500000	
Li	7	3	45	85.433	ppb	85.433	15.80	2700727	50000	
Be	9	1	6	39.379	ppb	39.379	2.96	5531	2000	
B	11	1	6	51.646	ppb	51.646	5.16	8586	2000	
Na	23	1	45	19527.172	ppb	19527.172	1.04	24265678	2000	>LDR
Na	23	2	45	19320.504	ppb	19320.504	0.93	2530389	400000	
Mg	24	2	45	25421.509	ppb	25421.509	0.96	1435461	400000	
Al	27	2	45	388.892	ppb	388.892	3.09	5468	400000	
K	39	1	45	5872.470	ppb	5872.470	0.37	8021732	400000	
K	39	2	45	6702.185	ppb	6702.185	0.78	189285	400000	
Ca	40	1	45	51222.581	ppb	51222.581	0.23	88977655	400000	
Ca	44	2	45	50491.301	ppb	50491.301	1.28	85764	400000	
V	51	2	72	66.376	ppb	66.376	1.99	48241	2000	
Cr	52	2	72	45.226	ppb	45.226	0.69	43478	5000	
Mn	55	2	72	42.308	ppb	42.308	1.19	14834	10000	
Fe	57	2	72	417.479	ppb	417.479	0.65	7819	400000	
Co	59	2	72	40.136	ppb	40.136	1.71	74814	2000	
Ni	60	2	72	40.317	ppb	40.317	0.23	22186	5000	
Cu	63	2	72	40.222	ppb	40.222	1.82	63765	5000	
Zn	66	2	72	44.254	ppb	44.254	3.45	8316	5000	
As	75	2	72	40.913	ppb	40.913	1.25	4475	2000	
Se	78	1	72	39.004	ppb	39.004	1.58	7571	2000	
Sr	88	2	72	334.692	ppb	334.692	1.01	125053	4000	
Zr	90	2	72	9517.475	ppb	9517.475	2.66	42454	1000	>LDR
Nb	93	2	72	0.445	ppb	0.445	4.63	1874	200	
Mo	95	2	115	40.926	ppb	40.926	2.39	32220	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-170.58	30	100	
Ag	107	2	115	41.423	ppb	41.423	0.69	120765	100	
Cd	111	2	115	39.113	ppb	39.113	2.74	12939	2000	
Sn	120	2	115	39.388	ppb	39.388	0.75	34114	2000	
Sb	121	2	115	39.366	ppb	39.366	2.87	27405	1000	
Ba	137	2	115	49.417	ppb	49.417	3.88	11628	5000	
W	182	2	165	12.115	ppb	12.115	4.22	61373	100	
Pt	195	2	165	0.000	ppb	0.000	-3804.70	53	100	
Tl	205	2	165	40.688	ppb	40.688	1.47	358796	2000	
Pb	208	2	165	40.386	ppb	40.386	1.73	462364	5000	
Th	232	2	165	40.061	ppb	40.061	1.57	542668	2000	
U	238	2	165	42.954	ppb	42.954	1.74	702103	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	406558	0.71	446069	91.14	60	120	
Sc (IS)	45	1	HMI H2	12322832	0.38	13344586	92.34	60	120	
Sc (IS)	45	2	HMI He	508379	0.33	548684	92.65	60	120	
Sc (IS)	45	3	No Gas	36541384	0.41	39087130	93.49	60	120	
Ge Internal Standard	72	1	HMI H2	7655525	0.47	8240244	92.90	60	120	
Ge Internal Standard	72	2	HMI He	729572	0.45	783465	93.12	60	120	
In Internal Standard	115	2	HMI He	2585053	0.38	2775841	93.13	60	120	
Ho-165	165	2	HMI He	16719278	1.28	17360012	96.31	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-2-D MSD
Data File Name	170SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T22:57:59-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	81.881	ppb	81.881	13.35	62465	500000	
Li	7	2	45	58.909	ppb	58.909	39.39	4097	500000	
Li	7	3	45	68.199	ppb	68.199	21.05	2585968	50000	
Be	9	1	6	40.388	ppb	40.388	5.70	5728	2000	
B	11	1	6	50.407	ppb	50.407	2.91	8466	2000	
Na	23	1	45	19017.241	ppb	19017.241	0.33	23702865	2000	>LDR
Na	23	2	45	18737.976	ppb	18737.976	0.99	2467793	400000	
Mg	24	2	45	24722.740	ppb	24722.740	0.92	1403038	400000	
Al	27	2	45	396.875	ppb	396.875	8.00	5608	400000	
K	39	1	45	5734.676	ppb	5734.676	1.23	7895499	400000	
K	39	2	45	6498.296	ppb	6498.296	0.91	184634	400000	
Ca	40	1	45	49852.095	ppb	49852.095	0.32	86815865	400000	
Ca	44	2	45	48893.327	ppb	48893.327	1.39	83469	400000	
V	51	2	72	64.336	ppb	64.336	2.91	46938	2000	
Cr	52	2	72	44.618	ppb	44.618	1.46	43037	5000	
Mn	55	2	72	41.163	ppb	41.163	5.26	14480	10000	
Fe	57	2	72	429.813	ppb	429.813	3.14	8072	400000	
Co	59	2	72	39.422	ppb	39.422	0.54	73729	2000	
Ni	60	2	72	39.636	ppb	39.636	1.87	21885	5000	
Cu	63	2	72	40.277	ppb	40.277	2.34	64056	5000	
Zn	66	2	72	43.901	ppb	43.901	6.84	8282	5000	
As	75	2	72	38.746	ppb	38.746	1.73	4252	2000	
Se	78	1	72	39.019	ppb	39.019	1.23	7589	2000	
Sr	88	2	72	326.329	ppb	326.329	1.95	122331	4000	
Zr	90	2	72	10072.760	ppb	10072.760	2.61	45074	1000	>LDR
Nb	93	2	72	0.257	ppb	0.257	33.27	1370	200	
Mo	95	2	115	40.331	ppb	40.331	2.39	31946	2000	
Pd	105	2	115	-0.028	ppb	-0.028	-15.37	3	100	
Ag	107	2	115	40.869	ppb	40.869	1.23	119882	100	
Cd	111	2	115	39.599	ppb	39.599	1.26	13183	2000	
Sn	120	2	115	39.926	ppb	39.926	2.27	34789	2000	
Sb	121	2	115	40.665	ppb	40.665	2.09	28483	1000	
Ba	137	2	115	49.708	ppb	49.708	3.79	11772	5000	
W	182	2	165	12.239	ppb	12.239	0.91	61995	100	
Pt	195	2	165	0.004	ppb	0.004	168.94	70	100	
Tl	205	2	165	40.843	ppb	40.843	0.74	360093	2000	
Pb	208	2	165	40.446	ppb	40.446	1.18	462942	5000	
Th	232	2	165	40.815	ppb	40.815	0.35	552761	2000	
U	238	2	165	43.168	ppb	43.168	1.29	705441	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	410549	0.90	446069	92.04	60	120	
Sc (IS)	45	1	HMI H2	12353863	0.44	13344586	92.58	60	120	
Sc (IS)	45	2	HMI He	510927	0.16	548684	93.12	60	120	
Sc (IS)	45	3	No Gas	36412577	1.02	39087130	93.16	60	120	
Ge Internal Standard	72	1	HMI H2	7671159	1.07	8240244	93.09	60	120	
Ge Internal Standard	72	2	HMI He	732036	0.75	783465	93.44	60	120	
In Internal Standard	115	2	HMI He	2601040	0.93	2775841	93.70	60	120	
Ho-165	165	2	HMI He	16714234	0.76	17360012	96.28	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-2-B pds
Data File Name	171SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:01:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.900	ppb	10.900	39.29	51893	500000	
Li	7	2	45	-8.534	ppb	-8.534	-223.18	3461	500000	
Li	7	3	45	3.109	ppb	3.109	99.06	2169615	50000	
Be	9	1	6	204.574	ppb	204.574	1.42	28952	2000	
B	11	1	6	20.693	ppb	20.693	5.28	3627	2000	
Na	23	1	45	17622.777	ppb	17622.777	0.68	21828020	2000	>LDR
Na	23	2	45	17529.865	ppb	17529.865	0.67	2315905	400000	
Mg	24	2	45	22892.153	ppb	22892.153	0.98	1301577	400000	
Al	27	2	45	2002.366	ppb	2002.366	1.39	28204	400000	
K	39	1	45	5320.140	ppb	5320.140	0.92	7398485	400000	
K	39	2	45	6008.301	ppb	6008.301	2.77	171483	400000	
Ca	40	1	45	47165.848	ppb	47165.848	0.55	81513919	400000	
Ca	44	2	45	45224.687	ppb	45224.687	0.90	77347	400000	
V	51	2	72	230.154	ppb	230.154	0.46	165218	2000	
Cr	52	2	72	212.345	ppb	212.345	0.91	203972	5000	
Mn	55	2	72	210.075	ppb	210.075	1.55	73474	10000	
Fe	57	2	72	2120.910	ppb	2120.910	3.93	39298	400000	
Co	59	2	72	203.559	ppb	203.559	1.16	380141	2000	
Ni	60	2	72	199.141	ppb	199.141	2.05	109167	5000	
Cu	63	2	72	205.973	ppb	205.973	0.61	323178	5000	
Zn	66	2	72	217.177	ppb	217.177	2.66	38780	5000	
As	75	2	72	192.185	ppb	192.185	1.63	21035	2000	
Se	78	1	72	199.794	ppb	199.794	1.59	38841	2000	
Sr	88	2	72	271.702	ppb	271.702	1.14	101734	4000	
Zr	90	2	72	54783.940	ppb	54783.940	0.49	244393	1000	>LDR
Nb	93	2	72	4.262	ppb	4.262	3.64	12178	200	
Mo	95	2	115	210.258	ppb	210.258	0.29	165331	2000	
Pd	105	2	115	0.007	ppb	0.007	103.30	50	100	
Ag	107	2	115	49.930	ppb	49.930	1.76	145500	100	
Cd	111	2	115	206.413	ppb	206.413	2.62	68221	2000	
Sn	120	2	115	208.070	ppb	208.070	0.96	179140	2000	
Sb	121	2	115	206.886	ppb	206.886	1.40	143774	1000	
Ba	137	2	115	219.913	ppb	219.913	1.47	51613	5000	
W	182	2	165	213.271	ppb	213.271	0.61	1058794	100	
Pt	195	2	165	0.053	ppb	0.053	15.18	283	100	
Tl	205	2	165	225.389	ppb	225.389	1.73	1969029	2000	
Pb	208	2	165	206.988	ppb	206.988	0.46	2344825	5000	
Th	232	2	165	16.058	ppb	16.058	0.48	215764	2000	
U	238	2	165	213.313	ppb	213.313	0.54	3454973	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	410048	0.23	446069	91.92	60	120	
Sc (IS)	45	1	HMI H2	12259733	0.54	13344586	91.87	60	120	
Sc (IS)	45	2	HMI He	511828	0.18	548684	93.28	60	120	
Sc (IS)	45	3	No Gas	36053669	0.48	39087130	92.24	60	120	
Ge Internal Standard	72	1	HMI H2	7671112	0.40	8240244	93.09	60	120	
Ge Internal Standard	72	2	HMI He	731067	0.33	783465	93.31	60	120	
In Internal Standard	115	2	HMI He	2584121	0.80	2775841	93.09	60	120	
Ho-165	165	2	HMI He	16567548	0.92	17360012	95.44	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	172_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:05:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	508.512	ppb	2.296	126261	500	101.7	90	110	
Li	7	2	45	467.706	ppb	9.984	8152	500	93.5	90	110	
Li	7	3	45	489.278	ppb	2.904	5327489	500	97.9	90	110	
Be	9	1	6	44.875	ppb	2.668	6662	50	89.8	90	110	>+\-10%
B	11	1	6	38.450	ppb	6.559	6828	50	76.9	90	110	>+\-10%
Na	23	1	45	5408.758	ppb	0.879	7194517	5000	108.2	90	110	
Na	23	2	45	5147.190	ppb	1.306	727149	5000	102.9	90	110	
Mg	24	2	45	5030.834	ppb	0.811	292557	5000	100.6	90	110	
Al	27	2	45	4787.635	ppb	1.344	68597	5000	95.8	90	110	
K	39	1	45	5017.278	ppb	0.351	7285644	5000	100.3	90	110	
K	39	2	45	4916.620	ppb	0.633	143998	5000	98.3	90	110	
Ca	40	1	45	4967.047	ppb	1.238	8887259	5000	99.3	90	110	
Ca	44	2	45	4998.131	ppb	0.686	8766	5000	100.0	90	110	
V	51	2	72	47.868	ppb	1.745	35656	50	95.7	90	110	
Cr	52	2	72	49.988	ppb	4.390	48860	50	100.0	90	110	
Mn	55	2	72	50.267	ppb	2.554	17910	50	100.5	90	110	
Fe	57	2	72	4915.764	ppb	1.584	92277	5000	98.3	90	110	
Co	59	2	72	48.974	ppb	1.382	92844	50	97.9	90	110	
Ni	60	2	72	48.034	ppb	0.911	26853	50	96.1	90	110	
Cu	63	2	72	49.674	ppb	1.986	79861	50	99.3	90	110	
Zn	66	2	72	52.340	ppb	7.339	9903	50	104.7	90	110	
As	75	2	72	48.812	ppb	5.189	5428	50	97.6	90	110	
Se	78	1	72	49.245	ppb	2.408	9879	50	98.5	90	110	
Sr	88	2	72	49.890	ppb	2.101	18995	50	99.8	90	110	
Zr	90	2	72	112.490	ppb	17.065	613	50	225.0	90	110	>+\-10%
Nb	93	2	72	92.437	ppb	1.276	253931	100	92.4	90	110	
Mo	95	2	115	48.548	ppb	2.977	38975	50	97.1	90	110	
Pd	105	2	115	51.306	ppb	2.042	69452	50	102.6	90	110	
Ag	107	2	115	48.674	ppb	2.375	144750	50	97.3	90	110	
Cd	111	2	115	47.737	ppb	1.353	16109	50	95.5	90	110	
Sn	120	2	115	49.306	ppb	2.555	43494	50	98.6	90	110	
Sb	121	2	115	50.966	ppb	2.182	36176	50	101.9	90	110	
Ba	137	2	115	49.607	ppb	4.758	11905	50	99.2	90	110	
W	182	2	165	49.448	ppb	1.240	250611	50	98.9	90	110	
Pt	195	2	165	49.436	ppb	0.303	218075	50	98.9	90	110	
Tl	205	2	165	49.671	ppb	0.285	442133	50	99.3	90	110	
Pb	208	2	165	49.797	ppb	1.411	575251	50	99.6	90	110	
Th	232	2	165	48.798	ppb	1.253	667157	50	97.6	90	110	
U	238	2	165	45.757	ppb	1.016	754964	50	91.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	429794	0.52	446069	96.35	60	120	
Sc (IS)	45	1	HMI H2	12616484	0.88	13344586	94.54	60	120	
Sc (IS)	45	2	HMI He	520974	0.74	548684	94.95	60	120	
Sc (IS)	45	3	No Gas	37717249	0.35	39087130	96.50	60	120	
Ge Internal Standard	72	1	HMI H2	7913838	0.68	8240244	96.04	60	120	
Ge Internal Standard	72	2	HMI He	742050	0.10	783465	94.71	60	120	
In Internal Standard	115	2	HMI He	2637045	1.19	2775841	95.00	60	120	
Ho-165	165	2	HMI He	16875628	1.04	17360012	97.21	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	173_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:09:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	6.929	ppb	79.5	2308611	10	
Be	9	1	6	0.067	ppb	206.0	17	0.5	
B	11	1	6	2.497	ppb	10.5	717	0.5	>RL
Na	23	1	45	430.115	ppb	1.5	985404	25	>RL
Na	23	2	45	513.282	ppb	1.5	117445	25	>RL
Mg	24	2	45	130.407	ppb	2.1	9383	25	>RL
Al	27	2	45	3.382	ppb	43.4	83	15	
K	39	1	45	-4.569	ppb	-675.8	1868450	50	
K	39	2	45	27.499	ppb	97.0	7195	50	
Ca	40	1	45	6.063	ppb	3.6	71875	50	
Ca	44	2	45	-17.048	ppb	-19.0	43	25	
V	51	2	72	0.145	ppb	102.6	1103	1	
Cr	52	2	72	0.067	ppb	74.4	227	1	
Mn	55	2	72	-0.046	ppb	-217.5	70	0.5	
Fe	57	2	72	0.789	ppb	451.5	143	25	
Co	59	2	72	0.019	ppb	55.7	53	0.5	
Ni	60	2	72	0.095	ppb	104.7	220	1	
Cu	63	2	72	0.180	ppb	67.3	1290	1	
Zn	66	2	72	0.232	ppb	204.7	600	5	
As	75	2	72	0.020	ppb	87.0	10	1	
Se	78	1	72	0.086	ppb	47.4	23	1	
Sr	88	2	72	0.022	ppb	121.0	50	0.5	
Zr	90	2	72	0.925	ppb	1867.6	110	1	
Nb	93	2	72	2.842	ppb	6.9	8603	2	>RL
Mo	95	2	115	0.092	ppb	30.9	107	0.5	
Pd	105	2	115	0.050	ppb	52.5	110	1	
Ag	107	2	115	0.036	ppb	37.7	123	1	
Cd	111	2	115	0.011	ppb	157.0	13	0.5	
Sn	120	2	115	0.127	ppb	18.1	353	1	
Sb	121	2	115	0.958	ppb	15.9	737	0.6	>RL
Ba	137	2	115	-0.021	ppb	-511.4	30	0.5	
W	182	2	165	0.100	ppb	27.2	1253	1	
Pt	195	2	165	0.012	ppb	69.2	107	1	
Tl	205	2	165	0.023	ppb	24.2	317	0.1	
Pb	208	2	165	0.009	ppb	104.0	1003	0.5	
Th	232	2	165	0.071	ppb	12.5	1303	1	
U	238	2	165	0.060	ppb	14.0	1117	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	439065	0.22	446069	98.43	60	120	
Sc (IS)	45	1	HMI H2	12813076	0.80	13344586	96.02	60	120	
Sc (IS)	45	2	HMI He	522250	0.47	548684	95.18	60	120	
Sc (IS)	45	3	No Gas	37957914	0.92	39087130	97.11	60	120	
Ge Internal Standard	72	1	HMI H2	8027935	0.54	8240244	97.42	60	120	
Ge Internal Standard	72	2	HMI He	753442	0.16	783465	96.17	60	120	
In Internal Standard	115	2	HMI He	2672767	0.17	2775841	96.29	60	120	
Ho-165	165	2	HMI He	16912053	0.59	17360012	97.42	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-3-B
Data File Name	174SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:13:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.591	ppb	4.591	136.15	51401	500000	
Li	7	2	45	4.908	ppb	4.908	403.50	3604	500000	
Li	7	3	45	0.136	ppb	0.136	4465.56	2166580	50000	
Be	9	1	6	0.004	ppb	0.004	1076.44	7	2000	
B	11	1	6	20.088	ppb	20.088	0.24	3531	2000	
Na	23	1	45	18735.657	ppb	18735.657	0.93	23365110	2000	>LDR
Na	23	2	45	18687.512	ppb	18687.512	0.60	2476446	400000	
Mg	24	2	45	24947.668	ppb	24947.668	2.29	1424443	400000	
Al	27	2	45	3.242	ppb	3.242	44.87	80	400000	
K	39	1	45	5760.993	ppb	5760.993	1.13	7925874	400000	
K	39	2	45	6547.167	ppb	6547.167	1.32	187118	400000	
Ca	40	1	45	50066.578	ppb	50066.578	0.35	87216075	400000	
Ca	44	2	45	48730.912	ppb	48730.912	0.93	83708	400000	
V	51	2	72	24.078	ppb	24.078	1.58	18391	2000	
Cr	52	2	72	4.363	ppb	4.363	5.21	4401	5000	
Mn	55	2	72	0.136	ppb	0.136	140.51	133	10000	
Fe	57	2	72	7.159	ppb	7.159	27.27	260	400000	
Co	59	2	72	0.015	ppb	0.015	186.49	43	2000	
Ni	60	2	72	0.077	ppb	0.077	107.68	207	5000	
Cu	63	2	72	0.171	ppb	0.171	30.34	1253	5000	
Zn	66	2	72	3.597	ppb	3.597	9.66	1190	5000	
As	75	2	72	1.148	ppb	1.148	13.63	135	2000	
Se	78	1	72	0.421	ppb	0.421	17.18	87	2000	
Sr	88	2	72	292.479	ppb	292.479	2.35	110957	4000	
Zr	90	2	72	16.057	ppb	16.057	113.87	177	1000	
Nb	93	2	72	1.870	ppb	1.870	8.92	5798	200	
Mo	95	2	115	3.491	ppb	3.491	13.93	2810	2000	
Pd	105	2	115	0.009	ppb	0.009	196.50	53	100	
Ag	107	2	115	0.007	ppb	0.007	146.07	37	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.025	ppb	-0.025	-111.53	213	2000	
Sb	121	2	115	0.465	ppb	0.465	20.89	373	1000	
Ba	137	2	115	7.344	ppb	7.344	5.16	1777	5000	
W	182	2	165	0.199	ppb	0.199	31.06	1744	100	
Pt	195	2	165	0.003	ppb	0.003	383.24	67	100	
Tl	205	2	165	0.012	ppb	0.012	41.53	220	2000	
Pb	208	2	165	0.032	ppb	0.032	45.36	1270	5000	
Th	232	2	165	0.131	ppb	0.131	18.71	2114	2000	
U	238	2	165	5.206	ppb	5.206	2.28	85650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	410255	0.99	446069	91.97	60	120	
Sc (IS)	45	1	HMI H2	12357726	0.45	13344586	92.60	60	120	
Sc (IS)	45	2	HMI He	514083	0.69	548684	93.69	60	120	
Sc (IS)	45	3	No Gas	36303554	0.81	39087130	92.88	60	120	
Ge Internal Standard	72	1	HMI H2	7653167	0.30	8240244	92.88	60	120	
Ge Internal Standard	72	2	HMI He	740711	0.41	783465	94.54	60	120	
In Internal Standard	115	2	HMI He	2614248	1.03	2775841	94.18	60	120	
Ho-165	165	2	HMI He	16807435	0.31	17360012	96.82	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-4-B
Data File Name	175SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:16:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.854	ppb	5.854	38.87	51796	500000	
Li	7	2	45	-12.306	ppb	-12.306	-325.42	3427	500000	
Li	7	3	45	-2.817	ppb	-2.817	-349.22	2167487	50000	
Be	9	1	6	-0.020	ppb	-0.020	-208.15	3	2000	
B	11	1	6	15.285	ppb	15.285	3.66	2737	2000	
Na	23	1	45	26712.394	ppb	26712.394	0.74	33267800	2000	>LDR
Na	23	2	45	26008.885	ppb	26008.885	0.76	3416127	400000	
Mg	24	2	45	16861.314	ppb	16861.314	1.03	960146	400000	
Al	27	2	45	8.231	ppb	8.231	48.32	150	400000	
K	39	1	45	4349.701	ppb	4349.701	0.76	6453306	400000	
K	39	2	45	5116.255	ppb	5116.255	1.91	147118	400000	
Ca	40	1	45	31395.448	ppb	31395.448	0.27	54936409	400000	
Ca	44	2	45	30790.649	ppb	30790.649	2.55	52738	400000	
V	51	2	72	20.536	ppb	20.536	4.13	15808	2000	
Cr	52	2	72	6.718	ppb	6.718	3.11	6682	5000	
Mn	55	2	72	0.429	ppb	0.429	19.83	237	10000	
Fe	57	2	72	9.311	ppb	9.311	19.70	300	400000	
Co	59	2	72	0.029	ppb	0.029	17.69	70	2000	
Ni	60	2	72	0.096	ppb	0.096	115.02	217	5000	
Cu	63	2	72	0.340	ppb	0.340	34.14	1520	5000	
Zn	66	2	72	8.452	ppb	8.452	13.82	2054	5000	
As	75	2	72	1.321	ppb	1.321	14.96	154	2000	
Se	78	1	72	1.212	ppb	1.212	30.55	243	2000	
Sr	88	2	72	132.104	ppb	132.104	0.91	50065	4000	
Zr	90	2	72	11.754	ppb	11.754	86.51	157	1000	
Nb	93	2	72	1.129	ppb	1.129	9.73	3767	200	
Mo	95	2	115	2.824	ppb	2.824	3.37	2287	2000	
Pd	105	2	115	0.017	ppb	0.017	267.81	63	100	
Ag	107	2	115	0.008	ppb	0.008	107.65	40	100	
Cd	111	2	115	-0.009	ppb	-0.009	-200.78	7	2000	
Sn	120	2	115	0.066	ppb	0.066	139.12	293	2000	
Sb	121	2	115	0.325	ppb	0.325	13.16	277	1000	
Ba	137	2	115	13.346	ppb	13.346	2.27	3214	5000	
W	182	2	165	2.136	ppb	2.136	1.98	11605	100	
Pt	195	2	165	-0.004	ppb	-0.004	-110.74	37	100	
Tl	205	2	165	0.011	ppb	0.011	39.77	207	2000	
Pb	208	2	165	0.047	ppb	0.047	18.97	1447	5000	
Th	232	2	165	0.047	ppb	0.047	15.79	977	2000	
U	238	2	165	2.097	ppb	2.097	1.39	34890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408453	0.91	446069	91.57	60	120	
Sc (IS)	45	1	HMI H2	12408046	0.37	13344586	92.98	60	120	
Sc (IS)	45	2	HMI He	512377	0.42	548684	93.38	60	120	
Sc (IS)	45	3	No Gas	36622138	0.87	39087130	93.69	60	120	
Ge Internal Standard	72	1	HMI H2	7739366	0.90	8240244	93.92	60	120	
Ge Internal Standard	72	2	HMI He	739606	0.74	783465	94.40	60	120	
In Internal Standard	115	2	HMI He	2624222	1.18	2775841	94.54	60	120	
Ho-165	165	2	HMI He	16965344	0.17	17360012	97.73	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-5-B
Data File Name	176SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:20:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.659	ppb	11.659	86.52	52298	500000	
Li	7	2	45	4.876	ppb	4.876	522.42	3597	500000	
Li	7	3	45	4.453	ppb	4.453	90.71	2181140	50000	
Be	9	1	6	0.004	ppb	0.004	1854.37	7	2000	
B	11	1	6	20.157	ppb	20.157	8.56	3514	2000	
Na	23	1	45	24481.138	ppb	24481.138	0.24	30335945	2000	>LDR
Na	23	2	45	23879.998	ppb	23879.998	0.39	3144947	400000	
Mg	24	2	45	27410.385	ppb	27410.385	1.66	1561887	400000	
Al	27	2	45	5.601	ppb	5.601	39.70	113	400000	
K	39	1	45	5960.038	ppb	5960.038	0.95	8119809	400000	
K	39	2	45	6659.270	ppb	6659.270	1.53	189856	400000	
Ca	40	1	45	48670.338	ppb	48670.338	0.50	84604029	400000	
Ca	44	2	45	47167.444	ppb	47167.444	0.71	80867	400000	
V	51	2	72	12.712	ppb	12.712	5.00	10117	2000	
Cr	52	2	72	3.954	ppb	3.954	1.64	3981	5000	
Mn	55	2	72	22.251	ppb	22.251	4.01	7916	10000	
Fe	57	2	72	20.850	ppb	20.850	2.60	513	400000	
Co	59	2	72	0.052	ppb	0.052	15.83	113	2000	
Ni	60	2	72	0.285	ppb	0.285	12.41	320	5000	
Cu	63	2	72	0.217	ppb	0.217	48.02	1320	5000	
Zn	66	2	72	3.807	ppb	3.807	21.10	1220	5000	
As	75	2	72	1.007	ppb	1.007	27.02	118	2000	
Se	78	1	72	0.950	ppb	0.950	21.48	189	2000	
Sr	88	2	72	228.882	ppb	228.882	1.48	86348	4000	
Zr	90	2	72	2.945	ppb	2.945	388.29	117	1000	
Nb	93	2	72	0.745	ppb	0.745	9.14	2707	200	
Mo	95	2	115	3.018	ppb	3.018	8.68	2434	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-84.52	20	100	
Ag	107	2	115	0.028	ppb	0.028	50.48	100	100	
Cd	111	2	115	-0.008	ppb	-0.008	-419.40	7	2000	
Sn	120	2	115	0.017	ppb	0.017	82.66	250	2000	
Sb	121	2	115	0.299	ppb	0.299	37.00	257	1000	
Ba	137	2	115	11.587	ppb	11.587	7.47	2787	5000	
W	182	2	165	0.267	ppb	0.267	18.39	2080	100	
Pt	195	2	165	0.003	ppb	0.003	170.50	70	100	
Tl	205	2	165	0.015	ppb	0.015	47.99	240	2000	
Pb	208	2	165	0.074	ppb	0.074	39.10	1737	5000	
Th	232	2	165	0.031	ppb	0.031	39.99	743	2000	
U	238	2	165	3.978	ppb	3.978	2.30	65241	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	407058	1.25	446069	91.25	60	120	
Sc (IS)	45	1	HMI H2	12331396	0.90	13344586	92.41	60	120	
Sc (IS)	45	2	HMI He	513099	0.65	548684	93.51	60	120	
Sc (IS)	45	3	No Gas	36110627	0.37	39087130	92.38	60	120	
Ge Internal Standard	72	1	HMI H2	7662033	0.82	8240244	92.98	60	120	
Ge Internal Standard	72	2	HMI He	736570	0.71	783465	94.01	60	120	
In Internal Standard	115	2	HMI He	2617198	0.97	2775841	94.28	60	120	
Ho-165	165	2	HMI He	16747686	0.60	17360012	96.47	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-6-B
Data File Name	177SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:24:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.126	ppb	1.126	134.45	52063	500000	
Li	7	2	45	-3.528	ppb	-3.528	-300.80	3591	500000	
Li	7	3	45	-14.114	ppb	-14.114	-60.56	2123257	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	2.373	ppb	2.373	17.73	667	2000	
Na	23	1	45	1003.283	ppb	1003.283	2.43	1689715	2000	
Na	23	2	45	970.836	ppb	970.836	1.03	178355	400000	
Mg	24	2	45	117.876	ppb	117.876	9.93	8683	400000	
Al	27	2	45	29.541	ppb	29.541	38.05	460	400000	
K	39	1	45	-823.285	ppb	-823.285	-0.80	953811	400000	
K	39	2	45	42.563	ppb	42.563	12.35	7642	400000	
Ca	40	1	45	240.326	ppb	240.326	0.28	487979	400000	
Ca	44	2	45	217.291	ppb	217.291	26.77	453	400000	
V	51	2	72	-0.605	ppb	-0.605	-9.35	553	2000	
Cr	52	2	72	0.372	ppb	0.372	19.58	530	5000	
Mn	55	2	72	0.203	ppb	0.203	98.33	160	10000	
Fe	57	2	72	18.936	ppb	18.936	10.05	490	400000	
Co	59	2	72	0.012	ppb	0.012	217.33	40	2000	
Ni	60	2	72	0.040	ppb	0.040	424.29	190	5000	
Cu	63	2	72	0.281	ppb	0.281	17.63	1457	5000	
Zn	66	2	72	4.214	ppb	4.214	37.12	1327	5000	
As	75	2	72	0.060	ppb	0.060	92.45	14	2000	
Se	78	1	72	0.088	ppb	0.088	12.11	23	2000	
Sr	88	2	72	0.461	ppb	0.461	16.33	220	4000	
Zr	90	2	72	12.422	ppb	12.422	55.81	163	1000	
Nb	93	2	72	0.466	ppb	0.466	13.08	1997	200	
Mo	95	2	115	0.062	ppb	0.062	74.41	83	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-60.58	17	100	
Ag	107	2	115	0.001	ppb	0.001	261.13	20	100	
Cd	111	2	115	-0.019	ppb	-0.019	-89.89	3	2000	
Sn	120	2	115	0.289	ppb	0.289	13.19	500	2000	
Sb	121	2	115	0.159	ppb	0.159	50.43	163	1000	
Ba	137	2	115	1.700	ppb	1.700	16.82	450	5000	
W	182	2	165	0.020	ppb	0.020	68.85	863	100	
Pt	195	2	165	-0.003	ppb	-0.003	-328.29	43	100	
Tl	205	2	165	0.003	ppb	0.003	233.47	140	2000	
Pb	208	2	165	0.038	ppb	0.038	31.72	1357	5000	
Th	232	2	165	0.014	ppb	0.014	37.70	533	2000	
U	238	2	165	0.007	ppb	0.007	56.63	240	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	421318	0.79	446069	94.45	60	120	
Sc (IS)	45	1	HMI H2	12638521	0.55	13344586	94.71	60	120	
Sc (IS)	45	2	HMI He	523792	0.28	548684	95.46	60	120	
Sc (IS)	45	3	No Gas	37056491	0.97	39087130	94.80	60	120	
Ge Internal Standard	72	1	HMI H2	7900813	0.86	8240244	95.88	60	120	
Ge Internal Standard	72	2	HMI He	755548	0.43	783465	96.44	60	120	
In Internal Standard	115	2	HMI He	2687482	0.45	2775841	96.82	60	120	
Ho-165	165	2	HMI He	17136720	0.91	17360012	98.71	60	120	

Sample Report

Sample Table

Sample Name	280-114253-D-7-B
Data File Name	178SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:28:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430016 6020b
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.530	ppb	6.530	70.17	51879	500000	
Li	7	2	45	-11.191	ppb	-11.191	-99.27	3467	500000	
Li	7	3	45	0.389	ppb	0.389	2995.04	2160802	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	16.293	ppb	16.293	11.32	2900	2000	
Na	23	1	45	19777.395	ppb	19777.395	0.69	24735591	2000	>LDR
Na	23	2	45	19588.536	ppb	19588.536	0.71	2605945	400000	
Mg	24	2	45	25170.168	ppb	25170.168	1.57	1444015	400000	
Al	27	2	45	22.471	ppb	22.471	46.48	353	400000	
K	39	1	45	5210.917	ppb	5210.917	0.62	7369957	400000	
K	39	2	45	6021.278	ppb	6021.278	1.01	173416	400000	
Ca	40	1	45	43392.698	ppb	43392.698	0.26	75889544	400000	
Ca	44	2	45	42006.256	ppb	42006.256	0.56	72505	400000	
V	51	2	72	24.548	ppb	24.548	2.42	18851	2000	
Cr	52	2	72	6.504	ppb	6.504	8.93	6522	5000	
Mn	55	2	72	1.360	ppb	1.360	8.03	570	10000	
Fe	57	2	72	28.676	ppb	28.676	17.22	667	400000	
Co	59	2	72	0.029	ppb	0.029	49.91	70	2000	
Ni	60	2	72	-0.015	ppb	-0.015	-668.85	157	5000	
Cu	63	2	72	0.228	ppb	0.228	23.80	1353	5000	
Zn	66	2	72	9.465	ppb	9.465	11.04	2250	5000	
As	75	2	72	1.246	ppb	1.246	9.43	146	2000	
Se	78	1	72	0.829	ppb	0.829	14.97	168	2000	
Sr	88	2	72	188.494	ppb	188.494	1.41	71971	4000	
Zr	90	2	72	93.695	ppb	93.695	24.86	530	1000	
Nb	93	2	72	0.312	ppb	0.312	24.10	1547	200	
Mo	95	2	115	3.059	ppb	3.059	4.04	2477	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-324.22	30	100	
Ag	107	2	115	0.004	ppb	0.004	140.04	27	100	
Cd	111	2	115	-0.008	ppb	-0.008	-205.80	7	2000	
Sn	120	2	115	0.080	ppb	0.080	55.42	307	2000	
Sb	121	2	115	0.107	ppb	0.107	53.77	123	1000	
Ba	137	2	115	13.357	ppb	13.357	4.44	3220	5000	
W	182	2	165	0.094	ppb	0.094	40.81	1230	100	
Pt	195	2	165	0.002	ppb	0.002	435.40	63	100	
Tl	205	2	165	0.005	ppb	0.005	44.23	157	2000	
Pb	208	2	165	0.044	ppb	0.044	20.61	1417	5000	
Th	232	2	165	0.010	ppb	0.010	27.75	463	2000	
U	238	2	165	2.414	ppb	2.414	1.64	40080	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408814	1.38	446069	91.65	60	120	
Sc (IS)	45	1	HMI H2	12405401	0.75	13344586	92.96	60	120	
Sc (IS)	45	2	HMI He	516527	0.70	548684	94.14	60	120	
Sc (IS)	45	3	No Gas	36180627	1.12	39087130	92.56	60	120	
Ge Internal Standard	72	1	HMI H2	7762169	0.37	8240244	94.20	60	120	
Ge Internal Standard	72	2	HMI He	745422	0.87	783465	95.14	60	120	
In Internal Standard	115	2	HMI He	2628242	0.67	2775841	94.68	60	120	
Ho-165	165	2	HMI He	16934369	0.40	17360012	97.55	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	179_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:32:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	475.810	ppb	1.071	124260	500	95.2	90	110	
Li	7	2	45	484.683	ppb	4.126	8429	500	96.9	90	110	
Li	7	3	45	473.363	ppb	4.127	5285574	500	94.7	90	110	
Be	9	1	6	46.221	ppb	8.184	6862	50	92.4	90	110	
B	11	1	6	39.116	ppb	3.106	6942	50	78.2	90	110	>+\-10%
Na	23	1	45	5061.908	ppb	0.816	6915703	5000	101.2	90	110	
Na	23	2	45	4831.259	ppb	0.657	694848	5000	96.6	90	110	
Mg	24	2	45	4974.788	ppb	0.989	293228	5000	99.5	90	110	
Al	27	2	45	4746.498	ppb	0.460	68922	5000	94.9	90	110	
K	39	1	45	4849.825	ppb	1.607	7266732	5000	97.0	90	110	
K	39	2	45	4942.576	ppb	1.658	146677	5000	98.9	90	110	
Ca	40	1	45	4944.829	ppb	0.917	9051182	5000	98.9	90	110	
Ca	44	2	45	4876.218	ppb	1.557	8669	5000	97.5	90	110	
V	51	2	72	47.762	ppb	2.447	36374	50	95.5	90	110	
Cr	52	2	72	49.496	ppb	0.742	49458	50	99.0	90	110	
Mn	55	2	72	50.666	ppb	2.424	18454	50	101.3	90	110	
Fe	57	2	72	4932.385	ppb	1.895	94648	5000	98.6	90	110	
Co	59	2	72	48.842	ppb	0.952	94655	50	97.7	90	110	
Ni	60	2	72	48.508	ppb	2.356	27721	50	97.0	90	110	
Cu	63	2	72	50.004	ppb	0.871	82176	50	100.0	90	110	
Zn	66	2	72	50.580	ppb	2.697	9803	50	101.2	90	110	
As	75	2	72	46.924	ppb	3.075	5335	50	93.8	90	110	
Se	78	1	72	50.462	ppb	4.314	10201	50	100.9	90	110	
Sr	88	2	72	51.013	ppb	3.398	19853	50	102.0	90	110	
Zr	90	2	72	49.757	ppb	9.411	337	50	99.5	90	110	
Nb	93	2	72	92.457	ppb	0.371	259643	100	92.5	90	110	
Mo	95	2	115	47.897	ppb	3.088	39015	50	95.8	90	110	
Pd	105	2	115	51.171	ppb	1.893	70276	50	102.3	90	110	
Ag	107	2	115	48.297	ppb	2.022	145710	50	96.6	90	110	
Cd	111	2	115	49.813	ppb	3.475	17053	50	99.6	90	110	
Sn	120	2	115	48.576	ppb	1.483	43485	50	97.2	90	110	
Sb	121	2	115	49.005	ppb	0.801	35294	50	98.0	90	110	
Ba	137	2	115	51.344	ppb	2.098	12502	50	102.7	90	110	
W	182	2	165	48.955	ppb	1.446	251465	50	97.9	90	110	
Pt	195	2	165	48.972	ppb	1.200	218932	50	97.9	90	110	
Tl	205	2	165	49.410	ppb	0.321	445722	50	98.8	90	110	
Pb	208	2	165	49.346	ppb	0.647	577780	50	98.7	90	110	
Th	232	2	165	48.641	ppb	0.837	674007	50	97.3	90	110	
U	238	2	165	45.416	ppb	0.895	759442	50	90.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	429915	0.54	446069	96.38	60	120	
Sc (IS)	45	1	HMI H2	12905731	0.17	13344586	96.71	60	120	
Sc (IS)	45	2	HMI He	528006	0.51	548684	96.23	60	120	
Sc (IS)	45	3	No Gas	38141483	0.85	39087130	97.58	60	120	
Ge Internal Standard	72	1	HMI H2	7977025	1.43	8240244	96.81	60	120	
Ge Internal Standard	72	2	HMI He	758582	0.31	783465	96.82	60	120	
In Internal Standard	115	2	HMI He	2675248	0.39	2775841	96.38	60	120	
Ho-165	165	2	HMI He	17102877	0.65	17360012	98.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	180_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:35:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.008	ppb	-449.0	2292012	10	
Be	9	1	6	0.001	ppb	4919.5	7	0.5	
B	11	1	6	2.046	ppb	36.6	637	0.5	>RL
Na	23	1	45	162.712	ppb	4.4	652082	25	>RL
Na	23	2	45	198.486	ppb	4.3	77083	25	>RL
Mg	24	2	45	100.838	ppb	2.2	7789	25	>RL
Al	27	2	45	2.604	ppb	30.5	73	15	
K	39	1	45	-1.754	ppb	-1789.0	1889445	50	
K	39	2	45	2.321	ppb	251.2	6592	50	
Ca	40	1	45	3.641	ppb	10.3	68143	50	
Ca	44	2	45	-17.424	ppb	-49.5	43	25	
V	51	2	72	0.187	ppb	71.9	1150	1	
Cr	52	2	72	0.048	ppb	85.1	210	1	
Mn	55	2	72	0.061	ppb	155.6	110	0.5	
Fe	57	2	72	1.033	ppb	258.4	150	25	
Co	59	2	72	0.024	ppb	108.7	63	0.5	
Ni	60	2	72	0.019	ppb	309.7	180	1	
Cu	63	2	72	0.173	ppb	18.2	1297	1	
Zn	66	2	72	-0.174	ppb	-203.4	533	5	
As	75	2	72	0.059	ppb	44.0	14	1	
Se	78	1	72	0.066	ppb	45.9	19	1	
Sr	88	2	72	-0.023	ppb	-232.1	33	0.5	
Zr	90	2	72	-1.548	ppb	-239.2	100	1	
Nb	93	2	72	3.144	ppb	6.9	9570	2	>RL
Mo	95	2	115	0.057	ppb	42.2	80	0.5	
Pd	105	2	115	0.046	ppb	48.9	107	1	
Ag	107	2	115	0.012	ppb	40.6	53	1	
Cd	111	2	115	-0.019	ppb	-90.4	3	0.5	
Sn	120	2	115	0.010	ppb	268.2	253	1	
Sb	121	2	115	0.473	ppb	22.7	393	0.6	
Ba	137	2	115	-0.091	ppb	-51.7	13	0.5	
W	182	2	165	0.048	ppb	51.3	1007	1	
Pt	195	2	165	0.015	ppb	60.6	123	1	
Tl	205	2	165	0.021	ppb	10.6	303	0.1	
Pb	208	2	165	0.013	ppb	62.8	1073	0.5	
Th	232	2	165	0.074	ppb	10.2	1367	1	
U	238	2	165	0.041	ppb	12.5	803	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	438457	0.83	446069	98.29	60	120	
Sc (IS)	45	1	HMI H2	12935252	0.47	13344586	96.93	60	120	
Sc (IS)	45	2	HMI He	530350	0.08	548684	96.66	60	120	
Sc (IS)	45	3	No Gas	38637155	0.37	39087130	98.85	60	120	
Ge Internal Standard	72	1	HMI H2	8049164	0.49	8240244	97.68	60	120	
Ge Internal Standard	72	2	HMI He	763633	0.28	783465	97.47	60	120	
In Internal Standard	115	2	HMI He	2713908	0.86	2775841	97.77	60	120	
Ho-165	165	2	HMI He	17157948	0.71	17360012	98.84	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	181LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:39:39-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	4.891	ppb	85.137	2323399	50	9.8	70	130	>+/-30%
Be	9	1	6	0.956	ppb	11.763	150	1	95.6	70	130	
Na	23	2	45	265.322	ppb	3.913	86219	50	530.6	70	130	>+/-30%
Mg	24	2	45	158.971	ppb	4.175	11231	50	317.9	70	130	>+/-30%
Al	27	2	45	31.814	ppb	8.445	500	30	106.0	70	130	
K	39	2	45	113.828	ppb	7.699	9790	100	113.8	70	130	
Ca	44	2	45	35.181	ppb	65.301	137	50	70.4	70	130	
V	51	2	72	4.875	ppb	6.623	4654	5	97.5	70	130	
Cr	52	2	72	2.267	ppb	6.725	2440	2	113.4	70	130	
Mn	55	2	72	1.083	ppb	31.734	483	1	108.3	70	130	
Fe	57	2	72	50.870	ppb	10.827	1113	50	101.7	70	130	
Co	59	2	72	1.005	ppb	3.034	1980	1	100.5	70	130	
Ni	60	2	72	1.993	ppb	9.478	1310	2	99.6	70	130	
Cu	63	2	72	2.432	ppb	3.370	4998	2	121.6	70	130	
Zn	66	2	72	11.541	ppb	11.099	2694	10	115.4	70	130	
As	75	2	72	4.746	ppb	9.696	551	5	94.9	70	130	
Se	78	1	72	4.905	ppb	1.453	1004	5	98.1	70	130	
Sr	88	2	72	1.024	ppb	29.883	443	1	102.4	70	130	
Zr	90	2	72	17.029	ppb	49.426	187	0.5	3405.8	70	130	>+/-30%
Nb	93	2	72	6.118	ppb	6.744	17988	2	305.9	70	130	>+/-30%
Mo	95	2	115	2.037	ppb	4.299	1747	2	101.9	70	130	
Pd	105	2	115	0.017	ppb	88.092	67	1	1.7	70	130	>+/-30%
Ag	107	2	115	5.158	ppb	4.336	16095	5	103.2	70	130	
Cd	111	2	115	0.943	ppb	20.892	343	1	94.3	70	130	
Sn	120	2	115	9.814	ppb	1.737	9276	10	98.1	70	130	
Sb	121	2	115	2.369	ppb	4.801	1810	2	118.4	70	130	
Ba	137	2	115	0.798	ppb	28.899	237	1	79.8	70	130	
W	182	2	165	4.954	ppb	1.342	26133	1	495.4	70	130	>+/-30%
Pt	195	2	165	0.011	ppb	34.722	103	1	1.1	70	130	>+/-30%
Tl	205	2	165	1.051	ppb	5.817	9594	1	105.1	70	130	
Pb	208	2	165	1.037	ppb	2.548	13046	1	103.7	70	130	
Th	232	2	165	2.126	ppb	3.004	29788	2	106.3	70	130	
U	238	2	165	0.968	ppb	3.003	16300	1	96.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	434908	0.33	446069	97.50	60	120	
Sc (IS)	45	1	HMI H2	12919595	0.48	13344586	96.82	60	120	
Sc (IS)	45	2	HMI He	531466	0.64	548684	96.86	60	120	
Sc (IS)	45	3	No Gas	38419125	0.12	39087130	98.29	60	120	
Ge Internal Standard	72	1	HMI H2	8036234	0.34	8240244	97.52	60	120	
Ge Internal Standard	72	2	HMI He	765012	0.77	783465	97.64	60	120	
In Internal Standard	115	2	HMI He	2764549	0.38	2775841	99.59	60	120	
Ho-165	165	2	HMI He	17107196	1.19	17360012	98.54	60	120	

Blank Report

Sample Table

Sample Name	MB 280-430020/1-A
Data File Name	182_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:43:28-06:00
Sample Type	Blank
Dilution	1
Comment	430020 6020a
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	2.084	ppb	129.5504217	52872	0.5
Li	7	2	45	-26.714	ppb	-48.49702939	3410	0.5
Li	7	3	45	-6.026	ppb	-188.1215716	2186880	10
Be	9	1	6	-0.020	ppb	-199.5014458	3	0.5
B	11	1	6	1.658	ppb	14.86282587	547	0.5
Na	23	1	45	255.429	ppb	10.74555417	762891	25
Na	23	2	45	296.487	ppb	5.615187079	90328	25
Mg	24	2	45	82.316	ppb	3.683184837	6708	25
Al	27	2	45	2.828	ppb	61.17054618	77	15
K	39	1	45	-827.311	ppb	-0.493056146	961567	50
K	39	2	45	21.086	ppb	24.59580933	7135	50
Ca	40	1	45	13.744	ppb	3.125630564	85649	50
Ca	44	2	45	8.830	ppb	218.9586476	90	25
V	51	2	72	-0.387	ppb	-17.35548837	723	1
Cr	52	2	72	0.080	ppb	19.16124441	243	1
Mn	55	2	72	0.279	ppb	73.93976341	190	0.5
Fe	57	2	72	7.408	ppb	39.62112799	273	25
Co	59	2	72	0.007	ppb	218.6473422	30	0.5
Ni	60	2	72	0.065	ppb	252.2716508	207	1
Cu	63	2	72	0.309	ppb	9.393593121	1520	1
Zn	66	2	72	2.735	ppb	18.87151759	1070	5
As	75	2	72	-0.016	ppb	-190.1060045	6	1
Se	78	1	72	0.014	ppb	1.340513069	8	1
Sr	88	2	72	0.037	ppb	244.3892106	57	0.5
Zr	90	2	72	1.993	ppb	162.5483897	117	1
Nb	93	2	72	0.560	ppb	14.93139206	2287	2
Mo	95	2	115	0.004	ppb	421.5987998	37	0.5
Pd	105	2	115	0.017	ppb	47.512606	67	1
Ag	107	2	115	0.009	ppb	150.4111072	43	1
Cd	111	2	115	-0.019	ppb	-86.71390788	3	0.5
Sn	120	2	115	0.069	ppb	117.3588729	310	1
Sb	121	2	115	0.068	ppb	102.1742523	100	0.6
Ba	137	2	115	0.148	ppb	147.9308976	73	0.5
W	182	2	165	-0.010	ppb	-122.5025963	713	1
Pt	195	2	165	-0.008	ppb	-27.15406575	20	1
Tl	205	2	165	0.014	ppb	17.23591398	237	0.1
Pb	208	2	165	0.016	ppb	44.66005167	1110	0.5
Th	232	2	165	0.023	ppb	19.0050512	663	1
U	238	2	165	0.005	ppb	36.43694699	203	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	420438	0.75	446069	94.25	60	120	
Sc (IS)	45	1	HMI H2	12800279	0.27	13344586	95.92	60	120	
Sc (IS)	45	2	HMI He	531040	0.45	548684	96.78	60	120	
Sc (IS)	45	3	No Gas	37285658	0.47	39087130	95.39	60	120	
Ge Internal Standard	72	1	HMI H2	7962484	0.48	8240244	96.63	60	120	
Ge Internal Standard	72	2	HMI He	764764	0.17	783465	97.61	60	120	
In Internal Standard	115	2	HMI He	2745355	0.81	2775841	98.90	60	120	
Ho-165	165	2	HMI He	17241802	0.70	17360012	99.32	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-430020/2-A
Data File Name	183_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:47:17-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	430020 6020a
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	70.724	70.724	ppb	16.696	62073	400	17.7	80	120	>+/-20%
Li	7	2	45	61.595	61.595	ppb	38.878	4181	400	15.4	80	120	>+/-20%
Li	7	3	45	73.369	73.369	ppb	4.975	2589045	400	18.3	80	120	>+/-20%
Be	9	1	6	37.875	37.875	ppb	7.783	5481	40	94.7	80	120	
Na	23	2	45	210.265	210.265	ppb	2.053	76848	40	525.7	80	120	>+/-20%
Mg	24	2	45	81.612	81.612	ppb	3.286	6505	40	204.0	80	120	>+/-20%
Al	27	2	45	405.253	405.253	ppb	8.748	5805	40	1013.1	80	120	>+/-20%
K	39	2	45	26.230	26.230	ppb	105.352	7105	40	65.6	80	120	>+/-20%
Ca	44	2	45	282.041	282.041	ppb	18.392	560	40	705.1	80	120	>+/-20%
V	51	2	72	38.734	38.734	ppb	2.729	29320	40	96.8	80	120	
Cr	52	2	72	39.901	39.901	ppb	2.211	39415	40	99.8	80	120	
Mn	55	2	72	40.532	40.532	ppb	0.773	14600	40	101.3	80	120	
Fe	57	2	72	413.726	413.726	ppb	3.485	7959	40	1034.3	80	120	>+/-20%
Co	59	2	72	40.096	40.096	ppb	3.127	76752	40	100.2	80	120	
Ni	60	2	72	40.251	40.251	ppb	3.909	22750	40	100.6	80	120	
Cu	63	2	72	40.089	40.089	ppb	0.925	65270	40	100.2	80	120	
Zn	66	2	72	43.031	43.031	ppb	8.067	8322	40	107.6	80	120	
As	75	2	72	37.379	37.379	ppb	0.576	4199	40	93.4	80	120	
Se	78	1	72	37.184	37.184	ppb	3.350	7406	40	93.0	80	120	
Nb	93	2	72	0.367	0.367	ppb	18.480	1707	40	0.9	80	120	>+/-20%
Mo	95	2	115	37.139	37.139	ppb	5.162	30163	40	92.8	80	120	
Pd	105	2	115	-0.001	-0.001	ppb	-33.882	40	40	0.0	80	120	>+/-20%
Ag	107	2	115	41.336	41.336	ppb	1.074	124363	40	103.3	80	120	
Cd	111	2	115	39.600	39.600	ppb	7.055	13513	40	99.0	80	120	
Sn	120	2	115	39.660	39.660	ppb	1.922	35441	40	99.2	80	120	
Sb	121	2	115	38.253	38.253	ppb	1.341	27481	40	95.6	80	120	
Ba	137	2	115	42.268	42.268	ppb	3.424	10270	40	105.7	80	120	
W	182	2	165	12.007	12.007	ppb	1.564	62059	40	30.0	80	120	>+/-20%
Pt	195	2	165	-0.005	-0.005	ppb	-93.670	33	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.660	40.660	ppb	0.775	365681	40	101.7	80	120	
Pb	208	2	165	40.699	40.699	ppb	0.853	475215	40	101.7	80	120	
Th	232	2	165	39.128	39.128	ppb	0.577	540576	40	97.8	80	120	
U	238	2	165	37.356	37.356	ppb	1.415	622742	40	93.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	419016	0.59	446069	93.94	60	120	
Sc (IS)	45	1	HMI H2	12598751	0.38	13344586	94.41	60	120	
Sc (IS)	45	2	HMI He	518139	0.50	548684	94.43	60	120	
Sc (IS)	45	3	No Gas	36011819	0.26	39087130	92.13	60	120	
Ge Internal Standard	72	1	HMI H2	7855244	0.22	8240244	95.33	60	120	
Ge Internal Standard	72	2	HMI He	749308	0.84	783465	95.64	60	120	
In Internal Standard	115	2	HMI He	2667749	1.27	2775841	96.11	60	120	
Ho-165	165	2	HMI He	17050393	0.80	17360012	98.22	60	120	

Sample Report

Sample Table

Sample Name	280-114362-D-1-D
Data File Name	184SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:51:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	104.456	ppb	104.456	7.44	58193	500000	
Li	7	2	45	75.984	ppb	75.984	20.90	3971	500000	
Li	7	3	45	91.443	ppb	91.443	12.12	2456734	50000	
Be	9	1	6	0.010	ppb	0.010	467.79	7	2000	
B	11	1	6	5508.035	ppb	5508.035	0.82	795048	2000	
Na	23	1	45	366839.242	ppb	366839.242	0.83	398075781	2000	>LDR
Na	23	2	45	353492.285	ppb	353492.285	0.65	42582783	400000	
Mg	24	2	45	255022.461	ppb	255022.461	0.39	13473945	400000	
Al	27	2	45	47.242	ppb	47.242	22.01	650	400000	
K	39	1	45	27175.347	ppb	27175.347	0.58	27155071	400000	
K	39	2	45	28214.211	ppb	28214.211	0.67	727603	400000	
Ca	40	1	45	389209.324	ppb	389209.324	0.86	599928111	400000	
Ca	44	2	45	386433.649	ppb	386433.649	0.37	614425	400000	
V	51	2	72	0.456	ppb	0.456	67.40	1180	2000	
Cr	52	2	72	1.021	ppb	1.021	20.34	1037	5000	
Mn	55	2	72	9.143	ppb	9.143	7.81	2994	10000	
Fe	57	2	72	106.375	ppb	106.375	4.90	1907	400000	
Co	59	2	72	0.172	ppb	0.172	23.85	307	2000	
Ni	60	2	72	1.606	ppb	1.606	8.57	950	5000	
Cu	63	2	72	2.741	ppb	2.741	8.40	4801	5000	
Zn	66	2	72	3.873	ppb	3.873	6.83	1117	5000	
As	75	2	72	1.412	ppb	1.412	6.38	148	2000	
Se	78	1	72	13.641	ppb	13.641	1.04	2343	2000	
Sr	88	2	72	2787.700	ppb	2787.700	0.91	952522	4000	
Zr	90	2	72	1095.761	ppb	1095.761	6.44	4554	1000	
Nb	93	2	72	0.431	ppb	0.431	48.94	1677	200	
Mo	95	2	115	23.212	ppb	23.212	0.50	16886	2000	
Pd	105	2	115	0.046	ppb	0.046	21.36	93	100	
Ag	107	2	115	0.043	ppb	0.043	23.92	130	100	
Cd	111	2	115	0.092	ppb	0.092	53.74	37	2000	
Sn	120	2	115	0.288	ppb	0.288	34.74	443	2000	
Sb	121	2	115	0.827	ppb	0.827	10.32	573	1000	
Ba	137	2	115	31.055	ppb	31.055	4.25	6758	5000	
W	182	2	165	0.069	ppb	0.069	22.41	1010	100	
Pt	195	2	165	-0.001	ppb	-0.001	-376.59	47	100	
Tl	205	2	165	0.061	ppb	0.061	11.19	603	2000	
Pb	208	2	165	0.073	ppb	0.073	16.16	1607	5000	
Th	232	2	165	0.364	ppb	0.364	9.22	4891	2000	
U	238	2	165	16.651	ppb	16.651	0.90	253462	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	364033	0.12	446069	81.61	60	120	
Sc (IS)	45	1	HMI H2	10941169	0.26	13344586	81.99	60	120	
Sc (IS)	45	2	HMI He	476221	0.20	548684	86.79	60	120	
Sc (IS)	45	3	No Gas	32800229	0.66	39087130	83.92	60	120	
Ge Internal Standard	72	1	HMI H2	6766108	0.40	8240244	82.11	60	120	
Ge Internal Standard	72	2	HMI He	667392	0.66	783465	85.18	60	120	
In Internal Standard	115	2	HMI He	2387061	0.86	2775841	85.99	60	120	
Ho-165	165	2	HMI He	15564576	0.39	17360012	89.66	60	120	

Sample Report

Sample Table

Sample Name	280-114362-D-2-B
Data File Name	185SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:54:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	116.132	ppb	116.132	10.55	61019	500000	
Li	7	2	45	66.070	ppb	66.070	16.88	3917	500000	
Li	7	3	45	105.978	ppb	105.978	5.82	2641116	50000	
Be	9	1	6	0.677	ppb	0.677	22.91	90	2000	
B	11	1	6	2227.256	ppb	2227.256	1.46	319790	2000	
Na	23	1	45	356709.414	ppb	356709.414	0.88	395845061	2000	>LDR
Na	23	2	45	341169.123	ppb	341169.123	0.40	41463071	400000	
Mg	24	2	45	114616.472	ppb	114616.472	0.53	6110252	400000	
Al	27	2	45	6529.501	ppb	6529.501	0.36	86256	400000	
K	39	1	45	8001.084	ppb	8001.084	2.26	9330041	400000	
K	39	2	45	8821.674	ppb	8821.674	1.27	233581	400000	
Ca	40	1	45	220346.862	ppb	220346.862	0.52	347343715	400000	
Ca	44	2	45	222332.587	ppb	222332.587	0.96	356654	400000	
V	51	2	72	21.813	ppb	21.813	1.96	15271	2000	
Cr	52	2	72	13.338	ppb	13.338	2.77	11968	5000	
Mn	55	2	72	625.760	ppb	625.760	0.68	201990	10000	
Fe	57	2	72	13580.807	ppb	13580.807	1.53	231767	400000	
Co	59	2	72	4.293	ppb	4.293	0.66	7419	2000	
Ni	60	2	72	23.291	ppb	23.291	0.63	11925	5000	
Cu	63	2	72	14.532	ppb	14.532	2.17	21892	5000	
Zn	66	2	72	29.974	ppb	29.974	4.49	5374	5000	
As	75	2	72	4.791	ppb	4.791	5.71	491	2000	
Se	78	1	72	3.235	ppb	3.235	17.43	572	2000	
Sr	88	2	72	2384.034	ppb	2384.034	0.56	824170	4000	
Zr	90	2	72	2081.148	ppb	2081.148	6.50	8666	1000	
Nb	93	2	72	0.812	ppb	0.812	40.03	2646	200	
Mo	95	2	115	3.686	ppb	3.686	2.86	2707	2000	
Pd	105	2	115	0.016	ppb	0.016	76.41	57	100	
Ag	107	2	115	0.293	ppb	0.293	7.22	803	100	
Cd	111	2	115	0.255	ppb	0.255	35.44	87	2000	
Sn	120	2	115	0.065	ppb	0.065	179.11	267	2000	
Sb	121	2	115	0.768	ppb	0.768	16.26	537	1000	
Ba	137	2	115	151.009	ppb	151.009	1.52	32759	5000	
W	182	2	165	0.167	ppb	0.167	21.95	1490	100	
Pt	195	2	165	0.001	ppb	0.001	407.28	57	100	
Tl	205	2	165	0.196	ppb	0.196	5.87	1734	2000	
Pb	208	2	165	5.680	ppb	5.680	0.75	62174	5000	
Th	232	2	165	2.431	ppb	2.431	2.03	31402	2000	
U	238	2	165	8.606	ppb	8.606	0.95	133009	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	361985	1.01	446069	81.15	60	120	
Sc (IS)	45	1	HMI H2	11188575	0.67	13344586	83.84	60	120	
Sc (IS)	45	2	HMI He	480430	0.45	548684	87.56	60	120	
Sc (IS)	45	3	No Gas	34156646	1.01	39087130	87.39	60	120	
Ge Internal Standard	72	1	HMI H2	6922186	0.63	8240244	84.00	60	120	
Ge Internal Standard	72	2	HMI He	675209	0.11	783465	86.18	60	120	
In Internal Standard	115	2	HMI He	2388038	1.34	2775841	86.03	60	120	
Ho-165	165	2	HMI He	15796024	0.30	17360012	90.99	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-1-B
Data File Name	186SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-19T23:58:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.072	ppb	79.072	5.39	57384	500000	
Li	7	2	45	33.797	ppb	33.797	50.46	3651	500000	
Li	7	3	45	68.593	ppb	68.593	9.12	2387481	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	326.788	ppb	326.788	1.73	48175	2000	
Na	23	1	45	130435.600	ppb	130435.600	0.90	148015481	2000	>LDR
Na	23	2	45	126510.633	ppb	126510.633	0.88	15499769	400000	
Mg	24	2	45	104015.231	ppb	104015.231	1.19	5579597	400000	
Al	27	2	45	29.182	ppb	29.182	10.25	420	400000	
K	39	1	45	8827.381	ppb	8827.381	0.79	10336232	400000	
K	39	2	45	9680.058	ppb	9680.058	0.30	257320	400000	
Ca	40	1	45	255716.108	ppb	255716.108	0.60	411518327	400000	
Ca	44	2	45	267913.980	ppb	267913.980	0.68	432441	400000	
V	51	2	72	-0.623	ppb	-0.623	-17.13	493	2000	
Cr	52	2	72	0.398	ppb	0.398	27.13	507	5000	
Mn	55	2	72	931.733	ppb	931.733	0.42	307064	10000	
Fe	57	2	72	11026.697	ppb	11026.697	1.02	192174	400000	
Co	59	2	72	0.414	ppb	0.414	10.45	743	2000	
Ni	60	2	72	0.938	ppb	0.938	10.61	637	5000	
Cu	63	2	72	0.387	ppb	0.387	28.89	1487	5000	
Zn	66	2	72	4.374	ppb	4.374	10.88	1237	5000	
As	75	2	72	1.409	ppb	1.409	5.65	152	2000	
Se	78	1	72	0.079	ppb	0.079	99.38	19	2000	
Sr	88	2	72	4908.490	ppb	4908.490	0.76	1732634	4000	
Zr	90	2	72	136.304	ppb	136.304	6.80	670	1000	
Nb	93	2	72	0.177	ppb	0.177	34.39	1087	200	
Mo	95	2	115	0.269	ppb	0.269	26.12	230	2000	
Pd	105	2	115	0.020	ppb	0.020	150.11	63	100	
Ag	107	2	115	0.038	ppb	0.038	10.22	120	100	
Cd	111	2	115	0.025	ppb	0.025	73.60	17	2000	
Sn	120	2	115	0.065	ppb	0.065	74.94	273	2000	
Sb	121	2	115	0.116	ppb	0.116	27.06	120	1000	
Ba	137	2	115	58.094	ppb	58.094	2.93	12939	5000	
W	182	2	165	-0.002	ppb	-0.002	-1144.23	690	100	
Pt	195	2	165	-0.009	ppb	-0.009	-15.23	13	100	
Tl	205	2	165	0.003	ppb	0.003	110.76	130	2000	
Pb	208	2	165	0.138	ppb	0.138	18.50	2330	5000	
Th	232	2	165	0.052	ppb	0.052	25.95	970	2000	
U	238	2	165	0.168	ppb	0.168	3.46	2707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	370092	0.60	446069	82.97	60	120	
Sc (IS)	45	1	HMI H2	11422305	0.65	13344586	85.60	60	120	
Sc (IS)	45	2	HMI He	483423	0.26	548684	88.11	60	120	
Sc (IS)	45	3	No Gas	33580759	0.41	39087130	85.91	60	120	
Ge Internal Standard	72	1	HMI H2	7060906	0.68	8240244	85.69	60	120	
Ge Internal Standard	72	2	HMI He	689454	0.17	783465	88.00	60	120	
In Internal Standard	115	2	HMI He	2447898	0.69	2775841	88.19	60	120	
Ho-165	165	2	HMI He	15801532	0.30	17360012	91.02	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-1-Bsd@5
Data File Name	187SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:02:27-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	13.736	ppb	13.736	73.39	51365	500000	
Li	7	2	45	3.551	ppb	3.551	534.22	3477	500000	
Li	7	3	45	9.530	ppb	9.530	47.68	2140446	50000	
Be	9	1	6	-0.019	ppb	-0.019	-227.03	3	2000	
B	11	1	6	82.219	ppb	82.219	0.63	13139	2000	
Na	23	1	45	27510.835	ppb	27510.835	1.09	33236829	2000	>LDR
Na	23	2	45	27117.125	ppb	27117.125	1.29	3456706	400000	
Mg	24	2	45	23486.601	ppb	23486.601	2.06	1298067	400000	
Al	27	2	45	6.843	ppb	6.843	43.62	127	400000	
K	39	1	45	1836.766	ppb	1836.766	0.50	3661692	400000	
K	39	2	45	2022.544	ppb	2022.544	0.90	60183	400000	
Ca	40	1	45	53591.166	ppb	53591.166	0.90	90960495	400000	
Ca	44	2	45	56596.827	ppb	56596.827	1.40	94081	400000	
V	51	2	72	-0.391	ppb	-0.391	-42.76	677	2000	
Cr	52	2	72	0.167	ppb	0.167	29.49	310	5000	
Mn	55	2	72	198.663	ppb	198.663	0.80	68278	10000	
Fe	57	2	72	2351.969	ppb	2351.969	1.61	42803	400000	
Co	59	2	72	0.079	ppb	0.079	43.31	160	2000	
Ni	60	2	72	0.101	ppb	0.101	157.67	213	5000	
Cu	63	2	72	0.238	ppb	0.238	48.20	1320	5000	
Zn	66	2	72	0.724	ppb	0.724	74.52	657	5000	
As	75	2	72	0.408	ppb	0.408	20.88	51	2000	
Se	78	1	72	0.037	ppb	0.037	56.23	12	2000	
Sr	88	2	72	974.196	ppb	974.196	0.66	358311	4000	
Zr	90	2	72	8.921	ppb	8.921	87.26	140	1000	
Nb	93	2	72	-0.013	ppb	-0.013	-317.85	630	200	
Mo	95	2	115	0.037	ppb	0.037	59.40	60	2000	
Pd	105	2	115	0.013	ppb	0.013	123.68	57	100	
Ag	107	2	115	0.012	ppb	0.012	75.98	50	100	
Cd	111	2	115	-0.018	ppb	-0.018	-96.05	3	2000	
Sn	120	2	115	-0.040	ppb	-0.040	-133.59	197	2000	
Sb	121	2	115	0.140	ppb	0.140	52.24	143	1000	
Ba	137	2	115	10.796	ppb	10.796	5.98	2554	5000	
W	182	2	165	-0.006	ppb	-0.006	-162.75	690	100	
Pt	195	2	165	0.008	ppb	0.008	73.85	87	100	
Tl	205	2	165	0.003	ppb	0.003	19.78	133	2000	
Pb	208	2	165	0.022	ppb	0.022	84.87	1117	5000	
Th	232	2	165	0.010	ppb	0.010	42.86	450	2000	
U	238	2	165	0.034	ppb	0.034	12.30	653	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	395333	0.55	446069	88.63	60	120	
Sc (IS)	45	1	HMI H2	12041192	0.19	13344586	90.23	60	120	
Sc (IS)	45	2	HMI He	497581	0.65	548684	90.69	60	120	
Sc (IS)	45	3	No Gas	34947283	0.16	39087130	89.41	60	120	
Ge Internal Standard	72	1	HMI H2	7518016	0.21	8240244	91.24	60	120	
Ge Internal Standard	72	2	HMI He	718326	0.40	783465	91.69	60	120	
In Internal Standard	115	2	HMI He	2570910	0.44	2775841	92.62	60	120	
Ho-165	165	2	HMI He	16278875	0.68	17360012	93.77	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-1-C MS
Data File Name	188SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:06:16-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	152.493	ppb	152.493	6.48	65880	500000	
Li	7	2	45	125.816	ppb	125.816	7.51	4431	500000	
Li	7	3	45	141.841	ppb	141.841	3.99	2744460	50000	
Be	9	1	6	36.869	ppb	36.869	4.69	4617	2000	
B	11	1	6	318.093	ppb	318.093	1.66	45950	2000	
Na	23	1	45	133020.096	ppb	133020.096	0.61	148158274	2000	>LDR
Na	23	2	45	128334.580	ppb	128334.580	0.22	15549141	400000	
Mg	24	2	45	105043.525	ppb	105043.525	1.06	5572528	400000	
Al	27	2	45	438.253	ppb	438.253	5.22	5791	400000	
K	39	1	45	8996.809	ppb	8996.809	0.37	10308907	400000	
K	39	2	45	9822.377	ppb	9822.377	1.30	258127	400000	
Ca	40	1	45	259570.367	ppb	259570.367	0.72	410003007	400000	
Ca	44	2	45	271648.238	ppb	271648.238	0.87	433634	400000	
V	51	2	72	40.419	ppb	40.419	1.89	27761	2000	
Cr	52	2	72	41.731	ppb	41.731	3.37	37440	5000	
Mn	55	2	72	999.200	ppb	999.200	0.14	325153	10000	
Fe	57	2	72	11644.617	ppb	11644.617	1.18	200375	400000	
Co	59	2	72	39.784	ppb	39.784	2.54	69190	2000	
Ni	60	2	72	39.931	ppb	39.931	3.62	20503	5000	
Cu	63	2	72	39.070	ppb	39.070	0.60	57819	5000	
Zn	66	2	72	46.915	ppb	46.915	5.19	8199	5000	
As	75	2	72	40.583	ppb	40.583	2.13	4142	2000	
Se	78	1	72	40.237	ppb	40.237	1.60	7095	2000	
Sr	88	2	72	5090.083	ppb	5090.083	1.97	1773987	4000	
Zr	90	2	72	10500.036	ppb	10500.036	1.59	43694	1000	>LDR
Nb	93	2	72	0.100	ppb	0.100	72.80	880	200	
Mo	95	2	115	38.681	ppb	38.681	4.41	28496	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-3176.97	37	100	
Ag	107	2	115	39.013	ppb	39.013	0.89	106428	100	
Cd	111	2	115	37.865	ppb	37.865	2.14	11721	2000	
Sn	120	2	115	40.268	ppb	40.268	2.16	32628	2000	
Sb	121	2	115	41.354	ppb	41.354	0.84	26937	1000	
Ba	137	2	115	100.061	ppb	100.061	3.00	22003	5000	
W	182	2	165	12.321	ppb	12.321	1.71	58769	100	
Pt	195	2	165	0.009	ppb	0.009	135.68	90	100	
Tl	205	2	165	39.484	ppb	39.484	0.69	327822	2000	
Pb	208	2	165	39.830	ppb	39.830	0.50	429353	5000	
Th	232	2	165	40.714	ppb	40.714	1.00	519255	2000	
U	238	2	165	37.956	ppb	37.956	1.16	584136	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	362560	0.46	446069	81.28	60	120	
Sc (IS)	45	1	HMI H2	11211501	0.44	13344586	84.02	60	120	
Sc (IS)	45	2	HMI He	478084	0.26	548684	87.13	60	120	
Sc (IS)	45	3	No Gas	32943590	0.41	39087130	84.28	60	120	
Ge Internal Standard	72	1	HMI H2	6955415	1.10	8240244	84.41	60	120	
Ge Internal Standard	72	2	HMI He	680796	0.87	783465	86.90	60	120	
In Internal Standard	115	2	HMI He	2418995	0.81	2775841	87.14	60	120	
Ho-165	165	2	HMI He	15740166	0.65	17360012	90.67	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-1-D MSD
Data File Name	189SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:10:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	154.756	ppb	154.756	5.98	66001	500000	
Li	7	2	45	143.144	ppb	143.144	26.62	4544	500000	
Li	7	3	45	140.835	ppb	140.835	3.18	2726226	50000	
Be	9	1	6	39.994	ppb	39.994	5.04	4968	2000	
B	11	1	6	318.218	ppb	318.218	1.63	45588	2000	
Na	23	1	45	134216.959	ppb	134216.959	1.13	149104424	2000	>LDR
Na	23	2	45	129777.901	ppb	129777.901	1.00	15577334	400000	
Mg	24	2	45	105718.074	ppb	105718.074	1.40	5556258	400000	
Al	27	2	45	397.584	ppb	397.584	1.25	5208	400000	
K	39	1	45	8969.914	ppb	8969.914	1.09	10256775	400000	
K	39	2	45	9876.781	ppb	9876.781	0.48	257123	400000	
Ca	40	1	45	260590.700	ppb	260590.700	0.94	410562634	400000	
Ca	44	2	45	277625.827	ppb	277625.827	0.87	439050	400000	
V	51	2	72	40.967	ppb	40.967	1.11	27871	2000	
Cr	52	2	72	40.974	ppb	40.974	2.50	36435	5000	
Mn	55	2	72	1004.821	ppb	1004.821	0.88	324013	10000	
Fe	57	2	72	11651.984	ppb	11651.984	1.17	198688	400000	
Co	59	2	72	40.423	ppb	40.423	1.04	69675	2000	
Ni	60	2	72	39.075	ppb	39.075	4.48	19886	5000	
Cu	63	2	72	39.012	ppb	39.012	1.02	57211	5000	
Zn	66	2	72	43.384	ppb	43.384	0.99	7549	5000	
As	75	2	72	40.392	ppb	40.392	5.81	4084	2000	
Se	78	1	72	39.988	ppb	39.988	2.20	7091	2000	
Sr	88	2	72	5121.517	ppb	5121.517	1.78	1768900	4000	
Zr	90	2	72	10585.452	ppb	10585.452	2.77	43650	1000	>LDR
Nb	93	2	72	0.073	ppb	0.073	40.28	803	200	
Mo	95	2	115	39.585	ppb	39.585	2.88	28566	2000	
Pd	105	2	115	0.036	ppb	0.036	115.66	80	100	
Ag	107	2	115	40.120	ppb	40.120	0.98	107230	100	
Cd	111	2	115	40.605	ppb	40.605	2.00	12315	2000	
Sn	120	2	115	40.920	ppb	40.920	1.51	32481	2000	
Sb	121	2	115	40.793	ppb	40.793	2.07	26033	1000	
Ba	137	2	115	99.888	ppb	99.888	2.08	21519	5000	
W	182	2	165	11.909	ppb	11.909	0.46	56939	100	
Pt	195	2	165	-0.004	ppb	-0.004	-197.55	37	100	
Tl	205	2	165	39.217	ppb	39.217	0.49	326240	2000	
Pb	208	2	165	39.214	ppb	39.214	1.14	423546	5000	
Th	232	2	165	40.159	ppb	40.159	0.79	513184	2000	
U	238	2	165	37.817	ppb	37.817	0.78	583149	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	359597	0.53	446069	80.61	60	120	
Sc (IS)	45	1	HMI H2	11183056	0.66	13344586	83.80	60	120	
Sc (IS)	45	2	HMI He	473656	0.58	548684	86.33	60	120	
Sc (IS)	45	3	No Gas	32790280	0.41	39087130	83.89	60	120	
Ge Internal Standard	72	1	HMI H2	6993871	0.29	8240244	84.87	60	120	
Ge Internal Standard	72	2	HMI He	674626	0.57	783465	86.11	60	120	
In Internal Standard	115	2	HMI He	2369901	0.66	2775841	85.38	60	120	
Ho-165	165	2	HMI He	15770766	0.56	17360012	90.85	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-1-B pds
Data File Name	190SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:13:50-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	67.513	ppb	67.513	8.63	53963	500000	
Li	7	2	45	43.741	ppb	43.741	71.59	3664	500000	
Li	7	3	45	67.412	ppb	67.412	1.42	2287065	50000	
Be	9	1	6	206.130	ppb	206.130	5.53	25166	2000	
B	11	1	6	279.164	ppb	279.164	2.11	39377	2000	
Na	23	1	45	128632.527	ppb	128632.527	0.63	141036541	2000	>LDR
Na	23	2	45	123020.959	ppb	123020.959	0.77	14765745	400000	
Mg	24	2	45	100908.033	ppb	100908.033	0.33	5302429	400000	
Al	27	2	45	1985.173	ppb	1985.173	0.37	25871	400000	
K	39	1	45	8642.132	ppb	8642.132	1.22	9810535	400000	
K	39	2	45	9396.883	ppb	9396.883	0.69	244853	400000	
Ca	40	1	45	250218.792	ppb	250218.792	0.87	389030781	400000	
Ca	44	2	45	261908.392	ppb	261908.392	0.78	414102	400000	
V	51	2	72	213.433	ppb	213.433	0.92	140807	2000	
Cr	52	2	72	210.537	ppb	210.537	0.61	185774	5000	
Mn	55	2	72	1140.281	ppb	1140.281	1.37	365993	10000	
Fe	57	2	72	12870.601	ppb	12870.601	1.78	218449	400000	
Co	59	2	72	208.327	ppb	208.327	0.71	357365	2000	
Ni	60	2	72	202.753	ppb	202.753	1.22	102096	5000	
Cu	63	2	72	203.766	ppb	203.766	0.47	293691	5000	
Zn	66	2	72	211.022	ppb	211.022	1.61	34627	5000	
As	75	2	72	200.497	ppb	200.497	1.16	20156	2000	
Se	78	1	72	212.185	ppb	212.185	0.26	37110	2000	
Sr	88	2	72	4956.050	ppb	4956.050	0.57	1703999	4000	
Zr	90	2	72	56684.469	ppb	56684.469	0.93	232273	1000	>LDR
Nb	93	2	72	3.179	ppb	3.179	8.87	8499	200	
Mo	95	2	115	209.977	ppb	209.977	1.82	153033	2000	
Pd	105	2	115	0.081	ppb	0.081	36.96	137	100	
Ag	107	2	115	47.781	ppb	47.781	1.54	129064	100	
Cd	111	2	115	200.193	ppb	200.193	1.78	61329	2000	
Sn	120	2	115	211.175	ppb	211.175	0.59	168529	2000	
Sb	121	2	115	205.951	ppb	205.951	1.13	132665	1000	
Ba	137	2	115	272.943	ppb	272.943	0.18	59374	5000	
W	182	2	165	216.425	ppb	216.425	0.84	999990	100	
Pt	195	2	165	0.028	ppb	0.028	27.36	163	100	
Tl	205	2	165	225.552	ppb	225.552	0.94	1834105	2000	
Pb	208	2	165	204.471	ppb	204.471	0.69	2155860	5000	
Th	232	2	165	16.221	ppb	16.221	1.30	202854	2000	
U	238	2	165	213.562	ppb	213.562	0.48	3219432	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	353778	0.52	446069	79.31	60	120	
Sc (IS)	45	1	HMI H2	11035557	0.41	13344586	82.70	60	120	
Sc (IS)	45	2	HMI He	473545	0.58	548684	86.31	60	120	
Sc (IS)	45	3	No Gas	32257517	0.48	39087130	82.53	60	120	
Ge Internal Standard	72	1	HMI H2	6901665	0.58	8240244	83.76	60	120	
Ge Internal Standard	72	2	HMI He	671540	0.52	783465	85.71	60	120	
In Internal Standard	115	2	HMI He	2395356	1.00	2775841	86.29	60	120	
Ho-165	165	2	HMI He	15419841	0.62	17360012	88.82	60	120	

Sample Report

Sample Table

Sample Name	280-114367-D-2-B
Data File Name	191SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:17:36-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	430020 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.851	ppb	-14.851	-36.83	46504	500000	
Li	7	2	45	-57.080	ppb	-57.080	-60.59	2900	500000	
Li	7	3	45	-15.707	ppb	-15.707	-32.30	1937555	50000	
Be	9	1	6	0.211	ppb	0.211	54.84	33	2000	
B	11	1	6	16.998	ppb	16.998	6.05	2804	2000	
Na	23	1	45	156.972	ppb	156.972	2.05	589246	2000	
Na	23	2	45	155.010	ppb	155.010	3.51	66548	400000	
Mg	24	2	45	71.199	ppb	71.199	13.40	5648	400000	
Al	27	2	45	6.382	ppb	6.382	18.92	120	400000	
K	39	1	45	-840.857	ppb	-840.857	-0.81	874308	400000	
K	39	2	45	20.706	ppb	20.706	98.83	6648	400000	
Ca	40	1	45	148.070	ppb	148.070	7.78	302863	400000	
Ca	44	2	45	87.179	ppb	87.179	11.64	213	400000	
V	51	2	72	-0.688	ppb	-0.688	-23.20	467	2000	
Cr	52	2	72	0.256	ppb	0.256	27.41	393	5000	
Mn	55	2	72	0.635	ppb	0.635	28.15	300	10000	
Fe	57	2	72	16.296	ppb	16.296	22.29	417	400000	
Co	59	2	72	0.088	ppb	0.088	3.60	177	2000	
Ni	60	2	72	0.015	ppb	0.015	140.94	167	5000	
Cu	63	2	72	0.365	ppb	0.365	24.81	1510	5000	
Zn	66	2	72	4.406	ppb	4.406	14.55	1290	5000	
As	75	2	72	0.086	ppb	0.086	75.70	16	2000	
Se	78	1	72	0.124	ppb	0.124	74.43	28	2000	
Sr	88	2	72	1.447	ppb	1.447	26.53	570	4000	
Zr	90	2	72	31.191	ppb	31.191	49.40	237	1000	
Nb	93	2	72	-0.153	ppb	-0.153	-6.09	257	200	
Mo	95	2	115	0.270	ppb	0.270	29.09	240	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-239.58	27	100	
Ag	107	2	115	0.026	ppb	0.026	25.39	90	100	
Cd	111	2	115	0.023	ppb	0.023	76.77	17	2000	
Sn	120	2	115	0.249	ppb	0.249	46.66	440	2000	
Sb	121	2	115	1.057	ppb	1.057	24.92	770	1000	
Ba	137	2	115	-0.016	ppb	-0.016	-264.50	30	5000	
W	182	2	165	0.130	ppb	0.130	16.71	1353	100	
Pt	195	2	165	0.002	ppb	0.002	529.61	60	100	
Tl	205	2	165	0.037	ppb	0.037	16.86	423	2000	
Pb	208	2	165	0.083	ppb	0.083	14.58	1790	5000	
Th	232	2	165	0.023	ppb	0.023	15.04	620	2000	
U	238	2	165	0.156	ppb	0.156	8.00	2597	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	379923	0.46	446069	85.17	60	120	
Sc (IS)	45	1	HMI H2	11821566	0.53	13344586	88.59	60	120	
Sc (IS)	45	2	HMI He	495288	0.90	548684	90.27	60	120	
Sc (IS)	45	3	No Gas	33969024	0.37	39087130	86.91	60	120	
Ge Internal Standard	72	1	HMI H2	7394405	0.67	8240244	89.74	60	120	
Ge Internal Standard	72	2	HMI He	716309	0.40	783465	91.43	60	120	
In Internal Standard	115	2	HMI He	2548214	1.39	2775841	91.80	60	120	
Ho-165	165	2	HMI He	16271162	0.58	17360012	93.73	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	192_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:21:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	478.068	ppb	2.666	114950	500	95.6	90	110	
Li	7	2	45	460.261	ppb	4.617	7645	500	92.1	90	110	
Li	7	3	45	476.533	ppb	0.452	4818655	500	95.3	90	110	
Be	9	1	6	49.218	ppb	3.961	6588	50	98.4	90	110	
B	11	1	6	50.789	ppb	1.320	8052	50	101.6	90	110	
Na	23	1	45	5089.918	ppb	1.221	6413396	5000	101.8	90	110	
Na	23	2	45	4851.077	ppb	0.367	651186	5000	97.0	90	110	
Mg	24	2	45	5062.482	ppb	0.372	278567	5000	101.2	90	110	
Al	27	2	45	4878.567	ppb	1.925	66130	5000	97.6	90	110	
K	39	1	45	5110.650	ppb	1.133	6971177	5000	102.2	90	110	
K	39	2	45	5094.325	ppb	1.447	140956	5000	101.9	90	110	
Ca	40	1	45	5103.003	ppb	0.788	8615890	5000	102.1	90	110	
Ca	44	2	45	4951.794	ppb	3.659	8219	5000	99.0	90	110	
V	51	2	72	49.127	ppb	2.168	35021	50	98.3	90	110	
Cr	52	2	72	49.907	ppb	1.259	46717	50	99.8	90	110	
Mn	55	2	72	52.864	ppb	1.640	18034	50	105.7	90	110	
Fe	57	2	72	4999.060	ppb	2.199	89858	5000	100.0	90	110	
Co	59	2	72	49.888	ppb	0.870	90572	50	99.8	90	110	
Ni	60	2	72	48.751	ppb	2.390	26095	50	97.5	90	110	
Cu	63	2	72	50.845	ppb	1.018	78257	50	101.7	90	110	
Zn	66	2	72	49.952	ppb	3.018	9076	50	99.9	90	110	
As	75	2	72	48.984	ppb	4.846	5217	50	98.0	90	110	
Se	78	1	72	50.434	ppb	4.227	9518	50	100.9	90	110	
Sr	88	2	72	52.002	ppb	3.020	18962	50	104.0	90	110	
Zr	90	2	72	80.178	ppb	51.174	447	50	160.4	90	110	>+\-10%
Nb	93	2	72	94.097	ppb	0.446	247537	100	94.1	90	110	
Mo	95	2	115	47.948	ppb	1.324	37348	50	95.9	90	110	
Pd	105	2	115	52.057	ppb	0.565	68364	50	104.1	90	110	
Ag	107	2	115	49.443	ppb	1.179	142637	50	98.9	90	110	
Cd	111	2	115	49.330	ppb	3.233	16146	50	98.7	90	110	
Sn	120	2	115	49.820	ppb	1.446	42639	50	99.6	90	110	
Sb	121	2	115	49.128	ppb	1.094	33834	50	98.3	90	110	
Ba	137	2	115	48.850	ppb	3.722	11378	50	97.7	90	110	
W	182	2	165	49.884	ppb	0.294	242109	50	99.8	90	110	
Pt	195	2	165	49.740	ppb	0.350	210114	50	99.5	90	110	
Tl	205	2	165	50.506	ppb	1.106	430461	50	101.0	90	110	
Pb	208	2	165	50.985	ppb	1.197	563988	50	102.0	90	110	
Th	232	2	165	50.024	ppb	0.140	654944	50	100.0	90	110	
U	238	2	165	47.021	ppb	1.041	742910	50	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	387583	0.13	446069	86.89	60	120	
Sc (IS)	45	1	HMI H2	11907021	0.59	13344586	89.23	60	120	
Sc (IS)	45	2	HMI He	492956	0.83	548684	89.84	60	120	
Sc (IS)	45	3	No Gas	34637409	0.54	39087130	88.62	60	120	
Ge Internal Standard	72	1	HMI H2	7444544	0.33	8240244	90.34	60	120	
Ge Internal Standard	72	2	HMI He	710644	0.72	783465	90.71	60	120	
In Internal Standard	115	2	HMI He	2558116	0.59	2775841	92.16	60	120	
Ho-165	165	2	HMI He	16159581	0.68	17360012	93.09	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	193_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:25:14-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.317	ppb	-30.1	2048950	10	
Be	9	1	6	0.031	ppb	239.1	10	0.5	
B	11	1	6	9.874	ppb	13.7	1780	0.5	>RL
Na	23	1	45	98.499	ppb	6.4	520955	25	>RL
Na	23	2	45	117.174	ppb	13.7	61850	25	>RL
Mg	24	2	45	86.696	ppb	5.2	6502	25	>RL
Al	27	2	45	1.243	ppb	102.2	50	15	
K	39	1	45	54.910	ppb	22.9	1785236	50	>RL
K	39	2	45	24.323	ppb	64.8	6745	50	
Ca	40	1	45	15.854	ppb	9.9	82668	50	
Ca	44	2	45	0.436	ppb	2801.7	70	25	
V	51	2	72	-0.191	ppb	-74.6	817	1	
Cr	52	2	72	0.089	ppb	49.2	237	1	
Mn	55	2	72	0.041	ppb	286.9	97	0.5	
Fe	57	2	72	3.737	ppb	65.1	190	25	
Co	59	2	72	0.030	ppb	18.2	70	0.5	
Ni	60	2	72	-0.041	ppb	-179.1	137	1	
Cu	63	2	72	0.063	ppb	112.4	1050	1	
Zn	66	2	72	-0.472	ppb	-33.9	450	5	
As	75	2	72	0.115	ppb	15.3	20	1	
Se	78	1	72	0.108	ppb	99.8	25	1	
Sr	88	2	72	0.200	ppb	8.2	113	0.5	
Zr	90	2	72	-9.333	ppb	-64.3	60	1	
Nb	93	2	72	2.846	ppb	7.8	8212	2	>RL
Mo	95	2	115	0.076	ppb	33.0	90	0.5	
Pd	105	2	115	0.083	ppb	17.5	150	1	
Ag	107	2	115	0.022	ppb	30.0	80	1	
Cd	111	2	115	-0.008	ppb	-426.2	7	0.5	
Sn	120	2	115	0.026	ppb	176.9	253	1	
Sb	121	2	115	0.820	ppb	20.2	613	0.6	>RL
Ba	137	2	115	-0.102	ppb	-42.3	10	0.5	
W	182	2	165	0.075	ppb	7.3	1087	1	
Pt	195	2	165	0.005	ppb	243.6	73	1	
Tl	205	2	165	0.026	ppb	32.5	333	0.1	
Pb	208	2	165	-0.004	ppb	-334.1	827	0.5	
Th	232	2	165	0.073	ppb	16.6	1283	1	
U	238	2	165	0.050	ppb	8.5	903	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	390872	0.74	446069	87.63	60	120	
Sc (IS)	45	1	HMI H2	11827249	0.86	13344586	88.63	60	120	
Sc (IS)	45	2	HMI He	495618	0.30	548684	90.33	60	120	
Sc (IS)	45	3	No Gas	35061010	0.09	39087130	89.70	60	120	
Ge Internal Standard	72	1	HMI H2	7461856	0.62	8240244	90.55	60	120	
Ge Internal Standard	72	2	HMI He	718328	0.34	783465	91.69	60	120	
In Internal Standard	115	2	HMI He	2569057	0.87	2775841	92.55	60	120	
Ho-165	165	2	HMI He	16261033	1.04	17360012	93.67	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	194LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:29:05-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.917	ppb	104.019	2091866	50	7.8	70	130	>+/-30%
Be	9	1	6	1.096	ppb	16.892	153	1	109.6	70	130	
Na	23	2	45	198.646	ppb	4.141	72034	50	397.3	70	130	>+/-30%
Mg	24	2	45	139.665	ppb	6.836	9410	50	279.3	70	130	>+/-30%
Al	27	2	45	30.608	ppb	22.622	450	30	102.0	70	130	
K	39	2	45	136.552	ppb	13.059	9733	100	136.6	70	130	>+/-30%
Ca	44	2	45	107.299	ppb	59.773	247	50	214.6	70	130	>+/-30%
V	51	2	72	4.624	ppb	4.932	4201	5	92.5	70	130	
Cr	52	2	72	2.188	ppb	6.466	2220	2	109.4	70	130	
Mn	55	2	72	1.048	ppb	28.686	443	1	104.8	70	130	
Fe	57	2	72	59.093	ppb	6.340	1197	50	118.2	70	130	
Co	59	2	72	1.034	ppb	1.229	1917	1	103.4	70	130	
Ni	60	2	72	2.037	ppb	12.208	1257	2	101.8	70	130	
Cu	63	2	72	2.374	ppb	8.610	4611	2	118.7	70	130	
Zn	66	2	72	12.527	ppb	13.688	2704	10	125.3	70	130	
As	75	2	72	4.867	ppb	2.130	531	5	97.3	70	130	
Se	78	1	72	5.056	ppb	7.451	961	5	101.1	70	130	
Sr	88	2	72	1.131	ppb	15.397	457	1	113.1	70	130	
Zr	90	2	72	21.795	ppb	36.877	197	0.5	4359.1	70	130	>+/-30%
Nb	93	2	72	5.413	ppb	3.544	15048	2	270.7	70	130	>+/-30%
Mo	95	2	115	1.874	ppb	9.548	1500	2	93.7	70	130	
Pd	105	2	115	0.025	ppb	122.131	73	1	2.5	70	130	>+/-30%
Ag	107	2	115	5.228	ppb	1.623	15214	5	104.6	70	130	
Cd	111	2	115	1.185	ppb	8.054	400	1	118.5	70	130	
Sn	120	2	115	10.104	ppb	4.483	8900	10	101.0	70	130	
Sb	121	2	115	2.350	ppb	20.019	1673	2	117.5	70	130	
Ba	137	2	115	0.737	ppb	25.348	207	1	73.7	70	130	
W	182	2	165	5.111	ppb	2.794	25693	1	511.1	70	130	>+/-30%
Pt	195	2	165	0.010	ppb	27.301	97	1	1.0	70	130	>+/-30%
Tl	205	2	165	1.081	ppb	1.005	9410	1	108.1	70	130	
Pb	208	2	165	1.035	ppb	2.334	12409	1	103.5	70	130	
Th	232	2	165	2.203	ppb	2.518	29424	2	110.2	70	130	
U	238	2	165	0.997	ppb	2.019	16009	1	99.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	390068	0.46	446069	87.45	60	120	
Sc (IS)	45	1	HMI H2	11897496	0.58	13344586	89.16	60	120	
Sc (IS)	45	2	HMI He	495506	0.64	548684	90.31	60	120	
Sc (IS)	45	3	No Gas	34684104	0.49	39087130	88.74	60	120	
Ge Internal Standard	72	1	HMI H2	7468113	0.51	8240244	90.63	60	120	
Ge Internal Standard	72	2	HMI He	719643	0.18	783465	91.85	60	120	
In Internal Standard	115	2	HMI He	2578006	0.76	2775841	92.87	60	120	
Ho-165	165	2	HMI He	16316124	1.37	17360012	93.99	60	120	

Blank Report

Sample Table

Sample Name	MB 280-429951/1-A
Data File Name	195_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:32:54-06:00
Sample Type	Blank
Dilution	1
Comment	429951 6020a dod5
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-15.749	ppb	-22.95051532	46344	0.5
Li	7	2	45	-9.042	ppb	-40.4522707	3357	0.5
Li	7	3	45	-16.442	ppb	-31.55847838	1915609	10
Be	9	1	6	0.082	ppb	264.0491443	17	0.5
B	11	1	6	8.275	ppb	5.595076175	1493	0.5
Na	23	1	45	173.609	ppb	2.674461627	608205	25
Na	23	2	45	205.396	ppb	2.253732387	73135	25
Mg	24	2	45	75.101	ppb	6.808205034	5881	25
Al	27	2	45	2.204	ppb	133.3492479	63	15
K	39	1	45	-812.419	ppb	-0.747866951	902419	50
K	39	2	45	38.695	ppb	7.095015444	7152	50
Ca	40	1	45	16.384	ppb	4.024887311	83428	50
Ca	44	2	45	26.411	ppb	48.34571395	113	25
V	51	2	72	-0.692	ppb	-22.47971819	467	1
Cr	52	2	72	0.116	ppb	28.27090782	263	1
Mn	55	2	72	0.389	ppb	37.85797303	217	0.5
Fe	57	2	72	5.914	ppb	80.11857826	230	25
Co	59	2	72	0.006	ppb	222.624396	27	0.5
Ni	60	2	72	-0.036	ppb	-378.6625469	140	1
Cu	63	2	72	0.230	ppb	39.84437162	1310	1
Zn	66	2	72	1.846	ppb	7.062399745	853	5
As	75	2	72	0.085	ppb	33.10368753	16	1
Se	78	1	72	-0.018	ppb	-66.8508583	1	1
Sr	88	2	72	0.046	ppb	33.55237491	57	0.5
Zr	90	2	72	-5.569	ppb	-61.7172115	77	1
Nb	93	2	72	0.477	ppb	20.34677274	1934	2
Mo	95	2	115	0.016	ppb	121.2734265	43	0.5
Pd	105	2	115	0.020	ppb	116.7205285	67	1
Ag	107	2	115	0.014	ppb	35.98839611	57	1
Cd	111	2	115	0.042	ppb	229.0894801	23	0.5
Sn	120	2	115	0.761	ppb	3.645876194	883	1
Sb	121	2	115	0.112	ppb	34.01564954	123	0.6
Ba	137	2	115	-0.016	ppb	-536.3642547	30	0.5
W	182	2	165	0.009	ppb	518.99467	770	1
Pt	195	2	165	0.001	ppb	666.8829107	57	1
Tl	205	2	165	0.008	ppb	87.47984335	180	0.1
Pb	208	2	165	0.014	ppb	46.02460499	1037	0.5
Th	232	2	165	0.017	ppb	54.15959533	543	1
U	238	2	165	0.011	ppb	7.366685396	290	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	380804	0.93	446069	85.37	60	120	
Sc (IS)	45	1	HMI H2	11811540	0.14	13344586	88.51	60	120	
Sc (IS)	45	2	HMI He	497226	0.77	548684	90.62	60	120	
Sc (IS)	45	3	No Gas	33655954	0.77	39087130	86.10	60	120	
Ge Internal Standard	72	1	HMI H2	7426221	0.37	8240244	90.12	60	120	
Ge Internal Standard	72	2	HMI He	720234	0.37	783465	91.93	60	120	
In Internal Standard	115	2	HMI He	2574233	0.96	2775841	92.74	60	120	
Ho-165	165	2	HMI He	16428060	1.55	17360012	94.63	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429951/2-A
Data File Name	196_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:36:45-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429951 6020a dod5
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	57.553	57.553	ppb	9.433	56384	400	14.4	80	120	>+/-20%
Li	7	2	45	31.855	31.855	ppb	81.887	3727	400	8.0	80	120	>+/-20%
Li	7	3	45	58.650	58.650	ppb	0.808	2341113	400	14.7	80	120	>+/-20%
Be	9	1	6	39.775	39.775	ppb	3.041	5194	40	99.4	80	120	
Na	23	2	45	349.281	349.281	ppb	3.958	90994	40	873.2	80	120	>+/-20%
Mg	24	2	45	89.721	89.721	ppb	8.549	6675	40	224.3	80	120	>+/-20%
Al	27	2	45	387.117	387.117	ppb	3.991	5311	40	967.8	80	120	>+/-20%
K	39	2	45	36.062	36.062	ppb	23.264	7065	40	90.2	80	120	
Ca	44	2	45	260.034	260.034	ppb	5.955	500	40	650.1	80	120	>+/-20%
V	51	2	72	37.887	37.887	ppb	1.664	27654	40	94.7	80	120	
Cr	52	2	72	40.342	40.342	ppb	0.181	38389	40	100.9	80	120	
Mn	55	2	72	41.506	41.506	ppb	3.843	14400	40	103.8	80	120	
Fe	57	2	72	419.631	419.631	ppb	3.902	7775	40	1049.1	80	120	>+/-20%
Co	59	2	72	40.163	40.163	ppb	2.666	74071	40	100.4	80	120	
Ni	60	2	72	39.791	39.791	ppb	2.131	21668	40	99.5	80	120	
Cu	63	2	72	40.282	40.282	ppb	1.716	63182	40	100.7	80	120	
Zn	66	2	72	40.495	40.495	ppb	6.381	7575	40	101.2	80	120	
As	75	2	72	38.102	38.102	ppb	2.073	4123	40	95.3	80	120	
Se	78	1	72	38.204	38.204	ppb	3.492	7207	40	95.5	80	120	
Nb	93	2	72	0.341	0.341	ppb	30.318	1573	40	0.9	80	120	>+/-20%
Mo	95	2	115	35.430	35.430	ppb	2.070	28276	40	88.6	80	120	
Pd	105	2	115	-0.001	-0.001	ppb	-1208.935	40	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.490	40.490	ppb	0.619	119654	40	101.2	80	120	
Cd	111	2	115	39.253	39.253	ppb	1.769	13163	40	98.1	80	120	
Sn	120	2	115	38.292	38.292	ppb	1.952	33620	40	95.7	80	120	
Sb	121	2	115	37.869	37.869	ppb	1.087	26724	40	94.7	80	120	
Ba	137	2	115	40.573	40.573	ppb	2.616	9683	40	101.4	80	120	
W	182	2	165	12.101	12.101	ppb	1.396	60225	40	30.3	80	120	>+/-20%
Pt	195	2	165	-0.002	-0.002	ppb	-367.919	47	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.770	40.770	ppb	0.165	353125	40	101.9	80	120	
Pb	208	2	165	40.918	40.918	ppb	0.536	460120	40	102.3	80	120	
Th	232	2	165	39.399	39.399	ppb	1.070	524216	40	98.5	80	120	
U	238	2	165	37.090	37.090	ppb	0.763	595518	40	92.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	378033	0.33	446069	84.75	60	120	
Sc (IS)	45	1	HMI H2	11809855	0.42	13344586	88.50	60	120	
Sc (IS)	45	2	HMI He	496064	0.69	548684	90.41	60	120	
Sc (IS)	45	3	No Gas	33714680	0.23	39087130	86.26	60	120	
Ge Internal Standard	72	1	HMI H2	7439894	0.13	8240244	90.29	60	120	
Ge Internal Standard	72	2	HMI He	721873	0.27	783465	92.14	60	120	
In Internal Standard	115	2	HMI He	2620294	0.83	2775841	94.40	60	120	
Ho-165	165	2	HMI He	16420137	0.53	17360012	94.59	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-429951/3-A
Data File Name	197SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:40:34-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	64.907	ppb	64.907	4.77	57548	500000	
Li	7	2	45	43.708	ppb	43.708	56.64	3881	500000	
Li	7	3	45	60.779	ppb	60.779	2.03	2339084	50000	
Be	9	1	6	40.750	ppb	40.750	4.74	5358	2000	
B	11	1	6	38.440	ppb	38.440	7.81	6045	2000	
Na	23	1	45	107.124	ppb	107.124	4.28	531734	2000	
Na	23	2	45	113.850	ppb	113.850	8.53	62195	400000	
Mg	24	2	45	70.385	ppb	70.385	2.02	5675	400000	
Al	27	2	45	383.924	ppb	383.924	5.09	5328	400000	
K	39	1	45	-836.682	ppb	-836.682	-0.46	880025	400000	
K	39	2	45	24.949	ppb	24.949	47.15	6845	400000	
Ca	40	1	45	12.135	ppb	12.135	1.68	76552	400000	
Ca	44	2	45	242.571	ppb	242.571	21.78	477	400000	
V	51	2	72	40.037	ppb	40.037	2.79	29086	2000	
Cr	52	2	72	41.856	ppb	41.856	1.42	39712	5000	
Mn	55	2	72	42.746	ppb	42.746	2.57	14787	10000	
Fe	57	2	72	409.464	ppb	409.464	1.06	7569	400000	
Co	59	2	72	41.202	ppb	41.202	1.70	75775	2000	
Ni	60	2	72	41.770	ppb	41.770	4.00	22673	5000	
Cu	63	2	72	42.336	ppb	42.336	0.77	66167	5000	
Zn	66	2	72	42.969	ppb	42.969	8.42	7982	5000	
As	75	2	72	37.972	ppb	37.972	1.66	4098	2000	
Se	78	1	72	39.238	ppb	39.238	2.33	7352	2000	
Sr	88	2	72	40.477	ppb	40.477	4.17	14957	4000	
Zr	90	2	72	9948.956	ppb	9948.956	0.96	43784	1000	>LDR
Nb	93	2	72	0.269	ppb	0.269	5.97	1380	200	
Mo	95	2	115	36.499	ppb	36.499	3.86	28690	2000	
Pd	105	2	115	0.002	ppb	0.002	1132.25	43	100	
Ag	107	2	115	41.615	ppb	41.615	1.48	121143	100	
Cd	111	2	115	40.136	ppb	40.136	5.07	13256	2000	
Sn	120	2	115	39.599	ppb	39.599	1.03	34245	2000	
Sb	121	2	115	39.196	ppb	39.196	1.29	27248	1000	
Ba	137	2	115	41.820	ppb	41.820	2.11	9833	5000	
W	182	2	165	13.018	ppb	13.018	0.72	64780	100	
Pt	195	2	165	-0.001	ppb	-0.001	-498.87	50	100	
Tl	205	2	165	41.199	ppb	41.199	0.25	357047	2000	
Pb	208	2	165	41.986	ppb	41.986	0.46	472393	5000	
Th	232	2	165	40.805	ppb	40.805	0.84	543214	2000	
U	238	2	165	37.843	ppb	37.843	1.34	607916	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	380611	0.23	446069	85.33	60	120	
Sc (IS)	45	1	HMI H2	11841756	0.49	13344586	88.74	60	120	
Sc (IS)	45	2	HMI He	501815	0.97	548684	91.46	60	120	
Sc (IS)	45	3	No Gas	33514077	0.08	39087130	85.74	60	120	
Ge Internal Standard	72	1	HMI H2	7390435	0.20	8240244	89.69	60	120	
Ge Internal Standard	72	2	HMI He	719841	0.11	783465	91.88	60	120	
In Internal Standard	115	2	HMI He	2581376	0.85	2775841	92.99	60	120	
Ho-165	165	2	HMI He	16430067	0.80	17360012	94.64	60	120	

Sample Report

Sample Table

Sample Name	280-114394-D-1-A
Data File Name	198SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:44:24-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.235	ppb	-16.235	-64.20	45384	500000	
Li	7	2	45	-33.400	ppb	-33.400	-20.56	3107	500000	
Li	7	3	45	-11.852	ppb	-11.852	-22.46	1905715	50000	
Be	9	1	6	0.036	ppb	0.036	222.28	10	2000	
B	11	1	6	393.689	ppb	393.689	1.27	57702	2000	
Na	23	1	45	40863.573	ppb	40863.573	0.85	47303208	2000	>LDR
Na	23	2	45	39575.880	ppb	39575.880	0.62	4981275	400000	
Mg	24	2	45	5895.805	ppb	5895.805	1.24	324432	400000	
Al	27	2	45	6.173	ppb	6.173	27.27	117	400000	
K	39	1	45	16325.703	ppb	16325.703	0.23	17949235	400000	
K	39	2	45	17010.842	ppb	17010.842	1.36	456922	400000	
Ca	40	1	45	37939.505	ppb	37939.505	0.78	61969194	400000	
Ca	44	2	45	37570.073	ppb	37570.073	0.50	61956	400000	
V	51	2	72	-0.510	ppb	-0.510	-20.93	580	2000	
Cr	52	2	72	0.597	ppb	0.597	24.91	700	5000	
Mn	55	2	72	242.705	ppb	242.705	1.21	81586	10000	
Fe	57	2	72	19860.647	ppb	19860.647	0.69	352712	400000	
Co	59	2	72	0.239	ppb	0.239	24.74	443	2000	
Ni	60	2	72	1.402	ppb	1.402	29.63	893	5000	
Cu	63	2	72	0.495	ppb	0.495	18.04	1677	5000	
Zn	66	2	72	8.604	ppb	8.604	9.10	1977	5000	
As	75	2	72	83.243	ppb	83.243	1.28	8762	2000	
Se	78	1	72	0.339	ppb	0.339	23.48	67	2000	
Sr	88	2	72	314.103	ppb	314.103	1.48	113048	4000	
Zr	90	2	72	901.708	ppb	901.708	10.34	3964	1000	
Nb	93	2	72	0.121	ppb	0.121	52.04	963	200	
Mo	95	2	115	23.905	ppb	23.905	4.19	18421	2000	
Pd	105	2	115	0.011	ppb	0.011	179.17	53	100	
Ag	107	2	115	0.023	ppb	0.023	41.18	80	100	
Cd	111	2	115	-0.018	ppb	-0.018	-99.39	3	2000	
Sn	120	2	115	0.379	ppb	0.379	18.83	547	2000	
Sb	121	2	115	0.825	ppb	0.825	5.47	607	1000	
Ba	137	2	115	53.444	ppb	53.444	3.31	12302	5000	
W	182	2	165	0.087	ppb	0.087	22.66	1133	100	
Pt	195	2	165	-0.006	ppb	-0.006	-97.67	27	100	
Tl	205	2	165	0.017	ppb	0.017	52.96	247	2000	
Pb	208	2	165	0.718	ppb	0.718	2.06	8765	5000	
Th	232	2	165	0.366	ppb	0.366	4.21	5084	2000	
U	238	2	165	0.147	ppb	0.147	7.98	2427	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	368235	0.46	446069	82.55	60	120	
Sc (IS)	45	1	HMI H2	11584474	0.36	13344586	86.81	60	120	
Sc (IS)	45	2	HMI He	493419	0.55	548684	89.93	60	120	
Sc (IS)	45	3	No Gas	33038149	0.41	39087130	84.52	60	120	
Ge Internal Standard	72	1	HMI H2	7213142	0.85	8240244	87.54	60	120	
Ge Internal Standard	72	2	HMI He	702745	0.31	783465	89.70	60	120	
In Internal Standard	115	2	HMI He	2528947	0.37	2775841	91.11	60	120	
Ho-165	165	2	HMI He	16103881	0.52	17360012	92.76	60	120	

Sample Report

Sample Table

Sample Name	280-114394-D-1-Asd@5
Data File Name	199SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:48:12-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.803	ppb	-8.803	-64.32	46841	500000	
Li	7	2	45	-38.317	ppb	-38.317	-19.08	3047	500000	
Li	7	3	45	-9.722	ppb	-9.722	-29.37	2001768	50000	
Be	9	1	6	-0.018	ppb	-0.018	-242.55	3	2000	
B	11	1	6	85.776	ppb	85.776	3.32	13286	2000	
Na	23	1	45	8078.417	ppb	8078.417	0.77	9765318	2000	
Na	23	2	45	7616.977	ppb	7616.977	0.27	991798	400000	
Mg	24	2	45	1207.855	ppb	1207.855	2.13	67505	400000	
Al	27	2	45	3.005	ppb	3.005	37.31	73	400000	
K	39	1	45	3214.804	ppb	3214.804	1.20	4942898	400000	
K	39	2	45	3330.771	ppb	3330.771	1.21	93890	400000	
Ca	40	1	45	7428.169	ppb	7428.169	0.74	12296657	400000	
Ca	44	2	45	7079.033	ppb	7079.033	6.70	11671	400000	
V	51	2	72	-0.286	ppb	-0.286	-47.65	747	2000	
Cr	52	2	72	0.203	ppb	0.203	66.13	343	5000	
Mn	55	2	72	47.421	ppb	47.421	2.80	16292	10000	
Fe	57	2	72	3799.384	ppb	3799.384	1.28	68767	400000	
Co	59	2	72	0.015	ppb	0.015	41.40	43	2000	
Ni	60	2	72	0.202	ppb	0.202	20.04	267	5000	
Cu	63	2	72	0.266	ppb	0.266	27.11	1357	5000	
Zn	66	2	72	1.417	ppb	1.417	27.01	773	5000	
As	75	2	72	16.477	ppb	16.477	2.70	1771	2000	
Se	78	1	72	0.054	ppb	0.054	141.30	15	2000	
Sr	88	2	72	59.977	ppb	59.977	3.54	21999	4000	
Zr	90	2	72	54.123	ppb	54.123	34.02	337	1000	
Nb	93	2	72	-0.048	ppb	-0.048	-73.19	533	200	
Mo	95	2	115	4.724	ppb	4.724	9.71	3647	2000	
Pd	105	2	115	0.003	ppb	0.003	506.53	43	100	
Ag	107	2	115	0.011	ppb	0.011	65.67	47	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.084	ppb	0.084	170.07	297	2000	
Sb	121	2	115	0.298	ppb	0.298	20.85	247	1000	
Ba	137	2	115	9.067	ppb	9.067	3.54	2104	5000	
W	182	2	165	-0.010	ppb	-0.010	-213.23	673	100	
Pt	195	2	165	0.000	ppb	0.000	-22219.09	53	100	
Tl	205	2	165	0.010	ppb	0.010	83.01	197	2000	
Pb	208	2	165	0.135	ppb	0.135	11.67	2384	5000	
Th	232	2	165	0.024	ppb	0.024	17.36	640	2000	
U	238	2	165	0.027	ppb	0.027	7.27	537	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	383471	0.22	446069	85.97	60	120	
Sc (IS)	45	1	HMI H2	11698121	0.41	13344586	87.66	60	120	
Sc (IS)	45	2	HMI He	491009	0.36	548684	89.49	60	120	
Sc (IS)	45	3	No Gas	34489802	0.51	39087130	88.24	60	120	
Ge Internal Standard	72	1	HMI H2	7353974	0.86	8240244	89.24	60	120	
Ge Internal Standard	72	2	HMI He	715219	0.55	783465	91.29	60	120	
In Internal Standard	115	2	HMI He	2516399	1.02	2775841	90.65	60	120	
Ho-165	165	2	HMI He	16349185	0.59	17360012	94.18	60	120	

Sample Report

Sample Table

Sample Name	280-114394-D-1-B MS
Data File Name	200SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:52:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	58.521	ppb	58.521	11.74	54752	500000	
Li	7	2	45	18.347	ppb	18.347	157.17	3571	500000	
Li	7	3	45	58.817	ppb	58.817	3.36	2302019	50000	
Be	9	1	6	38.734	ppb	38.734	8.22	4851	2000	
B	11	1	6	425.931	ppb	425.931	1.57	61441	2000	
Na	23	1	45	40896.401	ppb	40896.401	0.58	46754256	2000	>LDR
Na	23	2	45	39399.792	ppb	39399.792	1.57	4940727	400000	
Mg	24	2	45	5842.414	ppb	5842.414	0.66	320310	400000	
Al	27	2	45	398.026	ppb	398.026	1.08	5411	400000	
K	39	1	45	16323.835	ppb	16323.835	0.39	17724641	400000	
K	39	2	45	16876.066	ppb	16876.066	1.24	451669	400000	
Ca	40	1	45	37957.018	ppb	37957.018	0.66	61227941	400000	
Ca	44	2	45	37736.113	ppb	37736.113	0.44	61996	400000	
V	51	2	72	40.121	ppb	40.121	2.08	28719	2000	
Cr	52	2	72	41.358	ppb	41.358	3.00	38666	5000	
Mn	55	2	72	280.303	ppb	280.303	2.68	95093	10000	
Fe	57	2	72	20017.720	ppb	20017.720	0.65	358812	400000	
Co	59	2	72	39.913	ppb	39.913	2.14	72329	2000	
Ni	60	2	72	40.497	ppb	40.497	0.83	21665	5000	
Cu	63	2	72	40.805	ppb	40.805	0.66	62875	5000	
Zn	66	2	72	48.454	ppb	48.454	6.78	8803	5000	
As	75	2	72	118.312	ppb	118.312	1.18	12566	2000	
Se	78	1	72	39.335	ppb	39.335	1.97	7188	2000	
Sr	88	2	72	352.044	ppb	352.044	1.35	127883	4000	
Zr	90	2	72	10436.417	ppb	10436.417	2.94	45252	1000	>LDR
Nb	93	2	72	0.026	ppb	0.026	106.09	723	200	
Mo	95	2	115	63.241	ppb	63.241	1.59	48742	2000	
Pd	105	2	115	0.013	ppb	0.013	67.49	57	100	
Ag	107	2	115	40.650	ppb	40.650	0.93	116069	100	
Cd	111	2	115	39.520	ppb	39.520	1.00	12806	2000	
Sn	120	2	115	39.736	ppb	39.736	2.13	33704	2000	
Sb	121	2	115	39.258	ppb	39.258	3.49	26767	1000	
Ba	137	2	115	93.393	ppb	93.393	1.84	21496	5000	
W	182	2	165	12.268	ppb	12.268	1.58	60489	100	
Pt	195	2	165	-0.005	ppb	-0.005	-75.32	33	100	
Tl	205	2	165	40.292	ppb	40.292	2.24	345727	2000	
Pb	208	2	165	41.206	ppb	41.206	1.10	459064	5000	
Th	232	2	165	40.222	ppb	40.222	1.12	530206	2000	
U	238	2	165	38.044	ppb	38.044	1.71	605128	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	362541	0.44	446069	81.27	60	120	
Sc (IS)	45	1	HMI H2	11440796	0.33	13344586	85.73	60	120	
Sc (IS)	45	2	HMI He	491583	0.73	548684	89.59	60	120	
Sc (IS)	45	3	No Gas	33138123	0.64	39087130	84.78	60	120	
Ge Internal Standard	72	1	HMI H2	7207248	0.37	8240244	87.46	60	120	
Ge Internal Standard	72	2	HMI He	709302	0.07	783465	90.53	60	120	
In Internal Standard	115	2	HMI He	2531814	0.35	2775841	91.21	60	120	
Ho-165	165	2	HMI He	16269613	1.21	17360012	93.72	60	120	

Sample Report

Sample Table

Sample Name	280-114394-D-1-C MSD
Data File Name	201SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:55:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	59.943	ppb	59.943	22.38	55468	500000	
Li	7	2	45	23.364	ppb	23.364	40.88	3616	500000	
Li	7	3	45	54.290	ppb	54.290	19.35	2294333	50000	
Be	9	1	6	39.934	ppb	39.934	4.53	5084	2000	
B	11	1	6	431.701	ppb	431.701	2.38	63311	2000	
Na	23	1	45	41441.673	ppb	41441.673	1.27	47832719	2000	>LDR
Na	23	2	45	39762.501	ppb	39762.501	1.03	4984644	400000	
Mg	24	2	45	5912.406	ppb	5912.406	0.32	324052	400000	
Al	27	2	45	399.914	ppb	399.914	3.85	5434	400000	
K	39	1	45	16478.142	ppb	16478.142	0.86	18050358	400000	
K	39	2	45	17287.078	ppb	17287.078	0.14	462417	400000	
Ca	40	1	45	38417.846	ppb	38417.846	0.51	62575029	400000	
Ca	44	2	45	38354.679	ppb	38354.679	2.22	62993	400000	
V	51	2	72	39.979	ppb	39.979	0.35	28585	2000	
Cr	52	2	72	41.877	ppb	41.877	1.30	39101	5000	
Mn	55	2	72	289.987	ppb	289.987	1.17	98255	10000	
Fe	57	2	72	20347.465	ppb	20347.465	0.97	364287	400000	
Co	59	2	72	41.172	ppb	41.172	1.77	74519	2000	
Ni	60	2	72	40.746	ppb	40.746	1.95	21772	5000	
Cu	63	2	72	40.770	ppb	40.770	1.32	62744	5000	
Zn	66	2	72	48.536	ppb	48.536	0.21	8806	5000	
As	75	2	72	121.110	ppb	121.110	1.85	12848	2000	
Se	78	1	72	39.545	ppb	39.545	1.93	7252	2000	
Sr	88	2	72	360.338	ppb	360.338	0.96	130733	4000	
Zr	90	2	72	10747.549	ppb	10747.549	1.82	46542	1000	>LDR
Nb	93	2	72	-0.004	ppb	-0.004	-164.53	643	200	
Mo	95	2	115	63.625	ppb	63.625	0.46	49013	2000	
Pd	105	2	115	0.021	ppb	0.021	86.40	67	100	
Ag	107	2	115	41.725	ppb	41.725	2.00	119059	100	
Cd	111	2	115	41.395	ppb	41.395	1.66	13406	2000	
Sn	120	2	115	40.964	ppb	40.964	3.03	34716	2000	
Sb	121	2	115	40.554	ppb	40.554	3.14	27628	1000	
Ba	137	2	115	93.110	ppb	93.110	2.16	21416	5000	
W	182	2	165	11.991	ppb	11.991	1.21	59278	100	
Pt	195	2	165	0.000	ppb	0.000	4251.30	53	100	
Tl	205	2	165	41.007	ppb	41.007	1.33	352736	2000	
Pb	208	2	165	41.979	ppb	41.979	1.06	468788	5000	
Th	232	2	165	41.191	ppb	41.191	0.73	544291	2000	
U	238	2	165	38.771	ppb	38.771	0.90	618216	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	368649	1.17	446069	82.64	60	120	
Sc (IS)	45	1	HMI H2	11552518	0.74	13344586	86.57	60	120	
Sc (IS)	45	2	HMI He	491457	0.41	548684	89.57	60	120	
Sc (IS)	45	3	No Gas	33392288	0.45	39087130	85.43	60	120	
Ge Internal Standard	72	1	HMI H2	7233034	0.72	8240244	87.78	60	120	
Ge Internal Standard	72	2	HMI He	708435	0.50	783465	90.42	60	120	
In Internal Standard	115	2	HMI He	2530455	1.25	2775841	91.16	60	120	
Ho-165	165	2	HMI He	16308358	1.07	17360012	93.94	60	120	

Sample Report

Sample Table

Sample Name	280-114394-D-1-A pds
Data File Name	202SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T00:59:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-19.771	ppb	-19.771	-11.41	44585	500000	
Li	7	2	45	-25.437	ppb	-25.437	-135.15	3164	500000	
Li	7	3	45	-21.061	ppb	-21.061	-2.60	1853541	50000	
Be	9	1	6	203.146	ppb	203.146	0.08	25627	2000	
B	11	1	6	399.447	ppb	399.447	1.03	58107	2000	
Na	23	1	45	40150.791	ppb	40150.791	0.80	46146231	2000	>LDR
Na	23	2	45	38670.299	ppb	38670.299	1.43	4842107	400000	
Mg	24	2	45	5735.568	ppb	5735.568	1.99	313958	400000	
Al	27	2	45	2097.822	ppb	2097.822	1.20	28331	400000	
K	39	1	45	16042.019	ppb	16042.019	2.04	17536884	400000	
K	39	2	45	16839.287	ppb	16839.287	1.49	449946	400000	
Ca	40	1	45	37617.122	ppb	37617.122	1.88	60991522	400000	
Ca	44	2	45	36593.332	ppb	36593.332	1.93	60019	400000	
V	51	2	72	206.924	ppb	206.924	1.20	144365	2000	
Cr	52	2	72	212.089	ppb	212.089	0.79	197870	5000	
Mn	55	2	72	458.012	ppb	458.012	0.89	155492	10000	
Fe	57	2	72	21655.522	ppb	21655.522	0.53	388564	400000	
Co	59	2	72	209.176	ppb	209.176	0.54	379395	2000	
Ni	60	2	72	205.494	ppb	205.494	0.61	109408	5000	
Cu	63	2	72	209.201	ppb	209.201	0.34	318790	5000	
Zn	66	2	72	226.408	ppb	226.408	1.63	39245	5000	
As	75	2	72	277.947	ppb	277.947	1.38	29543	2000	
Se	78	1	72	201.370	ppb	201.370	1.04	36708	2000	
Sr	88	2	72	310.225	ppb	310.225	2.17	112814	4000	
Zr	90	2	72	57021.201	ppb	57021.201	0.71	247054	1000	>LDR
Nb	93	2	72	2.272	ppb	2.272	6.05	6612	200	
Mo	95	2	115	230.753	ppb	230.753	0.74	179359	2000	
Pd	105	2	115	0.028	ppb	0.028	84.27	77	100	
Ag	107	2	115	49.404	ppb	49.404	2.03	142311	100	
Cd	111	2	115	206.402	ppb	206.402	1.52	67438	2000	
Sn	120	2	115	211.259	ppb	211.259	1.30	179795	2000	
Sb	121	2	115	206.734	ppb	206.734	1.53	142015	1000	
Ba	137	2	115	271.444	ppb	271.444	1.71	62965	5000	
W	182	2	165	211.557	ppb	211.557	0.14	1026548	100	
Pt	195	2	165	0.033	ppb	0.033	42.95	193	100	
Tl	205	2	165	227.466	ppb	227.466	0.96	1942359	2000	
Pb	208	2	165	210.847	ppb	210.847	0.80	2334532	5000	
Th	232	2	165	15.739	ppb	15.739	3.98	206699	2000	
U	238	2	165	212.109	ppb	212.109	0.98	3357850	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	365493	0.65	446069	81.94	60	120	
Sc (IS)	45	1	HMI H2	11500255	0.67	13344586	86.18	60	120	
Sc (IS)	45	2	HMI He	490771	0.47	548684	89.44	60	120	
Sc (IS)	45	3	No Gas	33011937	0.43	39087130	84.46	60	120	
Ge Internal Standard	72	1	HMI H2	7193585	0.40	8240244	87.30	60	120	
Ge Internal Standard	72	2	HMI He	710041	0.09	783465	90.63	60	120	
In Internal Standard	115	2	HMI He	2554502	1.00	2775841	92.03	60	120	
Ho-165	165	2	HMI He	16192799	0.41	17360012	93.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	203_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:03:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	474.470	ppb	2.168	113091	500	94.9	90	110	
Li	7	2	45	419.335	ppb	6.958	7305	500	83.9	90	110	>+\-10%
Li	7	3	45	467.035	ppb	2.217	4793431	500	93.4	90	110	
Be	9	1	6	50.462	ppb	4.162	6592	50	100.9	90	110	
B	11	1	6	53.088	ppb	5.802	8202	50	106.2	90	110	
Na	23	1	45	5075.794	ppb	0.169	6320397	5000	101.5	90	110	
Na	23	2	45	4701.959	ppb	0.196	635740	5000	94.0	90	110	
Mg	24	2	45	5037.294	ppb	0.572	278555	5000	100.7	90	110	
Al	27	2	45	4927.456	ppb	0.579	67127	5000	98.5	90	110	
K	39	1	45	5174.167	ppb	0.517	6952223	5000	103.5	90	110	
K	39	2	45	5162.059	ppb	0.239	143463	5000	103.2	90	110	
Ca	40	1	45	5169.630	ppb	0.688	8623412	5000	103.4	90	110	
Ca	44	2	45	4864.305	ppb	5.360	8116	5000	97.3	90	110	
V	51	2	72	47.408	ppb	1.668	34196	50	94.8	90	110	
Cr	52	2	72	50.077	ppb	1.034	47385	50	100.2	90	110	
Mn	55	2	72	52.127	ppb	2.956	17977	50	104.3	90	110	
Fe	57	2	72	5035.238	ppb	2.048	91500	5000	100.7	90	110	
Co	59	2	72	50.293	ppb	1.945	92302	50	100.6	90	110	
Ni	60	2	72	47.900	ppb	1.305	25925	50	95.8	90	110	
Cu	63	2	72	49.808	ppb	0.580	77520	50	99.6	90	110	
Zn	66	2	72	51.657	ppb	1.814	9470	50	103.3	90	110	
As	75	2	72	47.171	ppb	2.267	5079	50	94.3	90	110	
Se	78	1	72	50.529	ppb	2.734	9528	50	101.1	90	110	
Sr	88	2	72	52.411	ppb	2.740	19316	50	104.8	90	110	
Zr	90	2	72	119.976	ppb	13.676	627	50	240.0	90	110	>+\-10%
Nb	93	2	72	94.846	ppb	1.518	252222	100	94.8	90	110	
Mo	95	2	115	48.772	ppb	1.199	38093	50	97.5	90	110	
Pd	105	2	115	51.306	ppb	0.731	67567	50	102.6	90	110	
Ag	107	2	115	49.044	ppb	1.687	141884	50	98.1	90	110	
Cd	111	2	115	49.511	ppb	1.025	16252	50	99.0	90	110	
Sn	120	2	115	50.496	ppb	1.767	43334	50	101.0	90	110	
Sb	121	2	115	53.415	ppb	3.079	36887	50	106.8	90	110	
Ba	137	2	115	52.073	ppb	2.422	12159	50	104.1	90	110	
W	182	2	165	49.435	ppb	0.853	244214	50	98.9	90	110	
Pt	195	2	165	49.252	ppb	0.952	211759	50	98.5	90	110	
Tl	205	2	165	50.199	ppb	0.814	435503	50	100.4	90	110	
Pb	208	2	165	50.564	ppb	0.375	569350	50	101.1	90	110	
Th	232	2	165	49.639	ppb	1.018	661491	50	99.3	90	110	
U	238	2	165	46.586	ppb	0.105	749216	50	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	378290	1.34	446069	84.81	60	120	
Sc (IS)	45	1	HMI H2	11764539	0.18	13344586	88.16	60	120	
Sc (IS)	45	2	HMI He	495390	0.67	548684	90.29	60	120	
Sc (IS)	45	3	No Gas	34853384	0.50	39087130	89.17	60	120	
Ge Internal Standard	72	1	HMI H2	7438986	0.59	8240244	90.28	60	120	
Ge Internal Standard	72	2	HMI He	718393	0.30	783465	91.69	60	120	
In Internal Standard	115	2	HMI He	2565218	0.38	2775841	92.41	60	120	
Ho-165	165	2	HMI He	16448097	0.34	17360012	94.75	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	204_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:07:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.911	ppb	-28.8	2020547	10	
Be	9	1	6	0.302	ppb	74.2	47	0.5	
B	11	1	6	8.416	ppb	9.8	1553	0.5	>RL
Na	23	1	45	27.162	ppb	17.1	440040	25	>RL
Na	23	2	45	23.211	ppb	30.3	50730	25	
Mg	24	2	45	65.012	ppb	1.6	5378	25	>RL
Al	27	2	45	1.436	ppb	177.0	53	15	
K	39	1	45	68.065	ppb	29.2	1809567	50	>RL
K	39	2	45	46.378	ppb	55.6	7429	50	
Ca	40	1	45	9.478	ppb	2.4	72468	50	
Ca	44	2	45	-4.102	ppb	-169.0	63	25	
V	51	2	72	-0.236	ppb	-101.5	797	1	
Cr	52	2	72	0.099	ppb	58.8	250	1	
Mn	55	2	72	0.094	ppb	106.1	117	0.5	
Fe	57	2	72	1.952	ppb	122.5	160	25	
Co	59	2	72	0.026	ppb	32.2	63	0.5	
Ni	60	2	72	0.040	ppb	186.8	183	1	
Cu	63	2	72	0.102	ppb	38.0	1127	1	
Zn	66	2	72	-0.701	ppb	-42.7	417	5	
As	75	2	72	0.107	ppb	108.3	19	1	
Se	78	1	72	0.065	ppb	74.4	17	1	
Sr	88	2	72	0.071	ppb	122.4	67	0.5	
Zr	90	2	72	4.703	ppb	136.9	123	1	>RL
Nb	93	2	72	2.419	ppb	19.9	7185	2	>RL
Mo	95	2	115	0.078	ppb	40.1	93	0.5	
Pd	105	2	115	0.069	ppb	23.0	133	1	
Ag	107	2	115	0.022	ppb	55.4	80	1	
Cd	111	2	115	-0.018	ppb	-93.7	3	0.5	
Sn	120	2	115	0.079	ppb	32.3	303	1	
Sb	121	2	115	0.977	ppb	8.6	733	0.6	>RL
Ba	137	2	115	-0.075	ppb	-87.2	17	0.5	
W	182	2	165	0.114	ppb	35.4	1283	1	
Pt	195	2	165	0.004	ppb	314.8	70	1	
Tl	205	2	165	0.025	ppb	32.3	327	0.1	
Pb	208	2	165	0.011	ppb	174.4	993	0.5	
Th	232	2	165	0.070	ppb	14.4	1247	1	
U	238	2	165	0.078	ppb	5.1	1370	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	390462	0.62	446069	87.53	60	120	
Sc (IS)	45	1	HMI H2	11898860	0.13	13344586	89.17	60	120	
Sc (IS)	45	2	HMI He	502031	0.19	548684	91.50	60	120	
Sc (IS)	45	3	No Gas	35136328	0.37	39087130	89.89	60	120	
Ge Internal Standard	72	1	HMI H2	7533881	0.67	8240244	91.43	60	120	
Ge Internal Standard	72	2	HMI He	729276	0.35	783465	93.08	60	120	
In Internal Standard	115	2	HMI He	2613504	1.01	2775841	94.15	60	120	
Ho-165	165	2	HMI He	16384239	0.79	17360012	94.38	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	205LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:11:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-5.609	ppb	-129.647	2057015	50	-11.2	70	130	>+/-30%
Be	9	1	6	0.944	ppb	80.190	133	1	94.4	70	130	
Na	23	2	45	85.417	ppb	14.493	58900	50	170.8	70	130	>+/-30%
Mg	24	2	45	128.207	ppb	4.682	8939	50	256.4	70	130	>+/-30%
Al	27	2	45	30.035	ppb	22.079	450	30	100.1	70	130	
K	39	2	45	153.435	ppb	5.966	10364	100	153.4	70	130	>+/-30%
Ca	44	2	45	43.297	ppb	97.971	143	50	86.6	70	130	
V	51	2	72	4.841	ppb	4.495	4421	5	96.8	70	130	
Cr	52	2	72	1.957	ppb	11.415	2034	2	97.9	70	130	
Mn	55	2	72	1.305	ppb	21.166	540	1	130.5	70	130	>+/-30%
Fe	57	2	72	59.919	ppb	14.459	1230	50	119.8	70	130	
Co	59	2	72	1.058	ppb	9.531	1990	1	105.8	70	130	
Ni	60	2	72	1.867	ppb	14.389	1183	2	93.3	70	130	
Cu	63	2	72	2.320	ppb	3.098	4597	2	116.0	70	130	
Zn	66	2	72	11.687	ppb	11.975	2597	10	116.9	70	130	
As	75	2	72	4.708	ppb	7.968	522	5	94.2	70	130	
Se	78	1	72	5.526	ppb	12.207	1060	5	110.5	70	130	
Sr	88	2	72	0.961	ppb	28.916	400	1	96.1	70	130	
Zr	90	2	72	23.399	ppb	62.638	207	0.5	4679.7	70	130	>+/-30%
Nb	93	2	72	5.195	ppb	5.307	14691	2	259.8	70	130	>+/-30%
Mo	95	2	115	2.174	ppb	13.741	1760	2	108.7	70	130	
Pd	105	2	115	-0.001	ppb	-6454.793	40	1	-0.1	70	130	>+/-30%
Ag	107	2	115	5.225	ppb	2.556	15425	5	104.5	70	130	
Cd	111	2	115	0.920	ppb	19.426	317	1	92.0	70	130	
Sn	120	2	115	10.319	ppb	4.103	9213	10	103.2	70	130	
Sb	121	2	115	3.058	ppb	5.048	2197	2	152.9	70	130	>+/-30%
Ba	137	2	115	1.021	ppb	20.957	277	1	102.1	70	130	
W	182	2	165	4.938	ppb	2.113	25185	1	493.8	70	130	>+/-30%
Pt	195	2	165	0.308	ppb	3.395	1383	1	30.8	70	130	>+/-30%
Tl	205	2	165	1.057	ppb	2.429	9327	1	105.7	70	130	
Pb	208	2	165	1.049	ppb	5.667	12736	1	104.9	70	130	
Th	232	2	165	2.171	ppb	0.264	29401	2	108.6	70	130	
U	238	2	165	0.998	ppb	2.595	16240	1	99.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	391446	0.34	446069	87.75	60	120	
Sc (IS)	45	1	HMI H2	11992990	0.60	13344586	89.87	60	120	
Sc (IS)	45	2	HMI He	504428	0.30	548684	91.93	60	120	
Sc (IS)	45	3	No Gas	35027579	0.18	39087130	89.61	60	120	
Ge Internal Standard	72	1	HMI H2	7533872	0.44	8240244	91.43	60	120	
Ge Internal Standard	72	2	HMI He	730695	0.43	783465	93.26	60	120	
In Internal Standard	115	2	HMI He	2615545	1.43	2775841	94.23	60	120	
Ho-165	165	2	HMI He	16537721	0.69	17360012	95.26	60	120	

Sample Report

Sample Table

Sample Name	280-114394-C-3-A
Data File Name	206SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:14:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-17.360	ppb	-17.360	-65.01	46253	500000	
Li	7	2	45	-48.559	ppb	-48.559	-58.38	3034	500000	
Li	7	3	45	-19.511	ppb	-19.511	-22.25	1902935	50000	
Be	9	1	6	-0.018	ppb	-0.018	-238.67	3	2000	
B	11	1	6	6.722	ppb	6.722	11.32	1260	2000	
Na	23	1	45	208.415	ppb	208.415	2.33	650806	2000	
Na	23	2	45	218.405	ppb	218.405	4.79	75867	400000	
Mg	24	2	45	71.180	ppb	71.180	7.46	5748	400000	
Al	27	2	45	3.809	ppb	3.809	70.04	87	400000	
K	39	1	45	-799.938	ppb	-799.938	-0.80	917694	400000	
K	39	2	45	35.060	ppb	35.060	36.92	7158	400000	
Ca	40	1	45	21.627	ppb	21.627	4.18	92412	400000	
Ca	44	2	45	5.487	ppb	5.487	425.62	80	400000	
V	51	2	72	-0.578	ppb	-0.578	-14.27	557	2000	
Cr	52	2	72	0.468	ppb	0.468	15.95	607	5000	
Mn	55	2	72	0.235	ppb	0.235	13.21	167	10000	
Fe	57	2	72	11.432	ppb	11.432	25.87	337	400000	
Co	59	2	72	0.009	ppb	0.009	129.73	33	2000	
Ni	60	2	72	0.081	ppb	0.081	115.23	207	5000	
Cu	63	2	72	0.119	ppb	0.119	80.69	1160	5000	
Zn	66	2	72	2.246	ppb	2.246	29.74	940	5000	
As	75	2	72	0.088	ppb	0.088	61.86	17	2000	
Se	78	1	72	0.031	ppb	0.031	210.15	11	2000	
Sr	88	2	72	0.034	ppb	0.034	163.95	53	4000	
Zr	90	2	72	-5.087	ppb	-5.087	-276.61	80	1000	
Nb	93	2	72	0.472	ppb	0.472	14.12	1957	200	
Mo	95	2	115	0.035	ppb	0.035	93.27	60	2000	
Pd	105	2	115	0.017	ppb	0.017	187.37	63	100	
Ag	107	2	115	0.004	ppb	0.004	141.74	27	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.132	ppb	0.132	56.71	353	2000	
Sb	121	2	115	0.243	ppb	0.243	10.94	220	1000	
Ba	137	2	115	-0.034	ppb	-0.034	-261.53	27	5000	
W	182	2	165	0.002	ppb	0.002	1061.87	743	100	
Pt	195	2	165	0.059	ppb	0.059	24.19	310	100	
Tl	205	2	165	0.005	ppb	0.005	14.02	153	2000	
Pb	208	2	165	0.011	ppb	0.011	22.68	1007	5000	
Th	232	2	165	0.031	ppb	0.031	12.56	740	2000	
U	238	2	165	0.023	ppb	0.023	34.13	480	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	381238	0.97	446069	85.47	60	120	
Sc (IS)	45	1	HMI H2	11845281	0.27	13344586	88.76	60	120	
Sc (IS)	45	2	HMI He	504498	0.82	548684	91.95	60	120	
Sc (IS)	45	3	No Gas	33737048	0.64	39087130	86.31	60	120	
Ge Internal Standard	72	1	HMI H2	7464743	0.85	8240244	90.59	60	120	
Ge Internal Standard	72	2	HMI He	733393	0.48	783465	93.61	60	120	
In Internal Standard	115	2	HMI He	2636852	0.51	2775841	94.99	60	120	
Ho-165	165	2	HMI He	16583184	0.35	17360012	95.53	60	120	

Sample Report

Sample Table

Sample Name	280-114273-A-1-O
Data File Name	207SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:18:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	385.004	ppb	385.004	2.43	76595	500000	
Li	7	2	45	214.772	ppb	214.772	7.00	4637	500000	
Li	7	3	45	296.017	ppb	296.017	2.14	3261874	50000	
Be	9	1	6	0.123	ppb	0.123	92.58	17	2000	
B	11	1	6	513.215	ppb	513.215	0.49	59043	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	>LDR
Na	23	2	45	4958609.105	ppb	4958609.105	1.12	531840099	400000	>LDR
Mg	24	2	45	1612346.589	ppb	1612346.589	0.85	75915461	400000	
Al	27	2	45	15.283	ppb	15.283	26.14	207	400000	
K	39	1	45	7092.257	ppb	7092.257	1.42	6751588	400000	
K	39	2	45	3814.680	ppb	3814.680	1.56	92191	400000	
Ca	40	1	45	1189497.518	ppb	1189497.518	0.57	1496913844	400000	
Ca	44	2	45	1378948.840	ppb	1378948.840	1.88	1953798	400000	
V	51	2	72	5.389	ppb	5.389	7.66	3561	2000	
Cr	52	2	72	2.407	ppb	2.407	9.46	1824	5000	
Mn	55	2	72	2080.327	ppb	2080.327	0.66	537638	10000	
Fe	57	2	72	394.721	ppb	394.721	6.73	5484	400000	
Co	59	2	72	0.124	ppb	0.124	6.32	183	2000	
Ni	60	2	72	1.014	ppb	1.014	5.47	530	5000	
Cu	63	2	72	0.140	ppb	0.140	51.30	880	5000	
Zn	66	2	72	1.459	ppb	1.459	48.21	590	5000	
As	75	2	72	4.424	ppb	4.424	1.19	363	2000	
Se	78	1	72	0.205	ppb	0.205	46.49	31	2000	
Sr	88	2	72	29312.265	ppb	29312.265	0.68	8115020	4000	>LDR
Zr	90	2	72	258.846	ppb	258.846	15.63	930	1000	
Nb	93	2	72	1.271	ppb	1.271	6.07	3037	200	
Mo	95	2	115	2.009	ppb	2.009	9.87	1170	2000	
Pd	105	2	115	0.447	ppb	0.447	27.34	460	100	
Ag	107	2	115	0.028	ppb	0.028	103.92	70	100	
Cd	111	2	115	0.041	ppb	0.041	154.40	17	2000	
Sn	120	2	115	1.335	ppb	1.335	4.23	1003	2000	
Sb	121	2	115	0.785	ppb	0.785	24.40	430	1000	
Ba	137	2	115	37.696	ppb	37.696	1.72	6452	5000	
W	182	2	165	1.478	ppb	1.478	7.06	5948	100	
Pt	195	2	165	0.051	ppb	0.051	21.33	203	100	
Tl	205	2	165	0.005	ppb	0.005	94.83	113	2000	
Pb	208	2	165	0.025	ppb	0.025	8.38	857	5000	
Th	232	2	165	0.082	ppb	0.082	5.52	1050	2000	
U	238	2	165	2.639	ppb	2.639	1.53	31609	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	289319	0.82	446069	64.86	60	120	
Sc (IS)	45	1	HMI H2	8932996	0.22	13344586	66.94	60	120	
Sc (IS)	45	2	HMI He	424455	0.97	548684	77.36	60	120	
Sc (IS)	45	3	No Gas	29922257	0.89	39087130	76.55	60	120	
Ge Internal Standard	72	1	HMI H2	5229848	1.03	8240244	63.47	60	120	
Ge Internal Standard	72	2	HMI He	540754	0.46	783465	69.02	60	120	
In Internal Standard	115	2	HMI He	1878446	0.84	2775841	67.67	60	120	
Ho-165	165	2	HMI He	12217035	0.33	17360012	70.37	60	120	

Sample Report

Sample Table

Sample Name	280-114273-A-3-A
Data File Name	208SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:22:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	482.424	ppb	482.424	1.93	89175	500000	
Li	7	2	45	391.441	ppb	391.441	6.13	5855	500000	
Li	7	3	45	398.646	ppb	398.646	1.12	3501852	50000	
Be	9	1	6	0.030	ppb	0.030	213.56	7	2000	
B	11	1	6	913.465	ppb	913.465	1.64	95670	2000	
Na	23	1	45	2696497.907	ppb	2696497.907	0.47	2455369723	2000	>LDR
Na	23	2	45	2621275.372	ppb	2621275.372	1.19	272672609	400000	>LDR
Mg	24	2	45	932560.922	ppb	932560.922	1.00	42583091	400000	
Al	27	2	45	2.843	ppb	2.843	109.98	60	400000	
K	39	1	45	30271.054	ppb	30271.054	0.16	25249899	400000	
K	39	2	45	30397.983	ppb	30397.983	0.60	677225	400000	
Ca	40	1	45	884990.574	ppb	884990.574	0.52	1145567690	400000	
Ca	44	2	45	1060436.173	ppb	1060436.173	1.44	1457209	400000	
V	51	2	72	58.774	ppb	58.774	1.89	31821	2000	
Cr	52	2	72	0.264	ppb	0.264	35.87	303	5000	
Mn	55	2	72	420.754	ppb	420.754	0.96	109068	10000	
Fe	57	2	72	349.538	ppb	349.538	8.57	4878	400000	
Co	59	2	72	3.494	ppb	3.494	4.89	4851	2000	
Ni	60	2	72	8.706	ppb	8.706	2.23	3654	5000	
Cu	63	2	72	1.279	ppb	1.279	6.85	2204	5000	
Zn	66	2	72	2.110	ppb	2.110	12.20	677	5000	
As	75	2	72	12.925	ppb	12.925	8.28	1054	2000	
Se	78	1	72	3.720	ppb	3.720	7.52	524	2000	
Sr	88	2	72	25203.105	ppb	25203.105	1.17	6995222	4000	>LDR
Zr	90	2	72	11.257	ppb	11.257	55.61	113	1000	
Nb	93	2	72	0.576	ppb	0.576	11.71	1654	200	
Mo	95	2	115	59.902	ppb	59.902	0.41	35277	2000	
Pd	105	2	115	0.437	ppb	0.437	14.92	463	100	
Ag	107	2	115	0.008	ppb	0.008	107.24	30	100	
Cd	111	2	115	0.093	ppb	0.093	2.12	30	2000	
Sn	120	2	115	0.076	ppb	0.076	43.62	223	2000	
Sb	121	2	115	1.101	ppb	1.101	8.64	607	1000	
Ba	137	2	115	28.446	ppb	28.446	7.32	5021	5000	
W	182	2	165	0.219	ppb	0.219	25.04	1373	100	
Pt	195	2	165	0.048	ppb	0.048	4.86	197	100	
Tl	205	2	165	0.137	ppb	0.137	10.74	987	2000	
Pb	208	2	165	0.098	ppb	0.098	20.27	1503	5000	
Th	232	2	165	0.020	ppb	0.020	58.79	447	2000	
U	238	2	165	190.086	ppb	190.086	1.20	2325330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	263768	1.45	446069	59.13	60	120	IS Failed
Sc (IS)	45	1	HMI H2	9188438	0.27	13344586	68.86	60	120	
Sc (IS)	45	2	HMI He	411657	1.64	548684	75.03	60	120	
Sc (IS)	45	3	No Gas	27763925	0.21	39087130	71.03	60	120	
Ge Internal Standard	72	1	HMI H2	5522561	0.44	8240244	67.02	60	120	
Ge Internal Standard	72	2	HMI He	542148	0.73	783465	69.20	60	120	
In Internal Standard	115	2	HMI He	1934486	1.64	2775841	69.69	60	120	
Ho-165	165	2	HMI He	12513353	0.95	17360012	72.08	60	120	

Sample Report

Sample Table

Sample Name	280-114273-A-5-A
Data File Name	209SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:26:34-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	227.999	ppb	227.999	6.86	54514	500000	
Li	7	2	45	168.198	ppb	168.198	16.72	3617	500000	
Li	7	3	45	172.421	ppb	172.421	6.21	2071883	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	295.514	ppb	295.514	2.32	26191	2000	
Na	23	1	45	4419298.442	ppb	4419298.442	1.61	3535794187	2000	>LDR
Na	23	2	45	4330068.891	ppb	4330068.891	0.38	393437781	400000	>LDR
Mg	24	2	45	1113540.616	ppb	1113540.616	0.52	44414443	400000	
Al	27	2	45	30.638	ppb	30.638	5.77	327	400000	
K	39	1	45	22058.482	ppb	22058.482	1.30	16488915	400000	
K	39	2	45	20209.532	ppb	20209.532	0.05	394739	400000	
Ca	40	1	45	1156280.120	ppb	1156280.120	1.50	1315170327	400000	
Ca	44	2	45	1362551.406	ppb	1362551.406	0.30	1635527	400000	
V	51	2	72	54.950	ppb	54.950	1.35	25597	2000	
Cr	52	2	72	1.267	ppb	1.267	19.36	873	5000	
Mn	55	2	72	1.872	ppb	1.872	24.03	470	10000	
Fe	57	2	72	176.082	ppb	176.082	5.90	2150	400000	
Co	59	2	72	0.098	ppb	0.098	13.84	127	2000	
Ni	60	2	72	0.718	ppb	0.718	14.53	353	5000	
Cu	63	2	72	1.719	ppb	1.719	16.41	2330	5000	
Zn	66	2	72	9.789	ppb	9.789	16.51	1443	5000	
As	75	2	72	13.567	ppb	13.567	2.48	950	2000	
Se	78	1	72	11.806	ppb	11.806	6.07	1429	2000	
Sr	88	2	72	29163.797	ppb	29163.797	0.46	6953568	4000	>LDR
Zr	90	2	72	50.738	ppb	50.738	65.46	210	1000	
Nb	93	2	72	0.270	ppb	0.270	25.05	893	200	
Mo	95	2	115	32.469	ppb	32.469	6.96	16439	2000	
Pd	105	2	115	0.455	ppb	0.455	21.83	413	100	
Ag	107	2	115	0.141	ppb	0.141	38.49	273	100	
Cd	111	2	115	0.034	ppb	0.034	159.52	13	2000	
Sn	120	2	115	0.533	ppb	0.533	35.70	447	2000	
Sb	121	2	115	0.624	ppb	0.624	22.81	310	1000	
Ba	137	2	115	22.068	ppb	22.068	4.51	3354	5000	
W	182	2	165	0.074	ppb	0.074	86.47	720	100	
Pt	195	2	165	0.055	ppb	0.055	6.84	190	100	
Tl	205	2	165	0.046	ppb	0.046	33.52	337	2000	
Pb	208	2	165	0.166	ppb	0.166	25.41	1810	5000	
Th	232	2	165	0.026	ppb	0.026	42.97	437	2000	
U	238	2	165	34.526	ppb	34.526	0.51	366181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	222330	1.38	446069	49.84	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8074791	1.18	13344586	60.51	60	120	
Sc (IS)	45	2	HMI He	359542	0.69	548684	65.53	60	120	
Sc (IS)	45	3	No Gas	23437475	0.85	39087130	59.96	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4768177	2.13	8240244	57.86	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	465712	0.81	783465	59.44	60	120	IS Failed
In Internal Standard	115	2	HMI He	1664236	2.88	2775841	59.95	60	120	IS Failed
Ho-165	165	2	HMI He	10846569	0.34	17360012	62.48	60	120	

Sample Report

Sample Table

Sample Name	280-114273-A-7-A
Data File Name	210SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:30:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	267.685	ppb	267.685	4.74	50325	500000	
Li	7	2	45	185.016	ppb	185.016	0.77	3220	500000	
Li	7	3	45	207.523	ppb	207.523	4.72	1927337	50000	
Be	9	1	6	0.063	ppb	0.063	145.72	7	2000	
B	11	1	6	563.368	ppb	563.368	1.36	40506	2000	
Na	23	1	45	5107698.760	ppb	5107698.760	0.49	3531482187	2000	>LDR
Na	23	2	45	5021172.188	ppb	5021172.188	0.21	393970687	400000	>LDR
Mg	24	2	45	1132596.415	ppb	1132596.415	0.19	39011095	400000	
Al	27	2	45	3.451	ppb	3.451	91.62	50	400000	
K	39	1	45	18957.536	ppb	18957.536	0.90	12388911	400000	
K	39	2	45	16954.773	ppb	16954.773	0.78	286586	400000	
Ca	40	1	45	910985.654	ppb	910985.654	0.24	895413880	400000	
Ca	44	2	45	1029270.161	ppb	1029270.161	0.42	1066883	400000	
V	51	2	72	80.331	ppb	80.331	0.51	32460	2000	
Cr	52	2	72	0.137	ppb	0.137	75.17	160	5000	
Mn	55	2	72	367.816	ppb	367.816	1.70	71589	10000	
Fe	57	2	72	72.985	ppb	72.985	15.97	820	400000	
Co	59	2	72	2.460	ppb	2.460	2.73	2567	2000	
Ni	60	2	72	7.020	ppb	7.020	3.66	2230	5000	
Cu	63	2	72	1.749	ppb	1.749	13.04	2064	5000	
Zn	66	2	72	1.951	ppb	1.951	58.43	493	5000	
As	75	2	72	7.141	ppb	7.141	6.06	439	2000	
Se	78	1	72	9.905	ppb	9.905	6.08	1056	2000	
Sr	88	2	72	29484.252	ppb	29484.252	0.87	6144372	4000	>LDR
Zr	90	2	72	11.877	ppb	11.877	102.55	87	1000	
Nb	93	2	72	0.327	ppb	0.327	23.53	867	200	
Mo	95	2	115	48.562	ppb	48.562	2.61	19733	2000	
Pd	105	2	115	0.608	ppb	0.608	12.62	437	100	
Ag	107	2	115	0.012	ppb	0.012	110.76	27	100	
Cd	111	2	115	0.129	ppb	0.129	115.08	27	2000	
Sn	120	2	115	0.060	ppb	0.060	204.34	147	2000	
Sb	121	2	115	0.593	ppb	0.593	7.16	237	1000	
Ba	137	2	115	28.071	ppb	28.071	4.32	3417	5000	
W	182	2	165	0.126	ppb	0.126	22.16	807	100	
Pt	195	2	165	0.073	ppb	0.073	25.17	220	100	
Tl	205	2	165	0.120	ppb	0.120	34.05	687	2000	
Pb	208	2	165	0.036	ppb	0.036	51.82	767	5000	
Th	232	2	165	0.015	ppb	0.015	30.12	313	2000	
U	238	2	165	72.096	ppb	72.096	1.33	693734	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	180868	0.62	446069	40.55	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6977114	0.29	13344586	52.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	310486	0.97	548684	56.59	60	120	IS Failed
Sc (IS)	45	3	No Gas	20446883	0.59	39087130	52.31	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4196838	1.03	8240244	50.93	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	407063	0.97	783465	51.96	60	120	IS Failed
In Internal Standard	115	2	HMI He	1334505	0.78	2775841	48.08	60	120	IS Failed
Ho-165	165	2	HMI He	9842454	0.94	17360012	56.70	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-9-A
Data File Name	211SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:34:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	252.366	ppb	252.366	2.89	45953	500000	
Li	7	2	45	180.527	ppb	180.527	18.38	2964	500000	
Li	7	3	45	204.022	ppb	204.022	1.97	1693655	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1155.991	ppb	1155.991	2.06	71457	2000	
Na	23	1	45	2386562.288	ppb	2386562.288	0.29	1544873577	2000	>LDR
Na	23	2	45	2341686.588	ppb	2341686.588	0.52	170519537	400000	>LDR
Mg	24	2	45	794454.053	ppb	794454.053	0.97	25393965	400000	
Al	27	2	45	5.573	ppb	5.573	47.51	63	400000	
K	39	1	45	6286.587	ppb	6286.587	1.40	4484383	400000	
K	39	2	45	5524.507	ppb	5524.507	0.76	89050	400000	
Ca	40	1	45	717145.162	ppb	717145.162	0.09	659905910	400000	
Ca	44	2	45	791750.242	ppb	791750.242	0.97	761608	400000	
V	51	2	72	92.247	ppb	92.247	2.49	36064	2000	
Cr	52	2	72	0.320	ppb	0.320	15.24	250	5000	
Mn	55	2	72	32.306	ppb	32.306	0.36	6138	10000	
Fe	57	2	72	62.485	ppb	62.485	5.28	690	400000	
Co	59	2	72	0.064	ppb	0.064	35.04	73	2000	
Ni	60	2	72	1.554	ppb	1.554	14.29	547	5000	
Cu	63	2	72	3.647	ppb	3.647	2.12	3604	5000	
Zn	66	2	72	2.154	ppb	2.154	29.18	497	5000	
As	75	2	72	18.335	ppb	18.335	2.90	1087	2000	
Se	78	1	72	6.628	ppb	6.628	10.34	684	2000	
Sr	88	2	72	16596.977	ppb	16596.977	0.30	3353457	4000	
Zr	90	2	72	12.986	ppb	12.986	36.59	87	1000	
Nb	93	2	72	0.107	ppb	0.107	41.84	520	200	
Mo	95	2	115	67.524	ppb	67.524	0.75	27481	2000	
Pd	105	2	115	0.412	ppb	0.412	20.30	303	100	
Ag	107	2	115	0.024	ppb	0.024	115.45	43	100	
Cd	111	2	115	-0.009	ppb	-0.009	-398.08	3	2000	
Sn	120	2	115	-0.061	ppb	-0.061	-83.13	93	2000	
Sb	121	2	115	0.193	ppb	0.193	36.28	93	1000	
Ba	137	2	115	14.279	ppb	14.279	8.27	1750	5000	
W	182	2	165	0.057	ppb	0.057	93.65	613	100	
Pt	195	2	165	0.070	ppb	0.070	34.95	213	100	
Tl	205	2	165	0.021	ppb	0.021	21.16	177	2000	
Pb	208	2	165	-0.011	ppb	-0.011	-59.03	453	5000	
Th	232	2	165	0.001	ppb	0.001	348.00	207	2000	
U	238	2	165	199.700	ppb	199.700	0.43	1945324	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	155755	1.54	446069	34.92	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6531808	0.29	13344586	48.95	60	120	IS Failed
Sc (IS)	45	2	HMI He	288137	0.77	548684	52.51	60	120	IS Failed
Sc (IS)	45	3	No Gas	18080077	0.86	39087130	46.26	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4057991	0.58	8240244	49.25	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	394646	0.57	783465	50.37	60	120	IS Failed
In Internal Standard	115	2	HMI He	1336956	0.95	2775841	48.16	60	120	IS Failed
Ho-165	165	2	HMI He	9963684	0.95	17360012	57.39	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-11-A
Data File Name	212SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:38:16-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	552.656	ppb	552.656	3.13	57955	500000	
Li	7	2	45	412.157	ppb	412.157	21.29	3544	500000	
Li	7	3	45	436.010	ppb	436.010	2.34	1912338	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	5048.719	ppb	5048.719	0.55	242256	2000	
Na	23	1	45	3557370.205	ppb	3557370.205	0.47	1942256131	2000	>LDR
Na	23	2	45	3473292.563	ppb	3473292.563	0.25	212967483	400000	>LDR
Mg	24	2	45	2127111.430	ppb	2127111.430	0.42	57247752	400000	>LDR
Al	27	2	45	69.953	ppb	69.953	14.02	483	400000	
K	39	1	45	245036.425	ppb	245036.425	0.53	116834392	400000	
K	39	2	45	266463.940	ppb	266463.940	0.03	3475749	400000	
Ca	40	1	45	611919.230	ppb	611919.230	0.59	474928926	400000	
Ca	44	2	45	758350.676	ppb	758350.676	0.74	614238	400000	
V	51	2	72	95.399	ppb	95.399	1.10	30813	2000	
Cr	52	2	72	10.919	ppb	10.919	1.93	4748	5000	
Mn	55	2	72	19.843	ppb	19.843	4.82	3132	10000	
Fe	57	2	72	219.261	ppb	219.261	5.76	1864	400000	
Co	59	2	72	1.653	ppb	1.653	7.94	1383	2000	
Ni	60	2	72	37.055	ppb	37.055	3.41	9126	5000	
Cu	63	2	72	9.429	ppb	9.429	5.68	7015	5000	
Zn	66	2	72	8.719	ppb	8.719	5.45	927	5000	
As	75	2	72	16.896	ppb	16.896	6.35	828	2000	
Se	78	1	72	2.013	ppb	2.013	15.31	176	2000	
Sr	88	2	72	36428.456	ppb	36428.456	0.45	6084689	4000	>LDR
Zr	90	2	72	188.061	ppb	188.061	7.05	420	1000	
Nb	93	2	72	0.176	ppb	0.176	25.09	513	200	
Mo	95	2	115	369.026	ppb	369.026	0.93	124499	2000	
Pd	105	2	115	0.630	ppb	0.630	18.09	377	100	
Ag	107	2	115	0.011	ppb	0.011	74.48	20	100	
Cd	111	2	115	0.020	ppb	0.020	423.37	7	2000	
Sn	120	2	115	0.773	ppb	0.773	55.05	383	2000	
Sb	121	2	115	0.536	ppb	0.536	15.19	180	1000	
Ba	137	2	115	54.693	ppb	54.693	2.55	5518	5000	
W	182	2	165	0.405	ppb	0.405	7.69	1423	100	
Pt	195	2	165	0.028	ppb	0.028	34.01	90	100	
Tl	205	2	165	0.329	ppb	0.329	2.32	1547	2000	
Pb	208	2	165	0.118	ppb	0.118	37.67	1150	5000	
Th	232	2	165	0.041	ppb	0.041	29.92	457	2000	
U	238	2	165	304.025	ppb	304.025	2.23	2552737	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	121009	0.74	446069	27.13	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5509392	0.84	13344586	41.29	60	120	IS Failed
Sc (IS)	45	2	HMI He	242620	1.70	548684	44.22	60	120	IS Failed
Sc (IS)	45	3	No Gas	14448216	0.62	39087130	36.96	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3410292	1.08	8240244	41.39	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	326258	1.20	783465	41.64	60	120	IS Failed
In Internal Standard	115	2	HMI He	1108874	1.69	2775841	39.95	60	120	IS Failed
Ho-165	165	2	HMI He	8589806	1.25	17360012	49.48	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	213_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:42:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	189.445	ppb	8.111	35394	500	37.9	90	110	>+\-10%
Li	7	2	45	280.412	ppb	10.819	2910	500	56.1	90	110	>+\-10%
Li	7	3	45	199.345	ppb	3.667	1400702	500	39.9	90	110	>+\-10%
Be	9	1	6	59.317	ppb	6.025	2307	50	118.6	90	110	>+\-10%
B	11	1	6	127.798	ppb	5.596	5778	50	255.6	90	110	>+\-10%
Na	23	1	45	12089.139	ppb	4.668	6917203	5000	241.8	90	110	>+\-10%
Na	23	2	45	9245.890	ppb	7.246	582531	5000	184.9	90	110	>+\-10%
Mg	24	2	45	6661.120	ppb	4.268	177850	5000	133.2	90	110	>+\-10%
Al	27	2	45	4586.272	ppb	2.259	30211	5000	91.7	90	110	
K	39	1	45	5720.206	ppb	2.027	3580956	5000	114.4	90	110	>+\-10%
K	39	2	45	5315.036	ppb	1.450	71333	5000	106.3	90	110	
Ca	40	1	45	6074.191	ppb	1.628	4830348	5000	121.5	90	110	>+\-10%
Ca	44	2	45	5844.591	ppb	2.861	4708	5000	116.9	90	110	>+\-10%
V	51	2	72	47.089	ppb	2.608	17386	50	94.2	90	110	
Cr	52	2	72	48.011	ppb	5.432	23250	50	96.0	90	110	
Mn	55	2	72	52.253	ppb	3.534	9223	50	104.5	90	110	
Fe	57	2	72	4876.902	ppb	1.939	45357	5000	97.5	90	110	
Co	59	2	72	48.581	ppb	2.586	45621	50	97.2	90	110	
Ni	60	2	72	47.695	ppb	3.010	13209	50	95.4	90	110	
Cu	63	2	72	51.335	ppb	2.264	40865	50	102.7	90	110	
Zn	66	2	72	49.532	ppb	3.358	4658	50	99.1	90	110	
As	75	2	72	48.348	ppb	0.511	2664	50	96.7	90	110	
Se	78	1	72	51.143	ppb	4.265	4887	50	102.3	90	110	
Sr	88	2	72	83.019	ppb	5.230	15641	50	166.0	90	110	>+\-10%
Zr	90	2	72	18.597	ppb	49.353	93	50	37.2	90	110	>+\-10%
Nb	93	2	72	98.625	ppb	1.304	134190	100	98.6	90	110	
Mo	95	2	115	53.661	ppb	2.181	21004	50	107.3	90	110	
Pd	105	2	115	56.858	ppb	1.800	37528	50	113.7	90	110	>+\-10%
Ag	107	2	115	53.811	ppb	1.718	78019	50	107.6	90	110	
Cd	111	2	115	51.696	ppb	3.719	8506	50	103.4	90	110	
Sn	120	2	115	56.104	ppb	2.650	24119	50	112.2	90	110	>+\-10%
Sb	121	2	115	53.384	ppb	2.467	18475	50	106.8	90	110	
Ba	137	2	115	56.993	ppb	2.254	6668	50	114.0	90	110	>+\-10%
W	182	2	165	50.324	ppb	1.007	143619	50	100.6	90	110	
Pt	195	2	165	51.626	ppb	0.663	128237	50	103.3	90	110	
Tl	205	2	165	53.226	ppb	0.800	266770	50	106.5	90	110	
Pb	208	2	165	52.867	ppb	0.944	343901	50	105.7	90	110	
Th	232	2	165	52.281	ppb	1.052	402515	50	104.6	90	110	
U	238	2	165	49.977	ppb	0.718	464336	50	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	112685	1.51	446069	25.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5613922	0.23	13344586	42.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	239528	0.54	548684	43.65	60	120	IS Failed
Sc (IS)	45	3	No Gas	15077507	0.32	39087130	38.57	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3770835	1.10	8240244	45.76	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	367616	0.78	783465	46.92	60	120	IS Failed
In Internal Standard	115	2	HMI He	1285694	0.58	2775841	46.32	60	120	IS Failed
Ho-165	165	2	HMI He	9502587	0.36	17360012	54.74	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	214_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:45:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-147.770	ppb	-0.6	552901	10	
Be	9	1	6	0.191	ppb	122.8	10	0.5	
B	11	1	6	27.320	ppb	11.5	1420	0.5	>RL
Na	23	1	45	2017.629	ppb	1.3	1348736	25	>RL
Na	23	2	45	1966.666	ppb	3.7	149241	25	>RL
Mg	24	2	45	217.159	ppb	1.2	6955	25	>RL
Al	27	2	45	6.218	ppb	45.5	60	15	
K	39	1	45	2.675	ppb	905.6	843294	50	
K	39	2	45	150.198	ppb	9.9	5134	50	>RL
Ca	40	1	45	84.780	ppb	2.7	96159	50	>RL
Ca	44	2	45	21.400	ppb	82.9	53	25	
V	51	2	72	-0.490	ppb	-27.5	323	1	
Cr	52	2	72	0.077	ppb	119.6	120	1	
Mn	55	2	72	-0.076	ppb	-72.1	30	0.5	
Fe	57	2	72	0.156	ppb	1376.9	67	25	
Co	59	2	72	0.036	ppb	43.1	43	0.5	
Ni	60	2	72	-0.051	ppb	-136.7	70	1	
Cu	63	2	72	0.067	ppb	308.4	563	1	
Zn	66	2	72	-0.761	ppb	-114.3	213	5	
As	75	2	72	0.002	ppb	5843.3	4	1	
Se	78	1	72	0.069	ppb	89.8	9	1	
Sr	88	2	72	2.784	ppb	10.7	567	0.5	>RL
Zr	90	2	72	-10.175	ppb	-41.7	30	1	
Nb	93	2	72	2.631	ppb	11.8	4071	2	>RL
Mo	95	2	115	0.240	ppb	41.6	117	0.5	
Pd	105	2	115	0.069	ppb	62.1	70	1	
Ag	107	2	115	0.005	ppb	247.0	17	1	
Cd	111	2	115	-0.009	ppb	-352.8	3	0.5	
Sn	120	2	115	-0.081	ppb	-174.5	87	1	
Sb	121	2	115	0.404	ppb	28.5	173	0.6	
Ba	137	2	115	-0.145	ppb	0.0	0	0.5	
W	182	2	165	0.092	ppb	6.8	717	1	
Pt	195	2	165	0.036	ppb	58.2	127	1	
Tl	205	2	165	0.017	ppb	42.3	153	0.1	
Pb	208	2	165	0.016	ppb	39.0	640	0.5	
Th	232	2	165	0.054	ppb	24.5	630	1	
U	238	2	165	0.154	ppb	13.2	1563	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	123775	0.15	446069	27.75	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5758513	1.13	13344586	43.15	60	120	IS Failed
Sc (IS)	45	2	HMI He	252075	0.96	548684	45.94	60	120	IS Failed
Sc (IS)	45	3	No Gas	15788029	0.19	39087130	40.39	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3886368	0.30	8240244	47.16	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	382769	0.30	783465	48.86	60	120	IS Failed
In Internal Standard	115	2	HMI He	1371474	0.39	2775841	49.41	60	120	IS Failed
Ho-165	165	2	HMI He	9962917	0.41	17360012	57.39	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	215LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:49:46-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-138.071	ppb	-0.452	594668	50	-276.1	70	130	>+/-30%
Be	9	1	6	1.511	ppb	0.545	70	1	151.1	70	130	>+/-30%
Na	23	2	45	1541.269	ppb	3.951	126994	50	3082.5	70	130	>+/-30%
Mg	24	2	45	224.072	ppb	10.270	7432	50	448.1	70	130	>+/-30%
Al	27	2	45	34.199	ppb	42.259	263	30	114.0	70	130	
K	39	2	45	240.998	ppb	9.418	6618	100	241.0	70	130	>+/-30%
Ca	44	2	45	110.526	ppb	53.557	133	50	221.1	70	130	>+/-30%
V	51	2	72	4.461	ppb	14.283	2277	5	89.2	70	130	
Cr	52	2	72	1.997	ppb	14.581	1137	2	99.9	70	130	
Mn	55	2	72	1.134	ppb	25.407	263	1	113.4	70	130	
Fe	57	2	72	49.196	ppb	12.250	567	50	98.4	70	130	
Co	59	2	72	1.039	ppb	9.897	1073	1	103.9	70	130	
Ni	60	2	72	2.236	ppb	15.898	760	2	111.8	70	130	
Cu	63	2	72	2.313	ppb	16.884	2517	2	115.7	70	130	
Zn	66	2	72	10.973	ppb	8.777	1357	10	109.7	70	130	
As	75	2	72	4.997	ppb	7.883	304	5	99.9	70	130	
Se	78	1	72	5.164	ppb	5.370	528	5	103.3	70	130	
Sr	88	2	72	2.863	ppb	18.369	610	1	286.3	70	130	>+/-30%
Zr	90	2	72	13.758	ppb	88.586	90	0.5	2751.5	70	130	>+/-30%
Nb	93	2	72	5.389	ppb	7.430	8349	2	269.4	70	130	>+/-30%
Mo	95	2	115	2.142	ppb	24.317	1010	2	107.1	70	130	
Pd	105	2	115	0.042	ppb	32.612	57	1	4.2	70	130	>+/-30%
Ag	107	2	115	5.413	ppb	1.423	9320	5	108.3	70	130	
Cd	111	2	115	1.393	ppb	19.556	277	1	139.3	70	130	>+/-30%
Sn	120	2	115	10.534	ppb	6.622	5481	10	105.3	70	130	
Sb	121	2	115	2.322	ppb	6.203	980	2	116.1	70	130	
Ba	137	2	115	1.300	ppb	19.626	200	1	130.0	70	130	
W	182	2	165	5.067	ppb	2.338	16073	1	506.7	70	130	>+/-30%
Pt	195	2	165	0.044	ppb	63.420	153	1	4.4	70	130	>+/-30%
Tl	205	2	165	1.098	ppb	7.108	6025	1	109.8	70	130	
Pb	208	2	165	1.122	ppb	4.629	8441	1	112.2	70	130	
Th	232	2	165	2.277	ppb	4.876	19184	2	113.8	70	130	
U	238	2	165	1.029	ppb	4.045	10427	1	102.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	130513	0.53	446069	29.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5985549	0.44	13344586	44.85	60	120	IS Failed
Sc (IS)	45	2	HMI He	262120	1.57	548684	47.77	60	120	IS Failed
Sc (IS)	45	3	No Gas	16231177	0.20	39087130	41.53	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4016170	0.60	8240244	48.74	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	401054	0.24	783465	51.19	60	120	IS Failed
In Internal Standard	115	2	HMI He	1525638	1.72	2775841	54.96	60	120	IS Failed
Ho-165	165	2	HMI He	10292897	0.48	17360012	59.29	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-13-A
Data File Name	216SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:53:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	169.021	ppb	169.021	2.57	30956	500000	
Li	7	2	45	148.679	ppb	148.679	6.42	2224	500000	
Li	7	3	45	142.598	ppb	142.598	1.35	1099744	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1009.195	ppb	1009.195	5.34	43062	2000	
Na	23	1	45	2823401.770	ppb	2823401.770	1.41	1427246272	2000	>LDR
Na	23	2	45	2766086.264	ppb	2766086.264	0.65	160334591	400000	>LDR
Mg	24	2	45	938623.816	ppb	938623.816	0.59	23882150	400000	
Al	27	2	45	4.458	ppb	4.458	55.32	43	400000	
K	39	1	45	15554.423	ppb	15554.423	1.05	7565613	400000	
K	39	2	45	14515.106	ppb	14515.106	1.51	181658	400000	
Ca	40	1	45	872944.454	ppb	872944.454	0.63	627332191	400000	
Ca	44	2	45	977587.383	ppb	977587.383	1.05	748545	400000	
V	51	2	72	40.964	ppb	40.964	2.07	13092	2000	
Cr	52	2	72	0.239	ppb	0.239	50.99	167	5000	
Mn	55	2	72	2069.045	ppb	2069.045	0.27	313399	10000	
Fe	57	2	72	483.559	ppb	483.559	5.26	3927	400000	
Co	59	2	72	10.019	ppb	10.019	2.04	8119	2000	
Ni	60	2	72	5.944	ppb	5.944	4.19	1480	5000	
Cu	63	2	72	1.334	ppb	1.334	21.65	1327	5000	
Zn	66	2	72	1.326	ppb	1.326	105.65	337	5000	
As	75	2	72	42.993	ppb	42.993	2.66	2043	2000	
Se	78	1	72	2.589	ppb	2.589	10.03	212	2000	
Sr	88	2	72	22462.033	ppb	22462.033	1.54	3644366	4000	>LDR
Zr	90	2	72	-9.139	ppb	-9.139	-120.38	27	1000	
Nb	93	2	72	1.167	ppb	1.167	27.06	1657	200	
Mo	95	2	115	124.642	ppb	124.642	1.41	42063	2000	
Pd	105	2	115	0.556	ppb	0.556	19.55	333	100	
Ag	107	2	115	0.027	ppb	0.027	78.77	40	100	
Cd	111	2	115	0.018	ppb	0.018	438.74	7	2000	
Sn	120	2	115	0.027	ppb	0.027	287.88	110	2000	
Sb	121	2	115	0.493	ppb	0.493	21.82	167	1000	
Ba	137	2	115	21.120	ppb	21.120	2.17	2140	5000	
W	182	2	165	0.212	ppb	0.212	18.92	907	100	
Pt	195	2	165	0.016	ppb	0.016	18.06	63	100	
Tl	205	2	165	0.028	ppb	0.028	55.61	177	2000	
Pb	208	2	165	0.028	ppb	0.028	53.53	610	5000	
Th	232	2	165	0.065	ppb	0.065	10.60	607	2000	
U	238	2	165	85.663	ppb	85.663	0.90	704160	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	107554	2.53	446069	24.11	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5101417	1.00	13344586	38.23	60	120	IS Failed
Sc (IS)	45	2	HMI He	229363	0.89	548684	41.80	60	120	IS Failed
Sc (IS)	45	3	No Gas	13180809	0.65	39087130	33.72	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3200214	0.28	8240244	38.84	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	316934	1.26	783465	40.45	60	120	IS Failed
In Internal Standard	115	2	HMI He	1108938	0.89	2775841	39.95	60	120	IS Failed
Ho-165	165	2	HMI He	8408129	1.23	17360012	48.43	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-15-A
Data File Name	217SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T01:57:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	129.663	ppb	129.663	14.65	23727	500000	
Li	7	2	45	86.455	ppb	86.455	71.81	1610	500000	
Li	7	3	45	36.152	ppb	36.152	2.07	670015	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	481.581	ppb	481.581	4.27	16462	2000	
Na	23	1	45	3541127.190	ppb	3541127.190	0.27	1483486325	2000	>LDR
Na	23	2	45	3470571.593	ppb	3470571.593	0.68	165170234	400000	>LDR
Mg	24	2	45	1153934.490	ppb	1153934.490	0.94	24106393	400000	
Al	27	2	45	22.693	ppb	22.693	22.48	130	400000	
K	39	1	45	18194.506	ppb	18194.506	0.65	7229069	400000	
K	39	2	45	15519.119	ppb	15519.119	1.51	159290	400000	
Ca	40	1	45	1454558.202	ppb	1454558.202	0.26	866246600	400000	
Ca	44	2	45	1616247.758	ppb	1616247.758	0.73	1016138	400000	
V	51	2	72	1.368	ppb	1.368	16.31	683	2000	
Cr	52	2	72	0.372	ppb	0.372	6.22	180	5000	
Mn	55	2	72	4379.736	ppb	4379.736	1.58	537282	10000	
Fe	57	2	72	199.288	ppb	199.288	14.77	1333	400000	
Co	59	2	72	0.043	ppb	0.043	55.70	33	2000	
Ni	60	2	72	0.625	ppb	0.625	12.32	177	5000	
Cu	63	2	72	0.152	ppb	0.152	100.69	423	5000	
Zn	66	2	72	1.308	ppb	1.308	128.96	270	5000	
As	75	2	72	0.254	ppb	0.254	61.15	12	2000	
Se	78	1	72	0.354	ppb	0.354	78.18	25	2000	
Sr	88	2	72	38439.017	ppb	38439.017	0.53	5052433	4000	>LDR
Zr	90	2	72	-3.817	ppb	-3.817	-293.25	30	1000	
Nb	93	2	72	0.589	ppb	0.589	32.75	793	200	
Mo	95	2	115	0.347	ppb	0.347	5.08	107	2000	
Pd	105	2	115	0.998	ppb	0.998	43.00	477	100	
Ag	107	2	115	0.041	ppb	0.041	78.42	47	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.027	ppb	-0.027	-153.66	73	2000	
Sb	121	2	115	0.372	ppb	0.372	36.68	107	1000	
Ba	137	2	115	36.709	ppb	36.709	2.29	3030	5000	
W	182	2	165	0.616	ppb	0.616	13.92	1637	100	
Pt	195	2	165	0.048	ppb	0.048	60.83	113	100	
Tl	205	2	165	0.004	ppb	0.004	130.00	60	2000	
Pb	208	2	165	0.004	ppb	0.004	466.69	403	5000	
Th	232	2	165	0.025	ppb	0.025	10.23	287	2000	
U	238	2	165	0.699	ppb	0.699	6.47	4934	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	85963	1.40	446069	19.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	4227504	0.98	13344586	31.68	60	120	IS Failed
Sc (IS)	45	2	HMI He	188340	2.26	548684	34.33	60	120	IS Failed
Sc (IS)	45	3	No Gas	10200012	0.75	39087130	26.10	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	2635643	1.04	8240244	31.99	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	256751	2.25	783465	32.77	60	120	IS Failed
In Internal Standard	115	2	HMI He	905745	1.22	2775841	32.63	60	120	IS Failed
Ho-165	165	2	HMI He	7153974	0.68	17360012	41.21	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-17-A
Data File Name	218SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:01:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	83.871	ppb	83.871	29.86	18197	500000	
Li	7	2	45	59.642	ppb	59.642	93.19	1263	500000	
Li	7	3	45	12.345	ppb	12.345	23.66	523389	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	536.823	ppb	536.823	3.07	13446	2000	
Na	23	1	45	2220798.439	ppb	2220798.439	0.52	788393402	2000	>LDR
Na	23	2	45	2220569.210	ppb	2220569.210	0.62	88174825	400000	>LDR
Mg	24	2	45	848327.213	ppb	848327.213	1.42	14785047	400000	
Al	27	2	45	6.836	ppb	6.836	34.22	40	400000	
K	39	1	45	13698.369	ppb	13698.369	0.39	4741340	400000	
K	39	2	45	12336.124	ppb	12336.124	1.14	106041	400000	
Ca	40	1	45	1256945.278	ppb	1256945.278	0.50	634298084	400000	
Ca	44	2	45	1425098.477	ppb	1425098.477	0.98	747482	400000	
V	51	2	72	3.513	ppb	3.513	19.55	1053	2000	
Cr	52	2	72	0.871	ppb	0.871	23.26	300	5000	
Mn	55	2	72	2196.918	ppb	2196.918	2.58	232600	10000	
Fe	57	2	72	123.680	ppb	123.680	14.94	730	400000	
Co	59	2	72	0.092	ppb	0.092	43.73	57	2000	
Ni	60	2	72	0.348	ppb	0.348	41.03	107	5000	
Cu	63	2	72	18.854	ppb	18.854	1.86	9233	5000	
Zn	66	2	72	4.361	ppb	4.361	43.04	397	5000	
As	75	2	72	2.261	ppb	2.261	19.91	77	2000	
Se	78	1	72	0.068	ppb	0.068	157.68	5	2000	
Sr	88	2	72	32756.320	ppb	32756.320	1.70	3715458	4000	>LDR
Zr	90	2	72	97.645	ppb	97.645	37.23	163	1000	
Nb	93	2	72	0.328	ppb	0.328	44.07	473	200	
Mo	95	2	115	0.205	ppb	0.205	40.51	60	2000	
Pd	105	2	115	0.792	ppb	0.792	24.93	340	100	
Ag	107	2	115	0.002	ppb	0.002	319.76	7	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.122	ppb	-0.122	-80.41	40	2000	
Sb	121	2	115	0.134	ppb	0.134	112.67	43	1000	
Ba	137	2	115	35.374	ppb	35.374	1.79	2604	5000	
W	182	2	165	3.367	ppb	3.367	4.71	6779	100	
Pt	195	2	165	0.075	ppb	0.075	46.58	147	100	
Tl	205	2	165	0.007	ppb	0.007	101.93	67	2000	
Pb	208	2	165	0.041	ppb	0.041	47.45	523	5000	
Th	232	2	165	0.019	ppb	0.019	26.30	223	2000	
U	238	2	165	1.230	ppb	1.230	0.85	7789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	63007	1.78	446069	14.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3582145	0.17	13344586	26.84	60	120	IS Failed
Sc (IS)	45	2	HMI He	157125	1.64	548684	28.64	60	120	IS Failed
Sc (IS)	45	3	No Gas	8480618	0.88	39087130	21.70	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	2260625	0.56	8240244	27.43	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	221552	1.02	783465	28.28	60	120	IS Failed
In Internal Standard	115	2	HMI He	807576	1.18	2775841	29.09	60	120	IS Failed
Ho-165	165	2	HMI He	6440677	0.17	17360012	37.10	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-19-A
Data File Name	219SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:05:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	90.347	ppb	90.347	29.03	16132	500000	
Li	7	2	45	123.430	ppb	123.430	41.88	1287	500000	
Li	7	3	45	16.728	ppb	16.728	23.99	467620	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	881.848	ppb	881.848	0.79	17903	2000	
Na	23	1	45	1639790.318	ppb	1639790.318	1.17	508517219	2000	>LDR
Na	23	2	45	1623700.585	ppb	1623700.585	1.46	57282507	400000	
Mg	24	2	45	645642.573	ppb	645642.573	0.85	9997667	400000	
Al	27	2	45	6.284	ppb	6.284	105.63	33	400000	
K	39	1	45	9405.416	ppb	9405.416	0.95	2987039	400000	
K	39	2	45	8671.139	ppb	8671.139	1.85	66734	400000	
Ca	40	1	45	742830.031	ppb	742830.031	0.90	327441742	400000	
Ca	44	2	45	829322.346	ppb	829322.346	0.63	386481	400000	
V	51	2	72	6.263	ppb	6.263	13.83	1497	2000	
Cr	52	2	72	0.431	ppb	0.431	19.20	157	5000	
Mn	55	2	72	2324.001	ppb	2324.001	0.76	223623	10000	
Fe	57	2	72	2942.143	ppb	2942.143	1.90	14997	400000	
Co	59	2	72	0.452	ppb	0.452	6.93	237	2000	
Ni	60	2	72	1.364	ppb	1.364	18.24	250	5000	
Cu	63	2	72	0.084	ppb	0.084	183.72	303	5000	
Zn	66	2	72	0.435	ppb	0.435	167.87	170	5000	
As	75	2	72	66.927	ppb	66.927	3.21	2018	2000	
Se	78	1	72	0.364	ppb	0.364	0.59	20	2000	
Sr	88	2	72	18975.623	ppb	18975.623	1.35	1955966	4000	
Zr	90	2	72	28.634	ppb	28.634	67.00	63	1000	
Nb	93	2	72	0.338	ppb	0.338	12.61	437	200	
Mo	95	2	115	8.814	ppb	8.814	9.22	2020	2000	
Pd	105	2	115	0.394	ppb	0.394	8.92	163	100	
Ag	107	2	115	0.007	ppb	0.007	314.02	10	100	
Cd	111	2	115	0.007	ppb	0.007	907.58	3	2000	
Sn	120	2	115	0.077	ppb	0.077	27.33	87	2000	
Sb	121	2	115	0.165	ppb	0.165	63.82	47	1000	
Ba	137	2	115	20.032	ppb	20.032	18.12	1373	5000	
W	182	2	165	0.382	ppb	0.382	14.05	953	100	
Pt	195	2	165	0.111	ppb	0.111	16.07	193	100	
Tl	205	2	165	-0.001	ppb	-0.001	-1007.07	37	2000	
Pb	208	2	165	0.016	ppb	0.016	89.13	387	5000	
Th	232	2	165	0.015	ppb	0.015	82.64	190	2000	
U	238	2	165	84.111	ppb	84.111	0.21	493907	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	51122	2.32	446069	11.46	60	120	IS Failed
Sc (IS)	45	1	HMI H2	3129042	0.29	13344586	23.45	60	120	IS Failed
Sc (IS)	45	2	HMI He	139587	0.91	548684	25.44	60	120	IS Failed
Sc (IS)	45	3	No Gas	7488247	0.36	39087130	19.16	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	2027809	0.55	8240244	24.61	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	201333	0.65	783465	25.70	60	120	IS Failed
In Internal Standard	115	2	HMI He	749672	1.16	2775841	27.01	60	120	IS Failed
Ho-165	165	2	HMI He	6005970	0.68	17360012	34.60	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-21-A
Data File Name	220SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:09:01-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.709	ppb	16.709	72.90	11054	500000	
Li	7	2	45	-43.532	ppb	-43.532	-90.88	683	500000	
Li	7	3	45	-28.850	ppb	-28.850	-4.02	308334	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	463.582	ppb	463.582	0.92	7652	2000	
Na	23	1	45	3936335.975	ppb	3936335.975	1.38	1002746865	2000	>LDR
Na	23	2	45	3927558.090	ppb	3927558.090	1.88	111006195	400000	>LDR
Mg	24	2	45	1139830.852	ppb	1139830.852	2.37	14140843	400000	
Al	27	2	45	1.939	ppb	1.939	195.01	13	400000	
K	39	1	45	20801.399	ppb	20801.399	1.16	4972173	400000	
K	39	2	45	17417.678	ppb	17417.678	1.70	106001	400000	
Ca	40	1	45	1532790.673	ppb	1532790.673	1.70	555058485	400000	
Ca	44	2	45	1759832.517	ppb	1759832.517	1.61	657052	400000	
V	51	2	72	42.087	ppb	42.087	7.54	6568	2000	
Cr	52	2	72	0.758	ppb	0.758	33.91	187	5000	
Mn	55	2	72	1.686	ppb	1.686	36.76	143	10000	
Fe	57	2	72	193.424	ppb	193.424	10.91	783	400000	
Co	59	2	72	0.084	ppb	0.084	15.92	37	2000	
Ni	60	2	72	0.507	ppb	0.507	63.24	93	5000	
Cu	63	2	72	1.126	ppb	1.126	16.60	580	5000	
Zn	66	2	72	2.209	ppb	2.209	53.65	197	5000	
As	75	2	72	11.724	ppb	11.724	10.30	273	2000	
Se	78	1	72	5.259	ppb	5.259	5.09	213	2000	
Sr	88	2	72	44508.621	ppb	44508.621	0.91	3532439	4000	>LDR
Zr	90	2	72	-15.842	ppb	-15.842	-78.44	7	1000	
Nb	93	2	72	0.095	ppb	0.095	144.27	197	200	
Mo	95	2	115	23.714	ppb	23.714	2.90	4204	2000	
Pd	105	2	115	0.946	ppb	0.946	31.80	290	100	
Ag	107	2	115	0.274	ppb	0.274	11.79	183	100	
Cd	111	2	115	0.016	ppb	0.016	476.54	3	2000	
Sn	120	2	115	0.524	ppb	0.524	55.84	153	2000	
Sb	121	2	115	0.298	ppb	0.298	87.86	57	1000	
Ba	137	2	115	32.756	ppb	32.756	2.02	1737	5000	
W	182	2	165	0.123	ppb	0.123	20.84	397	100	
Pt	195	2	165	0.053	ppb	0.053	29.41	83	100	
Tl	205	2	165	0.029	ppb	0.029	22.09	107	2000	
Pb	208	2	165	0.084	ppb	0.084	21.69	540	5000	
Th	232	2	165	0.010	ppb	0.010	100.88	137	2000	
U	238	2	165	54.620	ppb	54.620	0.82	261135	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	41497	1.54	446069	9.30	60	120	IS Failed
Sc (IS)	45	1	HMI H2	2570956	1.43	13344586	19.27	60	120	IS Failed
Sc (IS)	45	2	HMI He	111837	1.21	548684	20.38	60	120	IS Failed
Sc (IS)	45	3	No Gas	5621500	0.33	39087130	14.38	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1593523	0.54	8240244	19.34	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	155035	2.09	783465	19.79	60	120	IS Failed
In Internal Standard	115	2	HMI He	581679	2.44	2775841	20.96	60	120	IS Failed
Ho-165	165	2	HMI He	4890119	1.58	17360012	28.17	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-23-A
Data File Name	221SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:12:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	38.042	ppb	38.042	11.77	8986	500000	
Li	7	2	45	51.122	ppb	51.122	137.87	680	500000	
Li	7	3	45	-4.655	ppb	-4.655	-38.70	266418	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1136.435	ppb	1136.435	1.54	13132	2000	
Na	23	1	45	3828977.624	ppb	3828977.624	0.11	749724815	2000	>LDR
Na	23	2	45	3838342.252	ppb	3838342.252	1.67	83868884	400000	>LDR
Mg	24	2	45	1068458.350	ppb	1068458.350	1.84	10247994	400000	
Al	27	2	45	-1.046	ppb	-1.046	-228.56	3	400000	
K	39	1	45	22167.556	ppb	22167.556	0.88	4053493	400000	
K	39	2	45	20111.144	ppb	20111.144	1.10	94487	400000	
Ca	40	1	45	750675.035	ppb	750675.035	0.74	208955597	400000	
Ca	44	2	45	854833.347	ppb	854833.347	1.06	246772	400000	
V	51	2	72	20.775	ppb	20.775	9.99	2690	2000	
Cr	52	2	72	0.245	ppb	0.245	37.57	67	5000	
Mn	55	2	72	1037.243	ppb	1037.243	0.78	61817	10000	
Fe	57	2	72	1198.828	ppb	1198.828	7.94	3794	400000	
Co	59	2	72	6.626	ppb	6.626	9.07	2110	2000	
Ni	60	2	72	11.621	ppb	11.621	8.54	1113	5000	
Cu	63	2	72	0.705	ppb	0.705	21.87	353	5000	
Zn	66	2	72	8.688	ppb	8.688	33.72	353	5000	
As	75	2	72	20.463	ppb	20.463	11.60	384	2000	
Se	78	1	72	0.424	ppb	0.424	17.69	13	2000	
Sr	88	2	72	20751.521	ppb	20751.521	1.11	1324401	4000	>LDR
Zr	90	2	72	16.669	ppb	16.669	139.08	30	1000	
Nb	93	2	72	0.215	ppb	0.215	70.21	213	200	
Mo	95	2	115	53.184	ppb	53.184	6.20	7792	2000	
Pd	105	2	115	0.630	ppb	0.630	17.56	163	100	
Ag	107	2	115	0.001	ppb	0.001	1434.13	3	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.041	ppb	-0.041	-87.62	37	2000	
Sb	121	2	115	0.372	ppb	0.372	32.54	57	1000	
Ba	137	2	115	20.543	ppb	20.543	11.90	903	5000	
W	182	2	165	0.229	ppb	0.229	19.18	463	100	
Pt	195	2	165	0.111	ppb	0.111	19.04	133	100	
Tl	205	2	165	0.007	ppb	0.007	175.66	43	2000	
Pb	208	2	165	0.012	ppb	0.012	262.19	253	5000	
Th	232	2	165	0.017	ppb	0.017	55.38	137	2000	
U	238	2	165	179.988	ppb	179.988	1.37	723208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	29117	2.24	446069	6.53	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1975865	0.21	13344586	14.81	60	120	IS Failed
Sc (IS)	45	2	HMI He	86471	1.65	548684	15.76	60	120	IS Failed
Sc (IS)	45	3	No Gas	4524475	0.22	39087130	11.58	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1169307	0.59	8240244	14.19	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	124676	2.03	783465	15.91	60	120	IS Failed
In Internal Standard	115	2	HMI He	481258	1.25	2775841	17.34	60	120	IS Failed
Ho-165	165	2	HMI He	4110585	1.76	17360012	23.68	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114273-A-25-A
Data File Name	222SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:16:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429951 6020a dod5
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	17.294	ppb	17.294	114.67	6678	500000	
Li	7	2	45	41.551	ppb	41.551	242.28	497	500000	
Li	7	3	45	25.398	ppb	25.398	19.70	205435	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	614.926	ppb	614.926	9.22	5298	2000	
Na	23	1	45	5204298.967	ppb	5204298.967	0.22	799668415	2000	>LDR
Na	23	2	45	5301500.543	ppb	5301500.543	2.15	86390359	400000	>LDR
Mg	24	2	45	1587602.327	ppb	1587602.327	2.08	11356658	400000	
Al	27	2	45	10.526	ppb	10.526	111.03	23	400000	
K	39	1	45	13196.961	ppb	13196.961	0.29	1985527	400000	
K	39	2	45	7397.856	ppb	7397.856	4.66	26425	400000	
Ca	40	1	45	1501558.965	ppb	1501558.965	0.37	327995382	400000	
Ca	44	2	45	1762788.387	ppb	1762788.387	1.85	379530	400000	
V	51	2	72	67.139	ppb	67.139	3.91	5985	2000	
Cr	52	2	72	0.007	ppb	0.007	1193.86	20	5000	
Mn	55	2	72	42.530	ppb	42.530	0.87	1830	10000	
Fe	57	2	72	182.991	ppb	182.991	28.57	430	400000	
Co	59	2	72	0.444	ppb	0.444	40.86	103	2000	
Ni	60	2	72	2.385	ppb	2.385	27.31	180	5000	
Cu	63	2	72	5.643	ppb	5.643	2.11	1200	5000	
Zn	66	2	72	5.574	ppb	5.574	19.03	187	5000	
As	75	2	72	13.411	ppb	13.411	18.23	180	2000	
Se	78	1	72	11.791	ppb	11.791	20.14	265	2000	
Sr	88	2	72	49445.791	ppb	49445.791	1.24	2266742	4000	>LDR
Zr	90	2	72	37.953	ppb	37.953	73.87	33	1000	
Nb	93	2	72	0.053	ppb	0.053	121.68	100	200	
Mo	95	2	115	104.443	ppb	104.443	3.02	11254	2000	
Pd	105	2	115	1.772	ppb	1.772	14.53	327	100	
Ag	107	2	115	0.121	ppb	0.121	56.61	50	100	
Cd	111	2	115	0.117	ppb	0.117	215.24	7	2000	
Sn	120	2	115	0.296	ppb	0.296	71.31	67	2000	
Sb	121	2	115	0.526	ppb	0.526	55.55	57	1000	
Ba	137	2	115	37.054	ppb	37.054	9.93	1197	5000	
W	182	2	165	0.262	ppb	0.262	27.05	383	100	
Pt	195	2	165	0.048	ppb	0.048	49.62	50	100	
Tl	205	2	165	0.048	ppb	0.048	63.18	100	2000	
Pb	208	2	165	0.240	ppb	0.240	32.83	680	5000	
Th	232	2	165	-0.003	ppb	-0.003	-404.49	53	2000	
U	238	2	165	68.498	ppb	68.498	0.31	209890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	21738	4.85	446069	4.87	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1550584	0.26	13344586	11.62	60	120	IS Failed
Sc (IS)	45	2	HMI He	64523	4.45	548684	11.76	60	120	IS Failed
Sc (IS)	45	3	No Gas	3215149	0.42	39087130	8.23	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	887548	1.20	8240244	10.77	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	89556	2.45	783465	11.43	60	120	IS Failed
In Internal Standard	115	2	HMI He	353896	2.36	2775841	12.75	60	120	IS Failed
Ho-165	165	2	HMI He	3134103	2.96	17360012	18.05	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	223_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:20:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-54.977	ppb	-13.574	4621	500	-11.0	90	110	>+\-10%
Li	7	2	45	98.215	ppb	67.341	513	500	19.6	90	110	>+\-10%
Li	7	3	45	-57.135	ppb	-6.800	160942	500	-11.4	90	110	>+\-10%
Be	9	1	6	99.405	ppb	17.032	473	50	198.8	90	110	>+\-10%
B	11	1	6	87.443	ppb	14.964	487	50	174.9	90	110	>+\-10%
Na	23	1	45	19525.620	ppb	7.380	2621829	5000	390.5	90	110	>+\-10%
Na	23	2	45	12801.388	ppb	9.238	195444	5000	256.0	90	110	>+\-10%
Mg	24	2	45	5630.531	ppb	3.501	36868	5000	112.6	90	110	>+\-10%
Al	27	2	45	4341.917	ppb	3.909	7012	5000	86.8	90	110	>+\-10%
K	39	1	45	5842.219	ppb	0.474	863853	5000	116.8	90	110	>+\-10%
K	39	2	45	5867.851	ppb	2.858	19225	5000	117.4	90	110	>+\-10%
Ca	40	1	45	8361.045	ppb	4.638	1574970	5000	167.2	90	110	>+\-10%
Ca	44	2	45	6490.491	ppb	1.741	1280	5000	129.8	90	110	>+\-10%
V	51	2	72	42.871	ppb	7.695	4034	50	85.7	90	110	>+\-10%
Cr	52	2	72	47.224	ppb	3.506	5815	50	94.4	90	110	
Mn	55	2	72	50.863	ppb	7.861	2284	50	101.7	90	110	
Fe	57	2	72	4796.346	ppb	2.922	11344	5000	95.9	90	110	
Co	59	2	72	46.588	ppb	3.694	11124	50	93.2	90	110	
Ni	60	2	72	45.670	ppb	6.436	3217	50	91.3	90	110	
Cu	63	2	72	52.536	ppb	6.472	10637	50	105.1	90	110	
Zn	66	2	72	45.656	ppb	9.728	1097	50	91.3	90	110	
As	75	2	72	52.222	ppb	4.628	731	50	104.4	90	110	
Se	78	1	72	58.587	ppb	10.818	1276	50	117.2	90	110	>+\-10%
Sr	88	2	72	89.796	ppb	9.650	4301	50	179.6	90	110	>+\-10%
Zr	90	2	72	58.969	ppb	35.928	47	50	117.9	90	110	>+\-10%
Nb	93	2	72	101.852	ppb	0.910	35237	100	101.9	90	110	
Mo	95	2	115	45.493	ppb	4.911	5378	50	91.0	90	110	
Pd	105	2	115	55.533	ppb	2.513	11071	50	111.1	90	110	>+\-10%
Ag	107	2	115	53.192	ppb	2.475	23291	50	106.4	90	110	
Cd	111	2	115	49.977	ppb	5.752	2484	50	100.0	90	110	
Sn	120	2	115	51.589	ppb	5.959	6702	50	103.2	90	110	
Sb	121	2	115	53.013	ppb	5.087	5541	50	106.0	90	110	
Ba	137	2	115	60.853	ppb	3.745	2150	50	121.7	90	110	>+\-10%
W	182	2	165	47.155	ppb	2.394	45784	50	94.3	90	110	
Pt	195	2	165	49.716	ppb	1.130	42014	50	99.4	90	110	
Tl	205	2	165	54.305	ppb	1.061	92596	50	108.6	90	110	
Pb	208	2	165	55.717	ppb	1.042	123280	50	111.4	90	110	>+\-10%
Th	232	2	165	55.872	ppb	1.220	146326	50	111.7	90	110	>+\-10%
U	238	2	165	53.440	ppb	0.965	168900	50	106.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	13808	2.32	446069	3.10	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1332334	1.29	13344586	9.98	60	120	IS Failed
Sc (IS)	45	2	HMI He	58701	1.39	548684	10.70	60	120	IS Failed
Sc (IS)	45	3	No Gas	3210539	0.89	39087130	8.21	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	859940	1.18	8240244	10.44	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	93480	1.01	783465	11.93	60	120	IS Failed
In Internal Standard	115	2	HMI He	388299	0.71	2775841	13.99	60	120	IS Failed
Ho-165	165	2	HMI He	3232608	0.87	17360012	18.62	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	224_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:24:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-225.841	ppb	-0.9	75253	10	
Be	9	1	6	3.039	ppb	35.9	17	0.5	>RL
B	11	1	6	26.226	ppb	23.5	173	0.5	>RL
Na	23	1	45	3091.371	ppb	2.2	488899	25	>RL
Na	23	2	45	3103.585	ppb	0.5	55493	25	>RL
Mg	24	2	45	357.188	ppb	6.3	2720	25	>RL
Al	27	2	45	-2.427	ppb	0.0	0	15	
K	39	1	45	271.756	ppb	3.4	243430	50	>RL
K	39	2	45	439.944	ppb	9.1	2267	50	>RL
Ca	40	1	45	284.212	ppb	2.7	64298	50	>RL
Ca	44	2	45	527.332	ppb	14.5	120	25	>RL
V	51	2	72	0.424	ppb	88.9	173	1	
Cr	52	2	72	0.117	ppb	36.3	37	1	
Mn	55	2	72	0.597	ppb	35.4	40	0.5	>RL
Fe	57	2	72	2.542	ppb	363.4	23	25	
Co	59	2	72	0.018	ppb	127.4	7	0.5	
Ni	60	2	72	-0.161	ppb	-83.7	10	1	
Cu	63	2	72	0.222	ppb	229.9	180	1	
Zn	66	2	72	-0.996	ppb	-2.4	50	5	
As	75	2	72	0.194	ppb	65.9	4	1	
Se	78	1	72	0.256	ppb	75.4	7	1	
Sr	88	2	72	6.476	ppb	17.1	337	0.5	>RL
Zr	90	2	72	-23.016	ppb	0.0	0	1	
Nb	93	2	72	2.947	ppb	7.3	1180	2	>RL
Mo	95	2	115	0.430	ppb	31.3	60	0.5	
Pd	105	2	115	0.062	ppb	127.5	20	1	
Ag	107	2	115	0.030	ppb	108.0	17	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	0.040	ppb	451.4	43	1	
Sb	121	2	115	0.644	ppb	42.2	80	0.6	>RL
Ba	137	2	115	-0.059	ppb	-255.8	3	0.5	
W	182	2	165	0.258	ppb	27.9	420	1	
Pt	195	2	165	0.124	ppb	32.3	123	1	
Tl	205	2	165	0.041	ppb	6.5	97	0.1	
Pb	208	2	165	0.010	ppb	230.7	210	0.5	
Th	232	2	165	0.059	ppb	71.4	233	1	
U	238	2	165	0.109	ppb	18.5	393	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	15710	1.22	446069	3.52	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1435448	0.52	13344586	10.76	60	120	IS Failed
Sc (IS)	45	2	HMI He	63100	0.94	548684	11.50	60	120	IS Failed
Sc (IS)	45	3	No Gas	3420189	0.36	39087130	8.75	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	931587	0.69	8240244	11.31	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	99941	1.15	783465	12.76	60	120	IS Failed
In Internal Standard	115	2	HMI He	419827	0.96	2775841	15.12	60	120	IS Failed
Ho-165	165	2	HMI He	3461406	1.40	17360012	19.94	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	225LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:28:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-221.259	ppb	-0.876	81755	50	-442.5	70	130	>+/-30%
Be	9	1	6	3.467	ppb	101.588	20	1	346.7	70	130	>+/-30%
Na	23	2	45	2282.262	ppb	1.506	45466	50	4564.5	70	130	>+/-30%
Mg	24	2	45	361.954	ppb	4.817	2954	50	723.9	70	130	>+/-30%
Al	27	2	45	42.439	ppb	65.423	83	30	141.5	70	130	>+/-30%
K	39	2	45	558.812	ppb	4.486	2864	100	558.8	70	130	>+/-30%
Ca	44	2	45	164.810	ppb	67.687	47	50	329.6	70	130	>+/-30%
V	51	2	72	4.924	ppb	36.287	647	5	98.5	70	130	
Cr	52	2	72	2.421	ppb	45.533	357	2	121.0	70	130	
Mn	55	2	72	1.014	ppb	39.952	63	1	101.4	70	130	
Fe	57	2	72	55.794	ppb	26.608	167	50	111.6	70	130	
Co	59	2	72	0.918	ppb	27.592	250	1	91.8	70	130	
Ni	60	2	72	1.726	ppb	57.177	160	2	86.3	70	130	
Cu	63	2	72	2.435	ppb	23.624	690	2	121.7	70	130	
Zn	66	2	72	12.553	ppb	34.683	397	10	125.5	70	130	
As	75	2	72	5.937	ppb	15.540	95	5	118.7	70	130	
Se	78	1	72	5.684	ppb	18.873	143	5	113.7	70	130	
Sr	88	2	72	5.757	ppb	3.968	317	1	575.7	70	130	>+/-30%
Zr	90	2	72	-2.326	ppb	-378.226	13	0.5	-465.2	70	130	>+/-30%
Nb	93	2	72	5.630	ppb	6.867	2290	2	281.5	70	130	>+/-30%
Mo	95	2	115	1.923	ppb	29.246	267	2	96.1	70	130	
Pd	105	2	115	0.042	ppb	156.539	17	1	4.2	70	130	>+/-30%
Ag	107	2	115	5.437	ppb	8.857	2737	5	108.7	70	130	
Cd	111	2	115	1.317	ppb	31.277	77	1	131.7	70	130	>+/-30%
Sn	120	2	115	10.873	ppb	11.387	1653	10	108.7	70	130	
Sb	121	2	115	2.572	ppb	15.946	317	2	128.6	70	130	
Ba	137	2	115	0.845	ppb	51.728	40	1	84.5	70	130	
W	182	2	165	5.141	ppb	3.632	5761	1	514.1	70	130	>+/-30%
Pt	195	2	165	0.050	ppb	71.513	60	1	5.0	70	130	>+/-30%
Tl	205	2	165	1.115	ppb	12.036	2164	1	111.5	70	130	
Pb	208	2	165	1.123	ppb	5.944	2984	1	112.3	70	130	
Th	232	2	165	2.374	ppb	4.367	7065	2	118.7	70	130	
U	238	2	165	1.158	ppb	9.440	4141	1	115.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	16818	2.90	446069	3.77	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1539055	0.28	13344586	11.53	60	120	IS Failed
Sc (IS)	45	2	HMI He	67668	0.33	548684	12.33	60	120	IS Failed
Sc (IS)	45	3	No Gas	3590846	0.59	39087130	9.19	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	986278	0.42	8240244	11.97	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	105447	0.94	783465	13.46	60	120	IS Failed
In Internal Standard	115	2	HMI He	446153	0.81	2775841	16.07	60	120	IS Failed
Ho-165	165	2	HMI He	3636475	1.32	17360012	20.95	60	120	IS Failed

Blank Report

Sample Table

Sample Name	MB 280-429765/1-A
Data File Name	226_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:31:59-06:00
Sample Type	Blank
Dilution	1
Comment	429765 6020a
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-216.248	ppb	-2.123511818	2440	0.5
Li	7	2	45	-163.380	ppb	-73.88267105	260	0.5
Li	7	3	45	-224.265	ppb	-0.435631441	80520	10
Be	9	1	6	0.499	ppb	188.2115654	3	0.5
B	11	1	6	11.852	ppb	42.63818576	93	0.5
Na	23	1	45	1823.623	ppb	0.634247005	328617	25
Na	23	2	45	1996.273	ppb	3.400631293	40152	25
Mg	24	2	45	243.777	ppb	6.770265272	2047	25
Al	27	2	45	6.648	ppb	95.24003294	17	15
K	39	1	45	-623.229	ppb	-1.759744389	141631	50
K	39	2	45	459.144	ppb	6.331668717	2477	50
Ca	40	1	45	154.947	ppb	6.27567703	40624	50
Ca	44	2	45	166.959	ppb	41.59351163	47	25
V	51	2	72	0.144	ppb	326.5682907	157	1
Cr	52	2	72	0.360	ppb	80.01551379	73	1
Mn	55	2	72	1.001	ppb	64.65378381	63	0.5
Fe	57	2	72	28.899	ppb	17.98344313	97	25
Co	59	2	72	0.028	ppb	130.4726176	10	0.5
Ni	60	2	72	-0.129	ppb	-146.662618	13	1
Cu	63	2	72	0.051	ppb	673.5466164	153	1
Zn	66	2	72	1.814	ppb	117.9273707	127	5
As	75	2	72	0.220	ppb	130.4783092	5	1
Se	78	1	72	0.028	ppb	328.3204817	1	1
Sr	88	2	72	2.985	ppb	14.93157012	170	0.5
Zr	90	2	72	-2.688	ppb	-319.1614239	13	1
Nb	93	2	72	0.659	ppb	20.51221998	360	2
Mo	95	2	115	0.155	ppb	27.12454334	27	0.5
Pd	105	2	115	-0.016	ppb	-157.3688702	3	1
Ag	107	2	115	0.001	ppb	920.491157	3	1
Cd	111	2	115	-0.028	ppb	0	0	0.5
Sn	120	2	115	0.019	ppb	895.6641405	43	1
Sb	121	2	115	0.153	ppb	111.8960319	27	0.6
Ba	137	2	115	0.100	ppb	245.9035951	10	0.5
W	182	2	165	0.102	ppb	82.21180375	277	1
Pt	195	2	165	0.067	ppb	32.95967285	77	1
Tl	205	2	165	0.037	ppb	79.16431618	97	0.1
Pb	208	2	165	0.063	ppb	63.38515136	357	0.5
Th	232	2	165	0.052	ppb	36.71927527	227	1
U	238	2	165	0.053	ppb	21.4148164	217	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	17286	4.40	446069	3.88	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1528540	0.71	13344586	11.45	60	120	IS Failed
Sc (IS)	45	2	HMI He	66973	1.91	548684	12.21	60	120	IS Failed
Sc (IS)	45	3	No Gas	3616516	0.63	39087130	9.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	977365	0.36	8240244	11.86	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	107240	1.30	783465	13.69	60	120	IS Failed
In Internal Standard	115	2	HMI He	451000	0.25	2775841	16.25	60	120	IS Failed
Ho-165	165	2	HMI He	3687034	0.77	17360012	21.24	60	120	IS Failed

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429765/2-A
Data File Name	227_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:35:51-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429765 6020a
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	-176.447	-176.447	ppb	-11.561	3257	400	-44.1	80	120	>+/-20%
Li	7	2	45	-156.006	-156.006	ppb	-11.239	283	400	-39.0	80	120	>+/-20%
Li	7	3	45	-190.089	-190.089	ppb	-1.732	102368	400	-47.5	80	120	>+/-20%
Be	9	1	6	47.461	47.461	ppb	38.773	303	40	118.7	80	120	
Na	23	2	45	1621.919	1621.919	ppb	4.011	35665	40	4054.8	80	120	>+/-20%
Mg	24	2	45	183.661	183.661	ppb	24.370	1690	40	459.2	80	120	>+/-20%
Al	27	2	45	337.472	337.472	ppb	2.379	660	40	843.7	80	120	>+/-20%
K	39	2	45	432.328	432.328	ppb	16.056	2507	40	1080.8	80	120	>+/-20%
Ca	44	2	45	399.492	399.492	ppb	71.123	103	40	998.7	80	120	>+/-20%
V	51	2	72	35.191	35.191	ppb	8.168	3897	40	88.0	80	120	
Cr	52	2	72	37.888	37.888	ppb	11.836	5454	40	94.7	80	120	
Mn	55	2	72	40.989	40.989	ppb	9.242	2154	40	102.5	80	120	
Fe	57	2	72	433.510	433.510	ppb	18.467	1213	40	1083.8	80	120	>+/-20%
Co	59	2	72	37.294	37.294	ppb	5.914	10407	40	93.2	80	120	
Ni	60	2	72	35.557	35.557	ppb	4.162	2934	40	88.9	80	120	
Cu	63	2	72	39.608	39.608	ppb	1.838	9403	40	99.0	80	120	
Zn	66	2	72	38.693	38.693	ppb	14.336	1100	40	96.7	80	120	
As	75	2	72	38.373	38.373	ppb	5.215	629	40	95.9	80	120	
Se	78	1	72	44.605	44.605	ppb	10.592	1145	40	111.5	80	120	
Nb	93	2	72	0.428	0.428	ppb	24.667	273	40	1.1	80	120	>+/-20%
Mo	95	2	115	36.583	36.583	ppb	1.096	5164	40	91.5	80	120	
Pd	105	2	115	-0.002	-0.002	ppb	-1014.166	7	40	0.0	80	120	>+/-20%
Ag	107	2	115	43.920	43.920	ppb	1.574	22957	40	109.8	80	120	
Cd	111	2	115	44.691	44.691	ppb	4.542	2650	40	111.7	80	120	
Sn	120	2	115	43.750	43.750	ppb	4.147	6788	40	109.4	80	120	
Sb	121	2	115	41.534	41.534	ppb	7.584	5184	40	103.8	80	120	
Ba	137	2	115	49.854	49.854	ppb	6.901	2104	40	124.6	80	120	>+/-20%
W	182	2	165	11.243	11.243	ppb	2.959	12963	40	28.1	80	120	>+/-20%
Pt	195	2	165	0.038	0.038	ppb	106.269	50	40	0.1	80	120	>+/-20%
Tl	205	2	165	44.545	44.545	ppb	1.036	89295	40	111.4	80	120	
Pb	208	2	165	44.511	44.511	ppb	0.531	115832	40	111.3	80	120	
Th	232	2	165	44.018	44.018	ppb	1.404	135546	40	110.0	80	120	
U	238	2	165	42.775	42.775	ppb	0.841	158953	40	106.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	18367	4.19	446069	4.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1582270	0.27	13344586	11.86	60	120	IS Failed
Sc (IS)	45	2	HMI He	70647	1.71	548684	12.88	60	120	IS Failed
Sc (IS)	45	3	No Gas	3661145	0.87	39087130	9.37	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1012863	0.55	8240244	12.29	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	109252	1.26	783465	13.94	60	120	IS Failed
In Internal Standard	115	2	HMI He	463498	0.59	2775841	16.70	60	120	IS Failed
Ho-165	165	2	HMI He	3800528	0.33	17360012	21.89	60	120	IS Failed

Sample Report

Sample Table

Sample Name	LCSD 280-429765/3-A
Data File Name	228SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:39:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-184.744	ppb	-184.744	-2.35	3174	500000	
Li	7	2	45	-169.816	ppb	-169.816	-13.17	270	500000	
Li	7	3	45	-188.204	ppb	-188.204	-0.72	105746	50000	
Be	9	1	6	42.529	ppb	42.529	15.56	280	2000	
B	11	1	6	61.771	ppb	61.771	29.50	477	2000	
Na	23	1	45	1454.008	ppb	1454.008	0.44	288472	2000	
Na	23	2	45	1564.544	ppb	1564.544	1.91	35301	400000	
Mg	24	2	45	149.676	ppb	149.676	5.91	1447	400000	
Al	27	2	45	331.255	ppb	331.255	4.06	660	400000	
K	39	1	45	-696.311	ppb	-696.311	-0.96	139703	400000	
K	39	2	45	409.964	ppb	409.964	2.58	2470	400000	
Ca	40	1	45	88.442	ppb	88.442	2.46	27841	400000	
Ca	44	2	45	291.156	ppb	291.156	75.68	80	400000	
V	51	2	72	33.466	ppb	33.466	11.31	3871	2000	
Cr	52	2	72	36.398	ppb	36.398	0.42	5468	5000	
Mn	55	2	72	41.097	ppb	41.097	10.72	2250	10000	
Fe	57	2	72	390.613	ppb	390.613	7.10	1143	400000	
Co	59	2	72	36.435	ppb	36.435	0.54	10604	2000	
Ni	60	2	72	35.901	ppb	35.901	9.39	3087	5000	
Cu	63	2	72	40.214	ppb	40.214	6.08	9953	5000	
Zn	66	2	72	42.624	ppb	42.624	9.78	1253	5000	
As	75	2	72	37.893	ppb	37.893	4.25	647	2000	
Se	78	1	72	44.409	ppb	44.409	5.62	1167	2000	
Sr	88	2	72	49.127	ppb	49.127	7.55	2870	4000	
Zr	90	2	72	11076.167	ppb	11076.167	9.18	7709	1000	>LDR
Nb	93	2	72	0.304	ppb	0.304	34.20	233	200	
Mo	95	2	115	34.688	ppb	34.688	10.31	5044	2000	
Pd	105	2	115	-0.030	ppb	-0.030	0.00	0	100	
Ag	107	2	115	44.037	ppb	44.037	2.66	23712	100	
Cd	111	2	115	42.892	ppb	42.892	3.40	2620	2000	
Sn	120	2	115	43.851	ppb	43.851	6.29	7012	2000	
Sb	121	2	115	42.532	ppb	42.532	5.85	5468	1000	
Ba	137	2	115	51.698	ppb	51.698	6.20	2247	5000	
W	182	2	165	11.631	ppb	11.631	1.84	13703	100	
Pt	195	2	165	0.037	ppb	0.037	117.49	50	100	
Tl	205	2	165	44.726	ppb	44.726	1.88	91646	2000	
Pb	208	2	165	44.378	ppb	44.378	1.35	118049	5000	
Th	232	2	165	44.398	ppb	44.398	1.98	139746	2000	
U	238	2	165	42.980	ppb	42.980	0.75	163262	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	19071	3.39	446069	4.28	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1617334	0.60	13344586	12.12	60	120	IS Failed
Sc (IS)	45	2	HMI He	71966	0.04	548684	13.12	60	120	IS Failed
Sc (IS)	45	3	No Gas	3739477	0.14	39087130	9.57	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1036100	0.50	8240244	12.57	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	113906	0.61	783465	14.54	60	120	IS Failed
In Internal Standard	115	2	HMI He	477440	0.77	2775841	17.20	60	120	IS Failed
Ho-165	165	2	HMI He	3884957	0.67	17360012	22.38	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-A
Data File Name	229SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:43:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-202.004	ppb	-202.004	-8.60	2824	500000	
Li	7	2	45	-188.523	ppb	-188.523	-12.75	247	500000	
Li	7	3	45	-204.179	ppb	-204.179	-1.15	94845	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	86.197	ppb	86.197	16.94	660	2000	
Na	23	1	45	38332.568	ppb	38332.568	1.46	6141278	2000	>LDR
Na	23	2	45	37316.407	ppb	37316.407	1.68	689730	400000	
Mg	24	2	45	18737.414	ppb	18737.414	1.53	150782	400000	
Al	27	2	45	511.569	ppb	511.569	23.41	1023	400000	
K	39	1	45	6566.626	ppb	6566.626	1.86	1138692	400000	
K	39	2	45	7607.198	ppb	7607.198	1.77	30482	400000	
Ca	40	1	45	118200.226	ppb	118200.226	1.67	26688567	400000	
Ca	44	2	45	127971.383	ppb	127971.383	1.26	30953	400000	
V	51	2	72	9.452	ppb	9.452	1.71	1193	2000	
Cr	52	2	72	234.329	ppb	234.329	1.08	34828	5000	
Mn	55	2	72	31895.372	ppb	31895.372	0.67	1724166	10000	
Fe	57	2	72	268.641	ppb	268.641	17.18	787	400000	
Co	59	2	72	0.269	ppb	0.269	77.90	80	2000	
Ni	60	2	72	1.751	ppb	1.751	9.83	173	5000	
Cu	63	2	72	24.185	ppb	24.185	2.17	6005	5000	
Zn	66	2	72	27.275	ppb	27.275	16.27	827	5000	
As	75	2	72	2.714	ppb	2.714	33.46	47	2000	
Se	78	1	72	40.482	ppb	40.482	7.05	1052	2000	
Sr	88	2	72	1901.879	ppb	1901.879	0.29	110152	4000	
Zr	90	2	72	1561.297	ppb	1561.297	12.48	1093	1000	
Nb	93	2	72	0.229	ppb	0.229	47.18	200	200	
Mo	95	2	115	0.217	ppb	0.217	36.58	37	2000	
Pd	105	2	115	0.066	ppb	0.066	94.66	23	100	
Ag	107	2	115	0.033	ppb	0.033	100.99	20	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.540	ppb	0.540	52.84	127	2000	
Sb	121	2	115	0.250	ppb	0.250	83.59	40	1000	
Ba	137	2	115	80.555	ppb	80.555	3.40	3437	5000	
W	182	2	165	0.106	ppb	0.106	47.10	293	100	
Pt	195	2	165	0.073	ppb	0.073	38.91	87	100	
Tl	205	2	165	0.030	ppb	0.030	60.66	87	2000	
Pb	208	2	165	0.149	ppb	0.149	14.14	600	5000	
Th	232	2	165	0.536	ppb	0.536	3.59	1750	2000	
U	238	2	165	183.450	ppb	183.450	0.97	692352	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	19007	2.20	446069	4.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1602560	1.19	13344586	12.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	72429	1.68	548684	13.20	60	120	IS Failed
Sc (IS)	45	3	No Gas	3703069	0.71	39087130	9.47	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1024977	0.09	8240244	12.44	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	113121	0.74	783465	14.44	60	120	IS Failed
In Internal Standard	115	2	HMI He	469191	0.50	2775841	16.90	60	120	IS Failed
Ho-165	165	2	HMI He	3860522	0.79	17360012	22.24	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-Asd@5
Data File Name	230SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:47:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-209.593	ppb	-209.593	-3.51	2830	500000	
Li	7	2	45	-212.637	ppb	-212.637	-12.54	220	500000	
Li	7	3	45	-215.765	ppb	-215.765	-0.91	92127	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	27.154	ppb	27.154	44.54	233	2000	
Na	23	1	45	10096.285	ppb	10096.285	1.50	1750075	2000	>LDR
Na	23	2	45	9644.182	ppb	9644.182	2.97	188729	400000	
Mg	24	2	45	4570.091	ppb	4570.091	2.27	38051	400000	
Al	27	2	45	139.023	ppb	139.023	25.05	290	400000	
K	39	1	45	1625.842	ppb	1625.842	4.07	483626	400000	
K	39	2	45	1973.952	ppb	1973.952	11.34	8813	400000	
Ca	40	1	45	27542.822	ppb	27542.822	2.20	6569862	400000	
Ca	44	2	45	29227.783	ppb	29227.783	5.09	7282	400000	
V	51	2	72	2.884	ppb	2.884	7.86	490	2000	
Cr	52	2	72	51.899	ppb	51.899	7.29	8089	5000	
Mn	55	2	72	6967.579	ppb	6967.579	0.17	394224	10000	
Fe	57	2	72	69.079	ppb	69.079	6.58	227	400000	
Co	59	2	72	0.058	ppb	0.058	114.43	20	2000	
Ni	60	2	72	0.191	ppb	0.191	204.02	43	5000	
Cu	63	2	72	6.465	ppb	6.465	12.95	1797	5000	
Zn	66	2	72	8.492	ppb	8.492	20.97	330	5000	
As	75	2	72	0.486	ppb	0.486	82.48	10	2000	
Se	78	1	72	10.550	ppb	10.550	1.97	292	2000	
Sr	88	2	72	415.415	ppb	415.415	4.85	25184	4000	
Zr	90	2	72	120.459	ppb	120.459	68.19	103	1000	
Nb	93	2	72	-0.006	ppb	-0.006	-859.01	107	200	
Mo	95	2	115	0.251	ppb	0.251	81.29	43	2000	
Pd	105	2	115	0.089	ppb	0.089	43.61	30	100	
Ag	107	2	115	0.037	ppb	0.037	74.26	23	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.160	ppb	0.160	64.29	70	2000	
Sb	121	2	115	0.111	ppb	0.111	104.33	23	1000	
Ba	137	2	115	17.750	ppb	17.750	6.73	793	5000	
W	182	2	165	0.168	ppb	0.168	20.13	377	100	
Pt	195	2	165	0.055	ppb	0.055	34.22	70	100	
Tl	205	2	165	0.011	ppb	0.011	72.03	50	2000	
Pb	208	2	165	0.018	ppb	0.018	117.22	263	5000	
Th	232	2	165	0.067	ppb	0.067	24.58	293	2000	
U	238	2	165	42.744	ppb	42.744	0.53	166577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	20535	1.58	446069	4.60	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1691505	1.46	13344586	12.68	60	120	IS Failed
Sc (IS)	45	2	HMI He	74554	1.65	548684	13.59	60	120	IS Failed
Sc (IS)	45	3	No Gas	3890325	1.13	39087130	9.95	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1089635	1.46	8240244	13.22	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	118394	1.30	783465	15.11	60	120	IS Failed
In Internal Standard	115	2	HMI He	488309	1.03	2775841	17.59	60	120	IS Failed
Ho-165	165	2	HMI He	3985788	0.76	17360012	22.96	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-B MS
Data File Name	231SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:51:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-172.762	ppb	-172.762	-13.16	3410	500000	
Li	7	2	45	-138.131	ppb	-138.131	-27.26	317	500000	
Li	7	3	45	-172.277	ppb	-172.277	-1.00	117068	50000	
Be	9	1	6	47.609	ppb	47.609	4.35	317	2000	
B	11	1	6	153.594	ppb	153.594	13.36	1190	2000	
Na	23	1	45	39935.121	ppb	39935.121	2.21	6485056	2000	>LDR
Na	23	2	45	39169.665	ppb	39169.665	1.70	729546	400000	
Mg	24	2	45	19841.277	ppb	19841.277	1.72	160944	400000	
Al	27	2	45	821.480	ppb	821.480	4.93	1653	400000	
K	39	1	45	6921.345	ppb	6921.345	3.85	1204055	400000	
K	39	2	45	7773.951	ppb	7773.951	4.46	31377	400000	
Ca	40	1	45	123154.851	ppb	123154.851	1.71	28194782	400000	
Ca	44	2	45	133179.524	ppb	133179.524	0.76	32479	400000	
V	51	2	72	32.612	ppb	32.612	8.08	3821	2000	
Cr	52	2	72	277.517	ppb	277.517	0.71	42024	5000	
Mn	55	2	72	30573.930	ppb	30573.930	2.01	1684262	10000	
Fe	57	2	72	447.715	ppb	447.715	12.22	1323	400000	
Co	59	2	72	30.624	ppb	30.624	5.00	9016	2000	
Ni	60	2	72	37.517	ppb	37.517	12.06	3260	5000	
Cu	63	2	72	63.618	ppb	63.618	1.98	15842	5000	
Zn	66	2	72	69.541	ppb	69.541	6.64	2017	5000	
As	75	2	72	14.898	ppb	14.898	1.73	258	2000	
Se	78	1	72	84.038	ppb	84.038	2.06	2203	2000	
Sr	88	2	72	2027.693	ppb	2027.693	2.24	119645	4000	
Zr	90	2	72	9303.356	ppb	9303.356	5.38	6555	1000	>LDR
Nb	93	2	72	0.158	ppb	0.158	20.73	173	200	
Mo	95	2	115	0.622	ppb	0.622	27.92	97	2000	
Pd	105	2	115	0.159	ppb	0.159	128.64	47	100	
Ag	107	2	115	35.833	ppb	35.833	1.87	19409	100	
Cd	111	2	115	40.353	ppb	40.353	6.11	2480	2000	
Sn	120	2	115	6.633	ppb	6.633	11.98	1103	2000	
Sb	121	2	115	20.563	ppb	20.563	4.61	2664	1000	
Ba	137	2	115	129.316	ppb	129.316	7.36	5645	5000	
W	182	2	165	0.130	ppb	0.130	31.84	327	100	
Pt	195	2	165	0.036	ppb	0.036	54.20	50	100	
Tl	205	2	165	21.547	ppb	21.547	1.39	44645	2000	
Pb	208	2	165	13.942	ppb	13.942	2.82	37627	5000	
Th	232	2	165	43.711	ppb	43.711	1.39	139090	2000	
U	238	2	165	236.340	ppb	236.340	1.20	907381	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	19269	4.49	446069	4.32	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1624998	1.54	13344586	12.18	60	120	IS Failed
Sc (IS)	45	2	HMI He	73024	2.19	548684	13.31	60	120	IS Failed
Sc (IS)	45	3	No Gas	3784625	0.86	39087130	9.68	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1034147	0.44	8240244	12.55	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	115269	1.43	783465	14.71	60	120	IS Failed
In Internal Standard	115	2	HMI He	480275	0.34	2775841	17.30	60	120	IS Failed
Ho-165	165	2	HMI He	3927515	1.42	17360012	22.62	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-C MSD
Data File Name	232SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:55:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-168.288	ppb	-168.288	-8.70	3551	500000	
Li	7	2	45	-155.378	ppb	-155.378	-39.26	300	500000	
Li	7	3	45	-172.205	ppb	-172.205	-1.34	118024	50000	
Be	9	1	6	50.506	ppb	50.506	14.44	333	2000	
B	11	1	6	144.876	ppb	144.876	12.47	1110	2000	
Na	23	1	45	40932.771	ppb	40932.771	1.06	6745280	2000	>LDR
Na	23	2	45	39387.802	ppb	39387.802	2.42	752303	400000	
Mg	24	2	45	19997.417	ppb	19997.417	2.85	166341	400000	
Al	27	2	45	784.883	ppb	784.883	6.21	1620	400000	
K	39	1	45	7349.158	ppb	7349.158	2.22	1282817	400000	
K	39	2	45	7900.838	ppb	7900.838	2.50	32699	400000	
Ca	40	1	45	126740.697	ppb	126740.697	1.03	29454945	400000	
Ca	44	2	45	134440.021	ppb	134440.021	2.64	33618	400000	
V	51	2	72	30.681	ppb	30.681	4.95	3654	2000	
Cr	52	2	72	276.185	ppb	276.185	0.65	42385	5000	
Mn	55	2	72	33746.960	ppb	33746.960	1.78	1883838	10000	
Fe	57	2	72	473.481	ppb	473.481	12.50	1417	400000	
Co	59	2	72	31.468	ppb	31.468	2.40	9393	2000	
Ni	60	2	72	36.558	ppb	36.558	4.23	3224	5000	
Cu	63	2	72	65.853	ppb	65.853	2.11	16616	5000	
Zn	66	2	72	72.182	ppb	72.182	8.83	2117	5000	
As	75	2	72	13.801	ppb	13.801	5.94	242	2000	
Se	78	1	72	89.869	ppb	89.869	4.88	2379	2000	
Sr	88	2	72	2052.607	ppb	2052.607	1.69	122765	4000	
Zr	90	2	72	10003.448	ppb	10003.448	5.35	7145	1000	>LDR
Nb	93	2	72	-0.010	ppb	-0.010	-474.70	103	200	
Mo	95	2	115	0.800	ppb	0.800	60.15	123	2000	
Pd	105	2	115	0.049	ppb	0.049	212.42	20	100	
Ag	107	2	115	37.635	ppb	37.635	3.47	20564	100	
Cd	111	2	115	41.199	ppb	41.199	19.69	2557	2000	
Sn	120	2	115	8.642	ppb	8.642	5.55	1437	2000	
Sb	121	2	115	20.626	ppb	20.626	8.56	2697	1000	
Ba	137	2	115	138.801	ppb	138.801	1.95	6111	5000	
W	182	2	165	0.105	ppb	0.105	36.89	300	100	
Pt	195	2	165	0.026	ppb	0.026	110.47	40	100	
Tl	205	2	165	24.032	ppb	24.032	1.41	50303	2000	
Pb	208	2	165	15.655	ppb	15.655	2.00	42666	5000	
Th	232	2	165	43.557	ppb	43.557	0.70	140017	2000	
U	238	2	165	238.467	ppb	238.467	0.77	924915	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	19154	2.43	446069	4.29	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1649235	1.24	13344586	12.36	60	120	IS Failed
Sc (IS)	45	2	HMI He	74896	2.12	548684	13.65	60	120	IS Failed
Sc (IS)	45	3	No Gas	3814104	1.23	39087130	9.76	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1044598	0.69	8240244	12.68	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	116818	0.44	783465	14.91	60	120	IS Failed
In Internal Standard	115	2	HMI He	484565	0.96	2775841	17.46	60	120	IS Failed
Ho-165	165	2	HMI He	3967430	0.74	17360012	22.85	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-A pds
Data File Name	233SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T02:58:52-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-200.846	ppb	-200.846	-0.97	2967	500000	
Li	7	2	45	-223.912	ppb	-223.912	-17.81	210	500000	
Li	7	3	45	-201.915	ppb	-201.915	-0.71	99569	50000	
Be	9	1	6	297.003	ppb	297.003	3.33	1997	2000	
B	11	1	6	106.310	ppb	106.310	9.78	833	2000	
Na	23	1	45	39422.758	ppb	39422.758	1.52	6584541	2000	>LDR
Na	23	2	45	37318.205	ppb	37318.205	1.94	731652	400000	
Mg	24	2	45	19131.170	ppb	19131.170	2.88	163263	400000	
Al	27	2	45	2383.754	ppb	2383.754	3.40	5038	400000	
K	39	1	45	6895.984	ppb	6895.984	4.08	1234651	400000	
K	39	2	45	7513.309	ppb	7513.309	4.42	31935	400000	
Ca	40	1	45	121807.285	ppb	121807.285	1.14	28680455	400000	
Ca	44	2	45	127630.946	ppb	127630.946	2.23	32740	400000	
V	51	2	72	200.428	ppb	200.428	0.53	23461	2000	
Cr	52	2	72	424.930	ppb	424.930	0.87	66474	5000	
Mn	55	2	72	33219.963	ppb	33219.963	2.43	1890772	10000	
Fe	57	2	72	2375.962	ppb	2375.962	5.17	7169	400000	
Co	59	2	72	183.483	ppb	183.483	2.05	55822	2000	
Ni	60	2	72	184.192	ppb	184.192	1.62	16452	5000	
Cu	63	2	72	225.250	ppb	225.250	1.53	57565	5000	
Zn	66	2	72	226.113	ppb	226.113	1.88	6575	5000	
As	75	2	72	194.741	ppb	194.741	4.52	3472	2000	
Se	78	1	72	274.843	ppb	274.843	1.22	7382	2000	
Sr	88	2	72	1912.366	ppb	1912.366	0.96	116617	4000	
Zr	90	2	72	61237.295	ppb	61237.295	1.78	44506	1000	>LDR
Nb	93	2	72	2.632	ppb	2.632	14.40	1267	200	
Mo	95	2	115	197.817	ppb	197.817	1.83	29438	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-609.55	7	100	
Ag	107	2	115	50.192	ppb	50.192	3.08	27682	100	
Cd	111	2	115	209.573	ppb	209.573	4.17	13109	2000	
Sn	120	2	115	224.989	ppb	224.989	0.55	36657	2000	
Sb	121	2	115	226.816	ppb	226.816	4.12	29829	1000	
Ba	137	2	115	329.975	ppb	329.975	4.24	14654	5000	
W	182	2	165	199.510	ppb	199.510	1.18	239886	100	
Pt	195	2	165	0.080	ppb	0.080	18.06	97	100	
Tl	205	2	165	224.710	ppb	224.710	0.60	475470	2000	
Pb	208	2	165	221.482	ppb	221.482	0.63	607648	5000	
Th	232	2	165	17.872	ppb	17.872	0.61	58154	2000	
U	238	2	165	450.662	ppb	450.662	0.80	1767742	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	19475	1.34	446069	4.37	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1671050	0.70	13344586	12.52	60	120	IS Failed
Sc (IS)	45	2	HMI He	76834	2.22	548684	14.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	3830914	0.78	39087130	9.80	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1059905	0.37	8240244	12.86	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	119104	0.34	783465	15.20	60	120	IS Failed
In Internal Standard	115	2	HMI He	489050	0.21	2775841	17.62	60	120	IS Failed
Ho-165	165	2	HMI He	4012440	0.66	17360012	23.11	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	234_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:02:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-10.920	ppb	-132.057	7172	500	-2.2	90	110	>+\-10%
Li	7	2	45	27.954	ppb	195.357	600	500	5.6	90	110	>+\-10%
Li	7	3	45	-12.316	ppb	-47.470	239715	500	-2.5	90	110	>+\-10%
Be	9	1	6	80.008	ppb	3.216	620	50	160.0	90	110	>+\-10%
B	11	1	6	65.521	ppb	10.757	597	50	131.0	90	110	>+\-10%
Na	23	1	45	5358.652	ppb	0.455	1018849	5000	107.2	90	110	
Na	23	2	45	5241.663	ppb	1.520	114415	5000	104.8	90	110	
Mg	24	2	45	4293.480	ppb	1.410	38672	5000	85.9	90	110	>+\-10%
Al	27	2	45	4412.259	ppb	0.908	9780	5000	88.2	90	110	>+\-10%
K	39	1	45	5702.321	ppb	1.499	1146891	5000	114.0	90	110	>+\-10%
K	39	2	45	5728.031	ppb	2.098	25797	5000	114.6	90	110	>+\-10%
Ca	40	1	45	5630.829	ppb	1.340	1438310	5000	112.6	90	110	>+\-10%
Ca	44	2	45	5111.407	ppb	12.830	1387	5000	102.2	90	110	
V	51	2	72	46.008	ppb	9.369	5938	50	92.0	90	110	
Cr	52	2	72	46.917	ppb	2.463	7939	50	93.8	90	110	
Mn	55	2	72	106.023	ppb	11.409	6522	50	212.0	90	110	>+\-10%
Fe	57	2	72	4719.697	ppb	1.774	15334	5000	94.4	90	110	
Co	59	2	72	45.564	ppb	1.202	14951	50	91.1	90	110	
Ni	60	2	72	48.135	ppb	5.607	4658	50	96.3	90	110	
Cu	63	2	72	48.781	ppb	1.253	13576	50	97.6	90	110	
Zn	66	2	72	54.693	ppb	6.035	1787	50	109.4	90	110	
As	75	2	72	50.634	ppb	1.806	975	50	101.3	90	110	
Se	78	1	72	57.033	ppb	7.771	1685	50	114.1	90	110	>+\-10%
Sr	88	2	72	67.689	ppb	7.567	4457	50	135.4	90	110	>+\-10%
Zr	90	2	72	130.181	ppb	64.409	120	50	260.4	90	110	>+\-10%
Nb	93	2	72	102.955	ppb	0.871	48936	100	103.0	90	110	
Mo	95	2	115	46.262	ppb	5.920	7515	50	92.5	90	110	
Pd	105	2	115	51.475	ppb	1.635	14100	50	102.9	90	110	
Ag	107	2	115	50.729	ppb	0.892	30527	50	101.5	90	110	
Cd	111	2	115	56.342	ppb	5.414	3847	50	112.7	90	110	>+\-10%
Sn	120	2	115	54.701	ppb	3.001	9760	50	109.4	90	110	
Sb	121	2	115	52.517	ppb	5.505	7542	50	105.0	90	110	
Ba	137	2	115	58.975	ppb	3.377	2864	50	118.0	90	110	>+\-10%
W	182	2	165	48.164	ppb	1.116	61346	50	96.3	90	110	
Pt	195	2	165	49.287	ppb	2.022	54631	50	98.6	90	110	
Tl	205	2	165	55.395	ppb	1.198	123895	50	110.8	90	110	>+\-10%
Pb	208	2	165	55.338	ppb	0.600	160618	50	110.7	90	110	>+\-10%
Th	232	2	165	56.246	ppb	1.511	193223	50	112.5	90	110	>+\-10%
U	238	2	165	54.463	ppb	1.357	225801	50	108.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	22458	2.95	446069	5.03	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1802452	0.97	13344586	13.51	60	120	IS Failed
Sc (IS)	45	2	HMI He	80602	1.47	548684	14.69	60	120	IS Failed
Sc (IS)	45	3	No Gas	4162243	2.03	39087130	10.65	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1165413	0.63	8240244	14.14	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	128430	0.25	783465	16.39	60	120	IS Failed
In Internal Standard	115	2	HMI He	533598	0.55	2775841	19.22	60	120	IS Failed
Ho-165	165	2	HMI He	4240383	0.22	17360012	24.43	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	235_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:06:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-215.094	ppb	-0.8	99596	10	
Be	9	1	6	0.819	ppb	182.4	7	0.5	>RL
B	11	1	6	8.405	ppb	84.8	90	0.5	>RL
Na	23	1	45	985.616	ppb	2.8	241936	25	>RL
Na	23	2	45	1030.784	ppb	2.0	28839	25	>RL
Mg	24	2	45	76.365	ppb	12.7	970	25	>RL
Al	27	2	45	-2.427	ppb	0.0	0	15	
K	39	1	45	207.394	ppb	9.1	300839	50	>RL
K	39	2	45	388.588	ppb	8.7	2690	50	>RL
Ca	40	1	45	63.640	ppb	5.7	25153	50	>RL
Ca	44	2	45	19.409	ppb	287.8	17	25	
V	51	2	72	1.056	ppb	4.0	307	1	>RL
Cr	52	2	72	0.150	ppb	90.4	53	1	
Mn	55	2	72	19.788	ppb	10.5	1247	0.5	>RL
Fe	57	2	72	9.463	ppb	129.9	53	25	
Co	59	2	72	0.162	ppb	77.1	57	0.5	
Ni	60	2	72	0.046	ppb	128.9	33	1	
Cu	63	2	72	0.026	ppb	748.1	180	1	
Zn	66	2	72	-0.311	ppb	-61.3	87	5	
As	75	2	72	0.067	ppb	86.7	3	1	
Se	78	1	72	0.240	ppb	110.6	8	1	
Sr	88	2	72	1.190	ppb	83.5	87	0.5	>RL
Zr	90	2	72	-10.414	ppb	-121.0	10	1	
Nb	93	2	72	2.459	ppb	15.5	1303	2	>RL
Mo	95	2	115	0.323	ppb	49.6	60	0.5	
Pd	105	2	115	0.065	ppb	84.0	27	1	
Ag	107	2	115	0.044	ppb	37.2	30	1	
Cd	111	2	115	0.020	ppb	421.7	3	0.5	
Sn	120	2	115	0.080	ppb	261.9	63	1	
Sb	121	2	115	0.503	ppb	7.9	83	0.6	
Ba	137	2	115	-0.010	ppb	-1195.2	7	0.5	
W	182	2	165	0.161	ppb	39.8	397	1	
Pt	195	2	165	0.136	ppb	37.4	167	1	
Tl	205	2	165	0.026	ppb	104.3	87	0.1	
Pb	208	2	165	0.022	ppb	84.8	293	0.5	
Th	232	2	165	0.081	ppb	22.9	367	1	
U	238	2	165	0.165	ppb	19.3	720	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	22826	1.68	446069	5.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1833937	1.79	13344586	13.74	60	120	IS Failed
Sc (IS)	45	2	HMI He	81081	1.24	548684	14.78	60	120	IS Failed
Sc (IS)	45	3	No Gas	4185688	1.12	39087130	10.71	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1189438	0.11	8240244	14.43	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	130287	0.25	783465	16.63	60	120	IS Failed
In Internal Standard	115	2	HMI He	543584	0.27	2775841	19.58	60	120	IS Failed
Ho-165	165	2	HMI He	4291083	0.36	17360012	24.72	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	236LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:10:18-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-210.246	ppb	-1.597	104495	50	-420.5	70	130	>+/-30%
Be	9	1	6	1.606	ppb	88.952	13	1	160.6	70	130	>+/-30%
Na	23	2	45	1065.013	ppb	2.462	30732	50	2130.0	70	130	>+/-30%
Mg	24	2	45	130.073	ppb	16.351	1513	50	260.1	70	130	>+/-30%
Al	27	2	45	29.221	ppb	10.007	73	30	97.4	70	130	
K	39	2	45	474.713	ppb	4.163	3190	100	474.7	70	130	>+/-30%
Ca	44	2	45	99.605	ppb	60.372	40	50	199.2	70	130	>+/-30%
V	51	2	72	5.815	ppb	25.241	920	5	116.3	70	130	
Cr	52	2	72	2.075	ppb	23.149	387	2	103.8	70	130	
Mn	55	2	72	19.006	ppb	5.833	1210	1	1900.6	70	130	>+/-30%
Fe	57	2	72	48.512	ppb	44.095	183	50	97.0	70	130	
Co	59	2	72	0.964	ppb	10.493	327	1	96.4	70	130	
Ni	60	2	72	1.971	ppb	17.428	223	2	98.5	70	130	
Cu	63	2	72	2.185	ppb	23.360	790	2	109.2	70	130	
Zn	66	2	72	8.817	ppb	21.754	377	10	88.2	70	130	
As	75	2	72	3.683	ppb	14.355	74	5	73.7	70	130	
Se	78	1	72	6.393	ppb	18.058	196	5	127.9	70	130	
Sr	88	2	72	2.963	ppb	20.735	207	1	296.3	70	130	>+/-30%
Zr	90	2	72	47.555	ppb	109.199	57	0.5	9511.0	70	130	>+/-30%
Nb	93	2	72	5.621	ppb	9.901	2850	2	281.0	70	130	>+/-30%
Mo	95	2	115	2.059	ppb	20.609	353	2	103.0	70	130	
Pd	105	2	115	0.040	ppb	87.457	20	1	4.0	70	130	>+/-30%
Ag	107	2	115	5.538	ppb	3.046	3457	5	110.8	70	130	
Cd	111	2	115	1.008	ppb	8.047	73	1	100.8	70	130	
Sn	120	2	115	10.036	ppb	1.771	1897	10	100.4	70	130	
Sb	121	2	115	2.670	ppb	27.300	407	2	133.5	70	130	>+/-30%
Ba	137	2	115	0.720	ppb	112.428	43	1	72.0	70	130	
W	182	2	165	5.021	ppb	6.445	6755	1	502.1	70	130	>+/-30%
Pt	195	2	165	0.125	ppb	49.487	157	1	12.5	70	130	>+/-30%
Tl	205	2	165	1.135	ppb	1.857	2640	1	113.5	70	130	
Pb	208	2	165	1.174	ppb	2.859	3737	1	117.4	70	130	
Th	232	2	165	2.324	ppb	4.811	8299	2	116.2	70	130	
U	238	2	165	1.202	ppb	4.547	5158	1	120.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	23515	1.29	446069	5.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1850241	0.90	13344586	13.87	60	120	IS Failed
Sc (IS)	45	2	HMI He	84371	1.44	548684	15.38	60	120	IS Failed
Sc (IS)	45	3	No Gas	4247732	1.07	39087130	10.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1205039	0.24	8240244	14.62	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	131545	0.61	783465	16.79	60	120	IS Failed
In Internal Standard	115	2	HMI He	553096	0.33	2775841	19.93	60	120	IS Failed
Ho-165	165	2	HMI He	4365153	0.41	17360012	25.14	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-8-A
Data File Name	237SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:14:08-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-187.852	ppb	-187.852	-1.09	3450	500000	
Li	7	2	45	-203.796	ppb	-203.796	-24.08	260	500000	
Li	7	3	45	-193.485	ppb	-193.485	-1.54	111777	50000	
Be	9	1	6	0.803	ppb	0.803	182.54	7	2000	
B	11	1	6	68.347	ppb	68.347	23.92	610	2000	
Na	23	1	45	30065.974	ppb	30065.974	1.61	5397934	2000	>LDR
Na	23	2	45	28597.745	ppb	28597.745	1.14	609232	400000	
Mg	24	2	45	22889.599	ppb	22889.599	0.46	211591	400000	
Al	27	2	45	931.407	ppb	931.407	6.10	2137	400000	
K	39	1	45	11345.853	ppb	11345.853	2.66	2008586	400000	
K	39	2	45	11715.931	ppb	11715.931	1.23	53400	400000	
Ca	40	1	45	125705.090	ppb	125705.090	0.70	31730244	400000	
Ca	44	2	45	131982.460	ppb	131982.460	2.94	36682	400000	
V	51	2	72	3.727	ppb	3.727	5.17	637	2000	
Cr	52	2	72	34.330	ppb	34.330	4.97	5808	5000	
Mn	55	2	72	4776.775	ppb	4776.775	0.72	292878	10000	
Fe	57	2	72	1286.851	ppb	1286.851	5.03	4194	400000	
Co	59	2	72	1.354	ppb	1.354	23.97	447	2000	
Ni	60	2	72	41.711	ppb	41.711	3.82	4034	5000	
Cu	63	2	72	344.499	ppb	344.499	2.02	94730	5000	
Zn	66	2	72	146.359	ppb	146.359	1.28	4618	5000	
As	75	2	72	2.792	ppb	2.792	9.03	55	2000	
Se	78	1	72	2.480	ppb	2.480	32.06	72	2000	
Sr	88	2	72	2135.275	ppb	2135.275	1.03	140255	4000	
Zr	90	2	72	394.169	ppb	394.169	11.19	327	1000	
Nb	93	2	72	1.071	ppb	1.071	18.88	627	200	
Mo	95	2	115	29.904	ppb	29.904	2.60	4861	2000	
Pd	105	2	115	0.140	ppb	0.140	60.03	47	100	
Ag	107	2	115	0.056	ppb	0.056	34.84	37	100	
Cd	111	2	115	0.021	ppb	0.021	409.60	3	2000	
Sn	120	2	115	2.434	ppb	2.434	10.76	480	2000	
Sb	121	2	115	0.607	ppb	0.607	29.00	97	1000	
Ba	137	2	115	61.191	ppb	61.191	6.67	2970	5000	
W	182	2	165	0.437	ppb	0.437	6.13	753	100	
Pt	195	2	165	0.044	ppb	0.044	24.56	63	100	
Tl	205	2	165	0.060	ppb	0.060	30.79	163	2000	
Pb	208	2	165	2.348	ppb	2.348	6.73	7134	5000	
Th	232	2	165	1.340	ppb	1.340	4.07	4751	2000	
U	238	2	165	24.674	ppb	24.674	0.45	103763	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	22079	3.15	446069	4.95	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1791444	1.16	13344586	13.42	60	120	IS Failed
Sc (IS)	45	2	HMI He	83218	1.09	548684	15.17	60	120	IS Failed
Sc (IS)	45	3	No Gas	4080498	1.58	39087130	10.44	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1130682	1.87	8240244	13.72	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	128296	1.44	783465	16.38	60	120	IS Failed
In Internal Standard	115	2	HMI He	533563	0.29	2775841	19.22	60	120	IS Failed
Ho-165	165	2	HMI He	4300492	1.05	17360012	24.77	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-9-A
Data File Name	238SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:17:59-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-190.888	ppb	-190.888	-6.11	3444	500000	
Li	7	2	45	-172.784	ppb	-172.784	-22.74	313	500000	
Li	7	3	45	-195.991	ppb	-195.991	-1.24	108577	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	68.636	ppb	68.636	22.46	617	2000	
Na	23	1	45	59550.122	ppb	59550.122	0.72	10809212	2000	>LDR
Na	23	2	45	58808.226	ppb	58808.226	0.84	1269327	400000	
Mg	24	2	45	61772.582	ppb	61772.582	0.83	581900	400000	
Al	27	2	45	2229.365	ppb	2229.365	6.80	5204	400000	
K	39	1	45	17992.392	ppb	17992.392	0.67	3082829	400000	
K	39	2	45	18036.081	ppb	18036.081	0.72	83277	400000	
Ca	40	1	45	440449.899	ppb	440449.899	1.29	113008328	400000	
Ca	44	2	45	469716.430	ppb	469716.430	0.75	133104	400000	
V	51	2	72	0.400	ppb	0.400	125.11	220	2000	
Cr	52	2	72	41.464	ppb	41.464	10.01	7015	5000	
Mn	55	2	72	71383.461	ppb	71383.461	0.38	4379143	10000	>LDR
Fe	57	2	72	203.964	ppb	203.964	11.60	683	400000	
Co	59	2	72	0.409	ppb	0.409	30.24	137	2000	
Ni	60	2	72	23.358	ppb	23.358	9.01	2274	5000	
Cu	63	2	72	40.433	ppb	40.433	4.77	11278	5000	
Zn	66	2	72	68.737	ppb	68.737	6.61	2220	5000	
As	75	2	72	0.035	ppb	0.035	290.14	2	2000	
Se	78	1	72	13.360	ppb	13.360	4.17	389	2000	
Sr	88	2	72	6187.290	ppb	6187.290	0.67	406655	4000	
Zr	90	2	72	462.502	ppb	462.502	36.42	380	1000	
Nb	93	2	72	1.930	ppb	1.930	19.49	1033	200	
Mo	95	2	115	0.272	ppb	0.272	39.75	50	2000	
Pd	105	2	115	0.302	ppb	0.302	32.43	90	100	
Ag	107	2	115	0.006	ppb	0.006	165.44	7	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.052	ppb	0.052	546.78	57	2000	
Sb	121	2	115	0.027	ppb	0.027	397.68	13	1000	
Ba	137	2	115	6622.741	ppb	6622.741	0.99	317484	5000	
W	182	2	165	0.082	ppb	0.082	34.16	297	100	
Pt	195	2	165	0.017	ppb	0.017	29.09	33	100	
Tl	205	2	165	-0.001	ppb	-0.001	-1105.99	27	2000	
Pb	208	2	165	-0.010	ppb	-0.010	-165.05	200	5000	
Th	232	2	165	0.644	ppb	0.644	0.88	2327	2000	
U	238	2	165	293.335	ppb	293.335	0.64	1233995	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	22253	4.70	446069	4.99	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1821320	0.72	13344586	13.65	60	120	IS Failed
Sc (IS)	45	2	HMI He	84880	1.31	548684	15.47	60	120	IS Failed
Sc (IS)	45	3	No Gas	4024612	0.66	39087130	10.30	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1148294	1.15	8240244	13.94	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	128373	0.27	783465	16.39	60	120	IS Failed
In Internal Standard	115	2	HMI He	528138	0.12	2775841	19.03	60	120	IS Failed
Ho-165	165	2	HMI He	4303068	0.46	17360012	24.79	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114297-A-1-A
Data File Name	239SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:21:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-191.640	ppb	-191.640	-0.89	3337	500000	
Li	7	2	45	-121.923	ppb	-121.923	-12.63	380	500000	
Li	7	3	45	-201.744	ppb	-201.744	-1.92	103475	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	139.028	ppb	139.028	7.53	1220	2000	
Na	23	1	45	34511.273	ppb	34511.273	1.07	6122859	2000	>LDR
Na	23	2	45	32593.197	ppb	32593.197	1.60	681833	400000	
Mg	24	2	45	20644.214	ppb	20644.214	1.50	187724	400000	
Al	27	2	45	22.980	ppb	22.980	91.90	57	400000	
K	39	1	45	8056.714	ppb	8056.714	0.90	1486784	400000	
K	39	2	45	8159.996	ppb	8159.996	1.36	36882	400000	
Ca	40	1	45	137165.964	ppb	137165.964	1.87	34262439	400000	
Ca	44	2	45	150046.389	ppb	150046.389	2.48	41005	400000	
V	51	2	72	1.797	ppb	1.797	100.43	390	2000	
Cr	52	2	72	1.264	ppb	1.264	16.02	237	5000	
Mn	55	2	72	4200.401	ppb	4200.401	0.93	253530	10000	
Fe	57	2	72	1121.846	ppb	1121.846	9.80	3602	400000	
Co	59	2	72	1.263	ppb	1.263	15.61	410	2000	
Ni	60	2	72	3.091	ppb	3.091	31.97	320	5000	
Cu	63	2	72	6.794	ppb	6.794	6.35	2004	5000	
Zn	66	2	72	16.654	ppb	16.654	12.30	600	5000	
As	75	2	72	236.562	ppb	236.562	1.93	4473	2000	
Se	78	1	72	75.552	ppb	75.552	5.50	2168	2000	
Sr	88	2	72	2173.997	ppb	2173.997	1.57	140582	4000	
Zr	90	2	72	284.299	ppb	284.299	10.10	237	1000	
Nb	93	2	72	0.179	ppb	0.179	24.74	200	200	
Mo	95	2	115	1.313	ppb	1.313	23.37	217	2000	
Pd	105	2	115	0.080	ppb	0.080	91.30	30	100	
Ag	107	2	115	0.023	ppb	0.023	112.89	17	100	
Cd	111	2	115	0.021	ppb	0.021	403.97	3	2000	
Sn	120	2	115	-0.004	ppb	-0.004	-3295.36	47	2000	
Sb	121	2	115	0.122	ppb	0.122	121.00	27	1000	
Ba	137	2	115	284.523	ppb	284.523	2.67	13606	5000	
W	182	2	165	0.065	ppb	0.065	73.90	267	100	
Pt	195	2	165	0.012	ppb	0.012	177.42	27	100	
Tl	205	2	165	0.009	ppb	0.009	28.78	47	2000	
Pb	208	2	165	0.179	ppb	0.179	24.07	737	5000	
Th	232	2	165	0.073	ppb	0.073	24.19	330	2000	
U	238	2	165	124.664	ppb	124.664	0.51	510383	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	21855	3.22	446069	4.90	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1772796	0.95	13344586	13.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	81855	1.60	548684	14.92	60	120	IS Failed
Sc (IS)	45	3	No Gas	3977392	1.12	39087130	10.18	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1132421	0.96	8240244	13.74	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	126305	0.95	783465	16.12	60	120	IS Failed
In Internal Standard	115	2	HMI He	526637	0.50	2775841	18.97	60	120	IS Failed
Ho-165	165	2	HMI He	4187649	0.50	17360012	24.12	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114297-A-2-A
Data File Name	240SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:25:40-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-191.901	ppb	-191.901	-2.78	3267	500000	
Li	7	2	45	-191.985	ppb	-191.985	-33.49	267	500000	
Li	7	3	45	-204.504	ppb	-204.504	-2.01	98569	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	128.510	ppb	128.510	9.09	1107	2000	
Na	23	1	45	152525.544	ppb	152525.544	1.38	26336285	2000	>LDR
Na	23	2	45	148067.691	ppb	148067.691	1.04	3003108	400000	
Mg	24	2	45	13137.811	ppb	13137.811	1.87	116956	400000	
Al	27	2	45	100.613	ppb	100.613	7.62	227	400000	
K	39	1	45	5294.285	ppb	5294.285	0.91	1045413	400000	
K	39	2	45	6279.035	ppb	6279.035	2.04	27988	400000	
Ca	40	1	45	90076.831	ppb	90076.831	0.65	22070574	400000	
Ca	44	2	45	93437.584	ppb	93437.584	1.45	24986	400000	
V	51	2	72	0.497	ppb	0.497	126.92	223	2000	
Cr	52	2	72	56.876	ppb	56.876	8.31	9260	5000	
Mn	55	2	72	27451.035	ppb	27451.035	1.85	1622072	10000	
Fe	57	2	72	87.084	ppb	87.084	42.74	293	400000	
Co	59	2	72	0.150	ppb	0.150	56.17	50	2000	
Ni	60	2	72	0.496	ppb	0.496	45.14	73	5000	
Cu	63	2	72	9.057	ppb	9.057	4.54	2560	5000	
Zn	66	2	72	12.823	ppb	12.823	7.14	473	5000	
As	75	2	72	5.406	ppb	5.406	12.98	101	2000	
Se	78	1	72	108.649	ppb	108.649	8.60	3040	2000	
Sr	88	2	72	1332.359	ppb	1332.359	2.19	84351	4000	
Zr	90	2	72	56.447	ppb	56.447	39.74	60	1000	
Nb	93	2	72	0.196	ppb	0.196	62.60	203	200	
Mo	95	2	115	0.110	ppb	0.110	90.04	23	2000	
Pd	105	2	115	0.020	ppb	0.020	289.35	13	100	
Ag	107	2	115	0.058	ppb	0.058	86.82	37	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.095	ppb	-0.095	-122.09	30	2000	
Sb	121	2	115	0.030	ppb	0.030	144.15	13	1000	
Ba	137	2	115	54.300	ppb	54.300	6.68	2547	5000	
W	182	2	165	0.086	ppb	0.086	50.24	290	100	
Pt	195	2	165	0.018	ppb	0.018	116.99	33	100	
Tl	205	2	165	0.017	ppb	0.017	256.09	63	2000	
Pb	208	2	165	0.064	ppb	0.064	64.29	400	5000	
Th	232	2	165	0.042	ppb	0.042	33.04	220	2000	
U	238	2	165	156.442	ppb	156.442	0.44	632101	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	21443	1.96	446069	4.81	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1738712	0.57	13344586	13.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	80066	1.09	548684	14.59	60	120	IS Failed
Sc (IS)	45	3	No Gas	3856606	0.47	39087130	9.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1104731	0.98	8240244	13.41	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	123658	0.58	783465	15.78	60	120	IS Failed
In Internal Standard	115	2	HMI He	515475	0.75	2775841	18.57	60	120	IS Failed
Ho-165	165	2	HMI He	4132860	0.43	17360012	23.81	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	241_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:29:28-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-8.511	ppb	-72.790	7582	500	-1.7	90	110	>+\-10%
Li	7	2	45	8.984	ppb	412.758	617	500	1.8	90	110	>+\-10%
Li	7	3	45	-13.626	ppb	-19.913	246440	500	-2.7	90	110	>+\-10%
Be	9	1	6	63.739	ppb	12.374	517	50	127.5	90	110	>+\-10%
B	11	1	6	57.660	ppb	10.910	553	50	115.3	90	110	>+\-10%
Na	23	1	45	5262.365	ppb	2.678	1051047	5000	105.2	90	110	
Na	23	2	45	4860.213	ppb	1.962	115193	5000	97.2	90	110	
Mg	24	2	45	4212.192	ppb	1.278	40984	5000	84.2	90	110	>+\-10%
Al	27	2	45	4336.240	ppb	4.365	10380	5000	86.7	90	110	>+\-10%
K	39	1	45	5811.963	ppb	2.744	1221553	5000	116.2	90	110	>+\-10%
K	39	2	45	5629.544	ppb	2.272	27393	5000	112.6	90	110	>+\-10%
Ca	40	1	45	5504.826	ppb	2.900	1475571	5000	110.1	90	110	>+\-10%
Ca	44	2	45	5200.097	ppb	3.336	1523	5000	104.0	90	110	
V	51	2	72	46.616	ppb	6.698	6435	50	93.2	90	110	
Cr	52	2	72	45.657	ppb	3.138	8266	50	91.3	90	110	
Mn	55	2	72	97.632	ppb	6.101	6425	50	195.3	90	110	>+\-10%
Fe	57	2	72	4761.257	ppb	0.795	16549	5000	95.2	90	110	
Co	59	2	72	44.861	ppb	3.938	15748	50	89.7	90	110	>+\-10%
Ni	60	2	72	47.276	ppb	1.980	4894	50	94.6	90	110	
Cu	63	2	72	49.864	ppb	2.539	14844	50	99.7	90	110	
Zn	66	2	72	49.703	ppb	4.878	1747	50	99.4	90	110	
As	75	2	72	48.443	ppb	10.891	997	50	96.9	90	110	
Se	78	1	72	60.020	ppb	5.932	1865	50	120.0	90	110	>+\-10%
Sr	88	2	72	67.208	ppb	5.152	4734	50	134.4	90	110	>+\-10%
Zr	90	2	72	-3.111	ppb	-584.611	17	50	-6.2	90	110	>+\-10%
Nb	93	2	72	102.768	ppb	1.108	52256	100	102.8	90	110	
Mo	95	2	115	46.443	ppb	6.572	7962	50	92.9	90	110	
Pd	105	2	115	51.121	ppb	4.702	14777	50	102.2	90	110	
Ag	107	2	115	50.822	ppb	2.195	32264	50	101.6	90	110	
Cd	111	2	115	52.756	ppb	2.252	3801	50	105.5	90	110	
Sn	120	2	115	53.196	ppb	2.805	10017	50	106.4	90	110	
Sb	121	2	115	51.497	ppb	6.151	7802	50	103.0	90	110	
Ba	137	2	115	64.119	ppb	8.359	3284	50	128.2	90	110	>+\-10%
W	182	2	165	47.886	ppb	1.615	64224	50	95.8	90	110	
Pt	195	2	165	48.648	ppb	1.996	56779	50	97.3	90	110	
Tl	205	2	165	54.514	ppb	1.167	128395	50	109.0	90	110	
Pb	208	2	165	54.888	ppb	1.767	167750	50	109.8	90	110	
Th	232	2	165	54.734	ppb	1.058	198006	50	109.5	90	110	
U	238	2	165	53.305	ppb	1.839	232713	50	106.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	23513	2.21	446069	5.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1891686	1.30	13344586	14.18	60	120	IS Failed
Sc (IS)	45	2	HMI He	87068	1.85	548684	15.87	60	120	IS Failed
Sc (IS)	45	3	No Gas	4294274	1.00	39087130	10.99	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1226259	0.32	8240244	14.88	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	137395	0.67	783465	17.54	60	120	IS Failed
In Internal Standard	115	2	HMI He	562946	0.83	2775841	20.28	60	120	IS Failed
Ho-165	165	2	HMI He	4465505	1.09	17360012	25.72	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	242_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:33:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-213.132	ppb	-1.1	103756	10	
Be	9	1	6	-0.043	ppb	0.0	0	0.5	
B	11	1	6	4.762	ppb	35.1	63	0.5	>RL
Na	23	1	45	798.784	ppb	2.3	217710	25	>RL
Na	23	2	45	830.923	ppb	0.8	26765	25	>RL
Mg	24	2	45	48.559	ppb	26.2	780	25	>RL
Al	27	2	45	4.524	ppb	140.6	17	15	
K	39	1	45	243.664	ppb	11.2	320843	50	>RL
K	39	2	45	363.249	ppb	14.2	2790	50	>RL
Ca	40	1	45	71.312	ppb	3.0	28409	50	>RL
Ca	44	2	45	71.892	ppb	54.6	33	25	>RL
V	51	2	72	0.736	ppb	48.9	280	1	
Cr	52	2	72	0.114	ppb	173.7	50	1	
Mn	55	2	72	29.026	ppb	10.2	1920	0.5	>RL
Fe	57	2	72	10.533	ppb	71.4	60	25	
Co	59	2	72	0.048	ppb	117.1	20	0.5	
Ni	60	2	72	-0.037	ppb	-754.8	27	1	
Cu	63	2	72	0.083	ppb	97.2	207	1	
Zn	66	2	72	-0.659	ppb	-163.2	80	5	
As	75	2	72	0.029	ppb	332.7	2	1	
Se	78	1	72	0.313	ppb	62.0	11	1	
Sr	88	2	72	1.834	ppb	38.5	137	0.5	>RL
Zr	90	2	72	20.689	ppb	119.1	37	1	>RL
Nb	93	2	72	2.360	ppb	6.4	1323	2	>RL
Mo	95	2	115	0.172	ppb	69.9	37	0.5	
Pd	105	2	115	0.084	ppb	61.9	33	1	
Ag	107	2	115	0.031	ppb	116.1	23	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	-0.129	ppb	-62.5	27	1	
Sb	121	2	115	0.630	ppb	21.6	107	0.6	>RL
Ba	137	2	115	0.177	ppb	62.6	17	0.5	
W	182	2	165	0.144	ppb	47.8	390	1	
Pt	195	2	165	0.028	ppb	90.4	47	1	
Tl	205	2	165	0.026	ppb	28.3	90	0.1	
Pb	208	2	165	0.004	ppb	885.2	250	0.5	
Th	232	2	165	0.076	ppb	5.2	363	1	
U	238	2	165	0.095	ppb	13.7	443	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	25111	2.16	446069	5.63	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1919369	1.04	13344586	14.38	60	120	IS Failed
Sc (IS)	45	2	HMI He	87715	1.12	548684	15.99	60	120	IS Failed
Sc (IS)	45	3	No Gas	4301277	0.27	39087130	11.00	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1243158	0.25	8240244	15.09	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	137288	0.81	783465	17.52	60	120	IS Failed
In Internal Standard	115	2	HMI He	568970	0.36	2775841	20.50	60	120	IS Failed
Ho-165	165	2	HMI He	4462715	0.35	17360012	25.71	60	120	IS Failed

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5314916
Data File Name	243LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:37:12-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-207.146	ppb	-0.503	108412	50	-414.3	70	130	>+/-30%
Be	9	1	6	0.732	ppb	91.776	7	1	73.2	70	130	
Na	23	2	45	896.692	ppb	0.422	28441	50	1793.4	70	130	>+/-30%
Mg	24	2	45	93.233	ppb	11.382	1223	50	186.5	70	130	>+/-30%
Al	27	2	45	23.622	ppb	19.498	63	30	78.7	70	130	
K	39	2	45	513.388	ppb	12.589	3524	100	513.4	70	130	>+/-30%
Ca	44	2	45	116.370	ppb	17.910	47	50	232.7	70	130	>+/-30%
V	51	2	72	5.847	ppb	17.539	977	5	116.9	70	130	
Cr	52	2	72	1.592	ppb	3.060	320	2	79.6	70	130	
Mn	55	2	72	23.612	ppb	8.858	1583	1	2361.2	70	130	>+/-30%
Fe	57	2	72	51.173	ppb	39.209	203	50	102.3	70	130	
Co	59	2	72	0.959	ppb	26.064	343	1	95.9	70	130	
Ni	60	2	72	1.883	ppb	20.302	227	2	94.1	70	130	
Cu	63	2	72	2.866	ppb	9.235	1037	2	143.3	70	130	>+/-30%
Zn	66	2	72	9.582	ppb	18.154	423	10	95.8	70	130	
As	75	2	72	4.962	ppb	7.676	105	5	99.2	70	130	
Se	78	1	72	5.688	ppb	10.710	183	5	113.8	70	130	
Sr	88	2	72	2.938	ppb	5.228	217	1	293.8	70	130	>+/-30%
Zr	90	2	72	-11.232	ppb	-105.014	10	0.5	-2246.4	70	130	>+/-30%
Nb	93	2	72	5.457	ppb	7.443	2927	2	272.9	70	130	>+/-30%
Mo	95	2	115	1.715	ppb	14.232	310	2	85.7	70	130	
Pd	105	2	115	-0.008	ppb	-242.379	7	1	-0.8	70	130	>+/-30%
Ag	107	2	115	5.915	ppb	3.677	3877	5	118.3	70	130	
Cd	111	2	115	1.005	ppb	20.914	77	1	100.5	70	130	
Sn	120	2	115	10.704	ppb	7.257	2120	10	107.0	70	130	
Sb	121	2	115	2.281	ppb	26.740	367	2	114.1	70	130	
Ba	137	2	115	1.118	ppb	54.209	67	1	111.8	70	130	
W	182	2	165	4.974	ppb	6.573	6945	1	497.4	70	130	>+/-30%
Pt	195	2	165	0.038	ppb	21.971	60	1	3.8	70	130	>+/-30%
Tl	205	2	165	1.179	ppb	2.796	2844	1	117.9	70	130	
Pb	208	2	165	1.158	ppb	3.304	3824	1	115.8	70	130	
Th	232	2	165	2.372	ppb	0.912	8786	2	118.6	70	130	
U	238	2	165	1.171	ppb	9.407	5214	1	117.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	24782	2.26	446069	5.56	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1948257	0.86	13344586	14.60	60	120	IS Failed
Sc (IS)	45	2	HMI He	88392	0.90	548684	16.11	60	120	IS Failed
Sc (IS)	45	3	No Gas	4315802	0.42	39087130	11.04	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1261582	0.38	8240244	15.31	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	138934	0.35	783465	17.73	60	120	IS Failed
In Internal Standard	115	2	HMI He	580771	0.50	2775841	20.92	60	120	IS Failed
Ho-165	165	2	HMI He	4527606	0.34	17360012	26.08	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-16-B
Data File Name	244SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:41:01-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-190.127	ppb	-190.127	-8.54	3454	500000	
Li	7	2	45	-164.357	ppb	-164.357	-31.05	327	500000	
Li	7	3	45	-206.218	ppb	-206.218	-1.74	104558	50000	
Be	9	1	6	0.376	ppb	0.376	193.15	3	2000	
B	11	1	6	932.976	ppb	932.976	7.19	8486	2000	
Na	23	1	45	531553.672	ppb	531553.672	1.85	95821965	2000	>LDR
Na	23	2	45	513959.456	ppb	513959.456	0.95	11004118	400000	
Mg	24	2	45	27824.711	ppb	27824.711	1.81	261623	400000	
Al	27	2	45	1.856	ppb	1.856	229.38	10	400000	
K	39	1	45	19039.624	ppb	19039.624	1.13	3241003	400000	
K	39	2	45	19109.645	ppb	19109.645	1.54	87951	400000	
Ca	40	1	45	36926.763	ppb	36926.763	0.25	9466208	400000	
Ca	44	2	45	38489.848	ppb	38489.848	4.34	10891	400000	
V	51	2	72	0.651	ppb	0.651	35.56	257	2000	
Cr	52	2	72	3.776	ppb	3.776	12.40	677	5000	
Mn	55	2	72	604.369	ppb	604.369	7.56	37821	10000	
Fe	57	2	72	5286.614	ppb	5286.614	0.99	17513	400000	
Co	59	2	72	0.241	ppb	0.241	14.48	83	2000	
Ni	60	2	72	2.796	ppb	2.796	31.54	303	5000	
Cu	63	2	72	1.365	ppb	1.365	15.11	557	5000	
Zn	66	2	72	3.469	ppb	3.469	43.45	207	5000	
As	75	2	72	10.766	ppb	10.766	8.56	212	2000	
Se	78	1	72	6.406	ppb	6.406	12.09	187	2000	
Sr	88	2	72	449.868	ppb	449.868	1.71	30169	4000	
Zr	90	2	72	39.493	ppb	39.493	30.08	50	1000	
Nb	93	2	72	0.702	ppb	0.702	33.46	460	200	
Mo	95	2	115	1.664	ppb	1.664	16.92	277	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-116.64	3	100	
Ag	107	2	115	0.006	ppb	0.006	335.92	7	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.162	ppb	0.162	72.95	77	2000	
Sb	121	2	115	0.631	ppb	0.631	77.68	100	1000	
Ba	137	2	115	6.466	ppb	6.466	21.44	320	5000	
W	182	2	165	0.171	ppb	0.171	57.32	413	100	
Pt	195	2	165	0.038	ppb	0.038	27.48	57	100	
Tl	205	2	165	0.020	ppb	0.020	33.94	73	2000	
Pb	208	2	165	0.046	ppb	0.046	25.60	367	5000	
Th	232	2	165	0.057	ppb	0.057	16.42	283	2000	
U	238	2	165	0.077	ppb	0.077	17.65	357	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	22937	2.89	446069	5.14	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1818105	0.46	13344586	13.62	60	120	IS Failed
Sc (IS)	45	2	HMI He	84673	0.91	548684	15.43	60	120	IS Failed
Sc (IS)	45	3	No Gas	4136899	0.20	39087130	10.58	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1145636	0.29	8240244	13.90	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	130967	1.04	783465	16.72	60	120	IS Failed
In Internal Standard	115	2	HMI He	533659	0.55	2775841	19.23	60	120	IS Failed
Ho-165	165	2	HMI He	4328567	0.90	17360012	24.93	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-17-B
Data File Name	245SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:44:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-176.024	ppb	-176.024	-8.63	5485	500000	
Li	7	2	45	-145.723	ppb	-145.723	-43.34	353	500000	
Li	7	3	45	-187.972	ppb	-187.972	-1.74	110699	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	433.155	ppb	433.155	93.60	4981	2000	
Na	23	1	45	539833.595	ppb	539833.595	89.44	116859402	2000	>LDR
Na	23	2	45	1076577.217	ppb	1076577.217	1.37	22893843	400000	
Mg	24	2	45	190488.156	ppb	190488.156	0.53	1778075	400000	
Al	27	2	45	16.339	ppb	16.339	55.65	43	400000	
K	39	1	45	4259.221	ppb	4259.221	108.04	1150394	400000	
K	39	2	45	8793.360	ppb	8793.360	0.70	40774	400000	
Ca	40	1	45	264411.293	ppb	264411.293	90.49	81127786	400000	
Ca	44	2	45	576120.728	ppb	576120.728	0.71	161819	400000	
V	51	2	72	-0.006	ppb	-0.006	-2578.25	167	2000	
Cr	52	2	72	0.561	ppb	0.561	47.62	120	5000	
Mn	55	2	72	7857.154	ppb	7857.154	0.63	475028	10000	
Fe	57	2	72	1957.883	ppb	1957.883	5.32	6278	400000	
Co	59	2	72	4.365	ppb	4.365	3.54	1413	2000	
Ni	60	2	72	7.555	ppb	7.555	17.99	743	5000	
Cu	63	2	72	0.588	ppb	0.588	63.37	327	5000	
Zn	66	2	72	1.518	ppb	1.518	113.63	140	5000	
As	75	2	72	2.797	ppb	2.797	12.45	54	2000	
Se	78	1	72	0.273	ppb	0.273	168.18	9	2000	
Sr	88	2	72	4528.699	ppb	4528.699	0.22	293334	4000	
Zr	90	2	72	72.120	ppb	72.120	52.28	73	1000	
Nb	93	2	72	0.513	ppb	0.513	12.37	357	200	
Mo	95	2	115	0.389	ppb	0.389	24.91	67	2000	
Pd	105	2	115	0.135	ppb	0.135	59.20	43	100	
Ag	107	2	115	0.006	ppb	0.006	323.11	7	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.004	ppb	0.004	2989.98	47	2000	
Sb	121	2	115	0.345	ppb	0.345	32.57	57	1000	
Ba	137	2	115	184.838	ppb	184.838	0.94	8589	5000	
W	182	2	165	0.106	ppb	0.106	17.33	323	100	
Pt	195	2	165	0.014	ppb	0.014	107.70	30	100	
Tl	205	2	165	0.008	ppb	0.008	60.71	47	2000	
Pb	208	2	165	-0.019	ppb	-0.019	-92.93	173	5000	
Th	232	2	165	0.035	ppb	0.035	50.34	203	2000	
U	238	2	165	9.608	ppb	9.608	1.09	40006	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	38666	42.40	446069	8.67	60	120	IS Failed
Sc (IS)	45	1	HMI H2	2642489	29.25	13344586	19.80	60	120	IS Failed
Sc (IS)	45	2	HMI He	84132	0.80	548684	15.33	60	120	IS Failed
Sc (IS)	45	3	No Gas	3909456	0.44	39087130	10.00	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	1726100	33.70	8240244	20.95	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	126513	0.57	783465	16.15	60	120	IS Failed
In Internal Standard	115	2	HMI He	511548	0.49	2775841	18.43	60	120	IS Failed
Ho-165	165	2	HMI He	4256165	0.18	17360012	24.52	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-18-B
Data File Name	246SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:48:40-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-127.629	ppb	-127.629	-9.43	3994	500000	
Li	7	2	45	-196.554	ppb	-196.554	-13.32	233	500000	
Li	7	3	45	-161.048	ppb	-161.048	-1.72	111691	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1659.845	ppb	1659.845	3.72	15838	2000	
Na	23	1	45	6377393.634	ppb	6377393.634	1.01	961377506	2000	>LDR
Na	23	2	45	6123052.763	ppb	6123052.763	1.93	110825732	400000	>LDR
Mg	24	2	45	1056472.721	ppb	1056472.721	2.00	8394407	400000	
Al	27	2	45	16.250	ppb	16.250	37.88	37	400000	
K	39	1	45	238757.561	ppb	238757.561	1.38	31439610	400000	
K	39	2	45	238986.522	ppb	238986.522	1.31	920393	400000	
Ca	40	1	45	580273.204	ppb	580273.204	1.23	124357245	400000	
Ca	44	2	45	634291.420	ppb	634291.420	1.05	151696	400000	
V	51	2	72	8.425	ppb	8.425	12.13	957	2000	
Cr	52	2	72	13.038	ppb	13.038	4.98	1737	5000	
Mn	55	2	72	9691.364	ppb	9691.364	0.45	464160	10000	
Fe	57	2	72	92.220	ppb	92.220	28.23	250	400000	
Co	59	2	72	0.070	ppb	0.070	55.43	20	2000	
Ni	60	2	72	0.905	ppb	0.905	16.51	90	5000	
Cu	63	2	72	2.535	ppb	2.535	5.35	677	5000	
Zn	66	2	72	2.049	ppb	2.049	94.30	123	5000	
As	75	2	72	60.471	ppb	60.471	6.12	908	2000	
Se	78	1	72	0.913	ppb	0.913	11.55	21	2000	
Sr	88	2	72	11859.641	ppb	11859.641	0.72	608461	4000	
Zr	90	2	72	609.612	ppb	609.612	3.07	387	1000	
Nb	93	2	72	0.849	ppb	0.849	11.52	407	200	
Mo	95	2	115	0.750	ppb	0.750	23.86	97	2000	
Pd	105	2	115	0.596	ppb	0.596	56.15	130	100	
Ag	107	2	115	0.068	ppb	0.068	38.38	33	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.095	ppb	-0.095	-91.90	23	2000	
Sb	121	2	115	1.590	ppb	1.590	39.87	180	1000	
Ba	137	2	115	284.918	ppb	284.918	2.84	10431	5000	
W	182	2	165	2.668	ppb	2.668	7.82	2927	100	
Pt	195	2	165	0.079	ppb	0.079	42.40	83	100	
Tl	205	2	165	0.024	ppb	0.024	33.92	67	2000	
Pb	208	2	165	0.074	ppb	0.074	47.47	360	5000	
Th	232	2	165	0.026	ppb	0.026	28.08	140	2000	
U	238	2	165	0.222	ppb	0.222	18.05	777	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	24044	0.79	446069	5.39	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1521345	1.07	13344586	11.40	60	120	IS Failed
Sc (IS)	45	2	HMI He	71632	1.34	548684	13.06	60	120	IS Failed
Sc (IS)	45	3	No Gas	3404610	1.08	39087130	8.71	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	897805	0.41	8240244	10.90	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	100216	1.35	783465	12.79	60	120	IS Failed
In Internal Standard	115	2	HMI He	403101	1.46	2775841	14.52	60	120	IS Failed
Ho-165	165	2	HMI He	3469814	0.78	17360012	19.99	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-20-B
Data File Name	247SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:52:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-187.400	ppb	-187.400	-7.21	2550	500000	
Li	7	2	45	-134.344	ppb	-134.344	-72.75	267	500000	
Li	7	3	45	-189.850	ppb	-189.850	-1.96	79672	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1289.726	ppb	1289.726	2.71	8923	2000	
Na	23	1	45	4854209.933	ppb	4854209.933	0.79	635003471	2000	>LDR
Na	23	2	45	4713289.281	ppb	4713289.281	1.67	71875887	400000	>LDR
Mg	24	2	45	883688.070	ppb	883688.070	2.04	5915792	400000	
Al	27	2	45	13.643	ppb	13.643	102.07	27	400000	
K	39	1	45	139207.964	ppb	139207.964	0.38	15987716	400000	
K	39	2	45	140280.731	ppb	140280.731	2.21	455478	400000	
Ca	40	1	45	384409.920	ppb	384409.920	1.20	71489111	400000	
Ca	44	2	45	430373.072	ppb	430373.072	1.89	86716	400000	
V	51	2	72	12.365	ppb	12.365	18.96	1163	2000	
Cr	52	2	72	4.147	ppb	4.147	14.67	493	5000	
Mn	55	2	72	2536.640	ppb	2536.640	3.64	105408	10000	
Fe	57	2	72	64.339	ppb	64.339	26.60	157	400000	
Co	59	2	72	0.726	ppb	0.726	12.98	163	2000	
Ni	60	2	72	1.653	ppb	1.653	16.57	127	5000	
Cu	63	2	72	10.258	ppb	10.258	10.57	2024	5000	
Zn	66	2	72	2.020	ppb	2.020	82.35	107	5000	
As	75	2	72	12.150	ppb	12.150	15.51	159	2000	
Se	78	1	72	0.851	ppb	0.851	27.92	17	2000	
Sr	88	2	72	8165.091	ppb	8165.091	2.06	363568	4000	
Zr	90	2	72	1256.237	ppb	1256.237	10.96	680	1000	
Nb	93	2	72	0.570	ppb	0.570	22.46	263	200	
Mo	95	2	115	0.600	ppb	0.600	46.89	70	2000	
Pd	105	2	115	0.383	ppb	0.383	35.20	77	100	
Ag	107	2	115	0.052	ppb	0.052	119.62	23	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.230	ppb	0.230	38.61	60	2000	
Sb	121	2	115	0.754	ppb	0.754	48.10	80	1000	
Ba	137	2	115	537.897	ppb	537.897	1.61	17641	5000	
W	182	2	165	0.435	ppb	0.435	29.69	537	100	
Pt	195	2	165	0.029	ppb	0.029	89.47	33	100	
Tl	205	2	165	0.010	ppb	0.010	70.11	37	2000	
Pb	208	2	165	0.120	ppb	0.120	12.34	417	5000	
Th	232	2	165	0.011	ppb	0.011	133.60	87	2000	
U	238	2	165	1.351	ppb	1.351	1.53	4081	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	17434	1.06	446069	3.91	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1320120	1.06	13344586	9.89	60	120	IS Failed
Sc (IS)	45	2	HMI He	60357	2.10	548684	11.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	2844885	0.48	39087130	7.28	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	781603	0.84	8240244	9.49	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	87000	2.51	783465	11.10	60	120	IS Failed
In Internal Standard	115	2	HMI He	361260	1.24	2775841	13.01	60	120	IS Failed
Ho-165	165	2	HMI He	3073916	0.25	17360012	17.71	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-21-B
Data File Name	248SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T03:56:17-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-173.049	ppb	-173.049	-5.37	2134	500000	
Li	7	2	45	-139.891	ppb	-139.891	-31.74	213	500000	
Li	7	3	45	-175.531	ppb	-175.531	-2.42	71162	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1079.236	ppb	1079.236	4.51	6275	2000	
Na	23	1	45	5848278.211	ppb	5848278.211	0.38	589260218	2000	>LDR
Na	23	2	45	5261938.534	ppb	5261938.534	1.21	65839731	400000	>LDR
Mg	24	2	45	936084.014	ppb	936084.014	1.56	5141786	400000	
Al	27	2	45	9.803	ppb	9.803	86.02	17	400000	
K	39	1	45	197793.051	ppb	197793.051	1.11	17433794	400000	
K	39	2	45	181910.926	ppb	181910.926	0.26	484425	400000	
Ca	40	1	45	555764.181	ppb	555764.181	0.28	79610355	400000	
Ca	44	2	45	572389.196	ppb	572389.196	1.50	94622	400000	
V	51	2	72	6.288	ppb	6.288	21.69	517	2000	
Cr	52	2	72	3.510	ppb	3.510	19.72	333	5000	
Mn	55	2	72	4425.423	ppb	4425.423	3.25	146339	10000	
Fe	57	2	72	96.002	ppb	96.002	50.90	180	400000	
Co	59	2	72	0.086	ppb	0.086	100.46	17	2000	
Ni	60	2	72	0.930	ppb	0.930	73.70	63	5000	
Cu	63	2	72	1.182	ppb	1.182	26.72	267	5000	
Zn	66	2	72	1.108	ppb	1.108	334.03	70	5000	
As	75	2	72	75.450	ppb	75.450	5.23	782	2000	
Se	78	1	72	0.380	ppb	0.380	73.84	7	2000	
Sr	88	2	72	11197.690	ppb	11197.690	0.67	396644	4000	
Zr	90	2	72	339.685	ppb	339.685	44.55	153	1000	
Nb	93	2	72	0.351	ppb	0.351	36.88	153	200	
Mo	95	2	115	0.926	ppb	0.926	18.85	87	2000	
Pd	105	2	115	0.388	ppb	0.388	35.86	63	100	
Ag	107	2	115	0.005	ppb	0.005	364.09	3	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.100	ppb	-0.100	-157.84	17	2000	
Sb	121	2	115	3.838	ppb	3.838	6.95	310	1000	
Ba	137	2	115	712.729	ppb	712.729	0.96	19109	5000	
W	182	2	165	8.468	ppb	8.468	1.86	6675	100	
Pt	195	2	165	0.042	ppb	0.042	109.43	37	100	
Tl	205	2	165	-0.005	ppb	-0.005	-3.38	10	2000	
Pb	208	2	165	0.029	ppb	0.029	30.55	190	5000	
Th	232	2	165	0.038	ppb	0.038	42.68	130	2000	
U	238	2	165	0.780	ppb	0.780	6.95	1990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	14655	3.06	446069	3.29	60	120	IS Failed
Sc (IS)	45	1	HMI H2	1016804	0.70	13344586	7.62	60	120	IS Failed
Sc (IS)	45	2	HMI He	49512	0.43	548684	9.02	60	120	IS Failed
Sc (IS)	45	3	No Gas	2341686	0.43	39087130	5.99	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	648366	0.45	8240244	7.87	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	69186	0.80	783465	8.83	60	120	IS Failed
In Internal Standard	115	2	HMI He	295349	1.42	2775841	10.64	60	120	IS Failed
Ho-165	165	2	HMI He	2586554	2.35	17360012	14.90	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-22-B
Data File Name	249SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:00:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-171.953	ppb	-171.953	-4.01	1704	500000	
Li	7	2	45	-154.744	ppb	-154.744	-15.29	157	500000	
Li	7	3	45	-190.225	ppb	-190.225	-1.56	53876	50000	
Be	9	1	6	1.802	ppb	1.802	177.36	7	2000	
B	11	1	6	1093.977	ppb	1093.977	13.41	4824	2000	
Na	23	1	45	5151383.538	ppb	5151383.538	0.63	411940154	2000	>LDR
Na	23	2	45	4715763.902	ppb	4715763.902	1.93	46331581	400000	>LDR
Mg	24	2	45	767410.700	ppb	767410.700	2.34	3309707	400000	
Al	27	2	45	44.475	ppb	44.475	56.78	50	400000	
K	39	1	45	169320.970	ppb	169320.970	0.42	11862133	400000	
K	39	2	45	156728.266	ppb	156728.266	2.47	327784	400000	
Ca	40	1	45	445957.039	ppb	445957.039	0.40	50700009	400000	
Ca	44	2	45	464627.726	ppb	464627.726	2.68	60304	400000	
V	51	2	72	24.812	ppb	24.812	3.49	1427	2000	
Cr	52	2	72	19.925	ppb	19.925	4.28	1473	5000	
Mn	55	2	72	2801.563	ppb	2801.563	0.46	74776	10000	
Fe	57	2	72	144.725	ppb	144.725	26.35	213	400000	
Co	59	2	72	0.483	ppb	0.483	15.42	70	2000	
Ni	60	2	72	3.599	ppb	3.599	69.43	163	5000	
Cu	63	2	72	1.162	ppb	1.162	39.75	213	5000	
Zn	66	2	72	2.645	ppb	2.645	92.46	77	5000	
As	75	2	72	14.782	ppb	14.782	8.12	124	2000	
Se	78	1	72	2.836	ppb	2.836	22.60	37	2000	
Sr	88	2	72	8354.568	ppb	8354.568	0.58	238896	4000	
Zr	90	2	72	1219.365	ppb	1219.365	11.94	423	1000	
Nb	93	2	72	1.008	ppb	1.008	32.10	260	200	
Mo	95	2	115	1.921	ppb	1.921	23.35	147	2000	
Pd	105	2	115	0.364	ppb	0.364	57.12	50	100	
Ag	107	2	115	0.007	ppb	0.007	315.28	3	100	
Cd	111	2	115	0.079	ppb	0.079	235.54	3	2000	
Sn	120	2	115	-0.068	ppb	-0.068	-276.50	17	2000	
Sb	121	2	115	0.939	ppb	0.939	56.52	67	1000	
Ba	137	2	115	845.551	ppb	845.551	2.76	18906	5000	
W	182	2	165	1.026	ppb	1.026	8.98	770	100	
Pt	195	2	165	-0.001	ppb	-0.001	-1155.81	7	100	
Tl	205	2	165	0.008	ppb	0.008	274.32	23	2000	
Pb	208	2	165	0.098	ppb	0.098	37.03	263	5000	
Th	232	2	165	0.047	ppb	0.047	26.19	127	2000	
U	238	2	165	0.660	ppb	0.660	4.14	1427	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	11168	5.98	446069	2.50	60	120	IS Failed
Sc (IS)	45	1	HMI H2	806983	0.37	13344586	6.05	60	120	IS Failed
Sc (IS)	45	2	HMI He	38883	1.43	548684	7.09	60	120	IS Failed
Sc (IS)	45	3	No Gas	1928579	1.73	39087130	4.93	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	514956	0.53	8240244	6.25	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	55850	1.28	783465	7.13	60	120	IS Failed
In Internal Standard	115	2	HMI He	246336	1.25	2775841	8.87	60	120	IS Failed
Ho-165	165	2	HMI He	2189563	1.70	17360012	12.61	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-23-B
Data File Name	250SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:03:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-195.894	ppb	-195.894	-7.66	1230	500000	
Li	7	2	45	-139.022	ppb	-139.022	-25.82	140	500000	
Li	7	3	45	-202.145	ppb	-202.145	-1.34	44359	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1176.391	ppb	1176.391	5.71	4037	2000	
Na	23	1	45	2890098.883	ppb	2890098.883	0.81	192244590	2000	>LDR
Na	23	2	45	2684520.465	ppb	2684520.465	0.99	21981396	400000	>LDR
Mg	24	2	45	394080.291	ppb	394080.291	0.04	1416621	400000	
Al	27	2	45	-2.427	ppb	-2.427	0.00	0	400000	
K	39	1	45	116645.026	ppb	116645.026	0.58	6827610	400000	
K	39	2	45	108784.867	ppb	108784.867	1.35	189723	400000	
Ca	40	1	45	212038.904	ppb	212038.904	0.57	20052891	400000	
Ca	44	2	45	228069.641	ppb	228069.641	3.06	24673	400000	
V	51	2	72	3.172	ppb	3.172	15.43	217	2000	
Cr	52	2	72	2.996	ppb	2.996	7.46	203	5000	
Mn	55	2	72	2350.511	ppb	2350.511	2.29	55076	10000	
Fe	57	2	72	90.105	ppb	90.105	8.10	120	400000	
Co	59	2	72	0.178	ppb	0.178	68.40	23	2000	
Ni	60	2	72	0.343	ppb	0.343	201.93	23	5000	
Cu	63	2	72	2.679	ppb	2.679	37.40	347	5000	
Zn	66	2	72	3.419	ppb	3.419	51.57	77	5000	
As	75	2	72	1.635	ppb	1.635	112.45	12	2000	
Se	78	1	72	4.290	ppb	4.290	21.96	48	2000	
Sr	88	2	72	4583.211	ppb	4583.211	2.02	115058	4000	
Zr	90	2	72	121.681	ppb	121.681	30.96	43	1000	
Nb	93	2	72	0.044	ppb	0.044	311.77	53	200	
Mo	95	2	115	1.658	ppb	1.658	36.17	113	2000	
Pd	105	2	115	0.236	ppb	0.236	37.80	30	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.689	ppb	0.689	52.62	70	2000	
Sb	121	2	115	0.103	ppb	0.103	0.79	10	1000	
Ba	137	2	115	809.947	ppb	809.947	0.46	16122	5000	
W	182	2	165	0.338	ppb	0.338	6.31	283	100	
Pt	195	2	165	0.033	ppb	0.033	32.80	23	100	
Tl	205	2	165	-0.006	ppb	-0.006	-96.69	7	2000	
Pb	208	2	165	0.240	ppb	0.240	26.01	423	5000	
Th	232	2	165	0.001	ppb	0.001	2038.21	40	2000	
U	238	2	165	0.042	ppb	0.042	49.51	93	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	8652	4.55	446069	1.94	60	120	IS Failed
Sc (IS)	45	1	HMI H2	671239	0.62	13344586	5.03	60	120	IS Failed
Sc (IS)	45	2	HMI He	32403	1.33	548684	5.91	60	120	IS Failed
Sc (IS)	45	3	No Gas	1709165	0.19	39087130	4.37	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	438833	0.50	8240244	5.33	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	49034	0.82	783465	6.26	60	120	IS Failed
In Internal Standard	115	2	HMI He	219262	0.48	2775841	7.90	60	120	IS Failed
Ho-165	165	2	HMI He	1945188	1.53	17360012	11.20	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-24-B
Data File Name	251SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:07:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-179.706	ppb	-179.706	-6.61	1213	500000	
Li	7	2	45	-131.065	ppb	-131.065	-122.26	130	500000	
Li	7	3	45	-203.631	ppb	-203.631	-1.10	40142	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1308.647	ppb	1308.647	3.29	3767	2000	
Na	23	1	45	2950565.430	ppb	2950565.430	0.48	175526144	2000	>LDR
Na	23	2	45	2715008.130	ppb	2715008.130	1.60	20081938	400000	>LDR
Mg	24	2	45	399141.514	ppb	399141.514	1.59	1296035	400000	
Al	27	2	45	18.579	ppb	18.579	195.83	17	400000	
K	39	1	45	120170.706	ppb	120170.706	0.48	6287980	400000	
K	39	2	45	109805.964	ppb	109805.964	2.43	172976	400000	
Ca	40	1	45	217982.341	ppb	217982.341	0.84	18435982	400000	
Ca	44	2	45	234830.239	ppb	234830.239	2.52	22947	400000	
V	51	2	72	1.309	ppb	1.309	40.38	113	2000	
Cr	52	2	72	3.741	ppb	3.741	13.15	223	5000	
Mn	55	2	72	2458.297	ppb	2458.297	2.69	51153	10000	
Fe	57	2	72	35.530	ppb	35.530	63.47	47	400000	
Co	59	2	72	0.559	ppb	0.559	106.17	63	2000	
Ni	60	2	72	0.625	ppb	0.625	48.67	30	5000	
Cu	63	2	72	4.458	ppb	4.458	28.68	473	5000	
Zn	66	2	72	3.628	ppb	3.628	97.44	70	5000	
As	75	2	72	3.140	ppb	3.140	19.03	21	2000	
Se	78	1	72	4.171	ppb	4.171	22.24	41	2000	
Sr	88	2	72	4710.272	ppb	4710.272	2.10	104987	4000	
Zr	90	2	72	115.201	ppb	115.201	81.99	37	1000	
Nb	93	2	72	0.061	ppb	0.061	173.94	50	200	
Mo	95	2	115	2.035	ppb	2.035	43.38	123	2000	
Pd	105	2	115	0.102	ppb	0.102	56.44	13	100	
Ag	107	2	115	0.055	ppb	0.055	46.03	13	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.344	ppb	0.344	118.67	40	2000	
Sb	121	2	115	0.058	ppb	0.058	373.04	7	1000	
Ba	137	2	115	841.583	ppb	841.583	2.00	14961	5000	
W	182	2	165	0.448	ppb	0.448	16.40	313	100	
Pt	195	2	165	0.024	ppb	0.024	139.26	17	100	
Tl	205	2	165	0.006	ppb	0.006	111.38	17	2000	
Pb	208	2	165	0.094	ppb	0.094	70.63	207	5000	
Th	232	2	165	0.004	ppb	0.004	485.36	40	2000	
U	238	2	165	0.070	ppb	0.070	50.20	133	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	7256	6.35	446069	1.63	60	120	IS Failed
Sc (IS)	45	1	HMI H2	600305	0.67	13344586	4.50	60	120	IS Failed
Sc (IS)	45	2	HMI He	29273	1.90	548684	5.34	60	120	IS Failed
Sc (IS)	45	3	No Gas	1561689	0.82	39087130	4.00	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	388605	0.40	8240244	4.72	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	43542	1.19	783465	5.56	60	120	IS Failed
In Internal Standard	115	2	HMI He	195847	1.28	2775841	7.06	60	120	IS Failed
Ho-165	165	2	HMI He	1756956	0.74	17360012	10.12	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	252_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:11:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-98.545	ppb	-18.356	1830	500	-19.7	90	110	>+\-10%
Li	7	2	45	-29.426	ppb	-190.542	193	500	-5.9	90	110	>+\-10%
Li	7	3	45	-92.826	ppb	-6.166	71502	500	-18.6	90	110	>+\-10%
Be	9	1	6	83.410	ppb	14.613	177	50	166.8	90	110	>+\-10%
B	11	1	6	146.997	ppb	43.343	360	50	294.0	90	110	>+\-10%
Na	23	1	45	36498.045	ppb	3.999	2254739	5000	730.0	90	110	>+\-10%
Na	23	2	45	31748.523	ppb	8.405	246781	5000	635.0	90	110	>+\-10%
Mg	24	2	45	3942.934	ppb	2.162	13422	5000	78.9	90	110	>+\-10%
Al	27	2	45	4130.017	ppb	16.598	3447	5000	82.6	90	110	>+\-10%
K	39	1	45	7476.394	ppb	0.716	487215	5000	149.5	90	110	>+\-10%
K	39	2	45	6628.984	ppb	3.814	11214	5000	132.6	90	110	>+\-10%
Ca	40	1	45	5582.046	ppb	1.281	488610	5000	111.6	90	110	>+\-10%
Ca	44	2	45	5836.708	ppb	10.517	597	5000	116.7	90	110	>+\-10%
V	51	2	72	44.459	ppb	4.204	2150	50	88.9	90	110	>+\-10%
Cr	52	2	72	45.995	ppb	9.151	2910	50	92.0	90	110	
Mn	55	2	72	72.116	ppb	7.161	1660	50	144.2	90	110	>+\-10%
Fe	57	2	72	4795.609	ppb	4.680	5828	5000	95.9	90	110	
Co	59	2	72	44.315	ppb	6.494	5435	50	88.6	90	110	>+\-10%
Ni	60	2	72	47.654	ppb	6.020	1723	50	95.3	90	110	
Cu	63	2	72	54.030	ppb	2.727	5621	50	108.1	90	110	
Zn	66	2	72	37.620	ppb	28.553	470	50	75.2	90	110	>+\-10%
As	75	2	72	50.326	ppb	5.165	362	50	100.7	90	110	
Se	78	1	72	66.776	ppb	2.465	723	50	133.6	90	110	>+\-10%
Sr	88	2	72	69.769	ppb	11.903	1717	50	139.5	90	110	>+\-10%
Zr	90	2	72	11.011	ppb	312.643	10	50	22.0	90	110	>+\-10%
Nb	93	2	72	103.642	ppb	5.367	18428	100	103.6	90	110	
Mo	95	2	115	41.642	ppb	10.234	2774	50	83.3	90	110	>+\-10%
Pd	105	2	115	51.623	ppb	5.228	5798	50	103.2	90	110	
Ag	107	2	115	48.945	ppb	3.848	12075	50	97.9	90	110	
Cd	111	2	115	52.053	ppb	14.916	1457	50	104.1	90	110	
Sn	120	2	115	52.263	ppb	2.624	3824	50	104.5	90	110	
Sb	121	2	115	50.042	ppb	5.970	2947	50	100.1	90	110	
Ba	137	2	115	67.346	ppb	6.655	1340	50	134.7	90	110	>+\-10%
W	182	2	165	44.869	ppb	3.877	25239	50	89.7	90	110	>+\-10%
Pt	195	2	165	47.408	ppb	3.155	23205	50	94.8	90	110	
Tl	205	2	165	54.398	ppb	2.145	53715	50	108.8	90	110	
Pb	208	2	165	55.847	ppb	1.426	71568	50	111.7	90	110	>+\-10%
Th	232	2	165	56.064	ppb	2.038	85034	50	112.1	90	110	>+\-10%
U	238	2	165	54.287	ppb	0.333	99379	50	108.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	6138	3.45	446069	1.38	60	120	IS Failed
Sc (IS)	45	1	HMI H2	617646	0.36	13344586	4.63	60	120	IS Failed
Sc (IS)	45	2	HMI He	30455	3.31	548684	5.55	60	120	IS Failed
Sc (IS)	45	3	No Gas	1618386	0.23	39087130	4.14	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	426936	0.47	8240244	5.18	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	48049	2.33	783465	6.13	60	120	IS Failed
In Internal Standard	115	2	HMI He	218759	0.24	2775841	7.88	60	120	IS Failed
Ho-165	165	2	HMI He	1872326	0.90	17360012	10.79	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	253_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:15:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-248.332	ppb	-0.7	30334	10	
Be	9	1	6	-0.043	ppb	0.0	0	0.5	
B	11	1	6	40.777	ppb	12.7	103	0.5	>RL
Na	23	1	45	15702.111	ppb	1.8	1004566	25	>RL
Na	23	2	45	14658.634	ppb	4.6	116879	25	>RL
Mg	24	2	45	164.875	ppb	30.0	670	25	>RL
Al	27	2	45	1.534	ppb	447.2	3	15	
K	39	1	45	961.941	ppb	1.6	144607	50	>RL
K	39	2	45	1080.430	ppb	9.3	2164	50	>RL
Ca	40	1	45	114.260	ppb	1.7	13172	50	>RL
Ca	44	2	45	314.964	ppb	17.5	37	25	>RL
V	51	2	72	1.293	ppb	36.3	127	1	>RL
Cr	52	2	72	0.099	ppb	329.7	17	1	
Mn	55	2	72	24.374	ppb	19.8	577	0.5	>RL
Fe	57	2	72	22.837	ppb	52.9	37	25	
Co	59	2	72	0.153	ppb	91.3	20	0.5	
Ni	60	2	72	-0.114	ppb	-137.4	7	1	
Cu	63	2	72	0.752	ppb	109.5	143	1	
Zn	66	2	72	-0.239	ppb	-551.2	33	5	
As	75	2	72	0.559	ppb	111.3	5	1	
Se	78	1	72	1.536	ppb	67.6	17	1	>RL
Sr	88	2	72	3.740	ppb	31.4	97	0.5	>RL
Zr	90	2	72	-0.972	ppb	-3929.7	7	1	
Nb	93	2	72	2.514	ppb	19.3	500	2	>RL
Mo	95	2	115	0.742	ppb	45.6	53	0.5	>RL
Pd	105	2	115	-0.030	ppb	0.0	0	1	
Ag	107	2	115	0.061	ppb	38.2	17	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	-0.004	ppb	-8509.8	20	1	
Sb	121	2	115	0.430	ppb	37.9	30	0.6	
Ba	137	2	115	1.333	ppb	98.6	30	0.5	>RL
W	182	2	165	0.384	ppb	18.2	303	1	
Pt	195	2	165	0.088	ppb	61.4	50	1	
Tl	205	2	165	0.011	ppb	293.4	23	0.1	
Pb	208	2	165	0.017	ppb	56.5	123	0.5	
Th	232	2	165	0.058	ppb	14.1	127	1	
U	238	2	165	0.140	ppb	24.9	273	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	6158	5.18	446069	1.38	60	120	IS Failed
Sc (IS)	45	1	HMI H2	631731	0.16	13344586	4.73	60	120	IS Failed
Sc (IS)	45	2	HMI He	30766	0.97	548684	5.61	60	120	IS Failed
Sc (IS)	45	3	No Gas	1662005	0.55	39087130	4.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	437442	0.38	8240244	5.31	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	48962	1.10	783465	6.25	60	120	IS Failed
In Internal Standard	115	2	HMI He	224351	0.81	2775841	8.08	60	120	IS Failed
Ho-165	165	2	HMI He	1905501	0.81	17360012	10.98	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-1-B
Data File Name	254SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:19:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-226.914	ppb	-226.914	-9.36	880	500000	
Li	7	2	45	-204.946	ppb	-204.946	-11.35	93	500000	
Li	7	3	45	-237.748	ppb	-237.748	-1.57	32853	50000	
Be	9	1	6	3.778	ppb	3.778	175.19	7	2000	
B	11	1	6	2094.581	ppb	2094.581	8.28	4684	2000	
Na	23	1	45	247495.557	ppb	247495.557	1.03	14680547	2000	>LDR
Na	23	2	45	226510.982	ppb	226510.982	3.71	1723131	400000	
Mg	24	2	45	74196.044	ppb	74196.044	4.09	247460	400000	
Al	27	2	45	-2.427	ppb	-2.427	0.00	0	400000	
K	39	1	45	804.667	ppb	804.667	5.37	128749	400000	
K	39	2	45	2056.441	ppb	2056.441	3.52	3694	400000	
Ca	40	1	45	60652.945	ppb	60652.945	0.45	5110243	400000	
Ca	44	2	45	64571.764	ppb	64571.764	4.69	6495	400000	
V	51	2	72	28.645	ppb	28.645	11.56	1353	2000	
Cr	52	2	72	0.555	ppb	0.555	121.39	43	5000	
Mn	55	2	72	62.681	ppb	62.681	2.66	1390	10000	
Fe	57	2	72	36.042	ppb	36.042	40.76	50	400000	
Co	59	2	72	0.048	ppb	0.048	203.39	7	2000	
Ni	60	2	72	1.538	ppb	1.538	58.13	63	5000	
Cu	63	2	72	1.875	ppb	1.875	26.50	247	5000	
Zn	66	2	72	2.318	ppb	2.318	193.17	60	5000	
As	75	2	72	4.179	ppb	4.179	22.84	29	2000	
Se	78	1	72	1.141	ppb	1.141	90.23	12	2000	
Sr	88	2	72	1177.514	ppb	1177.514	1.93	27875	4000	
Zr	90	2	72	36.145	ppb	36.145	57.25	17	1000	
Nb	93	2	72	1.994	ppb	1.994	18.96	383	200	
Mo	95	2	115	22.913	ppb	22.913	8.49	1483	2000	
Pd	105	2	115	0.091	ppb	0.091	151.68	13	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.767	ppb	0.767	28.97	73	2000	
Sb	121	2	115	0.634	ppb	0.634	111.30	40	1000	
Ba	137	2	115	44.596	ppb	44.596	5.73	863	5000	
W	182	2	165	0.513	ppb	0.513	27.51	363	100	
Pt	195	2	165	0.008	ppb	0.008	249.92	10	100	
Tl	205	2	165	0.025	ppb	0.025	46.56	37	2000	
Pb	208	2	165	0.068	ppb	0.068	40.30	183	5000	
Th	232	2	165	0.198	ppb	0.198	29.63	330	2000	
U	238	2	165	10.179	ppb	10.179	4.32	18299	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5676	12.77	446069	1.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	597768	0.58	13344586	4.48	60	120	IS Failed
Sc (IS)	45	2	HMI He	30082	3.62	548684	5.48	60	120	IS Failed
Sc (IS)	45	3	No Gas	1641575	1.14	39087130	4.20	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	406029	0.23	8240244	4.93	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	46237	0.73	783465	5.90	60	120	IS Failed
In Internal Standard	115	2	HMI He	212535	1.06	2775841	7.66	60	120	IS Failed
Ho-165	165	2	HMI He	1837933	0.89	17360012	10.59	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-1-Bsd@5
Data File Name	255SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:23:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-232.002	ppb	-232.002	-5.14	880	500000	
Li	7	2	45	-264.153	ppb	-264.153	-30.76	60	500000	
Li	7	3	45	-250.051	ppb	-250.051	-1.07	29851	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	419.388	ppb	419.388	18.01	930	2000	
Na	23	1	45	55814.185	ppb	55814.185	0.57	3465317	2000	>LDR
Na	23	2	45	49050.895	ppb	49050.895	4.37	380851	400000	
Mg	24	2	45	15572.604	ppb	15572.604	4.53	52780	400000	
Al	27	2	45	26.299	ppb	26.299	153.00	23	400000	
K	39	1	45	897.009	ppb	897.009	4.09	139062	400000	
K	39	2	45	1102.244	ppb	1102.244	9.40	2180	400000	
Ca	40	1	45	12119.445	ppb	12119.445	0.86	1066081	400000	
Ca	44	2	45	12163.335	ppb	12163.335	3.37	1243	400000	
V	51	2	72	7.898	ppb	7.898	21.98	430	2000	
Cr	52	2	72	7.621	ppb	7.621	13.92	487	5000	
Mn	55	2	72	35.494	ppb	35.494	7.67	813	10000	
Fe	57	2	72	256.570	ppb	256.570	21.77	317	400000	
Co	59	2	72	0.183	ppb	0.183	51.58	23	2000	
Ni	60	2	72	0.078	ppb	0.078	205.19	13	5000	
Cu	63	2	72	2.031	ppb	2.031	32.03	270	5000	
Zn	66	2	72	10.572	ppb	10.572	68.89	157	5000	
As	75	2	72	1.492	ppb	1.492	38.49	11	2000	
Se	78	1	72	0.845	ppb	0.845	67.72	9	2000	
Sr	88	2	72	222.514	ppb	222.514	6.06	5428	4000	
Zr	90	2	72	11.410	ppb	11.410	1.18	10	1000	
Nb	93	2	72	0.944	ppb	0.944	15.99	210	200	
Mo	95	2	115	3.727	ppb	3.727	18.61	250	2000	
Pd	105	2	115	0.029	ppb	0.029	176.16	7	100	
Ag	107	2	115	0.049	ppb	0.049	48.43	13	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.189	ppb	0.189	42.08	33	2000	
Sb	121	2	115	0.218	ppb	0.218	163.59	17	1000	
Ba	137	2	115	8.439	ppb	8.439	6.36	170	5000	
W	182	2	165	0.198	ppb	0.198	22.63	193	100	
Pt	195	2	165	0.015	ppb	0.015	79.36	13	100	
Tl	205	2	165	0.011	ppb	0.011	103.70	23	2000	
Pb	208	2	165	45.869	ppb	45.869	1.12	58591	5000	
Th	232	2	165	0.015	ppb	0.015	73.53	60	2000	
U	238	2	165	2.170	ppb	2.170	5.36	3971	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5592	3.19	446069	1.25	60	120	IS Failed
Sc (IS)	45	1	HMI H2	622725	0.75	13344586	4.67	60	120	IS Failed
Sc (IS)	45	2	HMI He	30529	4.14	548684	5.56	60	120	IS Failed
Sc (IS)	45	3	No Gas	1661793	0.89	39087130	4.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	423725	0.35	8240244	5.14	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	47623	0.39	783465	6.08	60	120	IS Failed
In Internal Standard	115	2	HMI He	218219	0.37	2775841	7.86	60	120	IS Failed
Ho-165	165	2	HMI He	1865674	0.37	17360012	10.75	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-1-C MS
Data File Name	256SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:26:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-207.404	ppb	-207.404	-7.18	1007	500000	
Li	7	2	45	-205.481	ppb	-205.481	-18.59	93	500000	
Li	7	3	45	-213.943	ppb	-213.943	-2.91	39514	50000	
Be	9	1	6	73.852	ppb	73.852	44.93	137	2000	
B	11	1	6	2225.588	ppb	2225.588	0.67	4728	2000	
Na	23	1	45	233147.920	ppb	233147.920	1.42	13702245	2000	>LDR
Na	23	2	45	218369.111	ppb	218369.111	0.51	1673944	400000	
Mg	24	2	45	71613.268	ppb	71613.268	1.78	240667	400000	
Al	27	2	45	421.354	ppb	421.354	29.80	353	400000	
K	39	1	45	682.267	ppb	682.267	2.15	121334	400000	
K	39	2	45	1758.779	ppb	1758.779	2.24	3234	400000	
Ca	40	1	45	59154.544	ppb	59154.544	0.45	4938121	400000	
Ca	44	2	45	60832.561	ppb	60832.561	2.97	6155	400000	
V	51	2	72	61.290	ppb	61.290	7.21	2837	2000	
Cr	52	2	72	38.181	ppb	38.181	6.24	2337	5000	
Mn	55	2	72	103.426	ppb	103.426	3.09	2300	10000	
Fe	57	2	72	383.407	ppb	383.407	25.45	457	400000	
Co	59	2	72	35.309	ppb	35.309	5.45	4187	2000	
Ni	60	2	72	39.016	ppb	39.016	8.46	1367	5000	
Cu	63	2	72	37.097	ppb	37.097	15.16	3741	5000	
Zn	66	2	72	35.334	ppb	35.334	16.35	430	5000	
As	75	2	72	48.665	ppb	48.665	2.61	339	2000	
Se	78	1	72	48.396	ppb	48.396	11.77	492	2000	
Sr	88	2	72	1167.556	ppb	1167.556	7.71	27731	4000	
Zr	90	2	72	11016.204	ppb	11016.204	3.80	3127	1000	>LDR
Nb	93	2	72	0.801	ppb	0.801	9.42	180	200	
Mo	95	2	115	55.876	ppb	55.876	9.40	3617	2000	
Pd	105	2	115	0.093	ppb	0.093	152.67	13	100	
Ag	107	2	115	37.487	ppb	37.487	1.34	8983	100	
Cd	111	2	115	36.129	ppb	36.129	15.76	983	2000	
Sn	120	2	115	44.419	ppb	44.419	2.92	3160	2000	
Sb	121	2	115	39.967	ppb	39.967	19.30	2290	1000	
Ba	137	2	115	101.381	ppb	101.381	12.47	1957	5000	
W	182	2	165	10.941	ppb	10.941	3.10	6101	100	
Pt	195	2	165	0.057	ppb	0.057	56.71	33	100	
Tl	205	2	165	41.731	ppb	41.731	0.08	40436	2000	
Pb	208	2	165	42.952	ppb	42.952	2.73	54018	5000	
Th	232	2	165	44.129	ppb	44.129	1.18	65686	2000	
U	238	2	165	53.335	ppb	53.335	1.26	95786	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5355	1.99	446069	1.20	60	120	IS Failed
Sc (IS)	45	1	HMI H2	592258	0.44	13344586	4.44	60	120	IS Failed
Sc (IS)	45	2	HMI He	30285	1.17	548684	5.52	60	120	IS Failed
Sc (IS)	45	3	No Gas	1647872	1.14	39087130	4.22	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	401039	0.39	8240244	4.87	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	46424	1.68	783465	5.93	60	120	IS Failed
In Internal Standard	115	2	HMI He	212487	1.39	2775841	7.65	60	120	IS Failed
Ho-165	165	2	HMI He	1836962	1.13	17360012	10.58	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-1-D MSD
Data File Name	257SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:30:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-210.928	ppb	-210.928	-4.31	980	500000	
Li	7	2	45	-141.356	ppb	-141.356	-100.00	127	500000	
Li	7	3	45	-214.853	ppb	-214.853	-1.35	39039	50000	
Be	9	1	6	83.227	ppb	83.227	16.25	150	2000	
B	11	1	6	2434.891	ppb	2434.891	3.88	5028	2000	
Na	23	1	45	237437.900	ppb	237437.900	1.11	13920547	2000	>LDR
Na	23	2	45	220066.520	ppb	220066.520	3.49	1656100	400000	
Mg	24	2	45	72617.183	ppb	72617.183	4.18	239556	400000	
Al	27	2	45	370.561	ppb	370.561	20.92	307	400000	
K	39	1	45	711.428	ppb	711.428	1.25	122516	400000	
K	39	2	45	1681.771	ppb	1681.771	8.18	3049	400000	
Ca	40	1	45	60628.505	ppb	60628.505	1.97	5047508	400000	
Ca	44	2	45	58755.658	ppb	58755.658	3.40	5841	400000	
V	51	2	72	62.235	ppb	62.235	5.31	2844	2000	
Cr	52	2	72	34.991	ppb	34.991	19.31	2110	5000	
Mn	55	2	72	107.473	ppb	107.473	14.55	2354	10000	
Fe	57	2	72	407.876	ppb	407.876	13.84	480	400000	
Co	59	2	72	35.067	ppb	35.067	8.62	4101	2000	
Ni	60	2	72	36.328	ppb	36.328	11.63	1257	5000	
Cu	63	2	72	43.667	ppb	43.667	4.55	4337	5000	
Zn	66	2	72	39.029	ppb	39.029	26.39	463	5000	
As	75	2	72	50.031	ppb	50.031	12.84	343	2000	
Se	78	1	72	48.000	ppb	48.000	7.25	487	2000	
Sr	88	2	72	1180.172	ppb	1180.172	4.11	27658	4000	
Zr	90	2	72	11424.081	ppb	11424.081	8.30	3197	1000	>LDR
Nb	93	2	72	0.814	ppb	0.814	50.28	180	200	
Mo	95	2	115	53.978	ppb	53.978	3.12	3451	2000	
Pd	105	2	115	0.031	ppb	0.031	342.36	7	100	
Ag	107	2	115	39.435	ppb	39.435	5.28	9333	100	
Cd	111	2	115	46.256	ppb	46.256	5.26	1243	2000	
Sn	120	2	115	43.389	ppb	43.389	12.13	3047	2000	
Sb	121	2	115	41.168	ppb	41.168	5.11	2327	1000	
Ba	137	2	115	97.990	ppb	97.990	3.50	1870	5000	
W	182	2	165	10.516	ppb	10.516	8.99	5831	100	
Pt	195	2	165	0.015	ppb	0.015	156.84	13	100	
Tl	205	2	165	42.707	ppb	42.707	0.72	41148	2000	
Pb	208	2	165	42.977	ppb	42.977	2.93	53750	5000	
Th	232	2	165	44.811	ppb	44.811	0.82	66322	2000	
U	238	2	165	53.457	ppb	53.457	0.42	95473	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5204	5.76	446069	1.17	60	120	IS Failed
Sc (IS)	45	1	HMI H2	590794	1.75	13344586	4.43	60	120	IS Failed
Sc (IS)	45	2	HMI He	29758	3.92	548684	5.42	60	120	IS Failed
Sc (IS)	45	3	No Gas	1638167	1.43	39087130	4.19	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	400009	0.84	8240244	4.85	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	45787	1.43	783465	5.84	60	120	IS Failed
In Internal Standard	115	2	HMI He	209961	1.52	2775841	7.56	60	120	IS Failed
Ho-165	165	2	HMI He	1826637	0.63	17360012	10.52	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-1-B pds
Data File Name	258SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:34:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-225.040	ppb	-225.040	-5.15	877	500000	
Li	7	2	45	-256.833	ppb	-256.833	-4.12	63	500000	
Li	7	3	45	-236.548	ppb	-236.548	-1.09	33578	50000	
Be	9	1	6	303.389	ppb	303.389	14.88	547	2000	
B	11	1	6	2150.345	ppb	2150.345	5.94	4404	2000	
Na	23	1	45	236335.437	ppb	236335.437	0.86	13764670	2000	>LDR
Na	23	2	45	217542.361	ppb	217542.361	0.83	1638606	400000	
Mg	24	2	45	72787.574	ppb	72787.574	1.21	240377	400000	
Al	27	2	45	1868.411	ppb	1868.411	4.46	1530	400000	
K	39	1	45	651.152	ppb	651.152	3.16	118675	400000	
K	39	2	45	1697.062	ppb	1697.062	12.03	3079	400000	
Ca	40	1	45	59991.012	ppb	59991.012	0.67	4962483	400000	
Ca	44	2	45	58523.165	ppb	58523.165	2.61	5818	400000	
V	51	2	72	202.402	ppb	202.402	2.20	9140	2000	
Cr	52	2	72	194.527	ppb	194.527	1.63	11745	5000	
Mn	55	2	72	286.216	ppb	286.216	3.88	6288	10000	
Fe	57	2	72	2046.196	ppb	2046.196	2.56	2384	400000	
Co	59	2	72	179.844	ppb	179.844	4.41	21098	2000	
Ni	60	2	72	175.763	ppb	175.763	3.13	6055	5000	
Cu	63	2	72	200.371	ppb	200.371	2.93	19756	5000	
Zn	66	2	72	197.174	ppb	197.174	6.15	2217	5000	
As	75	2	72	216.874	ppb	216.874	4.94	1491	2000	
Se	78	1	72	247.412	ppb	247.412	5.21	2480	2000	
Sr	88	2	72	1142.543	ppb	1142.543	2.24	26883	4000	
Zr	90	2	72	65972.708	ppb	65972.708	1.34	18498	1000	>LDR
Nb	93	2	72	4.846	ppb	4.846	14.71	863	200	
Mo	95	2	115	219.819	ppb	219.819	4.25	13943	2000	
Pd	105	2	115	0.032	ppb	0.032	167.87	7	100	
Ag	107	2	115	46.739	ppb	46.739	0.49	10991	100	
Cd	111	2	115	210.256	ppb	210.256	2.44	5608	2000	
Sn	120	2	115	220.370	ppb	220.370	0.61	15308	2000	
Sb	121	2	115	212.349	ppb	212.349	2.11	11908	1000	
Ba	137	2	115	316.862	ppb	316.862	7.40	5998	5000	
W	182	2	165	187.501	ppb	187.501	2.93	103031	100	
Pt	195	2	165	0.036	ppb	0.036	133.29	23	100	
Tl	205	2	165	222.389	ppb	222.389	0.44	215065	2000	
Pb	208	2	165	218.483	ppb	218.483	1.24	273944	5000	
Th	232	2	165	17.386	ppb	17.386	3.90	25850	2000	
U	238	2	165	238.603	ppb	238.603	0.76	427764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5179	8.34	446069	1.16	60	120	IS Failed
Sc (IS)	45	1	HMI H2	586903	0.96	13344586	4.40	60	120	IS Failed
Sc (IS)	45	2	HMI He	29757	0.17	548684	5.42	60	120	IS Failed
Sc (IS)	45	3	No Gas	1660855	1.29	39087130	4.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	395667	1.41	8240244	4.80	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	45951	2.30	783465	5.87	60	120	IS Failed
In Internal Standard	115	2	HMI He	208509	0.92	2775841	7.51	60	120	IS Failed
Ho-165	165	2	HMI He	1833843	0.83	17360012	10.56	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-3-B
Data File Name	259SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:38:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-209.885	ppb	-209.885	-8.74	953	500000	
Li	7	2	45	-308.257	ppb	-308.257	-21.53	33	500000	
Li	7	3	45	-236.509	ppb	-236.509	-1.73	31156	50000	
Be	9	1	6	1.931	ppb	1.931	177.09	3	2000	
B	11	1	6	4638.079	ppb	4638.079	1.42	9296	2000	
Na	23	1	45	389426.305	ppb	389426.305	0.42	22031936	2000	>LDR
Na	23	2	45	350601.707	ppb	350601.707	1.25	2529106	400000	
Mg	24	2	45	124809.468	ppb	124809.468	1.61	394915	400000	
Al	27	2	45	23.080	ppb	23.080	111.07	20	400000	
K	39	1	45	352.961	ppb	352.961	6.00	100719	400000	
K	39	2	45	1481.573	ppb	1481.573	8.81	2620	400000	
Ca	40	1	45	128002.532	ppb	128002.532	1.23	10288890	400000	
Ca	44	2	45	126872.360	ppb	126872.360	2.74	12082	400000	
V	51	2	72	18.347	ppb	18.347	9.59	840	2000	
Cr	52	2	72	0.605	ppb	0.605	123.90	43	5000	
Mn	55	2	72	27.467	ppb	27.467	12.71	577	10000	
Fe	57	2	72	63.268	ppb	63.268	52.66	77	400000	
Co	59	2	72	0.289	ppb	0.289	69.57	33	2000	
Ni	60	2	72	2.452	ppb	2.452	22.74	90	5000	
Cu	63	2	72	2.029	ppb	2.029	26.51	247	5000	
Zn	66	2	72	6.116	ppb	6.116	15.64	97	5000	
As	75	2	72	7.945	ppb	7.945	32.16	52	2000	
Se	78	1	72	84.093	ppb	84.093	9.41	821	2000	
Sr	88	2	72	2253.316	ppb	2253.316	2.72	50323	4000	
Zr	90	2	72	240.754	ppb	240.754	28.54	70	1000	
Nb	93	2	72	-0.187	ppb	-0.187	-59.03	10	200	
Mo	95	2	115	8.844	ppb	8.844	12.94	540	2000	
Pd	105	2	115	0.132	ppb	0.132	112.70	17	100	
Ag	107	2	115	0.098	ppb	0.098	52.20	23	100	
Cd	111	2	115	0.233	ppb	0.233	97.13	7	2000	
Sn	120	2	115	0.432	ppb	0.432	19.95	47	2000	
Sb	121	2	115	1.112	ppb	1.112	53.77	63	1000	
Ba	137	2	115	53.710	ppb	53.710	12.94	977	5000	
W	182	2	165	0.522	ppb	0.522	46.91	350	100	
Pt	195	2	165	0.024	ppb	0.024	138.44	17	100	
Tl	205	2	165	0.133	ppb	0.133	62.55	133	2000	
Pb	208	2	165	0.118	ppb	0.118	58.24	233	5000	
Th	232	2	165	0.028	ppb	0.028	88.76	73	2000	
U	238	2	165	11.642	ppb	11.642	3.37	19814	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5056	3.86	446069	1.13	60	120	IS Failed
Sc (IS)	45	1	HMI H2	570454	0.56	13344586	4.27	60	120	IS Failed
Sc (IS)	45	2	HMI He	28519	0.90	548684	5.20	60	120	IS Failed
Sc (IS)	45	3	No Gas	1541011	1.31	39087130	3.94	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	385382	0.11	8240244	4.68	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	43632	2.11	783465	5.57	60	120	IS Failed
In Internal Standard	115	2	HMI He	199795	0.11	2775841	7.20	60	120	IS Failed
Ho-165	165	2	HMI He	1740163	0.85	17360012	10.02	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-D-4-B
Data File Name	260SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:42:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-233.277	ppb	-233.277	-2.77	787	500000	
Li	7	2	45	-257.914	ppb	-257.914	-17.82	60	500000	
Li	7	3	45	-247.609	ppb	-247.609	-0.81	29503	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	681.172	ppb	681.172	7.66	1383	2000	
Na	23	1	45	48291.808	ppb	48291.808	0.82	2709640	2000	>LDR
Na	23	2	45	41309.885	ppb	41309.885	3.54	296844	400000	
Mg	24	2	45	25386.900	ppb	25386.900	4.85	79433	400000	
Al	27	2	45	15.083	ppb	15.083	100.62	13	400000	
K	39	1	45	205.535	ppb	205.535	19.89	92143	400000	
K	39	2	45	1330.580	ppb	1330.580	5.50	2360	400000	
Ca	40	1	45	54095.583	ppb	54095.583	0.24	4287217	400000	
Ca	44	2	45	50271.823	ppb	50271.823	12.45	4724	400000	
V	51	2	72	6.594	ppb	6.594	19.78	340	2000	
Cr	52	2	72	0.301	ppb	0.301	66.24	27	5000	
Mn	55	2	72	108.972	ppb	108.972	7.00	2287	10000	
Fe	57	2	72	17.359	ppb	17.359	159.21	27	400000	
Co	59	2	72	0.527	ppb	0.527	60.84	60	2000	
Ni	60	2	72	1.938	ppb	1.938	65.19	73	5000	
Cu	63	2	72	1.477	ppb	1.477	14.73	197	5000	
Zn	66	2	72	4.191	ppb	4.191	34.54	77	5000	
As	75	2	72	3.623	ppb	3.623	53.21	24	2000	
Se	78	1	72	0.794	ppb	0.794	51.72	8	2000	
Sr	88	2	72	675.423	ppb	675.423	1.57	15154	4000	
Zr	90	2	72	14.354	ppb	14.354	260.05	10	1000	
Nb	93	2	72	-0.147	ppb	-0.147	-87.71	17	200	
Mo	95	2	115	2.651	ppb	2.651	27.20	167	2000	
Pd	105	2	115	0.001	ppb	0.001	4121.72	3	100	
Ag	107	2	115	0.053	ppb	0.053	95.34	13	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.070	ppb	-0.070	-491.73	13	2000	
Sb	121	2	115	0.238	ppb	0.238	88.29	17	1000	
Ba	137	2	115	73.004	ppb	73.004	4.30	1350	5000	
W	182	2	165	0.282	ppb	0.282	51.66	223	100	
Pt	195	2	165	-0.005	ppb	-0.005	-245.82	3	100	
Tl	205	2	165	0.057	ppb	0.057	11.58	63	2000	
Pb	208	2	165	0.107	ppb	0.107	84.76	220	5000	
Th	232	2	165	0.037	ppb	0.037	104.53	87	2000	
U	238	2	165	1.501	ppb	1.501	3.94	2557	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5126	5.92	446069	1.15	60	120	IS Failed
Sc (IS)	45	1	HMI H2	562239	0.39	13344586	4.21	60	120	IS Failed
Sc (IS)	45	2	HMI He	28205	3.74	548684	5.14	60	120	IS Failed
Sc (IS)	45	3	No Gas	1605918	0.63	39087130	4.11	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	385293	0.49	8240244	4.68	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	43817	0.20	783465	5.59	60	120	IS Failed
In Internal Standard	115	2	HMI He	203297	1.21	2775841	7.32	60	120	IS Failed
Ho-165	165	2	HMI He	1734485	0.41	17360012	9.99	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	261_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:46:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-91.763	ppb	-36.749	1784	500	-18.4	90	110	>+\-10%
Li	7	2	45	-149.648	ppb	-80.390	123	500	-29.9	90	110	>+\-10%
Li	7	3	45	-92.898	ppb	-4.025	71996	500	-18.6	90	110	>+\-10%
Be	9	1	6	84.032	ppb	39.924	140	50	168.1	90	110	>+\-10%
B	11	1	6	123.657	ppb	20.617	243	50	247.3	90	110	>+\-10%
Na	23	1	45	6877.658	ppb	0.360	419845	5000	137.6	90	110	>+\-10%
Na	23	2	45	6084.693	ppb	2.207	48287	5000	121.7	90	110	>+\-10%
Mg	24	2	45	3940.083	ppb	1.527	13039	5000	78.8	90	110	>+\-10%
Al	27	2	45	4228.169	ppb	4.272	3437	5000	84.6	90	110	>+\-10%
K	39	1	45	6994.590	ppb	0.497	438404	5000	139.9	90	110	>+\-10%
K	39	2	45	6414.205	ppb	5.495	10554	5000	128.3	90	110	>+\-10%
Ca	40	1	45	5581.291	ppb	0.416	463957	5000	111.6	90	110	>+\-10%
Ca	44	2	45	5022.399	ppb	27.282	503	5000	100.4	90	110	
V	51	2	72	42.760	ppb	4.604	2004	50	85.5	90	110	>+\-10%
Cr	52	2	72	46.249	ppb	3.106	2837	50	92.5	90	110	
Mn	55	2	72	73.248	ppb	5.228	1633	50	146.5	90	110	>+\-10%
Fe	57	2	72	4877.901	ppb	4.094	5741	5000	97.6	90	110	
Co	59	2	72	45.641	ppb	4.998	5424	50	91.3	90	110	
Ni	60	2	72	43.735	ppb	10.720	1537	50	87.5	90	110	>+\-10%
Cu	63	2	72	52.926	ppb	9.482	5331	50	105.9	90	110	
Zn	66	2	72	48.817	ppb	20.015	583	50	97.6	90	110	
As	75	2	72	56.677	ppb	4.341	395	50	113.4	90	110	>+\-10%
Se	78	1	72	59.039	ppb	12.503	607	50	118.1	90	110	>+\-10%
Sr	88	2	72	69.406	ppb	6.130	1657	50	138.8	90	110	>+\-10%
Zr	90	2	72	139.417	ppb	98.710	47	50	278.8	90	110	>+\-10%
Nb	93	2	72	103.101	ppb	6.421	17764	100	103.1	90	110	
Mo	95	2	115	42.478	ppb	1.887	2784	50	85.0	90	110	>+\-10%
Pd	105	2	115	52.596	ppb	3.361	5811	50	105.2	90	110	
Ag	107	2	115	50.075	ppb	4.598	12152	50	100.2	90	110	
Cd	111	2	115	53.270	ppb	21.357	1467	50	106.5	90	110	
Sn	120	2	115	55.138	ppb	5.529	3967	50	110.3	90	110	>+\-10%
Sb	121	2	115	48.978	ppb	11.440	2837	50	98.0	90	110	
Ba	137	2	115	59.234	ppb	6.317	1160	50	118.5	90	110	>+\-10%
W	182	2	165	45.709	ppb	2.083	24915	50	91.4	90	110	
Pt	195	2	165	48.059	ppb	2.773	22791	50	96.1	90	110	
Tl	205	2	165	56.204	ppb	1.004	53782	50	112.4	90	110	>+\-10%
Pb	208	2	165	56.429	ppb	2.264	70078	50	112.9	90	110	>+\-10%
Th	232	2	165	56.931	ppb	1.043	83674	50	113.9	90	110	>+\-10%
U	238	2	165	55.426	ppb	1.593	98323	50	110.9	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	4928	7.85	446069	1.10	60	120	IS Failed
Sc (IS)	45	1	HMI H2	586560	0.75	13344586	4.40	60	120	IS Failed
Sc (IS)	45	2	HMI He	29587	3.52	548684	5.39	60	120	IS Failed
Sc (IS)	45	3	No Gas	1630101	0.94	39087130	4.17	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	405471	0.43	8240244	4.92	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	46550	2.30	783465	5.94	60	120	IS Failed
In Internal Standard	115	2	HMI He	215206	0.46	2775841	7.75	60	120	IS Failed
Ho-165	165	2	HMI He	1814203	0.60	17360012	10.45	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	262_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:49:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-248.479	ppb	-1.1	29570	10	
Be	9	1	6	-0.043	ppb	0.0	0	0.5	
B	11	1	6	40.756	ppb	40.4	93	0.5	>RL
Na	23	1	45	1856.135	ppb	1.8	133107	25	>RL
Na	23	2	45	1630.639	ppb	6.2	15188	25	>RL
Mg	24	2	45	86.416	ppb	24.4	393	25	>RL
Al	27	2	45	-2.427	ppb	0.0	0	15	
K	39	1	45	685.747	ppb	3.3	125156	50	>RL
K	39	2	45	880.125	ppb	7.4	1784	50	>RL
Ca	40	1	45	87.029	ppb	6.2	10377	50	>RL
Ca	44	2	45	57.189	ppb	174.7	10	25	>RL
V	51	2	72	1.408	ppb	49.9	127	1	>RL
Cr	52	2	72	0.161	ppb	98.4	20	1	
Mn	55	2	72	11.904	ppb	16.9	273	0.5	>RL
Fe	57	2	72	24.075	ppb	18.9	37	25	
Co	59	2	72	0.266	ppb	152.3	33	0.5	
Ni	60	2	72	-0.013	ppb	-2129.9	10	1	
Cu	63	2	72	0.170	ppb	357.6	80	1	
Zn	66	2	72	-1.325	ppb	-131.3	20	5	
As	75	2	72	0.580	ppb	71.7	5	1	
Se	78	1	72	0.225	ppb	192.8	3	1	
Sr	88	2	72	3.629	ppb	30.5	90	0.5	>RL
Zr	90	2	72	35.225	ppb	58.8	17	1	>RL
Nb	93	2	72	2.111	ppb	4.2	410	2	>RL
Mo	95	2	115	0.410	ppb	126.1	30	0.5	
Pd	105	2	115	0.030	ppb	351.1	7	1	
Ag	107	2	115	0.022	ppb	215.4	7	1	
Cd	111	2	115	0.090	ppb	227.5	3	0.5	
Sn	120	2	115	0.189	ppb	169.8	33	1	
Sb	121	2	115	0.786	ppb	57.8	50	0.6	>RL
Ba	137	2	115	-0.145	ppb	0.0	0	0.5	
W	182	2	165	0.286	ppb	36.7	237	1	
Pt	195	2	165	0.037	ppb	34.3	23	1	
Tl	205	2	165	0.043	ppb	61.7	53	0.1	
Pb	208	2	165	0.002	ppb	1299.3	100	0.5	
Th	232	2	165	0.084	ppb	15.0	160	1	
U	238	2	165	0.111	ppb	31.2	210	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5517	4.45	446069	1.24	60	120	IS Failed
Sc (IS)	45	1	HMI H2	610035	1.10	13344586	4.57	60	120	IS Failed
Sc (IS)	45	2	HMI He	29965	2.64	548684	5.46	60	120	IS Failed
Sc (IS)	45	3	No Gas	1622382	1.30	39087130	4.15	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	421843	0.98	8240244	5.12	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	47056	1.36	783465	6.01	60	120	IS Failed
In Internal Standard	115	2	HMI He	218627	0.68	2775841	7.88	60	120	IS Failed
Ho-165	165	2	HMI He	1822275	0.88	17360012	10.50	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-D-5-B
Data File Name	263SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:53:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-242.683	ppb	-242.683	-6.41	753	500000	
Li	7	2	45	-237.587	ppb	-237.587	-36.39	70	500000	
Li	7	3	45	-247.665	ppb	-247.665	-0.99	30111	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	509.342	ppb	509.342	11.70	1063	2000	
Na	23	1	45	93098.441	ppb	93098.441	1.31	5408332	2000	>LDR
Na	23	2	45	83756.663	ppb	83756.663	2.33	603930	400000	
Mg	24	2	45	54235.979	ppb	54235.979	3.82	170971	400000	
Al	27	2	45	10.734	ppb	10.734	212.36	10	400000	
K	39	1	45	889.114	ppb	889.114	1.44	130048	400000	
K	39	2	45	1720.902	ppb	1720.902	9.40	2974	400000	
Ca	40	1	45	99332.181	ppb	99332.181	0.52	8176042	400000	
Ca	44	2	45	100650.829	ppb	100650.829	2.64	9550	400000	
V	51	2	72	7.657	ppb	7.657	29.21	400	2000	
Cr	52	2	72	5.323	ppb	5.323	60.64	327	5000	
Mn	55	2	72	15.994	ppb	15.994	2.71	353	10000	
Fe	57	2	72	33.739	ppb	33.739	28.17	47	400000	
Co	59	2	72	0.134	ppb	0.134	72.27	17	2000	
Ni	60	2	72	0.681	ppb	0.681	49.46	33	5000	
Cu	63	2	72	0.444	ppb	0.444	133.55	103	5000	
Zn	66	2	72	3.297	ppb	3.297	53.50	70	5000	
As	75	2	72	1.850	ppb	1.850	35.78	13	2000	
Se	78	1	72	1.439	ppb	1.439	79.57	15	2000	
Sr	88	2	72	1127.416	ppb	1127.416	2.19	26299	4000	
Zr	90	2	72	48.399	ppb	48.399	146.77	20	1000	
Nb	93	2	72	1.610	ppb	1.610	23.63	313	200	
Mo	95	2	115	2.934	ppb	2.934	18.40	187	2000	
Pd	105	2	115	-0.030	ppb	-0.030	0.00	0	100	
Ag	107	2	115	0.009	ppb	0.009	278.11	3	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.359	ppb	0.359	83.37	43	2000	
Sb	121	2	115	0.474	ppb	0.474	37.61	30	1000	
Ba	137	2	115	147.313	ppb	147.313	3.25	2760	5000	
W	182	2	165	0.228	ppb	0.228	90.89	200	100	
Pt	195	2	165	0.009	ppb	0.009	241.15	10	100	
Tl	205	2	165	0.027	ppb	0.027	101.44	37	2000	
Pb	208	2	165	0.034	ppb	0.034	45.99	137	5000	
Th	232	2	165	0.217	ppb	0.217	55.49	347	2000	
U	238	2	165	1.630	ppb	1.630	9.21	2847	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5266	4.98	446069	1.18	60	120	IS Failed
Sc (IS)	45	1	HMI H2	584095	0.11	13344586	4.38	60	120	IS Failed
Sc (IS)	45	2	HMI He	28419	2.53	548684	5.18	60	120	IS Failed
Sc (IS)	45	3	No Gas	1639760	1.58	39087130	4.20	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	394268	0.75	8240244	4.78	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	45555	1.21	783465	5.81	60	120	IS Failed
In Internal Standard	115	2	HMI He	206191	1.39	2775841	7.43	60	120	IS Failed
Ho-165	165	2	HMI He	1780331	1.40	17360012	10.26	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-6-B
Data File Name	264SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T04:57:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-234.575	ppb	-234.575	-1.45	760	500000	
Li	7	2	45	-229.302	ppb	-229.302	-25.19	70	500000	
Li	7	3	45	-247.298	ppb	-247.298	-0.51	28241	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	3657.157	ppb	3657.157	4.26	6622	2000	
Na	23	1	45	225208.530	ppb	225208.530	0.85	12275706	2000	>LDR
Na	23	2	45	216601.924	ppb	216601.924	2.23	1440754	400000	
Mg	24	2	45	135389.226	ppb	135389.226	3.45	394641	400000	
Al	27	2	45	2.110	ppb	2.110	372.44	3	400000	
K	39	1	45	1190.621	ppb	1190.621	5.16	136520	400000	
K	39	2	45	2316.404	ppb	2316.404	2.95	3597	400000	
Ca	40	1	45	247567.419	ppb	247567.419	2.87	19154152	400000	
Ca	44	2	45	257339.509	ppb	257339.509	3.01	22576	400000	
V	51	2	72	15.563	ppb	15.563	13.49	687	2000	
Cr	52	2	72	0.874	ppb	0.874	52.19	57	5000	
Mn	55	2	72	20.889	ppb	20.889	12.33	420	10000	
Fe	57	2	72	72.602	ppb	72.602	20.05	83	400000	
Co	59	2	72	0.117	ppb	0.117	46.96	13	2000	
Ni	60	2	72	1.846	ppb	1.846	19.95	67	5000	
Cu	63	2	72	2.715	ppb	2.715	12.59	297	5000	
Zn	66	2	72	2.581	ppb	2.581	80.07	57	5000	
As	75	2	72	3.718	ppb	3.718	39.35	24	2000	
Se	78	1	72	3.296	ppb	3.296	79.81	31	2000	
Sr	88	2	72	3189.654	ppb	3189.654	2.30	67900	4000	
Zr	90	2	72	29.445	ppb	29.445	204.30	13	1000	
Nb	93	2	72	1.531	ppb	1.531	7.10	273	200	
Mo	95	2	115	2.132	ppb	2.132	37.28	127	2000	
Pd	105	2	115	0.105	ppb	0.105	54.74	13	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.200	ppb	0.200	76.36	30	2000	
Sb	121	2	115	0.126	ppb	0.126	153.19	10	1000	
Ba	137	2	115	82.723	ppb	82.723	3.40	1440	5000	
W	182	2	165	0.300	ppb	0.300	51.40	223	100	
Pt	195	2	165	0.003	ppb	0.003	470.99	7	100	
Tl	205	2	165	0.014	ppb	0.014	122.06	23	2000	
Pb	208	2	165	0.074	ppb	0.074	47.05	173	5000	
Th	232	2	165	0.082	ppb	0.082	23.18	143	2000	
U	238	2	165	16.615	ppb	16.615	1.69	27046	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	4572	5.21	446069	1.02	60	120	IS Failed
Sc (IS)	45	1	HMI H2	549244	1.14	13344586	4.12	60	120	IS Failed
Sc (IS)	45	2	HMI He	26292	3.58	548684	4.79	60	120	IS Failed
Sc (IS)	45	3	No Gas	1532905	1.31	39087130	3.92	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	362602	1.08	8240244	4.40	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	41581	0.51	783465	5.31	60	120	IS Failed
In Internal Standard	115	2	HMI He	191485	1.07	2775841	6.90	60	120	IS Failed
Ho-165	165	2	HMI He	1664356	0.38	17360012	9.59	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-D-7-B
Data File Name	265SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:01:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-239.539	ppb	-239.539	-6.45	690	500000	
Li	7	2	45	-262.383	ppb	-262.383	-30.09	53	500000	
Li	7	3	45	-234.087	ppb	-234.087	-1.93	30358	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1856.595	ppb	1856.595	8.83	3150	2000	
Na	23	1	45	205756.878	ppb	205756.878	1.59	10627852	2000	>LDR
Na	23	2	45	187000.331	ppb	187000.331	2.87	1229274	400000	
Mg	24	2	45	76529.648	ppb	76529.648	4.06	220459	400000	
Al	27	2	45	2.091	ppb	2.091	374.21	3	400000	
K	39	1	45	5829.037	ppb	5829.037	2.38	336816	400000	
K	39	2	45	6383.940	ppb	6383.940	5.84	9220	400000	
Ca	40	1	45	177866.168	ppb	177866.168	2.11	13041440	400000	
Ca	44	2	45	178994.675	ppb	178994.675	3.87	15521	400000	
V	51	2	72	12.592	ppb	12.592	32.71	540	2000	
Cr	52	2	72	0.414	ppb	0.414	46.36	30	5000	
Mn	55	2	72	2144.673	ppb	2144.673	2.87	40631	10000	
Fe	57	2	72	129.602	ppb	129.602	51.05	137	400000	
Co	59	2	72	0.485	ppb	0.485	81.18	50	2000	
Ni	60	2	72	18.908	ppb	18.908	18.46	570	5000	
Cu	63	2	72	3.152	ppb	3.152	12.82	320	5000	
Zn	66	2	72	4.948	ppb	4.948	155.78	77	5000	
As	75	2	72	4.891	ppb	4.891	35.67	29	2000	
Se	78	1	72	0.885	ppb	0.885	102.26	8	2000	
Sr	88	2	72	2244.527	ppb	2244.527	2.41	45552	4000	
Zr	90	2	72	101.014	ppb	101.014	70.74	30	1000	
Nb	93	2	72	0.228	ppb	0.228	149.36	70	200	
Mo	95	2	115	15.242	ppb	15.242	18.25	850	2000	
Pd	105	2	115	0.005	ppb	0.005	1134.90	3	100	
Ag	107	2	115	0.027	ppb	0.027	207.99	7	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.058	ppb	0.058	283.86	20	2000	
Sb	121	2	115	0.611	ppb	0.611	84.29	33	1000	
Ba	137	2	115	38.801	ppb	38.801	5.26	647	5000	
W	182	2	165	0.189	ppb	0.189	10.19	160	100	
Pt	195	2	165	-0.004	ppb	-0.004	-309.86	3	100	
Tl	205	2	165	0.043	ppb	0.043	58.17	47	2000	
Pb	208	2	165	0.063	ppb	0.063	79.40	153	5000	
Th	232	2	165	0.051	ppb	0.051	46.28	97	2000	
U	238	2	165	23.804	ppb	23.804	2.27	36935	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	4284	4.70	446069	0.96	60	120	IS Failed
Sc (IS)	45	1	HMI H2	520440	0.71	13344586	3.90	60	120	IS Failed
Sc (IS)	45	2	HMI He	25978	3.10	548684	4.73	60	120	IS Failed
Sc (IS)	45	3	No Gas	1471883	0.63	39087130	3.77	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	346228	0.94	8240244	4.20	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	39638	0.33	783465	5.06	60	120	IS Failed
In Internal Standard	115	2	HMI He	182993	1.15	2775841	6.59	60	120	IS Failed
Ho-165	165	2	HMI He	1586835	0.63	17360012	9.14	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-8-B
Data File Name	266SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:05:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-239.249	ppb	-239.249	-11.69	630	500000	
Li	7	2	45	-290.416	ppb	-290.416	-15.98	37	500000	
Li	7	3	45	-226.293	ppb	-226.293	-0.27	30806	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	2214.252	ppb	2214.252	8.35	3834	2000	
Na	23	1	45	2304155.815	ppb	2304155.815	0.46	108109145	2000	>LDR
Na	23	2	45	2033033.130	ppb	2033033.130	1.61	12560807	400000	>LDR
Mg	24	2	45	259202.158	ppb	259202.158	2.22	702944	400000	
Al	27	2	45	56.643	ppb	56.643	67.97	40	400000	
K	39	1	45	148850.659	ppb	148850.659	0.84	6126535	400000	
K	39	2	45	134196.134	ppb	134196.134	1.83	176533	400000	
Ca	40	1	45	189389.044	ppb	189389.044	0.32	12633351	400000	
Ca	44	2	45	183954.093	ppb	183954.093	3.66	15014	400000	
V	51	2	72	10.473	ppb	10.473	40.83	423	2000	
Cr	52	2	72	49.361	ppb	49.361	5.11	2387	5000	
Mn	55	2	72	2636.922	ppb	2636.922	3.07	46269	10000	
Fe	57	2	72	214442.422	ppb	214442.422	1.68	198947	400000	
Co	59	2	72	3.691	ppb	3.691	15.08	347	2000	
Ni	60	2	72	9.502	ppb	9.502	19.68	270	5000	
Cu	63	2	72	2.229	ppb	2.229	21.80	223	5000	
Zn	66	2	72	3.662	ppb	3.662	78.36	60	5000	
As	75	2	72	30.021	ppb	30.021	2.96	165	2000	
Se	78	1	72	12.001	ppb	12.001	6.17	95	2000	
Sr	88	2	72	1971.582	ppb	1971.582	1.33	37074	4000	
Zr	90	2	72	2596.079	ppb	2596.079	12.72	587	1000	
Nb	93	2	72	1.494	ppb	1.494	28.75	237	200	
Mo	95	2	115	1.677	ppb	1.677	65.13	87	2000	
Pd	105	2	115	0.048	ppb	0.048	141.52	7	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.093	ppb	0.093	341.70	20	2000	
Sb	121	2	115	14.773	ppb	14.773	9.30	663	1000	
Ba	137	2	115	70.999	ppb	70.999	4.32	1073	5000	
W	182	2	165	0.303	ppb	0.303	51.87	190	100	
Pt	195	2	165	0.042	ppb	0.042	64.64	20	100	
Tl	205	2	165	-0.003	ppb	-0.003	-229.60	7	2000	
Pb	208	2	165	0.982	ppb	0.982	17.81	1020	5000	
Th	232	2	165	0.353	ppb	0.353	19.33	430	2000	
U	238	2	165	0.683	ppb	0.683	9.45	950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	4386	8.75	446069	0.98	60	120	IS Failed
Sc (IS)	45	1	HMI H2	473442	0.75	13344586	3.55	60	120	IS Failed
Sc (IS)	45	2	HMI He	24452	2.39	548684	4.46	60	120	IS Failed
Sc (IS)	45	3	No Gas	1404916	2.06	39087130	3.59	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	310610	0.32	8240244	3.77	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	36733	2.55	783465	4.69	60	120	IS Failed
In Internal Standard	115	2	HMI He	166227	0.65	2775841	5.99	60	120	IS Failed
Ho-165	165	2	HMI He	1408752	0.48	17360012	8.11	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-10-B
Data File Name	267SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:08:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-195.707	ppb	-195.707	-16.98	843	500000	
Li	7	2	45	-166.629	ppb	-166.629	-36.22	80	500000	
Li	7	3	45	-140.527	ppb	-140.527	-3.51	45389	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	2700.233	ppb	2700.233	7.30	6408	2000	
Na	23	1	45	7318423.684	ppb	7318423.684	0.72	333413382	2000	>LDR
Na	23	2	45	6793769.577	ppb	6793769.577	2.24	35800762	400000	>LDR
Mg	24	2	45	1200377.525	ppb	1200377.525	3.07	2776590	400000	
Al	27	2	45	193.330	ppb	193.330	51.27	113	400000	
K	39	1	45	232773.610	ppb	232773.610	0.89	9265386	400000	
K	39	2	45	216966.399	ppb	216966.399	2.57	243258	400000	
Ca	40	1	45	543105.231	ppb	543105.231	0.75	35176671	400000	
Ca	44	2	45	583386.303	ppb	583386.303	1.39	40618	400000	
V	51	2	72	20.553	ppb	20.553	15.27	643	2000	
Cr	52	2	72	16.748	ppb	16.748	18.68	667	5000	
Mn	55	2	72	371.672	ppb	371.672	5.48	5348	10000	
Fe	57	2	72	344.207	ppb	344.207	7.09	267	400000	
Co	59	2	72	1.412	ppb	1.412	47.34	110	2000	
Ni	60	2	72	4.159	ppb	4.159	44.93	100	5000	
Cu	63	2	72	3.163	ppb	3.163	14.50	243	5000	
Zn	66	2	72	12.148	ppb	12.148	32.16	110	5000	
As	75	2	72	20.769	ppb	20.769	20.59	94	2000	
Se	78	1	72	3.477	ppb	3.477	67.01	25	2000	
Sr	88	2	72	13192.294	ppb	13192.294	0.60	203396	4000	
Zr	90	2	72	2028.952	ppb	2028.952	10.68	377	1000	
Nb	93	2	72	1.401	ppb	1.401	76.54	183	200	
Mo	95	2	115	1.703	ppb	1.703	20.99	73	2000	
Pd	105	2	115	0.157	ppb	0.157	103.48	13	100	
Ag	107	2	115	0.017	ppb	0.017	228.17	3	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.728	ppb	0.728	106.54	47	2000	
Sb	121	2	115	1.451	ppb	1.451	44.43	57	1000	
Ba	137	2	115	1002.870	ppb	1002.870	3.85	12582	5000	
W	182	2	165	4.238	ppb	4.238	7.93	1570	100	
Pt	195	2	165	-0.002	ppb	-0.002	-1156.90	3	100	
Tl	205	2	165	0.020	ppb	0.020	84.30	20	2000	
Pb	208	2	165	0.438	ppb	0.438	30.90	423	5000	
Th	232	2	165	0.107	ppb	0.107	20.83	127	2000	
U	238	2	165	0.561	ppb	0.561	31.95	663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	5985	0.77	446069	1.34	60	120	IS Failed
Sc (IS)	45	1	HMI H2	459756	0.28	13344586	3.45	60	120	IS Failed
Sc (IS)	45	2	HMI He	20861	3.45	548684	3.80	60	120	IS Failed
Sc (IS)	45	3	No Gas	1253302	3.90	39087130	3.21	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	286899	1.81	8240244	3.48	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	30116	2.75	783465	3.84	60	120	IS Failed
In Internal Standard	115	2	HMI He	138243	3.64	2775841	4.98	60	120	IS Failed
Ho-165	165	2	HMI He	1196691	1.94	17360012	6.89	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-11-B
Data File Name	268SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:12:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-214.788	ppb	-214.788	-12.72	607	500000	
Li	7	2	45	-229.891	ppb	-229.891	-33.22	50	500000	
Li	7	3	45	-219.342	ppb	-219.342	-1.93	25797	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1736.184	ppb	1736.184	2.53	2590	2000	
Na	23	1	45	2193756.778	ppb	2193756.778	0.55	81756972	2000	>LDR
Na	23	2	45	1917269.269	ppb	1917269.269	1.83	9248333	400000	
Mg	24	2	45	215423.670	ppb	215423.670	1.29	456184	400000	
Al	27	2	45	-2.427	ppb	-2.427	0.00	0	400000	
K	39	1	45	104833.394	ppb	104833.394	0.32	3443368	400000	
K	39	2	45	92172.792	ppb	92172.792	1.44	94738	400000	
Ca	40	1	45	160759.624	ppb	160759.624	0.44	8517827	400000	
Ca	44	2	45	159598.663	ppb	159598.663	4.87	10170	400000	
V	51	2	72	3.807	ppb	3.807	30.96	140	2000	
Cr	52	2	72	8.561	ppb	8.561	49.42	320	5000	
Mn	55	2	72	5161.068	ppb	5161.068	1.70	68653	10000	
Fe	57	2	72	608.797	ppb	608.797	20.73	433	400000	
Co	59	2	72	0.884	ppb	0.884	46.32	63	2000	
Ni	60	2	72	1.454	ppb	1.454	82.16	37	5000	
Cu	63	2	72	2.622	ppb	2.622	14.50	193	5000	
Zn	66	2	72	2.398	ppb	2.398	37.03	37	5000	
As	75	2	72	15.957	ppb	15.957	29.15	67	2000	
Se	78	1	72	1.694	ppb	1.694	44.67	11	2000	
Sr	88	2	72	2313.765	ppb	2313.765	1.63	32975	4000	
Zr	90	2	72	485.101	ppb	485.101	49.35	87	1000	
Nb	93	2	72	0.690	ppb	0.690	116.57	97	200	
Mo	95	2	115	2.987	ppb	2.987	22.65	120	2000	
Pd	105	2	115	-0.030	ppb	-0.030	0.00	0	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.422	ppb	0.422	55.17	30	2000	
Sb	121	2	115	0.504	ppb	0.504	0.35	20	1000	
Ba	137	2	115	45.211	ppb	45.211	12.72	537	5000	
W	182	2	165	0.504	ppb	0.504	61.10	213	100	
Pt	195	2	165	0.022	ppb	0.022	155.32	10	100	
Tl	205	2	165	-0.007	ppb	-0.007	-152.32	3	2000	
Pb	208	2	165	0.033	ppb	0.033	151.52	83	5000	
Th	232	2	165	0.002	ppb	0.002	803.29	23	2000	
U	238	2	165	0.177	ppb	0.177	12.19	197	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	3761	1.54	446069	0.84	60	120	IS Failed
Sc (IS)	45	1	HMI H2	376050	0.46	13344586	2.82	60	120	IS Failed
Sc (IS)	45	2	HMI He	19088	1.34	548684	3.48	60	120	IS Failed
Sc (IS)	45	3	No Gas	1117484	0.43	39087130	2.86	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	245294	0.66	8240244	2.98	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	27839	1.45	783465	3.55	60	120	IS Failed
In Internal Standard	115	2	HMI He	130395	0.31	2775841	4.70	60	120	IS Failed
Ho-165	165	2	HMI He	1092927	0.19	17360012	6.30	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-E-12-C
Data File Name	269SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:16:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-224.753	ppb	-224.753	-3.08	530	500000	
Li	7	2	45	-229.358	ppb	-229.358	-16.18	47	500000	
Li	7	3	45	-225.540	ppb	-225.540	-0.49	22576	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1441.838	ppb	1441.838	10.33	2010	2000	
Na	23	1	45	2125982.974	ppb	2125982.974	0.94	74541139	2000	>LDR
Na	23	2	45	1856688.121	ppb	1856688.121	0.81	8310157	400000	
Mg	24	2	45	254855.837	ppb	254855.837	0.91	500733	400000	
Al	27	2	45	-2.427	ppb	-2.427	0.00	0	400000	
K	39	1	45	104405.428	ppb	104405.428	0.72	3226400	400000	
K	39	2	45	91091.482	ppb	91091.482	0.53	86876	400000	
Ca	40	1	45	260498.641	ppb	260498.641	0.49	12984295	400000	
Ca	44	2	45	257728.389	ppb	257728.389	2.39	15238	400000	
V	51	2	72	3.492	ppb	3.492	82.81	120	2000	
Cr	52	2	72	1.934	ppb	1.934	72.04	70	5000	
Mn	55	2	72	1368.567	ppb	1368.567	2.75	16696	10000	
Fe	57	2	72	209.992	ppb	209.992	12.87	140	400000	
Co	59	2	72	1.115	ppb	1.115	20.33	73	2000	
Ni	60	2	72	2.867	ppb	2.867	68.25	60	5000	
Cu	63	2	72	3.892	ppb	3.892	53.97	247	5000	
Zn	66	2	72	0.725	ppb	0.725	260.37	23	5000	
As	75	2	72	4.861	ppb	4.861	64.97	19	2000	
Se	78	1	72	1.575	ppb	1.575	109.43	9	2000	
Sr	88	2	72	3595.883	ppb	3595.883	2.42	47000	4000	
Zr	90	2	72	447.874	ppb	447.874	70.44	73	1000	
Nb	93	2	72	0.209	ppb	0.209	76.23	43	200	
Mo	95	2	115	3.213	ppb	3.213	29.95	120	2000	
Pd	105	2	115	0.076	ppb	0.076	120.96	7	100	
Ag	107	2	115	0.019	ppb	0.019	221.63	3	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	0.224	ppb	0.224	189.37	20	2000	
Sb	121	2	115	0.648	ppb	0.648	71.35	23	1000	
Ba	137	2	115	250.085	ppb	250.085	2.20	2750	5000	
W	182	2	165	0.568	ppb	0.568	47.18	220	100	
Pt	195	2	165	0.037	ppb	0.037	58.08	13	100	
Tl	205	2	165	0.037	ppb	0.037	144.35	27	2000	
Pb	208	2	165	0.003	ppb	0.003	324.17	57	5000	
Th	232	2	165	0.004	ppb	0.004	735.31	23	2000	
U	238	2	165	1.775	ppb	1.775	2.82	1790	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	3524	8.92	446069	0.79	60	120	IS Failed
Sc (IS)	45	1	HMI H2	353791	0.79	13344586	2.65	60	120	IS Failed
Sc (IS)	45	2	HMI He	17710	1.35	548684	3.23	60	120	IS Failed
Sc (IS)	45	3	No Gas	1023753	0.50	39087130	2.62	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	230248	0.33	8240244	2.79	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	25532	1.87	783465	3.26	60	120	IS Failed
In Internal Standard	115	2	HMI He	121104	0.95	2775841	4.36	60	120	IS Failed
Ho-165	165	2	HMI He	1027415	0.38	17360012	5.92	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-E-13-B
Data File Name	270SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:20:26-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-130.043	ppb	-130.043	-1.98	790	500000	
Li	7	2	45	-89.819	ppb	-89.819	-85.42	70	500000	
Li	7	3	45	-89.376	ppb	-89.376	-16.77	45610	50000	
Be	9	1	6	4.605	ppb	4.605	174.83	7	2000	
B	11	1	6	4058.449	ppb	4058.449	9.32	6612	2000	
Na	23	1	45	7301825.990	ppb	7301825.990	1.22	220102903	2000	>LDR
Na	23	2	45	6788489.510	ppb	6788489.510	3.85	22982109	400000	>LDR
Mg	24	2	45	1122997.739	ppb	1122997.739	4.82	1668580	400000	
Al	27	2	45	25.286	ppb	25.286	110.21	10	400000	
K	39	1	45	238012.550	ppb	238012.550	0.99	6267384	400000	
K	39	2	45	222592.941	ppb	222592.941	4.48	160323	400000	
Ca	40	1	45	558748.785	ppb	558748.785	0.53	23945239	400000	
Ca	44	2	45	595516.450	ppb	595516.450	5.25	26629	400000	
V	51	2	72	51.040	ppb	51.040	4.46	973	2000	
Cr	52	2	72	613.133	ppb	613.133	6.60	15281	5000	
Mn	55	2	72	3780.685	ppb	3780.685	2.44	34357	10000	
Fe	57	2	72	243.537	ppb	243.537	15.92	120	400000	
Co	59	2	72	0.469	ppb	0.469	66.17	23	2000	
Ni	60	2	72	39.099	ppb	39.099	18.23	563	5000	
Cu	63	2	72	5.240	ppb	5.240	34.71	237	5000	
Zn	66	2	72	4.108	ppb	4.108	115.11	33	5000	
As	75	2	72	49.469	ppb	49.469	12.37	141	2000	
Se	78	1	72	0.251	ppb	0.251	190.82	1	2000	
Sr	88	2	72	12251.298	ppb	12251.298	2.15	119172	4000	
Zr	90	2	72	895.433	ppb	895.433	32.24	107	1000	
Nb	93	2	72	12.841	ppb	12.841	8.57	917	200	
Mo	95	2	115	3.463	ppb	3.463	62.54	97	2000	
Pd	105	2	115	0.815	ppb	0.815	23.09	40	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	4.429	ppb	4.429	25.23	143	2000	
Sb	121	2	115	5.868	ppb	5.868	14.96	147	1000	
Ba	137	2	115	269.606	ppb	269.606	12.66	2244	5000	
W	182	2	165	18.714	ppb	18.714	1.69	4588	100	
Pt	195	2	165	0.019	ppb	0.019	144.09	7	100	
Tl	205	2	165	0.011	ppb	0.011	6.06	10	2000	
Pb	208	2	165	0.113	ppb	0.113	55.31	107	5000	
Th	232	2	165	0.037	ppb	0.037	84.05	40	2000	
U	238	2	165	0.103	ppb	0.103	30.73	87	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	4103	2.68	446069	0.92	60	120	IS Failed
Sc (IS)	45	1	HMI H2	304200	0.35	13344586	2.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	13406	3.21	548684	2.44	60	120	IS Failed
Sc (IS)	45	3	No Gas	1018803	2.14	39087130	2.61	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	189510	0.39	8240244	2.30	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	19010	3.93	783465	2.43	60	120	IS Failed
In Internal Standard	115	2	HMI He	91855	3.10	2775841	3.31	60	120	IS Failed
Ho-165	165	2	HMI He	812468	2.86	17360012	4.68	60	120	IS Failed

Sample Report

Sample Table

Sample Name	720-88516-F-14-C
Data File Name	271SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:24:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-230.921	ppb	-230.921	-5.26	330	500000	
Li	7	2	45	-286.662	ppb	-286.662	-26.27	17	500000	
Li	7	3	45	-228.495	ppb	-228.495	-1.34	20216	50000	
Be	9	1	6	-0.043	ppb	-0.043	0.00	0	2000	
B	11	1	6	1496.754	ppb	1496.754	24.30	1407	2000	
Na	23	1	45	1865323.907	ppb	1865323.907	1.93	42749061	2000	>LDR
Na	23	2	45	1741586.311	ppb	1741586.311	4.40	4693196	400000	
Mg	24	2	45	176468.759	ppb	176468.759	4.67	208737	400000	
Al	27	2	45	9.757	ppb	9.757	216.28	3	400000	
K	39	1	45	93765.341	ppb	93765.341	0.51	1897685	400000	
K	39	2	45	82115.839	ppb	82115.839	2.24	47205	400000	
Ca	40	1	45	132765.629	ppb	132765.629	1.09	4326343	400000	
Ca	44	2	45	131003.811	ppb	131003.811	0.96	4671	400000	
V	51	2	72	2.044	ppb	2.044	128.80	53	2000	
Cr	52	2	72	2.987	ppb	2.987	70.53	67	5000	
Mn	55	2	72	731.775	ppb	731.775	0.54	5575	10000	
Fe	57	2	72	142.986	ppb	142.986	61.11	60	400000	
Co	59	2	72	1.636	ppb	1.636	24.51	67	2000	
Ni	60	2	72	0.799	ppb	0.799	118.65	13	5000	
Cu	63	2	72	4.550	ppb	4.550	15.34	177	5000	
Zn	66	2	72	-1.353	ppb	-1.353	-220.23	7	5000	
As	75	2	72	5.152	ppb	5.152	19.78	12	2000	
Se	78	1	72	5.518	ppb	5.518	59.89	21	2000	
Sr	88	2	72	2664.017	ppb	2664.017	3.50	21719	4000	
Zr	90	2	72	144.533	ppb	144.533	105.64	17	1000	
Nb	93	2	72	-0.079	ppb	-0.079	-214.18	10	200	
Mo	95	2	115	1.905	ppb	1.905	8.35	47	2000	
Pd	105	2	115	0.214	ppb	0.214	197.75	10	100	
Ag	107	2	115	-0.005	ppb	-0.005	0.00	0	100	
Cd	111	2	115	-0.028	ppb	-0.028	0.00	0	2000	
Sn	120	2	115	-0.019	ppb	-0.019	-2285.57	7	2000	
Sb	121	2	115	0.085	ppb	0.085	310.02	3	1000	
Ba	137	2	115	88.119	ppb	88.119	8.05	630	5000	
W	182	2	165	0.809	ppb	0.809	16.44	197	100	
Pt	195	2	165	0.024	ppb	0.024	261.96	7	100	
Tl	205	2	165	0.006	ppb	0.006	537.59	7	2000	
Pb	208	2	165	0.149	ppb	0.149	42.59	107	5000	
Th	232	2	165	0.006	ppb	0.006	181.68	17	2000	
U	238	2	165	0.365	ppb	0.365	18.86	250	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2437	17.34	446069	0.55	60	120	IS Failed
Sc (IS)	45	1	HMI H2	231281	1.29	13344586	1.73	60	120	IS Failed
Sc (IS)	45	2	HMI He	10681	5.91	548684	1.95	60	120	IS Failed
Sc (IS)	45	3	No Gas	937430	2.09	39087130	2.40	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	151548	0.74	8240244	1.84	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	15935	3.86	783465	2.03	60	120	IS Failed
In Internal Standard	115	2	HMI He	78711	4.73	2775841	2.84	60	120	IS Failed
Ho-165	165	2	HMI He	685765	1.81	17360012	3.95	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5314914
Data File Name	272_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:28:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-180.511	ppb	-15.067	503	500	-36.1	90	110	>+\-10%
Li	7	2	45	-46.495	ppb	-448.121	70	500	-9.3	90	110	>+\-10%
Li	7	3	45	-125.407	ppb	-4.908	36498	500	-25.1	90	110	>+\-10%
Be	9	1	6	93.646	ppb	43.585	67	50	187.3	90	110	>+\-10%
B	11	1	6	168.403	ppb	58.618	133	50	336.8	90	110	>+\-10%
Na	23	1	45	31768.153	ppb	2.919	795380	5000	635.4	90	110	>+\-10%
Na	23	2	45	27382.800	ppb	8.045	83054	5000	547.7	90	110	>+\-10%
Mg	24	2	45	3954.351	ppb	6.818	5238	5000	79.1	90	110	>+\-10%
Al	27	2	45	4427.382	ppb	15.927	1447	5000	88.5	90	110	>+\-10%
K	39	1	45	8521.599	ppb	2.781	219628	5000	170.4	90	110	>+\-10%
K	39	2	45	7670.922	ppb	1.747	5048	5000	153.4	90	110	>+\-10%
Ca	40	1	45	5676.358	ppb	0.568	201097	5000	113.5	90	110	>+\-10%
Ca	44	2	45	6420.154	ppb	5.865	257	5000	128.4	90	110	>+\-10%
V	51	2	72	51.328	ppb	6.131	953	50	102.7	90	110	
Cr	52	2	72	43.924	ppb	7.858	1073	50	87.8	90	110	>+\-10%
Mn	55	2	72	72.529	ppb	20.702	647	50	145.1	90	110	>+\-10%
Fe	57	2	72	5078.844	ppb	7.825	2384	5000	101.6	90	110	
Co	59	2	72	46.249	ppb	8.438	2190	50	92.5	90	110	
Ni	60	2	72	48.892	ppb	15.100	680	50	97.8	90	110	
Cu	63	2	72	57.121	ppb	13.711	2290	50	114.2	90	110	>+\-10%
Zn	66	2	72	38.886	ppb	20.694	187	50	77.8	90	110	>+\-10%
As	75	2	72	52.439	ppb	14.579	146	50	104.9	90	110	
Se	78	1	72	78.254	ppb	7.245	343	50	156.5	90	110	>+\-10%
Sr	88	2	72	75.279	ppb	21.180	717	50	150.6	90	110	>+\-10%
Zr	90	2	72	94.817	ppb	139.970	13	50	189.6	90	110	>+\-10%
Nb	93	2	72	103.592	ppb	2.155	7102	100	103.6	90	110	
Mo	95	2	115	39.089	ppb	5.997	1087	50	78.2	90	110	>+\-10%
Pd	105	2	115	50.127	ppb	6.380	2350	50	100.3	90	110	
Ag	107	2	115	52.956	ppb	1.998	5438	50	105.9	90	110	
Cd	111	2	115	45.139	ppb	18.108	530	50	90.3	90	110	
Sn	120	2	115	55.465	ppb	6.438	1694	50	110.9	90	110	>+\-10%
Sb	121	2	115	47.060	ppb	7.291	1157	50	94.1	90	110	
Ba	137	2	115	71.241	ppb	9.937	590	50	142.5	90	110	>+\-10%
W	182	2	165	48.567	ppb	5.225	10801	50	97.1	90	110	
Pt	195	2	165	50.159	ppb	1.246	9707	50	100.3	90	110	
Tl	205	2	165	61.430	ppb	1.514	23980	50	122.9	90	110	>+\-10%
Pb	208	2	165	62.065	ppb	2.924	31435	50	124.1	90	110	>+\-10%
Th	232	2	165	60.545	ppb	1.623	36317	50	121.1	90	110	>+\-10%
U	238	2	165	62.307	ppb	3.001	45074	50	124.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2022	8.49	446069	0.45	60	120	IS Failed
Sc (IS)	45	1	HMI H2	249999	1.08	13344586	1.87	60	120	IS Failed
Sc (IS)	45	2	HMI He	11885	7.33	548684	2.17	60	120	IS Failed
Sc (IS)	45	3	No Gas	942179	2.27	39087130	2.41	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	172832	0.80	8240244	2.10	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	18523	3.21	783465	2.36	60	120	IS Failed
In Internal Standard	115	2	HMI He	91043	7.77	2775841	3.28	60	120	IS Failed
Ho-165	165	2	HMI He	740383	3.59	17360012	4.26	60	120	IS Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5314921
Data File Name	273_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T05:31:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	129CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

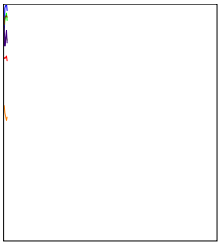
Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-258.227	ppb	-1.8	15808	10	
Be	9	1	6	-0.043	ppb	0.0	0	0.5	
B	11	1	6	34.096	ppb	3.6	30	0.5	>RL
Na	23	1	45	13968.392	ppb	0.9	378756	25	>RL
Na	23	2	45	12431.580	ppb	10.8	39497	25	>RL
Mg	24	2	45	159.169	ppb	48.0	253	25	>RL
Al	27	2	45	6.566	ppb	237.2	3	15	
K	39	1	45	1438.555	ppb	7.9	72053	50	>RL
K	39	2	45	1649.234	ppb	12.9	1233	50	>RL
Ca	40	1	45	149.944	ppb	6.4	6908	50	>RL
Ca	44	2	45	121.577	ppb	118.0	7	25	>RL
V	51	2	72	1.424	ppb	106.2	53	1	>RL
Cr	52	2	72	0.235	ppb	171.3	10	1	
Mn	55	2	72	10.954	ppb	56.2	107	0.5	>RL
Fe	57	2	72	39.012	ppb	125.0	23	25	>RL
Co	59	2	72	0.257	ppb	89.6	13	0.5	
Ni	60	2	72	-0.295	ppb	0.0	0	1	
Cu	63	2	72	1.031	ppb	57.7	70	1	>RL
Zn	66	2	72	-1.641	ppb	-75.6	7	5	
As	75	2	72	1.258	ppb	50.3	4	1	>RL
Se	78	1	72	0.816	ppb	178.6	4	1	
Sr	88	2	72	2.577	ppb	62.2	27	0.5	>RL
Zr	90	2	72	-23.016	ppb	0.0	0	1	
Nb	93	2	72	2.322	ppb	32.8	187	2	>RL
Mo	95	2	115	0.396	ppb	190.5	13	0.5	
Pd	105	2	115	-0.030	ppb	0.0	0	1	
Ag	107	2	115	0.025	ppb	210.6	3	1	
Cd	111	2	115	-0.028	ppb	0.0	0	0.5	
Sn	120	2	115	-0.169	ppb	-104.5	3	1	
Sb	121	2	115	0.580	ppb	41.8	17	0.6	
Ba	137	2	115	0.228	ppb	283.6	3	0.5	
W	182	2	165	0.455	ppb	37.4	140	1	
Pt	195	2	165	0.054	ppb	57.1	13	1	
Tl	205	2	165	0.004	ppb	761.0	7	0.1	
Pb	208	2	165	-0.010	ppb	-474.1	37	0.5	
Th	232	2	165	0.097	ppb	22.1	77	1	
U	238	2	165	0.181	ppb	73.9	143	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2121	3.38	446069	0.48	60	120	IS Failed
Sc (IS)	45	1	HMI H2	267022	0.74	13344586	2.00	60	120	IS Failed
Sc (IS)	45	2	HMI He	12285	9.47	548684	2.24	60	120	IS Failed
Sc (IS)	45	3	No Gas	952487	1.09	39087130	2.44	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	185299	1.59	8240244	2.25	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	19682	3.65	783465	2.51	60	120	IS Failed
In Internal Standard	115	2	HMI He	96741	5.26	2775841	3.49	60	120	IS Failed
Ho-165	165	2	HMI He	776313	2.68	17360012	4.47	60	120	IS Failed

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	38049	38629.5	1.17
9	50000	46743	46611.5	3.32
59	50000	48770	48361.1	4.61
66	10000	5235	5368.2	5.00
70	1000	1827	1798.2	2.83
75	5000	2583	2593.0	1.38
89	50000	73507	71001.9	10.66
105	500	527	531.3	3.02
118	500	656	708.7	6.05
137	10000	9470	9411.7	1.90
140	1E+05	84759	84990.3	1.63
205	50000	59896	59092.2	1.52
6	5000	7551	7664.0	1.55
70/140	2	2.156 %	2.116 %	2.01
156/140	2	1.675 %	1.730 %	4.65

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.00
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-40	V	Deflect	14.6	V
Extract 2	-165.0	V	Omega Lens	7.8	V	Cell Exit	-48	V	Plate Bias	-50	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94		Axis Gain	0.9906		QP Bias	-5.0	V
Mass Offset	126		Axis Offset	-0.03				

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

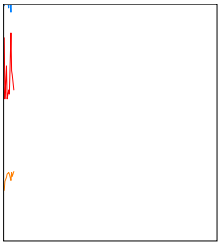
Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587	V

Meters

IF/BK Press	2.19E+2	Pa	TMP Revolution	100.0	%	Reflected Power	4	W
Analyzer Press	1.54E-4	Pa	Carrier Gas	0.90	L/min			

Current Signal

[HMI He]



Mass Range		Count	Avg. Count	RSD [%]
7	50	32	35.0	14.57
51	200	53	38.0	20.76
59	5000	3760	3475.2	10.78
66	1000	292	267.3	9.29
70	200	94	102.2	14.13
75	20	4	3.8	40.77
78	20	0	0.4	174.80
115	5000	1861	1821.2	7.05
118	50	32	23.1	22.40
137	500	294	260.8	6.86
140	10000	6823	6901.3	4.16
205	10000	11941	11542.1	2.60
238	20000	21157	20384.7	2.92
70/140	2	1.378 %	1.476 %	10.92
156/140	1	0.176 %	0.116 %	46.79

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.23	
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas	15.0	
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas	0.9	

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-28	V	Deflect	0.6	V
Extract 2	-170.0	V	Omega Lens	8.6	V	Cell Exit	-60	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94	Axis Gain	0.9906	QP Bias	-15.0	V
Mass Offset	126	Axis Offset	-0.03			

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

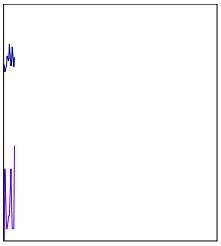
Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587	V

Meters

IF/BK Press	2.19E+2	Pa	TMP Revolution	100.0	%	Reflected Power	4	W
Analyzer Press	1.59E-4	Pa	Carrier Gas	0.90	L/min			

Current Signal

[HMI H2]



Mass	Range	Count	Avg. Count	RSD [%]
7	500	790	790.1	4.88
9	2000	2664	2790.9	3.55
59	5000	7368	7085.3	2.45
63	500	739	717.8	4.40
70	500	677	662.0	5.03
78	20	8	2.8	93.64
89	20000	47766	46559.9	2.67
115	20000	51157	51847.1	1.76
118	200	436	458.7	4.32
137	5000	6718	6560.2	1.94
140	20000	43674	43326.6	2.18
205	10000	39355	38582.5	2.05
238	20000	51116	48812.6	2.44
70/140	2	1.550 %	1.528 %	4.70
156/140	1	1.037 %	1.078 %	7.44

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.14
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-70	V	Cell Entrance	-40	V	Deflect	1.2	V
Extract 2	-165.0	V	Omega Lens	8.1	V	Cell Exit	-62	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	180	V		

Qpole Parameters

Mass Gain	94		Axis Gain	0.9906		QP Bias	-15.0	V
Mass Offset	126		Axis Offset	-0.03				

Torch Axis Parameters

Torch H	-0.6	mm	Torch V	0.4	mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1733	V	Pulse HV	1587	V

Meters

IF/BK Press	2.28E+2	Pa	TMP Revolution	100.0	%	Reflected Power	3	W
Analyzer Press	7.09E-4	Pa	Carrier Gas	0.75	L/min			

US EPA Tune Check Sample Report

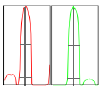
Batch Folder D:\MassHunter Data\ji092018.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	5216	1.71	5.00	
9	18611	1.07	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	5219	5068	5296	5277	5221
9	18849	18307	18693	18575	18632

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	827	6.90	6.9 - 7.1		0.793	0.750	[F]
9	2868	8.90	8.9 - 9.1		0.791	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters
Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.1	V	Deflect	1.2	V
Extract 2	-165.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-70	V	Cell Exit	-62	V			

Cell Parameters

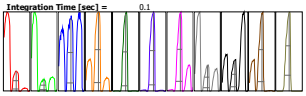
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	180	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	11901	1.18	5.00	
25	1786	2.05	5.00	
26	2205	1.17	5.00	
59	23830	2.69	5.00	
103	63805	2.35	5.00	
115	11412	4.29	5.00	
205	66541	2.57	5.00	
206	22363	2.31	5.00	
207	19602	2.26	5.00	
208	46639	2.56	5.00	
238	117104	2.20	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	12046	11732	11912	11785	12029
25	1792	1733	1774	1800	1833
26	2192	2208	2186	2192	2249
59	22889	23669	23790	24201	24600
103	61356	63684	64034	64683	65268
115	10794	11117	11356	11818	11977
205	64190	66010	66561	67025	68918
206	21626	22101	22540	22563	22985
207	18885	19726	19623	19675	20102
208	44817	46629	46939	46656	48155
238	113697	115747	117351	118170	120553

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	1940	23.950	23.9 - 24.1		0.759	0.750	[F]
25	286	25.000	24.9 - 25.1		0.793	0.750	[F]
26	347	25.950	25.9 - 26.1		0.774	0.750	[F]
59	3926	59.000	58.9 - 59.1		0.752	0.750	[F]
103	11665	103.000	102.9 - 103.1		0.728	0.750	
115	2055	115.050	114.9 - 115.1		0.737	0.750	
205	12380	205.000	204.9 - 205.1		0.752	0.750	[F]
206	4106	206.000	205.9 - 206.1		0.750	0.750	[F]
207	3531	207.000	206.9 - 207.1		0.734	0.750	
208	8839	208.000	207.9 - 208.1		0.735	0.750	
238	21508	238.000	237.9 - 238.1		0.744	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters
Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.6	V	Deflect	0.6	V
Extract 2	-170.0	V	Cell Entrance	-28	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-60	V			

Cell Parameters

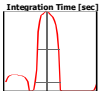
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	180	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	253423	4.13	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	269624	257624	249845	246378	243647

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	39606	6.900	6.9 - 7.1		0.797	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters
Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.8	V	Deflect	14.6	V
Extract 2	-165.0	V	Cell Entrance	-40	V	Plate Bias	-50	V
Omega Bias	-75	V	Cell Exit	-48	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	180	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

Mass	Element Name	Current Value
7	Li	Signal too low
9	Be	0.106740919010577
23	Na	0.116343773262035
24	Mg	0.121382321121223
27	Al	0.125949372915631
39	K	0.126849607603938
45	Sc	0.128403761445152
51	V	0.128254323751371
55	Mn	0.136445355354748
56	Fe	0.12703886668928
59	Co	0.139966294504619
60	Ni	0.141923891993534
63	Cu	0.14391842228594
66	Zn	0.142662062755544
72	Ge	0.142224647254598
75	As	0.141078187071233
77	Se	Signal too low
82	Se	Signal too low
89	Y	0.142040713230045
95	Mo	0.14131347631451
100	Ru	0.144173217538664
101	Ru	0.145621274528068
102	Ru	0.146408232230901
104	Ru	0.147481732727182
105	Pd	0.149674913126333
106	Pd	0.150432448611596

	Mass	Element Name	Current Value
	111	Cd	0.151009286825146
	114	Cd	0.152025215907794
	115	In	0.151421577290107
	118	Sn	0.151494058462756
	121	Sb	0.149868370673803
	137	Ba	0.149851485196202
	175	Lu	0.157467826297414
	193	Ir	0.157695178237653
	205	Tl	0.160510930266176
	208	Pb	0.161523405003812
	209	Bi	0.160957432826445
	232	Th	0.160526126651399
	238	U	0.161980973289831

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:09:52-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:13:39-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:17:26-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:21:13-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:25:01-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	006WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:28:48-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	icis-5314921
Data File Name	007CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:32:36-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	256648	0.00
Li	7	2	HMI He	11087	0.00
Li	7	3	No Gas	12419906	0.00
Be	9	1	HMI H2	37	300.60
B	11	1	HMI H2	1670	0.09
Na	23	1	HMI H2	650136	0.00
Na	23	2	HMI He	34853	0.00
Mg	24	2	HMI He	197	7.90
Al	27	2	HMI He	120	43.37
K	39	2	HMI He	10137	0.02
Ca	44	2	HMI He	120	34.72
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	890	1.33
Cr	52	2	HMI He	373	5.48
Mn	55	2	HMI He	127	40.07
Fe	57	2	HMI He	193	14.73
Co	59	2	HMI He	20	433.01
Ni	60	2	HMI He	333	8.07
Cu	63	2	HMI He	2284	0.39
Zn	66	2	HMI He	780	1.83
As	75	2	HMI He	25	132.28
Se	78	1	HMI H2	28	51.02
Sr	88	2	HMI He	20	866.03
Zr	90	2	HMI He	100	10.00
Nb	93	2	HMI He	197	17.60
Mo	95	2	HMI He	67	90.94
Pd	105	2	HMI He	20	500.00
Ag	107	2	HMI He	13	859.23
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	247	6.22
Sb	121	2	HMI He	53	113.02
Ba	137	2	HMI He	17	207.85
W	182	2	HMI He	907	1.89
Pt	195	2	HMI He	57	117.90
Tl	205	2	HMI He	233	5.61
Pb	208	2	HMI He	1173	1.91
Th	232	2	HMI He	330	6.02
U	238	2	HMI He	127	15.68

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	2128935	1.95
Sc (IS)	45	1	HMI H2	47418043	0.12
Sc (IS)	45	2	HMI He	935665	1.37
Sc (IS)	45	3	No Gas	125437115	0.80
Ge Internal Standard	72	1	HMI H2	21615861	0.40
Ge Internal Standard	72	2	HMI He	1215965	0.64
In Internal Standard	115	2	HMI He	3509672	1.88
Ho-165	165	2	HMI He	22804243	1.05

Calibration Standard Report

Sample Table

Sample Name	ic-5317211
Data File Name	008CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:38:30-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	1081632	0.00
Li	7	2	HMI He	43038	0.00
Li	7	3	No Gas	45930794	0.00
Be	9	1	HMI H2	68056	0.00
B	11	1	HMI H2	75140	0.00
Na	23	1	HMI H2	56759797	0.00
Na	23	2	HMI He	2856158	0.00
Mg	24	2	HMI He	1261297	0.00
Al	27	2	HMI He	268737	0.00
K	39	1	HMI H2	62051916	0.00
K	39	2	HMI He	511369	0.00
Ca	40	1	HMI H2	83154460	0.00
Ca	44	2	HMI He	30720	0.00
Ti	47	2	HMI He	7	2598.08
V	51	2	HMI He	141097	0.00
Cr	52	2	HMI He	194814	0.00
Mn	55	2	HMI He	63791	0.00
Fe	57	2	HMI He	356732	0.00
Co	59	2	HMI He	379892	0.00
Ni	60	2	HMI He	113010	0.00
Cu	63	2	HMI He	326496	0.00
Zn	66	2	HMI He	34327	0.00
As	75	2	HMI He	20086	0.00
Se	78	1	HMI H2	59505	0.00
Sr	88	2	HMI He	54901	0.00
Zr	90	2	HMI He	827	0.81
Nb	93	2	HMI He	948026	0.00
Mo	95	2	HMI He	130726	0.00
Pd	105	2	HMI He	235584	0.00
Ag	107	2	HMI He	496369	0.00
Cd	111	2	HMI He	52324	0.00
Sn	120	2	HMI He	122740	0.00
Sb	121	2	HMI He	95915	0.00
Ba	137	2	HMI He	31316	0.01
Nd	146	2	HMI He	149445	0.00
Sm	147	2	HMI He	130055	0.00
Sm	150	2	HMI He	125549	0.00
Gd	156	1	HMI H2	1503230	0.00
Gd	157	1	HMI H2	1126847	0.00
W	182	2	HMI He	778517	0.00
Pt	195	2	HMI He	709272	0.00
Tl	205	2	HMI He	1272602	0.00
Pb	208	2	HMI He	1630704	0.00
Th	232	2	HMI He	1995830	0.00
U	238	2	HMI He	2330094	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2072041	1.26	2128935	97.33	60	120	
Sc (IS)	45	1	HMI H2	48566263	0.01	47418043	102.42	60	120	
Sc (IS)	45	2	HMI He	953474	0.36	935665	101.90	60	120	
Sc (IS)	45	3	No Gas	121937405	0.42	125437115	97.21	60	120	
Ge Internal Standard	72	1	HMI H2	21722487	0.38	21615861	100.49	60	120	
Ge Internal Standard	72	2	HMI He	1236780	0.49	1215965	101.71	60	120	
In Internal Standard	115	2	HMI He	3553557	0.95	3509672	101.25	60	120	
Ho-165	165	2	HMI He	23051900	0.26	22804243	101.09	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5317213
Data File Name	009_ICV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:42:20-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	395.050	ppb	1.095	579371	400	98.8	90	110	
Li	7	2	45	435.005	ppb	6.824	24859	400	108.8	90	110	
Li	7	3	45	442.326	ppb	0.360	26631885	400	110.6	90	110	>+\-10%
Be	9	1	6	39.179	ppb	1.598	26952	40	97.9	90	110	
B	11	1	6	37.285	ppb	1.755	29326	40	93.2	90	110	
Na	23	1	45	3974.033	ppb	0.118	22686164	4000	99.4	90	110	>+\-10%
Na	23	2	45	4031.501	ppb	2.685	1161276	4000	100.8	90	110	
Mg	24	2	45	3908.285	ppb	0.664	488286	4000	97.7	90	110	
Al	27	2	45	7958.970	ppb	1.200	211835	4000	199.0	90	110	>+\-10%
K	39	1	45	3950.664	ppb	0.710	30483099	4000	98.8	90	110	
K	39	2	45	3950.849	ppb	0.954	206267	4000	98.8	90	110	
Ca	40	1	45	3970.593	ppb	0.736	32761520	4000	99.3	90	110	
Ca	44	2	45	4021.171	ppb	5.463	12302	4000	100.5	90	110	
Ti	47	2	45	18596.457	ppb	11.797	1230	40	46491.1	90	110	>+\-10%
V	51	2	72	39.494	ppb	3.287	55671	40	98.7	90	110	
Cr	52	2	72	41.029	ppb	3.016	79290	40	102.6	90	110	
Mn	55	2	72	40.367	ppb	3.416	25551	40	100.9	90	110	
Fe	57	2	72	8004.296	ppb	0.465	282508	4000	200.1	90	110	>+\-10%
Co	59	2	72	39.664	ppb	1.773	149073	40	99.2	90	110	
Ni	60	2	72	40.265	ppb	2.321	45213	40	100.7	90	110	
Cu	63	2	72	40.549	ppb	1.058	132334	40	101.4	90	110	
Zn	66	2	72	40.347	ppb	3.865	14170	40	100.9	90	110	
As	75	2	72	36.915	ppb	1.856	7351	40	92.3	90	110	
Se	78	1	72	39.500	ppb	1.453	23412	40	98.8	90	110	
Sr	88	2	72	40.416	ppb	2.615	21962	40	101.0	90	110	
Zr	90	2	72	15.728	ppb	45.813	213	40	39.3	90	110	>+\-10%
Nb	93	2	72	76.758	ppb	1.564	360058	80	95.9	90	110	
Mo	95	2	115	40.410	ppb	2.935	52708	40	101.0	90	110	
Pd	105	2	115	40.481	ppb	2.203	95091	40	101.2	90	110	
Ag	107	2	115	38.594	ppb	0.850	190989	40	96.5	90	110	
Cd	111	2	115	39.583	ppb	1.316	20651	40	99.0	90	110	
Sn	120	2	115	39.496	ppb	1.472	48476	40	98.7	90	110	
Sb	121	2	115	41.129	ppb	1.358	39361	40	102.8	90	110	
Ba	137	2	115	40.531	ppb	1.065	12662	40	101.3	90	110	
W	182	2	165	79.876	ppb	1.417	622915	40	199.7	90	110	>+\-10%
Pt	195	2	165	39.140	ppb	0.919	278034	40	97.8	90	110	
Tl	205	2	165	39.964	ppb	0.712	509432	40	99.9	90	110	
Pb	208	2	165	39.871	ppb	0.503	651804	40	99.7	90	110	
Th	232	2	165	38.156	ppb	0.782	762788	40	95.4	90	110	
U	238	2	165	37.580	ppb	0.828	876976	40	94.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2092541	0.14	2128935	98.29	60	120	
Sc (IS)	45	1	HMI H2	47991808	0.50	47418043	101.21	60	120	
Sc (IS)	45	2	HMI He	944287	1.00	935665	100.92	60	120	
Sc (IS)	45	3	No Gas	120052978	0.25	125437115	95.71	60	120	
Ge Internal Standard	72	1	HMI H2	21620451	0.07	21615861	100.02	60	120	
Ge Internal Standard	72	2	HMI He	1223498	0.32	1215965	100.62	60	120	
In Internal Standard	115	2	HMI He	3542468	0.31	3509672	100.93	60	120	
Ho-165	165	2	HMI He	23084279	0.36	22804243	101.23	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5317210
Data File Name	010_ICB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:46:09-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-3.977	ppb	-53.6	12216618	10	
Be	9	1	-0.014	ppb	-155.9	27	0.5	
B	11	1	1.352	ppb	15.3	2697	0.5	>RL
Na	23	1	0.510	ppb	297.2	661500	25	
Na	23	2	0.499	ppb	608.2	35498	25	
Mg	24	2	0.962	ppb	17.0	320	25	
Al	27	2	2.936	ppb	33.1	200	15	
K	39	1	22.094	ppb	87.9	10469465	50	
K	39	2	-8.499	ppb	-165.8	9860	50	
Ca	40	1	1.525	ppb	13.1	236734	50	
Ca	44	2	-14.700	ppb	-55.7	77	25	
Ti	47	2	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	0.264	ppb	40.4	1270	1	
Cr	52	2	0.094	ppb	41.5	560	1	
Mn	55	2	-0.044	ppb	-155.7	100	0.5	
Fe	57	2	2.285	ppb	76.2	277	25	
Co	59	2	0.019	ppb	42.4	93	0.5	
Ni	60	2	0.020	ppb	153.2	360	1	
Cu	63	2	0.110	ppb	44.8	2670	1	
Zn	66	2	0.889	ppb	46.1	1087	5	
As	75	2	-0.015	ppb	-515.7	22	1	
Se	78	1	0.027	ppb	90.6	44	1	
Sr	88	2	0.006	ppb	509.0	23	0.5	
Zr	90	2	2.130	ppb	134.4	117	1	>RL
Nb	93	2	2.372	ppb	14.3	11401	2	>RL
Mo	95	2	0.081	ppb	59.9	173	0.5	
Pd	105	2	0.041	ppb	50.5	117	1	
Ag	107	2	0.015	ppb	33.5	90	1	
Cd	111	2	0.038	ppb	27.8	23	0.5	
Sn	120	2	0.085	ppb	43.7	353	1	
Sb	121	2	0.606	ppb	28.8	633	0.6	>RL
Ba	137	2	0.042	ppb	74.2	30	0.5	
W	182	2	0.140	ppb	21.3	2010	1	
Pt	195	2	0.020	ppb	70.1	197	1	
Tl	205	2	0.020	ppb	28.7	487	0.1	
Pb	208	2	0.017	ppb	7.3	1467	0.5	
Th	232	2	0.074	ppb	17.4	1807	1	
U	238	2	0.032	ppb	13.5	863	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2131471	1.87	2128935	100.12	60	120	
Sc (IS)	45	1	HMI H2	48042963	0.68	47418043	101.32	60	120	
Sc (IS)	45	2	HMI He	949043	0.46	935665	101.43	60	120	
Sc (IS)	45	3	No Gas	124765998	1.03	125437115	99.46	60	120	
Ge Internal Standard	72	1	HMI H2	21692962	0.39	21615861	100.36	60	120	
Ge Internal Standard	72	2	HMI He	1231797	0.61	1215965	101.30	60	120	
In Internal Standard	115	2	HMI He	3549535	1.21	3509672	101.14	60	120	
Ho-165	165	2	HMI He	23078764	0.45	22804243	101.20	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	icvl-5317214
Data File Name	011LICV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:50:02-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	5.150	ppb	80.145	12804911	50	10.3	70	130	>+/-30%
Be	9	1	6	0.844	ppb	35.782	647	1	84.4	70	130	
Na	23	2	45	46.100	ppb	7.128	49169	50	92.2	70	130	>+/-30%
Mg	24	2	45	49.114	ppb	2.331	6478	50	98.2	70	130	
Al	27	2	45	26.923	ppb	24.144	857	30	89.7	70	130	
K	39	2	45	94.685	ppb	7.506	15274	100	94.7	70	130	
Ca	44	2	45	53.682	ppb	10.136	290	50	107.4	70	130	
V	51	2	72	5.245	ppb	1.742	8346	5	104.9	70	130	
Cr	52	2	72	2.002	ppb	2.973	4317	2	100.1	70	130	
Mn	55	2	72	1.067	ppb	13.290	817	1	106.7	70	130	
Fe	57	2	72	48.719	ppb	3.877	1954	50	97.4	70	130	
Co	59	2	72	0.952	ppb	3.911	3677	1	95.2	70	130	
Ni	60	2	72	2.015	ppb	8.059	2637	2	100.8	70	130	
Cu	63	2	72	2.075	ppb	2.959	9146	2	103.8	70	130	
Zn	66	2	72	10.986	ppb	1.355	4524	10	109.9	70	130	
As	75	2	72	4.364	ppb	6.378	910	5	87.3	70	130	
Se	78	1	72	4.841	ppb	4.647	2918	5	96.8	70	130	
Sr	88	2	72	0.929	ppb	22.291	537	1	92.9	70	130	
Zr	90	2	72	6.447	ppb	73.043	150	0.5	1289.5	70	130	>+/-30%
Nb	93	2	72	5.419	ppb	8.650	26166	2	270.9	70	130	>+/-30%
Mo	95	2	115	1.867	ppb	1.673	2600	2	93.4	70	130	
Pd	105	2	115	0.026	ppb	67.100	83	1	2.6	70	130	>+/-30%
Ag	107	2	115	5.053	ppb	2.989	26012	5	101.1	70	130	
Cd	111	2	115	1.076	ppb	5.723	587	1	107.6	70	130	
Sn	120	2	115	9.488	ppb	4.589	12302	10	94.9	70	130	
Sb	121	2	115	2.321	ppb	6.473	2364	2	116.0	70	130	
Ba	137	2	115	0.945	ppb	23.120	323	1	94.5	70	130	
W	182	2	165	4.836	ppb	2.867	39256	1	483.6	70	130	>+/-30%
Pt	195	2	165	0.025	ppb	71.334	240	1	2.5	70	130	>+/-30%
Tl	205	2	165	0.966	ppb	0.492	12763	1	96.6	70	130	
Pb	208	2	165	0.979	ppb	3.588	17468	1	97.9	70	130	
Th	232	2	165	2.009	ppb	1.704	41183	2	100.5	70	130	
U	238	2	165	0.938	ppb	2.199	22388	1	93.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2195045	0.93	2128935	103.11	60	120	
Sc (IS)	45	1	HMI H2	48531434	0.62	47418043	102.35	60	120	
Sc (IS)	45	2	HMI He	966074	0.28	935665	103.25	60	120	
Sc (IS)	45	3	No Gas	127486471	0.82	125437115	101.63	60	120	
Ge Internal Standard	72	1	HMI H2	21802146	0.48	21615861	100.86	60	120	
Ge Internal Standard	72	2	HMI He	1249847	0.84	1215965	102.79	60	120	
In Internal Standard	115	2	HMI He	3683995	1.87	3509672	104.97	60	120	
Ho-165	165	2	HMI He	23484460	1.09	22804243	102.98	60	120	

CRI Report

Sample Table

Sample Name	cri-5317215
Data File Name	012RLST.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:53:51-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	8.357	ppb	9.769	272316	10	83.6	80	120	
Li	7	2	45	9.625	ppb	24.348	11861	10	96.2	80	120	
Li	7	3	45	6.479	ppb	23.660	12815388	10	64.8	80	120	>+\-20%
Be	9	1	6	0.761	ppb	20.723	590	1	76.1	80	120	>+\-20%
B	11	1	6	1.183	ppb	9.380	2667	1	118.3	80	120	
Na	23	1	45	106.875	ppb	1.846	1277626	100	106.9	80	120	
Na	23	2	45	92.663	ppb	2.815	63025	100	92.7	80	120	
Mg	24	2	45	98.338	ppb	2.865	12879	100	98.3	80	120	
Al	27	2	45	92.876	ppb	14.918	2674	100	92.9	80	120	
K	39	2	45	91.571	ppb	16.395	15248	100	91.6	80	120	
Ca	40	1	45	99.358	ppb	0.280	1060789	100	99.4	80	120	
Ca	44	2	45	93.339	ppb	32.301	417	100	93.3	80	120	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	1	0.0	80	120	>+\-20%
V	51	2	72	1.105	ppb	7.432	2495	1	110.5	80	120	
Cr	52	2	72	1.153	ppb	0.542	2664	1	115.3	80	120	
Mn	55	2	72	0.853	ppb	19.876	683	1	85.3	80	120	
Fe	57	2	72	100.114	ppb	9.862	3827	100	100.1	80	120	
Co	59	2	72	0.972	ppb	3.219	3774	1	97.2	80	120	
Ni	60	2	72	0.995	ppb	5.875	1483	1	99.5	80	120	
Cu	63	2	72	1.287	ppb	7.364	6605	1	128.7	80	120	>+\-20%
Zn	66	2	72	1.585	ppb	24.327	1347	1	158.5	80	120	>+\-20%
As	75	2	72	0.848	ppb	24.711	199	1	84.8	80	120	
Se	78	1	72	1.022	ppb	14.153	651	1	102.2	80	120	
Sr	88	2	72	0.871	ppb	5.239	507	1	87.1	80	120	
Zr	90	2	72	6.783	ppb	100.972	153	1	678.3	80	120	>+\-20%
Nb	93	2	72	2.266	ppb	1.474	11118	2	113.3	80	120	
Mo	95	2	115	1.028	ppb	8.423	1453	1	102.8	80	120	
Pd	105	2	115	0.921	ppb	1.677	2257	1	92.1	80	120	
Ag	107	2	115	0.993	ppb	3.670	5094	1	99.3	80	120	
Cd	111	2	115	0.902	ppb	14.135	490	1	90.2	80	120	
Sn	120	2	115	1.032	ppb	10.285	1560	1	103.2	80	120	
Sb	121	2	115	1.091	ppb	12.008	1133	1	109.1	80	120	
Ba	137	2	115	0.887	ppb	21.953	303	1	88.7	80	120	
W	182	2	165	0.943	ppb	6.048	8396	1	94.3	80	120	
Pt	195	2	165	0.964	ppb	5.976	7015	1	96.4	80	120	
Tl	205	2	165	1.001	ppb	1.387	13200	1	100.1	80	120	
Pb	208	2	165	0.951	ppb	7.240	16971	1	95.1	80	120	
Th	232	2	165	0.870	ppb	3.752	18002	1	87.0	80	120	
U	238	2	165	0.903	ppb	2.545	21524	1	90.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2213667	1.64	2128935	103.98	60	120	
Sc (IS)	45	1	HMI H2	49036241	0.63	47418043	103.41	60	120	
Sc (IS)	45	2	HMI He	974511	0.37	935665	104.15	60	120	
Sc (IS)	45	3	No Gas	127117631	0.06	125437115	101.34	60	120	
Ge Internal Standard	72	1	HMI H2	22226740	0.60	21615861	102.83	60	120	
Ge Internal Standard	72	2	HMI He	1257198	0.33	1215965	103.39	60	120	
In Internal Standard	115	2	HMI He	3661585	0.80	3509672	104.33	60	120	
Ho-165	165	2	HMI He	23449517	0.67	22804243	102.83	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	013RLST.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T10:59:21-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-5.627	ppb	-36.976	267413	10	-56.3	80	120	>+\-20%
Li	7	2	45	1.481	ppb	227.079	11938	10	14.8	80	120	>+\-20%
Li	7	3	45	-3.962	ppb	-48.665	12731151	10	-39.6	80	120	>+\-20%
Be	9	1	6	0.921	ppb	10.001	707	1	92.1	80	120	
B	11	1	6	-0.187	ppb	-11.909	1590	1	-18.7	80	120	>+\-20%
Na	23	1	45	1.711	ppb	41.968	699441	100	1.7	80	120	>+\-20%
Na	23	2	45	3.377	ppb	82.368	38375	100	3.4	80	120	>+\-20%
Mg	24	2	45	-0.256	ppb	-92.075	177	100	-0.3	80	120	>+\-20%
Al	27	2	45	47.365	ppb	5.768	1467	100	47.4	80	120	>+\-20%
K	39	2	45	-5.481	ppb	-285.073	10577	100	-5.5	80	120	>+\-20%
Ca	40	1	45	2.658	ppb	3.865	257536	100	2.7	80	120	>+\-20%
Ca	44	2	45	-6.723	ppb	-116.514	107	100	-6.7	80	120	>+\-20%
Ti	47	2	45	0.000	ppb	#DIV/0!	0	1	0.0	80	120	>+\-20%
V	51	2	72	0.193	ppb	8.808	1227	1	19.3	80	120	>+\-20%
Cr	52	2	72	0.042	ppb	72.632	480	1	4.2	80	120	>+\-20%
Mn	55	2	72	0.139	ppb	53.948	227	1	13.9	80	120	>+\-20%
Fe	57	2	72	-0.308	ppb	-260.955	193	100	-0.3	80	120	>+\-20%
Co	59	2	72	0.001	ppb	416.948	27	1	0.1	80	120	>+\-20%
Ni	60	2	72	-0.046	ppb	-144.606	300	1	-4.6	80	120	>+\-20%
Cu	63	2	72	2.097	ppb	5.905	9520	1	209.7	80	120	>+\-20%
Zn	66	2	72	11.557	ppb	6.131	4871	1	1155.7	80	120	>+\-20%
As	75	2	72	-0.017	ppb	-184.693	23	1	-1.7	80	120	>+\-20%
Se	78	1	72	-0.019	ppb	-69.934	17	1	-1.9	80	120	>+\-20%
Sr	88	2	72	0.027	ppb	198.441	37	1	2.7	80	120	>+\-20%
Zr	90	2	72	7.130	ppb	161.452	160	1	713.0	80	120	>+\-20%
Nb	93	2	72	0.363	ppb	29.107	2004	2	18.1	80	120	>+\-20%
Mo	95	2	115	-0.030	ppb	-0.454	30	1	-3.0	80	120	>+\-20%
Pd	105	2	115	0.009	ppb	141.146	43	1	0.9	80	120	>+\-20%
Ag	107	2	115	0.006	ppb	88.996	47	1	0.6	80	120	>+\-20%
Cd	111	2	115	-0.001	ppb	-2030.227	3	1	-0.1	80	120	>+\-20%
Sn	120	2	115	0.030	ppb	119.642	303	1	3.0	80	120	>+\-20%
Sb	121	2	115	0.036	ppb	113.459	93	1	3.6	80	120	>+\-20%
Ba	137	2	115	-0.004	ppb	-1548.394	17	1	-0.4	80	120	>+\-20%
W	182	2	165	-0.014	ppb	-80.481	837	1	-1.4	80	120	>+\-20%
Pt	195	2	165	0.001	ppb	293.553	67	1	0.1	80	120	>+\-20%
Tl	205	2	165	0.000	ppb	-7297.995	243	1	0.0	80	120	>+\-20%
Pb	208	2	165	-0.002	ppb	-243.749	1197	1	-0.2	80	120	>+\-20%
Th	232	2	165	0.013	ppb	33.333	613	1	1.3	80	120	>+\-20%
U	238	2	165	0.003	ppb	67.678	210	1	0.3	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2213779	1.21	2128935	103.99	60	120	
Sc (IS)	45	1	HMI H2	50290274	0.82	47418043	106.06	60	120	
Sc (IS)	45	2	HMI He	1003116	0.56	935665	107.21	60	120	
Sc (IS)	45	3	No Gas	130027195	1.41	125437115	103.66	60	120	
Ge Internal Standard	72	1	HMI H2	22622115	0.22	21615861	104.66	60	120	
Ge Internal Standard	72	2	HMI He	1290335	0.75	1215965	106.12	60	120	
In Internal Standard	115	2	HMI He	3763405	0.63	3509672	107.23	60	120	
Ho-165	165	2	HMI He	23854829	0.30	22804243	104.61	60	120	

CRI Report

Sample Table

Sample Name	cri5317216
Data File Name	014_CRI.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:03:09-06:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.212	ppb	10.928	200	0.2	106.2	80	120	
Na	23	2	45	17.006	ppb	11.672	42642	20	85.0	80	120	
Mg	24	2	45	20.765	ppb	4.303	2980	20	103.8	80	120	
Al	27	2	45	20.818	ppb	12.581	720	20	104.1	80	120	
K	39	2	45	18.674	ppb	55.443	11911	20	93.4	80	120	
Ca	44	2	45	4.531	ppb	535.805	143	20	22.7	80	120	AFCRI Main CR1 Failed
V	51	2	72	0.378	ppb	26.810	1510	0.2	188.9	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.240	ppb	18.216	890	0.2	119.9	80	120	
(Cr)	53	2	72	1.063	ppb	39.040	707	0.2	531.4	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.310	ppb	34.266	343	0.2	155.1	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	21.322	ppb	10.341	1007	20	106.6	80	120	
Co	59	2	72	0.219	ppb	17.988	897	0.2	109.5	80	120	
Ni	60	2	72	0.262	ppb	16.208	667	0.2	130.9	80	120	AFCRI Main CR1 Failed
Cu	63	2	72	0.328	ppb	19.304	3564	0.2	163.8	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.572	ppb	48.887	1037	0.2	286.0	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.137	ppb	49.382	56	0.2	68.4	80	120	AFCRI Main CR1 Failed
Se	78	1	72	0.221	ppb	4.397	165	0.2	110.3	80	120	
(Se)	82	1	72	1.520	ppb	123.164	4758	0.2	759.9	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	0.626	ppb	3.337	3334	0.4	156.6	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.188	ppb	31.988	333	0.2	94.1	80	120	
Pd	105	2	115	0.177	ppb	8.037	463	0.2	88.4	80	120	
Ag	107	2	115	0.209	ppb	16.485	1113	0.2	104.4	80	120	
Cd	111	2	115	0.143	ppb	43.493	83	0.2	71.7	80	120	AFCRI Main CR1 Failed
(Cd)	114	2	115	0.190	ppb	16.374	303	0.2	95.0	80	120	
Sn	120	2	115	0.189	ppb	54.238	510	0.2	94.7	80	120	
Sb	121	2	115	0.212	ppb	20.264	273	0.2	106.0	80	120	
Ba	137	2	115	0.236	ppb	43.451	97	0.2	118.1	80	120	
W	182	2	165	0.240	ppb	7.758	2910	0.2	120.0	80	120	AFCRI Main CR1 Failed
Pt	195	2	165	0.205	ppb	3.969	1580	0.2	102.5	80	120	
Tl	205	2	165	0.216	ppb	6.463	3114	0.2	107.8	80	120	
(Pb)	206	2	165	0.218	ppb	8.836	1193	0.2	108.9	80	120	
(Pb)	207	2	165	0.201	ppb	18.273	1087	0.2	100.7	80	120	
Pb	208	2	165	0.213	ppb	4.867	4877	0.2	106.7	80	120	
Th	232	2	165	0.193	ppb	5.772	4384	0.2	96.7	80	120	
U	238	2	165	0.199	ppb	4.153	4991	0.2	99.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2303790	0.79	2128935	108.21	60	120	
Sc (IS)	45	1	HMI H2	50496419	1.23	47418043	106.49	60	120	
Sc (IS)	45	2	HMI He	1008271	0.65	935665	107.76	60	120	
Sc (IS)	45	3	No Gas	132443811	0.51	125437115	105.59	60	120	
Ge Internal Standard	72	1	HMI H2	22539131	0.18	21615861	104.27	60	120	
Ge Internal Standard	72	2	HMI He	1301546	0.62	1215965	107.04	60	120	
In Internal Standard	115	2	HMI He	3770175	1.51	3509672	107.42	60	120	
Ho-165	165	2	HMI He	24098527	0.72	22804243	105.68	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5311606
Data File Name	015ICSA.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:06:58-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.557	ppb	-209.0	11968065	1	
Be	9	1	6	-0.047	ppb	-17.8	3	1	
B	11	1	6	0.318	ppb	72.6	1877	1	
Na	23	1	45	95800.355	ppb	0.4	521481366	100000	
K	39	1	45	96322.952	ppb	0.7	491701699	100000	
Ca	40	1	45	95007.697	ppb	0.5	763867029	100000	
Ti	47	2	45	820784.808	ppb	0.9	53798	1	>RL or LOD
V	51	2	72	0.254	ppb	24.4	1207	1	
Cr	52	2	72	0.201	ppb	18.7	737	1	
Mn	55	2	72	0.832	ppb	26.8	630	1	
Co	59	2	72	0.006	ppb	49.0	40	1	
Ni	60	2	72	0.216	ppb	28.4	557	1	
Cu	63	2	72	0.715	ppb	7.3	4441	1	
Zn	66	2	72	0.835	ppb	11.5	1027	1	
As	75	2	72	0.078	ppb	23.2	39	1	
Se	78	1	72	0.002	ppb	800.9	28	1	
Sr	88	2	72	0.902	ppb	9.3	493	1	
Zr	90	2	72	5.686	ppb	144.8	137	1	>RL or LOD
Nb	93	2	72	0.455	ppb	28.2	2254	1	
Mo	95	2	115	2090.621	ppb	1.1	2588924	2000	>RL or LOD
Pd	105	2	115	0.006	ppb	83.7	33	1	
Ag	107	2	115	0.025	ppb	39.2	130	1	
Cd	111	2	115	0.276	ppb	44.7	140	1	
Sn	120	2	115	-0.037	ppb	-93.0	193	1	
Sb	121	2	115	0.156	ppb	44.5	193	1	
Ba	137	2	115	-0.009	ppb	-826.0	13	1	
W	182	2	165	0.193	ppb	15.0	2374	1	
Pt	195	2	165	0.002	ppb	463.9	70	1	
Tl	205	2	165	-0.004	ppb	-97.0	183	1	
Pb	208	2	165	0.067	ppb	21.2	2237	1	
Th	232	2	165	0.036	ppb	11.0	1030	1	
U	238	2	165	0.004	ppb	56.5	213	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2091764	0.43	2128935	98.25	60	120	
Sc (IS)	45	1	HMI H2	47071971	0.77	47418043	99.27	60	120	
Sc (IS)	45	2	HMI He	936109	1.00	935665	100.05	60	120	
Sc (IS)	45	3	No Gas	121404855	0.77	125437115	96.79	60	120	
Ge Internal Standard	72	1	HMI H2	20610917	0.51	21615861	95.35	60	120	
Ge Internal Standard	72	2	HMI He	1183340	0.22	1215965	97.32	60	120	
In Internal Standard	115	2	HMI He	3367779	0.39	3509672	95.96	60	120	
Ho-165	165	2	HMI He	22620716	0.42	22804243	99.20	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5311608
Data File Name	016ICSB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:10:45-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	1059.260	ppb	1.324	1083755	100	1059.3	80	120	
Li	7	2	45	1017.047	ppb	1.222	42795	100	1017.0	80	120	
Li	7	3	45	1042.495	ppb	1.619	47539434	100	1042.5	80	120	
Be	9	1	6	97.684	ppb	1.233	64365	100	97.7	80	120	
B	11	1	6	86.869	ppb	2.761	63398	100	86.9	80	120	
Na	23	1	45	105525.755	ppb	1.963	568221952	100	105525.8	80	120	
K	39	1	45	106439.083	ppb	1.677	536515939	100	106439.1	80	120	
Ca	40	1	45	105895.675	ppb	1.742	842278121	100	105895.7	80	120	
V	51	2	72	101.011	ppb	1.728	135930	100	101.0	80	120	
Cr	52	2	72	98.857	ppb	1.721	183692	100	98.9	80	120	
Mn	55	2	72	98.242	ppb	1.542	59782	100	98.2	80	120	
Co	59	2	72	98.160	ppb	0.283	355701	100	98.2	80	120	
Ni	60	2	72	95.806	ppb	0.750	103280	100	95.8	80	120	
Cu	63	2	72	106.566	ppb	0.401	331727	100	106.6	80	120	
Zn	66	2	72	97.221	ppb	2.773	31852	100	97.2	80	120	
As	75	2	72	93.982	ppb	1.031	18009	100	94.0	80	120	
Se	78	1	72	97.918	ppb	1.488	55482	100	97.9	80	120	
Sr	88	2	72	110.411	ppb	1.021	57814	100	110.4	80	120	
Zr	90	2	72	10.039	ppb	51.654	167	100	10.0	80	120	>+\-20%
Nb	93	2	72	163.481	ppb	0.786	739174	100	163.5	80	120	
Mo	95	2	115	2175.121	ppb	0.407	2712663	100	2175.1	80	120	
Pd	105	2	115	93.189	ppb	1.611	209519	100	93.2	80	120	
Ag	107	2	115	93.639	ppb	0.701	443617	100	93.6	80	120	
Cd	111	2	115	93.668	ppb	1.813	46777	100	93.7	80	120	
Sn	120	2	115	96.779	ppb	0.211	113380	100	96.8	80	120	
Sb	121	2	115	105.527	ppb	0.965	96603	100	105.5	80	120	
Ba	137	2	115	102.776	ppb	0.468	30714	100	102.8	80	120	
W	182	2	165	95.813	ppb	0.990	728029	100	95.8	80	120	
Pt	195	2	165	92.477	ppb	1.250	640141	100	92.5	80	120	
Tl	205	2	165	92.779	ppb	1.156	1152310	100	92.8	80	120	
Pb	208	2	165	93.218	ppb	0.799	1483649	100	93.2	80	120	
Th	232	2	165	98.441	ppb	0.656	1917485	100	98.4	80	120	
U	238	2	165	97.458	ppb	0.515	2216490	100	97.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2006013	1.30	2128935	94.23	60	120	
Sc (IS)	45	1	HMI H2	46577238	1.59	47418043	98.23	60	120	
Sc (IS)	45	2	HMI He	936306	0.96	935665	100.07	60	120	
Sc (IS)	45	3	No Gas	122376022	0.30	125437115	97.56	60	120	
Ge Internal Standard	72	1	HMI H2	20685348	0.56	21615861	95.70	60	120	
Ge Internal Standard	72	2	HMI He	1179710	1.07	1215965	97.02	60	120	
In Internal Standard	115	2	HMI He	3391577	1.37	3509672	96.64	60	120	
Ho-165	165	2	HMI He	22499073	1.15	22804243	98.66	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	017SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:14:31-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.279	ppb	0.279	1741.93	263003	500000	
Li	7	2	45	-6.890	ppb	-6.890	-176.55	11358	500000	
Li	7	3	45	-10.978	ppb	-10.978	-15.45	12204373	50000	
Be	9	1	6	0.023	ppb	0.023	67.81	53	2000	
B	11	1	6	0.562	ppb	0.562	64.99	2117	2000	
Na	23	1	45	75.083	ppb	75.083	11.00	1087033	2000	
Na	23	2	45	43.534	ppb	43.534	24.71	48968	400000	
Mg	24	2	45	30.061	ppb	30.061	8.38	4089	400000	
Al	27	2	45	29.501	ppb	29.501	16.12	937	400000	
K	39	1	45	107.589	ppb	107.589	22.98	11020965	400000	
K	39	2	45	15.469	ppb	15.469	51.39	11378	400000	
Ca	40	1	45	48.126	ppb	48.126	5.70	625726	400000	
Ca	44	2	45	21.821	ppb	21.821	110.51	193	400000	
Ti	47	2	45	484.400	ppb	484.400	95.38	33	4000	
V	51	2	72	0.455	ppb	0.455	21.49	1597	2000	
Cr	52	2	72	0.042	ppb	0.042	156.43	477	5000	
Mn	55	2	72	0.056	ppb	0.056	126.56	170	10000	
Fe	57	2	72	40.938	ppb	40.938	7.98	1713	400000	
Co	59	2	72	0.023	ppb	0.023	17.02	113	2000	
Ni	60	2	72	-0.020	ppb	-0.020	-250.23	327	5000	
Cu	63	2	72	0.357	ppb	0.357	13.43	3601	5000	
Zn	66	2	72	0.613	ppb	0.613	74.12	1033	5000	
As	75	2	72	0.053	ppb	0.053	106.19	37	2000	
Se	78	1	72	0.010	ppb	0.010	322.80	35	2000	
Sr	88	2	72	0.057	ppb	0.057	18.57	53	4000	
Zr	90	2	72	5.519	ppb	5.519	120.85	147	1000	
Nb	93	2	72	1.276	ppb	1.276	17.66	6465	200	
Mo	95	2	115	2.589	ppb	2.589	9.96	3571	2000	
Pd	105	2	115	0.056	ppb	0.056	46.41	157	100	
Ag	107	2	115	0.028	ppb	0.028	21.07	157	100	
Cd	111	2	115	0.018	ppb	0.018	156.54	13	2000	
Sn	120	2	115	-0.001	ppb	-0.001	-3405.31	257	2000	
Sb	121	2	115	0.078	ppb	0.078	27.01	133	1000	
Ba	137	2	115	0.090	ppb	0.090	130.28	47	5000	
W	182	2	165	0.055	ppb	0.055	29.08	1370	100	
Pt	195	2	165	0.028	ppb	0.028	23.87	263	100	
Tl	205	2	165	0.051	ppb	0.051	11.12	907	2000	
Pb	208	2	165	0.019	ppb	0.019	55.14	1530	5000	
Th	232	2	165	0.082	ppb	0.082	8.20	2020	2000	
U	238	2	165	0.057	ppb	0.057	6.17	1480	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2152385	0.82	2128935	101.10	60	120	
Sc (IS)	45	1	HMI H2	48552258	0.96	47418043	102.39	60	120	
Sc (IS)	45	2	HMI He	976981	1.32	935665	104.42	60	120	
Sc (IS)	45	3	No Gas	127168085	0.73	125437115	101.38	60	120	
Ge Internal Standard	72	1	HMI H2	22242570	0.70	21615861	102.90	60	120	
Ge Internal Standard	72	2	HMI He	1279875	0.37	1215965	105.26	60	120	
In Internal Standard	115	2	HMI He	3676791	0.40	3509672	104.76	60	120	
Ho-165	165	2	HMI He	23529460	0.68	22804243	103.18	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-5291681
Data File Name	018_LR.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:18:18-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1992.936	ppb	1.228	1386000	2000	99.6	90	110	
V	51	2	72	1973.835	ppb	0.137	2746117	2000	98.7	90	110	
Cr	52	2	72	4861.786	ppb	0.327	9378224	5000	97.2	90	110	
(Cr)	53	2	72	4862.366	ppb	0.795	1159463	5000	97.2	90	110	
Mn	55	2	72	9995.317	ppb	0.731	6313209	10000	100.0	90	110	
Co	59	2	72	2037.977	ppb	0.937	7680156	2000	101.9	90	110	
Ni	60	2	72	5044.615	ppb	0.141	5638745	5000	100.9	90	110	
Cu	63	2	72	5003.922	ppb	0.856	16093841	5000	100.1	90	110	
Zn	66	2	72	5085.554	ppb	2.080	1692536	5000	101.7	90	110	
As	75	2	72	1839.819	ppb	0.599	366170	2000	92.0	90	110	
Se	78	1	72	1998.065	ppb	0.373	1184918	2000	99.9	90	110	
(Se)	82	1	72	1822.878	ppb	0.308	512996	2000	91.1	90	110	
Mo	95	2	115	2053.515	ppb	0.484	2684768	2000	102.7	90	110	
Cd	111	2	115	1992.660	ppb	1.226	1043178	2000	99.6	90	110	
(Cd)	114	2	115	2043.105	ppb	1.554	2788553	2000	102.2	90	110	
Sn	120	2	115	2064.064	ppb	1.708	2529633	2000	103.2	90	110	
Sb	121	2	115	979.899	ppb	1.077	939932	1000	98.0	90	110	
Ba	137	2	115	5187.638	ppb	1.239	1624314	5000	103.8	90	110	
Tl	205	2	165	985.647	ppb	0.545	12477494	2000	49.3	90	110	LRS Main CR1 Failed
(Pb)	206	2	165	4960.181	ppb	0.329	19219406	5000	99.2	90	110	
(Pb)	207	2	165	4986.402	ppb	0.915	17956148	5000	99.7	90	110	
Pb	208	2	165	4951.846	ppb	0.599	80281817	5000	99.0	90	110	
Th	232	2	165	919.864	ppb	0.599	18262496	2000	46.0	90	110	LRS Main CR1 Failed
U	238	2	165	1859.845	ppb	0.787	43114128	2000	93.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2118263	1.16	2128935	99.50	60	120	
Sc (IS)	45	1	HMI H2	47848181	0.12	47418043	100.91	60	120	
Sc (IS)	45	2	HMI He	939129	0.32	935665	100.37	60	120	
Sc (IS)	45	3	No Gas	120087085	0.81	125437115	95.73	60	120	
Ge Internal Standard	72	1	HMI H2	21658373	0.75	21615861	100.20	60	120	
Ge Internal Standard	72	2	HMI He	1226936	0.58	1215965	100.90	60	120	
In Internal Standard	115	2	HMI He	3555509	1.18	3509672	101.31	60	120	
Ho-165	165	2	HMI He	22934841	0.35	22804243	100.57	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	019SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:22:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.704	ppb	-1.704	-115.08	257510	500000	
Li	7	2	45	0.693	ppb	0.693	1230.23	11217	500000	
Li	7	3	45	-13.724	ppb	-13.724	-25.12	11736596	50000	
Be	9	1	6	0.582	ppb	0.582	36.86	443	2000	
B	11	1	6	0.052	ppb	0.052	227.30	1713	2000	
Na	23	1	45	-20.930	ppb	-20.930	-3.59	540175	2000	
Na	23	2	45	-20.168	ppb	-20.168	-5.36	29560	400000	
Mg	24	2	45	3.295	ppb	3.295	10.86	610	400000	
Al	27	2	45	0.343	ppb	0.343	611.96	130	400000	
K	39	1	45	36.110	ppb	36.110	95.01	10494653	400000	
K	39	2	45	-0.904	ppb	-0.904	-213.04	10190	400000	
Ca	40	1	45	3.512	ppb	3.512	9.07	251920	400000	
Ca	44	2	45	-18.981	ppb	-18.981	-43.43	63	400000	
Ti	47	2	45	201.396	ppb	201.396	86.60	13	4000	
V	51	2	72	0.603	ppb	0.603	4.83	1727	2000	
Cr	52	2	72	1.037	ppb	1.037	11.38	2364	5000	
Mn	55	2	72	2.127	ppb	2.127	6.07	1463	10000	
Fe	57	2	72	2.075	ppb	2.075	77.59	267	400000	
Co	59	2	72	0.398	ppb	0.398	11.25	1513	2000	
Ni	60	2	72	0.926	ppb	0.926	12.23	1363	5000	
Cu	63	2	72	1.094	ppb	1.094	8.85	5795	5000	
Zn	66	2	72	1.694	ppb	1.694	4.56	1343	5000	
As	75	2	72	0.383	ppb	0.383	23.78	101	2000	
Se	78	1	72	0.811	ppb	0.811	25.48	508	2000	
Sr	88	2	72	0.018	ppb	0.018	203.12	30	4000	
Zr	90	2	72	1.820	ppb	1.820	270.51	113	1000	
Nb	93	2	72	0.315	ppb	0.315	22.44	1670	200	
Mo	95	2	115	2.895	ppb	2.895	14.66	3867	2000	
Pd	105	2	115	0.015	ppb	0.015	70.39	57	100	
Ag	107	2	115	0.003	ppb	0.003	293.58	27	100	
Cd	111	2	115	0.375	ppb	0.375	33.85	200	2000	
Sn	120	2	115	2.645	ppb	2.645	7.24	3504	2000	
Sb	121	2	115	4.419	ppb	4.419	3.82	4307	1000	
Ba	137	2	115	0.816	ppb	0.816	17.75	273	5000	
W	182	2	165	-0.018	ppb	-0.018	-59.80	770	100	
Pt	195	2	165	-0.002	ppb	-0.002	-102.32	40	100	
Tl	205	2	165	0.234	ppb	0.234	6.64	3170	2000	
Pb	208	2	165	0.998	ppb	0.998	6.28	17218	5000	
Th	232	2	165	1.163	ppb	1.163	10.11	23223	2000	
U	238	2	165	1.069	ppb	1.069	4.02	24695	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2133753	0.87	2128935	100.23	60	120	
Sc (IS)	45	1	HMI H2	47832556	0.70	47418043	100.87	60	120	
Sc (IS)	45	2	HMI He	944648	0.27	935665	100.96	60	120	
Sc (IS)	45	3	No Gas	123284408	1.03	125437115	98.28	60	120	
Ge Internal Standard	72	1	HMI H2	21627321	0.83	21615861	100.05	60	120	
Ge Internal Standard	72	2	HMI He	1220730	0.56	1215965	100.39	60	120	
In Internal Standard	115	2	HMI He	3566670	0.55	3509672	101.62	60	120	
Ho-165	165	2	HMI He	22735861	0.45	22804243	99.70	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	020_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:25:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	432.281	ppb	0.374	613985	500	86.5	90	110	>+\-10%
Li	7	2	45	496.687	ppb	2.942	27256	500	99.3	90	110	
Li	7	3	45	468.303	ppb	2.383	28477465	500	93.7	90	110	
Be	9	1	6	48.741	ppb	1.260	33881	50	97.5	90	110	
B	11	1	6	50.254	ppb	1.459	39373	50	100.5	90	110	
Na	23	1	45	5003.553	ppb	0.414	28601178	5000	100.1	90	110	
Na	23	2	45	5075.273	ppb	1.777	1477509	5000	101.5	90	110	
Mg	24	2	45	4944.071	ppb	1.156	628109	5000	98.9	90	110	
Al	27	2	45	4913.571	ppb	0.757	133052	5000	98.3	90	110	
K	39	1	45	5024.330	ppb	1.757	36218029	5000	100.5	90	110	
K	39	2	45	5089.362	ppb	0.689	267223	5000	101.8	90	110	
Ca	40	1	45	4933.379	ppb	0.173	40950515	5000	98.7	90	110	
Ca	44	2	45	4932.333	ppb	2.848	15321	5000	98.6	90	110	
Ti	47	2	45	100.490	ppb	173.205	7	50	201.0	90	110	>+\-10%
V	51	2	72	49.442	ppb	0.162	70755	50	98.9	90	110	
Cr	52	2	72	51.858	ppb	2.345	101963	50	103.7	90	110	
Mn	55	2	72	49.231	ppb	4.003	31705	50	98.5	90	110	
Fe	57	2	72	4975.748	ppb	0.747	178939	5000	99.5	90	110	
Co	59	2	72	49.869	ppb	1.317	190879	50	99.7	90	110	
Ni	60	2	72	49.097	ppb	3.156	56066	50	98.2	90	110	
Cu	63	2	72	50.163	ppb	1.637	166172	50	100.3	90	110	
Zn	66	2	72	49.187	ppb	1.204	17420	50	98.4	90	110	
As	75	2	72	49.190	ppb	2.435	9967	50	98.4	90	110	
Se	78	1	72	50.317	ppb	0.780	29735	50	100.6	90	110	
Sr	88	2	72	48.936	ppb	2.388	27080	50	97.9	90	110	
Zr	90	2	72	69.011	ppb	25.980	607	50	138.0	90	110	>+\-10%
Nb	93	2	72	95.657	ppb	1.268	456942	100	95.7	90	110	
Mo	95	2	115	50.495	ppb	0.977	66550	50	101.0	90	110	
Pd	105	2	115	49.799	ppb	2.414	118223	50	99.6	90	110	
Ag	107	2	115	49.709	ppb	0.675	248648	50	99.4	90	110	
Cd	111	2	115	49.859	ppb	1.311	26293	50	99.7	90	110	
Sn	120	2	115	49.509	ppb	1.145	61360	50	99.0	90	110	
Sb	121	2	115	51.850	ppb	0.492	50141	50	103.7	90	110	
Ba	137	2	115	49.770	ppb	1.276	15712	50	99.5	90	110	
W	182	2	165	48.599	ppb	1.880	380357	50	97.2	90	110	
Pt	195	2	165	48.799	ppb	1.024	347575	50	97.6	90	110	
Tl	205	2	165	49.452	ppb	0.384	632064	50	98.9	90	110	
Pb	208	2	165	49.998	ppb	0.393	819314	50	100.0	90	110	
Th	232	2	165	48.470	ppb	1.200	971537	50	96.9	90	110	
U	238	2	165	46.608	ppb	1.256	1090571	50	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2115134	0.99	2128935	99.35	60	120	
Sc (IS)	45	1	HMI H2	48344623	0.81	47418043	101.95	60	120	
Sc (IS)	45	2	HMI He	960336	1.17	935665	102.64	60	120	
Sc (IS)	45	3	No Gas	124341905	1.12	125437115	99.13	60	120	
Ge Internal Standard	72	1	HMI H2	21563330	0.82	21615861	99.76	60	120	
Ge Internal Standard	72	2	HMI He	1246170	1.01	1215965	102.48	60	120	
In Internal Standard	115	2	HMI He	3580618	0.47	3509672	102.02	60	120	
Ho-165	165	2	HMI He	23148030	1.00	22804243	101.51	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	021_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:29:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-11.110	ppb	-3.3	12094542	10	
Be	9	1	6	0.036	ppb	75.6	63	0.5	
B	11	1	6	1.071	ppb	33.5	2530	0.5	>RL
Na	23	1	45	-20.400	ppb	0.0	557814	25	
Na	23	2	45	-18.700	ppb	-8.8	30889	25	
Mg	24	2	45	1.389	ppb	30.2	383	25	
Al	27	2	45	-0.175	ppb	-895.9	120	15	
K	39	1	45	26.298	ppb	77.6	10727794	50	
K	39	2	45	-9.380	ppb	-94.8	10067	50	
Ca	40	1	45	1.560	ppb	9.5	242373	50	
Ca	44	2	45	-14.223	ppb	-40.5	80	25	
Ti	47	2	45	48.794	ppb	173.2	3	0.5	>RL
V	51	2	72	0.348	ppb	51.2	1420	1	
Cr	52	2	72	0.059	ppb	54.8	503	1	
Mn	55	2	72	0.218	ppb	36.0	273	0.5	
Fe	57	2	72	0.633	ppb	133.4	223	25	
Co	59	2	72	0.053	ppb	35.7	227	0.5	
Ni	60	2	72	0.065	ppb	48.6	420	1	
Cu	63	2	72	0.040	ppb	101.2	2504	1	
Zn	66	2	72	0.569	ppb	40.5	1003	5	
As	75	2	72	0.098	ppb	64.0	46	1	
Se	78	1	72	0.088	ppb	42.3	81	1	
Sr	88	2	72	0.010	ppb	524.8	27	0.5	
Zr	90	2	72	10.774	ppb	80.9	183	1	>RL
Nb	93	2	72	1.490	ppb	14.9	7409	2	
Mo	95	2	115	0.282	ppb	5.4	450	0.5	
Pd	105	2	115	0.031	ppb	50.7	97	1	
Ag	107	2	115	0.015	ppb	68.6	90	1	
Cd	111	2	115	0.024	ppb	158.2	17	0.5	
Sn	120	2	115	0.333	ppb	14.1	680	1	
Sb	121	2	115	1.099	ppb	27.1	1147	0.6	>RL
Ba	137	2	115	0.121	ppb	30.1	57	0.5	
W	182	2	165	0.053	ppb	49.0	1343	1	
Pt	195	2	165	0.030	ppb	45.0	270	1	
Tl	205	2	165	0.031	ppb	42.1	633	0.1	
Pb	208	2	165	0.096	ppb	13.5	2787	0.5	
Th	232	2	165	0.076	ppb	10.3	1877	1	
U	238	2	165	0.097	ppb	12.2	2414	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2172875	2.35	2128935	102.06	60	120	
Sc (IS)	45	1	HMI H2	49126541	0.44	47418043	103.60	60	120	
Sc (IS)	45	2	HMI He	973520	0.79	935665	104.05	60	120	
Sc (IS)	45	3	No Gas	126075675	0.94	125437115	100.51	60	120	
Ge Internal Standard	72	1	HMI H2	22048035	0.45	21615861	102.00	60	120	
Ge Internal Standard	72	2	HMI He	1261496	0.14	1215965	103.74	60	120	
In Internal Standard	115	2	HMI He	3672056	1.00	3509672	104.63	60	120	
Ho-165	165	2	HMI He	23322545	0.53	22804243	102.27	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	022LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:33:26-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-1.925	ppb	-152.188	12598631	50	-3.8	70	130	>+/-30%
Be	9	1	6	0.985	ppb	10.499	730	1	98.5	70	130	
Na	23	2	45	25.488	ppb	8.534	44299	50	51.0	70	130	>+/-30%
Mg	24	2	45	47.348	ppb	6.888	6401	50	94.7	70	130	
Al	27	2	45	31.150	ppb	27.394	993	30	103.8	70	130	
K	39	2	45	96.036	ppb	15.443	15701	100	96.0	70	130	
Ca	44	2	45	50.522	ppb	58.328	287	50	101.0	70	130	
V	51	2	72	5.249	ppb	5.628	8543	5	105.0	70	130	
Cr	52	2	72	2.174	ppb	8.045	4761	2	108.7	70	130	
Mn	55	2	72	0.937	ppb	4.066	750	1	93.7	70	130	
Fe	57	2	72	49.217	ppb	4.555	2017	50	98.4	70	130	
Co	59	2	72	0.962	ppb	7.239	3797	1	96.2	70	130	
Ni	60	2	72	1.880	ppb	11.958	2540	2	94.0	70	130	
Cu	63	2	72	1.952	ppb	5.780	8943	2	97.6	70	130	
Zn	66	2	72	11.457	ppb	3.953	4791	10	114.6	70	130	
As	75	2	72	4.533	ppb	3.009	966	5	90.7	70	130	
Se	78	1	72	4.990	ppb	4.875	3076	5	99.8	70	130	
Sr	88	2	72	1.108	ppb	24.690	650	1	110.8	70	130	
Zr	90	2	72	4.648	ppb	148.174	140	0.5	929.5	70	130	>+/-30%
Nb	93	2	72	3.811	ppb	11.195	18875	2	190.6	70	130	>+/-30%
Mo	95	2	115	2.084	ppb	2.527	2914	2	104.2	70	130	
Pd	105	2	115	0.010	ppb	121.482	47	1	1.0	70	130	>+/-30%
Ag	107	2	115	5.107	ppb	3.033	26483	5	102.1	70	130	
Cd	111	2	115	0.945	ppb	10.970	520	1	94.5	70	130	
Sn	120	2	115	9.787	ppb	5.422	12776	10	97.9	70	130	
Sb	121	2	115	2.654	ppb	3.742	2714	2	132.7	70	130	>+/-30%
Ba	137	2	115	1.028	ppb	30.739	353	1	102.8	70	130	
W	182	2	165	4.696	ppb	1.843	38246	1	469.6	70	130	>+/-30%
Pt	195	2	165	0.016	ppb	22.014	177	1	1.6	70	130	>+/-30%
Tl	205	2	165	1.003	ppb	4.522	13273	1	100.3	70	130	
Pb	208	2	165	1.019	ppb	2.628	18175	1	101.9	70	130	
Th	232	2	165	2.111	ppb	1.785	43383	2	105.6	70	130	
U	238	2	165	0.966	ppb	3.924	23133	1	96.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2144483	0.96	2128935	100.73	60	120	
Sc (IS)	45	1	HMI H2	49595129	0.66	47418043	104.59	60	120	
Sc (IS)	45	2	HMI He	988868	0.63	935665	105.69	60	120	
Sc (IS)	45	3	No Gas	127931448	0.44	125437115	101.99	60	120	
Ge Internal Standard	72	1	HMI H2	22307296	0.44	21615861	103.20	60	120	
Ge Internal Standard	72	2	HMI He	1278379	0.23	1215965	105.13	60	120	
In Internal Standard	115	2	HMI He	3710116	0.67	3509672	105.71	60	120	
Ho-165	165	2	HMI He	23551842	0.47	22804243	103.28	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-D
Data File Name	023SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:37:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.736	ppb	-14.736	-27.35	258832	500000	
Li	7	2	45	-17.795	ppb	-17.795	-54.07	11434	500000	
Li	7	3	45	-20.152	ppb	-20.152	-8.63	12278459	50000	
Be	9	1	6	-0.028	ppb	-0.028	-28.50	17	2000	
B	11	1	6	25.109	ppb	25.109	2.07	20743	2000	
Na	23	1	45	38767.583	ppb	38767.583	0.80	225119043	2000	>LDR
Na	23	2	45	37655.609	ppb	37655.609	0.72	11351065	400000	
Mg	24	2	45	2421.575	ppb	2421.575	1.48	325481	400000	
Al	27	2	45	7.801	ppb	7.801	48.82	353	400000	
K	39	1	45	8843.967	ppb	8843.967	0.41	57888164	400000	
K	39	2	45	9746.749	ppb	9746.749	1.30	531165	400000	
Ca	40	1	45	31618.696	ppb	31618.696	0.25	270847336	400000	
Ca	44	2	45	30307.405	ppb	30307.405	1.00	98900	400000	
Ti	47	2	45	140.801	ppb	140.801	100.26	10	4000	
V	51	2	72	0.067	ppb	0.067	176.76	1047	2000	
Cr	52	2	72	0.206	ppb	0.206	28.80	817	5000	
Mn	55	2	72	1410.921	ppb	1410.921	0.33	941941	10000	
Fe	57	2	72	10261.735	ppb	10261.735	0.37	383804	400000	
Co	59	2	72	1.464	ppb	1.464	1.06	5851	2000	
Ni	60	2	72	0.819	ppb	0.819	11.41	1323	5000	
Cu	63	2	72	0.044	ppb	0.044	79.69	2587	5000	
Zn	66	2	72	2.849	ppb	2.849	16.83	1834	5000	
As	75	2	72	6.913	ppb	6.913	3.34	1480	2000	
Se	78	1	72	0.115	ppb	0.115	38.95	99	2000	
Sr	88	2	72	99.600	ppb	99.600	1.85	57330	4000	
Zr	90	2	72	20.617	ppb	20.617	28.69	263	1000	
Nb	93	2	72	0.464	ppb	0.464	12.93	2517	200	
Mo	95	2	115	0.393	ppb	0.393	14.33	620	2000	
Pd	105	2	115	0.010	ppb	0.010	116.86	47	100	
Ag	107	2	115	0.011	ppb	0.011	37.79	70	100	
Cd	111	2	115	0.030	ppb	0.030	211.47	20	2000	
Sn	120	2	115	0.184	ppb	0.184	32.94	507	2000	
Sb	121	2	115	0.409	ppb	0.409	32.22	477	1000	
Ba	137	2	115	17.716	ppb	17.716	6.53	5928	5000	
W	182	2	165	-0.003	ppb	-0.003	-514.36	933	100	
Pt	195	2	165	0.007	ppb	0.007	50.84	110	100	
Tl	205	2	165	0.011	ppb	0.011	29.33	397	2000	
Pb	208	2	165	0.094	ppb	0.094	19.55	2834	5000	
Th	232	2	165	0.062	ppb	0.062	5.96	1647	2000	
U	238	2	165	0.045	ppb	0.045	17.17	1217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2139882	0.67	2128935	100.51	60	120	
Sc (IS)	45	1	HMI H2	50123704	0.47	47418043	105.71	60	120	
Sc (IS)	45	2	HMI He	1015564	0.38	935665	108.54	60	120	
Sc (IS)	45	3	No Gas	131435278	0.89	125437115	104.78	60	120	
Ge Internal Standard	72	1	HMI H2	22255313	0.78	21615861	102.96	60	120	
Ge Internal Standard	72	2	HMI He	1296708	0.44	1215965	106.64	60	120	
In Internal Standard	115	2	HMI He	3790062	1.51	3509672	107.99	60	120	
Ho-165	165	2	HMI He	24040316	0.93	22804243	105.42	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-Dsd@5
Data File Name	024SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:41:00-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.047	ppb	-10.047	-5.18	261995	500000	
Li	7	2	45	-25.358	ppb	-25.358	-33.14	11054	500000	
Li	7	3	45	-16.468	ppb	-16.468	-16.92	11954334	50000	
Be	9	1	6	-0.011	ppb	-0.011	-128.91	30	2000	
B	11	1	6	5.360	ppb	5.360	11.73	5928	2000	
Na	23	1	45	7820.386	ppb	7820.386	1.11	45817013	2000	
Na	23	2	45	7793.968	ppb	7793.968	0.75	2352967	400000	
Mg	24	2	45	488.950	ppb	488.950	2.47	65150	400000	
Al	27	2	45	3.832	ppb	3.832	52.51	237	400000	
K	39	1	45	1941.301	ppb	1941.301	1.14	21076346	400000	
K	39	2	45	1980.297	ppb	1980.297	1.14	115389	400000	
Ca	40	1	45	6349.787	ppb	6349.787	0.26	54411634	400000	
Ca	44	2	45	5842.426	ppb	5842.426	3.42	18955	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.501	ppb	0.501	24.56	1677	2000	
Cr	52	2	72	0.063	ppb	0.063	48.29	523	5000	
Mn	55	2	72	281.435	ppb	281.435	0.26	187070	10000	
Fe	57	2	72	2045.923	ppb	2045.923	2.03	76307	400000	
Co	59	2	72	0.330	ppb	0.330	10.69	1330	2000	
Ni	60	2	72	0.201	ppb	0.201	25.86	590	5000	
Cu	63	2	72	0.082	ppb	0.082	44.16	2700	5000	
Zn	66	2	72	3.296	ppb	3.296	10.06	1980	5000	
As	75	2	72	1.363	ppb	1.363	15.43	312	2000	
Se	78	1	72	0.035	ppb	0.035	58.59	51	2000	
Sr	88	2	72	19.886	ppb	19.886	3.51	11408	4000	
Zr	90	2	72	236.280	ppb	236.280	7.40	1894	1000	
Nb	93	2	72	0.252	ppb	0.252	27.39	1457	200	
Mo	95	2	115	0.118	ppb	0.118	38.66	237	2000	
Pd	105	2	115	0.013	ppb	0.013	111.13	53	100	
Ag	107	2	115	0.009	ppb	0.009	100.84	63	100	
Cd	111	2	115	0.041	ppb	0.041	132.94	27	2000	
Sn	120	2	115	0.085	ppb	0.085	46.99	377	2000	
Sb	121	2	115	0.391	ppb	0.391	17.25	457	1000	
Ba	137	2	115	3.678	ppb	3.678	9.55	1243	5000	
W	182	2	165	-0.011	ppb	-0.011	-112.57	867	100	
Pt	195	2	165	0.010	ppb	0.010	26.97	133	100	
Tl	205	2	165	0.004	ppb	0.004	195.13	293	2000	
Pb	208	2	165	0.010	ppb	0.010	43.97	1417	5000	
Th	232	2	165	0.017	ppb	0.017	13.52	693	2000	
U	238	2	165	0.012	ppb	0.012	36.57	427	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2206154	0.40	2128935	103.63	60	120	
Sc (IS)	45	1	HMI H2	49969751	1.04	47418043	105.38	60	120	
Sc (IS)	45	2	HMI He	1004297	0.73	935665	107.34	60	120	
Sc (IS)	45	3	No Gas	126578691	1.08	125437115	100.91	60	120	
Ge Internal Standard	72	1	HMI H2	22443637	1.04	21615861	103.83	60	120	
Ge Internal Standard	72	2	HMI He	1290313	0.10	1215965	106.11	60	120	
In Internal Standard	115	2	HMI He	3782127	0.31	3509672	107.76	60	120	
Ho-165	165	2	HMI He	24049922	0.88	22804243	105.46	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-E MS
Data File Name	025SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:44:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.403	ppb	54.403	4.08	317376	500000	
Li	7	2	45	36.300	ppb	36.300	32.27	13549	500000	
Li	7	3	45	50.879	ppb	50.879	9.22	14781995	50000	
Be	9	1	6	40.769	ppb	40.769	2.50	29066	2000	
B	11	1	6	58.464	ppb	58.464	2.11	46685	2000	
Na	23	1	45	38946.541	ppb	38946.541	1.06	226241170	2000	>LDR
Na	23	2	45	37795.681	ppb	37795.681	0.90	11638384	400000	
Mg	24	2	45	2446.630	ppb	2446.630	1.76	335926	400000	
Al	27	2	45	421.120	ppb	421.120	3.96	12442	400000	
K	39	1	45	8956.606	ppb	8956.606	0.04	58508622	400000	
K	39	2	45	9900.027	ppb	9900.027	1.08	550943	400000	
Ca	40	1	45	31804.072	ppb	31804.072	0.42	272536643	400000	
Ca	44	2	45	31015.043	ppb	31015.043	0.51	103387	400000	
Ti	47	2	45	1008.670	ppb	1008.670	56.60	73	4000	
V	51	2	72	40.847	ppb	40.847	1.21	61987	2000	
Cr	52	2	72	43.733	ppb	43.733	1.31	91020	5000	
Mn	55	2	72	1473.508	ppb	1473.508	0.54	999756	10000	
Fe	57	2	72	11009.773	ppb	11009.773	1.57	418462	400000	
Co	59	2	72	42.107	ppb	42.107	1.36	170457	2000	
Ni	60	2	72	41.127	ppb	41.127	2.31	49733	5000	
Cu	63	2	72	46.078	ppb	46.078	1.39	161635	5000	
Zn	66	2	72	43.868	ppb	43.868	3.29	16519	5000	
As	75	2	72	43.119	ppb	43.119	0.17	9245	2000	
Se	78	1	72	38.247	ppb	38.247	1.20	23396	2000	
Sr	88	2	72	141.950	ppb	141.950	1.06	83042	4000	
Zr	90	2	72	9944.021	ppb	9944.021	1.80	76938	1000	>LDR
Nb	93	2	72	0.303	ppb	0.303	11.18	1747	200	
Mo	95	2	115	39.447	ppb	39.447	2.29	55289	2000	
Pd	105	2	115	0.007	ppb	0.007	200.57	40	100	
Ag	107	2	115	41.589	ppb	41.589	0.42	221177	100	
Cd	111	2	115	39.545	ppb	39.545	2.14	22173	2000	
Sn	120	2	115	40.277	ppb	40.277	2.68	53124	2000	
Sb	121	2	115	40.409	ppb	40.409	1.06	41559	1000	
Ba	137	2	115	59.467	ppb	59.467	1.60	19957	5000	
W	182	2	165	11.588	ppb	11.588	1.16	95841	100	
Pt	195	2	165	0.006	ppb	0.006	148.50	103	100	
Tl	205	2	165	39.320	ppb	39.320	1.03	527002	2000	
Pb	208	2	165	40.013	ppb	40.013	1.11	687756	5000	
Th	232	2	165	38.126	ppb	38.126	0.92	801373	2000	
U	238	2	165	37.711	ppb	37.711	1.27	925264	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2168652	0.95	2128935	101.87	60	120	
Sc (IS)	45	1	HMI H2	50142053	0.30	47418043	105.74	60	120	
Sc (IS)	45	2	HMI He	1037409	0.37	935665	110.87	60	120	
Sc (IS)	45	3	No Gas	130653838	0.79	125437115	104.16	60	120	
Ge Internal Standard	72	1	HMI H2	22313535	0.36	21615861	103.23	60	120	
Ge Internal Standard	72	2	HMI He	1317890	1.15	1215965	108.38	60	120	
In Internal Standard	115	2	HMI He	3806942	0.43	3509672	108.47	60	120	
Ho-165	165	2	HMI He	24271611	0.51	22804243	106.43	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-F MSD
Data File Name	026SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:48:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.562	ppb	54.562	5.54	318218	500000	
Li	7	2	45	38.015	ppb	38.015	51.05	13573	500000	
Li	7	3	45	47.691	ppb	47.691	5.45	14755109	50000	
Be	9	1	6	39.026	ppb	39.026	1.56	27864	2000	
B	11	1	6	58.678	ppb	58.678	2.81	46905	2000	
Na	23	1	45	39702.227	ppb	39702.227	1.22	231131963	2000	>LDR
Na	23	2	45	38425.824	ppb	38425.824	1.54	11799395	400000	
Mg	24	2	45	2465.945	ppb	2465.945	0.14	337662	400000	
Al	27	2	45	408.370	ppb	408.370	1.87	12035	400000	
K	39	1	45	9085.389	ppb	9085.389	0.77	59326264	400000	
K	39	2	45	10028.538	ppb	10028.538	1.82	556436	400000	
Ca	40	1	45	32426.621	ppb	32426.621	0.52	278482989	400000	
Ca	44	2	45	31392.739	ppb	31392.739	0.69	104369	400000	
Ti	47	2	45	966.717	ppb	966.717	25.07	70	4000	
V	51	2	72	41.052	ppb	41.052	2.56	62683	2000	
Cr	52	2	72	40.771	ppb	40.771	0.83	85418	5000	
Mn	55	2	72	1480.474	ppb	1480.474	0.59	1010928	10000	
Fe	57	2	72	10821.432	ppb	10821.432	0.36	413949	400000	
Co	59	2	72	41.848	ppb	41.848	1.50	170487	2000	
Ni	60	2	72	40.809	ppb	40.809	2.31	49673	5000	
Cu	63	2	72	40.113	ppb	40.113	1.13	141932	5000	
Zn	66	2	72	42.672	ppb	42.672	1.51	16195	5000	
As	75	2	72	44.112	ppb	44.112	1.74	9517	2000	
Se	78	1	72	37.947	ppb	37.947	1.80	23362	2000	
Sr	88	2	72	141.921	ppb	141.921	1.37	83547	4000	
Zr	90	2	72	10424.882	ppb	10424.882	0.54	81176	1000	>LDR
Nb	93	2	72	0.249	ppb	0.249	16.31	1480	200	
Mo	95	2	115	38.561	ppb	38.561	1.49	54744	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-840.93	20	100	
Ag	107	2	115	40.506	ppb	40.506	0.59	218199	100	
Cd	111	2	115	39.701	ppb	39.701	1.83	22547	2000	
Sn	120	2	115	39.885	ppb	39.885	2.29	53285	2000	
Sb	121	2	115	40.142	ppb	40.142	1.44	41817	1000	
Ba	137	2	115	58.873	ppb	58.873	3.84	20010	5000	
W	182	2	165	11.325	ppb	11.325	2.30	93674	100	
Pt	195	2	165	0.000	ppb	0.000	-7476.23	60	100	
Tl	205	2	165	39.357	ppb	39.357	1.28	527428	2000	
Pb	208	2	165	39.483	ppb	39.483	1.23	678560	5000	
Th	232	2	165	37.828	ppb	37.828	1.51	795007	2000	
U	238	2	165	37.420	ppb	37.420	1.21	918040	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2171430	1.69	2128935	102.00	60	120	
Sc (IS)	45	1	HMI H2	50253458	0.37	47418043	105.98	60	120	
Sc (IS)	45	2	HMI He	1034661	0.80	935665	110.58	60	120	
Sc (IS)	45	3	No Gas	131436875	0.57	125437115	104.78	60	120	
Ge Internal Standard	72	1	HMI H2	22458334	0.55	21615861	103.90	60	120	
Ge Internal Standard	72	2	HMI He	1326274	0.52	1215965	109.07	60	120	
In Internal Standard	115	2	HMI He	3856192	1.21	3509672	109.87	60	120	
Ho-165	165	2	HMI He	24269349	1.06	22804243	106.42	60	120	

Sample Report

Sample Table

Sample Name	280-114109-B-7-D pds
Data File Name	027SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:52:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.218	ppb	-14.218	-31.70	258042	500000	
Li	7	2	45	-34.629	ppb	-34.629	-20.42	11084	500000	
Li	7	3	45	-25.210	ppb	-25.210	-16.44	12053632	50000	
Be	9	1	6	210.090	ppb	210.090	3.96	147268	2000	
B	11	1	6	27.063	ppb	27.063	5.72	22169	2000	
Na	23	1	45	38747.035	ppb	38747.035	0.26	223936243	2000	>LDR
Na	23	2	45	37313.209	ppb	37313.209	0.96	11473730	400000	
Mg	24	2	45	2372.753	ppb	2372.753	1.34	325315	400000	
Al	27	2	45	2183.035	ppb	2183.035	2.62	63845	400000	
K	39	1	45	8859.906	ppb	8859.906	0.26	57696974	400000	
K	39	2	45	9811.957	ppb	9811.957	0.22	545376	400000	
Ca	40	1	45	31440.040	ppb	31440.040	0.40	268039763	400000	
Ca	44	2	45	30250.860	ppb	30250.860	1.93	100694	400000	
Ti	47	2	45	4091.483	ppb	4091.483	13.22	297	4000	
V	51	2	72	212.902	ppb	212.902	0.60	323096	2000	
Cr	52	2	72	213.009	ppb	213.009	1.18	447367	5000	
Mn	55	2	72	1605.826	ppb	1605.826	1.13	1103466	10000	
Fe	57	2	72	12150.987	ppb	12150.987	1.32	467734	400000	
Co	59	2	72	210.273	ppb	210.273	1.15	862028	2000	
Ni	60	2	72	207.930	ppb	207.930	1.12	253185	5000	
Cu	63	2	72	209.038	ppb	209.038	1.29	733787	5000	
Zn	66	2	72	219.812	ppb	219.812	2.29	80401	5000	
As	75	2	72	195.966	ppb	195.966	1.92	42453	2000	
Se	78	1	72	201.487	ppb	201.487	0.13	122514	2000	
Sr	88	2	72	98.714	ppb	98.714	1.12	58491	4000	
Zr	90	2	72	57036.835	ppb	57036.835	1.65	446444	1000	>LDR
Nb	93	2	72	3.288	ppb	3.288	9.29	17026	200	
Mo	95	2	115	213.116	ppb	213.116	0.66	300170	2000	
Pd	105	2	115	0.021	ppb	0.021	86.04	77	100	
Ag	107	2	115	50.687	ppb	50.687	1.26	271140	100	
Cd	111	2	115	207.892	ppb	207.892	1.45	117227	2000	
Sn	120	2	115	214.419	ppb	214.419	1.16	283297	2000	
Sb	121	2	115	216.895	ppb	216.895	2.41	224117	1000	
Ba	137	2	115	235.950	ppb	235.950	2.38	79591	5000	
W	182	2	165	217.932	ppb	217.932	0.47	1785290	100	
Pt	195	2	165	0.047	ppb	0.047	11.32	410	100	
Tl	205	2	165	214.378	ppb	214.378	0.54	2872284	2000	
Pb	208	2	165	211.701	ppb	211.701	0.74	3633483	5000	
Th	232	2	165	15.069	ppb	15.069	1.15	316970	2000	
U	238	2	165	204.839	ppb	204.839	0.72	5025584	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2136556	3.68	2128935	100.36	60	120	
Sc (IS)	45	1	HMI H2	49885671	0.20	47418043	105.20	60	120	
Sc (IS)	45	2	HMI He	1035963	0.53	935665	110.72	60	120	
Sc (IS)	45	3	No Gas	130999808	0.52	125437115	104.43	60	120	
Ge Internal Standard	72	1	HMI H2	22201899	0.94	21615861	102.71	60	120	
Ge Internal Standard	72	2	HMI He	1334739	0.51	1215965	109.77	60	120	
In Internal Standard	115	2	HMI He	3829467	0.64	3509672	109.11	60	120	
Ho-165	165	2	HMI He	24272480	0.93	22804243	106.44	60	120	

Sample Report

Sample Table

Sample Name	280-114110-A-4-C
Data File Name	028SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:56:08-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.836	ppb	-14.836	-13.52	260281	500000	
Li	7	2	45	-34.664	ppb	-34.664	-26.19	11304	500000	
Li	7	3	45	-17.256	ppb	-17.256	-10.99	12550419	50000	
Be	9	1	6	0.131	ppb	0.131	81.88	130	2000	
B	11	1	6	21.296	ppb	21.296	3.10	18084	2000	
Na	23	1	45	71017.993	ppb	71017.993	1.41	414223180	2000	>LDR
Na	23	2	45	68189.827	ppb	68189.827	1.22	21351366	400000	
Mg	24	2	45	16811.595	ppb	16811.595	0.70	2349683	400000	
Al	27	2	45	4.750	ppb	4.750	13.05	277	400000	
K	39	1	45	1683.788	ppb	1683.788	1.30	19885600	400000	
K	39	2	45	2537.444	ppb	2537.444	1.67	152313	400000	
Ca	40	1	45	62721.594	ppb	62721.594	0.17	540205219	400000	
Ca	44	2	45	60399.526	ppb	60399.526	1.56	204913	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.018	ppb	0.018	80.33	1033	2000	
Cr	52	2	72	0.871	ppb	0.871	6.32	2304	5000	
Mn	55	2	72	44.643	ppb	44.643	4.42	31708	10000	
Fe	57	2	72	7.890	ppb	7.890	20.98	530	400000	
Co	59	2	72	0.133	ppb	0.133	23.11	583	2000	
Ni	60	2	72	8.130	ppb	8.130	3.33	10550	5000	
Cu	63	2	72	4.626	ppb	4.626	1.31	19242	5000	
Zn	66	2	72	12.926	ppb	12.926	5.19	5695	5000	
As	75	2	72	0.342	ppb	0.342	21.61	105	2000	
Se	78	1	72	0.159	ppb	0.159	43.54	127	2000	
Sr	88	2	72	143.737	ppb	143.737	4.19	87632	4000	
Zr	90	2	72	68.002	ppb	68.002	21.35	660	1000	
Nb	93	2	72	0.024	ppb	0.024	63.37	350	200	
Mo	95	2	115	0.829	ppb	0.829	9.25	1257	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-406.88	20	100	
Ag	107	2	115	0.048	ppb	0.048	67.21	277	100	
Cd	111	2	115	0.892	ppb	0.892	14.47	513	2000	
Sn	120	2	115	0.471	ppb	0.471	12.43	903	2000	
Sb	121	2	115	1.923	ppb	1.923	15.97	2074	1000	
Ba	137	2	115	15.267	ppb	15.267	4.25	5238	5000	
W	182	2	165	0.148	ppb	0.148	4.83	2210	100	
Pt	195	2	165	0.002	ppb	0.002	256.59	73	100	
Tl	205	2	165	0.059	ppb	0.059	27.65	1050	2000	
Pb	208	2	165	0.067	ppb	0.067	9.85	2434	5000	
Th	232	2	165	0.020	ppb	0.020	30.56	790	2000	
U	238	2	165	0.273	ppb	0.273	5.97	6922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2168402	2.01	2128935	101.85	60	120	
Sc (IS)	45	1	HMI H2	50418466	0.77	47418043	106.33	60	120	
Sc (IS)	45	2	HMI He	1056587	1.52	935665	112.92	60	120	
Sc (IS)	45	3	No Gas	133198531	0.48	125437115	106.19	60	120	
Ge Internal Standard	72	1	HMI H2	22493686	0.40	21615861	104.06	60	120	
Ge Internal Standard	72	2	HMI He	1374246	1.81	1215965	113.02	60	120	
In Internal Standard	115	2	HMI He	3881555	0.61	3509672	110.60	60	120	
Ho-165	165	2	HMI He	24605784	0.57	22804243	107.90	60	120	

Sample Report

Sample Table

Sample Name	280-114110-A-4-D DU
Data File Name	029SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T11:59:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429435 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.464	ppb	-16.464	-34.38	262921	500000	
Li	7	2	45	-34.874	ppb	-34.874	-40.36	11404	500000	
Li	7	3	45	-21.853	ppb	-21.853	-5.22	12283144	50000	
Be	9	1	6	-0.010	ppb	-0.010	-143.90	30	2000	
B	11	1	6	21.304	ppb	21.304	7.09	18134	2000	
Na	23	1	45	76271.369	ppb	76271.369	0.53	451816687	2000	>LDR
Na	23	2	45	73237.498	ppb	73237.498	0.45	23152500	400000	
Mg	24	2	45	17358.862	ppb	17358.862	0.73	2449333	400000	
Al	27	2	45	2.341	ppb	2.341	101.93	207	400000	
K	39	1	45	1561.686	ppb	1561.686	2.21	19532691	400000	
K	39	2	45	2401.628	ppb	2401.628	0.77	146187	400000	
Ca	40	1	45	63541.513	ppb	63541.513	1.12	555837818	400000	
Ca	44	2	45	61088.950	ppb	61088.950	0.53	209264	400000	
Ti	47	2	45	44.781	ppb	44.781	173.21	3	4000	
V	51	2	72	0.000	ppb	0.000	42194.57	990	2000	
Cr	52	2	72	0.795	ppb	0.795	15.33	2107	5000	
Mn	55	2	72	74.204	ppb	74.204	1.40	51826	10000	
Fe	57	2	72	8.246	ppb	8.246	10.69	537	400000	
Co	59	2	72	0.085	ppb	0.085	38.99	377	2000	
Ni	60	2	72	8.176	ppb	8.176	2.29	10450	5000	
Cu	63	2	72	4.071	ppb	4.071	0.91	16979	5000	
Zn	66	2	72	12.339	ppb	12.339	5.52	5394	5000	
As	75	2	72	0.142	ppb	0.142	35.92	59	2000	
Se	78	1	72	0.059	ppb	0.059	25.20	65	2000	
Sr	88	2	72	151.854	ppb	151.854	1.81	91208	4000	
Zr	90	2	72	30.067	ppb	30.067	22.40	350	1000	
Nb	93	2	72	0.020	ppb	0.020	30.59	323	200	
Mo	95	2	115	0.525	ppb	0.525	21.50	827	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-100.52	17	100	
Ag	107	2	115	0.011	ppb	0.011	91.46	77	100	
Cd	111	2	115	0.938	ppb	0.938	18.14	543	2000	
Sn	120	2	115	0.321	ppb	0.321	10.53	707	2000	
Sb	121	2	115	1.215	ppb	1.215	14.64	1337	1000	
Ba	137	2	115	15.868	ppb	15.868	5.53	5471	5000	
W	182	2	165	0.029	ppb	0.029	62.57	1217	100	
Pt	195	2	165	-0.005	ppb	-0.005	-58.81	27	100	
Tl	205	2	165	0.016	ppb	0.016	60.51	467	2000	
Pb	208	2	165	0.021	ppb	0.021	16.73	1630	5000	
Th	232	2	165	0.007	ppb	0.007	43.65	513	2000	
U	238	2	165	0.173	ppb	0.173	3.53	4424	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2175297	2.18	2128935	102.18	60	120	
Sc (IS)	45	1	HMI H2	51210408	1.21	47418043	108.00	60	120	
Sc (IS)	45	2	HMI He	1066756	0.42	935665	114.01	60	120	
Sc (IS)	45	3	No Gas	132149991	0.23	125437115	105.35	60	120	
Ge Internal Standard	72	1	HMI H2	22450696	0.15	21615861	103.86	60	120	
Ge Internal Standard	72	2	HMI He	1353135	0.67	1215965	111.28	60	120	
In Internal Standard	115	2	HMI He	3903309	1.29	3509672	111.22	60	120	
Ho-165	165	2	HMI He	24552121	1.05	22804243	107.66	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	030_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:03:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	434.490	ppb	1.284	629395	500	86.9	90	110	>+\-10%
Li	7	2	45	453.290	ppb	11.472	27316	500	90.7	90	110	
Li	7	3	45	464.081	ppb	1.824	27740365	500	92.8	90	110	
Be	9	1	6	48.147	ppb	2.593	34386	50	96.3	90	110	
B	11	1	6	51.027	ppb	3.871	41040	50	102.1	90	110	
Na	23	1	45	5104.253	ppb	0.580	29808710	5000	102.1	90	110	
Na	23	2	45	5051.179	ppb	1.225	1552333	5000	101.0	90	110	
Mg	24	2	45	4878.327	ppb	0.421	654187	5000	97.6	90	110	
Al	27	2	45	5052.187	ppb	0.997	144403	5000	101.0	90	110	
K	39	1	45	5189.169	ppb	0.239	37886551	5000	103.8	90	110	
K	39	2	45	5077.936	ppb	1.333	281435	5000	101.6	90	110	
Ca	40	1	45	5096.987	ppb	0.556	43236051	5000	101.9	90	110	
Ca	44	2	45	5189.710	ppb	5.183	17009	5000	103.8	90	110	
Ti	47	2	45	94.660	ppb	173.205	7	50	189.3	90	110	>+\-10%
V	51	2	72	50.852	ppb	2.410	75985	50	101.7	90	110	
Cr	52	2	72	49.197	ppb	3.127	101071	50	98.4	90	110	
Mn	55	2	72	50.862	ppb	1.005	34216	50	101.7	90	110	
Fe	57	2	72	4981.957	ppb	1.061	187149	5000	99.6	90	110	
Co	59	2	72	49.369	ppb	0.781	197398	50	98.7	90	110	
Ni	60	2	72	49.027	ppb	1.677	58492	50	98.1	90	110	
Cu	63	2	72	49.080	ppb	1.034	169892	50	98.2	90	110	
Zn	66	2	72	48.796	ppb	6.123	18057	50	97.6	90	110	
As	75	2	72	48.936	ppb	1.280	10359	50	97.9	90	110	
Se	78	1	72	49.965	ppb	0.978	30371	50	99.9	90	110	
Sr	88	2	72	50.287	ppb	1.983	29067	50	100.6	90	110	
Zr	90	2	72	104.348	ppb	4.977	903	50	208.7	90	110	>+\-10%
Nb	93	2	72	93.258	ppb	1.743	465359	100	93.3	90	110	
Mo	95	2	115	48.983	ppb	2.345	67985	50	98.0	90	110	
Pd	105	2	115	48.531	ppb	2.103	121337	50	97.1	90	110	
Ag	107	2	115	49.348	ppb	0.840	259966	50	98.7	90	110	
Cd	111	2	115	47.657	ppb	1.644	26466	50	95.3	90	110	
Sn	120	2	115	49.185	ppb	1.738	64195	50	98.4	90	110	
Sb	121	2	115	50.105	ppb	2.592	51030	50	100.2	90	110	
Ba	137	2	115	49.403	ppb	3.176	16423	50	98.8	90	110	
W	182	2	165	48.228	ppb	1.032	386897	50	96.5	90	110	
Pt	195	2	165	47.718	ppb	0.361	348360	50	95.4	90	110	
Tl	205	2	165	49.125	ppb	0.737	643542	50	98.3	90	110	
Pb	208	2	165	49.469	ppb	0.823	830829	50	98.9	90	110	
Th	232	2	165	46.720	ppb	0.494	959821	50	93.4	90	110	
U	238	2	165	46.390	ppb	0.662	1112540	50	92.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2173106	1.24	2128935	102.07	60	120	
Sc (IS)	45	1	HMI H2	49413649	0.26	47418043	104.21	60	120	
Sc (IS)	45	2	HMI He	1013616	0.83	935665	108.33	60	120	
Sc (IS)	45	3	No Gas	121735035	0.69	125437115	97.05	60	120	
Ge Internal Standard	72	1	HMI H2	22178766	0.26	21615861	102.60	60	120	
Ge Internal Standard	72	2	HMI He	1301654	0.15	1215965	107.05	60	120	
In Internal Standard	115	2	HMI He	3771305	1.35	3509672	107.45	60	120	
Ho-165	165	2	HMI He	23724896	0.71	22804243	104.04	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	031_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:07:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.625	ppb	-31.3	11802373	10	
Be	9	1	6	-0.029	ppb	-73.0	17	0.5	
B	11	1	6	1.268	ppb	5.4	2720	0.5	>RL
Na	23	1	45	2.687	ppb	18.7	696251	25	
Na	23	2	45	-3.726	ppb	-81.5	36594	25	
Mg	24	2	45	2.369	ppb	23.2	530	25	
Al	27	2	45	-1.268	ppb	-33.7	93	15	
K	39	1	45	46.602	ppb	18.7	10950948	50	
K	39	2	45	-15.354	ppb	-31.1	10150	50	
Ca	40	1	45	7.225	ppb	3.3	293019	50	
Ca	44	2	45	1.147	ppb	834.5	133	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.561	ppb	32.2	1777	1	
Cr	52	2	72	-0.025	ppb	-183.0	347	1	
Mn	55	2	72	0.042	ppb	169.3	163	0.5	
Fe	57	2	72	1.879	ppb	21.7	277	25	
Co	59	2	72	0.011	ppb	45.8	67	0.5	
Ni	60	2	72	-0.058	ppb	-156.3	287	1	
Cu	63	2	72	-0.056	ppb	-50.9	2250	1	
Zn	66	2	72	0.323	ppb	58.0	947	5	
As	75	2	72	0.014	ppb	344.9	29	1	
Se	78	1	72	0.016	ppb	204.3	39	1	
Sr	88	2	72	0.032	ppb	235.2	40	0.5	
Zr	90	2	72	6.553	ppb	110.7	157	1	>RL
Nb	93	2	72	1.404	ppb	19.1	7202	2	
Mo	95	2	115	0.073	ppb	53.3	173	0.5	
Pd	105	2	115	0.027	ppb	39.3	90	1	
Ag	107	2	115	0.023	ppb	40.1	133	1	
Cd	111	2	115	0.029	ppb	61.2	20	0.5	
Sn	120	2	115	0.071	ppb	73.7	360	1	
Sb	121	2	115	0.558	ppb	23.3	627	0.6	
Ba	137	2	115	0.005	ppb	1107.0	20	0.5	
W	182	2	165	0.061	ppb	7.5	1450	1	
Pt	195	2	165	0.043	ppb	12.2	377	1	
Tl	205	2	165	0.007	ppb	62.2	340	0.1	
Pb	208	2	165	0.012	ppb	59.5	1450	0.5	
Th	232	2	165	0.034	ppb	23.9	1060	1	
U	238	2	165	0.037	ppb	7.0	1043	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2203353	0.32	2128935	103.50	60	120	
Sc (IS)	45	1	HMI H2	49657088	0.24	47418043	104.72	60	120	
Sc (IS)	45	2	HMI He	1012232	0.83	935665	108.18	60	120	
Sc (IS)	45	3	No Gas	123930828	0.07	125437115	98.80	60	120	
Ge Internal Standard	72	1	HMI H2	22256243	0.49	21615861	102.96	60	120	
Ge Internal Standard	72	2	HMI He	1299118	0.11	1215965	106.84	60	120	
In Internal Standard	115	2	HMI He	3788750	2.13	3509672	107.95	60	120	
Ho-165	165	2	HMI He	24061493	0.54	22804243	105.51	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	032LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:11:17-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-6.697	ppb	-59.988	12237001	50	-13.4	70	130	>+/-30%
Be	9	1	6	0.860	ppb	14.414	653	1	86.0	70	130	
Na	23	2	45	33.757	ppb	4.465	47876	50	67.5	70	130	>+/-30%
Mg	24	2	45	45.459	ppb	4.585	6305	50	90.9	70	130	
Al	27	2	45	35.982	ppb	13.115	1157	30	119.9	70	130	
K	39	2	45	103.583	ppb	5.665	16495	100	103.6	70	130	
Ca	44	2	45	48.330	ppb	32.499	287	50	96.7	70	130	
V	51	2	72	5.357	ppb	1.886	8899	5	107.1	70	130	
Cr	52	2	72	1.904	ppb	3.149	4317	2	95.2	70	130	
Mn	55	2	72	0.976	ppb	11.219	793	1	97.6	70	130	
Fe	57	2	72	50.849	ppb	14.427	2124	50	101.7	70	130	
Co	59	2	72	0.971	ppb	6.404	3921	1	97.1	70	130	
Ni	60	2	72	1.974	ppb	3.824	2710	2	98.7	70	130	
Cu	63	2	72	1.949	ppb	1.710	9140	2	97.5	70	130	
Zn	66	2	72	10.929	ppb	1.493	4714	10	109.3	70	130	
As	75	2	72	4.453	ppb	3.737	971	5	89.1	70	130	
Se	78	1	72	4.839	ppb	2.740	2990	5	96.8	70	130	
Sr	88	2	72	1.112	ppb	6.595	667	1	111.2	70	130	
Zr	90	2	72	19.442	ppb	23.112	257	0.5	3888.4	70	130	>+/-30%
Nb	93	2	72	3.334	ppb	9.256	16923	2	166.7	70	130	>+/-30%
Mo	95	2	115	1.990	ppb	4.594	2854	2	99.5	70	130	
Pd	105	2	115	0.014	ppb	116.334	57	1	1.4	70	130	>+/-30%
Ag	107	2	115	4.946	ppb	1.323	26269	5	98.9	70	130	
Cd	111	2	115	0.923	ppb	11.975	520	1	92.3	70	130	
Sn	120	2	115	9.829	ppb	1.812	13143	10	98.3	70	130	
Sb	121	2	115	2.473	ppb	5.776	2594	2	123.7	70	130	
Ba	137	2	115	1.041	ppb	14.268	367	1	104.1	70	130	
W	182	2	165	4.614	ppb	2.128	38243	1	461.4	70	130	>+/-30%
Pt	195	2	165	0.071	ppb	9.491	580	1	7.1	70	130	>+/-30%
Tl	205	2	165	0.943	ppb	2.503	12713	1	94.3	70	130	
Pb	208	2	165	0.986	ppb	3.160	17932	1	98.6	70	130	
Th	232	2	165	1.909	ppb	0.781	39943	2	95.5	70	130	
U	238	2	165	0.927	ppb	2.524	22585	1	92.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2185710	1.86	2128935	102.67	60	120	
Sc (IS)	45	1	HMI H2	50133498	0.40	47418043	105.73	60	120	
Sc (IS)	45	2	HMI He	1013317	0.39	935665	108.30	60	120	
Sc (IS)	45	3	No Gas	125958198	0.76	125437115	100.42	60	120	
Ge Internal Standard	72	1	HMI H2	22342896	0.41	21615861	103.36	60	120	
Ge Internal Standard	72	2	HMI He	1307906	0.75	1215965	107.56	60	120	
In Internal Standard	115	2	HMI He	3800522	0.47	3509672	108.29	60	120	
Ho-165	165	2	HMI He	23960316	0.96	22804243	105.07	60	120	

Blank Report

Sample Table

Sample Name	MB 280-429765/1-A
Data File Name	033_BLK.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:15:08-06:00
Sample Type	Blank
Dilution	1
Comment	429765 6020a
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-14.196	ppb	-21.23452811	259860	0.5
Li	7	2	45	-16.747	ppb	-35.91249403	11771	0.5
Li	7	3	45	-21.084	ppb	-14.59095702	12031378	10
Be	9	1	6	-0.047	ppb	-17.08090009	3	0.5
B	11	1	6	0.277	ppb	19.71329518	1914	0.5
Na	23	1	45	134.159	ppb	3.201207057	1467186	25
Na	23	2	45	127.107	ppb	6.846974747	78037	25
Mg	24	2	45	2.592	ppb	28.17277288	577	25
Al	27	2	45	2.601	ppb	71.28408469	210	15
K	39	1	45	-884.118	ppb	-1.407295056	6112261	50
K	39	2	45	-15.261	ppb	-18.04354306	10457	50
Ca	40	1	45	16.432	ppb	1.444805939	375405	50
Ca	44	2	45	8.000	ppb	136.9344756	160	25
Ti	47	2	45	228.436	ppb	34.76510375	17	0.5
V	51	2	72	0.214	ppb	30.30105964	1300	1
Cr	52	2	72	0.207	ppb	23.99811412	843	1
Mn	55	2	72	0.956	ppb	13.35594838	797	0.5
Fe	57	2	72	28.459	ppb	13.11765812	1307	25
Co	59	2	72	0.017	ppb	67.16266246	90	0.5
Ni	60	2	72	0.017	ppb	56.70197335	387	1
Cu	63	2	72	0.008	ppb	1065.547605	2537	1
Zn	66	2	72	2.158	ppb	21.35037393	1637	5
As	75	2	72	-0.050	ppb	-46.5913	16	1
Se	78	1	72	0.007	ppb	151.9326364	33	1
Sr	88	2	72	0.115	ppb	89.270803	90	0.5
Zr	90	2	72	20.852	ppb	55.69807671	273	1
Nb	93	2	72	0.496	ppb	8.17162129	2754	2
Mo	95	2	115	0.011	ppb	166.0926356	90	0.5
Pd	105	2	115	0.000	ppb	2012.371158	23	1
Ag	107	2	115	0.013	ppb	36.12169763	83	1
Cd	111	2	115	-0.001	ppb	-1279.707815	3	0.5
Sn	120	2	115	0.155	ppb	27.94556514	483	1
Sb	121	2	115	0.190	ppb	13.68274879	260	0.6
Ba	137	2	115	0.004	ppb	1391.088657	20	0.5
W	182	2	165	0.028	ppb	40.53597253	1210	1
Pt	195	2	165	0.019	ppb	18.03170916	207	1
Tl	205	2	165	0.020	ppb	35.24786857	523	0.1
Pb	208	2	165	0.045	ppb	43.02018764	2053	0.5
Th	232	2	165	0.043	ppb	13.6005786	1273	1
U	238	2	165	0.023	ppb	9.821336046	697	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2167206	0.29	2128935	101.80	60	120	
Sc (IS)	45	1	HMI H2	50235278	0.85	47418043	105.94	60	120	
Sc (IS)	45	2	HMI He	1042359	0.64	935665	111.40	60	120	
Sc (IS)	45	3	No Gas	129150601	0.80	125437115	102.96	60	120	
Ge Internal Standard	72	1	HMI H2	22585696	0.38	21615861	104.49	60	120	
Ge Internal Standard	72	2	HMI He	1335133	0.90	1215965	109.80	60	120	
In Internal Standard	115	2	HMI He	3904168	1.02	3509672	111.24	60	120	
Ho-165	165	2	HMI He	24589369	1.13	22804243	107.83	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-429765/2-A
Data File Name	034_LCS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:18:56-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	429765 6020a
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	55.025	55.025	ppb	4.234	322531	400	13.8	80	120	>+/-20%
Li	7	2	45	49.010	49.010	ppb	49.456	14253	400	12.3	80	120	>+/-20%
Li	7	3	45	51.026	51.026	ppb	7.192	14932477	400	12.8	80	120	>+/-20%
Be	9	1	6	37.753	37.753	ppb	2.045	27183	40	94.4	80	120	
Na	23	2	45	8.400	8.400	ppb	35.142	42007	40	21.0	80	120	>+/-20%
Mg	24	2	45	2.585	2.585	ppb	12.079	583	40	6.5	80	120	>+/-20%
Al	27	2	45	406.173	406.173	ppb	3.569	12232	40	1015.4	80	120	>+/-20%
K	39	2	45	-9.562	-9.562	ppb	-33.236	10921	40	-23.9	80	120	>+/-20%
Ca	44	2	45	328.519	328.519	ppb	25.293	1250	40	821.3	80	120	>+/-20%
V	51	2	72	38.900	38.900	ppb	2.605	61211	40	97.2	80	120	
Cr	52	2	72	40.232	40.232	ppb	0.673	86811	40	100.6	80	120	
Mn	55	2	72	41.859	41.859	ppb	2.473	29574	40	104.6	80	120	
Fe	57	2	72	435.919	435.919	ppb	2.091	17390	40	1089.8	80	120	>+/-20%
Co	59	2	72	39.893	39.893	ppb	2.155	167337	40	99.7	80	120	
Ni	60	2	72	39.868	39.868	ppb	3.304	49960	40	99.7	80	120	
Cu	63	2	72	39.516	39.516	ppb	2.859	143978	40	98.8	80	120	
Zn	66	2	72	40.525	40.525	ppb	3.648	15885	40	101.3	80	120	
As	75	2	72	35.819	35.819	ppb	2.888	7961	40	89.5	80	120	
Se	78	1	72	36.411	36.411	ppb	2.330	22508	40	91.0	80	120	
Nb	93	2	72	0.351	0.351	ppb	13.366	2060	40	0.9	80	120	>+/-20%
Mo	95	2	115	38.075	38.075	ppb	0.876	55133	40	95.2	80	120	
Pd	105	2	115	0.017	0.017	ppb	67.678	67	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.643	40.643	ppb	0.973	223279	40	101.6	80	120	
Cd	111	2	115	38.890	38.890	ppb	1.961	22523	40	97.2	80	120	
Sn	120	2	115	39.418	39.418	ppb	2.290	53703	40	98.5	80	120	
Sb	121	2	115	39.183	39.183	ppb	4.819	41616	40	98.0	80	120	
Ba	137	2	115	42.310	42.310	ppb	4.791	14667	40	105.8	80	120	
W	182	2	165	11.344	11.344	ppb	1.014	95110	40	28.4	80	120	>+/-20%
Pt	195	2	165	0.015	0.015	ppb	73.106	177	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.715	39.715	ppb	0.490	539482	40	99.3	80	120	
Pb	208	2	165	39.838	39.838	ppb	0.561	694007	40	99.6	80	120	
Th	232	2	165	37.048	37.048	ppb	1.648	789209	40	92.6	80	120	
U	238	2	165	37.302	37.302	ppb	0.998	927579	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2190500	1.69	2128935	102.89	60	120	
Sc (IS)	45	1	HMI H2	50872164	0.28	47418043	107.28	60	120	
Sc (IS)	45	2	HMI He	1056938	0.68	935665	112.96	60	120	
Sc (IS)	45	3	No Gas	131937585	0.92	125437115	105.18	60	120	
Ge Internal Standard	72	1	HMI H2	22547176	0.33	21615861	104.31	60	120	
Ge Internal Standard	72	2	HMI He	1366041	2.81	1215965	112.34	60	120	
In Internal Standard	115	2	HMI He	3932759	1.29	3509672	112.05	60	120	
Ho-165	165	2	HMI He	24599555	1.06	22804243	107.87	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-429765/3-A
Data File Name	035SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:22:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.943	ppb	54.943	12.52	323362	500000	
Li	7	2	45	42.687	ppb	42.687	30.99	14050	500000	
Li	7	3	45	49.528	ppb	49.528	9.79	14755964	50000	
Be	9	1	6	38.052	ppb	38.052	2.74	27349	2000	
B	11	1	6	33.250	ppb	33.250	4.73	27506	2000	
Na	23	1	45	4.954	ppb	4.954	7.93	728706	2000	
Na	23	2	45	7.128	ppb	7.128	90.32	41680	400000	
Mg	24	2	45	2.012	ppb	2.012	60.40	503	400000	
Al	27	2	45	400.415	ppb	400.415	4.59	12075	400000	
K	39	1	45	-905.646	ppb	-905.646	-1.64	6091081	400000	
K	39	2	45	-6.871	ppb	-6.871	-161.01	11084	400000	
Ca	40	1	45	14.971	ppb	14.971	4.46	368516	400000	
Ca	44	2	45	390.923	ppb	390.923	11.97	1463	400000	
Ti	47	2	45	899.415	ppb	899.415	85.05	67	4000	
V	51	2	72	40.756	ppb	40.756	3.49	64232	2000	
Cr	52	2	72	40.280	ppb	40.280	2.01	87116	5000	
Mn	55	2	72	40.928	ppb	40.928	2.97	28976	10000	
Fe	57	2	72	420.898	ppb	420.898	1.73	16829	400000	
Co	59	2	72	40.435	ppb	40.435	2.27	170007	2000	
Ni	60	2	72	40.434	ppb	40.434	2.32	50813	5000	
Cu	63	2	72	39.938	ppb	39.938	1.92	145852	5000	
Zn	66	2	72	39.938	ppb	39.938	6.04	15691	5000	
As	75	2	72	35.885	ppb	35.885	2.67	7994	2000	
Se	78	1	72	36.485	ppb	36.485	0.88	22728	2000	
Sr	88	2	72	40.736	ppb	40.736	3.29	24760	4000	
Zr	90	2	72	10081.482	ppb	10081.482	3.09	81018	1000	>LDR
Nb	93	2	72	0.243	ppb	0.243	30.62	1500	200	
Mo	95	2	115	37.420	ppb	37.420	1.07	54209	2000	
Pd	105	2	115	0.000	ppb	0.000	1909.95	23	100	
Ag	107	2	115	41.344	ppb	41.344	2.04	227196	100	
Cd	111	2	115	39.141	ppb	39.141	0.81	22680	2000	
Sn	120	2	115	39.060	ppb	39.060	3.15	53234	2000	
Sb	121	2	115	39.661	ppb	39.661	2.81	42151	1000	
Ba	137	2	115	41.275	ppb	41.275	4.50	14327	5000	
W	182	2	165	11.420	ppb	11.420	1.18	96431	100	
Pt	195	2	165	0.005	ppb	0.005	137.12	103	100	
Tl	205	2	165	39.626	ppb	39.626	1.20	542178	2000	
Pb	208	2	165	39.980	ppb	39.980	0.71	701525	5000	
Th	232	2	165	37.206	ppb	37.206	0.74	798376	2000	
U	238	2	165	37.116	ppb	37.116	0.25	929691	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2186259	1.08	2128935	102.69	60	120	
Sc (IS)	45	1	HMI H2	51019704	1.02	47418043	107.60	60	120	
Sc (IS)	45	2	HMI He	1058509	0.66	935665	113.13	60	120	
Sc (IS)	45	3	No Gas	130849751	0.62	125437115	104.32	60	120	
Ge Internal Standard	72	1	HMI H2	22720862	0.55	21615861	105.11	60	120	
Ge Internal Standard	72	2	HMI He	1369136	2.23	1215965	112.60	60	120	
In Internal Standard	115	2	HMI He	3934831	2.16	3509672	112.11	60	120	
Ho-165	165	2	HMI He	24777624	0.24	22804243	108.65	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-7-A
Data File Name	036SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:26:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	22.662	ppb	22.662	3.08	278154	500000	
Li	7	2	45	18.374	ppb	18.374	70.27	12478	500000	
Li	7	3	45	11.900	ppb	11.900	6.31	12475615	50000	
Be	9	1	6	0.022	ppb	0.022	176.93	50	2000	
B	11	1	6	56.662	ppb	56.662	3.65	42885	2000	
Na	23	1	45	45917.603	ppb	45917.603	0.18	255240983	2000	>LDR
Na	23	2	45	44096.917	ppb	44096.917	1.00	13096505	400000	
Mg	24	2	45	22384.172	ppb	22384.172	1.92	2963853	400000	
Al	27	2	45	585.457	ppb	585.457	5.92	16642	400000	
K	39	1	45	5989.037	ppb	5989.037	1.93	40881321	400000	
K	39	2	45	6828.370	ppb	6828.370	0.98	370054	400000	
Ca	40	1	45	120273.485	ppb	120273.485	0.33	986048012	400000	
Ca	44	2	45	124332.423	ppb	124332.423	0.91	399546	400000	
Ti	47	2	45	1377.460	ppb	1377.460	41.27	97	4000	
V	51	2	72	9.724	ppb	9.724	1.16	14924	2000	
Cr	52	2	72	249.894	ppb	249.894	0.88	499165	5000	
Mn	55	2	72	30254.769	ppb	30254.769	0.65	19774221	10000	
Fe	57	2	72	288.644	ppb	288.644	3.97	10767	400000	
Co	59	2	72	0.220	ppb	0.220	3.77	880	2000	
Ni	60	2	72	1.423	ppb	1.423	1.99	1994	5000	
Cu	63	2	72	25.701	ppb	25.701	1.12	87912	5000	
Zn	66	2	72	34.322	ppb	34.322	7.65	12632	5000	
As	75	2	72	1.671	ppb	1.671	8.18	370	2000	
Se	78	1	72	35.396	ppb	35.396	0.99	20645	2000	
Sr	88	2	72	1600.016	ppb	1600.016	0.43	901438	4000	
Zr	90	2	72	843.633	ppb	843.633	8.78	6385	1000	
Nb	93	2	72	0.310	ppb	0.310	36.12	1714	200	
Mo	95	2	115	0.101	ppb	0.101	31.74	210	2000	
Pd	105	2	115	0.018	ppb	0.018	84.70	67	100	
Ag	107	2	115	0.055	ppb	0.055	72.74	300	100	
Cd	111	2	115	0.048	ppb	0.048	38.01	30	2000	
Sn	120	2	115	0.503	ppb	0.503	16.18	910	2000	
Sb	121	2	115	0.452	ppb	0.452	29.28	513	1000	
Ba	137	2	115	64.911	ppb	64.911	4.60	21376	5000	
W	182	2	165	0.030	ppb	0.030	42.19	1180	100	
Pt	195	2	165	0.006	ppb	0.006	49.04	100	100	
Tl	205	2	165	0.022	ppb	0.022	23.80	530	2000	
Pb	208	2	165	0.135	ppb	0.135	9.69	3464	5000	
Th	232	2	165	0.382	ppb	0.382	4.20	8143	2000	
U	238	2	165	166.776	ppb	166.776	0.97	3981795	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2053721	1.92	2128935	96.47	60	120	
Sc (IS)	45	1	HMI H2	48002958	0.39	47418043	101.23	60	120	
Sc (IS)	45	2	HMI He	1001111	0.75	935665	106.99	60	120	
Sc (IS)	45	3	No Gas	121927992	0.84	125437115	97.20	60	120	
Ge Internal Standard	72	1	HMI H2	21273025	0.48	21615861	98.41	60	120	
Ge Internal Standard	72	2	HMI He	1269620	0.45	1215965	104.41	60	120	
In Internal Standard	115	2	HMI He	3736822	0.88	3509672	106.47	60	120	
Ho-165	165	2	HMI He	23621025	0.73	22804243	103.58	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-7-Asd@5
Data File Name	037SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:30:21-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.176	ppb	-5.176	-35.76	258481	500000	
Li	7	2	45	-6.184	ppb	-6.184	-61.00	11588	500000	
Li	7	3	45	-16.697	ppb	-16.697	-24.70	11277676	50000	
Be	9	1	6	-0.028	ppb	-0.028	-57.62	17	2000	
B	11	1	6	10.245	ppb	10.245	3.13	9410	2000	
Na	23	1	45	8251.992	ppb	8251.992	0.96	46928816	2000	
Na	23	2	45	8198.099	ppb	8198.099	0.27	2450308	400000	
Mg	24	2	45	3969.540	ppb	3969.540	0.67	522599	400000	
Al	27	2	45	100.372	ppb	100.372	7.41	2940	400000	
K	39	1	45	1153.606	ppb	1153.606	1.71	16411123	400000	
K	39	2	45	1252.911	ppb	1252.911	3.08	76292	400000	
Ca	40	1	45	21086.157	ppb	21086.157	0.82	174988371	400000	
Ca	44	2	45	22043.591	ppb	22043.591	0.91	70514	400000	
Ti	47	2	45	527.285	ppb	527.285	57.29	37	4000	
V	51	2	72	1.842	ppb	1.842	3.59	3611	2000	
Cr	52	2	72	43.897	ppb	43.897	1.08	88768	5000	
Mn	55	2	72	5385.822	ppb	5385.822	0.72	3550527	10000	
Fe	57	2	72	46.322	ppb	46.322	13.65	1914	400000	
Co	59	2	72	0.043	ppb	0.043	41.56	190	2000	
Ni	60	2	72	0.294	ppb	0.294	21.47	693	5000	
Cu	63	2	72	4.718	ppb	4.718	2.35	18241	5000	
Zn	66	2	72	6.823	ppb	6.823	9.78	3190	5000	
As	75	2	72	0.330	ppb	0.330	32.67	95	2000	
Se	78	1	72	6.555	ppb	6.555	3.97	3950	2000	
Sr	88	2	72	277.879	ppb	277.879	0.75	157923	4000	
Zr	90	2	72	51.247	ppb	51.247	15.65	490	1000	
Nb	93	2	72	0.090	ppb	0.090	33.84	650	200	
Mo	95	2	115	-0.001	ppb	-0.001	-2164.17	70	2000	
Pd	105	2	115	0.001	ppb	0.001	1367.64	23	100	
Ag	107	2	115	0.101	ppb	0.101	105.62	543	100	
Cd	111	2	115	0.011	ppb	0.011	158.23	10	2000	
Sn	120	2	115	0.024	ppb	0.024	179.54	297	2000	
Sb	121	2	115	0.186	ppb	0.186	26.13	247	1000	
Ba	137	2	115	10.993	ppb	10.993	6.67	3667	5000	
W	182	2	165	-0.016	ppb	-0.016	-82.40	817	100	
Pt	195	2	165	0.019	ppb	0.019	41.16	197	100	
Tl	205	2	165	0.007	ppb	0.007	97.93	330	2000	
Pb	208	2	165	0.030	ppb	0.030	13.42	1720	5000	
Th	232	2	165	0.053	ppb	0.053	13.29	1423	2000	
U	238	2	165	28.054	ppb	28.054	0.76	672531	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2128613	1.10	2128935	99.98	60	120	
Sc (IS)	45	1	HMI H2	48538943	0.29	47418043	102.36	60	120	
Sc (IS)	45	2	HMI He	995038	0.52	935665	106.35	60	120	
Sc (IS)	45	3	No Gas	119504128	1.59	125437115	95.27	60	120	
Ge Internal Standard	72	1	HMI H2	21852557	0.42	21615861	101.10	60	120	
Ge Internal Standard	72	2	HMI He	1280567	0.19	1215965	105.31	60	120	
In Internal Standard	115	2	HMI He	3770696	1.00	3509672	107.44	60	120	
Ho-165	165	2	HMI He	23713179	0.83	22804243	103.99	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-7-B MS
Data File Name	038SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:34:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	89.696	ppb	89.696	4.30	328437	500000	
Li	7	2	45	94.932	ppb	94.932	25.01	14694	500000	
Li	7	3	45	89.993	ppb	89.993	2.53	14755026	50000	
Be	9	1	6	38.388	ppb	38.388	3.62	25690	2000	
B	11	1	6	88.871	ppb	88.871	3.81	65791	2000	
Na	23	1	45	47241.869	ppb	47241.869	1.16	259443196	2000	>LDR
Na	23	2	45	46341.482	ppb	46341.482	1.06	13453269	400000	
Mg	24	2	45	23674.419	ppb	23674.419	0.91	3064693	400000	
Al	27	2	45	896.424	ppb	896.424	3.27	24839	400000	
K	39	1	45	6168.566	ppb	6168.566	1.62	41298089	400000	
K	39	2	45	7116.244	ppb	7116.244	0.93	376574	400000	
Ca	40	1	45	125120.863	ppb	125120.863	1.23	1013526225	400000	
Ca	44	2	45	132643.210	ppb	132643.210	0.37	416714	400000	
Ti	47	2	45	1798.357	ppb	1798.357	25.56	123	4000	
V	51	2	72	35.185	ppb	35.185	2.25	51113	2000	
Cr	52	2	72	299.423	ppb	299.423	0.55	592793	5000	
Mn	55	2	72	28977.911	ppb	28977.911	1.65	18771589	10000	
Fe	57	2	72	444.565	ppb	444.565	5.45	16325	400000	
Co	59	2	72	32.420	ppb	32.420	0.79	125341	2000	
Ni	60	2	72	40.254	ppb	40.254	1.81	46490	5000	
Cu	63	2	72	64.334	ppb	64.334	0.87	214576	5000	
Zn	66	2	72	76.666	ppb	76.666	0.99	26970	5000	
As	75	2	72	14.607	ppb	14.607	2.58	3008	2000	
Se	78	1	72	72.657	ppb	72.657	1.25	41787	2000	
Sr	88	2	72	1722.169	ppb	1722.169	0.39	961769	4000	
Zr	90	2	72	8904.871	ppb	8904.871	1.14	65808	1000	>LDR
Nb	93	2	72	0.242	ppb	0.242	18.75	1370	200	
Mo	95	2	115	0.569	ppb	0.569	11.04	847	2000	
Pd	105	2	115	0.036	ppb	0.036	34.14	110	100	
Ag	107	2	115	34.418	ppb	34.418	0.94	178333	100	
Cd	111	2	115	37.435	ppb	37.435	1.63	20447	2000	
Sn	120	2	115	7.387	ppb	7.387	2.63	9703	2000	
Sb	121	2	115	18.842	ppb	18.842	3.31	18909	1000	
Ba	137	2	115	104.886	ppb	104.886	4.60	34269	5000	
W	182	2	165	0.047	ppb	0.047	8.74	1303	100	
Pt	195	2	165	0.013	ppb	0.013	113.02	150	100	
Tl	205	2	165	19.278	ppb	19.278	0.83	249534	2000	
Pb	208	2	165	12.609	ppb	12.609	1.62	210025	5000	
Th	232	2	165	36.512	ppb	36.512	0.74	740782	2000	
U	238	2	165	212.426	ppb	212.426	1.82	5029941	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2036203	1.32	2128935	95.64	60	120	
Sc (IS)	45	1	HMI H2	47433641	1.32	47418043	100.03	60	120	
Sc (IS)	45	2	HMI He	978682	0.47	935665	104.60	60	120	
Sc (IS)	45	3	No Gas	118989552	0.34	125437115	94.86	60	120	
Ge Internal Standard	72	1	HMI H2	20990700	1.04	21615861	97.11	60	120	
Ge Internal Standard	72	2	HMI He	1258515	1.03	1215965	103.50	60	120	
In Internal Standard	115	2	HMI He	3709155	1.30	3509672	105.68	60	120	
Ho-165	165	2	HMI He	23427275	0.56	22804243	102.73	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-7-C MSD
Data File Name	039SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:37:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	27.130	ppb	27.130	14.78	401325	500000	
Li	7	2	45	7.151	ppb	7.151	145.38	17627	500000	
Li	7	3	45	29.502	ppb	29.502	14.04	21324169	50000	
Be	9	1	6	-0.011	ppb	-0.011	-86.19	47	2000	
B	11	1	6	0.033	ppb	0.033	824.73	2710	2000	
Na	23	1	45	13.487	ppb	13.487	649.42	997647	2000	
Na	23	2	45	3719.841	ppb	3719.841	128.92	1626765	400000	
Mg	24	2	45	1940.997	ppb	1940.997	130.17	367096	400000	
Al	27	2	45	68.470	ppb	68.470	134.76	2941	400000	
K	39	1	45	-1073.358	ppb	-1073.358	-7.90	6903815	400000	
K	39	2	45	454.210	ppb	454.210	160.61	49740	400000	
Ca	40	1	45	126.152	ppb	126.152	135.55	1658332	400000	
Ca	44	2	45	10110.453	ppb	10110.453	132.65	46530	400000	
Ti	47	2	45	66.951	ppb	66.951	173.21	7	4000	
V	51	2	72	2.416	ppb	2.416	152.63	6244	2000	
Cr	52	2	72	23.314	ppb	23.314	129.72	66378	5000	
Mn	55	2	72	2446.063	ppb	2446.063	129.28	2261356	10000	
Fe	57	2	72	34.536	ppb	34.536	130.61	2080	400000	
Co	59	2	72	2.542	ppb	2.542	127.86	14057	2000	
Ni	60	2	72	2.940	ppb	2.940	131.13	5313	5000	
Cu	63	2	72	5.048	ppb	5.048	135.11	27196	5000	
Zn	66	2	72	5.822	ppb	5.822	134.71	4015	5000	
As	75	2	72	0.900	ppb	0.900	138.83	299	2000	
Se	78	1	72	0.077	ppb	0.077	98.60	103	2000	
Sr	88	2	72	129.599	ppb	129.599	132.10	103240	4000	
Zr	90	2	72	681.839	ppb	681.839	123.78	7339	1000	
Nb	93	2	72	0.060	ppb	0.060	146.83	710	200	
Mo	95	2	115	0.050	ppb	0.050	173.53	183	2000	
Pd	105	2	115	0.023	ppb	0.023	25.59	103	100	
Ag	107	2	115	3.073	ppb	3.073	127.08	20837	100	
Cd	111	2	115	3.185	ppb	3.185	135.09	2274	2000	
Sn	120	2	115	0.613	ppb	0.613	153.06	1370	2000	
Sb	121	2	115	1.655	ppb	1.655	117.41	2247	1000	
Ba	137	2	115	9.070	ppb	9.070	132.58	3892	5000	
W	182	2	165	-0.030	ppb	-0.030	-68.53	957	100	
Pt	195	2	165	0.000	ppb	0.000	-1336.67	77	100	
Tl	205	2	165	1.813	ppb	1.813	125.60	31711	2000	
Pb	208	2	165	1.145	ppb	1.145	133.38	26993	5000	
Th	232	2	165	3.023	ppb	3.023	130.29	82406	2000	
U	238	2	165	18.115	ppb	18.115	133.87	572855	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	3424437	10.04	2128935	160.85	60	120	IS Failed
Sc (IS)	45	1	HMI H2	68367769	10.03	47418043	144.18	60	120	IS Failed
Sc (IS)	45	2	HMI He	1458081	2.43	935665	155.83	60	120	IS Failed
Sc (IS)	45	3	No Gas	198968417	4.78	125437115	158.62	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	31638907	11.02	21615861	146.37	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1845466	3.13	1215965	151.77	60	120	IS Failed
In Internal Standard	115	2	HMI He	5009860	3.79	3509672	142.74	60	120	IS Failed
Ho-165	165	2	HMI He	32590051	4.53	22804243	142.91	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-7-A pds
Data File Name	040SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:41:43-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	19.510	ppb	19.510	15.38	270560	500000	
Li	7	2	45	8.505	ppb	8.505	20.10	11811	500000	
Li	7	3	45	11.015	ppb	11.015	27.17	12116239	50000	
Be	9	1	6	198.381	ppb	198.381	0.45	133111	2000	
B	11	1	6	57.993	ppb	57.993	2.08	43647	2000	
Na	23	1	45	46693.296	ppb	46693.296	0.56	254796430	2000	>LDR
Na	23	2	45	45150.136	ppb	45150.136	0.41	13037413	400000	
Mg	24	2	45	23169.706	ppb	23169.706	0.82	2982910	400000	
Al	27	2	45	2711.479	ppb	2711.479	0.64	74478	400000	
K	39	1	45	6062.332	ppb	6062.332	2.20	40501972	400000	
K	39	2	45	6977.542	ppb	6977.542	0.45	367426	400000	
Ca	40	1	45	123022.072	ppb	123022.072	0.58	990159479	400000	
Ca	44	2	45	128403.591	ppb	128403.591	0.59	401189	400000	
Ti	47	2	45	5817.910	ppb	5817.910	8.13	397	4000	
V	51	2	72	221.954	ppb	221.954	0.99	314786	2000	
Cr	52	2	72	465.005	ppb	465.005	0.50	912379	5000	
Mn	55	2	72	30824.472	ppb	30824.472	0.69	19795111	10000	
Fe	57	2	72	2338.114	ppb	2338.114	0.48	84286	400000	
Co	59	2	72	202.705	ppb	202.705	0.33	776739	2000	
Ni	60	2	72	198.732	ppb	198.732	0.70	226193	5000	
Cu	63	2	72	225.999	ppb	225.999	0.20	741321	5000	
Zn	66	2	72	235.959	ppb	235.959	1.39	80612	5000	
As	75	2	72	188.751	ppb	188.751	1.24	38219	2000	
Se	78	1	72	225.037	ppb	225.037	1.49	129491	2000	
Sr	88	2	72	1626.026	ppb	1626.026	1.25	900120	4000	
Zr	90	2	72	55587.443	ppb	55587.443	0.75	406686	1000	>LDR
Nb	93	2	72	1.944	ppb	1.944	7.30	9497	200	
Mo	95	2	115	209.529	ppb	209.529	0.46	279078	2000	
Pd	105	2	115	0.036	ppb	0.036	59.27	107	100	
Ag	107	2	115	48.202	ppb	48.202	0.57	243848	100	
Cd	111	2	115	200.991	ppb	200.991	1.33	107185	2000	
Sn	120	2	115	209.210	ppb	209.210	0.53	261409	2000	
Sb	121	2	115	218.472	ppb	218.472	1.71	213490	1000	
Ba	137	2	115	280.501	ppb	280.501	1.30	89481	5000	
W	182	2	165	211.585	ppb	211.585	1.93	1667361	100	
Pt	195	2	165	0.059	ppb	0.059	13.40	480	100	
Tl	205	2	165	210.962	ppb	210.962	0.34	2719066	2000	
Pb	208	2	165	202.564	ppb	202.564	1.38	3344480	5000	
Th	232	2	165	14.675	ppb	14.675	0.93	296945	2000	
U	238	2	165	363.772	ppb	363.772	1.02	8585143	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2043168	0.29	2128935	95.97	60	120	
Sc (IS)	45	1	HMI H2	47125883	0.43	47418043	99.38	60	120	
Sc (IS)	45	2	HMI He	973344	0.79	935665	104.03	60	120	
Sc (IS)	45	3	No Gas	118704188	0.92	125437115	94.63	60	120	
Ge Internal Standard	72	1	HMI H2	21011744	0.37	21615861	97.21	60	120	
Ge Internal Standard	72	2	HMI He	1247522	0.64	1215965	102.60	60	120	
In Internal Standard	115	2	HMI He	3621368	0.52	3509672	103.18	60	120	
Ho-165	165	2	HMI He	23348986	0.29	22804243	102.39	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	041_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:45:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	427.587	ppb	0.599	595382	500	85.5	90	110	>+\-10%
Li	7	2	45	451.401	ppb	2.334	25960	500	90.3	90	110	
Li	7	3	45	448.869	ppb	0.720	26015350	500	89.8	90	110	>+\-10%
Be	9	1	6	48.065	ppb	2.256	32535	50	96.1	90	110	
B	11	1	6	50.443	ppb	2.570	38478	50	100.9	90	110	
Na	23	1	45	5058.649	ppb	0.230	28209131	5000	101.2	90	110	
Na	23	2	45	5042.447	ppb	1.443	1476785	5000	100.8	90	110	
Mg	24	2	45	4852.819	ppb	0.299	620147	5000	97.1	90	110	
Al	27	2	45	5087.927	ppb	0.458	138574	5000	101.8	90	110	
K	39	1	45	5125.707	ppb	0.623	35850957	5000	102.5	90	110	
K	39	2	45	5092.842	ppb	0.654	268959	5000	101.9	90	110	
Ca	40	1	45	5073.762	ppb	0.209	41089499	5000	101.5	90	110	
Ca	44	2	45	4991.866	ppb	6.043	15595	5000	99.8	90	110	
Ti	47	2	45	197.242	ppb	86.607	13	50	394.5	90	110	>+\-10%
V	51	2	72	49.914	ppb	1.374	71736	50	99.8	90	110	
Cr	52	2	72	49.242	ppb	1.275	97282	50	98.5	90	110	
Mn	55	2	72	59.916	ppb	3.693	38733	50	119.8	90	110	>+\-10%
Fe	57	2	72	4945.876	ppb	1.318	178660	5000	98.9	90	110	
Co	59	2	72	48.679	ppb	2.538	187159	50	97.4	90	110	
Ni	60	2	72	48.513	ppb	0.474	55659	50	97.0	90	110	
Cu	63	2	72	49.286	ppb	0.628	164044	50	98.6	90	110	
Zn	66	2	72	50.441	ppb	1.072	17920	50	100.9	90	110	
As	75	2	72	49.281	ppb	1.748	10031	50	98.6	90	110	
Se	78	1	72	48.869	ppb	1.062	28656	50	97.7	90	110	
Sr	88	2	72	53.126	ppb	1.153	29528	50	106.3	90	110	
Zr	90	2	72	114.518	ppb	13.093	943	50	229.0	90	110	>+\-10%
Nb	93	2	72	93.174	ppb	1.535	447066	100	93.2	90	110	
Mo	95	2	115	49.160	ppb	2.649	66957	50	98.3	90	110	
Pd	105	2	115	47.773	ppb	1.247	117214	50	95.5	90	110	
Ag	107	2	115	48.059	ppb	0.901	248429	50	96.1	90	110	
Cd	111	2	115	50.106	ppb	3.400	27301	50	100.2	90	110	
Sn	120	2	115	48.809	ppb	2.999	62505	50	97.6	90	110	
Sb	121	2	115	49.365	ppb	1.075	49345	50	98.7	90	110	
Ba	137	2	115	51.737	ppb	0.130	16880	50	103.5	90	110	
W	182	2	165	47.590	ppb	0.796	376232	50	95.2	90	110	
Pt	195	2	165	47.484	ppb	1.183	341583	50	95.0	90	110	
Tl	205	2	165	49.147	ppb	1.414	634393	50	98.3	90	110	
Pb	208	2	165	48.723	ppb	1.428	806366	50	97.4	90	110	
Th	232	2	165	46.296	ppb	1.153	937218	50	92.6	90	110	
U	238	2	165	46.194	ppb	1.441	1091650	50	92.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2059424	0.27	2128935	96.73	60	120	
Sc (IS)	45	1	HMI H2	47174021	0.37	47418043	99.49	60	120	
Sc (IS)	45	2	HMI He	965912	0.58	935665	103.23	60	120	
Sc (IS)	45	3	No Gas	116321698	0.33	125437115	92.73	60	120	
Ge Internal Standard	72	1	HMI H2	21395158	0.37	21615861	98.98	60	120	
Ge Internal Standard	72	2	HMI He	1251649	0.39	1215965	102.93	60	120	
In Internal Standard	115	2	HMI He	3700643	1.42	3509672	105.44	60	120	
Ho-165	165	2	HMI He	23379569	1.10	22804243	102.52	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	042_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:49:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-20.227	ppb	-24.2	10910363	10	
Be	9	1	6	0.011	ppb	273.3	43	0.5	
B	11	1	6	0.853	ppb	29.3	2274	0.5	>RL
Na	23	1	45	-9.253	ppb	-13.6	591077	25	
Na	23	2	45	-16.947	ppb	-15.5	31196	25	
Mg	24	2	45	3.386	ppb	15.0	637	25	
Al	27	2	45	-0.751	ppb	-230.8	103	15	
K	39	1	45	72.391	ppb	11.9	10438835	50	>RL
K	39	2	45	-16.433	ppb	-20.5	9647	50	
Ca	40	1	45	22.893	ppb	9.3	400986	50	
Ca	44	2	45	-5.531	ppb	-175.2	107	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.307	ppb	21.6	1360	1	
Cr	52	2	72	0.049	ppb	114.4	483	1	
Mn	55	2	72	2.990	ppb	14.5	2070	0.5	>RL
Fe	57	2	72	-0.188	ppb	-650.7	193	25	
Co	59	2	72	0.021	ppb	61.9	103	0.5	
Ni	60	2	72	-0.063	ppb	-51.3	273	1	
Cu	63	2	72	-0.066	ppb	-81.0	2150	1	
Zn	66	2	72	0.476	ppb	61.0	970	5	
As	75	2	72	-0.021	ppb	-186.6	22	1	
Se	78	1	72	0.038	ppb	56.7	49	1	
Sr	88	2	72	0.201	ppb	33.3	133	0.5	
Zr	90	2	72	8.533	ppb	50.0	167	1	>RL
Nb	93	2	72	1.498	ppb	18.1	7435	2	
Mo	95	2	115	0.072	ppb	97.3	170	0.5	
Pd	105	2	115	0.021	ppb	78.8	73	1	
Ag	107	2	115	0.025	ppb	24.1	147	1	
Cd	111	2	115	0.024	ppb	159.7	17	0.5	
Sn	120	2	115	0.091	ppb	98.6	380	1	
Sb	121	2	115	0.386	ppb	36.5	447	0.6	
Ba	137	2	115	0.047	ppb	133.9	33	0.5	
W	182	2	165	0.061	ppb	33.2	1437	1	
Pt	195	2	165	0.066	ppb	13.9	543	1	
Tl	205	2	165	0.021	ppb	16.6	513	0.1	
Pb	208	2	165	0.025	ppb	51.7	1640	0.5	
Th	232	2	165	0.045	ppb	26.4	1270	1	
U	238	2	165	0.087	ppb	5.4	2214	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2090047	0.72	2128935	98.17	60	120	
Sc (IS)	45	1	HMI H2	46754614	0.27	47418043	98.60	60	120	
Sc (IS)	45	2	HMI He	967481	0.50	935665	103.40	60	120	
Sc (IS)	45	3	No Gas	116822012	0.77	125437115	93.13	60	120	
Ge Internal Standard	72	1	HMI H2	21208758	0.69	21615861	98.12	60	120	
Ge Internal Standard	72	2	HMI He	1259753	0.41	1215965	103.60	60	120	
In Internal Standard	115	2	HMI He	3735259	0.86	3509672	106.43	60	120	
Ho-165	165	2	HMI He	23797747	0.63	22804243	104.36	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	043LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:53:07-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-11.003	ppb	-24.581	11310656	50	-22.0	70	130	>+/-30%
Be	9	1	6	0.903	ppb	11.890	650	1	90.3	70	130	
Na	23	2	45	25.232	ppb	17.146	43283	50	50.5	70	130	>+/-30%
Mg	24	2	45	47.411	ppb	4.315	6271	50	94.8	70	130	
Al	27	2	45	32.257	ppb	5.650	1003	30	107.5	70	130	
K	39	2	45	93.434	ppb	8.072	15237	100	93.4	70	130	
Ca	44	2	45	28.903	ppb	68.430	213	50	57.8	70	130	>+/-30%
V	51	2	72	5.148	ppb	2.593	8272	5	103.0	70	130	
Cr	52	2	72	2.012	ppb	6.222	4371	2	100.6	70	130	
Mn	55	2	72	2.158	ppb	4.115	1530	1	215.8	70	130	>+/-30%
Fe	57	2	72	48.218	ppb	6.738	1950	50	96.4	70	130	
Co	59	2	72	0.969	ppb	9.053	3771	1	96.9	70	130	
Ni	60	2	72	1.926	ppb	7.723	2554	2	96.3	70	130	
Cu	63	2	72	1.890	ppb	3.854	8606	2	94.5	70	130	
Zn	66	2	72	11.167	ppb	1.457	4621	10	111.7	70	130	
As	75	2	72	4.408	ppb	0.903	926	5	88.2	70	130	
Se	78	1	72	4.876	ppb	2.420	2906	5	97.5	70	130	
Sr	88	2	72	1.048	ppb	16.961	607	1	104.8	70	130	
Zr	90	2	72	18.874	ppb	60.642	243	0.5	3774.8	70	130	>+/-30%
Nb	93	2	72	3.277	ppb	10.659	16025	2	163.8	70	130	>+/-30%
Mo	95	2	115	1.890	ppb	10.832	2650	2	94.5	70	130	
Pd	105	2	115	0.010	ppb	23.007	47	1	1.0	70	130	>+/-30%
Ag	107	2	115	4.832	ppb	2.096	25077	5	96.6	70	130	
Cd	111	2	115	0.969	ppb	8.913	533	1	96.9	70	130	
Sn	120	2	115	9.889	ppb	1.544	12919	10	98.9	70	130	
Sb	121	2	115	2.144	ppb	12.490	2204	2	107.2	70	130	
Ba	137	2	115	1.107	ppb	30.800	380	1	110.7	70	130	
W	182	2	165	4.799	ppb	2.046	38621	1	479.9	70	130	>+/-30%
Pt	195	2	165	0.036	ppb	40.684	313	1	3.6	70	130	>+/-30%
Tl	205	2	165	0.968	ppb	3.441	12679	1	96.8	70	130	
Pb	208	2	165	0.955	ppb	1.689	16911	1	95.5	70	130	
Th	232	2	165	1.908	ppb	1.510	38793	2	95.4	70	130	
U	238	2	165	0.963	ppb	4.500	22795	1	96.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2071974	0.83	2128935	97.32	60	120	
Sc (IS)	45	1	HMI H2	47540128	0.36	47418043	100.26	60	120	
Sc (IS)	45	2	HMI He	967874	0.57	935665	103.44	60	120	
Sc (IS)	45	3	No Gas	117868585	0.42	125437115	93.97	60	120	
Ge Internal Standard	72	1	HMI H2	21552766	0.45	21615861	99.71	60	120	
Ge Internal Standard	72	2	HMI He	1259485	0.77	1215965	103.58	60	120	
In Internal Standard	115	2	HMI He	3713401	0.36	3509672	105.80	60	120	
Ho-165	165	2	HMI He	23284450	0.43	22804243	102.11	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-7-C MSD
Data File Name	044SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T12:56:57-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	83.320	ppb	83.320	3.95	312773	500000	
Li	7	2	45	75.971	ppb	75.971	25.23	13799	500000	
Li	7	3	45	77.812	ppb	77.812	8.98	13883447	50000	
Be	9	1	6	38.632	ppb	38.632	5.43	24692	2000	
B	11	1	6	91.842	ppb	91.842	0.58	64894	2000	
Na	23	1	45	48103.886	ppb	48103.886	0.95	255526923	2000	>LDR
Na	23	2	45	45989.116	ppb	45989.116	1.16	13093747	400000	
Mg	24	2	45	23360.031	ppb	23360.031	0.70	2965496	400000	
Al	27	2	45	902.908	ppb	902.908	0.84	24539	400000	
K	39	1	45	6245.903	ppb	6245.903	1.00	40324953	400000	
K	39	2	45	7112.889	ppb	7112.889	1.18	369129	400000	
Ca	40	1	45	125785.826	ppb	125785.826	0.90	985615105	400000	
Ca	44	2	45	132934.926	ppb	132934.926	1.37	409549	400000	
Ti	47	2	45	2276.791	ppb	2276.791	42.61	153	4000	
V	51	2	72	34.557	ppb	34.557	2.31	48964	2000	
Cr	52	2	72	299.535	ppb	299.535	0.54	578168	5000	
Mn	55	2	72	31381.053	ppb	31381.053	0.95	19822296	10000	
Fe	57	2	72	480.346	ppb	480.346	5.14	17183	400000	
Co	59	2	72	33.371	ppb	33.371	1.11	125791	2000	
Ni	60	2	72	39.264	ppb	39.264	1.34	44224	5000	
Cu	63	2	72	63.644	ppb	63.644	0.60	206986	5000	
Zn	66	2	72	71.458	ppb	71.458	4.71	24556	5000	
As	75	2	72	12.909	ppb	12.909	1.64	2594	2000	
Se	78	1	72	72.217	ppb	72.217	0.20	40488	2000	
Sr	88	2	72	1721.649	ppb	1721.649	0.22	937418	4000	
Zr	90	2	72	8731.989	ppb	8731.989	0.58	62921	1000	>LDR
Nb	93	2	72	0.548	ppb	0.548	10.52	2777	200	
Mo	95	2	115	0.736	ppb	0.736	11.31	1050	2000	
Pd	105	2	115	0.030	ppb	0.030	20.87	93	100	
Ag	107	2	115	35.048	ppb	35.048	1.65	177264	100	
Cd	111	2	115	37.881	ppb	37.881	1.42	20200	2000	
Sn	120	2	115	7.365	ppb	7.365	1.75	9447	2000	
Sb	121	2	115	18.003	ppb	18.003	1.68	17644	1000	
Ba	137	2	115	107.170	ppb	107.170	0.37	34195	5000	
W	182	2	165	0.036	ppb	0.036	19.42	1207	100	
Pt	195	2	165	0.009	ppb	0.009	119.48	123	100	
Tl	205	2	165	21.522	ppb	21.522	0.90	275702	2000	
Pb	208	2	165	13.960	ppb	13.960	0.45	230023	5000	
Th	232	2	165	36.208	ppb	36.208	0.64	727147	2000	
U	238	2	165	210.405	ppb	210.405	0.87	4931554	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1944498	0.69	2128935	91.34	60	120	
Sc (IS)	45	1	HMI H2	45879524	0.56	47418043	96.76	60	120	
Sc (IS)	45	2	HMI He	959809	0.86	935665	102.58	60	120	
Sc (IS)	45	3	No Gas	115101255	0.20	125437115	91.76	60	120	
Ge Internal Standard	72	1	HMI H2	20462330	0.19	21615861	94.66	60	120	
Ge Internal Standard	72	2	HMI He	1227006	0.63	1215965	100.91	60	120	
In Internal Standard	115	2	HMI He	3621038	1.39	3509672	103.17	60	120	
Ho-165	165	2	HMI He	23188863	0.56	22804243	101.69	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-8-A
Data File Name	045SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:00:48-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.773	ppb	28.773	12.90	393138	500000	
Li	7	2	45	3.992	ppb	3.992	332.70	17910	500000	
Li	7	3	45	41.293	ppb	41.293	18.35	18096618	50000	
Be	9	1	6	-0.040	ppb	-0.040	-26.96	13	2000	
B	11	1	6	0.285	ppb	0.285	149.56	2907	2000	
Na	23	1	45	-2.082	ppb	-2.082	-2919.56	889608	2000	
Na	23	2	45	462.254	ppb	462.254	136.27	279449	400000	
Mg	24	2	45	474.435	ppb	474.435	129.79	102576	400000	
Al	27	2	45	14.459	ppb	14.459	143.69	860	400000	
K	39	1	45	-1059.840	ppb	-1059.840	-11.83	6863917	400000	
K	39	2	45	38.881	ppb	38.881	462.66	20239	400000	
Ca	40	1	45	115.999	ppb	115.999	138.15	1600352	400000	
Ca	44	2	45	1870.520	ppb	1870.520	125.76	9944	400000	
Ti	47	2	45	224.571	ppb	224.571	113.95	23	4000	
V	51	2	72	-0.330	ppb	-0.330	-38.40	703	2000	
Cr	52	2	72	0.517	ppb	0.517	142.83	2305	5000	
Mn	55	2	72	68.817	ppb	68.817	119.59	73896	10000	
Fe	57	2	72	14.378	ppb	14.378	148.77	1184	400000	
Co	59	2	72	0.027	ppb	0.027	127.09	207	2000	
Ni	60	2	72	0.552	ppb	0.552	144.57	1587	5000	
Cu	63	2	72	4.682	ppb	4.682	132.25	29349	5000	
Zn	66	2	72	1.734	ppb	1.734	134.99	2214	5000	
As	75	2	72	-0.029	ppb	-0.029	-78.99	31	2000	
Se	78	1	72	0.008	ppb	0.008	69.28	47	2000	
Sr	88	2	72	24.165	ppb	24.165	126.10	22447	4000	
Zr	90	2	72	68.437	ppb	68.437	92.84	977	1000	
Nb	93	2	72	0.045	ppb	0.045	178.75	680	200	
Mo	95	2	115	0.421	ppb	0.421	135.12	990	2000	
Pd	105	2	115	0.013	ppb	0.013	109.07	77	100	
Ag	107	2	115	0.038	ppb	0.038	22.99	303	100	
Cd	111	2	115	-0.007	ppb	-0.007	0.00	0	2000	
Sn	120	2	115	-0.020	ppb	-0.020	-278.54	337	2000	
Sb	121	2	115	0.099	ppb	0.099	27.71	220	1000	
Ba	137	2	115	0.913	ppb	0.913	111.05	480	5000	
W	182	2	165	-0.035	ppb	-0.035	-76.76	980	100	
Pt	195	2	165	0.029	ppb	0.029	25.40	393	100	
Tl	205	2	165	-0.002	ppb	-0.002	-407.05	320	2000	
Pb	208	2	165	0.033	ppb	0.033	124.84	2644	5000	
Th	232	2	165	0.056	ppb	0.056	80.45	2244	2000	
U	238	2	165	0.366	ppb	0.366	121.11	13953	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	3303365	6.28	2128935	155.17	60	120	IS Failed
Sc (IS)	45	1	HMI H2	66672057	6.19	47418043	140.60	60	120	IS Failed
Sc (IS)	45	2	HMI He	1497060	10.32	935665	160.00	60	120	IS Failed
Sc (IS)	45	3	No Gas	163954251	8.68	125437115	130.71	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	30531196	5.99	21615861	141.24	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1910897	11.30	1215965	157.15	60	120	IS Failed
In Internal Standard	115	2	HMI He	5213517	11.55	3509672	148.55	60	120	IS Failed
Ho-165	165	2	HMI He	34263549	10.58	22804243	150.25	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-114219-A-9-A
Data File Name	046SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:04:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.488	ppb	32.488	15.77	270847	500000	
Li	7	2	45	0.366	ppb	0.366	3865.98	11511	500000	
Li	7	3	45	14.695	ppb	14.695	19.61	11611766	50000	
Be	9	1	6	0.032	ppb	0.032	102.93	53	2000	
B	11	1	6	46.600	ppb	46.600	0.41	33557	2000	
Na	23	1	45	70115.942	ppb	70115.942	1.15	368648875	2000	>LDR
Na	23	2	45	67256.949	ppb	67256.949	0.77	19340962	400000	
Mg	24	2	45	73094.258	ppb	73094.258	0.39	9379726	400000	
Al	27	2	45	2617.389	ppb	2617.389	1.00	71666	400000	
K	39	1	45	16180.768	ppb	16180.768	0.90	87897745	400000	
K	39	2	45	17251.821	ppb	17251.821	0.48	890080	400000	
Ca	40	1	45	446189.499	ppb	446189.499	1.09	3462480482	400000	
Ca	44	2	45	479071.500	ppb	479071.500	2.69	1491682	400000	
Ti	47	2	45	639.217	ppb	639.217	114.04	43	4000	
V	51	2	72	-0.394	ppb	-0.394	-4.52	350	2000	
Cr	52	2	72	45.322	ppb	45.322	1.81	87967	5000	
Mn	55	2	72	67652.239	ppb	67652.239	1.20	42812254	10000	>LDR
Fe	57	2	72	143.070	ppb	143.070	5.20	5264	400000	
Co	59	2	72	0.342	ppb	0.342	11.26	1313	2000	
Ni	60	2	72	22.304	ppb	22.304	0.73	25313	5000	
Cu	63	2	72	40.394	ppb	40.394	1.46	132459	5000	
Zn	66	2	72	73.266	ppb	73.266	1.66	25210	5000	
As	75	2	72	0.143	ppb	0.143	43.58	54	2000	
Se	78	1	72	11.468	ppb	11.468	2.81	6295	2000	
Sr	88	2	72	5423.681	ppb	5423.681	1.50	2958512	4000	
Zr	90	2	72	438.357	ppb	438.357	4.33	3261	1000	
Nb	93	2	72	1.140	ppb	1.140	7.55	5571	200	
Mo	95	2	115	0.019	ppb	0.019	80.95	93	2000	
Pd	105	2	115	0.066	ppb	0.066	33.00	177	100	
Ag	107	2	115	0.013	ppb	0.013	66.78	80	100	
Cd	111	2	115	0.088	ppb	0.088	56.53	50	2000	
Sn	120	2	115	-0.053	ppb	-0.053	-61.56	187	2000	
Sb	121	2	115	0.019	ppb	0.019	221.03	73	1000	
Ba	137	2	115	5731.895	ppb	5731.895	0.44	1809366	5000	
W	182	2	165	-0.002	ppb	-0.002	-856.47	887	100	
Pt	195	2	165	0.067	ppb	0.067	24.17	523	100	
Tl	205	2	165	-0.004	ppb	-0.004	-123.26	187	2000	
Pb	208	2	165	0.007	ppb	0.007	200.43	1283	5000	
Th	232	2	165	0.557	ppb	0.557	6.26	11255	2000	
U	238	2	165	265.364	ppb	265.364	1.39	6083325	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1937469	0.38	2128935	91.01	60	120	
Sc (IS)	45	1	HMI H2	45447449	1.05	47418043	95.84	60	120	
Sc (IS)	45	2	HMI He	970230	0.29	935665	103.69	60	120	
Sc (IS)	45	3	No Gas	112633592	0.93	125437115	89.79	60	120	
Ge Internal Standard	72	1	HMI H2	19965426	0.40	21615861	92.36	60	120	
Ge Internal Standard	72	2	HMI He	1229315	0.57	1215965	101.10	60	120	
In Internal Standard	115	2	HMI He	3584147	0.75	3509672	102.12	60	120	
Ho-165	165	2	HMI He	22680815	0.49	22804243	99.46	60	120	

Sample Report

Sample Table

Sample Name	280-114297-A-1-A
Data File Name	047SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:08:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.128	ppb	9.128	46.35	244759	500000	
Li	7	2	45	-16.018	ppb	-16.018	-69.30	10754	500000	
Li	7	3	45	-11.346	ppb	-11.346	-33.85	10352180	50000	
Be	9	1	6	0.031	ppb	0.031	238.48	50	2000	
B	11	1	6	104.080	ppb	104.080	2.60	69833	2000	
Na	23	1	45	40398.431	ppb	40398.431	0.35	205768204	2000	>LDR
Na	23	2	45	38524.207	ppb	38524.207	0.86	10865706	400000	
Mg	24	2	45	24458.483	ppb	24458.483	1.59	3074230	400000	
Al	27	2	45	37.586	ppb	37.586	21.97	1127	400000	
K	39	1	45	6869.373	ppb	6869.373	0.98	41559280	400000	
K	39	2	45	7636.193	ppb	7636.193	1.12	391615	400000	
Ca	40	1	45	138750.286	ppb	138750.286	0.62	1041941744	400000	
Ca	44	2	45	145599.105	ppb	145599.105	1.17	444135	400000	
Ti	47	2	45	300.595	ppb	300.595	99.45	20	4000	
V	51	2	72	2.073	ppb	2.073	2.37	3794	2000	
Cr	52	2	72	1.270	ppb	1.270	12.19	2837	5000	
Mn	55	2	72	4258.107	ppb	4258.107	2.02	2697866	10000	
Fe	57	2	72	1085.524	ppb	1085.524	2.48	38706	400000	
Co	59	2	72	1.224	ppb	1.224	10.59	4651	2000	
Ni	60	2	72	3.306	ppb	3.306	2.78	4044	5000	
Cu	63	2	72	6.501	ppb	6.501	5.63	23284	5000	
Zn	66	2	72	17.660	ppb	17.660	9.33	6682	5000	
As	75	2	72	223.983	ppb	223.983	0.64	44747	2000	
Se	78	1	72	66.229	ppb	66.229	1.24	36147	2000	
Sr	88	2	72	1844.925	ppb	1844.925	0.61	1007715	4000	
Zr	90	2	72	301.388	ppb	301.388	5.10	2277	1000	
Nb	93	2	72	0.130	ppb	0.130	38.77	813	200	
Mo	95	2	115	1.256	ppb	1.256	6.48	1774	2000	
Pd	105	2	115	0.009	ppb	0.009	54.57	43	100	
Ag	107	2	115	0.019	ppb	0.019	4.10	113	100	
Cd	111	2	115	0.060	ppb	0.060	90.94	37	2000	
Sn	120	2	115	0.132	ppb	0.132	12.67	427	2000	
Sb	121	2	115	0.085	ppb	0.085	49.45	140	1000	
Ba	137	2	115	229.359	ppb	229.359	1.84	74566	5000	
W	182	2	165	0.014	ppb	0.014	59.46	1047	100	
Pt	195	2	165	0.065	ppb	0.065	26.96	530	100	
Tl	205	2	165	0.008	ppb	0.008	49.26	350	2000	
Pb	208	2	165	0.150	ppb	0.150	3.50	3714	5000	
Th	232	2	165	0.048	ppb	0.048	5.74	1320	2000	
U	238	2	165	113.412	ppb	113.412	0.90	2700455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1852067	1.96	2128935	86.99	60	120	
Sc (IS)	45	1	HMI H2	43970374	0.39	47418043	92.73	60	120	
Sc (IS)	45	2	HMI He	950342	0.96	935665	101.57	60	120	
Sc (IS)	45	3	No Gas	107990762	0.73	125437115	86.09	60	120	
Ge Internal Standard	72	1	HMI H2	19918497	0.51	21615861	92.15	60	120	
Ge Internal Standard	72	2	HMI He	1230907	1.33	1215965	101.23	60	120	
In Internal Standard	115	2	HMI He	3690885	1.48	3509672	105.16	60	120	
Ho-165	165	2	HMI He	23555385	0.65	22804243	103.29	60	120	

Sample Table

Sample Name	280-114297-A-2-A
Data File Name	048SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:12:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.285	ppb	-0.285	-2233.73	228622	500000	
Li	7	2	45	-17.326	ppb	-17.326	-115.64	10370	500000	
Li	7	3	45	-20.925	ppb	-20.925	-0.20	9566670	50000	
Be	9	1	6	-0.029	ppb	-0.029	-69.90	13	2000	
B	11	1	6	98.201	ppb	98.201	3.12	62579	2000	
Na	23	1	45	184305.948	ppb	184305.948	1.05	900541160	2000	>LDR
Na	23	2	45	172442.669	ppb	172442.669	0.64	46971078	400000	
Mg	24	2	45	15953.910	ppb	15953.910	0.94	1941547	400000	
Al	27	2	45	109.106	ppb	109.106	13.52	2947	400000	
K	39	1	45	4694.035	ppb	4694.035	1.30	30191649	400000	
K	39	2	45	5516.950	ppb	5516.950	0.62	276718	400000	
Ca	40	1	45	90132.220	ppb	90132.220	0.50	650871164	400000	
Ca	44	2	45	94205.910	ppb	94205.910	0.81	278279	400000	
Ti	47	2	45	465.817	ppb	465.817	33.32	30	4000	
V	51	2	72	0.461	ppb	0.461	16.19	1480	2000	
Cr	52	2	72	59.371	ppb	59.371	0.41	110514	5000	
Mn	55	2	72	25633.817	ppb	25633.817	0.38	15572799	10000	
Fe	57	2	72	70.048	ppb	70.048	4.27	2570	400000	
Co	59	2	72	0.148	ppb	0.148	18.60	557	2000	
Ni	60	2	72	0.608	ppb	0.608	15.21	977	5000	
Cu	63	2	72	8.799	ppb	8.799	0.79	29434	5000	
Zn	66	2	72	11.650	ppb	11.650	9.65	4484	5000	
As	75	2	72	5.053	ppb	5.053	4.50	992	2000	
Se	78	1	72	90.555	ppb	90.555	0.55	47494	2000	
Sr	88	2	72	1163.640	ppb	1163.640	0.63	609381	4000	
Zr	90	2	72	51.028	ppb	51.028	12.61	450	1000	
Nb	93	2	72	0.240	ppb	0.240	30.99	1277	200	
Mo	95	2	115	-0.006	ppb	-0.006	-331.10	60	2000	
Pd	105	2	115	0.012	ppb	0.012	34.37	50	100	
Ag	107	2	115	0.061	ppb	0.061	19.87	317	100	
Cd	111	2	115	0.025	ppb	0.025	157.61	17	2000	
Sn	120	2	115	0.046	ppb	0.046	109.13	307	2000	
Sb	121	2	115	0.093	ppb	0.093	23.50	143	1000	
Ba	137	2	115	44.907	ppb	44.907	1.95	14110	5000	
W	182	2	165	-0.015	ppb	-0.015	-70.81	800	100	
Pt	195	2	165	0.071	ppb	0.071	14.98	560	100	
Tl	205	2	165	0.002	ppb	0.002	174.53	263	2000	
Pb	208	2	165	0.060	ppb	0.060	2.51	2157	5000	
Th	232	2	165	0.049	ppb	0.049	4.85	1307	2000	
U	238	2	165	140.218	ppb	140.218	1.30	3259333	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1756886	1.56	2128935	82.52	60	120	
Sc (IS)	45	1	HMI H2	42279579	0.90	47418043	89.16	60	120	
Sc (IS)	45	2	HMI He	920102	0.85	935665	98.34	60	120	
Sc (IS)	45	3	No Gas	102639772	1.15	125437115	81.83	60	120	
Ge Internal Standard	72	1	HMI H2	19145231	0.88	21615861	88.57	60	120	
Ge Internal Standard	72	2	HMI He	1180127	0.25	1215965	97.05	60	120	
In Internal Standard	115	2	HMI He	3563239	0.28	3509672	101.53	60	120	
Ho-165	165	2	HMI He	22998509	1.18	22804243	100.85	60	120	

Sample Report

Sample Table

Sample Name	114103-4
Data File Name	049SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:16:08-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	33.541	ppb	33.541	17.26	258858	500000	
Li	7	2	45	15.574	ppb	15.574	24.74	11464	500000	
Li	7	3	45	14.828	ppb	14.828	19.92	11033397	50000	
Be	9	1	6	-0.002	ppb	-0.002	-679.51	30	2000	
B	11	1	6	152.848	ppb	152.848	2.26	100964	2000	
Na	23	1	45	83794.711	ppb	83794.711	0.19	419675687	2000	>LDR
Na	23	2	45	79650.525	ppb	79650.525	1.75	21871210	400000	
Mg	24	2	45	25237.094	ppb	25237.094	2.00	3093396	400000	
Al	27	2	45	7.070	ppb	7.070	30.58	303	400000	
K	39	1	45	1889.569	ppb	1889.569	0.94	18024954	400000	
K	39	2	45	2788.773	ppb	2788.773	0.96	145851	400000	
Ca	40	1	45	106452.083	ppb	106452.083	1.51	787254202	400000	
Ca	44	2	45	110176.818	ppb	110176.818	0.59	327798	400000	
Ti	47	2	45	102.273	ppb	102.273	173.21	7	4000	
V	51	2	72	-0.308	ppb	-0.308	-25.63	463	2000	
Cr	52	2	72	0.020	ppb	0.020	30.77	410	5000	
Mn	55	2	72	4566.192	ppb	4566.192	2.55	2846537	10000	
Fe	57	2	72	11425.416	ppb	11425.416	1.08	399021	400000	
Co	59	2	72	7.076	ppb	7.076	2.09	26339	2000	
Ni	60	2	72	2.029	ppb	2.029	6.49	2570	5000	
Cu	63	2	72	0.162	ppb	0.162	37.01	2790	5000	
Zn	66	2	72	4.357	ppb	4.357	9.95	2207	5000	
As	75	2	72	13.949	ppb	13.949	3.15	2764	2000	
Se	78	1	72	0.100	ppb	0.100	19.58	80	2000	
Sr	88	2	72	1103.601	ppb	1103.601	0.74	593018	4000	
Zr	90	2	72	8.975	ppb	8.975	58.80	163	1000	
Nb	93	2	72	0.014	ppb	0.014	191.74	263	200	
Mo	95	2	115	0.170	ppb	0.170	31.34	293	2000	
Pd	105	2	115	0.012	ppb	0.012	123.84	50	100	
Ag	107	2	115	-0.001	ppb	-0.001	-4.54	10	100	
Cd	111	2	115	0.025	ppb	0.025	158.84	17	2000	
Sn	120	2	115	-0.020	ppb	-0.020	-174.94	227	2000	
Sb	121	2	115	0.047	ppb	0.047	22.71	100	1000	
Ba	137	2	115	54.860	ppb	54.860	7.24	17324	5000	
W	182	2	165	0.000	ppb	0.000	-4260.97	913	100	
Pt	195	2	165	0.019	ppb	0.019	33.11	190	100	
Tl	205	2	165	0.010	ppb	0.010	62.38	363	2000	
Pb	208	2	165	0.030	ppb	0.030	32.75	1677	5000	
Th	232	2	165	0.002	ppb	0.002	143.50	370	2000	
U	238	2	165	0.242	ppb	0.242	11.76	5771	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1835390	1.64	2128935	86.21	60	120	
Sc (IS)	45	1	HMI H2	43301401	0.45	47418043	91.32	60	120	
Sc (IS)	45	2	HMI He	926770	0.64	935665	99.05	60	120	
Sc (IS)	45	3	No Gas	106984942	1.02	125437115	85.29	60	120	
Ge Internal Standard	72	1	HMI H2	19835608	0.40	21615861	91.76	60	120	
Ge Internal Standard	72	2	HMI He	1210928	0.46	1215965	99.59	60	120	
In Internal Standard	115	2	HMI He	3583703	1.75	3509672	102.11	60	120	
Ho-165	165	2	HMI He	23027869	0.19	22804243	100.98	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-8-A
Data File Name	050SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:19:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.406	ppb	12.406	37.47	314850	500000	
Li	7	2	45	-16.107	ppb	-16.107	-136.77	15691	500000	
Li	7	3	45	1.777	ppb	1.777	273.71	18599171	50000	
Be	9	1	6	-0.052	ppb	-0.052	0.00	0	2000	
B	11	1	6	2.473	ppb	2.473	72.96	4184	2000	
Na	23	1	45	8.713	ppb	8.713	683.66	755600	2000	
Na	23	2	45	-17.531	ppb	-17.531	-62.73	44304	400000	
Mg	24	2	45	2.690	ppb	2.690	94.58	780	400000	
Al	27	2	45	-1.626	ppb	-1.626	-36.91	113	400000	
K	39	1	45	-815.450	ppb	-815.450	-63.46	6679866	400000	
K	39	2	45	-102.397	ppb	-102.397	-7.01	7535	400000	
Ca	40	1	45	16.456	ppb	16.456	150.72	376348	400000	
Ca	44	2	45	-2.317	ppb	-2.317	-435.47	167	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.285	ppb	-0.285	-18.98	733	2000	
Cr	52	2	72	-0.075	ppb	-0.075	-28.10	337	5000	
Mn	55	2	72	2.090	ppb	2.090	36.68	2120	10000	
Fe	57	2	72	25.065	ppb	25.065	41.33	1564	400000	
Co	59	2	72	0.004	ppb	0.004	125.93	50	2000	
Ni	60	2	72	-0.086	ppb	-0.086	-38.26	353	5000	
Cu	63	2	72	-0.195	ppb	-0.195	-28.85	2457	5000	
Zn	66	2	72	0.080	ppb	0.080	357.87	1200	5000	
As	75	2	72	-0.057	ppb	-0.057	-76.73	20	2000	
Se	78	1	72	-0.013	ppb	-0.013	-71.20	24	2000	
Sr	88	2	72	0.165	ppb	0.165	21.87	160	4000	
Zr	90	2	72	7.468	ppb	7.468	33.58	227	1000	
Nb	93	2	72	0.008	ppb	0.008	146.01	343	200	
Mo	95	2	115	-0.023	ppb	-0.023	-68.88	53	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-77.89	13	100	
Ag	107	2	115	0.008	ppb	0.008	50.14	77	100	
Cd	111	2	115	0.009	ppb	0.009	303.27	10	2000	
Sn	120	2	115	-0.033	ppb	-0.033	-49.13	293	2000	
Sb	121	2	115	0.090	ppb	0.090	13.98	197	1000	
Ba	137	2	115	0.020	ppb	0.020	279.35	33	5000	
W	182	2	165	-0.035	ppb	-0.035	-26.70	920	100	
Pt	195	2	165	0.019	ppb	0.019	27.30	277	100	
Tl	205	2	165	0.001	ppb	0.001	321.25	353	2000	
Pb	208	2	165	-0.005	ppb	-0.005	-107.27	1600	5000	
Th	232	2	165	0.002	ppb	0.002	119.66	540	2000	
U	238	2	165	0.033	ppb	0.033	42.61	1283	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2702715	26.84	2128935	126.95	60	120	IS Failed
Sc (IS)	45	1	HMI H2	56145249	27.55	47418043	118.40	60	120	
Sc (IS)	45	2	HMI He	1388053	10.13	935665	148.35	60	120	IS Failed
Sc (IS)	45	3	No Gas	187059624	9.74	125437115	149.13	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	26325802	27.24	21615861	121.79	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1803110	10.00	1215965	148.29	60	120	IS Failed
In Internal Standard	115	2	HMI He	5000326	11.13	3509672	142.47	60	120	IS Failed
Ho-165	165	2	HMI He	33056699	10.61	22804243	144.96	60	120	IS Failed

Sample Report

Sample Table

Sample Name	114103-15
Data File Name	051SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:23:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.227	ppb	-2.227	-204.62	237590	500000	
Li	7	2	45	-26.551	ppb	-26.551	-62.39	10320	500000	
Li	7	3	45	-18.863	ppb	-18.863	-15.76	9956570	50000	
Be	9	1	6	0.002	ppb	0.002	2550.29	33	2000	
B	11	1	6	234.449	ppb	234.449	1.71	158186	2000	
Na	23	1	45	121503.330	ppb	121503.330	0.71	620951311	2000	>LDR
Na	23	2	45	113686.329	ppb	113686.329	0.62	31676661	400000	
Mg	24	2	45	5284.191	ppb	5284.191	0.09	657723	400000	
Al	27	2	45	25.129	ppb	25.129	33.53	787	400000	
K	39	1	45	1420.789	ppb	1420.789	1.68	16200146	400000	
K	39	2	45	2318.185	ppb	2318.185	0.14	124803	400000	
Ca	40	1	45	49641.076	ppb	49641.076	0.37	374897194	400000	
Ca	44	2	45	51802.102	ppb	51802.102	0.53	156521	400000	
Ti	47	2	45	152.630	ppb	152.630	173.21	10	4000	
V	51	2	72	-0.028	ppb	-0.028	-474.09	857	2000	
Cr	52	2	72	0.058	ppb	0.058	28.42	487	5000	
Mn	55	2	72	1426.732	ppb	1426.732	0.89	899126	10000	
Fe	57	2	72	1429.022	ppb	1429.022	3.06	50618	400000	
Co	59	2	72	2.069	ppb	2.069	3.86	7799	2000	
Ni	60	2	72	0.551	ppb	0.551	7.79	950	5000	
Cu	63	2	72	0.287	ppb	0.287	17.09	3220	5000	
Zn	66	2	72	1.432	ppb	1.432	16.67	1260	5000	
As	75	2	72	7.310	ppb	7.310	2.31	1477	2000	
Se	78	1	72	0.297	ppb	0.297	2.82	191	2000	
Sr	88	2	72	640.366	ppb	640.366	0.54	347845	4000	
Zr	90	2	72	10.588	ppb	10.588	84.29	177	1000	
Nb	93	2	72	0.006	ppb	0.006	202.32	227	200	
Mo	95	2	115	1.035	ppb	1.035	12.41	1450	2000	
Pd	105	2	115	0.000	ppb	0.000	-1117.58	20	100	
Ag	107	2	115	0.001	ppb	0.001	214.11	17	100	
Cd	111	2	115	0.012	ppb	0.012	267.55	10	2000	
Sn	120	2	115	-0.055	ppb	-0.055	-18.85	187	2000	
Sb	121	2	115	0.012	ppb	0.012	131.14	67	1000	
Ba	137	2	115	76.512	ppb	76.512	2.47	24477	5000	
W	182	2	165	-0.011	ppb	-0.011	-65.60	843	100	
Pt	195	2	165	0.051	ppb	0.051	5.02	430	100	
Tl	205	2	165	0.010	ppb	0.010	33.56	367	2000	
Pb	208	2	165	0.104	ppb	0.104	21.87	2937	5000	
Th	232	2	165	0.009	ppb	0.009	67.89	523	2000	
U	238	2	165	0.572	ppb	0.572	2.34	13677	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1884013	1.53	2128935	88.50	60	120	
Sc (IS)	45	1	HMI H2	44204798	0.29	47418043	93.22	60	120	
Sc (IS)	45	2	HMI He	940824	0.50	935665	100.55	60	120	
Sc (IS)	45	3	No Gas	106176362	0.94	125437115	84.65	60	120	
Ge Internal Standard	72	1	HMI H2	20250813	0.95	21615861	93.68	60	120	
Ge Internal Standard	72	2	HMI He	1224058	0.22	1215965	100.67	60	120	
In Internal Standard	115	2	HMI He	3630077	0.71	3509672	103.43	60	120	
Ho-165	165	2	HMI He	23449200	1.00	22804243	102.83	60	120	

Sample Report

Sample Table

Sample Name	280-114219-A-8-A
Data File Name	052SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:30:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429765 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.833	ppb	15.833	12.46	239693	500000	
Li	7	2	45	-2.587	ppb	-2.587	-1162.01	10851	500000	
Li	7	3	45	2.757	ppb	2.757	141.49	10192864	50000	
Be	9	1	6	0.056	ppb	0.056	126.17	63	2000	
B	11	1	6	52.573	ppb	52.573	2.46	34699	2000	
Na	23	1	45	35088.869	ppb	35088.869	0.60	171621117	2000	>LDR
Na	23	2	45	33203.344	ppb	33203.344	0.47	9093313	400000	
Mg	24	2	45	27367.413	ppb	27367.413	0.13	3338350	400000	
Al	27	2	45	1108.798	ppb	1108.798	0.88	28926	400000	
K	39	1	45	10090.101	ppb	10090.101	2.09	54324856	400000	
K	39	2	45	10864.238	ppb	10864.238	0.68	536515	400000	
Ca	40	1	45	126476.016	ppb	126476.016	1.06	911615080	400000	
Ca	44	2	45	133988.238	ppb	133988.238	1.00	396655	400000	
Ti	47	2	45	8669.047	ppb	8669.047	26.16	560	4000	
V	51	2	72	3.903	ppb	3.903	6.39	6178	2000	
Cr	52	2	72	36.577	ppb	36.577	1.73	69287	5000	
Mn	55	2	72	4809.126	ppb	4809.126	0.92	2967223	10000	
Fe	57	2	72	1283.149	ppb	1283.149	2.09	44525	400000	
Co	59	2	72	1.523	ppb	1.523	4.18	5625	2000	
Ni	60	2	72	42.598	ppb	42.598	1.37	46834	5000	
Cu	63	2	72	331.893	ppb	331.893	0.39	1044823	5000	
Zn	66	2	72	144.178	ppb	144.178	2.45	47617	5000	
As	75	2	72	2.421	ppb	2.421	8.73	495	2000	
Se	78	1	72	1.866	ppb	1.866	12.36	995	2000	
Sr	88	2	72	1822.221	ppb	1822.221	0.48	969144	4000	
Zr	90	2	72	324.382	ppb	324.382	7.38	2377	1000	
Nb	93	2	72	0.182	ppb	0.182	18.71	1030	200	
Mo	95	2	115	29.858	ppb	29.858	2.85	39834	2000	
Pd	105	2	115	0.001	ppb	0.001	611.91	23	100	
Ag	107	2	115	0.026	ppb	0.026	27.27	147	100	
Cd	111	2	115	0.087	ppb	0.087	86.87	50	2000	
Sn	120	2	115	1.887	ppb	1.887	8.56	2610	2000	
Sb	121	2	115	0.585	ppb	0.585	18.84	627	1000	
Ba	137	2	115	51.614	ppb	51.614	2.04	16483	5000	
W	182	2	165	0.204	ppb	0.204	7.20	2534	100	
Pt	195	2	165	0.081	ppb	0.081	29.32	637	100	
Tl	205	2	165	0.043	ppb	0.043	21.59	787	2000	
Pb	208	2	165	2.083	ppb	2.083	0.63	35509	5000	
Th	232	2	165	1.144	ppb	1.144	1.84	23420	2000	
U	238	2	165	21.329	ppb	21.329	0.91	502510	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1784995	0.57	2128935	83.84	60	120	
Sc (IS)	45	1	HMI H2	42205195	0.71	47418043	89.01	60	120	
Sc (IS)	45	2	HMI He	922245	0.52	935665	98.57	60	120	
Sc (IS)	45	3	No Gas	102156392	1.03	125437115	81.44	60	120	
Ge Internal Standard	72	1	HMI H2	18981132	0.49	21615861	87.81	60	120	
Ge Internal Standard	72	2	HMI He	1198499	0.92	1215965	98.56	60	120	
In Internal Standard	115	2	HMI He	3622723	1.20	3509672	103.22	60	120	
Ho-165	165	2	HMI He	23302701	0.25	22804243	102.19	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	053_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:35:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	401.831	ppb	1.285	530194	500	80.4	90	110	>+\-10%
Li	7	2	45	419.357	ppb	5.096	23704	500	83.9	90	110	>+\-10%
Li	7	3	45	411.733	ppb	0.858	21791971	500	82.3	90	110	>+\-10%
Be	9	1	6	48.733	ppb	1.048	29476	50	97.5	90	110	
B	11	1	6	52.123	ppb	0.422	35481	50	104.2	90	110	
Na	23	1	45	5011.728	ppb	0.582	25779776	5000	100.2	90	110	
Na	23	2	45	4871.919	ppb	1.207	1357805	5000	97.4	90	110	
Mg	24	2	45	4815.988	ppb	0.183	585134	5000	96.3	90	110	
Al	27	2	45	5112.470	ppb	1.341	132386	5000	102.2	90	110	
K	39	1	45	5141.222	ppb	1.048	33134996	5000	102.8	90	110	
K	39	2	45	5053.181	ppb	0.540	253804	5000	101.1	90	110	
Ca	40	1	45	5045.582	ppb	1.094	37685119	5000	100.9	90	110	
Ca	44	2	45	5207.740	ppb	1.432	15465	5000	104.2	90	110	
Ti	47	2	45	311.098	ppb	100.082	20	50	622.2	90	110	>+\-10%
V	51	2	72	48.456	ppb	1.339	67049	50	96.9	90	110	
Cr	52	2	72	48.564	ppb	1.616	92343	50	97.1	90	110	
Mn	55	2	72	50.987	ppb	1.685	31742	50	102.0	90	110	
Fe	57	2	72	4892.320	ppb	1.484	170082	5000	97.8	90	110	
Co	59	2	72	47.747	ppb	1.447	176674	50	95.5	90	110	
Ni	60	2	72	48.150	ppb	1.501	53167	50	96.3	90	110	
Cu	63	2	72	47.845	ppb	1.684	153322	50	95.7	90	110	
Zn	66	2	72	49.049	ppb	2.697	16793	50	98.1	90	110	
As	75	2	72	48.974	ppb	1.578	9594	50	97.9	90	110	
Se	78	1	72	49.816	ppb	2.527	26858	50	99.6	90	110	
Sr	88	2	72	52.738	ppb	1.557	28212	50	105.5	90	110	
Zr	90	2	72	74.256	ppb	17.482	623	50	148.5	90	110	>+\-10%
Nb	93	2	72	93.078	ppb	1.260	429823	100	93.1	90	110	
Mo	95	2	115	47.748	ppb	1.215	63979	50	95.5	90	110	
Pd	105	2	115	47.156	ppb	0.454	113805	50	94.3	90	110	
Ag	107	2	115	47.007	ppb	1.243	238999	50	94.0	90	110	
Cd	111	2	115	47.556	ppb	0.931	25495	50	95.1	90	110	
Sn	120	2	115	48.990	ppb	2.526	61712	50	98.0	90	110	
Sb	121	2	115	49.308	ppb	0.791	48472	50	98.6	90	110	
Ba	137	2	115	51.157	ppb	3.421	16413	50	102.3	90	110	
W	182	2	165	46.821	ppb	0.503	367306	50	93.6	90	110	
Pt	195	2	165	46.273	ppb	0.898	330309	50	92.5	90	110	
Tl	205	2	165	48.695	ppb	1.569	623724	50	97.4	90	110	
Pb	208	2	165	48.593	ppb	1.168	798029	50	97.2	90	110	
Th	232	2	165	45.952	ppb	1.266	923066	50	91.9	90	110	
U	238	2	165	45.755	ppb	1.159	1072951	50	91.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1840353	0.74	2128935	86.44	60	120	
Sc (IS)	45	1	HMI H2	43505441	0.25	47418043	91.75	60	120	
Sc (IS)	45	2	HMI He	918336	0.13	935665	98.15	60	120	
Sc (IS)	45	3	No Gas	102147832	0.44	125437115	81.43	60	120	
Ge Internal Standard	72	1	HMI H2	19672320	0.28	21615861	91.01	60	120	
Ge Internal Standard	72	2	HMI He	1204622	0.50	1215965	99.07	60	120	
In Internal Standard	115	2	HMI He	3639883	1.14	3509672	103.71	60	120	
Ho-165	165	2	HMI He	23197983	0.46	22804243	101.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	054_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:39:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-29.760	ppb	-15.1	9305427	10	
Be	9	1	6	-0.025	ppb	-191.8	17	0.5	
B	11	1	6	1.836	ppb	18.2	2647	0.5	>RL
Na	23	1	45	-21.289	ppb	-0.9	486814	25	
Na	23	2	45	-27.677	ppb	-10.3	26759	25	
Mg	24	2	45	2.493	ppb	32.4	497	25	
Al	27	2	45	-1.452	ppb	-141.6	80	15	
K	39	1	45	74.956	ppb	24.1	9671344	50	>RL
K	39	2	45	-21.324	ppb	-46.7	8943	50	
Ca	40	1	45	9.870	ppb	4.4	274851	50	
Ca	44	2	45	-12.782	ppb	-26.1	80	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.305	ppb	19.4	1303	1	
Cr	52	2	72	-0.024	ppb	-185.2	327	1	
Mn	55	2	72	0.557	ppb	21.6	473	0.5	>RL
Fe	57	2	72	0.891	ppb	96.6	223	25	
Co	59	2	72	0.008	ppb	88.5	50	0.5	
Ni	60	2	72	-0.046	ppb	-189.6	280	1	
Cu	63	2	72	-0.097	ppb	-48.2	1967	1	
Zn	66	2	72	0.227	ppb	251.1	850	5	
As	75	2	72	-0.030	ppb	-156.7	19	1	
Se	78	1	72	-0.023	ppb	-50.0	13	1	
Sr	88	2	72	0.131	ppb	29.2	90	0.5	
Zr	90	2	72	6.645	ppb	67.6	147	1	>RL
Nb	93	2	72	1.455	ppb	12.7	6945	2	
Mo	95	2	115	0.028	ppb	148.1	107	0.5	
Pd	105	2	115	0.031	ppb	29.5	97	1	
Ag	107	2	115	0.019	ppb	48.7	113	1	
Cd	111	2	115	0.012	ppb	154.8	10	0.5	
Sn	120	2	115	0.058	ppb	51.7	330	1	
Sb	121	2	115	0.363	ppb	9.2	413	0.6	
Ba	137	2	115	0.050	ppb	73.6	33	0.5	
W	182	2	165	0.039	ppb	64.1	1220	1	
Pt	195	2	165	0.191	ppb	14.3	1417	1	
Tl	205	2	165	0.002	ppb	174.1	263	0.1	
Pb	208	2	165	0.005	ppb	159.1	1277	0.5	
Th	232	2	165	0.031	ppb	55.8	950	1	
U	238	2	165	0.034	ppb	8.1	917	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1843767	0.96	2128935	86.61	60	120	
Sc (IS)	45	1	HMI H2	43264754	0.39	47418043	91.24	60	120	
Sc (IS)	45	2	HMI He	920520	0.42	935665	98.38	60	120	
Sc (IS)	45	3	No Gas	102536282	0.07	125437115	81.74	60	120	
Ge Internal Standard	72	1	HMI H2	19615279	0.80	21615861	90.74	60	120	
Ge Internal Standard	72	2	HMI He	1210154	0.57	1215965	99.52	60	120	
In Internal Standard	115	2	HMI He	3651635	1.08	3509672	104.04	60	120	
Ho-165	165	2	HMI He	23115445	0.81	22804243	101.36	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	055LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:43:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-24.191	ppb	-22.741	9683029	50	-48.4	70	130	>+/-30%
Be	9	1	6	0.903	ppb	25.263	583	1	90.3	70	130	
Na	23	2	45	14.492	ppb	21.106	38268	50	29.0	70	130	>+/-30%
Mg	24	2	45	49.403	ppb	6.842	6211	50	98.8	70	130	
Al	27	2	45	29.485	ppb	19.220	883	30	98.3	70	130	
K	39	2	45	76.015	ppb	10.552	13659	100	76.0	70	130	
Ca	44	2	45	24.462	ppb	56.778	190	50	48.9	70	130	>+/-30%
V	51	2	72	4.903	ppb	4.936	7602	5	98.1	70	130	
Cr	52	2	72	1.929	ppb	6.314	4037	2	96.4	70	130	
Mn	55	2	72	1.383	ppb	13.273	987	1	138.3	70	130	>+/-30%
Fe	57	2	72	51.642	ppb	14.501	1990	50	103.3	70	130	
Co	59	2	72	0.965	ppb	9.432	3604	1	96.5	70	130	
Ni	60	2	72	1.824	ppb	11.006	2340	2	91.2	70	130	
Cu	63	2	72	1.828	ppb	7.246	8062	2	91.4	70	130	
Zn	66	2	72	10.529	ppb	7.861	4227	10	105.3	70	130	
As	75	2	72	4.333	ppb	5.509	875	5	86.7	70	130	
Se	78	1	72	4.698	ppb	3.582	2558	5	94.0	70	130	
Sr	88	2	72	1.057	ppb	13.565	587	1	105.7	70	130	
Zr	90	2	72	21.231	ppb	22.959	250	0.5	4246.2	70	130	>+/-30%
Nb	93	2	72	3.567	ppb	7.454	16726	2	178.4	70	130	>+/-30%
Mo	95	2	115	1.779	ppb	2.541	2464	2	88.9	70	130	
Pd	105	2	115	-0.002	ppb	-131.538	17	1	-0.2	70	130	>+/-30%
Ag	107	2	115	4.720	ppb	1.214	24142	5	94.4	70	130	
Cd	111	2	115	0.989	ppb	4.304	537	1	98.9	70	130	
Sn	120	2	115	9.248	ppb	4.432	11922	10	92.5	70	130	
Sb	121	2	115	2.193	ppb	13.960	2220	2	109.7	70	130	
Ba	137	2	115	1.000	ppb	7.594	340	1	100.0	70	130	
W	182	2	165	4.591	ppb	3.304	37064	1	459.1	70	130	>+/-30%
Pt	195	2	165	0.134	ppb	1.568	1020	1	13.4	70	130	>+/-30%
Tl	205	2	165	0.938	ppb	3.020	12319	1	93.8	70	130	
Pb	208	2	165	0.975	ppb	3.574	17281	1	97.5	70	130	
Th	232	2	165	1.864	ppb	1.732	37991	2	93.2	70	130	
U	238	2	165	0.897	ppb	2.567	21293	1	89.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1867010	2.46	2128935	87.70	60	120	
Sc (IS)	45	1	HMI H2	43526359	0.12	47418043	91.79	60	120	
Sc (IS)	45	2	HMI He	921185	0.75	935665	98.45	60	120	
Sc (IS)	45	3	No Gas	104920818	1.17	125437115	83.64	60	120	
Ge Internal Standard	72	1	HMI H2	19684153	0.38	21615861	91.06	60	120	
Ge Internal Standard	72	2	HMI He	1208864	0.87	1215965	99.42	60	120	
In Internal Standard	115	2	HMI He	3659809	0.61	3509672	104.28	60	120	
Ho-165	165	2	HMI He	23332993	0.25	22804243	102.32	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-D@5
Data File Name	056SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:47:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5 Be
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	161.312	ppb	161.312	6.74	194164	500000	
Li	7	2	45	3.969	ppb	3.969	235.49	10971	500000	
Li	7	3	45	41.859	ppb	41.859	2.88	11242608	50000	
Be	9	1	6	-0.045	ppb	-0.045	-27.03	3	2000	
B	11	1	6	98.916	ppb	98.916	1.65	51509	2000	
Na	23	1	45	1232814.289	ppb	1232814.289	0.93	3400390669	2000	>LDR
Na	23	2	45	1227781.963	ppb	1227781.963	0.41	332593422	400000	
Mg	24	2	45	367660.498	ppb	367660.498	0.42	44521184	400000	
Al	27	2	45	2.311	ppb	2.311	37.39	177	400000	
K	39	1	45	2792.279	ppb	2792.279	0.78	12230251	400000	
K	39	2	45	3800.085	ppb	3800.085	1.00	192753	400000	
Ca	40	1	45	284241.020	ppb	284241.020	0.35	1159092649	400000	
Ca	44	2	45	424033.652	ppb	424033.652	2.64	1246181	400000	
Ti	47	2	45	52.468	ppb	52.468	173.21	3	4000	
V	51	2	72	15.242	ppb	15.242	2.91	20206	2000	
Cr	52	2	72	0.113	ppb	0.113	27.07	543	5000	
Mn	55	2	72	0.415	ppb	0.415	29.35	357	10000	
Fe	57	2	72	12.625	ppb	12.625	15.53	587	400000	
Co	59	2	72	0.011	ppb	0.011	55.37	57	2000	
Ni	60	2	72	0.186	ppb	0.186	25.84	497	5000	
Cu	63	2	72	0.266	ppb	0.266	14.62	2890	5000	
Zn	66	2	72	1.209	ppb	1.209	28.43	1087	5000	
As	75	2	72	3.491	ppb	3.491	9.89	658	2000	
Se	78	1	72	2.228	ppb	2.228	4.04	836	2000	
Sr	88	2	72	9195.755	ppb	9195.755	0.26	4577809	4000	
Zr	90	2	72	9.792	ppb	9.792	35.29	157	1000	
Nb	93	2	72	0.352	ppb	0.352	24.58	1697	200	
Mo	95	2	115	7.267	ppb	7.267	3.66	9033	2000	
Pd	105	2	115	0.059	ppb	0.059	52.03	150	100	
Ag	107	2	115	0.079	ppb	0.079	5.81	383	100	
Cd	111	2	115	0.054	ppb	0.054	98.24	30	2000	
Sn	120	2	115	0.106	ppb	0.106	60.97	360	2000	
Sb	121	2	115	0.220	ppb	0.220	24.42	250	1000	
Ba	137	2	115	6.426	ppb	6.426	11.01	1917	5000	
W	182	2	165	0.007	ppb	0.007	259.55	907	100	
Pt	195	2	165	0.101	ppb	0.101	39.03	723	100	
Tl	205	2	165	0.019	ppb	0.019	40.28	447	2000	
Pb	208	2	165	0.037	ppb	0.037	34.82	1660	5000	
Th	232	2	165	0.012	ppb	0.012	28.78	533	2000	
U	238	2	165	22.267	ppb	22.267	1.17	482304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1435603	1.10	2128935	67.43	60	120	
Sc (IS)	45	1	HMI H2	23880065	1.17	47418043	50.36	60	120	IS Failed
Sc (IS)	45	2	HMI He	915590	0.79	935665	97.85	60	120	
Sc (IS)	45	3	No Gas	101616418	0.68	125437115	81.01	60	120	
Ge Internal Standard	72	1	HMI H2	13421109	0.75	21615861	62.09	60	120	
Ge Internal Standard	72	2	HMI He	1121870	0.84	1215965	92.26	60	120	
In Internal Standard	115	2	HMI He	3357751	1.32	3509672	95.67	60	120	
Ho-165	165	2	HMI He	21425434	1.25	22804243	93.95	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-Dsd@25
Data File Name	057SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:51:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	60.788	ppb	60.788	9.67	178772	500000	
Li	7	2	45	-49.458	ppb	-49.458	-19.31	9893	500000	
Li	7	3	45	-36.968	ppb	-36.968	-3.31	9534418	50000	
Be	9	1	6	-0.052	ppb	-0.052	0.00	0	2000	
B	11	1	6	20.838	ppb	20.838	3.03	12985	2000	
Na	23	1	45	241084.139	ppb	241084.139	0.29	773684148	2000	>LDR
Na	23	2	45	238595.076	ppb	238595.076	0.97	68463982	400000	
Mg	24	2	45	72223.935	ppb	72223.935	1.15	9260767	400000	
Al	27	2	45	1.070	ppb	1.070	69.67	153	400000	
K	39	1	45	-42.461	ppb	-42.461	-58.29	5861640	400000	
K	39	2	45	708.814	ppb	708.814	1.65	46613	400000	
Ca	40	1	45	56516.289	ppb	56516.289	0.44	268132783	400000	
Ca	44	2	45	78623.881	ppb	78623.881	1.11	244728	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	2.901	ppb	2.901	2.19	5004	2000	
Cr	52	2	72	0.036	ppb	0.036	120.21	453	5000	
Mn	55	2	72	0.485	ppb	0.485	40.22	440	10000	
Fe	57	2	72	0.257	ppb	0.257	796.68	207	400000	
Co	59	2	72	0.003	ppb	0.003	88.95	33	2000	
Ni	60	2	72	0.014	ppb	0.014	693.17	357	5000	
Cu	63	2	72	0.178	ppb	0.178	33.99	2920	5000	
Zn	66	2	72	0.650	ppb	0.650	63.28	1017	5000	
As	75	2	72	0.709	ppb	0.709	13.30	169	2000	
Se	78	1	72	0.530	ppb	0.530	17.06	253	2000	
Sr	88	2	72	1657.852	ppb	1657.852	0.54	915751	4000	
Zr	90	2	72	5.643	ppb	5.643	121.84	143	1000	
Nb	93	2	72	0.188	ppb	0.188	23.98	1097	200	
Mo	95	2	115	1.536	ppb	1.536	6.08	2157	2000	
Pd	105	2	115	0.017	ppb	0.017	72.90	63	100	
Ag	107	2	115	0.023	ppb	0.023	39.09	133	100	
Cd	111	2	115	0.018	ppb	0.018	156.87	13	2000	
Sn	120	2	115	0.045	ppb	0.045	70.64	317	2000	
Sb	121	2	115	0.057	ppb	0.057	44.39	113	1000	
Ba	137	2	115	1.369	ppb	1.369	8.64	463	5000	
W	182	2	165	0.004	ppb	0.004	172.85	970	100	
Pt	195	2	165	0.129	ppb	0.129	5.22	997	100	
Tl	205	2	165	0.002	ppb	0.002	190.68	263	2000	
Pb	208	2	165	0.002	ppb	0.002	455.91	1247	5000	
Th	232	2	165	0.004	ppb	0.004	109.35	427	2000	
U	238	2	165	4.378	ppb	4.378	1.57	104459	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1588050	1.44	2128935	74.59	60	120	
Sc (IS)	45	1	HMI H2	27771590	0.33	47418043	58.57	60	120	IS Failed
Sc (IS)	45	2	HMI He	969466	0.31	935665	103.61	60	120	
Sc (IS)	45	3	No Gas	107429262	0.49	125437115	85.64	60	120	
Ge Internal Standard	72	1	HMI H2	16030795	0.53	21615861	74.16	60	120	
Ge Internal Standard	72	2	HMI He	1244803	0.80	1215965	102.37	60	120	
In Internal Standard	115	2	HMI He	3695673	0.43	3509672	105.30	60	120	
Ho-165	165	2	HMI He	23579675	0.85	22804243	103.40	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-E MS@5
Data File Name	058SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:55:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	154.686	ppb	154.686	0.82	197920	500000	
Li	7	2	45	-13.760	ppb	-13.760	-15.75	10574	500000	
Li	7	3	45	45.433	ppb	45.433	5.18	11505409	50000	
Be	9	1	6	6.525	ppb	6.525	7.52	3110	2000	
B	11	1	6	101.066	ppb	101.066	4.94	52793	2000	
Na	23	1	45	1150254.893	ppb	1150254.893	1.11	3278717178	2000	>LDR
Na	23	2	45	1140510.085	ppb	1140510.085	0.44	313175829	400000	
Mg	24	2	45	344662.938	ppb	344662.938	0.46	42306984	400000	
Al	27	2	45	75.774	ppb	75.774	2.53	2100	400000	
K	39	1	45	2587.406	ppb	2587.406	1.89	12100953	400000	
K	39	2	45	3538.868	ppb	3538.868	0.86	182641	400000	
Ca	40	1	45	267800.474	ppb	267800.474	1.06	1128495423	400000	
Ca	44	2	45	379611.199	ppb	379611.199	0.11	1130751	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	22.665	ppb	22.665	1.83	30128	2000	
Cr	52	2	72	7.754	ppb	7.754	2.76	14247	5000	
Mn	55	2	72	8.424	ppb	8.424	7.76	5061	10000	
Fe	57	2	72	84.041	ppb	84.041	5.80	2944	400000	
Co	59	2	72	7.360	ppb	7.360	1.72	25791	2000	
Ni	60	2	72	6.991	ppb	6.991	5.77	7575	5000	
Cu	63	2	72	7.155	ppb	7.155	0.36	23524	5000	
Zn	66	2	72	8.076	ppb	8.076	3.62	3227	5000	
As	75	2	72	10.083	ppb	10.083	11.86	1888	2000	
Se	78	1	72	8.758	ppb	8.758	2.95	3350	2000	
Sr	88	2	72	8596.096	ppb	8596.096	0.25	4348881	4000	
Zr	90	2	72	1951.089	ppb	1951.089	3.88	13136	1000	
Nb	93	2	72	0.220	ppb	0.220	25.37	1147	200	
Mo	95	2	115	14.457	ppb	14.457	2.97	17994	2000	
Pd	105	2	115	0.060	ppb	0.060	22.72	153	100	
Ag	107	2	115	7.032	ppb	7.032	2.28	33146	100	
Cd	111	2	115	6.900	ppb	6.900	1.25	3431	2000	
Sn	120	2	115	7.894	ppb	7.894	1.67	9417	2000	
Sb	121	2	115	8.139	ppb	8.139	1.53	7459	1000	
Ba	137	2	115	14.168	ppb	14.168	4.24	4224	5000	
W	182	2	165	2.176	ppb	2.176	3.63	16577	100	
Pt	195	2	165	0.140	ppb	0.140	13.28	973	100	
Tl	205	2	165	6.920	ppb	6.920	0.78	82037	2000	
Pb	208	2	165	6.941	ppb	6.941	0.89	106196	5000	
Th	232	2	165	7.086	ppb	7.086	0.93	131706	2000	
U	238	2	165	28.053	ppb	28.053	0.84	607466	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1441581	2.18	2128935	67.71	60	120	
Sc (IS)	45	1	HMI H2	24677735	0.88	47418043	52.04	60	120	IS Failed
Sc (IS)	45	2	HMI He	928110	0.92	935665	99.19	60	120	
Sc (IS)	45	3	No Gas	103068382	0.68	125437115	82.17	60	120	
Ge Internal Standard	72	1	HMI H2	13894414	0.31	21615861	64.28	60	120	
Ge Internal Standard	72	2	HMI He	1140092	0.76	1215965	93.76	60	120	
In Internal Standard	115	2	HMI He	3373224	1.26	3509672	96.11	60	120	
Ho-165	165	2	HMI He	21419632	0.28	22804243	93.93	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-F MSD@5
Data File Name	059SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T13:59:19-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	147.370	ppb	147.370	5.75	194849	500000	
Li	7	2	45	-1.923	ppb	-1.923	-360.13	11004	500000	
Li	7	3	45	40.531	ppb	40.531	9.64	11288175	50000	
Be	9	1	6	6.680	ppb	6.680	1.25	3160	2000	
B	11	1	6	99.569	ppb	99.569	2.86	51636	2000	
Na	23	1	45	1149095.522	ppb	1149095.522	0.36	3275197605	2000	>LDR
Na	23	2	45	1135320.604	ppb	1135320.604	0.90	313559582	400000	
Mg	24	2	45	341604.412	ppb	341604.412	1.11	42174823	400000	
Al	27	2	45	78.503	ppb	78.503	14.17	2184	400000	
K	39	1	45	2635.927	ppb	2635.927	1.68	12227313	400000	
K	39	2	45	3528.358	ppb	3528.358	1.03	183191	400000	
Ca	40	1	45	268717.754	ppb	268717.754	0.53	1132291476	400000	
Ca	44	2	45	378473.070	ppb	378473.070	0.18	1133911	400000	
Ti	47	2	45	152.701	ppb	152.701	99.63	10	4000	
V	51	2	72	22.721	ppb	22.721	3.63	30416	2000	
Cr	52	2	72	7.935	ppb	7.935	2.09	14677	5000	
Mn	55	2	72	8.241	ppb	8.241	4.79	4991	10000	
Fe	57	2	72	91.065	ppb	91.065	11.89	3197	400000	
Co	59	2	72	7.137	ppb	7.137	0.50	25190	2000	
Ni	60	2	72	7.177	ppb	7.177	0.29	7822	5000	
Cu	63	2	72	7.114	ppb	7.114	2.04	23568	5000	
Zn	66	2	72	8.075	ppb	8.075	5.15	3250	5000	
As	75	2	72	10.413	ppb	10.413	4.11	1963	2000	
Se	78	1	72	8.824	ppb	8.824	3.99	3411	2000	
Sr	88	2	72	8592.095	ppb	8592.095	1.16	4378041	4000	
Zr	90	2	72	2024.361	ppb	2024.361	3.75	13723	1000	
Nb	93	2	72	0.146	ppb	0.146	30.53	827	200	
Mo	95	2	115	14.515	ppb	14.515	2.92	18161	2000	
Pd	105	2	115	0.043	ppb	0.043	16.20	117	100	
Ag	107	2	115	7.142	ppb	7.142	0.91	33844	100	
Cd	111	2	115	7.564	ppb	7.564	6.00	3781	2000	
Sn	120	2	115	7.371	ppb	7.371	6.94	8850	2000	
Sb	121	2	115	8.319	ppb	8.319	2.56	7662	1000	
Ba	137	2	115	14.091	ppb	14.091	1.79	4224	5000	
W	182	2	165	2.079	ppb	2.079	2.98	15909	100	
Pt	195	2	165	0.121	ppb	0.121	7.54	850	100	
Tl	205	2	165	6.886	ppb	6.886	0.91	81799	2000	
Pb	208	2	165	6.851	ppb	6.851	2.31	105043	5000	
Th	232	2	165	7.000	ppb	7.000	1.67	130360	2000	
U	238	2	165	27.921	ppb	27.921	0.91	605822	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1429946	1.13	2128935	67.17	60	120	
Sc (IS)	45	1	HMI H2	24675270	0.63	47418043	52.04	60	120	IS Failed
Sc (IS)	45	2	HMI He	933512	0.55	935665	99.77	60	120	
Sc (IS)	45	3	No Gas	102368648	0.20	125437115	81.61	60	120	
Ge Internal Standard	72	1	HMI H2	14044935	0.57	21615861	64.98	60	120	
Ge Internal Standard	72	2	HMI He	1148261	0.18	1215965	94.43	60	120	
In Internal Standard	115	2	HMI He	3391191	1.54	3509672	96.62	60	120	
Ho-165	165	2	HMI He	21463565	0.96	22804243	94.12	60	120	

Sample Report

Sample Table

Sample Name	280-114200-A-11-Dpds@5
Data File Name	060SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:03:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	131.207	ppb	131.207	4.77	185604	500000	
Li	7	2	45	-9.968	ppb	-9.968	-294.73	10490	500000	
Li	7	3	45	21.486	ppb	21.486	5.82	10162583	50000	
Be	9	1	6	171.527	ppb	171.527	1.25	78762	2000	
B	11	1	6	98.423	ppb	98.423	0.50	49931	2000	
Na	23	1	45	1177634.083	ppb	1177634.083	0.85	3311573497	2000	>LDR
Na	23	2	45	1167986.756	ppb	1167986.756	0.18	314727269	400000	
Mg	24	2	45	350488.684	ppb	350488.684	0.44	42218458	400000	
Al	27	2	45	2007.214	ppb	2007.214	2.25	51620	400000	
K	39	1	45	2708.985	ppb	2708.985	2.30	12252209	400000	
K	39	2	45	3628.740	ppb	3628.740	0.84	183538	400000	
Ca	40	1	45	274927.885	ppb	274927.885	0.52	1142969663	400000	
Ca	44	2	45	387412.409	ppb	387412.409	0.27	1132402	400000	
Ti	47	2	45	4863.322	ppb	4863.322	36.55	310	4000	
V	51	2	72	225.645	ppb	225.645	0.80	287568	2000	
Cr	52	2	72	200.070	ppb	200.070	0.91	352966	5000	
Mn	55	2	72	208.277	ppb	208.277	1.44	120312	10000	
Fe	57	2	72	2027.089	ppb	2027.089	1.25	65688	400000	
Co	59	2	72	190.531	ppb	190.531	0.47	656082	2000	
Ni	60	2	72	180.740	ppb	180.740	0.89	184892	5000	
Cu	63	2	72	180.193	ppb	180.193	0.67	531583	5000	
Zn	66	2	72	188.665	ppb	188.665	2.68	58064	5000	
As	75	2	72	189.476	ppb	189.476	1.03	34477	2000	
Se	78	1	72	177.547	ppb	177.547	1.14	66996	2000	
Sr	88	2	72	8792.028	ppb	8792.028	0.22	4373813	4000	
Zr	90	2	72	57098.352	ppb	57098.352	1.14	375392	1000	>LDR
Nb	93	2	72	2.485	ppb	2.485	9.35	10861	200	
Mo	95	2	115	210.690	ppb	210.690	0.35	255486	2000	
Pd	105	2	115	0.066	ppb	0.066	28.55	163	100	
Ag	107	2	115	43.428	ppb	43.428	1.60	200009	100	
Cd	111	2	115	179.873	ppb	179.873	1.98	87337	2000	
Sn	120	2	115	200.563	ppb	200.563	1.64	228153	2000	
Sb	121	2	115	209.053	ppb	209.053	0.96	185992	1000	
Ba	137	2	115	219.791	ppb	219.791	1.68	63842	5000	
W	182	2	165	191.962	ppb	191.962	0.67	1363144	100	
Pt	195	2	165	0.149	ppb	0.149	5.72	1017	100	
Tl	205	2	165	189.186	ppb	189.186	0.32	2197038	2000	
Pb	208	2	165	178.003	ppb	178.003	0.89	2648164	5000	
Th	232	2	165	13.594	ppb	13.594	0.79	247860	2000	
U	238	2	165	211.475	ppb	211.475	0.67	4496878	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1398311	1.47	2128935	65.68	60	120	
Sc (IS)	45	1	HMI H2	24344646	0.57	47418043	51.34	60	120	IS Failed
Sc (IS)	45	2	HMI He	910759	0.29	935665	97.34	60	120	
Sc (IS)	45	3	No Gas	96803609	0.44	125437115	77.17	60	120	
Ge Internal Standard	72	1	HMI H2	13777961	0.35	21615861	63.74	60	120	
Ge Internal Standard	72	2	HMI He	1121082	0.44	1215965	92.20	60	120	
In Internal Standard	115	2	HMI He	3297016	0.72	3509672	93.94	60	120	
Ho-165	165	2	HMI He	21037734	0.58	22804243	92.25	60	120	

Sample Report

Sample Table

Sample Name	280-114103-A-4-B
Data File Name	061SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:07:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429300 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	84.110	ppb	84.110	2.57	170286	500000	
Li	7	2	45	-21.193	ppb	-21.193	-63.34	9533	500000	
Li	7	3	45	-15.281	ppb	-15.281	-13.05	7957824	50000	
Be	9	1	6	0.133	ppb	0.133	47.12	83	2000	
B	11	1	6	128.820	ppb	128.820	2.25	63683	2000	
Na	23	1	45	79167.756	ppb	79167.756	0.26	228301090	2000	>LDR
Na	23	2	45	77589.834	ppb	77589.834	0.36	19661462	400000	
Mg	24	2	45	25189.473	ppb	25189.473	0.20	2849223	400000	
Al	27	2	45	10.839	ppb	10.839	44.99	370	400000	
K	39	1	45	943.090	ppb	943.090	1.82	7871733	400000	
K	39	2	45	2762.840	ppb	2762.840	0.39	133424	400000	
Ca	40	1	45	87673.343	ppb	87673.343	0.40	373332728	400000	
Ca	44	2	45	110942.973	ppb	110942.973	0.64	304565	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.059	ppb	0.059	169.11	907	2000	
Cr	52	2	72	0.224	ppb	0.224	38.21	750	5000	
Mn	55	2	72	4335.054	ppb	4335.054	0.98	2535751	10000	
Fe	57	2	72	11460.294	ppb	11460.294	0.66	375587	400000	
Co	59	2	72	6.799	ppb	6.799	2.53	23744	2000	
Ni	60	2	72	2.082	ppb	2.082	3.95	2467	5000	
Cu	63	2	72	0.323	ppb	0.323	10.74	3097	5000	
Zn	66	2	72	5.675	ppb	5.675	8.16	2477	5000	
As	75	2	72	13.386	ppb	13.386	6.49	2491	2000	
Se	78	1	72	0.059	ppb	0.059	34.53	43	2000	
Sr	88	2	72	1148.150	ppb	1148.150	0.64	578928	4000	
Zr	90	2	72	67.028	ppb	67.028	17.81	540	1000	
Nb	93	2	72	0.014	ppb	0.014	63.64	247	200	
Mo	95	2	115	0.355	ppb	0.355	7.20	520	2000	
Pd	105	2	115	0.003	ppb	0.003	347.77	27	100	
Ag	107	2	115	0.015	ppb	0.015	27.78	87	100	
Cd	111	2	115	0.046	ppb	0.046	89.02	27	2000	
Sn	120	2	115	0.066	ppb	0.066	57.21	323	2000	
Sb	121	2	115	0.847	ppb	0.847	16.59	847	1000	
Ba	137	2	115	54.981	ppb	54.981	2.57	16840	5000	
W	182	2	165	0.145	ppb	0.145	17.81	1967	100	
Pt	195	2	165	0.060	ppb	0.060	24.18	463	100	
Tl	205	2	165	0.065	ppb	0.065	13.11	1023	2000	
Pb	208	2	165	0.064	ppb	0.064	29.36	2140	5000	
Th	232	2	165	0.021	ppb	0.021	14.96	717	2000	
U	238	2	165	0.320	ppb	0.320	5.81	7292	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1369619	1.14	2128935	64.33	60	120	
Sc (IS)	45	1	HMI H2	24930369	0.30	47418043	52.58	60	120	IS Failed
Sc (IS)	45	2	HMI He	855176	0.75	935665	91.40	60	120	
Sc (IS)	45	3	No Gas	83968664	0.83	125437115	66.94	60	120	
Ge Internal Standard	72	1	HMI H2	14655573	0.35	21615861	67.80	60	120	
Ge Internal Standard	72	2	HMI He	1136284	0.61	1215965	93.45	60	120	
In Internal Standard	115	2	HMI He	3474646	0.67	3509672	99.00	60	120	
Ho-165	165	2	HMI He	22192991	0.36	22804243	97.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	062_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:10:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	513.348	ppb	1.941	352966	500	102.7	90	110	
Li	7	2	45	340.392	ppb	8.519	19825	500	68.1	90	110	>+\-10%
Li	7	3	45	364.730	ppb	2.004	17035769	500	72.9	90	110	>+\-10%
Be	9	1	6	42.399	ppb	2.182	19638	50	84.8	90	110	>+\-10%
B	11	1	6	42.812	ppb	2.488	22509	50	85.6	90	110	>+\-10%
Na	23	1	45	5372.194	ppb	1.252	15913273	5000	107.4	90	110	
Na	23	2	45	5547.408	ppb	1.518	1435572	5000	110.9	90	110	>+\-10%
Mg	24	2	45	4718.644	ppb	1.023	533995	5000	94.4	90	110	
Al	27	2	45	5157.216	ppb	0.323	124392	5000	103.1	90	110	
K	39	1	45	3238.293	ppb	1.116	14039757	5000	64.8	90	110	>+\-10%
K	39	2	45	5029.018	ppb	0.411	235322	5000	100.6	90	110	
Ca	40	1	45	4161.531	ppb	1.241	17947131	5000	83.2	90	110	>+\-10%
Ca	44	2	45	5139.946	ppb	3.465	14217	5000	102.8	90	110	
Ti	47	2	45	220.256	ppb	173.205	13	50	440.5	90	110	>+\-10%
V	51	2	72	48.215	ppb	1.391	63482	50	96.4	90	110	
Cr	52	2	72	45.959	ppb	1.407	83166	50	91.9	90	110	
Mn	55	2	72	50.870	ppb	1.768	30135	50	101.7	90	110	
Fe	57	2	72	4762.596	ppb	1.368	157545	5000	95.3	90	110	
Co	59	2	72	46.823	ppb	1.036	164859	50	93.6	90	110	
Ni	60	2	72	45.840	ppb	1.409	48178	50	91.7	90	110	
Cu	63	2	72	47.062	ppb	0.552	143535	50	94.1	90	110	
Zn	66	2	72	49.695	ppb	2.038	16178	50	99.4	90	110	
As	75	2	72	49.581	ppb	1.264	9241	50	99.2	90	110	
Se	78	1	72	47.056	ppb	2.788	18945	50	94.1	90	110	
Sr	88	2	72	54.004	ppb	2.941	27488	50	108.0	90	110	
Zr	90	2	72	122.443	ppb	22.396	917	50	244.9	90	110	>+\-10%
Nb	93	2	72	93.874	ppb	1.862	412465	100	93.9	90	110	
Mo	95	2	115	46.274	ppb	0.976	60194	50	92.5	90	110	
Pd	105	2	115	45.479	ppb	2.315	106552	50	91.0	90	110	
Ag	107	2	115	45.605	ppb	0.784	225131	50	91.2	90	110	
Cd	111	2	115	45.684	ppb	1.218	23778	50	91.4	90	110	
Sn	120	2	115	48.940	ppb	1.475	59861	50	97.9	90	110	
Sb	121	2	115	50.901	ppb	0.527	48583	50	101.8	90	110	
Ba	137	2	115	51.810	ppb	1.202	16142	50	103.6	90	110	
W	182	2	165	45.981	ppb	1.181	347436	50	92.0	90	110	
Pt	195	2	165	45.363	ppb	0.208	311893	50	90.7	90	110	
Tl	205	2	165	47.805	ppb	0.724	589766	50	95.6	90	110	
Pb	208	2	165	48.080	ppb	1.076	760514	50	96.2	90	110	
Th	232	2	165	45.872	ppb	1.192	887503	50	91.7	90	110	
U	238	2	165	45.372	ppb	0.858	1024772	50	90.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1409402	2.11	2128935	66.20	60	120	
Sc (IS)	45	1	HMI H2	25093285	0.67	47418043	52.92	60	120	IS Failed
Sc (IS)	45	2	HMI He	855414	0.92	935665	91.42	60	120	
Sc (IS)	45	3	No Gas	85058699	0.49	125437115	67.81	60	120	
Ge Internal Standard	72	1	HMI H2	14689270	0.40	21615861	67.96	60	120	
Ge Internal Standard	72	2	HMI He	1146167	0.39	1215965	94.26	60	120	
In Internal Standard	115	2	HMI He	3533947	1.05	3509672	100.69	60	120	
Ho-165	165	2	HMI He	22343291	0.62	22804243	97.98	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	063_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:17:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	363.804	ppb	1.197	419421	500	72.8	90	110	>+\-10%
Li	7	2	45	351.290	ppb	7.504	19796	500	70.3	90	110	>+\-10%
Li	7	3	45	361.628	ppb	1.623	16312088	500	72.3	90	110	>+\-10%
Be	9	1	6	48.927	ppb	4.221	23847	50	97.9	90	110	
B	11	1	6	51.656	ppb	3.996	28348	50	103.3	90	110	
Na	23	1	45	5270.750	ppb	1.095	22612253	5000	105.4	90	110	
Na	23	2	45	5067.406	ppb	0.284	1291796	5000	101.3	90	110	
Mg	24	2	45	4649.004	ppb	0.445	517161	5000	93.0	90	110	
Al	27	2	45	5083.254	ppb	1.129	120519	5000	101.7	90	110	
K	39	1	45	5091.537	ppb	1.442	27475228	5000	101.8	90	110	
K	39	2	45	5029.387	ppb	1.029	231321	5000	100.6	90	110	
Ca	40	1	45	4997.790	ppb	0.382	31170215	5000	100.0	90	110	
Ca	44	2	45	5170.274	ppb	5.499	14057	5000	103.4	90	110	
Ti	47	2	45	170.181	ppb	100.064	10	50	340.4	90	110	>+\-10%
V	51	2	72	46.897	ppb	3.337	60280	50	93.8	90	110	
Cr	52	2	72	46.802	ppb	3.850	82624	50	93.6	90	110	
Mn	55	2	72	48.799	ppb	3.121	28212	50	97.6	90	110	
Fe	57	2	72	4794.534	ppb	0.513	154771	5000	95.9	90	110	
Co	59	2	72	46.616	ppb	0.406	160162	50	93.2	90	110	
Ni	60	2	72	45.788	ppb	0.725	46962	50	91.6	90	110	
Cu	63	2	72	46.381	ppb	0.937	138069	50	92.8	90	110	
Zn	66	2	72	50.150	ppb	3.661	15928	50	100.3	90	110	
As	75	2	72	48.982	ppb	2.181	8910	50	98.0	90	110	
Se	78	1	72	49.824	ppb	1.839	23203	50	99.6	90	110	
Sr	88	2	72	54.259	ppb	1.589	26947	50	108.5	90	110	
Zr	90	2	72	66.329	ppb	19.252	527	50	132.7	90	110	>+\-10%
Nb	93	2	72	97.896	ppb	0.306	419748	100	97.9	90	110	
Mo	95	2	115	46.318	ppb	2.553	58939	50	92.6	90	110	
Pd	105	2	115	45.030	ppb	1.082	103223	50	90.1	90	110	
Ag	107	2	115	45.808	ppb	1.438	221222	50	91.6	90	110	
Cd	111	2	115	47.791	ppb	1.144	24333	50	95.6	90	110	
Sn	120	2	115	48.797	ppb	2.642	58386	50	97.6	90	110	
Sb	121	2	115	50.363	ppb	1.462	47032	50	100.7	90	110	
Ba	137	2	115	52.788	ppb	3.178	16089	50	105.6	90	110	
W	182	2	165	46.717	ppb	1.944	344060	50	93.4	90	110	
Pt	195	2	165	45.142	ppb	1.293	302532	50	90.3	90	110	
Tl	205	2	165	48.704	ppb	1.632	585708	50	97.4	90	110	
Pb	208	2	165	48.939	ppb	1.474	754557	50	97.9	90	110	
Th	232	2	165	46.663	ppb	1.317	880040	50	93.3	90	110	
U	238	2	165	45.610	ppb	1.246	1004150	50	91.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1484041	2.62	2128935	69.71	60	120	
Sc (IS)	45	1	HMI H2	36327245	0.48	47418043	76.61	60	120	
Sc (IS)	45	2	HMI He	840808	0.30	935665	89.86	60	120	
Sc (IS)	45	3	No Gas	81795292	0.53	125437115	65.21	60	120	
Ge Internal Standard	72	1	HMI H2	16993457	0.54	21615861	78.62	60	120	
Ge Internal Standard	72	2	HMI He	1118477	0.70	1215965	91.98	60	120	
In Internal Standard	115	2	HMI He	3457392	1.15	3509672	98.51	60	120	
Ho-165	165	2	HMI He	21781000	1.13	22804243	95.51	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	064_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:21:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	372.553	ppb	2.059	421151	500	74.5	90	110	>+\-10%
Li	7	2	45	344.469	ppb	8.549	19452	500	68.9	90	110	>+\-10%
Li	7	3	45	375.075	ppb	1.873	16408574	500	75.0	90	110	>+\-10%
Be	9	1	6	48.433	ppb	4.499	23627	50	96.9	90	110	
B	11	1	6	53.882	ppb	2.353	29533	50	107.8	90	110	
Na	23	1	45	5226.636	ppb	0.491	22236672	5000	104.5	90	110	
Na	23	2	45	5031.489	ppb	0.999	1272865	5000	100.6	90	110	
Mg	24	2	45	4726.094	ppb	0.718	521634	5000	94.5	90	110	
Al	27	2	45	5123.191	ppb	0.652	120518	5000	102.5	90	110	
K	39	1	45	5112.920	ppb	0.577	27324061	5000	102.3	90	110	
K	39	2	45	5046.022	ppb	1.874	230247	5000	100.9	90	110	
Ca	40	1	45	5035.431	ppb	0.470	31136780	5000	100.7	90	110	
Ca	44	2	45	5061.152	ppb	1.210	13656	5000	101.2	90	110	
Ti	47	2	45	171.128	ppb	99.834	10	50	342.3	90	110	>+\-10%
V	51	2	72	47.942	ppb	2.739	61428	50	95.9	90	110	
Cr	52	2	72	47.195	ppb	1.148	83102	50	94.4	90	110	
Mn	55	2	72	50.761	ppb	3.670	29260	50	101.5	90	110	
Fe	57	2	72	4740.485	ppb	1.551	152602	5000	94.8	90	110	
Co	59	2	72	46.672	ppb	2.044	159923	50	93.3	90	110	
Ni	60	2	72	45.856	ppb	1.858	46898	50	91.7	90	110	
Cu	63	2	72	46.263	ppb	0.813	137349	50	92.5	90	110	
Zn	66	2	72	49.725	ppb	4.926	15755	50	99.5	90	110	
As	75	2	72	48.164	ppb	1.771	8736	50	96.3	90	110	
Se	78	1	72	49.863	ppb	3.783	23161	50	99.7	90	110	
Sr	88	2	72	52.685	ppb	1.008	26096	50	105.4	90	110	
Zr	90	2	72	85.928	ppb	17.980	653	50	171.9	90	110	>+\-10%
Nb	93	2	72	100.311	ppb	0.299	428924	100	100.3	90	110	
Mo	95	2	115	45.912	ppb	1.758	57976	50	91.8	90	110	
Pd	105	2	115	45.493	ppb	1.972	103453	50	91.0	90	110	
Ag	107	2	115	45.820	ppb	1.057	219536	50	91.6	90	110	
Cd	111	2	115	47.614	ppb	2.429	24049	50	95.2	90	110	
Sn	120	2	115	49.484	ppb	1.429	58744	50	99.0	90	110	
Sb	121	2	115	51.686	ppb	2.138	47874	50	103.4	90	110	
Ba	137	2	115	50.138	ppb	2.871	15161	50	100.3	90	110	
W	182	2	165	46.240	ppb	1.425	342179	50	92.5	90	110	
Pt	195	2	165	45.133	ppb	2.269	303876	50	90.3	90	110	
Tl	205	2	165	48.638	ppb	1.888	587647	50	97.3	90	110	
Pb	208	2	165	48.567	ppb	1.398	752368	50	97.1	90	110	
Th	232	2	165	46.543	ppb	1.621	881905	50	93.1	90	110	
U	238	2	165	45.369	ppb	0.621	1003627	50	90.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1484021	1.09	2128935	69.71	60	120	
Sc (IS)	45	1	HMI H2	36018284	0.71	47418043	75.96	60	120	
Sc (IS)	45	2	HMI He	834251	0.26	935665	89.16	60	120	
Sc (IS)	45	3	No Gas	80767640	0.35	125437115	64.39	60	120	
Ge Internal Standard	72	1	HMI H2	16952453	1.15	21615861	78.43	60	120	
Ge Internal Standard	72	2	HMI He	1115402	0.45	1215965	91.73	60	120	
In Internal Standard	115	2	HMI He	3429977	0.87	3509672	97.73	60	120	
Ho-165	165	2	HMI He	21883990	1.14	22804243	95.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	065_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:25:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-56.392	ppb	-1.8	6996590	10	
Be	9	1	6	-0.005	ppb	-1798.8	23	0.5	
B	11	1	6	1.495	ppb	35.2	2007	0.5	>RL
Na	23	1	45	203.797	ppb	0.6	1376276	25	>RL
Na	23	2	45	181.487	ppb	3.3	77019	25	>RL
Mg	24	2	45	7.578	ppb	18.6	1027	25	
Al	27	2	45	2.301	ppb	81.3	163	15	
K	39	1	45	59.178	ppb	27.0	8197373	50	>RL
K	39	2	45	-29.236	ppb	-22.2	7876	50	
Ca	40	1	45	10.347	ppb	4.9	237738	50	
Ca	44	2	45	-5.517	ppb	-138.4	93	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.570	ppb	32.2	1557	1	
Cr	52	2	72	0.062	ppb	64.7	457	1	
Mn	55	2	72	0.434	ppb	12.0	370	0.5	
Fe	57	2	72	0.218	ppb	1161.9	187	25	
Co	59	2	72	0.022	ppb	60.0	93	0.5	
Ni	60	2	72	-0.067	ppb	-76.9	240	1	
Cu	63	2	72	-0.113	ppb	-34.2	1787	1	
Zn	66	2	72	0.150	ppb	91.7	770	5	
As	75	2	72	-0.023	ppb	-190.3	19	1	
Se	78	1	72	0.017	ppb	121.9	31	1	
Sr	88	2	72	0.109	ppb	82.6	73	0.5	
Zr	90	2	72	11.151	ppb	31.9	167	1	>RL
Nb	93	2	72	1.917	ppb	14.0	8479	2	
Mo	95	2	115	0.084	ppb	50.0	177	0.5	
Pd	105	2	115	0.040	ppb	22.7	113	1	
Ag	107	2	115	0.013	ppb	55.5	77	1	
Cd	111	2	115	0.013	ppb	151.9	10	0.5	
Sn	120	2	115	0.048	ppb	79.9	307	1	
Sb	121	2	115	0.543	ppb	15.4	570	0.6	
Ba	137	2	115	-0.011	ppb	-328.3	13	0.5	
W	182	2	165	0.058	ppb	33.0	1307	1	
Pt	195	2	165	0.077	ppb	20.3	577	1	
Tl	205	2	165	0.009	ppb	49.3	337	0.1	
Pb	208	2	165	0.014	ppb	86.6	1350	0.5	
Th	232	2	165	0.035	ppb	24.0	990	1	
U	238	2	165	0.040	ppb	12.0	1017	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1523494	1.82	2128935	71.56	60	120	
Sc (IS)	45	1	HMI H2	36948342	0.96	47418043	77.92	60	120	
Sc (IS)	45	2	HMI He	846886	0.50	935665	90.51	60	120	
Sc (IS)	45	3	No Gas	83933782	0.23	125437115	66.91	60	120	
Ge Internal Standard	72	1	HMI H2	17299951	0.48	21615861	80.03	60	120	
Ge Internal Standard	72	2	HMI He	1129638	0.30	1215965	92.90	60	120	
In Internal Standard	115	2	HMI He	3523945	0.51	3509672	100.41	60	120	
Ho-165	165	2	HMI He	22053023	0.79	22804243	96.71	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	066LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:29:05-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-47.189	ppb	-5.133	7288050	50	-94.4	70	130	>+/-30%
Be	9	1	6	1.024	ppb	15.839	540	1	102.4	70	130	
Na	23	2	45	173.631	ppb	2.234	76165	50	347.3	70	130	>+/-30%
Mg	24	2	45	51.493	ppb	5.643	6031	50	103.0	70	130	
Al	27	2	45	30.423	ppb	8.435	847	30	101.4	70	130	
K	39	2	45	84.962	ppb	12.378	13146	100	85.0	70	130	
Ca	44	2	45	50.693	ppb	36.176	250	50	101.4	70	130	
V	51	2	72	5.027	ppb	4.051	7369	5	100.5	70	130	
Cr	52	2	72	1.915	ppb	9.864	3801	2	95.7	70	130	
Mn	55	2	72	1.464	ppb	8.809	983	1	146.4	70	130	>+/-30%
Fe	57	2	72	50.895	ppb	8.653	1864	50	101.8	70	130	
Co	59	2	72	0.994	ppb	9.394	3517	1	99.4	70	130	
Ni	60	2	72	1.871	ppb	1.994	2267	2	93.5	70	130	
Cu	63	2	72	1.858	ppb	6.877	7732	2	92.9	70	130	
Zn	66	2	72	10.737	ppb	11.345	4071	10	107.4	70	130	
As	75	2	72	4.445	ppb	4.719	850	5	88.9	70	130	
Se	78	1	72	4.640	ppb	4.259	2240	5	92.8	70	130	
Sr	88	2	72	1.215	ppb	16.237	637	1	121.5	70	130	
Zr	90	2	72	23.698	ppb	51.045	253	0.5	4739.5	70	130	>+/-30%
Nb	93	2	72	5.120	ppb	11.424	22670	2	256.0	70	130	>+/-30%
Mo	95	2	115	1.837	ppb	7.318	2470	2	91.9	70	130	
Pd	105	2	115	0.028	ppb	16.607	87	1	2.8	70	130	>+/-30%
Ag	107	2	115	4.706	ppb	4.610	23375	5	94.1	70	130	
Cd	111	2	115	0.733	ppb	15.658	387	1	73.3	70	130	
Sn	120	2	115	9.585	ppb	3.832	11995	10	95.9	70	130	
Sb	121	2	115	2.547	ppb	3.505	2497	2	127.3	70	130	
Ba	137	2	115	1.215	ppb	29.380	397	1	121.5	70	130	
W	182	2	165	4.536	ppb	0.773	35005	1	453.6	70	130	>+/-30%
Pt	195	2	165	0.074	ppb	7.077	560	1	7.4	70	130	>+/-30%
Tl	205	2	165	0.965	ppb	2.448	12102	1	96.5	70	130	
Pb	208	2	165	0.969	ppb	0.964	16421	1	96.9	70	130	
Th	232	2	165	1.875	ppb	0.762	36514	2	93.8	70	130	
U	238	2	165	0.906	ppb	0.269	20546	1	90.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1528652	0.48	2128935	71.80	60	120	
Sc (IS)	45	1	HMI H2	37102950	0.44	47418043	78.25	60	120	
Sc (IS)	45	2	HMI He	859414	1.00	935665	91.85	60	120	
Sc (IS)	45	3	No Gas	84827415	0.54	125437115	67.63	60	120	
Ge Internal Standard	72	1	HMI H2	17454094	0.12	21615861	80.75	60	120	
Ge Internal Standard	72	2	HMI He	1145970	0.17	1215965	94.24	60	120	
In Internal Standard	115	2	HMI He	3554899	0.87	3509672	101.29	60	120	
Ho-165	165	2	HMI He	22296643	0.52	22804243	97.77	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-16-B
Data File Name	067SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:33:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	36.657	ppb	36.657	2.20	132431	500000	
Li	7	2	45	-79.796	ppb	-79.796	-19.90	7602	500000	
Li	7	3	45	-57.939	ppb	-57.939	-4.50	6386207	50000	
Be	9	1	6	-0.052	ppb	-0.052	0.00	0	2000	
B	11	1	6	573.776	ppb	573.776	1.93	251819	2000	
Na	23	1	45	580339.780	ppb	580339.780	0.24	1472263018	2000	>LDR
Na	23	2	45	566111.604	ppb	566111.604	0.95	138474098	400000	
Mg	24	2	45	30538.079	ppb	30538.079	0.66	3338973	400000	
Al	27	2	45	6.763	ppb	6.763	15.56	263	400000	
K	39	1	45	12336.558	ppb	12336.558	0.43	33508265	400000	
K	39	2	45	17560.658	ppb	17560.658	0.67	771780	400000	
Ca	40	1	45	28839.983	ppb	28839.983	0.71	108242395	400000	
Ca	44	2	45	37210.368	ppb	37210.368	0.87	98823	400000	
Ti	47	2	45	344.770	ppb	344.770	49.47	20	4000	
V	51	2	72	0.704	ppb	0.704	24.02	1643	2000	
Cr	52	2	72	3.417	ppb	3.417	5.68	6101	5000	
Mn	55	2	72	554.651	ppb	554.651	1.55	306928	10000	
Fe	57	2	72	5011.941	ppb	5011.941	0.43	155425	400000	
Co	59	2	72	0.204	ppb	0.204	14.83	690	2000	
Ni	60	2	72	3.066	ppb	3.066	8.99	3295	5000	
Cu	63	2	72	0.772	ppb	0.772	28.81	4194	5000	
Zn	66	2	72	3.013	ppb	3.013	7.54	1567	5000	
As	75	2	72	9.639	ppb	9.639	2.92	1702	2000	
Se	78	1	72	5.957	ppb	5.957	4.67	2099	2000	
Sr	88	2	72	388.759	ppb	388.759	1.16	185391	4000	
Zr	90	2	72	86.979	ppb	86.979	38.09	637	1000	
Nb	93	2	72	0.858	ppb	0.858	17.89	3707	200	
Mo	95	2	115	1.509	ppb	1.509	0.55	1900	2000	
Pd	105	2	115	0.006	ppb	0.006	226.53	33	100	
Ag	107	2	115	0.004	ppb	0.004	156.61	33	100	
Cd	111	2	115	0.028	ppb	0.028	42.35	17	2000	
Sn	120	2	115	0.182	ppb	0.182	55.78	440	2000	
Sb	121	2	115	0.678	ppb	0.678	23.63	657	1000	
Ba	137	2	115	4.278	ppb	4.278	3.80	1263	5000	
W	182	2	165	0.026	ppb	0.026	54.35	1037	100	
Pt	195	2	165	0.047	ppb	0.047	13.30	360	100	
Tl	205	2	165	-0.001	ppb	-0.001	-747.30	210	2000	
Pb	208	2	165	0.040	ppb	0.040	44.58	1693	5000	
Th	232	2	165	0.037	ppb	0.037	5.36	987	2000	
U	238	2	165	0.036	ppb	0.036	14.92	883	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1232288	1.19	2128935	57.88	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21960266	0.66	47418043	46.31	60	120	IS Failed
Sc (IS)	45	2	HMI He	826672	0.65	935665	88.35	60	120	
Sc (IS)	45	3	No Gas	77006516	0.42	125437115	61.39	60	120	
Ge Internal Standard	72	1	HMI H2	12765406	0.29	21615861	59.06	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1074548	0.28	1215965	88.37	60	120	
In Internal Standard	115	2	HMI He	3311540	0.87	3509672	94.35	60	120	
Ho-165	165	2	HMI He	21292987	0.22	22804243	93.37	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-17-B
Data File Name	068SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:37:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	71.063	ppb	71.063	2.42	146200	500000	
Li	7	2	45	-66.754	ppb	-66.754	-26.81	8486	500000	
Li	7	3	45	-36.039	ppb	-36.039	-2.48	7550231	50000	
Be	9	1	6	-0.044	ppb	-0.044	-32.94	3	2000	
B	11	1	6	556.180	ppb	556.180	1.32	240680	2000	
Na	23	1	45	1204807.154	ppb	1204807.154	0.81	3077924861	2000	>LDR
Na	23	2	45	1181293.946	ppb	1181293.946	0.32	307939389	400000	
Mg	24	2	45	195663.404	ppb	195663.404	0.58	22799808	400000	
Al	27	2	45	9.719	ppb	9.719	46.94	353	400000	
K	39	1	45	5540.500	ppb	5540.500	0.66	17782443	400000	
K	39	2	45	8152.083	ppb	8152.083	0.77	386957	400000	
Ca	40	1	45	436077.685	ppb	436077.685	0.74	1646924775	400000	
Ca	44	2	45	582060.467	ppb	582060.467	0.82	1645769	400000	
Ti	47	2	45	109.117	ppb	109.117	173.21	7	4000	
V	51	2	72	-0.131	ppb	-0.131	-82.27	640	2000	
Cr	52	2	72	0.230	ppb	0.230	15.69	733	5000	
Mn	55	2	72	7762.176	ppb	7762.176	1.13	4387746	10000	
Fe	57	2	72	1913.820	ppb	1913.820	2.56	60749	400000	
Co	59	2	72	4.305	ppb	4.305	2.75	14537	2000	
Ni	60	2	72	7.803	ppb	7.803	3.29	8106	5000	
Cu	63	2	72	0.326	ppb	0.326	15.03	3000	5000	
Zn	66	2	72	2.694	ppb	2.694	21.58	1507	5000	
As	75	2	72	2.402	ppb	2.402	6.77	450	2000	
Se	78	1	72	0.282	ppb	0.282	10.97	112	2000	
Sr	88	2	72	4175.812	ppb	4175.812	1.83	2034719	4000	
Zr	90	2	72	41.892	ppb	41.892	64.65	360	1000	
Nb	93	2	72	0.506	ppb	0.506	25.15	2310	200	
Mo	95	2	115	0.185	ppb	0.185	43.96	290	2000	
Pd	105	2	115	0.043	ppb	0.043	58.52	113	100	
Ag	107	2	115	0.008	ppb	0.008	54.91	50	100	
Cd	111	2	115	0.007	ppb	0.007	331.47	7	2000	
Sn	120	2	115	0.122	ppb	0.122	96.95	373	2000	
Sb	121	2	115	0.282	ppb	0.282	26.84	303	1000	
Ba	137	2	115	150.054	ppb	150.054	0.92	43943	5000	
W	182	2	165	0.000	ppb	0.000	-5244.71	827	100	
Pt	195	2	165	0.056	ppb	0.056	8.21	413	100	
Tl	205	2	165	0.005	ppb	0.005	35.30	270	2000	
Pb	208	2	165	-0.012	ppb	-0.012	-162.69	903	5000	
Th	232	2	165	0.017	ppb	0.017	20.13	600	2000	
U	238	2	165	7.952	ppb	7.952	0.79	167666	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1214653	0.55	2128935	57.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	22116482	0.12	47418043	46.64	60	120	IS Failed
Sc (IS)	45	2	HMI He	881058	0.97	935665	94.16	60	120	
Sc (IS)	45	3	No Gas	84825909	0.68	125437115	67.62	60	120	
Ge Internal Standard	72	1	HMI H2	12440228	0.67	21615861	57.55	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1098042	0.57	1215965	90.30	60	120	
In Internal Standard	115	2	HMI He	3323806	0.96	3509672	94.70	60	120	
Ho-165	165	2	HMI He	20845617	0.30	22804243	91.41	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-18-B
Data File Name	069SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:40:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	70.698	ppb	70.698	5.25	112648	500000	
Li	7	2	45	-102.627	ppb	-102.627	-10.52	6428	500000	
Li	7	3	45	-4.411	ppb	-4.411	-27.79	8135678	50000	
Be	9	1	6	0.023	ppb	0.023	280.70	20	2000	
B	11	1	6	1430.131	ppb	1430.131	0.86	412626	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	6745468.963	ppb	6745468.963	0.22	1521276831	400000	>LDR
Mg	24	2	45	1124277.611	ppb	1124277.611	0.67	113349792	400000	
Al	27	2	45	19.054	ppb	19.054	17.78	507	400000	
K	39	1	45	164769.876	ppb	164769.876	0.51	302168042	400000	
K	39	2	45	229578.185	ppb	229578.185	0.51	9205016	400000	
Ca	40	1	45	454735.038	ppb	454735.038	0.64	1324458434	400000	
Ca	44	2	45	637096.498	ppb	637096.498	3.05	1558319	400000	
Ti	47	2	45	4815.556	ppb	4815.556	16.19	257	4000	
V	51	2	72	7.700	ppb	7.700	8.11	8169	2000	
Cr	52	2	72	12.758	ppb	12.758	4.65	17587	5000	
Mn	55	2	72	9635.149	ppb	9635.149	0.51	4284339	10000	
Fe	57	2	72	40.658	ppb	40.658	7.46	1150	400000	
Co	59	2	72	0.122	ppb	0.122	19.94	337	2000	
Ni	60	2	72	0.805	ppb	0.805	14.81	870	5000	
Cu	63	2	72	1.415	ppb	1.415	4.29	4828	5000	
Zn	66	2	72	41.266	ppb	41.266	2.78	10220	5000	
As	75	2	72	56.305	ppb	56.305	2.59	7908	2000	
Se	78	1	72	0.258	ppb	0.258	25.23	79	2000	
Sr	88	2	72	10572.935	ppb	10572.935	1.35	4052709	4000	
Zr	90	2	72	648.653	ppb	648.653	6.06	3357	1000	
Nb	93	2	72	0.917	ppb	0.917	10.36	3177	200	
Mo	95	2	115	0.122	ppb	0.122	53.23	163	2000	
Pd	105	2	115	0.111	ppb	0.111	33.68	203	100	
Ag	107	2	115	0.011	ppb	0.011	41.58	50	100	
Cd	111	2	115	0.073	ppb	0.073	36.61	30	2000	
Sn	120	2	115	0.176	ppb	0.176	48.46	337	2000	
Sb	121	2	115	1.783	ppb	1.783	11.70	1273	1000	
Ba	137	2	115	224.307	ppb	224.307	1.21	50650	5000	
W	182	2	165	2.384	ppb	2.384	0.48	13226	100	
Pt	195	2	165	0.054	ppb	0.054	11.31	300	100	
Tl	205	2	165	-0.004	ppb	-0.004	-64.87	127	2000	
Pb	208	2	165	0.028	ppb	0.028	20.04	1113	5000	
Th	232	2	165	0.026	ppb	0.026	11.20	573	2000	
U	238	2	165	0.175	ppb	0.175	5.73	2860	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	811903	0.95	2128935	38.14	60	120	IS Failed
Sc (IS)	45	1	HMI H2	17056788	0.48	47418043	35.97	60	120	IS Failed
Sc (IS)	45	2	HMI He	762341	1.45	935665	81.48	60	120	
Sc (IS)	45	3	No Gas	83194717	0.48	125437115	66.32	60	120	
Ge Internal Standard	72	1	HMI H2	9422132	0.47	21615861	43.59	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	863776	1.00	1215965	71.04	60	120	
In Internal Standard	115	2	HMI He	2563644	1.90	3509672	73.05	60	120	
Ho-165	165	2	HMI He	15671455	1.13	22804243	68.72	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-20-B
Data File Name	070SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:44:57-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	47.884	ppb	47.884	4.67	119839	500000	
Li	7	2	45	-99.039	ppb	-99.039	-23.26	7012	500000	
Li	7	3	45	-55.146	ppb	-55.146	-6.24	7700892	50000	
Be	9	1	6	0.025	ppb	0.025	349.19	27	2000	
B	11	1	6	851.402	ppb	851.402	2.12	319346	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5178478.521	ppb	5178478.521	0.05	1255430835	400000	>LDR
Mg	24	2	45	928768.793	ppb	928768.793	0.80	100662319	400000	
Al	27	2	45	9.752	ppb	9.752	4.19	330	400000	
K	39	1	45	93098.841	ppb	93098.841	0.31	194677777	400000	
K	39	2	45	133359.658	ppb	133359.658	0.92	5751640	400000	
Ca	40	1	45	299767.805	ppb	299767.805	0.33	986336732	400000	
Ca	44	2	45	413216.597	ppb	413216.597	1.20	1086775	400000	
Ti	47	2	45	5408.718	ppb	5408.718	32.74	310	4000	
V	51	2	72	10.319	ppb	10.319	2.72	11965	2000	
Cr	52	2	72	4.192	ppb	4.192	6.67	6638	5000	
Mn	55	2	72	2421.254	ppb	2421.254	0.20	1199942	10000	
Fe	57	2	72	44.089	ppb	44.089	6.74	1377	400000	
Co	59	2	72	0.556	ppb	0.556	9.62	1660	2000	
Ni	60	2	72	1.272	ppb	1.272	19.54	1380	5000	
Cu	63	2	72	0.397	ppb	0.397	17.16	2810	5000	
Zn	66	2	72	11.039	ppb	11.039	8.68	3497	5000	
As	75	2	72	9.353	ppb	9.353	4.03	1480	2000	
Se	78	1	72	0.777	ppb	0.777	15.04	247	2000	
Sr	88	2	72	7122.129	ppb	7122.129	1.65	3042659	4000	
Zr	90	2	72	1062.626	ppb	1062.626	10.20	6075	1000	
Nb	93	2	72	0.763	ppb	0.763	4.26	2970	200	
Mo	95	2	115	0.096	ppb	0.096	39.57	153	2000	
Pd	105	2	115	0.068	ppb	0.068	32.69	143	100	
Ag	107	2	115	0.007	ppb	0.007	69.12	40	100	
Cd	111	2	115	0.001	ppb	0.001	941.47	3	2000	
Sn	120	2	115	0.178	ppb	0.178	70.09	370	2000	
Sb	121	2	115	0.783	ppb	0.783	29.72	637	1000	
Ba	137	2	115	437.233	ppb	437.233	0.20	108306	5000	
W	182	2	165	0.198	ppb	0.198	19.44	1820	100	
Pt	195	2	165	0.063	ppb	0.063	6.00	377	100	
Tl	205	2	165	-0.010	ppb	-0.010	-32.53	80	2000	
Pb	208	2	165	0.143	ppb	0.143	15.96	2607	5000	
Th	232	2	165	0.019	ppb	0.019	27.28	530	2000	
U	238	2	165	1.163	ppb	1.163	2.15	20195	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1054489	1.18	2128935	49.53	60	120	IS Failed
Sc (IS)	45	1	HMI H2	19268218	0.73	47418043	40.63	60	120	IS Failed
Sc (IS)	45	2	HMI He	819469	0.51	935665	87.58	60	120	
Sc (IS)	45	3	No Gas	92003642	0.36	125437115	73.35	60	120	
Ge Internal Standard	72	1	HMI H2	10933738	0.73	21615861	50.58	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	962645	0.92	1215965	79.17	60	120	
In Internal Standard	115	2	HMI He	2812233	0.64	3509672	80.13	60	120	
Ho-165	165	2	HMI He	17093996	1.58	22804243	74.96	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-21-B
Data File Name	071SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:48:52-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	66.259	ppb	66.259	10.23	122593	500000	
Li	7	2	45	-87.208	ppb	-87.208	-21.82	6872	500000	
Li	7	3	45	-38.665	ppb	-38.665	-9.87	7647292	50000	
Be	9	1	6	0.008	ppb	0.008	644.02	20	2000	
B	11	1	6	730.178	ppb	730.178	1.43	260199	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5782122.172	ppb	5782122.172	0.94	1313228780	400000	>LDR
Mg	24	2	45	1003882.710	ppb	1003882.710	0.73	101931878	400000	
Al	27	2	45	9.784	ppb	9.784	15.28	310	400000	
K	39	1	45	121384.716	ppb	121384.716	0.09	246108816	400000	
K	39	2	45	172910.803	ppb	172910.803	0.45	6984188	400000	
Ca	40	1	45	396062.295	ppb	396062.295	0.37	1269854168	400000	
Ca	44	2	45	571790.667	ppb	571790.667	2.09	1408702	400000	
Ti	47	2	45	4718.191	ppb	4718.191	49.22	253	4000	
V	51	2	72	5.623	ppb	5.623	4.55	6358	2000	
Cr	52	2	72	4.462	ppb	4.462	4.37	6552	5000	
Mn	55	2	72	4342.318	ppb	4342.318	1.33	2000230	10000	
Fe	57	2	72	27.962	ppb	27.962	4.04	863	400000	
Co	59	2	72	0.150	ppb	0.150	9.19	427	2000	
Ni	60	2	72	0.873	ppb	0.873	26.11	957	5000	
Cu	63	2	72	0.180	ppb	0.180	93.25	2104	5000	
Zn	66	2	72	2.472	ppb	2.472	17.79	1173	5000	
As	75	2	72	63.321	ppb	63.321	1.93	9209	2000	
Se	78	1	72	0.539	ppb	0.539	7.85	171	2000	
Sr	88	2	72	9465.417	ppb	9465.417	0.29	3758275	4000	
Zr	90	2	72	427.604	ppb	427.604	3.23	2317	1000	
Nb	93	2	72	0.606	ppb	0.606	12.84	2224	200	
Mo	95	2	115	0.455	ppb	0.455	6.53	487	2000	
Pd	105	2	115	0.080	ppb	0.080	11.78	153	100	
Ag	107	2	115	0.009	ppb	0.009	61.95	43	100	
Cd	111	2	115	0.028	ppb	0.028	54.43	13	2000	
Sn	120	2	115	0.103	ppb	0.103	53.80	277	2000	
Sb	121	2	115	2.674	ppb	2.674	13.21	1927	1000	
Ba	137	2	115	556.003	ppb	556.003	1.17	128003	5000	
W	182	2	165	7.687	ppb	7.687	1.29	42404	100	
Pt	195	2	165	0.135	ppb	0.135	14.50	710	100	
Tl	205	2	165	-0.005	ppb	-0.005	-34.56	123	2000	
Pb	208	2	165	-0.018	ppb	-0.018	-55.08	623	5000	
Th	232	2	165	0.027	ppb	0.027	24.59	607	2000	
U	238	2	165	0.615	ppb	0.615	1.89	10094	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1001414	1.98	2128935	47.04	60	120	IS Failed
Sc (IS)	45	1	HMI H2	18775789	0.30	47418043	39.60	60	120	IS Failed
Sc (IS)	45	2	HMI He	767741	0.73	935665	82.05	60	120	
Sc (IS)	45	3	No Gas	86633955	1.45	125437115	69.07	60	120	
Ge Internal Standard	72	1	HMI H2	10635982	0.44	21615861	49.20	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	894775	0.17	1215965	73.59	60	120	
In Internal Standard	115	2	HMI He	2613806	0.79	3509672	74.47	60	120	
Ho-165	165	2	HMI He	16105647	0.92	22804243	70.63	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-22-B
Data File Name	072SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:52:50-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	50.981	ppb	50.981	7.58	115724	500000	
Li	7	2	45	-85.427	ppb	-85.427	-25.82	6662	500000	
Li	7	3	45	-66.076	ppb	-66.076	-2.86	6601573	50000	
Be	9	1	6	0.070	ppb	0.070	131.86	40	2000	
B	11	1	6	727.707	ppb	727.707	0.67	259793	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	5030099.978	ppb	5030099.978	0.46	1100457984	400000	>LDR
Mg	24	2	45	796086.917	ppb	796086.917	0.49	77861702	400000	
Al	27	2	45	44.406	ppb	44.406	23.19	1020	400000	
K	39	1	45	100174.632	ppb	100174.632	0.24	200289550	400000	
K	39	2	45	140798.278	ppb	140798.278	0.44	5479476	400000	
Ca	40	1	45	314792.641	ppb	314792.641	0.59	991874012	400000	
Ca	44	2	45	426289.964	ppb	426289.964	0.08	1011742	400000	
Ti	47	2	45	18800.867	ppb	18800.867	16.05	973	4000	
V	51	2	72	25.349	ppb	25.349	0.95	25587	2000	
Cr	52	2	72	18.060	ppb	18.060	5.37	24920	5000	
Mn	55	2	72	2540.622	ppb	2540.622	0.70	1135787	10000	
Fe	57	2	72	71.464	ppb	71.464	0.83	1927	400000	
Co	59	2	72	0.443	ppb	0.443	8.45	1197	2000	
Ni	60	2	72	3.130	ppb	3.130	7.97	2714	5000	
Cu	63	2	72	0.802	ppb	0.802	14.53	3457	5000	
Zn	66	2	72	2.138	ppb	2.138	19.45	1060	5000	
As	75	2	72	11.625	ppb	11.625	7.16	1655	2000	
Se	78	1	72	0.780	ppb	0.780	12.24	240	2000	
Sr	88	2	72	7040.101	ppb	7040.101	1.31	2712761	4000	
Zr	90	2	72	1043.553	ppb	1043.553	6.43	5384	1000	
Nb	93	2	72	1.027	ppb	1.027	3.38	3557	200	
Mo	95	2	115	0.943	ppb	0.943	20.06	943	2000	
Pd	105	2	115	0.042	ppb	0.042	33.23	87	100	
Ag	107	2	115	0.007	ppb	0.007	86.82	37	100	
Cd	111	2	115	0.011	ppb	0.011	138.62	7	2000	
Sn	120	2	115	0.238	ppb	0.238	21.23	393	2000	
Sb	121	2	115	0.933	ppb	0.933	26.59	690	1000	
Ba	137	2	115	673.923	ppb	673.923	1.66	153104	5000	
W	182	2	165	0.854	ppb	0.854	1.82	5228	100	
Pt	195	2	165	0.065	ppb	0.065	9.64	357	100	
Tl	205	2	165	-0.003	ppb	-0.003	-57.40	137	2000	
Pb	208	2	165	0.004	ppb	0.004	159.79	870	5000	
Th	232	2	165	0.050	ppb	0.050	8.76	923	2000	
U	238	2	165	0.497	ppb	0.497	1.99	8099	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1003091	1.06	2128935	47.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	18451287	0.15	47418043	38.91	60	120	IS Failed
Sc (IS)	45	2	HMI He	739511	0.49	935665	79.04	60	120	
Sc (IS)	45	3	No Gas	81836160	0.43	125437115	65.24	60	120	
Ge Internal Standard	72	1	HMI H2	10587981	0.22	21615861	48.98	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	868374	0.25	1215965	71.41	60	120	
In Internal Standard	115	2	HMI He	2579438	1.14	3509672	73.50	60	120	
Ho-165	165	2	HMI He	15938396	0.21	22804243	69.89	60	120	

Sample Table

Sample Name	720-88516-F-23-B
Data File Name	073SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T14:56:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	47.779	ppb	47.779	15.55	122512	500000	
Li	7	2	45	-78.582	ppb	-78.582	-21.61	6878	500000	
Li	7	3	45	-72.947	ppb	-72.947	-2.62	6776926	50000	
Be	9	1	6	-0.033	ppb	-0.033	-50.57	7	2000	
B	11	1	6	762.539	ppb	762.539	0.51	286514	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2904363.539	ppb	2904363.539	0.99	639961630	400000	>LDR
Mg	24	2	45	411654.350	ppb	411654.350	0.39	40549419	400000	
Al	27	2	45	9.127	ppb	9.127	34.41	287	400000	
K	39	1	45	68162.128	ppb	68162.128	0.91	146889814	400000	
K	39	2	45	95977.164	ppb	95977.164	0.88	3764368	400000	
Ca	40	1	45	150149.563	ppb	150149.563	0.72	505257312	400000	
Ca	44	2	45	206256.353	ppb	206256.353	0.36	493062	400000	
Ti	47	2	45	1214.879	ppb	1214.879	65.75	63	4000	
V	51	2	72	2.986	ppb	2.986	6.63	3791	2000	
Cr	52	2	72	2.752	ppb	2.752	6.67	4267	5000	
Mn	55	2	72	2140.208	ppb	2140.208	0.03	1014689	10000	
Fe	57	2	72	17.475	ppb	17.475	9.96	610	400000	
Co	59	2	72	0.285	ppb	0.285	3.82	820	2000	
Ni	60	2	72	0.256	ppb	0.256	9.81	467	5000	
Cu	63	2	72	0.477	ppb	0.477	3.03	2880	5000	
Zn	66	2	72	3.162	ppb	3.162	23.26	1380	5000	
As	75	2	72	0.910	ppb	0.910	20.06	155	2000	
Se	78	1	72	0.142	ppb	0.142	39.90	60	2000	
Sr	88	2	72	3848.472	ppb	3848.472	1.11	1572696	4000	
Zr	90	2	72	141.511	ppb	141.511	11.95	840	1000	
Nb	93	2	72	0.209	ppb	0.209	24.54	887	200	
Mo	95	2	115	0.068	ppb	0.068	90.49	120	2000	
Pd	105	2	115	0.021	ppb	0.021	41.55	53	100	
Ag	107	2	115	-0.002	ppb	-0.002	-81.71	3	100	
Cd	111	2	115	0.010	ppb	0.010	143.51	7	2000	
Sn	120	2	115	0.646	ppb	0.646	21.22	797	2000	
Sb	121	2	115	0.171	ppb	0.171	16.17	167	1000	
Ba	137	2	115	624.936	ppb	624.936	0.67	149772	5000	
W	182	2	165	0.036	ppb	0.036	30.06	887	100	
Pt	195	2	165	0.049	ppb	0.049	12.70	300	100	
Tl	205	2	165	-0.008	ppb	-0.008	-37.05	100	2000	
Pb	208	2	165	0.127	ppb	0.127	8.35	2414	5000	
Th	232	2	165	0.010	ppb	0.010	56.77	397	2000	
U	238	2	165	0.016	ppb	0.016	11.53	377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1055853	1.11	2128935	49.60	60	120	IS Failed
Sc (IS)	45	1	HMI H2	19703895	0.43	47418043	41.55	60	120	IS Failed
Sc (IS)	45	2	HMI He	744780	0.29	935665	79.60	60	120	
Sc (IS)	45	3	No Gas	86045589	0.79	125437115	68.60	60	120	
Ge Internal Standard	72	1	HMI H2	11541246	0.74	21615861	53.39	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	920907	0.54	1215965	75.73	60	120	
In Internal Standard	115	2	HMI He	2721029	0.73	3509672	77.53	60	120	
Ho-165	165	2	HMI He	17076297	1.39	22804243	74.88	60	120	

Sample Report

Sample Table

Sample Name	720-88516-F-24-B
Data File Name	074SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:00:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429827 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	53.558	ppb	53.558	10.43	124663	500000	
Li	7	2	45	-48.804	ppb	-48.804	-30.09	7715	500000	
Li	7	3	45	-73.722	ppb	-73.722	-2.70	6615235	50000	
Be	9	1	6	-0.004	ppb	-0.004	-995.51	17	2000	
B	11	1	6	783.336	ppb	783.336	1.57	298848	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2946903.868	ppb	2946903.868	0.69	657671270	400000	>LDR
Mg	24	2	45	415904.722	ppb	415904.722	1.00	41494499	400000	
Al	27	2	45	7.684	ppb	7.684	63.54	260	400000	
K	39	1	45	69694.853	ppb	69694.853	0.59	150374518	400000	
K	39	2	45	97356.483	ppb	97356.483	0.92	3867370	400000	
Ca	40	1	45	154754.634	ppb	154754.634	0.35	521709792	400000	
Ca	44	2	45	210981.184	ppb	210981.184	0.97	510857	400000	
Ti	47	2	45	2084.560	ppb	2084.560	24.77	110	4000	
V	51	2	72	3.250	ppb	3.250	11.37	4094	2000	
Cr	52	2	72	2.782	ppb	2.782	11.34	4341	5000	
Mn	55	2	72	2201.362	ppb	2201.362	0.41	1050407	10000	
Fe	57	2	72	16.443	ppb	16.443	7.63	587	400000	
Co	59	2	72	0.306	ppb	0.306	19.05	887	2000	
Ni	60	2	72	0.157	ppb	0.157	36.31	387	5000	
Cu	63	2	72	1.151	ppb	1.151	7.60	4537	5000	
Zn	66	2	72	2.662	ppb	2.662	29.77	1263	5000	
As	75	2	72	0.956	ppb	0.956	15.72	163	2000	
Se	78	1	72	0.113	ppb	0.113	90.01	51	2000	
Sr	88	2	72	3971.711	ppb	3971.711	0.88	1633551	4000	
Zr	90	2	72	136.876	ppb	136.876	3.24	820	1000	
Nb	93	2	72	0.193	ppb	0.193	16.47	837	200	
Mo	95	2	115	0.021	ppb	0.021	144.72	73	2000	
Pd	105	2	115	0.017	ppb	0.017	66.79	47	100	
Ag	107	2	115	0.004	ppb	0.004	95.04	27	100	
Cd	111	2	115	0.010	ppb	0.010	287.08	7	2000	
Sn	120	2	115	0.705	ppb	0.705	11.41	857	2000	
Sb	121	2	115	0.138	ppb	0.138	41.12	143	1000	
Ba	137	2	115	643.828	ppb	643.828	1.22	155099	5000	
W	182	2	165	0.040	ppb	0.040	42.15	917	100	
Pt	195	2	165	0.059	ppb	0.059	15.64	353	100	
Tl	205	2	165	-0.009	ppb	-0.009	-56.46	93	2000	
Pb	208	2	165	0.070	ppb	0.070	14.16	1740	5000	
Th	232	2	165	0.008	ppb	0.008	98.21	367	2000	
U	238	2	165	0.016	ppb	0.016	11.60	377	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1072321	1.71	2128935	50.37	60	120	IS Failed
Sc (IS)	45	1	HMI H2	19739836	0.08	47418043	41.63	60	120	IS Failed
Sc (IS)	45	2	HMI He	754389	0.96	935665	80.63	60	120	
Sc (IS)	45	3	No Gas	84221995	0.33	125437115	67.14	60	120	
Ge Internal Standard	72	1	HMI H2	11501011	0.54	21615861	53.21	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	926858	0.76	1215965	76.22	60	120	
In Internal Standard	115	2	HMI He	2735124	0.43	3509672	77.93	60	120	
Ho-165	165	2	HMI He	17213122	0.73	22804243	75.48	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	075_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:04:16-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	490.465	ppb	1.845	325346	500	98.1	90	110	
Li	7	2	45	331.096	ppb	2.372	18571	500	66.2	90	110	>+\-10%
Li	7	3	45	276.814	ppb	2.966	15774892	500	55.4	90	110	>+\-10%
Be	9	1	6	39.514	ppb	1.745	16809	50	79.0	90	110	>+\-10%
B	11	1	6	56.872	ppb	4.051	27126	50	113.7	90	110	>+\-10%
Na	23	1	45	8521.319	ppb	2.976	23728667	5000	170.4	90	110	>+\-10%
Na	23	2	45	8375.953	ppb	1.609	2042105	5000	167.5	90	110	>+\-10%
Mg	24	2	45	4787.191	ppb	1.311	514239	5000	95.7	90	110	
Al	27	2	45	4931.613	ppb	1.415	112908	5000	98.6	90	110	
K	39	1	45	3175.601	ppb	1.187	13147724	5000	63.5	90	110	>+\-10%
K	39	2	45	5145.601	ppb	0.114	228338	5000	102.9	90	110	
Ca	40	1	45	4123.746	ppb	0.574	16856411	5000	82.5	90	110	>+\-10%
Ca	44	2	45	5425.690	ppb	2.589	14240	5000	108.5	90	110	
Ti	47	2	45	116.976	ppb	173.205	7	50	234.0	90	110	>+\-10%
V	51	2	72	47.788	ppb	1.205	60368	50	95.6	90	110	
Cr	52	2	72	46.183	ppb	0.176	80168	50	92.4	90	110	
Mn	55	2	72	49.861	ppb	2.646	28335	50	99.7	90	110	
Fe	57	2	72	4734.414	ppb	1.738	150239	5000	94.7	90	110	
Co	59	2	72	46.713	ppb	1.347	157773	50	93.4	90	110	
Ni	60	2	72	46.306	ppb	3.449	46681	50	92.6	90	110	
Cu	63	2	72	47.078	ppb	0.322	137742	50	94.2	90	110	
Zn	66	2	72	48.568	ppb	0.531	15184	50	97.1	90	110	
As	75	2	72	47.936	ppb	1.677	8572	50	95.9	90	110	
Se	78	1	72	48.150	ppb	0.328	19400	50	96.3	90	110	
Sr	88	2	72	53.618	ppb	2.342	26179	50	107.2	90	110	
Zr	90	2	72	80.110	ppb	11.428	607	50	160.2	90	110	>+\-10%
Nb	93	2	72	93.791	ppb	2.309	395338	100	93.8	90	110	
Mo	95	2	115	48.273	ppb	3.161	58862	50	96.5	90	110	
Pd	105	2	115	47.092	ppb	1.699	103442	50	94.2	90	110	
Ag	107	2	115	47.297	ppb	0.653	218892	50	94.6	90	110	
Cd	111	2	115	48.675	ppb	3.403	23749	50	97.3	90	110	
Sn	120	2	115	48.408	ppb	3.202	55512	50	96.8	90	110	
Sb	121	2	115	49.078	ppb	1.238	43919	50	98.2	90	110	
Ba	137	2	115	51.812	ppb	2.070	15135	50	103.6	90	110	
W	182	2	165	45.902	ppb	1.305	321160	50	91.8	90	110	
Pt	195	2	165	44.887	ppb	0.692	285763	50	89.8	90	110	>+\-10%
Tl	205	2	165	47.403	ppb	1.525	541492	50	94.8	90	110	
Pb	208	2	165	47.806	ppb	0.498	700223	50	95.6	90	110	
Th	232	2	165	45.666	ppb	1.263	818106	50	91.3	90	110	
U	238	2	165	44.616	ppb	0.410	933125	50	89.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1294029	0.51	2128935	60.78	60	120	
Sc (IS)	45	1	HMI H2	23782072	0.87	47418043	50.15	60	120	IS Failed
Sc (IS)	45	2	HMI He	811926	0.32	935665	86.78	60	120	
Sc (IS)	45	3	No Gas	89699192	0.87	125437115	71.51	60	120	
Ge Internal Standard	72	1	HMI H2	14700340	0.70	21615861	68.01	60	120	
Ge Internal Standard	72	2	HMI He	1099531	0.34	1215965	90.42	60	120	
In Internal Standard	115	2	HMI He	3313006	0.65	3509672	94.40	60	120	
Ho-165	165	2	HMI He	20689301	0.75	22804243	90.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	076_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:08:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-92.307	ppb	-2.3	6599237	10	
Be	9	1	6	-0.037	ppb	-73.9	7	0.5	
B	11	1	6	8.998	ppb	13.9	5194	0.5	>RL
Na	23	1	45	2485.831	ppb	1.2	7150620	25	>RL
Na	23	2	45	2614.216	ppb	1.8	662121	25	>RL
Mg	24	2	45	134.859	ppb	0.5	14740	25	>RL
Al	27	2	45	0.526	ppb	469.6	117	15	
K	39	1	45	-782.664	ppb	-0.6	3148471	50	
K	39	2	45	20.787	ppb	70.5	9743	50	
Ca	40	1	45	45.493	ppb	2.9	295594	50	
Ca	44	2	45	30.111	ppb	41.5	183	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.195	ppb	50.1	1057	1	
Cr	52	2	72	-0.025	ppb	-72.4	297	1	
Mn	55	2	72	0.837	ppb	5.2	593	0.5	>RL
Fe	57	2	72	1.057	ppb	77.2	210	25	
Co	59	2	72	0.010	ppb	82.3	53	0.5	
Ni	60	2	72	-0.040	ppb	-36.3	263	1	
Cu	63	2	72	0.120	ppb	59.7	2434	1	
Zn	66	2	72	0.329	ppb	48.3	810	5	
As	75	2	72	-0.017	ppb	-289.1	20	1	
Se	78	1	72	0.030	ppb	187.3	31	1	
Sr	88	2	72	0.904	ppb	23.6	463	0.5	>RL
Zr	90	2	72	8.022	ppb	55.8	143	1	>RL
Nb	93	2	72	1.547	ppb	12.6	6755	2	
Mo	95	2	115	0.070	ppb	51.7	153	0.5	
Pd	105	2	115	0.018	ppb	43.8	60	1	
Ag	107	2	115	0.010	ppb	77.2	60	1	
Cd	111	2	115	0.007	ppb	341.6	7	0.5	
Sn	120	2	115	0.062	ppb	26.9	313	1	
Sb	121	2	115	0.406	ppb	4.7	427	0.6	
Ba	137	2	115	0.079	ppb	42.8	40	0.5	
W	182	2	165	0.032	ppb	67.8	1063	1	
Pt	195	2	165	0.098	ppb	15.8	687	1	
Tl	205	2	165	0.010	ppb	60.7	330	0.1	
Pb	208	2	165	0.002	ppb	519.6	1117	0.5	
Th	232	2	165	0.036	ppb	13.1	953	1	
U	238	2	165	0.033	ppb	3.3	813	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1306059	0.21	2128935	61.35	60	120	
Sc (IS)	45	1	HMI H2	23769787	0.49	47418043	50.13	60	120	IS Failed
Sc (IS)	45	2	HMI He	816810	0.38	935665	87.30	60	120	
Sc (IS)	45	3	No Gas	89925549	0.93	125437115	71.69	60	120	
Ge Internal Standard	72	1	HMI H2	14569512	0.44	21615861	67.40	60	120	
Ge Internal Standard	72	2	HMI He	1109390	0.34	1215965	91.24	60	120	
In Internal Standard	115	2	HMI He	3418334	0.74	3509672	97.40	60	120	
Ho-165	165	2	HMI He	20984830	0.34	22804243	92.02	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	077WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:11:50-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.052	ppb	0	0	0.5
Na	23	2	45	1936.300	ppb	1.696675272	512958	25
Mg	24	2	45	98.580	ppb	5.86036989	11138	25
Al	27	2	45	0.239	ppb	828.7696292	113	15
K	39	2	45	5.127	ppb	180.8691008	9336	50
Ca	44	2	45	18.206	ppb	65.57262044	157	25
V	51	2	72	0.081	ppb	152.6013172	937	1
Cr	52	2	72	0.001	ppb	4295.530266	350	1
Mn	55	2	72	0.736	ppb	14.95172047	550	0.5
Fe	57	2	72	0.495	ppb	699.8376253	197	25
Co	59	2	72	0.001	ppb	438.4915454	23	0.5
Ni	60	2	72	-0.020	ppb	-342.2239491	290	1
Cu	63	2	72	0.195	ppb	28.54254789	2717	1
Zn	66	2	72	0.458	ppb	67.25144675	870	5
As	75	2	72	-0.020	ppb	-89.71424889	20	1
Se	78	1	72	0.026	ppb	213.7000967	29	1
Nb	93	2	72	0.889	ppb	19.120476	4064	2
Mo	95	2	115	0.003	ppb	249.5437248	70	0.5
Pd	105	2	115	0.006	ppb	115.4486076	33	1
Ag	107	2	115	0.004	ppb	161.8560277	33	1
Cd	111	2	115	0.000	ppb	-26393.62759	3	0.5
Sn	120	2	115	0.024	ppb	251.7610679	273	1
Sb	121	2	115	0.171	ppb	16.10366554	213	0.6
Ba	137	2	115	0.043	ppb	270.8304359	30	0.5
W	182	2	165	-0.005	ppb	-202.0151384	817	1
Pt	195	2	165	0.058	ppb	22.69010336	437	1
Tl	205	2	165	-0.001	ppb	-618.8709671	207	0.1
Pb	208	2	165	-0.006	ppb	-174.761446	1020	0.5
Th	232	2	165	0.011	ppb	30.78126809	513	1
U	238	2	165	0.011	ppb	35.464709	363	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1330484	0.42	2128935	62.50	60	120	
Sc (IS)	45	1	HMI H2	24084107	0.73	47418043	50.79	60	120	IS Failed
Sc (IS)	45	2	HMI He	840844	0.53	935665	89.87	60	120	
Sc (IS)	45	3	No Gas	89982222	0.62	125437115	71.73	60	120	
Ge Internal Standard	72	1	HMI H2	14664935	0.51	21615861	67.84	60	120	
Ge Internal Standard	72	2	HMI He	1137700	0.99	1215965	93.56	60	120	
In Internal Standard	115	2	HMI He	3473716	1.48	3509672	98.98	60	120	
Ho-165	165	2	HMI He	21511869	0.60	22804243	94.33	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	078WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:15:39-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.037	ppb	-71.46216406	7	0.5
Na	23	2	45	1510.419	ppb	2.017310387	410521	25
Mg	24	2	45	73.110	ppb	3.372423073	8379	25
Al	27	2	45	0.050	ppb	4613.213296	110	15
K	39	2	45	1.780	ppb	453.0522343	9266	50
Ca	44	2	45	27.524	ppb	98.3222043	183	25
V	51	2	72	-0.003	ppb	-6066.357576	837	1
Cr	52	2	72	0.024	ppb	153.5319617	397	1
Mn	55	2	72	0.671	ppb	44.62353219	517	0.5
Fe	57	2	72	3.646	ppb	108.3060586	303	25
Co	59	2	72	0.005	ppb	64.36042329	37	0.5
Ni	60	2	72	0.002	ppb	3040.515033	317	1
Cu	63	2	72	0.113	ppb	98.64273373	2500	1
Zn	66	2	72	0.769	ppb	52.14784742	977	5
As	75	2	72	-0.031	ppb	-133.5763365	18	1
Se	78	1	72	-0.001	ppb	-2939.863501	19	1
Nb	93	2	72	0.520	ppb	32.25795395	2477	2
Mo	95	2	115	-0.029	ppb	-51.97806722	30	0.5
Pd	105	2	115	0.008	ppb	101.9479676	40	1
Ag	107	2	115	0.003	ppb	162.4689904	30	1
Cd	111	2	115	0.000	ppb	-3729.399722	3	0.5
Sn	120	2	115	0.024	ppb	57.51801623	280	1
Sb	121	2	115	0.061	ppb	76.93152643	113	0.6
Ba	137	2	115	0.009	ppb	584.4709418	20	0.5
W	182	2	165	-0.007	ppb	-79.18501727	813	1
Pt	195	2	165	0.036	ppb	31.41959846	293	1
Tl	205	2	165	-0.004	ppb	-85.40911835	173	0.1
Pb	208	2	165	0.009	ppb	70.95804215	1253	0.5
Th	232	2	165	0.008	ppb	64.65005911	473	1
U	238	2	165	0.005	ppb	22.83139746	240	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1343085	0.55	2128935	63.09	60	120	
Sc (IS)	45	1	HMI H2	24087284	0.46	47418043	50.80	60	120	IS Failed
Sc (IS)	45	2	HMI He	848085	0.85	935665	90.64	60	120	
Sc (IS)	45	3	No Gas	88691379	0.47	125437115	70.71	60	120	
Ge Internal Standard	72	1	HMI H2	14752920	0.26	21615861	68.25	60	120	
Ge Internal Standard	72	2	HMI He	1149810	0.29	1215965	94.56	60	120	
In Internal Standard	115	2	HMI He	3568634	1.27	3509672	101.68	60	120	
Ho-165	165	2	HMI He	21728928	0.48	22804243	95.28	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	079WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:19:28-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.022	ppb	-243.0661062	13	0.5
Na	23	2	45	1262.639	ppb	2.242694565	349660	25
Mg	24	2	45	60.809	ppb	0.81303918	7025	25
Al	27	2	45	-0.799	ppb	-177.5784537	90	15
K	39	2	45	-0.098	ppb	-15026.23646	9216	50
Ca	44	2	45	16.282	ppb	104.1321479	153	25
V	51	2	72	0.015	ppb	617.4183895	860	1
Cr	52	2	72	-0.005	ppb	-826.9225279	343	1
Mn	55	2	72	0.514	ppb	8.436732394	423	0.5
Fe	57	2	72	0.129	ppb	979.1466804	187	25
Co	59	2	72	0.000	ppb	1.884080425	20	0.5
Ni	60	2	72	0.021	ppb	160.320158	337	1
Cu	63	2	72	0.108	ppb	12.77746949	2484	1
Zn	66	2	72	0.568	ppb	53.92854724	913	5
As	75	2	72	-0.031	ppb	-66.88719634	18	1
Se	78	1	72	-0.004	ppb	-367.358282	17	1
Nb	93	2	72	0.448	ppb	23.27182972	2157	2
Mo	95	2	115	-0.016	ppb	-72.97766585	47	0.5
Pd	105	2	115	0.010	ppb	66.65586199	43	1
Ag	107	2	115	0.007	ppb	27.38891409	50	1
Cd	111	2	115	0.000	ppb	-5720.785241	3	0.5
Sn	120	2	115	0.072	ppb	106.7158156	337	1
Sb	121	2	115	0.045	ppb	88.96015339	97	0.6
Ba	137	2	115	0.063	ppb	58.10464737	37	0.5
W	182	2	165	-0.021	ppb	-9.197443248	727	1
Pt	195	2	165	0.030	ppb	14.98862246	260	1
Tl	205	2	165	-0.002	ppb	-137.3495305	200	0.1
Pb	208	2	165	-0.003	ppb	-204.9535429	1090	0.5
Th	232	2	165	0.009	ppb	41.5584986	490	1
U	238	2	165	0.002	ppb	77.90544802	170	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1322203	0.88	2128935	62.11	60	120	
Sc (IS)	45	1	HMI H2	24320987	0.07	47418043	51.29	60	120	IS Failed
Sc (IS)	45	2	HMI He	851288	1.02	935665	90.98	60	120	
Sc (IS)	45	3	No Gas	88627902	0.68	125437115	70.66	60	120	
Ge Internal Standard	72	1	HMI H2	14658449	0.38	21615861	67.81	60	120	
Ge Internal Standard	72	2	HMI He	1148671	0.11	1215965	94.47	60	120	
In Internal Standard	115	2	HMI He	3543091	0.18	3509672	100.95	60	120	
Ho-165	165	2	HMI He	22138210	0.52	22804243	97.08	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	080WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:23:15-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.037	ppb	-73.6800028	7	0.5
Na	23	2	45	1105.977	ppb	2.598290971	308148	25
Mg	24	2	45	51.981	ppb	2.977392443	5991	25
Al	27	2	45	0.071	ppb	1529.959037	110	15
K	39	2	45	4.487	ppb	193.9740482	9360	50
Ca	44	2	45	0.660	ppb	2009.588998	110	25
V	51	2	72	0.032	ppb	304.1192272	877	1
Cr	52	2	72	0.028	ppb	20.58785292	400	1
Mn	55	2	72	0.365	ppb	23.28012929	333	0.5
Fe	57	2	72	-0.952	ppb	-31.51466507	150	25
Co	59	2	72	0.004	ppb	220.5295225	33	0.5
Ni	60	2	72	-0.067	ppb	-36.7551071	243	1
Cu	63	2	72	0.183	ppb	39.29361973	2694	1
Zn	66	2	72	0.984	ppb	38.13232795	1037	5
As	75	2	72	-0.070	ppb	-17.64092099	10	1
Se	78	1	72	-0.024	ppb	-49.24719392	9	1
Nb	93	2	72	0.312	ppb	22.44824383	1550	2
Mo	95	2	115	-0.029	ppb	-27.06358674	30	0.5
Pd	105	2	115	0.007	ppb	155.6769612	37	1
Ag	107	2	115	0.002	ppb	59.26535529	23	1
Cd	111	2	115	-0.007	ppb	-1.77161E-06	0	0.5
Sn	120	2	115	-0.008	ppb	-854.2199864	240	1
Sb	121	2	115	0.016	ppb	330.373337	70	0.6
Ba	137	2	115	0.031	ppb	387.0922519	27	0.5
W	182	2	165	-0.004	ppb	-457.4565715	840	1
Pt	195	2	165	0.033	ppb	34.07682676	280	1
Tl	205	2	165	0.000	ppb	897.3030718	230	0.1
Pb	208	2	165	0.002	ppb	474.5263078	1157	0.5
Th	232	2	165	0.005	ppb	76.92485458	417	1
U	238	2	165	0.006	ppb	33.3026693	250	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1307986	0.14	2128935	61.44	60	120	
Sc (IS)	45	1	HMI H2	24024707	0.19	47418043	50.67	60	120	IS Failed
Sc (IS)	45	2	HMI He	845633	0.78	935665	90.38	60	120	
Sc (IS)	45	3	No Gas	86889245	1.06	125437115	69.27	60	120	
Ge Internal Standard	72	1	HMI H2	14474401	0.36	21615861	66.96	60	120	
Ge Internal Standard	72	2	HMI He	1141721	0.14	1215965	93.89	60	120	
In Internal Standard	115	2	HMI He	3564930	0.84	3509672	101.57	60	120	
Ho-165	165	2	HMI He	21904912	1.07	22804243	96.06	60	120	

Blank Report

Sample Table

Sample Name	rinse-5271046
Data File Name	081WASH.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:27:06-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.052	ppb	0	0	0.5
Na	23	2	45	994.622	ppb	2.094291649	280074	25
Mg	24	2	45	49.849	ppb	5.401225039	5748	25
Al	27	2	45	0.356	ppb	267.2415321	117	15
K	39	2	45	9.155	ppb	110.8256467	9560	50
Ca	44	2	45	1.890	ppb	974.5663688	113	25
V	51	2	72	0.013	ppb	413.1485014	857	1
Cr	52	2	72	-0.046	ppb	-64.74835607	270	1
Mn	55	2	72	0.334	ppb	6.334237361	317	0.5
Fe	57	2	72	0.032	ppb	590.9695889	183	25
Co	59	2	72	0.000	ppb	6.115011062	20	0.5
Ni	60	2	72	-0.055	ppb	-137.4662816	257	1
Cu	63	2	72	0.200	ppb	33.46728009	2757	1
Zn	66	2	72	0.933	ppb	54.3805135	1027	5
As	75	2	72	0.018	ppb	205.3599712	27	1
Se	78	1	72	-0.007	ppb	-659.5749328	16	1
Nb	93	2	72	0.282	ppb	18.55582511	1427	2
Mo	95	2	115	-0.034	ppb	-13.43962366	23	0.5
Pd	105	2	115	0.000	ppb	-2211.840037	20	1
Ag	107	2	115	0.001	ppb	329.5958357	20	1
Cd	111	2	115	0.025	ppb	115.2891358	17	0.5
Sn	120	2	115	0.038	ppb	66.67266296	300	1
Sb	121	2	115	0.040	ppb	27.57983545	93	0.6
Ba	137	2	115	-0.001	ppb	-11396.82514	17	0.5
W	182	2	165	-0.016	ppb	-104.744224	760	1
Pt	195	2	165	0.013	ppb	44.05673936	147	1
Tl	205	2	165	-0.001	ppb	-230.4167054	217	0.1
Pb	208	2	165	-0.013	ppb	-53.823174	927	0.5
Th	232	2	165	0.008	ppb	35.24692059	470	1
U	238	2	165	0.002	ppb	96.95486976	173	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1308051	1.10	2128935	61.44	60	120	
Sc (IS)	45	1	HMI H2	24012624	0.22	47418043	50.64	60	120	IS Failed
Sc (IS)	45	2	HMI He	844905	0.43	935665	90.30	60	120	
Sc (IS)	45	3	No Gas	86388199	1.25	125437115	68.87	60	120	
Ge Internal Standard	72	1	HMI H2	14483328	0.17	21615861	67.00	60	120	
Ge Internal Standard	72	2	HMI He	1147756	0.35	1215965	94.39	60	120	
In Internal Standard	115	2	HMI He	3592817	1.21	3509672	102.37	60	120	
Ho-165	165	2	HMI He	22065889	0.26	22804243	96.76	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5317210
Data File Name	082CALB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:30:53-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	137446	0.00
Li	7	2	HMI He	8106	0.06
Li	7	3	No Gas	6744287	0.00
Be	9	1	HMI H2	13	1299.04
B	11	1	HMI H2	2424	0.13
Na	23	1	HMI H2	2747532	0.00
Na	23	2	HMI He	265673	0.00
Mg	24	2	HMI He	4868	0.18
Al	27	2	HMI He	83	36.24
K	39	2	HMI He	9093	0.01
Ca	44	2	HMI He	100	0.01
Ti	47	2	HMI He	20	0.00
V	51	2	HMI He	787	1.30
Cr	52	2	HMI He	313	7.37
Mn	55	2	HMI He	243	9.30
Fe	57	2	HMI He	180	5.35
Co	59	2	HMI He	37	187.19
Ni	60	2	HMI He	253	6.49
Cu	63	2	HMI He	2394	0.25
Zn	66	2	HMI He	920	2.68
As	75	2	HMI He	27	41.69
Se	78	1	HMI H2	15	284.04
Sr	88	2	HMI He	103	47.14
Zr	90	2	HMI He	150	27.03
Nb	93	2	HMI He	1067	1.33
Mo	95	2	HMI He	27	292.73
Pd	105	2	HMI He	20	250.00
Ag	107	2	HMI He	17	207.85
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	237	8.81
Sb	121	2	HMI He	70	93.52
Ba	137	2	HMI He	3	5196.15
W	182	2	HMI He	757	1.01
Pt	195	2	HMI He	173	18.33
Tl	205	2	HMI He	170	9.15
Pb	208	2	HMI He	1163	0.56
Th	232	2	HMI He	443	5.12
U	238	2	HMI He	197	16.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1297767	1.22
Sc (IS)	45	1	HMI H2	23781905	1.10
Sc (IS)	45	2	HMI He	852397	0.19
Sc (IS)	45	3	No Gas	85455305	1.08
Ge Internal Standard	72	1	HMI H2	14308919	0.08
Ge Internal Standard	72	2	HMI He	1145983	0.29
In Internal Standard	115	2	HMI He	3570620	0.98
Ho-165	165	2	HMI He	22043381	0.78

Calibration Standard Report

Sample Table

Sample Name	ic-5317211
Data File Name	083CALS.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:34:40-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	505762	0.00
Li	7	2	HMI He	29733	0.01
Li	7	3	No Gas	24475851	0.00
Be	9	1	HMI H2	34035	0.01
B	11	1	HMI H2	37880	0.01
Na	23	1	HMI H2	26099100	0.00
Na	23	2	HMI He	2363268	0.00
Mg	24	2	HMI He	986311	0.00
Al	27	2	HMI He	226124	0.00
K	39	1	HMI H2	22343353	0.00
K	39	2	HMI He	439243	0.00
Ca	40	1	HMI H2	31920160	0.00
Ca	44	2	HMI He	27113	0.01
Ti	47	2	HMI He	10	1000.00
V	51	2	HMI He	116110	0.00
Cr	52	2	HMI He	157058	0.00
Mn	55	2	HMI He	55283	0.00
Fe	57	2	HMI He	294850	0.00
Co	59	2	HMI He	305253	0.00
Ni	60	2	HMI He	89410	0.00
Cu	63	2	HMI He	257916	0.00
Zn	66	2	HMI He	28876	0.00
As	75	2	HMI He	17009	0.01
Se	78	1	HMI H2	35721	0.00
Sr	88	2	HMI He	51657	0.00
Zr	90	2	HMI He	703	2.41
Nb	93	2	HMI He	822055	0.00
Mo	95	2	HMI He	113276	0.00
Pd	105	2	HMI He	188915	0.00
Ag	107	2	HMI He	424319	0.00
Cd	111	2	HMI He	46847	0.00
Sn	120	2	HMI He	113149	0.00
Sb	121	2	HMI He	89749	0.00
Ba	137	2	HMI He	29887	0.01
Nd	146	2	HMI He	138681	0.00
Sm	147	2	HMI He	121065	0.00
Sm	150	2	HMI He	115514	0.00
Gd	156	1	HMI H2	1052468	0.00
Gd	157	1	HMI H2	806200	0.00
W	182	2	HMI He	665925	0.00
Pt	195	2	HMI He	586974	0.00
Tl	205	2	HMI He	1124671	0.00
Pb	208	2	HMI He	1458223	0.00
Th	232	2	HMI He	1807120	0.00
U	238	2	HMI He	2061026	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1237833	1.44	1297767	95.38	60	120	
Sc (IS)	45	1	HMI H2	22872985	0.72	23781905	96.18	60	120	
Sc (IS)	45	2	HMI He	803668	0.86	852397	94.28	60	120	
Sc (IS)	45	3	No Gas	80624575	0.32	85455305	94.35	60	120	
Ge Internal Standard	72	1	HMI H2	13619694	0.67	14308919	95.18	60	120	
Ge Internal Standard	72	2	HMI He	1081063	0.12	1145983	94.33	60	120	
In Internal Standard	115	2	HMI He	3336654	0.57	3570620	93.45	60	120	
Ho-165	165	2	HMI He	21256266	1.03	22043381	96.43	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	084_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:38:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	517.960	ppb	1.849	314570	500	103.6	90	110	
Li	7	2	45	506.960	ppb	1.255	18454	500	101.4	90	110	
Li	7	3	45	507.094	ppb	1.262	15486451	500	101.4	90	110	
Be	9	1	6	48.641	ppb	2.835	16846	50	97.3	90	110	
B	11	1	6	51.146	ppb	2.820	20857	50	102.3	90	110	
Na	23	1	45	4935.252	ppb	1.235	13733483	5000	98.7	90	110	
Na	23	2	45	5175.029	ppb	1.981	1316200	5000	103.5	90	110	
Mg	24	2	45	5033.688	ppb	0.108	488505	5000	100.7	90	110	
Al	27	2	45	5103.064	ppb	0.214	113060	5000	102.1	90	110	
K	39	1	45	5050.167	ppb	0.788	12345998	5000	101.0	90	110	
K	39	2	45	5053.419	ppb	0.913	221556	5000	101.1	90	110	
Ca	40	1	45	5058.057	ppb	1.259	15653565	5000	101.2	90	110	
Ca	44	2	45	4967.042	ppb	4.805	13236	5000	99.3	90	110	
Ti	47	2	45	20.913	ppb	1145.051	17	50	41.8	90	110	>+\-10%
V	51	2	72	49.758	ppb	1.897	57451	50	99.5	90	110	
Cr	52	2	72	49.632	ppb	2.030	77164	50	99.3	90	110	
Mn	55	2	72	50.494	ppb	2.311	27694	50	101.0	90	110	
Fe	57	2	72	4984.335	ppb	0.186	145291	5000	99.7	90	110	
Co	59	2	72	49.780	ppb	2.010	150148	50	99.6	90	110	
Ni	60	2	72	49.667	ppb	1.090	43997	50	99.3	90	110	
Cu	63	2	72	50.437	ppb	0.646	129635	50	100.9	90	110	
Zn	66	2	72	48.321	ppb	3.112	14230	50	96.6	90	110	
As	75	2	72	49.061	ppb	3.067	8257	50	98.1	90	110	
Se	78	1	72	50.669	ppb	1.390	17612	50	101.3	90	110	
Sr	88	2	72	49.424	ppb	2.606	25274	50	98.8	90	110	
Zr	90	2	72	70.846	ppb	16.346	533	50	141.7	90	110	>+\-10%
Nb	93	2	72	100.668	ppb	0.169	409321	100	100.7	90	110	
Mo	95	2	115	49.867	ppb	0.890	56012	50	99.7	90	110	
Pd	105	2	115	52.583	ppb	2.321	98481	50	105.2	90	110	
Ag	107	2	115	50.200	ppb	0.534	211174	50	100.4	90	110	
Cd	111	2	115	50.548	ppb	2.001	23475	50	101.1	90	110	
Sn	120	2	115	49.674	ppb	1.577	55827	50	99.3	90	110	
Sb	121	2	115	51.116	ppb	1.539	45510	50	102.2	90	110	
Ba	137	2	115	50.901	ppb	3.048	15085	50	101.8	90	110	
W	182	2	165	50.131	ppb	0.950	332895	50	100.3	90	110	
Pt	195	2	165	49.876	ppb	0.982	291723	50	99.8	90	110	
Tl	205	2	165	50.029	ppb	0.867	560593	50	100.1	90	110	
Pb	208	2	165	50.030	ppb	1.364	727293	50	100.1	90	110	
Th	232	2	165	46.834	ppb	1.074	843295	50	93.7	90	110	
U	238	2	165	46.866	ppb	1.008	962341	50	93.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1259417	1.93	1297767	97.04	60	120	
Sc (IS)	45	1	HMI H2	22091315	0.82	23781905	92.89	60	120	
Sc (IS)	45	2	HMI He	787094	0.16	852397	92.34	60	120	
Sc (IS)	45	3	No Gas	80305979	0.38	85455305	93.97	60	120	
Ge Internal Standard	72	1	HMI H2	13247240	0.94	14308919	92.58	60	120	
Ge Internal Standard	72	2	HMI He	1068147	0.47	1145983	93.21	60	120	
In Internal Standard	115	2	HMI He	3307748	0.35	3570620	92.64	60	120	
Ho-165	165	2	HMI He	21174081	1.15	22043381	96.06	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	085_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:42:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	8.889	ppb	50.7	6457622	10	
Be	9	1	6	-0.018	ppb	-190.7	7	0.5	
B	11	1	6	0.633	ppb	37.8	2577	0.5	>RL
Na	23	1	45	-162.709	ppb	-5.8	2203772	25	
Na	23	2	45	-130.189	ppb	-10.3	222052	25	
Mg	24	2	45	-17.703	ppb	-11.6	2840	25	
Al	27	2	45	0.964	ppb	43.6	100	15	
K	39	1	45	19.470	ppb	113.9	2987367	50	
K	39	2	45	-1.259	ppb	-518.3	8483	50	
Ca	40	1	45	-4.192	ppb	-16.8	109645	50	
Ca	44	2	45	8.424	ppb	139.5	117	25	
Ti	47	2	45	174.980	ppb	37.3	3	0.5	>RL
V	51	2	72	0.290	ppb	33.4	1070	1	
Cr	52	2	72	0.053	ppb	89.6	377	1	
Mn	55	2	72	0.363	ppb	45.5	427	0.5	
Fe	57	2	72	0.501	ppb	928.3	183	25	
Co	59	2	72	0.011	ppb	89.7	67	0.5	
Ni	60	2	72	0.025	ppb	155.7	260	1	
Cu	63	2	72	0.230	ppb	64.6	2827	1	
Zn	66	2	72	-0.285	ppb	-94.2	783	5	
As	75	2	72	0.022	ppb	358.6	29	1	
Se	78	1	72	0.067	ppb	85.8	37	1	
Sr	88	2	72	-0.033	ppb	-259.2	80	0.5	
Zr	90	2	72	2.229	ppb	530.3	153	1	>RL
Nb	93	2	72	1.564	ppb	16.3	7385	2	
Mo	95	2	115	0.061	ppb	52.8	97	0.5	
Pd	105	2	115	0.043	ppb	25.1	103	1	
Ag	107	2	115	0.025	ppb	14.1	123	1	
Cd	111	2	115	0.049	ppb	106.9	27	0.5	
Sn	120	2	115	0.054	ppb	55.7	290	1	
Sb	121	2	115	0.431	ppb	8.7	463	0.6	
Ba	137	2	115	0.098	ppb	137.8	33	0.5	
W	182	2	165	0.072	ppb	17.9	1210	1	
Pt	195	2	165	0.028	ppb	7.5	333	1	
Tl	205	2	165	0.021	ppb	37.6	403	0.1	
Pb	208	2	165	0.005	ppb	163.8	1197	0.5	
Th	232	2	165	0.031	ppb	20.7	993	1	
U	238	2	165	0.043	ppb	14.9	1077	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1257243	1.19	1297767	96.88	60	120	
Sc (IS)	45	1	HMI H2	22293636	1.12	23781905	93.74	60	120	
Sc (IS)	45	2	HMI He	800285	0.59	852397	93.89	60	120	
Sc (IS)	45	3	No Gas	79807195	1.01	85455305	93.39	60	120	
Ge Internal Standard	72	1	HMI H2	13432938	0.78	14308919	93.88	60	120	
Ge Internal Standard	72	2	HMI He	1074575	0.31	1145983	93.77	60	120	
In Internal Standard	115	2	HMI He	3423679	0.31	3570620	95.88	60	120	
Ho-165	165	2	HMI He	21266926	0.88	22043381	96.48	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	086LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:46:01-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	17.587	ppb	9.407	6673244	50	35.2	70	130	>+/-30%
Be	9	1	6	0.940	ppb	4.084	340	1	94.0	70	130	
Na	23	2	45	-76.853	ppb	-4.715	238931	50	-153.7	70	130	>+/-30%
Mg	24	2	45	41.386	ppb	1.914	8826	50	82.8	70	130	
Al	27	2	45	33.680	ppb	7.896	857	30	112.3	70	130	
K	39	2	45	89.648	ppb	10.904	12682	100	89.6	70	130	
Ca	44	2	45	47.327	ppb	66.917	227	50	94.7	70	130	
V	51	2	72	5.239	ppb	2.719	6905	5	104.8	70	130	
Cr	52	2	72	1.949	ppb	6.451	3411	2	97.5	70	130	
Mn	55	2	72	0.976	ppb	13.069	780	1	97.6	70	130	
Fe	57	2	72	56.947	ppb	8.364	1880	50	113.9	70	130	
Co	59	2	72	0.956	ppb	1.829	3004	1	95.6	70	130	
Ni	60	2	72	2.326	ppb	0.821	2354	2	116.3	70	130	
Cu	63	2	72	2.172	ppb	5.433	7949	2	108.6	70	130	
Zn	66	2	72	9.909	ppb	3.119	3707	10	99.1	70	130	
As	75	2	72	4.477	ppb	2.416	799	5	89.5	70	130	
Se	78	1	72	4.862	ppb	3.856	1752	5	97.2	70	130	
Sr	88	2	72	0.796	ppb	20.816	517	1	79.6	70	130	
Zr	90	2	72	10.938	ppb	48.056	207	0.5	2187.7	70	130	>+/-30%
Nb	93	2	72	5.174	ppb	9.009	22630	2	258.7	70	130	>+/-30%
Mo	95	2	115	1.898	ppb	6.859	2297	2	94.9	70	130	
Pd	105	2	115	0.022	ppb	13.843	63	1	2.2	70	130	>+/-30%
Ag	107	2	115	4.923	ppb	4.600	22080	5	98.5	70	130	
Cd	111	2	115	0.856	ppb	11.279	427	1	85.6	70	130	
Sn	120	2	115	9.797	ppb	2.829	11918	10	98.0	70	130	
Sb	121	2	115	2.120	ppb	1.274	2077	2	106.0	70	130	
Ba	137	2	115	1.025	ppb	22.807	327	1	102.5	70	130	
W	182	2	165	4.851	ppb	3.074	33395	1	485.1	70	130	>+/-30%
Pt	195	2	165	0.016	ppb	144.569	263	1	1.6	70	130	>+/-30%
Tl	205	2	165	0.991	ppb	2.895	11442	1	99.1	70	130	
Pb	208	2	165	0.986	ppb	3.694	15674	1	98.6	70	130	
Th	232	2	165	1.956	ppb	1.842	36196	2	97.8	70	130	
U	238	2	165	0.942	ppb	1.715	19831	1	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1265426	1.21	1297767	97.51	60	120	
Sc (IS)	45	1	HMI H2	22558863	0.10	23781905	94.86	60	120	
Sc (IS)	45	2	HMI He	819737	0.50	852397	96.17	60	120	
Sc (IS)	45	3	No Gas	80523967	0.41	85455305	94.23	60	120	
Ge Internal Standard	72	1	HMI H2	13635257	0.14	14308919	95.29	60	120	
Ge Internal Standard	72	2	HMI He	1100006	0.38	1145983	95.99	60	120	
In Internal Standard	115	2	HMI He	3523836	0.73	3570620	98.69	60	120	
Ho-165	165	2	HMI He	21511031	0.70	22043381	97.58	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5311606
Data File Name	087ICSA.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:49:49-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	8.547	ppb	35.0	6178922	1	>RL or LOD
Be	9	1	6	-0.037	ppb	0.0	0	1	
B	11	1	6	-0.659	ppb	-81.1	2017	1	
Na	23	1	45	99469.217	ppb	0.9	215929857	100000	
K	39	1	45	94834.991	ppb	0.1	170411557	100000	
Ca	40	1	45	95765.354	ppb	0.4	278755716	100000	
Ti	47	2	45	-516773.757	ppb	-0.8	43792	1	
V	51	2	72	0.577	ppb	19.4	1307	1	
Cr	52	2	72	0.249	ppb	16.8	637	1	
Mn	55	2	72	0.385	ppb	9.6	410	1	
Co	59	2	72	0.016	ppb	47.1	77	1	
Ni	60	2	72	0.111	ppb	112.2	313	1	
Cu	63	2	72	0.353	ppb	18.3	2934	1	
Zn	66	2	72	0.222	ppb	160.5	863	1	
As	75	2	72	0.058	ppb	130.1	33	1	
Se	78	1	72	0.039	ppb	141.7	25	1	
Sr	88	2	72	0.799	ppb	8.0	473	1	
Zr	90	2	72	9.960	ppb	106.9	183	1	>RL or LOD
Nb	93	2	72	0.629	ppb	18.9	3331	1	
Mo	95	2	115	2031.288	ppb	1.1	2158639	2000	>RL or LOD
Pd	105	2	115	0.013	ppb	44.1	40	1	
Ag	107	2	115	0.026	ppb	33.9	120	1	
Cd	111	2	115	0.244	ppb	37.1	110	1	
Sn	120	2	115	0.050	ppb	86.6	260	1	
Sb	121	2	115	0.185	ppb	38.0	217	1	
Ba	137	2	115	0.049	ppb	151.2	17	1	
W	182	2	165	0.219	ppb	9.0	2107	1	
Pt	195	2	165	0.002	ppb	507.3	173	1	
Tl	205	2	165	0.009	ppb	93.6	250	1	
Pb	208	2	165	0.067	ppb	9.1	2017	1	
Th	232	2	165	0.014	ppb	30.2	657	1	
U	238	2	165	0.002	ppb	271.6	220	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1202747	0.93	1297767	92.68	60	120	
Sc (IS)	45	1	HMI H2	20931111	0.66	23781905	88.01	60	120	
Sc (IS)	45	2	HMI He	767645	0.50	852397	90.06	60	120	
Sc (IS)	45	3	No Gas	76432061	0.16	85455305	89.44	60	120	
Ge Internal Standard	72	1	HMI H2	12302105	0.63	14308919	85.98	60	120	
Ge Internal Standard	72	2	HMI He	1003795	0.30	1145983	87.59	60	120	
In Internal Standard	115	2	HMI He	3130779	0.39	3570620	87.68	60	120	
Ho-165	165	2	HMI He	20464863	0.44	22043381	92.84	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5311608
Data File Name	088ICSB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:53:34-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	1068.223	ppb	1.479	479712	100	1068.2	80	120	
Li	7	2	45	1031.678	ppb	2.381	28668	100	1031.7	80	120	
Li	7	3	45	1061.851	ppb	0.829	23984956	100	1061.9	80	120	
Be	9	1	6	98.763	ppb	2.554	30996	100	98.8	80	120	
B	11	1	6	88.101	ppb	4.315	31029	100	88.1	80	120	
Na	23	1	45	109427.167	ppb	0.559	234163063	100	109427.2	80	120	
K	39	1	45	104540.727	ppb	0.598	185077771	100	104540.7	80	120	
Ca	40	1	45	105239.206	ppb	0.045	302264815	100	105239.2	80	120	
V	51	2	72	98.723	ppb	0.719	105592	100	98.7	80	120	
Cr	52	2	72	99.069	ppb	0.425	143321	100	99.1	80	120	
Mn	55	2	72	99.251	ppb	0.702	50542	100	99.3	80	120	
Co	59	2	72	98.072	ppb	0.899	275748	100	98.1	80	120	
Ni	60	2	72	95.553	ppb	0.922	78702	100	95.6	80	120	
Cu	63	2	72	106.318	ppb	0.302	252444	100	106.3	80	120	
Zn	66	2	72	95.125	ppb	1.118	25341	100	95.1	80	120	
As	75	2	72	92.512	ppb	0.547	14495	100	92.5	80	120	
Se	78	1	72	96.482	ppb	1.601	30633	100	96.5	80	120	
Sr	88	2	72	106.492	ppb	1.859	50664	100	106.5	80	120	
Zr	90	2	72	33.416	ppb	25.895	303	100	33.4	80	120	>+\-20%
Nb	93	2	72	163.267	ppb	0.571	618291	100	163.3	80	120	
Mo	95	2	115	2169.759	ppb	0.918	2259771	100	2169.8	80	120	>+\-20%
Pd	105	2	115	96.543	ppb	0.744	167721	100	96.5	80	120	
Ag	107	2	115	94.035	ppb	1.139	366923	100	94.0	80	120	
Cd	111	2	115	94.528	ppb	1.820	40724	100	94.5	80	120	
Sn	120	2	115	97.270	ppb	1.843	101204	100	97.3	80	120	
Sb	121	2	115	105.111	ppb	1.615	86742	100	105.1	80	120	
Ba	137	2	115	101.193	ppb	0.331	27816	100	101.2	80	120	
W	182	2	165	97.602	ppb	0.806	620960	100	97.6	80	120	
Pt	195	2	165	93.586	ppb	0.256	524856	100	93.6	80	120	
Tl	205	2	165	95.059	ppb	0.356	1021475	100	95.1	80	120	
Pb	208	2	165	94.405	ppb	0.311	1315358	100	94.4	80	120	
Th	232	2	165	97.980	ppb	1.111	1691692	100	98.0	80	120	
U	238	2	165	97.925	ppb	0.158	1928334	100	97.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1141443	0.85	1297767	87.95	60	120	
Sc (IS)	45	1	HMI H2	20653651	0.59	23781905	86.85	60	120	
Sc (IS)	45	2	HMI He	756960	0.68	852397	88.80	60	120	
Sc (IS)	45	3	No Gas	75553117	1.26	85455305	88.41	60	120	
Ge Internal Standard	72	1	HMI H2	12105034	0.53	14308919	84.60	60	120	
Ge Internal Standard	72	2	HMI He	995770	0.18	1145983	86.89	60	120	
In Internal Standard	115	2	HMI He	3068433	0.97	3570620	85.94	60	120	
Ho-165	165	2	HMI He	20307048	0.14	22043381	92.12	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	089SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T15:57:21-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	082CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.253	ppb	5.253	49.15	126732	500000	
Li	7	2	45	-8.249	ppb	-8.249	-195.85	7248	500000	
Li	7	3	45	7.810	ppb	7.810	46.80	6315584	50000	
Be	9	1	6	-0.017	ppb	-0.017	-207.62	7	2000	
B	11	1	6	-1.795	ppb	-1.795	-20.39	1620	2000	
Na	23	1	45	-411.644	ppb	-411.644	-0.57	1584364	2000	
Na	23	2	45	-417.021	ppb	-417.021	-3.13	157773	400000	
Mg	24	2	45	-5.480	ppb	-5.480	-30.53	3937	400000	
Al	27	2	45	31.432	ppb	31.432	6.90	767	400000	
K	39	1	45	86.245	ppb	86.245	7.08	3017376	400000	
K	39	2	45	30.494	ppb	30.494	23.03	9606	400000	
Ca	40	1	45	42.039	ppb	42.039	9.23	245124	400000	
Ca	44	2	45	15.897	ppb	15.897	77.10	133	400000	
Ti	47	2	45	18.835	ppb	18.835	943.93	17	4000	
V	51	2	72	0.681	ppb	0.681	16.76	1487	2000	
Cr	52	2	72	0.012	ppb	0.012	176.25	307	5000	
Mn	55	2	72	-0.057	ppb	-0.057	-195.49	193	10000	
Fe	57	2	72	36.521	ppb	36.521	17.01	1213	400000	
Co	59	2	72	0.016	ppb	0.016	22.04	80	2000	
Ni	60	2	72	0.043	ppb	0.043	67.98	270	5000	
Cu	63	2	72	0.781	ppb	0.781	6.04	4144	5000	
Zn	66	2	72	0.680	ppb	0.680	51.92	1030	5000	
As	75	2	72	-0.026	ppb	-0.026	-139.02	20	2000	
Se	78	1	72	0.039	ppb	0.039	147.66	27	2000	
Sr	88	2	72	-0.063	ppb	-0.063	-17.46	63	4000	
Zr	90	2	72	0.379	ppb	0.379	3006.40	140	1000	
Nb	93	2	72	1.287	ppb	1.287	19.86	6121	200	
Mo	95	2	115	2.526	ppb	2.526	15.26	2884	2000	
Pd	105	2	115	0.078	ppb	0.078	41.58	167	100	
Ag	107	2	115	0.026	ppb	0.026	14.85	127	100	
Cd	111	2	115	0.015	ppb	0.015	249.68	10	2000	
Sn	120	2	115	-0.004	ppb	-0.004	-566.17	217	2000	
Sb	121	2	115	0.035	ppb	0.035	112.91	97	1000	
Ba	137	2	115	0.057	ppb	0.057	118.06	20	5000	
W	182	2	165	0.072	ppb	0.072	27.58	1197	100	
Pt	195	2	165	0.038	ppb	0.038	29.66	383	100	
Tl	205	2	165	0.062	ppb	0.062	17.45	857	2000	
Pb	208	2	165	0.016	ppb	0.016	46.00	1347	5000	
Th	232	2	165	0.074	ppb	0.074	26.56	1750	2000	
U	238	2	165	0.067	ppb	0.067	7.87	1553	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1199086	0.39	1297767	92.40	60	120	
Sc (IS)	45	1	HMI H2	21606004	0.56	23781905	90.85	60	120	
Sc (IS)	45	2	HMI He	780910	0.33	852397	91.61	60	120	
Sc (IS)	45	3	No Gas	78284196	0.59	85455305	91.61	60	120	
Ge Internal Standard	72	1	HMI H2	12974671	0.26	14308919	90.68	60	120	
Ge Internal Standard	72	2	HMI He	1052599	0.44	1145983	91.85	60	120	
In Internal Standard	115	2	HMI He	3337349	1.08	3570620	93.47	60	120	
Ho-165	165	2	HMI He	21021803	0.47	22043381	95.37	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5317212
Data File Name	090_CCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:01:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	482.018	ppb	2.461	302765	500	96.4	90	110	
Li	7	2	45	473.977	ppb	4.234	17890	500	94.8	90	110	
Li	7	3	45	491.180	ppb	0.808	14555971	500	98.2	90	110	
Be	9	1	6	46.586	ppb	3.955	15951	50	93.2	90	110	
B	11	1	6	45.951	ppb	8.042	18758	50	91.9	90	110	
Na	23	1	45	4669.703	ppb	0.763	13183339	5000	93.4	90	110	
Na	23	2	45	4910.752	ppb	1.498	1272086	5000	98.2	90	110	
Mg	24	2	45	4962.163	ppb	0.797	485670	5000	99.2	90	110	
Al	27	2	45	5014.553	ppb	0.867	112034	5000	100.3	90	110	
K	39	1	45	4986.321	ppb	0.841	12274737	5000	99.7	90	110	
K	39	2	45	5010.299	ppb	0.505	221583	5000	100.2	90	110	
Ca	40	1	45	5028.075	ppb	1.405	15622409	5000	100.6	90	110	
Ca	44	2	45	4912.984	ppb	4.163	13202	5000	98.3	90	110	
Ti	47	2	45	60.441	ppb	218.073	13	50	120.9	90	110	>+\-10%
V	51	2	72	49.027	ppb	1.233	57009	50	98.1	90	110	
Cr	52	2	72	49.447	ppb	2.375	77415	50	98.9	90	110	
Mn	55	2	72	48.249	ppb	1.909	26656	50	96.5	90	110	
Fe	57	2	72	4927.928	ppb	1.356	144643	5000	98.6	90	110	
Co	59	2	72	49.052	ppb	0.682	148985	50	98.1	90	110	
Ni	60	2	72	49.488	ppb	0.765	44140	50	99.0	90	110	
Cu	63	2	72	50.016	ppb	0.311	129463	50	100.0	90	110	
Zn	66	2	72	51.936	ppb	5.086	15335	50	103.9	90	110	
As	75	2	72	49.408	ppb	1.284	8373	50	98.8	90	110	
Se	78	1	72	49.794	ppb	1.909	17373	50	99.6	90	110	
Sr	88	2	72	50.111	ppb	0.565	25802	50	100.2	90	110	
Zr	90	2	72	64.276	ppb	22.441	500	50	128.6	90	110	>+\-10%
Nb	93	2	72	95.832	ppb	1.166	392397	100	95.8	90	110	
Mo	95	2	115	48.530	ppb	2.162	55784	50	97.1	90	110	
Pd	105	2	115	51.899	ppb	1.144	99483	50	103.8	90	110	
Ag	107	2	115	48.495	ppb	1.178	208789	50	97.0	90	110	
Cd	111	2	115	49.546	ppb	1.979	23548	50	99.1	90	110	
Sn	120	2	115	49.788	ppb	2.337	57265	50	99.6	90	110	
Sb	121	2	115	49.723	ppb	2.475	45306	50	99.4	90	110	
Ba	137	2	115	49.780	ppb	1.214	15098	50	99.6	90	110	
W	182	2	165	49.345	ppb	1.154	328992	50	98.7	90	110	
Pt	195	2	165	49.523	ppb	0.436	290819	50	99.0	90	110	
Tl	205	2	165	50.647	ppb	0.258	569797	50	101.3	90	110	
Pb	208	2	165	50.360	ppb	1.054	735020	50	100.7	90	110	
Th	232	2	165	47.129	ppb	0.513	852023	50	94.3	90	110	
U	238	2	165	46.641	ppb	1.060	961535	50	93.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1245251	2.35	1297767	95.95	60	120	
Sc (IS)	45	1	HMI H2	22178391	1.14	23781905	93.26	60	120	
Sc (IS)	45	2	HMI He	793707	0.17	852397	93.11	60	120	
Sc (IS)	45	3	No Gas	76905601	0.81	85455305	90.00	60	120	
Ge Internal Standard	72	1	HMI H2	13298227	1.15	14308919	92.94	60	120	
Ge Internal Standard	72	2	HMI He	1075530	0.28	1145983	93.85	60	120	
In Internal Standard	115	2	HMI He	3385651	1.35	3570620	94.82	60	120	
Ho-165	165	2	HMI He	21258279	0.72	22043381	96.44	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5317210
Data File Name	091_CCB.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:05:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.160	ppb	-223.0	5994549	10	
Be	9	1	6	0.035	ppb	51.6	23	0.5	
B	11	1	6	-0.284	ppb	-206.1	2107	0.5	
Na	23	1	45	-514.240	ppb	-1.4	1377332	25	
Na	23	2	45	-527.943	ppb	-1.6	136963	25	
Mg	24	2	45	-32.492	ppb	-5.3	1380	25	
Al	27	2	45	5.057	ppb	54.1	190	15	
K	39	1	45	-150.243	ppb	-6.3	2624582	50	
K	39	2	45	3.718	ppb	271.2	8606	50	
Ca	40	1	45	-2.229	ppb	-29.6	113832	50	
Ca	44	2	45	-18.562	ppb	-65.9	43	25	
Ti	47	2	45	212.636	ppb	0.0	0	0.5	>RL
V	51	2	72	0.432	ppb	33.8	1230	1	
Cr	52	2	72	0.024	ppb	206.5	330	1	
Mn	55	2	72	0.016	ppb	1060.8	237	0.5	
Fe	57	2	72	8.261	ppb	7.9	410	25	
Co	59	2	72	0.016	ppb	51.4	83	0.5	
Ni	60	2	72	0.052	ppb	108.5	283	1	
Cu	63	2	72	0.263	ppb	64.8	2907	1	
Zn	66	2	72	-0.194	ppb	-161.2	807	5	
As	75	2	72	0.006	ppb	1198.8	26	1	
Se	78	1	72	0.000	ppb	-9789.9	13	1	
Sr	88	2	72	-0.091	ppb	-85.6	50	0.5	
Zr	90	2	72	10.672	ppb	32.9	200	1	>RL
Nb	93	2	72	1.624	ppb	19.6	7612	2	
Mo	95	2	115	0.247	ppb	22.8	310	0.5	
Pd	105	2	115	0.030	ppb	55.8	77	1	
Ag	107	2	115	0.017	ppb	40.2	90	1	
Cd	111	2	115	-0.007	ppb	0.0	0	0.5	
Sn	120	2	115	0.068	ppb	57.8	303	1	
Sb	121	2	115	0.311	ppb	16.5	350	0.6	
Ba	137	2	115	0.056	ppb	205.4	20	0.5	
W	182	2	165	0.058	ppb	52.5	1123	1	
Pt	195	2	165	0.019	ppb	57.4	280	1	
Tl	205	2	165	0.014	ppb	26.2	320	0.1	
Pb	208	2	165	0.021	ppb	20.3	1437	0.5	
Th	232	2	165	0.035	ppb	3.7	1073	1	
U	238	2	165	0.036	ppb	7.3	930	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1180165	1.99	1297767	90.94	60	120	
Sc (IS)	45	1	HMI H2	21930442	0.55	23781905	92.21	60	120	
Sc (IS)	45	2	HMI He	792169	0.91	852397	92.93	60	120	
Sc (IS)	45	3	No Gas	76427224	0.55	85455305	89.44	60	120	
Ge Internal Standard	72	1	HMI H2	13081733	0.33	14308919	91.42	60	120	
Ge Internal Standard	72	2	HMI He	1072524	0.29	1145983	93.59	60	120	
In Internal Standard	115	2	HMI He	3396217	0.27	3570620	95.12	60	120	
Ho-165	165	2	HMI He	21411853	0.88	22043381	97.14	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5317214
Data File Name	092LCCV.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:09:04-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	265.416	ppb	3.174	10411870	50	530.8	70	130	>+/-30%
Be	9	1	6	25.657	ppb	3.851	8366	1	2565.7	70	130	>+/-30%
Na	23	2	45	2183.666	ppb	1.874	694775	50	4367.3	70	130	>+/-30%
Mg	24	2	45	2612.587	ppb	0.392	254833	50	5225.2	70	130	>+/-30%
Al	27	2	45	2668.679	ppb	1.339	58957	30	8895.6	70	130	>+/-30%
K	39	2	45	2692.222	ppb	1.050	121539	100	2692.2	70	130	>+/-30%
Ca	44	2	45	2515.274	ppb	1.475	6725	50	5030.5	70	130	>+/-30%
V	51	2	72	27.864	ppb	2.562	32543	5	557.3	70	130	>+/-30%
Cr	52	2	72	26.801	ppb	1.063	41864	2	1340.0	70	130	>+/-30%
Mn	55	2	72	26.350	ppb	1.252	14580	1	2635.0	70	130	>+/-30%
Fe	57	2	72	2611.119	ppb	1.502	76304	50	5222.2	70	130	>+/-30%
Co	59	2	72	26.390	ppb	0.958	79730	1	2639.0	70	130	>+/-30%
Ni	60	2	72	27.467	ppb	2.554	24472	2	1373.4	70	130	>+/-30%
Cu	63	2	72	27.304	ppb	1.456	71302	2	1365.2	70	130	>+/-30%
Zn	66	2	72	30.061	ppb	1.015	9190	10	300.6	70	130	>+/-30%
As	75	2	72	28.016	ppb	1.315	4733	5	560.3	70	130	>+/-30%
Se	78	1	72	29.196	ppb	3.647	10017	5	583.9	70	130	>+/-30%
Sr	88	2	72	26.755	ppb	2.299	13747	1	2675.5	70	130	>+/-30%
Zr	90	2	72	6.583	ppb	43.399	177	0.5	1316.5	70	130	>+/-30%
Nb	93	2	72	54.873	ppb	1.242	223880	2	2743.6	70	130	>+/-30%
Mo	95	2	115	26.745	ppb	2.628	30513	2	1337.2	70	130	>+/-30%
Pd	105	2	115	28.046	ppb	0.472	53350	1	2804.6	70	130	>+/-30%
Ag	107	2	115	28.561	ppb	3.333	121995	5	571.2	70	130	>+/-30%
Cd	111	2	115	26.228	ppb	3.691	12369	1	2622.8	70	130	>+/-30%
Sn	120	2	115	30.275	ppb	1.164	34642	10	302.7	70	130	>+/-30%
Sb	121	2	115	27.862	ppb	0.752	25221	2	1393.1	70	130	>+/-30%
Ba	137	2	115	26.433	ppb	2.384	7956	1	2643.3	70	130	>+/-30%
W	182	2	165	28.693	ppb	0.124	192340	1	2869.3	70	130	>+/-30%
Pt	195	2	165	26.071	ppb	0.794	153761	1	2607.1	70	130	>+/-30%
Tl	205	2	165	27.227	ppb	0.709	307550	1	2722.7	70	130	>+/-30%
Pb	208	2	165	27.047	ppb	1.386	396793	1	2704.7	70	130	>+/-30%
Th	232	2	165	25.564	ppb	1.064	464118	2	1278.2	70	130	>+/-30%
U	238	2	165	25.016	ppb	0.629	517783	1	2501.6	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1185391	2.95	1297767	91.34	60	120	
Sc (IS)	45	1	HMI H2	21688231	0.75	23781905	91.20	60	120	
Sc (IS)	45	2	HMI He	784404	0.53	852397	92.02	60	120	
Sc (IS)	45	3	No Gas	75149094	0.33	85455305	87.94	60	120	
Ge Internal Standard	72	1	HMI H2	13068705	0.42	14308919	91.33	60	120	
Ge Internal Standard	72	2	HMI He	1069662	0.36	1145983	93.34	60	120	
In Internal Standard	115	2	HMI He	3359017	0.91	3570620	94.07	60	120	
Ho-165	165	2	HMI He	21338774	0.28	22043381	96.80	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-1-b@5
Data File Name	093SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:12:51-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	114.521	ppb	114.521	4.04	154627	500000	
Li	7	2	45	80.896	ppb	80.896	26.94	9079	500000	
Li	7	3	45	108.635	ppb	108.635	3.90	7545388	50000	
Be	9	1	6	0.083	ppb	0.083	181.91	37	2000	
B	11	1	6	274.776	ppb	274.776	1.09	89287	2000	
Na	23	1	45	450511.579	ppb	450511.579	0.20	936167213	2000	>LDR
Na	23	2	45	438779.445	ppb	438779.445	0.60	89520812	400000	
Mg	24	2	45	152904.857	ppb	152904.857	0.59	14461320	400000	
Al	27	2	45	4.031	ppb	4.031	46.66	163	400000	
K	39	1	45	1022.390	ppb	1022.390	0.94	4420612	400000	
K	39	2	45	951.276	ppb	951.276	2.26	47716	400000	
Ca	40	1	45	133079.708	ppb	133079.708	0.26	374024154	400000	
Ca	44	2	45	141094.929	ppb	141094.929	0.82	367206	400000	
Ti	47	2	45	134.543	ppb	134.543	100.53	7	4000	
V	51	2	72	0.483	ppb	0.483	27.31	1213	2000	
Cr	52	2	72	0.100	ppb	0.100	49.91	423	5000	
Mn	55	2	72	334.559	ppb	334.559	0.88	172227	10000	
Fe	57	2	72	985.173	ppb	985.173	2.50	27270	400000	
Co	59	2	72	0.476	ppb	0.476	7.80	1390	2000	
Ni	60	2	72	0.581	ppb	0.581	11.74	707	5000	
Cu	63	2	72	0.020	ppb	0.020	383.28	2157	5000	
Zn	66	2	72	-0.104	ppb	-0.104	-255.25	783	5000	
As	75	2	72	3.041	ppb	3.041	2.66	506	2000	
Se	78	1	72	0.080	ppb	0.080	80.69	37	2000	
Sr	88	2	72	2661.176	ppb	2661.176	0.58	1281554	4000	
Zr	90	2	72	20.507	ppb	20.507	55.58	240	1000	
Nb	93	2	72	1.176	ppb	1.176	18.45	5451	200	
Mo	95	2	115	1.122	ppb	1.122	9.80	1220	2000	
Pd	105	2	115	0.037	ppb	0.037	53.69	83	100	
Ag	107	2	115	0.005	ppb	0.005	29.37	33	100	
Cd	111	2	115	-0.007	ppb	-0.007	0.00	0	2000	
Sn	120	2	115	0.074	ppb	0.074	40.67	287	2000	
Sb	121	2	115	0.282	ppb	0.282	11.44	300	1000	
Ba	137	2	115	2.792	ppb	2.792	13.63	790	5000	
W	182	2	165	0.097	ppb	0.097	25.95	1313	100	
Pt	195	2	165	0.020	ppb	0.020	55.30	273	100	
Tl	205	2	165	0.009	ppb	0.009	69.13	250	2000	
Pb	208	2	165	0.157	ppb	0.157	12.36	3260	5000	
Th	232	2	165	0.065	ppb	0.065	29.36	1533	2000	
U	238	2	165	22.504	ppb	22.504	0.51	443014	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1104635	1.32	1297767	85.12	60	120	
Sc (IS)	45	1	HMI H2	20211887	0.23	23781905	84.99	60	120	
Sc (IS)	45	2	HMI He	773965	0.62	852397	90.80	60	120	
Sc (IS)	45	3	No Gas	73024121	0.15	85455305	85.45	60	120	
Ge Internal Standard	72	1	HMI H2	11942342	0.47	14308919	83.46	60	120	
Ge Internal Standard	72	2	HMI He	1009652	0.52	1145983	88.10	60	120	
In Internal Standard	115	2	HMI He	3144897	0.95	3570620	88.08	60	120	
Ho-165	165	2	HMI He	20294603	0.86	22043381	92.07	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-3-b@5
Data File Name	094SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:16:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	88.498	ppb	88.498	4.54	146578	500000	
Li	7	2	45	81.364	ppb	81.364	34.48	9093	500000	
Li	7	3	45	91.820	ppb	91.820	5.31	7242445	50000	
Be	9	1	6	-0.026	ppb	-0.026	-73.37	3	2000	
B	11	1	6	90.287	ppb	90.287	2.59	30451	2000	
Na	23	1	45	434666.924	ppb	434666.924	0.51	906686680	2000	>LDR
Na	23	2	45	427501.724	ppb	427501.724	0.48	87220919	400000	
Mg	24	2	45	146762.329	ppb	146762.329	1.44	13878855	400000	
Al	27	2	45	2.650	ppb	2.650	11.57	133	400000	
K	39	1	45	2769.882	ppb	2769.882	0.97	7430960	400000	
K	39	2	45	2668.296	ppb	2668.296	0.93	118917	400000	
Ca	40	1	45	234240.505	ppb	234240.505	0.97	660683310	400000	
Ca	44	2	45	251268.221	ppb	251268.221	0.45	653802	400000	
Ti	47	2	45	212.636	ppb	212.636	0.00	0	4000	
V	51	2	72	0.764	ppb	0.764	16.33	1513	2000	
Cr	52	2	72	0.069	ppb	0.069	46.10	377	5000	
Mn	55	2	72	324.080	ppb	324.080	0.27	166532	10000	
Fe	57	2	72	10.369	ppb	10.369	24.13	443	400000	
Co	59	2	72	0.010	ppb	0.010	96.41	60	2000	
Ni	60	2	72	0.025	ppb	0.025	71.53	243	5000	
Cu	63	2	72	-0.041	ppb	-0.041	-205.94	2007	5000	
Zn	66	2	72	0.170	ppb	0.170	230.53	853	5000	
As	75	2	72	0.507	ppb	0.507	16.39	104	2000	
Se	78	1	72	0.072	ppb	0.072	45.06	35	2000	
Sr	88	2	72	5304.196	ppb	5304.196	1.17	2549629	4000	
Zr	90	2	72	29.527	ppb	29.527	35.35	287	1000	
Nb	93	2	72	0.597	ppb	0.597	24.70	3224	200	
Mo	95	2	115	0.131	ppb	0.131	57.78	163	2000	
Pd	105	2	115	0.052	ppb	0.052	32.71	110	100	
Ag	107	2	115	0.001	ppb	0.001	381.00	20	100	
Cd	111	2	115	0.016	ppb	0.016	140.89	10	2000	
Sn	120	2	115	0.032	ppb	0.032	235.76	243	2000	
Sb	121	2	115	0.182	ppb	0.182	66.59	217	1000	
Ba	137	2	115	4.966	ppb	4.966	5.87	1407	5000	
W	182	2	165	0.322	ppb	0.322	8.55	2777	100	
Pt	195	2	165	0.008	ppb	0.008	61.57	207	100	
Tl	205	2	165	0.003	ppb	0.003	246.73	193	2000	
Pb	208	2	165	0.005	ppb	0.005	304.87	1153	5000	
Th	232	2	165	0.010	ppb	0.010	28.59	590	2000	
U	238	2	165	0.025	ppb	0.025	11.43	690	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1094788	0.08	1297767	84.36	60	120	
Sc (IS)	45	1	HMI H2	20287273	0.61	23781905	85.31	60	120	
Sc (IS)	45	2	HMI He	773906	0.70	852397	90.79	60	120	
Sc (IS)	45	3	No Gas	72752447	0.44	85455305	85.14	60	120	
Ge Internal Standard	72	1	HMI H2	11862493	0.65	14308919	82.90	60	120	
Ge Internal Standard	72	2	HMI He	1007774	0.56	1145983	87.94	60	120	
In Internal Standard	115	2	HMI He	3156697	0.60	3570620	88.41	60	120	
Ho-165	165	2	HMI He	20548488	0.84	22043381	93.22	60	120	

Sample Report

Sample Table

Sample Name	280-114200-a-5-b@5
Data File Name	095SMPL.d
Data Path Name	D:\MassHunter Data\li09
Acq Date Time	2018-09-20T16:20:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	429568 6020A dod5
ISTD Ref FileName	082CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	86.909	ppb	86.909	2.65	145659	500000	
Li	7	2	45	56.164	ppb	56.164	46.85	8542	500000	
Li	7	3	45	90.360	ppb	90.360	1.60	7149272	50000	
Be	9	1	6	0.032	ppb	0.032	220.08	20	2000	
B	11	1	6	89.865	ppb	89.865	2.86	29497	2000	
Na	23	1	45	431655.945	ppb	431655.945	1.06	897927133	2000	>LDR
Na	23	2	45	425232.833	ppb	425232.833	0.84	86639139	400000	
Mg	24	2	45	145752.305	ppb	145752.305	0.26	13765209	400000	
Al	27	2	45	3.117	ppb	3.117	86.58	143	400000	
K	39	1	45	2764.353	ppb	2764.353	2.28	7400774	400000	
K	39	2	45	2598.244	ppb	2598.244	1.94	115856	400000	
Ca	40	1	45	230850.179	ppb	230850.179	0.97	649340137	400000	
Ca	44	2	45	249139.083	ppb	249139.083	0.17	647377	400000	
Ti	47	2	45	173.568	ppb	173.568	38.99	3	4000	
V	51	2	72	0.558	ppb	0.558	9.45	1287	2000	
Cr	52	2	72	0.107	ppb	0.107	39.59	430	5000	
Mn	55	2	72	316.900	ppb	316.900	0.50	162154	10000	
Fe	57	2	72	7.769	ppb	7.769	34.31	370	400000	
Co	59	2	72	0.000	ppb	0.000	2538.51	33	2000	
Ni	60	2	72	-0.038	ppb	-0.038	-239.90	190	5000	
Cu	63	2	72	-0.025	ppb	-0.025	-116.95	2037	5000	
Zn	66	2	72	0.415	ppb	0.415	117.28	913	5000	
As	75	2	72	0.423	ppb	0.423	13.77	90	2000	
Se	78	1	72	0.008	ppb	0.008	87.28	15	2000	
Sr	88	2	72	5280.032	ppb	5280.032	1.22	2527092	4000	
Zr	90	2	72	17.626	ppb	17.626	63.88	223	1000	
Nb	93	2	72	0.384	ppb	0.384	18.47	2397	200	
Mo	95	2	115	0.139	ppb	0.139	35.77	170	2000	
Pd	105	2	115	0.030	ppb	0.030	34.03	70	100	
Ag	107	2	115	0.004	ppb	0.004	193.92	30	100	
Cd	111	2	115	0.001	ppb	0.001	1256.80	3	2000	
Sn	120	2	115	-0.010	ppb	-0.010	-610.12	197	2000	
Sb	121	2	115	0.054	ppb	0.054	78.44	107	1000	
Ba	137	2	115	5.696	ppb	5.696	9.04	1597	5000	
W	182	2	165	0.309	ppb	0.309	3.53	2680	100	
Pt	195	2	165	-0.008	ppb	-0.008	-34.52	117	100	
Tl	205	2	165	-0.001	ppb	-0.001	-284.46	150	2000	
Pb	208	2	165	0.001	ppb	0.001	2246.41	1087	5000	
Th	232	2	165	0.010	ppb	0.010	14.02	587	2000	
U	238	2	165	0.009	ppb	0.009	33.38	357	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1065406	1.82	1297767	82.10	60	120	
Sc (IS)	45	1	HMI H2	20232607	1.24	23781905	85.08	60	120	
Sc (IS)	45	2	HMI He	772834	0.05	852397	90.67	60	120	
Sc (IS)	45	3	No Gas	72052734	0.53	85455305	84.32	60	120	
Ge Internal Standard	72	1	HMI H2	11787916	0.44	14308919	82.38	60	120	
Ge Internal Standard	72	2	HMI He	1003476	0.23	1145983	87.56	60	120	
In Internal Standard	115	2	HMI He	3123087	0.98	3570620	87.47	60	120	
Ho-165	165	2	HMI He	20433573	1.07	22043381	92.70	60	120	

Shipping and Receiving Documents

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Jonathan Lerner	Lab PM: Rothmeyer, Stephanie K	Carrier Tracking No(s):	COC No: 280-78946-25823.1
Client Contact: Marcia Olive	Phone: 601 403 0444	E-Mail: stephanie.rothmeyer@testamericainc.com		Page: Page 1 of 1
Company: Bhate Environmental				Job #:

Address: 445 Union Blvd Ste 129	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Lakewood	TAT Requested (days):		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CO, 80226			
Phone: 303-597-2450(Tel)	PO #: Purchase Order not required		
Email: molive@bhate.com	WO #:		Other:
Project Name: Griffiss AFB, NY - SS054 Q2 2018	Project #: 28015823		
Site: SS 052-02	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_DOD5 - Total VOCs - LTM QAPP List	6010C_DOD5, 6020A_DOD5	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
Trip Blank	9-6-18	0000		W			X			
BH1-10	9-6-18	0940	G	W	N		X			
BH1-10-dup	9-6-18	0900	G	W	N		X			
BH2-5	9-7-18	0815	G	W	N		X			
BH2-5-dup	9-7-18	0815	G	W	N		X			
775MW-6	9-7-18	0907	G	W	N			X		Filter In Lab
775MW-6-dup	9-7-18	0907	G	W	N			X		Filter In Lab

280-114110 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Jonathan Lerner	9/7/18 1305	Bhate	Fed Ex	9/7/18 1315	Fed Ex
				09-08-18 0545	HADEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0, +0.5 x fwd by IAS 9/8/18

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-114110-1

Login Number: 114110
List Number: 1
Creator: Staack, KiAundra A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Griffiss Air Force Base, New York, on October 22-23, 2018. Ten aqueous samples and two field duplicates were collected from site SD052-02 Building 775 as part of the performance monitoring. All analyses were performed by TestAmerica Laboratories, Inc., Arvada, Colorado. The specific samples included in this validation were:

Sample Identification	Matrix	Collection Date	Lab Package	Analyses (USEPA Method Number)
775MW-6_1018	Water	10/23/18	280-115988	VOCs (SW8260B)*
775VMW-8_1018				
775VMW-19R_1018		10/22/18	280-116017	
775VMW-28_1018				
775VMW-9_1018				
775VMW-10_1018				
775VMW-10_1018-a				
775VMW-20_1018				
775VMW-20R_1018		10/23/18		
775VMW-5_1018				
775VMW-5_1018-a				
775VMW-4_1018				

Notes: USEPA – United States Environmental Protection Agency; VOCs – Volatile Organic Compounds; SW – Solid Waste
*TestAmerica Denver holds both Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) and New York National Environmental Laboratory Accreditation Program (NELAP) certifications for method 8260B. The reporting limits for all analytes are much lower by 8260B compared to 8260C.

This data was validated against the laboratory's quality assurance (QA)/QC limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, January 2017) and per requirements of the DoD Quality Systems Manual (QSM), Version 5.0, as specified in the project-specific Quality Assurance Project Plan (QAPP).

Sample Handling and Holding Times

The samples were properly preserved and transferred under chain-of-custody to the laboratory for analysis and analyzed within the required holding time with the following exception.

- Samples 775VMW-20R_1018, 775VMW-5_1018, 775VMW-5_1018-a, and 775VMW-4_1018 were analyzed outside method hold time. All compounds were considered estimated and flagged "J/UJ".

Method Blank

No compounds were detected in the method blanks.

Blank Spike Sample (Laboratory Control Sample)/Surrogates

The laboratory control sample (LCS) and surrogate recoveries were within control limits for all analytes.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

The MS/MSD recoveries and/or relative percent difference (RPD), when reported, were within control limits.

Project Specific Quality Assurance/Quality Control

Two field duplicates were collected as part of this sampling effort. All RPD calculations were within project defined control limits with the exception of acetone in sample 775VMW-5_1018 and its duplicate. This compound was qualified as estimated, "J", in both samples.

Calibration Verification Data

The initial calibration verification (ICV) for dichlorodifluoromethane (21.9%) was slightly above control limits. This analyte is considered a poor performer. The continuing calibration verification (CCV) for bromomethane (22.9%) was above control limits associated with samples 775VMW-20R_1018, 775VMW-5_1018, 775VMW-5_1018-a, and 775VMW-4_1018. Both compounds were within the USEPA National Functional guidelines maximum percent difference (%D) of 30%. Therefore, using professional judgment no qualification was deemed necessary.

Overall Assessment of Data

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Results

Sample Identification	Compound	Result and Qualifier (µg/L)	Reason Code
775VMW-20R_1018	Acetone All non-detect Volatiles	4.8 J UJ	HT HT
775VMW-5_1018	1,1,1-Trichloroethane Acetone Trichloroethene All non-detect Volatiles	0.17 J 2.2 J 44 J UJ	HT HT/Dup RPD HT HT

Sample Identification	Compound	Result and Qualifier (µg/L)	Reason Code
775VMW-5_1018-a	1,1,1-Trichloroethane Acetone Trichloroethene All non-detect Volatiles	0.16 J 6.9 J 47 J UJ	HT HT/Dup RPD HT HT
775VMW-4_1018	Chloroform Trichloroethene All non-detect Volatiles	0.37 J 4.4 J UJ	HT HT HT
Notes: µg/L – micrograms per liter; HT – Hold time exceedance; Dup RPD – field duplicate RPD outside control limits			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-115988-1

Job Description: Griffiss AFB, NY (BRAC Eastern)

For:
Bhate Environmental
445 Union Blvd Ste.129
Lakewood, CO 80226

Attention: Marcia Olive



Approved for release.
Jamie N Ide
Project Manager I
10/31/2018 4:09 PM

Jamie N Ide, Project Manager I
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0126
jamie.ide@testamericainc.com
10/31/2018

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.

Glossary

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

CASE NARRATIVE
Client: Bhate Environmental
Project: Griffiss AFB, NY (BRAC Eastern)
Report Number: 280-115988-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/24/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

The requested analyses were performed by TestAmerica's Seattle laboratory to provide a quicker turn around time.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples 775VMW-8_1018 (280-115988-1) and 775MW-6_1018 (280-115988-2) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 10/31/2018.

The ICV for analytical batch 580-287774 recovered outside control limits for the following analyte(s): Dichlorodifluoromethane. Dichlorodifluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

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

Detection Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Client Sample ID: 775VMW-8_1018 — Lab Sample ID: 280-115988-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.47	J	3.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	23		3.0	0.85	ug/L	1		8260B	Total/NA

Client Sample ID: 775MW-6_1018 — Lab Sample ID: 280-115988-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.43	J	3.0	0.14	ug/L	1		8260B	Total/NA
Chloroform	1.3	J	5.0	0.50	ug/L	1		8260B	Total/NA
Trichloroethene	27		3.0	0.85	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 775VMW-8_1018
Lab Sample ID: 280-115988-1

Date Collected: 10/23/18 15:26
Matrix: Water

Date Received: 10/24/18 11:56

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.18	ug/L			10/31/18 00:32	1
1,1,1-Trichloroethane	**0.47**	**J**	3.0	0.14	ug/L			10/31/18 00:32	1
1,1,2,2-Tetrachloroethane	2.0	U	3.0	0.52	ug/L			10/31/18 00:32	1
1,1,2-Trichloroethane	0.50	U	1.0	0.24	ug/L			10/31/18 00:32	1
1,1-Dichloroethane	0.50	U	2.0	0.22	ug/L			10/31/18 00:32	1
1,1-Dichloroethene	2.0	U	4.0	0.78	ug/L			10/31/18 00:32	1
1,1-Dichloropropene	1.0	U	3.0	0.29	ug/L			10/31/18 00:32	1
1,2,3-Trichlorobenzene	1.0	U M	5.0	0.46	ug/L			10/31/18 00:32	1
1,2,3-Trichloropropane	1.0	U	2.0	0.41	ug/L			10/31/18 00:32	1
1,2,4-Trichlorobenzene	1.0	U M	2.0	0.33	ug/L			10/31/18 00:32	1
1,2,4-Trimethylbenzene	2.0	U M	3.0	0.61	ug/L			10/31/18 00:32	1
1,2-Dibromo-3-Chloropropane	6.0	U	10	1.8	ug/L			10/31/18 00:32	1
1,2-Dibromoethane	1.0	U	2.0	0.40	ug/L			10/31/18 00:32	1
1,2-Dichlorobenzene	1.0	U	2.0	0.46	ug/L			10/31/18 00:32	1
1,2-Dichloroethane	2.0	U	2.0	0.53	ug/L			10/31/18 00:32	1
1,2-Dichloropropane	0.50	U	1.0	0.18	ug/L			10/31/18 00:32	1
1,3,5-Trimethylbenzene	2.0	U M	3.0	0.55	ug/L			10/31/18 00:32	1
1,3-Dichlorobenzene	0.50	U	2.0	0.18	ug/L			10/31/18 00:32	1
1,3-Dichloropropane	1.0	U	2.0	0.35	ug/L			10/31/18 00:32	1
1,4-Dichlorobenzene	2.0	U	4.0	0.98	ug/L			10/31/18 00:32	1
2,2-Dichloropropane	1.0	U	3.0	0.32	ug/L			10/31/18 00:32	1
2-Butanone (MEK)	10	U	20	4.7	ug/L			10/31/18 00:32	1
2-Chlorotoluene	1.0	U	3.0	0.51	ug/L			10/31/18 00:32	1
2-Hexanone	10	U	20	4.0	ug/L			10/31/18 00:32	1
4-Chlorotoluene	1.0	U	2.0	0.51	ug/L			10/31/18 00:32	1
4-Isopropyltoluene	1.0	U	3.0	0.28	ug/L			10/31/18 00:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	15	2.5	ug/L			10/31/18 00:32	1
Acetone	18	U M	50	7.8	ug/L			10/31/18 00:32	1
Benzene	2.0	U	3.0	0.53	ug/L			10/31/18 00:32	1
Bromobenzene	0.50	U	2.0	0.18	ug/L			10/31/18 00:32	1
Bromochloromethane	1.0	U	2.0	0.29	ug/L			10/31/18 00:32	1
Bromodichloromethane	0.50	U M	2.0	0.14	ug/L			10/31/18 00:32	1
Bromoform	2.0	U	3.0	0.56	ug/L			10/31/18 00:32	1
Bromomethane	3.5	U	6.0	1.1	ug/L			10/31/18 00:32	1
Carbon disulfide	2.0	U	3.0	0.53	ug/L			10/31/18 00:32	1
Carbon tetrachloride	1.0	U	3.0	0.30	ug/L			10/31/18 00:32	1
Chlorobenzene	1.0	U	2.0	0.44	ug/L			10/31/18 00:32	1
Chloroethane	3.5	U	5.0	1.1	ug/L			10/31/18 00:32	1
Chloroform	1.0	U	5.0	0.50	ug/L			10/31/18 00:32	1
Chloromethane	15	U	20	5.4	ug/L			10/31/18 00:32	1
cis-1,2-Dichloroethene	2.0	U	3.0	0.69	ug/L			10/31/18 00:32	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.20	ug/L			10/31/18 00:32	1
Dibromochloromethane	0.50	U	1.0	0.20	ug/L			10/31/18 00:32	1
Dibromomethane	1.0	U	2.0	0.34	ug/L			10/31/18 00:32	1
Dichlorodifluoromethane	6.0	U Q	10	2.3	ug/L			10/31/18 00:32	1
Diisopropyl ether	1.3	U	2.0	0.35	ug/L			10/31/18 00:32	1
Ethylbenzene	1.0	U	3.0	0.50	ug/L			10/31/18 00:32	1
Hexachlorobutadiene	2.0	U	6.0	0.79	ug/L			10/31/18 00:32	1
Isopropylbenzene	1.0	U	2.0	0.51	ug/L			10/31/18 00:32	1

Client Sample ID: 775VMW-8_1018
Lab Sample ID: 280-115988-1
Date Collected: 10/23/18 15:26
Matrix: Water
Date Received: 10/24/18 11:56

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	2.0	U M	3.0	0.75	ug/L			10/31/18 00:32	1
Methyl iodide	0.50	U	5.0	0.24	ug/L			10/31/18 00:32	1
Methyl tert-butyl ether	1.0	U	2.0	0.44	ug/L			10/31/18 00:32	1
Methylene Chloride	3.5	U	5.0	1.4	ug/L			10/31/18 00:32	1
Naphthalene	2.0	U M	4.0	0.93	ug/L			10/31/18 00:32	1
n-Butylbenzene	1.0	U M	3.0	0.44	ug/L			10/31/18 00:32	1
N-Propylbenzene	1.0	U	3.0	0.50	ug/L			10/31/18 00:32	1
o-Xylene	0.50	U	2.0	0.15	ug/L			10/31/18 00:32	1
sec-Butylbenzene	1.0	U	3.0	0.49	ug/L			10/31/18 00:32	1
Styrene	1.0	U M	5.0	0.51	ug/L			10/31/18 00:32	1
tert-Butylbenzene	2.0	U M	3.0	0.58	ug/L			10/31/18 00:32	1
Tetrachloroethene	1.0	U	3.0	0.41	ug/L			10/31/18 00:32	1
Toluene	1.0	U	2.0	0.39	ug/L			10/31/18 00:32	1
trans-1,2-Dichloroethene	1.0	U	3.0	0.39	ug/L			10/31/18 00:32	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.16	ug/L			10/31/18 00:32	1
Trichloroethene	**23**		3.0	0.85	ug/L			10/31/18 00:32	1
Trichlorofluoromethane	2.0	U	3.0	0.63	ug/L			10/31/18 00:32	1
Vinyl acetate	2.5	U	5.0	1.2	ug/L			10/31/18 00:32	1
Vinyl chloride	0.50	U	1.0	0.22	ug/L			10/31/18 00:32	1
Xylenes, Total	2.0	U	3.0	0.75	ug/L			10/31/18 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*10/31/18 00:32*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/31/18 00:32*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/31/18 00:32*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/31/18 00:32*	*1*

Client Sample ID: 775MW-6_1018
Lab Sample ID: 280-115988-2
Date Collected: 10/23/18 16:31
Matrix: Water
Date Received: 10/24/18 11:56

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.18	ug/L			10/31/18 00:58	1
1,1,1-Trichloroethane	**0.43**	**J**	3.0	0.14	ug/L			10/31/18 00:58	1
1,1,2,2-Tetrachloroethane	2.0	U	3.0	0.52	ug/L			10/31/18 00:58	1
1,1,2-Trichloroethane	0.50	U	1.0	0.24	ug/L			10/31/18 00:58	1
1,1-Dichloroethane	0.50	U	2.0	0.22	ug/L			10/31/18 00:58	1
1,1-Dichloroethene	2.0	U	4.0	0.78	ug/L			10/31/18 00:58	1
1,1-Dichloropropene	1.0	U	3.0	0.29	ug/L			10/31/18 00:58	1
1,2,3-Trichlorobenzene	1.0	U	5.0	0.46	ug/L			10/31/18 00:58	1
1,2,3-Trichloropropane	1.0	U	2.0	0.41	ug/L			10/31/18 00:58	1
1,2,4-Trichlorobenzene	1.0	U	2.0	0.33	ug/L			10/31/18 00:58	1
1,2,4-Trimethylbenzene	2.0	U	3.0	0.61	ug/L			10/31/18 00:58	1
1,2-Dibromo-3-Chloropropane	6.0	U	10	1.8	ug/L			10/31/18 00:58	1
1,2-Dibromoethane	1.0	U	2.0	0.40	ug/L			10/31/18 00:58	1
1,2-Dichlorobenzene	1.0	U	2.0	0.46	ug/L			10/31/18 00:58	1
1,2-Dichloroethane	2.0	U	2.0	0.53	ug/L			10/31/18 00:58	1
1,2-Dichloropropane	0.50	U	1.0	0.18	ug/L			10/31/18 00:58	1
1,3,5-Trimethylbenzene	2.0	U	3.0	0.55	ug/L			10/31/18 00:58	1

Client Sample ID: 775MW-6_1018
Lab Sample ID: 280-115988-2

Date Collected: 10/23/18 16:31
Matrix: Water

Date Received: 10/24/18 11:56

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	0.50	U	2.0	0.18	ug/L			10/31/18 00:58	1
1,3-Dichloropropane	1.0	U	2.0	0.35	ug/L			10/31/18 00:58	1
1,4-Dichlorobenzene	2.0	U	4.0	0.98	ug/L			10/31/18 00:58	1
2,2-Dichloropropane	1.0	U	3.0	0.32	ug/L			10/31/18 00:58	1
2-Butanone (MEK)	10	U	20	4.7	ug/L			10/31/18 00:58	1
2-Chlorotoluene	1.0	U	3.0	0.51	ug/L			10/31/18 00:58	1
2-Hexanone	10	U	20	4.0	ug/L			10/31/18 00:58	1
4-Chlorotoluene	1.0	U	2.0	0.51	ug/L			10/31/18 00:58	1
4-Isopropyltoluene	1.0	U	3.0	0.28	ug/L			10/31/18 00:58	1
4-Methyl-2-pentanone (MIBK)	5.0	U	15	2.5	ug/L			10/31/18 00:58	1
Acetone	18	U M	50	7.8	ug/L			10/31/18 00:58	1
Benzene	2.0	U	3.0	0.53	ug/L			10/31/18 00:58	1
Bromobenzene	0.50	U	2.0	0.18	ug/L			10/31/18 00:58	1
Bromochloromethane	1.0	U	2.0	0.29	ug/L			10/31/18 00:58	1
Bromodichloromethane	0.50	U	2.0	0.14	ug/L			10/31/18 00:58	1
Bromoform	2.0	U	3.0	0.56	ug/L			10/31/18 00:58	1
Bromomethane	3.5	U	6.0	1.1	ug/L			10/31/18 00:58	1
Carbon disulfide	2.0	U	3.0	0.53	ug/L			10/31/18 00:58	1
Carbon tetrachloride	1.0	U	3.0	0.30	ug/L			10/31/18 00:58	1
Chlorobenzene	1.0	U	2.0	0.44	ug/L			10/31/18 00:58	1
Chloroethane	3.5	U	5.0	1.1	ug/L			10/31/18 00:58	1
Chloroform	**1.3**	**J**	5.0	0.50	ug/L			10/31/18 00:58	1
Chloromethane	15	U	20	5.4	ug/L			10/31/18 00:58	1
cis-1,2-Dichloroethene	2.0	U	3.0	0.69	ug/L			10/31/18 00:58	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.20	ug/L			10/31/18 00:58	1
Dibromochloromethane	0.50	U	1.0	0.20	ug/L			10/31/18 00:58	1
Dibromomethane	1.0	U	2.0	0.34	ug/L			10/31/18 00:58	1
Dichlorodifluoromethane	6.0	U Q	10	2.3	ug/L			10/31/18 00:58	1
Diisopropyl ether	1.3	U	2.0	0.35	ug/L			10/31/18 00:58	1
Ethylbenzene	1.0	U	3.0	0.50	ug/L			10/31/18 00:58	1
Hexachlorobutadiene	2.0	U	6.0	0.79	ug/L			10/31/18 00:58	1
Isopropylbenzene	1.0	U	2.0	0.51	ug/L			10/31/18 00:58	1
m,p-Xylene	2.0	U M	3.0	0.75	ug/L			10/31/18 00:58	1
Methyl iodide	0.50	U	5.0	0.24	ug/L			10/31/18 00:58	1
Methyl tert-butyl ether	1.0	U	2.0	0.44	ug/L			10/31/18 00:58	1
Methylene Chloride	3.5	U	5.0	1.4	ug/L			10/31/18 00:58	1
Naphthalene	2.0	U M	4.0	0.93	ug/L			10/31/18 00:58	1
n-Butylbenzene	1.0	U M	3.0	0.44	ug/L			10/31/18 00:58	1
N-Propylbenzene	1.0	U	3.0	0.50	ug/L			10/31/18 00:58	1
o-Xylene	0.50	U	2.0	0.15	ug/L			10/31/18 00:58	1
sec-Butylbenzene	1.0	U M	3.0	0.49	ug/L			10/31/18 00:58	1
Styrene	1.0	U M	5.0	0.51	ug/L			10/31/18 00:58	1
tert-Butylbenzene	2.0	U	3.0	0.58	ug/L			10/31/18 00:58	1
Tetrachloroethene	1.0	U	3.0	0.41	ug/L			10/31/18 00:58	1
Toluene	1.0	U M	2.0	0.39	ug/L			10/31/18 00:58	1
trans-1,2-Dichloroethene	1.0	U	3.0	0.39	ug/L			10/31/18 00:58	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.16	ug/L			10/31/18 00:58	1
Trichloroethene	**27**		3.0	0.85	ug/L			10/31/18 00:58	1
Trichlorofluoromethane	2.0	U	3.0	0.63	ug/L			10/31/18 00:58	1

Client Sample ID: 775MW-6_1018
Lab Sample ID: 280-115988-2
Date Collected: 10/23/18 16:31
Matrix: Water
Date Received: 10/24/18 11:56

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	2.5	U	5.0	1.2	ug/L			10/31/18 00:58	1
Vinyl chloride	0.50	U	1.0	0.22	ug/L			10/31/18 00:58	1
Xylenes, Total	2.0	U	3.0	0.75	ug/L			10/31/18 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*10/31/18 00:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/31/18 00:58*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/31/18 00:58*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/31/18 00:58*	*1*

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1,2-Tetrachloroethane	2.0	0.18	ug/L	8260B
1,1,1-Trichloroethane	3.0	0.14	ug/L	8260B
1,1,2,2-Tetrachloroethane	3.0	0.52	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.24	ug/L	8260B
1,1-Dichloroethane	2.0	0.22	ug/L	8260B
1,1-Dichloroethene	4.0	0.78	ug/L	8260B
1,1-Dichloropropene	3.0	0.29	ug/L	8260B
1,2,3-Trichlorobenzene	5.0	0.46	ug/L	8260B
1,2,3-Trichloropropane	2.0	0.41	ug/L	8260B
1,2,4-Trichlorobenzene	2.0	0.33	ug/L	8260B
1,2,4-Trimethylbenzene	3.0	0.61	ug/L	8260B
1,2-Dibromo-3-Chloropropane	10	1.8	ug/L	8260B
1,2-Dibromoethane	2.0	0.40	ug/L	8260B
1,2-Dichlorobenzene	2.0	0.46	ug/L	8260B
1,2-Dichloroethane	2.0	0.53	ug/L	8260B
1,2-Dichloropropane	1.0	0.18	ug/L	8260B
1,3,5-Trimethylbenzene	3.0	0.55	ug/L	8260B
1,3-Dichlorobenzene	2.0	0.18	ug/L	8260B
1,3-Dichloropropane	2.0	0.35	ug/L	8260B
1,4-Dichlorobenzene	4.0	0.98	ug/L	8260B
2,2-Dichloropropane	3.0	0.32	ug/L	8260B
2-Butanone (MEK)	20	4.7	ug/L	8260B
2-Chlorotoluene	3.0	0.51	ug/L	8260B
2-Hexanone	20	4.0	ug/L	8260B
4-Chlorotoluene	2.0	0.51	ug/L	8260B
4-Isopropyltoluene	3.0	0.28	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	15	2.5	ug/L	8260B
Acetone	50	7.8	ug/L	8260B
Benzene	3.0	0.53	ug/L	8260B
Bromobenzene	2.0	0.18	ug/L	8260B
Bromochloromethane	2.0	0.29	ug/L	8260B
Bromodichloromethane	2.0	0.14	ug/L	8260B
Bromoform	3.0	0.56	ug/L	8260B
Bromomethane	6.0	1.1	ug/L	8260B
Carbon disulfide	3.0	0.53	ug/L	8260B
Carbon tetrachloride	3.0	0.30	ug/L	8260B
Chlorobenzene	2.0	0.44	ug/L	8260B
Chloroethane	5.0	1.1	ug/L	8260B
Chloroform	5.0	0.50	ug/L	8260B
Chloromethane	20	5.4	ug/L	8260B
cis-1,2-Dichloroethene	3.0	0.69	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.20	ug/L	8260B
Dibromochloromethane	1.0	0.20	ug/L	8260B
Dibromomethane	2.0	0.34	ug/L	8260B
Dichlorodifluoromethane	10	2.3	ug/L	8260B
Diisopropyl ether	2.0	0.35	ug/L	8260B
Ethylbenzene	3.0	0.50	ug/L	8260B
Hexachlorobutadiene	6.0	0.79	ug/L	8260B
Isopropylbenzene	2.0	0.51	ug/L	8260B
m,p-Xylene	3.0	0.75	ug/L	8260B
Methyl iodide	5.0	0.24	ug/L	8260B
Methyl tert-butyl ether	2.0	0.44	ug/L	8260B

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units	Method
Methylene Chloride	5.0	1.4	ug/L	8260B
Naphthalene	4.0	0.93	ug/L	8260B
n-Butylbenzene	3.0	0.44	ug/L	8260B
N-Propylbenzene	3.0	0.50	ug/L	8260B
o-Xylene	2.0	0.15	ug/L	8260B
sec-Butylbenzene	3.0	0.49	ug/L	8260B
Styrene	5.0	0.51	ug/L	8260B
tert-Butylbenzene	3.0	0.58	ug/L	8260B
Tetrachloroethene	3.0	0.41	ug/L	8260B
Toluene	2.0	0.39	ug/L	8260B
trans-1,2-Dichloroethene	3.0	0.39	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Trichloroethene	3.0	0.85	ug/L	8260B
Trichlorofluoromethane	3.0	0.63	ug/L	8260B
Vinyl acetate	5.0	1.2	ug/L	8260B
Vinyl chloride	1.0	0.22	ug/L	8260B
Xylenes, Total	3.0	0.75	ug/L	8260B

Surrogate Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-115988-1	775VMW-8_1018	106	103	102	100
280-115988-2	775MW-6_1018	103	99	101	101
LCS 580-287774/25	Lab Control Sample	101	98	100	99
LCSD 580-287774/26	Lab Control Sample Dup	101	102	98	100
MB 580-287774/24	Method Blank	101	103	98	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-287774/24
Matrix: Water
Analysis Batch: 287774

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.18	ug/L			10/30/18 20:38	1
1,1,1-Trichloroethane	0.50	U	3.0	0.14	ug/L			10/30/18 20:38	1
1,1,2,2-Tetrachloroethane	2.0	U	3.0	0.52	ug/L			10/30/18 20:38	1
1,1,2-Trichloroethane	0.50	U	1.0	0.24	ug/L			10/30/18 20:38	1
1,1-Dichloroethane	0.50	U	2.0	0.22	ug/L			10/30/18 20:38	1
1,1-Dichloroethene	2.0	U	4.0	0.78	ug/L			10/30/18 20:38	1
1,1-Dichloropropene	1.0	U	3.0	0.29	ug/L			10/30/18 20:38	1
1,2,3-Trichlorobenzene	1.0	U	5.0	0.46	ug/L			10/30/18 20:38	1
1,2,3-Trichloropropane	1.0	U	2.0	0.41	ug/L			10/30/18 20:38	1
1,2,4-Trichlorobenzene	1.0	U M	2.0	0.33	ug/L			10/30/18 20:38	1
1,2,4-Trimethylbenzene	2.0	U M	3.0	0.61	ug/L			10/30/18 20:38	1
1,2-Dibromo-3-Chloropropane	6.0	U	10	1.8	ug/L			10/30/18 20:38	1
1,2-Dibromoethane	1.0	U M	2.0	0.40	ug/L			10/30/18 20:38	1
1,2-Dichlorobenzene	1.0	U M	2.0	0.46	ug/L			10/30/18 20:38	1
1,2-Dichloroethane	2.0	U M	2.0	0.53	ug/L			10/30/18 20:38	1
1,2-Dichloropropane	0.50	U	1.0	0.18	ug/L			10/30/18 20:38	1
1,3,5-Trimethylbenzene	2.0	U M	3.0	0.55	ug/L			10/30/18 20:38	1
1,3-Dichlorobenzene	0.50	U	2.0	0.18	ug/L			10/30/18 20:38	1
1,3-Dichloropropane	1.0	U	2.0	0.35	ug/L			10/30/18 20:38	1
1,4-Dichlorobenzene	2.0	U	4.0	0.98	ug/L			10/30/18 20:38	1
2,2-Dichloropropane	1.0	U	3.0	0.32	ug/L			10/30/18 20:38	1
2-Butanone (MEK)	10	U	20	4.7	ug/L			10/30/18 20:38	1
2-Chlorotoluene	1.0	U M	3.0	0.51	ug/L			10/30/18 20:38	1
2-Hexanone	10	U M	20	4.0	ug/L			10/30/18 20:38	1
4-Chlorotoluene	1.0	U M	2.0	0.51	ug/L			10/30/18 20:38	1
4-Isopropyltoluene	1.0	U	3.0	0.28	ug/L			10/30/18 20:38	1
4-Methyl-2-pentanone (MIBK)	5.0	U M	15	2.5	ug/L			10/30/18 20:38	1
Acetone	18	U	50	7.8	ug/L			10/30/18 20:38	1
Benzene	2.0	U	3.0	0.53	ug/L			10/30/18 20:38	1
Bromobenzene	0.50	U M	2.0	0.18	ug/L			10/30/18 20:38	1
Bromochloromethane	1.0	U	2.0	0.29	ug/L			10/30/18 20:38	1
Bromodichloromethane	0.50	U	2.0	0.14	ug/L			10/30/18 20:38	1
Bromoform	2.0	U	3.0	0.56	ug/L			10/30/18 20:38	1
Bromomethane	3.5	U	6.0	1.1	ug/L			10/30/18 20:38	1
Carbon disulfide	2.0	U	3.0	0.53	ug/L			10/30/18 20:38	1
Carbon tetrachloride	1.0	U	3.0	0.30	ug/L			10/30/18 20:38	1
Chlorobenzene	1.0	U	2.0	0.44	ug/L			10/30/18 20:38	1
Chloroethane	3.5	U	5.0	1.1	ug/L			10/30/18 20:38	1
Chloroform	1.0	U	5.0	0.50	ug/L			10/30/18 20:38	1
Chloromethane	15	U	20	5.4	ug/L			10/30/18 20:38	1
cis-1,2-Dichloroethene	2.0	U	3.0	0.69	ug/L			10/30/18 20:38	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.20	ug/L			10/30/18 20:38	1
Dibromochloromethane	0.50	U	1.0	0.20	ug/L			10/30/18 20:38	1
Dibromomethane	1.0	U	2.0	0.34	ug/L			10/30/18 20:38	1
Dichlorodifluoromethane	6.0	U	10	2.3	ug/L			10/30/18 20:38	1
Diisopropyl ether	1.3	U	2.0	0.35	ug/L			10/30/18 20:38	1
Ethylbenzene	1.0	U M	3.0	0.50	ug/L			10/30/18 20:38	1
Hexachlorobutadiene	2.0	U	6.0	0.79	ug/L			10/30/18 20:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-287774/24
Matrix: Water
Analysis Batch: 287774

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	1.0	U M	2.0	0.51	ug/L			10/30/18 20:38	1
m,p-Xylene	2.0	U M	3.0	0.75	ug/L			10/30/18 20:38	1
Methyl iodide	0.50	U	5.0	0.24	ug/L			10/30/18 20:38	1
Methyl tert-butyl ether	1.0	U	2.0	0.44	ug/L			10/30/18 20:38	1
Methylene Chloride	3.5	U	5.0	1.4	ug/L			10/30/18 20:38	1
Naphthalene	2.0	U M	4.0	0.93	ug/L			10/30/18 20:38	1
n-Butylbenzene	1.0	U	3.0	0.44	ug/L			10/30/18 20:38	1
N-Propylbenzene	1.0	U	3.0	0.50	ug/L			10/30/18 20:38	1
o-Xylene	0.50	U M	2.0	0.15	ug/L			10/30/18 20:38	1
sec-Butylbenzene	1.0	U	3.0	0.49	ug/L			10/30/18 20:38	1
Styrene	1.0	U M	5.0	0.51	ug/L			10/30/18 20:38	1
tert-Butylbenzene	2.0	U M	3.0	0.58	ug/L			10/30/18 20:38	1
Tetrachloroethene	1.0	U	3.0	0.41	ug/L			10/30/18 20:38	1
Toluene	1.0	U M	2.0	0.39	ug/L			10/30/18 20:38	1
trans-1,2-Dichloroethene	1.0	U M	3.0	0.39	ug/L			10/30/18 20:38	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.16	ug/L			10/30/18 20:38	1
Trichloroethene	2.0	U	3.0	0.85	ug/L			10/30/18 20:38	1
Trichlorofluoromethane	2.0	U	3.0	0.63	ug/L			10/30/18 20:38	1
Vinyl acetate	2.5	U	5.0	1.2	ug/L			10/30/18 20:38	1
Vinyl chloride	0.50	U	1.0	0.22	ug/L			10/30/18 20:38	1
Xylenes, Total	2.0	U	3.0	0.75	ug/L			10/30/18 20:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*10/30/18 20:38*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/30/18 20:38*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/30/18 20:38*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/30/18 20:38*	*1*

Lab Sample ID: LCS 580-287774/25
Matrix: Water
Analysis Batch: 287774

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.79		ug/L		98	78 - 124
1,1,1-Trichloroethane	10.0	9.92		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	10.0	9.60		ug/L		96	71 - 121
1,1,2-Trichloroethane	10.0	9.60		ug/L		96	80 - 119
1,1-Dichloroethane	10.0	10.0		ug/L		100	77 - 125
1,1-Dichloroethene	10.0	10.5		ug/L		105	71 - 131
1,1-Dichloropropene	10.0	9.75		ug/L		98	79 - 125
1,2,3-Trichlorobenzene	10.0	9.57		ug/L		96	69 - 129
1,2,3-Trichloropropane	10.0	9.45		ug/L		94	73 - 122
1,2,4-Trichlorobenzene	10.0	9.75		ug/L		98	69 - 130
1,2,4-Trimethylbenzene	10.0	9.67		ug/L		97	76 - 124
1,2-Dibromo-3-Chloropropane	10.0	9.15	J	ug/L		92	62 - 128
1,2-Dibromoethane	10.0	9.65		ug/L		97	77 - 121
1,2-Dichlorobenzene	10.0	9.77		ug/L		98	80 - 119
1,2-Dichloroethane	10.0	9.94		ug/L		99	73 - 128

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-287774/25
Matrix: Water
Analysis Batch: 287774

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	9.99		ug/L		100	78 - 122
1,3,5-Trimethylbenzene	10.0	9.71		ug/L		97	75 - 124
1,3-Dichlorobenzene	10.0	9.62		ug/L		96	80 - 119
1,3-Dichloropropane	10.0	9.90		ug/L		99	80 - 119
1,4-Dichlorobenzene	10.0	10.0		ug/L		100	79 - 118
2,2-Dichloropropane	10.0	9.70		ug/L		97	60 - 139
2-Butanone (MEK)	50.0	46.3		ug/L		93	56 - 143
2-Chlorotoluene	10.0	9.36		ug/L		94	79 - 122
2-Hexanone	50.0	47.1		ug/L		94	57 - 139
4-Chlorotoluene	10.0	9.88		ug/L		99	78 - 122
4-Isopropyltoluene	10.0	9.75		ug/L		98	77 - 127
4-Methyl-2-pentanone (MIBK)	50.0	50.8		ug/L		102	67 - 130
Acetone	50.0	47.3	J	ug/L		95	39 - 160
Benzene	10.0	9.92		ug/L		99	79 - 120
Bromobenzene	10.0	9.66		ug/L		97	80 - 120
Bromochloromethane	10.0	9.76		ug/L		98	78 - 123
Bromodichloromethane	10.0	10.2		ug/L		102	79 - 125
Bromoform	10.0	9.42		ug/L		94	66 - 130
Bromomethane	10.0	10.4		ug/L		104	53 - 141
Carbon disulfide	10.0	10.1		ug/L		101	64 - 133
Carbon tetrachloride	10.0	9.81		ug/L		98	72 - 136
Chlorobenzene	10.0	9.95		ug/L		99	82 - 118
Chloroethane	10.0	10.4		ug/L		104	60 - 138
Chloroform	10.0	10.2		ug/L		102	79 - 124
Chloromethane	10.0	10.0	J M	ug/L		100	50 - 139
cis-1,2-Dichloroethene	10.0	10.0		ug/L		100	78 - 123
cis-1,3-Dichloropropene	10.0	9.66		ug/L		97	75 - 124
Dibromochloromethane	10.0	9.64		ug/L		96	74 - 126
Dibromomethane	10.0	9.63		ug/L		96	79 - 123
Dichlorodifluoromethane	10.0	9.57	J	ug/L		96	32 - 152
Diisopropyl ether	12.5	12.4		ug/L		99	67 - 128
Ethylbenzene	10.0	9.87		ug/L		99	79 - 121
Hexachlorobutadiene	10.0	9.90		ug/L		99	66 - 134
Isopropylbenzene	10.0	9.90		ug/L		99	72 - 131
m,p-Xylene	10.0	9.99		ug/L		100	80 - 121
Methyl iodide	10.0	9.89		ug/L		99	69 - 131
Methyl tert-butyl ether	10.0	9.63		ug/L		96	71 - 124
Methylene Chloride	10.0	10.5		ug/L		105	74 - 124
Naphthalene	10.0	9.60		ug/L		96	61 - 128
n-Butylbenzene	10.0	9.99		ug/L		100	75 - 128
N-Propylbenzene	10.0	9.73		ug/L		97	76 - 126
o-Xylene	10.0	9.99		ug/L		100	78 - 122
sec-Butylbenzene	10.0	9.69		ug/L		97	77 - 126
Styrene	10.0	9.41		ug/L		94	78 - 123
tert-Butylbenzene	10.0	9.83		ug/L		98	78 - 124
Tetrachloroethene	10.0	9.72		ug/L		97	74 - 129
Toluene	10.0	9.99		ug/L		100	80 - 121
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	75 - 124

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-287774/25
Matrix: Water
Analysis Batch: 287774

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.63		ug/L		96	73 - 127
Trichloroethene	10.0	9.77		ug/L		98	79 - 123
Trichlorofluoromethane	10.0	10.2		ug/L		102	65 - 141
Vinyl acetate	25.0	23.9		ug/L		96	54 - 146
Vinyl chloride	10.0	10.6		ug/L		106	58 - 137
Xylenes, Total	20.0	20.0		ug/L		100	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: LCSD 580-287774/26
Matrix: Water
Analysis Batch: 287774

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	9.56		ug/L		96	78 - 124	2	20
1,1,1-Trichloroethane	10.0	9.66		ug/L		97	74 - 131	3	20
1,1,2,2-Tetrachloroethane	10.0	9.49		ug/L		95	71 - 121	1	20
1,1,2-Trichloroethane	10.0	9.90		ug/L		99	80 - 119	3	20
1,1-Dichloroethane	10.0	9.42		ug/L		94	77 - 125	6	20
1,1-Dichloroethene	10.0	10.0		ug/L		100	71 - 131	5	20
1,1-Dichloropropene	10.0	9.42		ug/L		94	79 - 125	3	20
1,2,3-Trichlorobenzene	10.0	9.33		ug/L		93	69 - 129	3	20
1,2,3-Trichloropropane	10.0	9.68		ug/L		97	73 - 122	2	20
1,2,4-Trichlorobenzene	10.0	9.52		ug/L		95	69 - 130	2	20
1,2,4-Trimethylbenzene	10.0	9.27		ug/L		93	76 - 124	4	20
1,2-Dibromo-3-Chloropropane	10.0	9.06	J	ug/L		91	62 - 128	1	20
1,2-Dibromoethane	10.0	9.92		ug/L		99	77 - 121	3	20
1,2-Dichlorobenzene	10.0	9.46		ug/L		95	80 - 119	3	20
1,2-Dichloroethane	10.0	9.98		ug/L		100	73 - 128	0	20
1,2-Dichloropropane	10.0	9.56		ug/L		96	78 - 122	4	20
1,3,5-Trimethylbenzene	10.0	9.22		ug/L		92	75 - 124	5	20
1,3-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 119	2	20
1,3-Dichloropropane	10.0	10.2		ug/L		102	80 - 119	3	20
1,4-Dichlorobenzene	10.0	9.75		ug/L		97	79 - 118	3	20
2,2-Dichloropropane	10.0	9.17		ug/L		92	60 - 139	6	20
2-Butanone (MEK)	50.0	50.5		ug/L		101	56 - 143	9	20
2-Chlorotoluene	10.0	9.44		ug/L		94	79 - 122	1	20
2-Hexanone	50.0	54.0		ug/L		108	57 - 139	14	20
4-Chlorotoluene	10.0	9.57		ug/L		96	78 - 122	3	20
4-Isopropyltoluene	10.0	9.21		ug/L		92	77 - 127	6	20
4-Methyl-2-pentanone (MIBK)	50.0	52.5		ug/L		105	67 - 130	3	20
Acetone	50.0	52.8		ug/L		106	39 - 160	11	20
Benzene	10.0	9.32		ug/L		93	79 - 120	6	20
Bromobenzene	10.0	9.48		ug/L		95	80 - 120	2	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-287774/26
Matrix: Water
Analysis Batch: 287774

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromochloromethane	10.0	9.59		ug/L		96	78 - 123	2	20
Bromodichloromethane	10.0	9.60		ug/L		96	79 - 125	6	20
Bromoform	10.0	9.66		ug/L		97	66 - 130	2	20
Bromomethane	10.0	9.64		ug/L		96	53 - 141	8	20
Carbon disulfide	10.0	9.93		ug/L		99	64 - 133	1	20
Carbon tetrachloride	10.0	9.58		ug/L		96	72 - 136	2	20
Chlorobenzene	10.0	9.88		ug/L		99	82 - 118	1	20
Chloroethane	10.0	9.87		ug/L		99	60 - 138	5	20
Chloroform	10.0	9.61		ug/L		96	79 - 124	6	20
Chloromethane	10.0	9.58	J	ug/L		96	50 - 139	5	20
cis-1,2-Dichloroethene	10.0	9.47		ug/L		95	78 - 123	6	20
cis-1,3-Dichloropropene	10.0	9.47		ug/L		95	75 - 124	2	20
Dibromochloromethane	10.0	9.76		ug/L		98	74 - 126	1	20
Dibromomethane	10.0	9.76		ug/L		98	79 - 123	1	20
Dichlorodifluoromethane	10.0	9.17	J	ug/L		92	32 - 152	4	20
Diisopropyl ether	12.5	12.5		ug/L		100	67 - 128	0	20
Ethylbenzene	10.0	9.87		ug/L		99	79 - 121	0	20
Hexachlorobutadiene	10.0	9.77		ug/L		98	66 - 134	1	20
Isopropylbenzene	10.0	9.72		ug/L		97	72 - 131	2	20
m,p-Xylene	10.0	9.87		ug/L		99	80 - 121	1	20
Methyl iodide	10.0	9.94		ug/L		99	69 - 131	0	20
Methyl tert-butyl ether	10.0	9.74		ug/L		97	71 - 124	1	20
Methylene Chloride	10.0	10.6		ug/L		106	74 - 124	1	20
Naphthalene	10.0	9.58		ug/L		96	61 - 128	0	20
n-Butylbenzene	10.0	9.48		ug/L		95	75 - 128	5	20
N-Propylbenzene	10.0	9.34		ug/L		93	76 - 126	4	20
o-Xylene	10.0	9.60		ug/L		96	78 - 122	4	20
sec-Butylbenzene	10.0	9.21		ug/L		92	77 - 126	5	20
Styrene	10.0	9.37		ug/L		94	78 - 123	0	20
tert-Butylbenzene	10.0	9.49		ug/L		95	78 - 124	3	20
Tetrachloroethene	10.0	9.72		ug/L		97	74 - 129	0	20
Toluene	10.0	9.87		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene	10.0	9.88		ug/L		99	75 - 124	4	20
trans-1,3-Dichloropropene	10.0	9.67		ug/L		97	73 - 127	0	20
Trichloroethene	10.0	9.42		ug/L		94	79 - 123	4	20
Trichlorofluoromethane	10.0	9.53	M	ug/L		95	65 - 141	7	20
Vinyl acetate	25.0	22.0		ug/L		88	54 - 146	8	20
Vinyl chloride	10.0	9.89		ug/L		99	58 - 137	7	20
Xylenes, Total	20.0	19.5		ug/L		97	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

QC Association Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

GC/MS VOA

Analysis Batch: 287774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115988-1	775VMW-8_1018	Total/NA	Water	8260B	
280-115988-2	775MW-6_1018	Total/NA	Water	8260B	
MB 580-287774/24	Method Blank	Total/NA	Water	8260B	
LCS 580-287774/25	Lab Control Sample	Total/NA	Water	8260B	
LCSD 580-287774/26	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Client Sample ID: 775VMW-8_1018

Lab Sample ID: 280-115988-1

Date Collected: 10/23/18 15:26

Matrix: Water

Date Received: 10/24/18 11:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	287774	10/31/18 00:32	RSB	TAL SEA

Client Sample ID: 775MW-6_1018

Lab Sample ID: 280-115988-2

Date Collected: 10/23/18 16:31

Matrix: Water

Date Received: 10/24/18 11:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	287774	10/31/18 00:58	RSB	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Bhate Environmental
TestAmerica Job ID: 280-115988-1
Project/Site: Griffiss AFB, NY (BRAC Eastern)

Laboratory: TestAmerica Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19
New York	NELAP	2	11964	04-01-19

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	11-05-18
Montana (UST)	State Program	8	N/A	04-30-20
Nevada	State Program	9	WA000502019-1	07-31-19
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-19

Method Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY (BRAC Eastern)

TestAmerica Job ID: 280-115988-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-115988-1	775VMW-8_1018	Water	10/23/18 15:26	10/24/18 11:56
280-115988-2	775MW-6_1018	Water	10/23/18 16:31	10/24/18 11:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Instrument ID: SEA102 Analysis Batch Number: 287774

Lab Sample ID: ICV 580-287774/12 Client Sample ID:

Date Analyzed: 10/30/18 20:12 Lab File ID: J3018112.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl methacrylate	10.96	Peak assignment corrected	brennanr	10/31/18 10:09

Lab Sample ID: MB 580-287774/24 Client Sample ID:

Date Analyzed: 10/30/18 20:38 Lab File ID: J3018113.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4-Trichlorobenzene		Invalid Compound ID	brennanr	10/31/18 11:26
1,2,4-Trimethylbenzene		Invalid Compound ID	brennanr	10/31/18 11:26
1,2-Dibromoethane		Invalid Compound ID	brennanr	10/31/18 11:25
1,2-Dichlorobenzene		Invalid Compound ID	brennanr	10/31/18 11:26
1,2-Dichloroethane		Invalid Compound ID	brennanr	10/31/18 11:24
1,3,5-Trimethylbenzene		Invalid Compound ID	brennanr	10/31/18 11:26
2-Chlorotoluene		Invalid Compound ID	brennanr	10/31/18 11:26
2-Hexanone		Invalid Compound ID	brennanr	10/31/18 11:25
4-Chlorotoluene		Invalid Compound ID	brennanr	10/31/18 11:26
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	brennanr	10/31/18 11:25
Bromobenzene		Invalid Compound ID	brennanr	10/31/18 11:26
Ethylbenzene		Invalid Compound ID	brennanr	10/31/18 11:25
Isopropylbenzene		Invalid Compound ID	brennanr	10/31/18 11:26
m,p-Xylene		Invalid Compound ID	brennanr	10/31/18 11:25
Naphthalene		Invalid Compound ID	brennanr	10/31/18 11:26
o-Xylene		Invalid Compound ID	brennanr	10/31/18 11:26
Styrene		Invalid Compound ID	brennanr	10/31/18 11:26
tert-Butylbenzene		Invalid Compound ID	brennanr	10/31/18 11:26
Toluene		Invalid Compound ID	brennanr	10/31/18 11:25
trans-1,2-Dichloroethene		Invalid Compound ID	brennanr	10/31/18 11:24

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Instrument ID: SEA102 Analysis Batch Number: 287774

Lab Sample ID: LCS 580-287774/25 Client Sample ID:

Date Analyzed: 10/30/18 21:04 Lab File ID: J3018114.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	4.37	Peak assignment corrected	brennanr	10/31/18 11:27

Lab Sample ID: LCSD 580-287774/26 Client Sample ID:

Date Analyzed: 10/30/18 21:30 Lab File ID: J3018115.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	5.96	Peak assignment corrected	brennanr	10/31/18 11:28

Lab Sample ID: 280-115988-1 Client Sample ID: 775VMW-8_1018

Date Analyzed: 10/31/18 00:32 Lab File ID: J3018022.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichlorobenzene		Invalid Compound ID	brennanr	10/31/18 11:50
1,2,4-Trichlorobenzene		Invalid Compound ID	brennanr	10/31/18 11:50
1,2,4-Trimethylbenzene		Invalid Compound ID	brennanr	10/31/18 11:50
1,3,5-Trimethylbenzene		Invalid Compound ID	brennanr	10/31/18 11:49
Acetone		Invalid Compound ID	brennanr	10/31/18 11:48
Bromodichloromethane		Invalid Compound ID	brennanr	10/31/18 11:49
m,p-Xylene		Invalid Compound ID	brennanr	10/31/18 11:49
Naphthalene		Invalid Compound ID	brennanr	10/31/18 11:50
n-Butylbenzene		Invalid Compound ID	brennanr	10/31/18 11:50
Styrene		Invalid Compound ID	brennanr	10/31/18 11:49
tert-Butylbenzene		Invalid Compound ID	brennanr	10/31/18 11:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Instrument ID: SEA102 Analysis Batch Number: 287774

Lab Sample ID: 280-115988-2 Client Sample ID: 775MW-6_1018

Date Analyzed: 10/31/18 00:58 Lab File ID: J3018023.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	brennanr	10/31/18 11:50
m,p-Xylene		Invalid Compound ID	brennanr	10/31/18 11:51
Naphthalene		Invalid Compound ID	brennanr	10/31/18 11:52
n-Butylbenzene		Invalid Compound ID	brennanr	10/31/18 11:52
sec-Butylbenzene		Invalid Compound ID	brennanr	10/31/18 11:52
Styrene		Invalid Compound ID	brennanr	10/31/18 11:51
Toluene		Invalid Compound ID	brennanr	10/31/18 11:51

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
5X SUR/IS/TFT_00006							TAH	
							Tentatively Identified Compound	
							Xylenes, Total	
					SURR/IS/TFT_00104	5 mL	Trifluorotoluene (Surr)	49.98 ppm
							1,2-Dichloroethane-d4 (Surr)	48.75 ppm
							1,4-Dichlorobenzene-d4	48.75 ppm
							4-Bromofluorobenzene (Surr)	48.75 ppm
							BFB	48.75 ppm
							Chlorobenzene-d5	48.75 ppm
							Dibromofluoromethane (Surr)	48.75 ppm
							Fluorobenzene (IS)	48.75 ppm
							TBA-d9 (IS)	975 ppm
							Toluene-d8 (Surr)	48.75 ppm
.SURR/IS/TFT_00104	03/27/19	05/31/18	blk, Lot voarsurr/is_00047	25 mL	V-TFTStk_00034	625 uL	Trifluorotoluene (Surr)	249.9 ppm
					VOARSURR/IS_00047	24.375 mL	1,2-Dichloroethane-d4 (Surr)	243.75 ppm
							1,4-Dichlorobenzene-d4	243.75 ppm
							4-Bromofluorobenzene (Surr)	243.75 ppm
							BFB	243.75 ppm
							Chlorobenzene-d5	243.75 ppm
							Dibromofluoromethane (Surr)	243.75 ppm
							Fluorobenzene (IS)	243.75 ppm
							TBA-d9 (IS)	4875 ppm
							Toluene-d8 (Surr)	243.75 ppm
..V-TFTStk_00034	03/27/19	03/27/18	methanol, Lot 177891	50 mL	TFTneat_00013	420 uL	Trifluorotoluene (Surr)	9996 mg/L
...TFTneat_00013	03/31/19	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
..VOARSURR/IS_00047	10/31/22	Restek, Lot A0131478			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							BFB	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
VOAMasterMix_00027	10/31/18	09/14/18	MeOH, Lot 177891	50 mL	VOARGAS__00018	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOARKETON__00017	1000 uL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					VOARMegMix__00028	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
					VOARPOLARAD__00013	1250 uL	Diisopropyl ether	62.5 ug/mL
					VOARVA__00036	1250 uL	Vinyl acetate	125 ug/mL
.VOARGAS__00018	12/31/20		Restek, Lot A0133239		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOARKETON__00017	12/31/20		Restek, Lot A0133260		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.VOARMegMix__00028	06/30/19		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added	Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
.VOARPOLARAD__00013	11/30/19		Restek, Lot A0132831		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
.VOARVA__00036	12/31/18		Restek, Lot A0138862		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VOAMasterSEC_00021	12/31/18	09/16/18	methanol, Lot 177891	25 mL	VOASGAS2__00021	500 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOASKETON2__00018	500 uL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOASMegMix2__00019	500 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					VOASPOLARAD2__00015	625 uL	Diisopropyl ether	62.5 ug/mL
					VOASVA2__00035	625 uL	Vinyl acetate	125 ug/mL
.VOASGAS2__00021	12/31/20		Restek, Lot A0133344		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOASKETON2__00018	12/31/20		Restek, Lot A0133078		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.VOASMegMix2__00019	12/31/18		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.VOASPOLARAD2__00015	04/30/19		Restek, Lot A0126826		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
.VOASVA2__00035	12/31/18		Restek, Lot A0138863		(Purchased Reagent)		Vinyl acetate	5000 ug/mL

Reagent

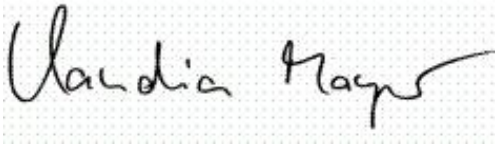
TFTneat_00013

3050 Spruce Street, Saint Louis, MO 63103 USA
Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:	α,α,α-TRIFLUOROTOLUENE
	>= 99 %
Product Number:	T63703
Batch Number:	STBG2214V
Brand:	Sigma-Aldrich
CAS Number:	98-08-8
Formula:	$C_6H_5CF_3$
Formula Weight:	146.11
Quality Release Date:	31 MAR 2016

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	LIQUID	LIQUID
PURITY (GC AREA %)	≥ 99.0 %	> 99.9 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS



Claudia Mayer
Manager Quality Control
Steinheim, Germany

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Reagent

VOARGAS__00018

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CERTIFIED REFERENCE MATERIAL

6/18/16

ACCREDITED
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Reference Material Producer
Certificate#3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate#3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0133239

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

21B2328
ID VOARGAS_00018
Exp 12/31/20 Prpd RSB
50PPM 8260 Gases L1/S3 (2

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,502.2 µg/mL	+/- 19.1835	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/- 140.8542	µg/mL	Unstressed
	Purity 99%		+/- 144.1244	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,502.9 µg/mL	+/- 20.7092	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBH5831)		+/- 141.1071	µg/mL	Unstressed
	Purity 99%		+/- 144.3732	µg/mL	Stressed
3	Vinyl chloride	2,500.5 µg/mL	+/- 19.3155	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 00012557)		+/- 140.7734	µg/mL	Unstressed
	Purity 99%		+/- 144.0407	µg/mL	Stressed
4	1,3-Butadiene	2,503.2 µg/mL	+/- 18.7452	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBH7966)		+/- 140.8494	µg/mL	Unstressed
	Purity 99%		+/- 144.1222	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.2 µg/mL	+/- 20.5611	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/- 141.0441	µg/mL	Unstressed
	Purity 99%		+/- 144.3097	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.9 µg/mL	+/- 18.5356	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/- 140.6956	µg/mL	Unstressed
	Purity 99%		+/- 143.9660	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.5352	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot 4938100)		+/- 140.1725	µg/mL	Unstressed
	Purity 99%		+/- 143.4524	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.9	µg/mL	+/-	18.3561	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBH4155V)			+/-	140.6709	µg/mL	Unstressed
	Purity 99%				+/-	143.9418	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

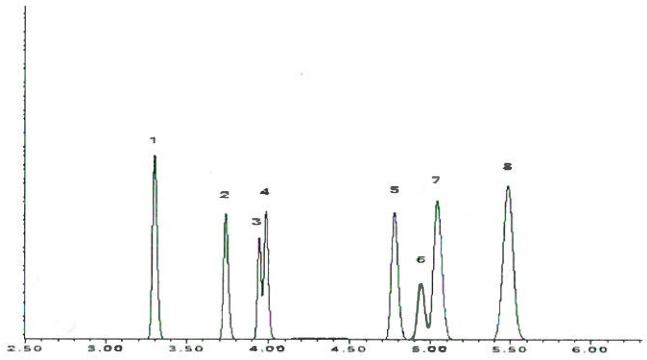
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 19-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VOARKETON__00017

6-18-18

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0133260

21823321
ID VOARKETON_00017
Exp 12/31/20 Prpd RSB
8260 List 1 / Std #2 Kete

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot SHBH6933) **Purity** 99%	12,585.0 µg/mL	+/- 73.6879 µg/mL +/- 759.3589 µg/mL +/- 761.1615 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBF2461V) **Purity** 99%	12,601.5 µg/mL	+/- 73.7846 µg/mL +/- 760.3545 µg/mL +/- 762.1594 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBH7006) **Purity** 99%	12,622.0 µg/mL	+/- 73.9046 µg/mL +/- 761.5914 µg/mL +/- 763.3993 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBW0198V) **Purity** 99%	12,604.0 µg/mL	+/- 73.7992 µg/mL +/- 760.5053 µg/mL +/- 762.3106 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

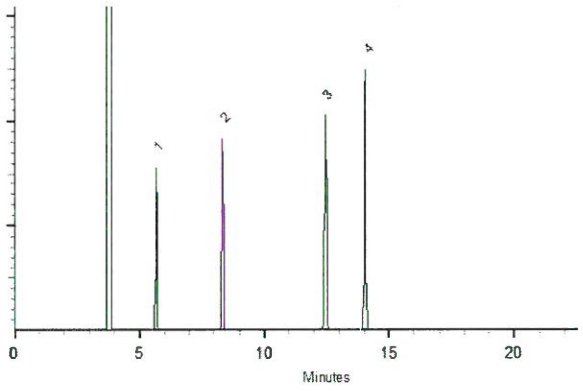
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B251644995

Justine Albertson - Operations Tech-ARM QC

Date Passed: 13-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VOARMegMix__00028

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0123711

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

21807765
ID: VOARMegMix_00028
Exp: 06/30/19 Prpd: RSB
8260 List 1/ Std #1 MegaM

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether)	2,501.3 µg/mL	+/- 14.5425 µg/mL	Gravimetric
	CAS # 60-29-7 (Lot SHBG1462V)		+/- 150.9115 µg/mL	Unstressed
	Purity 99%		+/- 151.2698 µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,505.1 µg/mL	+/- 14.5650 µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00009482)		+/- 151.1453 µg/mL	Unstressed
	Purity 99%		+/- 151.5041 µg/mL	Stressed
3	1,1-dichloroethene	2,511.5 µg/mL	+/- 14.6021 µg/mL	Gravimetric
	CAS # 75-35-4 (Lot SHBG8609V)		+/- 151.5299 µg/mL	Unstressed
	Purity 99%		+/- 151.8897 µg/mL	Stressed
4	tert-Butanol (TBA)	25,001.8 µg/mL	+/- 145.3547 µg/mL	Gravimetric
	CAS # 75-65-0 (Lot SHBF0688V)		+/- 1,508.4656 µg/mL	Unstressed
	Purity 99%		+/- 1,512.0470 µg/mL	Stressed
5	Methyl acetate	5,000.5 µg/mL	+/- 29.0733 µg/mL	Gravimetric
	CAS # 79-20-9 (Lot SHBG4345V)		+/- 301.7023 µg/mL	Unstressed
	Purity 99%		+/- 302.4186 µg/mL	Stressed
6	Iodomethane (methyl iodide)	2,502.9 µg/mL	+/- 14.5519 µg/mL	Gravimetric
	CAS # 74-88-4 (Lot SHBF2149V)		+/- 151.0095 µg/mL	Unstressed
	Purity 99%		+/- 151.3681 µg/mL	Stressed
7	Allyl chloride (3-chloropropene)	2,517.1 µg/mL	+/- 14.6348 µg/mL	Gravimetric
	CAS # 107-05-1 (Lot SHBF8133V)		+/- 151.8693 µg/mL	Unstressed
	Purity 99%		+/- 152.2299 µg/mL	Stressed

8	Methylene chloride (dichloromethane)		2,502.1	µg/mL	+/- 14.5476	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBH2578V)			+/- 150.9643	µg/mL	Unstressed
	Purity 99%				+/- 151.3227	µg/mL	Stressed
9	Carbon disulfide		2,501.4	µg/mL	+/- 14.5432	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot S20A856)			+/- 150.9190	µg/mL	Unstressed
	Purity 99%				+/- 151.2773	µg/mL	Stressed
10	Acrylonitrile		25,001.3	µg/mL	+/- 145.3518	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot T07B2030)			+/- 1,508.4355	µg/mL	Unstressed
	Purity 99%				+/- 1,512.0167	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,505.3	µg/mL	+/- 14.5657	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBG2655V)			+/- 151.1528	µg/mL	Unstressed
	Purity 99%				+/- 151.5117	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,500.5	µg/mL	+/- 14.5379	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBV2831V)			+/- 150.8644	µg/mL	Unstressed
	Purity 98%				+/- 151.2226	µg/mL	Stressed
13	n-Hexane (C6)		2,503.8	µg/mL	+/- 14.5570	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBG2674V)			+/- 151.0623	µg/mL	Unstressed
	Purity 99%				+/- 151.4210	µg/mL	Stressed
14	1,1-Dichloroethane		2,500.4	µg/mL	+/- 14.5374	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 00008621)			+/- 150.8587	µg/mL	Unstressed
	Purity 99%				+/- 151.2169	µg/mL	Stressed
15	2,2-Dichloropropane		2,501.0	µg/mL	+/- 14.5408	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBR0622V)			+/- 150.8940	µg/mL	Unstressed
	Purity 98%				+/- 151.2522	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,503.8	µg/mL	+/- 14.5570	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot 09431AEV)			+/- 151.0623	µg/mL	Unstressed
	Purity 99%				+/- 151.4210	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,512.5	µg/mL	+/- 363.4341	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBG8201V)			+/- 3,771.6543	µg/mL	Unstressed
	Purity 99%				+/- 3,780.6088	µg/mL	Stressed
18	chloroform		2,501.9	µg/mL	+/- 14.5461	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot MKBV2089V)			+/- 150.9492	µg/mL	Unstressed
	Purity 99%				+/- 151.3076	µg/mL	Stressed
19	Bromochloromethane		2,503.3	µg/mL	+/- 14.5541	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/- 151.0322	µg/mL	Unstressed
	Purity 99%				+/- 151.3907	µg/mL	Stressed
20	Tetrahydrofuran		5,001.3	µg/mL	+/- 29.0777	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBG2910V)			+/- 301.7476	µg/mL	Unstressed
	Purity 99%				+/- 302.4640	µg/mL	Stressed
21	1,1,1-trichloroethane		2,500.3	µg/mL	+/- 14.5367	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B15W12061)			+/- 150.8512	µg/mL	Unstressed
	Purity 99%				+/- 151.2093	µg/mL	Stressed
22	Cyclohexane		2,502.0	µg/mL	+/- 14.5468	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot MKBX4768V)			+/- 150.9567	µg/mL	Unstressed
	Purity 99%				+/- 151.3151	µg/mL	Stressed
23	1,1-Dichloropropene		2,500.5	µg/mL	+/- 14.5381	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 160727JLM)			+/- 150.8662	µg/mL	Unstressed
	Purity 99%				+/- 151.2244	µg/mL	Stressed

24	carbon tetrachloride **CAS #** 56-23-5 **Purity** 99%	(Lot SHBG1763V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBG6171V)	2,505.5 µg/mL	+/- 14.5672 +/- 151.1679 +/- 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBF9313V)	2,504.8 µg/mL	+/- 14.5628 +/- 151.1227 +/- 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBH2056V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBH1955V)	2,502.4 µg/mL	+/- 14.5490 +/- 150.9794 +/- 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2 **Purity** 98%	(Lot SHBG0634V)	2,500.3 µg/mL	+/- 14.5372 +/- 150.8570 +/- 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,503.0 µg/mL	+/- 14.5527 +/- 151.0171 +/- 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBH2584V)	50,011.4 µg/mL	+/- 290.7552 +/- 3,017.4064 +/- 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 98%	(Lot 10183283)	2,501.9 µg/mL	+/- 14.5465 +/- 150.9531 +/- 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 22622)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBH1932V)	2,504.3 µg/mL	+/- 14.5599 +/- 151.0925 +/- 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot SHBD9190V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C584177)	2,503.6 µg/mL	+/- 14.5563 +/- 151.0548 +/- 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,503.5 µg/mL	+/- 14.5556 +/- 151.0472 +/- 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD9374V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,500.2	µg/mL	+/-	14.5365	µg/mL	Gravimetric
	CAS# 124-48-1	(Lot MKBW3597V)			+/-	150.8497	µg/mL	Unstressed
	Purity 98%				+/-	151.2078	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
42	Chlorobenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS# 108-90-7	(Lot SHBF0505V)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
43	m-Xylene		1,250.3	µg/mL	+/-	7.2691	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBG4347V)			+/-	75.4331	µg/mL	Unstressed
	Purity 99%				+/-	75.6122	µg/mL	Stressed
44	p-Xylene		1,251.3	µg/mL	+/-	7.2749	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBG3928V)			+/-	75.4935	µg/mL	Unstressed
	Purity 99%				+/-	75.6727	µg/mL	Stressed
45	Ethylbenzene		2,503.3	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBG5920V)			+/-	151.0322	µg/mL	Unstressed
	Purity 99%				+/-	151.3907	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
47	o-Xylene		2,504.9	µg/mL	+/-	14.5636	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBH3432V)			+/-	151.1302	µg/mL	Unstressed
	Purity 99%				+/-	151.4890	µg/mL	Stressed
48	Styrene		2,506.3	µg/mL	+/-	14.5716	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKBS7097V)			+/-	151.2132	µg/mL	Unstressed
	Purity 99%				+/-	151.5722	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10185056)			+/-	150.9341	µg/mL	Unstressed
	Purity 99%				+/-	151.2925	µg/mL	Stressed
50	bromoform		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBD8459V)			+/-	151.0095	µg/mL	Unstressed
	Purity 99%				+/-	151.3681	µg/mL	Stressed
51	bromodichloromethane		2,506.8	µg/mL	+/-	14.5750	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKBW5506V)			+/-	151.2490	µg/mL	Unstressed
	Purity 97%				+/-	151.6081	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,508.5	µg/mL	+/-	14.5846	µg/mL	Gravimetric
	CAS# 96-18-4	(Lot BCBH8722V)			+/-	151.3489	µg/mL	Unstressed
	Purity 99%				+/-	151.7082	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP6041V)			+/-	150.8817	µg/mL	Unstressed
	Purity 95%				+/-	151.2399	µg/mL	Stressed
55	n-Propylbenzene		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBJ0332V)			+/-	150.9492	µg/mL	Unstressed
	Purity 99%				+/-	151.3076	µg/mL	Stressed

56	Bromobenzene		2,507.0	µg/mL	+/-	14.5759	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/-	151.2584	µg/mL	Unstressed
	Purity 99%				+/-	151.6175	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCBQ2165V)			+/-	150.9040	µg/mL	Unstressed
	Purity 99%				+/-	151.2622	µg/mL	Stressed
58	2-Chlorotoluene		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKBW5554V)			+/-	150.8738	µg/mL	Unstressed
	Purity 99%				+/-	151.2320	µg/mL	Stressed
59	4-Chlorotoluene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKBL7753V)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
60	tert-Butylbenzene		2,507.0	µg/mL	+/-	14.5759	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot S52237V)			+/-	151.2584	µg/mL	Unstressed
	Purity 99%				+/-	151.6175	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.8	µg/mL	+/-	14.5401	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot MKBJ6229V)			+/-	150.8866	µg/mL	Unstressed
	Purity 98%				+/-	151.2448	µg/mL	Stressed
62	sec-Butylbenzene		2,505.4	µg/mL	+/-	14.5665	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKBR9260V)			+/-	151.1604	µg/mL	Unstressed
	Purity 99%				+/-	151.5193	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,503.8	µg/mL	+/-	14.5570	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKBS2604V)			+/-	151.0623	µg/mL	Unstressed
	Purity 99%				+/-	151.4210	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	151.0699	µg/mL	Unstressed
	Purity 99%				+/-	151.4285	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,509.9	µg/mL	+/-	14.5926	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	151.4319	µg/mL	Unstressed
	Purity 99%				+/-	151.7914	µg/mL	Stressed
66	n-Butylbenzene		2,503.3	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJV)			+/-	151.0322	µg/mL	Unstressed
	Purity 99%				+/-	151.3907	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,503.8	µg/mL	+/-	14.5570	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	151.0623	µg/mL	Unstressed
	Purity 99%				+/-	151.4210	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot FBL01)			+/-	151.1378	µg/mL	Unstressed
	Purity 99%				+/-	151.4966	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	151.1528	µg/mL	Unstressed
	Purity 99%				+/-	151.5117	µg/mL	Stressed
70	Hexachlorobutadiene		2,506.5	µg/mL	+/-	14.5728	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	151.2266	µg/mL	Unstressed
	Purity 98%				+/-	151.5856	µg/mL	Stressed
71	Naphthalene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,511.1	µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)			+/-	151.5073	µg/mL	Unstressed
	Purity 99%				+/-	151.8670	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

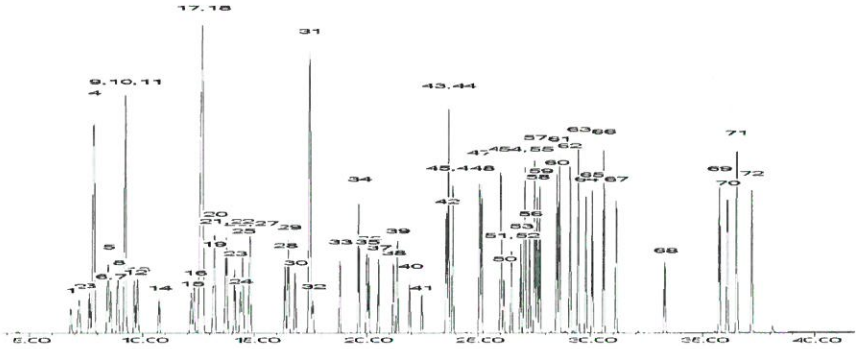
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 22-Dec-2016 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

VOARPOLARAD__00013

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0132831

2180685
ID: VOARPOLARAD_00013
Exp: 11/30/19 Prpd: RSB
8260 LIST 3 / Std #1 Pola

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2,500-25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS#** 75-05-8 **Purity** 99%	(Lot SHBB1630V)	25,004.8 µg/mL	+/- 146.4086 µg/mL +/- 1,237.0550 µg/mL +/- 1,267.8094 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS#** 108-20-3 **Purity** 99%	(Lot SHBC0391V)	2,501.6 µg/mL	+/- 14.6808 µg/mL +/- 123.7649 µg/mL +/- 126.8416 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS#** 637-92-3 **Purity** 99%	(Lot MKCC2702)	2,502.0 µg/mL	+/- 14.6831 µg/mL +/- 123.7846 µg/mL +/- 126.8619 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS#** 107-12-0 **Purity** 99%	(Lot BCBQ1587V)	25,006.0 µg/mL	+/- 146.4156 µg/mL +/- 1,237.1143 µg/mL +/- 1,267.8703 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4 **Purity** 99%	(Lot STBB1898V)	25,005.2 µg/mL	+/- 146.4109 µg/mL +/- 1,237.0747 µg/mL +/- 1,267.8297 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8 **Purity** 98%	(Lot HMBD8698V)	2,506.1 µg/mL	+/- 14.7069 µg/mL +/- 123.9853 µg/mL +/- 127.0675 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

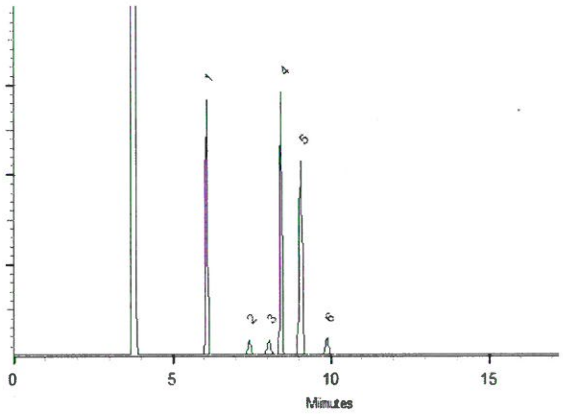
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Jozefick - Mix Technician

Date Mixed: 30-Nov-2017 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VOARSURR/IS_00047

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0131478

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

2114457
ID: VOARSURR/IS_00047
Exp 10/31/22 Prpd:JSM Opn:03/02/18
8260 IS/Surrogate Mix (20

RSB
3-2-18

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 (Lot CD-107) **Purity** 98%	5,017.3 µg/mL	+/- 29.1695 µg/mL +/- 107.4207 µg/mL +/- 110.5436 µg/mL	Gravimetric Unstressed Stressed
2	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012017) **Purity** 99.8%	249.0 µg/mL	+/- 1.4511 µg/mL +/- 5.3320 µg/mL +/- 5.4870 µg/mL	Gravimetric Unstressed Stressed
3	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-26748) **Purity** 99%	249.6 µg/mL	+/- 1.4545 µg/mL +/- 5.3449 µg/mL +/- 5.5002 µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 (Lot I-19942) **Purity** 99%	4,979.2 µg/mL	+/- 28.9478 µg/mL +/- 106.6041 µg/mL +/- 109.7033 µg/mL	Gravimetric Unstressed Stressed
5	Fluorobenzene **CAS #** 462-06-6 (Lot BCBK8171V) **Purity** 99%	250.0 µg/mL	+/- 1.4567 µg/mL +/- 5.3527 µg/mL +/- 5.5083 µg/mL	Gravimetric Unstressed Stressed
6	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-26623) **Purity** 99%	249.2 µg/mL	+/- 1.4522 µg/mL +/- 5.3363 µg/mL +/- 5.4914 µg/mL	Gravimetric Unstressed Stressed
7	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-23926) **Purity** 99%	249.6 µg/mL	+/- 1.4545 µg/mL +/- 5.3449 µg/mL +/- 5.5002 µg/mL	Gravimetric Unstressed Stressed

8	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 **Purity** 99%	(Lot 20401KOV)	248.5	µg/mL	+/- 1.4481 +/- 5.3213 +/- 5.4760	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene-d4 **CAS#** 3855-82-1 **Purity** 99%	(Lot PR-18488)	249.5	µg/mL	+/- 1.4540 +/- 5.3427 +/- 5.4980	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

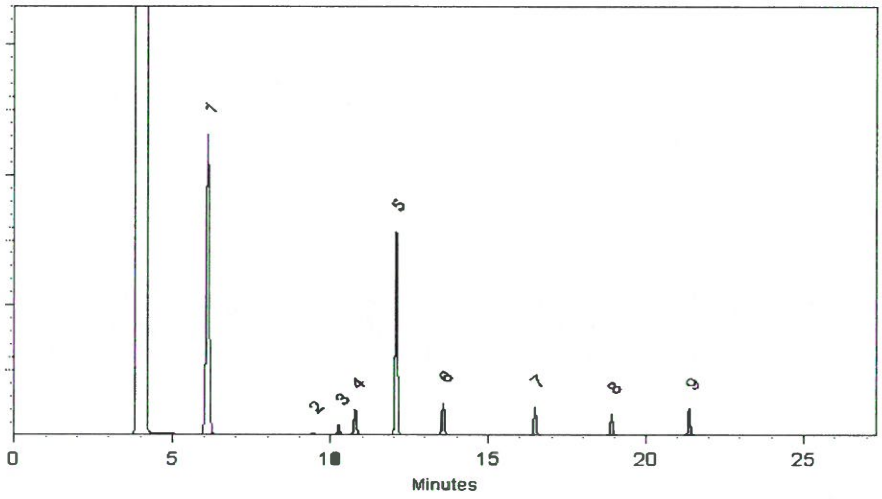
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 09-Oct-2017 **Balance:** B707717271

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: VOARSURR/IS_00047

Type:	ASTD	Expiration Date:	10/31/2022
Description:	8260 IS/Surrogate Mix (2016)	Laboratory:	TestAmerica Seattle
No. of Bottles:	10	Prepared By:	McKell, Justin S
Storage Location:	MSV Frzr#21: S.wall	Vendor:	Restek
Reagent Volume:	5.000 mL	Vendor Lot #:	A0131478
Creation Date:	03/01/2018	Vendor Cat #:	570812
Open Date:	03/02/2018		
Container(s):	2114457, 2114458, 2114459, 2114460, 2114461, 2114462, 2114463, 2114464, 2114465, 21144		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dichloroethane-d4 (Surr)					250.00000	ug/mL
1,4-Dichlorobenzene-d4					250.00000	ug/mL
1,4-Dioxane-d8					5000.00000	ug/mL
4-Bromofluorobenzene (Surr)					250.00000	ug/mL
BFB					250.00000	ug/mL
Chlorobenzene-d5					250.00000	ug/mL
Dibromofluoromethane (Surr)					250.00000	ug/mL
Fluorobenzene (IS)					250.00000	ug/mL
TBA-d9 (IS)					5000.00000	ug/mL
Toluene-d8 (Surr)					250.00000	ug/mL

Reagent

VOARVA__00036

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0138862

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,015.0 µg/mL	+/- 29.4308	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.6036	µg/mL	Unstressed
	Purity 99%		+/- 303.3219	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

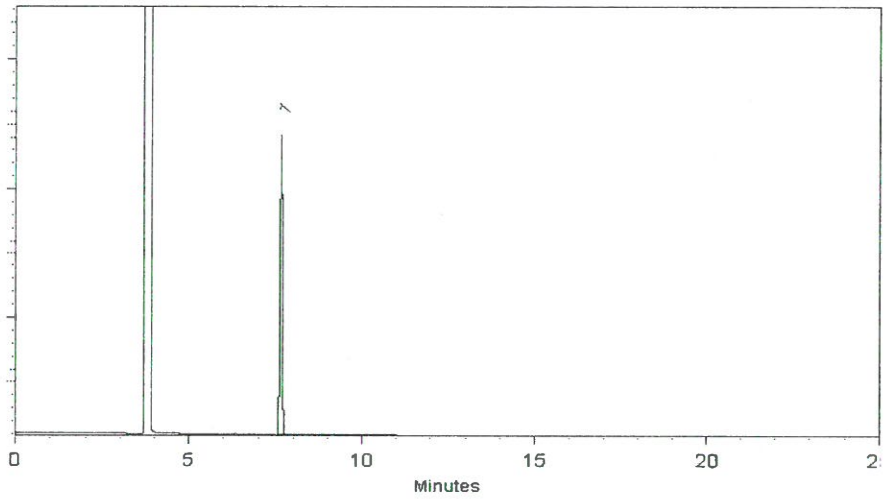
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 14-Jun-2018 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 18-Jun-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

VOASGAS2__00021

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0133344

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

2181771
ID: VOASGAS2__00021
Exp: 12/31/20 Prpd: RSB
8260 List 1/Std #3 Gases

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 * (Lot 4938100) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL +/- 140.1725 µg/mL +/- 143.4524 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,521.6 µg/mL	+/- 17.0984 µg/mL +/- 141.6588 µg/mL +/- 144.9608 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,502.2 µg/mL	+/- 18.3289 µg/mL +/- 140.7354 µg/mL +/- 144.0080 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 24033) **Purity** 99%	2,513.3 µg/mL	+/- 16.7862 µg/mL +/- 141.1580 µg/mL +/- 144.4497 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,524.8 µg/mL	+/- 22.7878 µg/mL +/- 142.6298 µg/mL +/- 145.9179 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot 00004202) **Purity** 99%	2,515.6 µg/mL	+/- 20.9811 µg/mL +/- 141.8493 µg/mL +/- 145.1315 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8.SEC (Lot 24186) **Purity** 99%	2,509.0 µg/mL	+/- 17.4430 µg/mL +/- 141.0029 µg/mL +/- 144.2872 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,497.44	µg/mL	+/- 222.1815	µg/mL	Gravimetric
	CAS# 75-69-4 SEC	(Lot# 2538600)			+/- 144.10261	µg/mL	Unstressed
	Purity 99%				+/- 144.27798	µg/mL	Stressed

Solvent: P&T Methanol
CAS# 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat #10916)

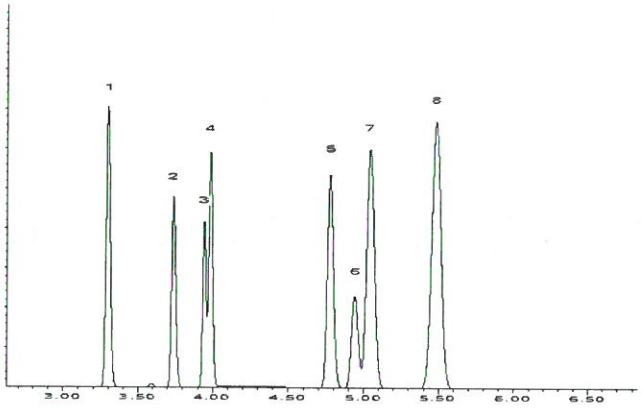
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 5 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 14-Dec-2017 Balance: 1128342934

Justine Albertson - Operations Tech-ARM QC

Date Passed: 20-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VOASKETON2__00018

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.SEC **Lot No.:** A0133078

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

2181764
ID VOASKETON2__00018
Exp 12/31/20 Prpd RSB
8260 List 1 / Std #2 Keto

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1.SEC (Lot P14A572) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 754.5197 µg/mL +/- 756.3109 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC (Lot RA58J) **Purity** 99%	12,504.0 µg/mL	+/- 73.2137 µg/mL +/- 754.4715 µg/mL +/- 756.2625 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC (Lot E29T040) **Purity** 99%	12,500.8 µg/mL	+/- 73.1949 µg/mL +/- 754.2784 µg/mL +/- 756.0689 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC (Lot V3NRA) **Purity** 99%	12,503.6 µg/mL	+/- 73.2113 µg/mL +/- 754.4473 µg/mL +/- 756.2383 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

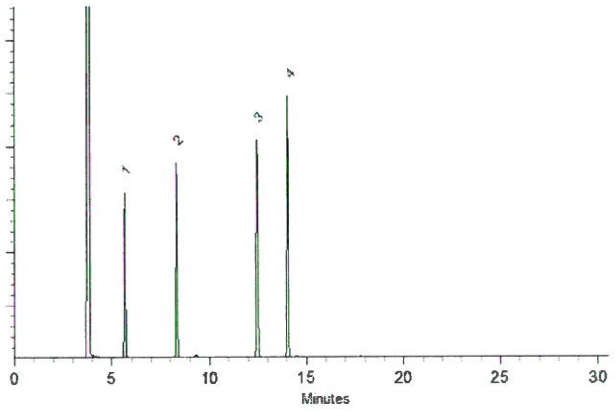
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 07-Dec-2017 **Balance:** 1127510105

Justine Albertson - Operations Tech AHM QC

Date Passed: 12-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VOASMegMix2__00019

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Testing Laboratory
Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 571992-sec **Lot No.:** A0123775

Description: 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/mL, P&T Methanol, 1 mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES§

	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) CAS # 60-29-7.SEC Purity 98% (Lot F23X068)	2,501.2 µg/mL	+/- 14.5422 µg/mL +/- 150.9088 µg/mL +/- 151.2671 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1.SEC Purity 99% (Lot 18342)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene CAS # 75-35-4.SEC Purity 99% (Lot 27670000)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) CAS # 75-65-0.SEC Purity 98% (Lot XYXDO)	25,000.11 µg/mL	+/- 145.3626 +/- 1,508.54775 +/- 1,512.12291 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate CAS # 79-20-9.SEC Purity 99% (Lot YDGWD)	5,000.44 µg/mL	+/- 29.07226 +/- 301.69448 +/- 302.41111 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4.SEC Purity 99% (Lot Y25A027)	2,500.44 µg/mL	+/- 14.53374 +/- 150.85887 +/- 151.22169 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1.SEC Purity 98% (Lot VEB0CC)	2,500.11 µg/mL	+/- 14.53358 +/- 150.84233 +/- 151.20004 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) CAS #: 75-09-2.SEC Purity: 99%	(Lot FGM02)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS #: 75-15-0.SEC Purity: 99%	(Lot MKBB1376V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS #: 107-13-1.SEC Purity: 99%	(Lot UERRL)	2,500.9 µg/mL	+/- 14.5396 +/- 150.8413 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) CAS #: 1634-04-4.SEC Purity: 99%	(Lot ZAQTAAMS)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene CAS #: 156-59-2.SEC Purity: 98%	(Lot HGC01HBLKT)	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) CAS #: 110-54-3.SEC Purity: 99%	(Lot 10188491)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane CAS #: 75-34-3.SEC Purity: 99%	(Lot 53790000)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane CAS #: 594-20-7.SEC Purity: 98%	(Lot 17ESE)	2,500.1 µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene CAS #: 156-60-5.SEC Purity: 97%	(Lot TS5UB)	2,500.2 µg/mL	+/- 14.5362 +/- 150.8466 +/- 151.2048	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) CAS #: 78-83-1.SEC Purity: 99%	(Lot 83NHH)	62,506.9 µg/mL	+/- 363.4014 +/- 3,771.3149 +/- 3,780.2687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Chloroform CAS #: 67-66-3.SEC Purity: 99%	(Lot 1297547)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane CAS #: 74-97-5.SEC Purity: 99%	(Lot 56702000)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran CAS #: 109-99-9.SEC Purity: 99%	(Lot K3W71-SU)	5,002.3 µg/mL	+/- 29.0835 +/- 301.8079 +/- 302.5245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-Trichloroethane CAS #: 71-55-6.SEC Purity: 98%	(Lot CS1607122)	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane CAS #: 110-82-7.SEC Purity: 99%	(Lot YYADRA)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene CAS #: 563-58-6.SEC Purity: 96%	(Lot 53211000)	2,501.3 µg/mL	+/- 14.5427 +/- 150.9133 +/- 151.2716	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Carbon tetrachloride CAS# 56-23-5.SEC Purity 99%	(Lot I14466)	2,500.055	µg/mL	+/- 14.45381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) CAS# 142-82-5.SEC Purity 99%	(Lot OGM01)	2,500.055	µg/mL	+/- 14.45381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane CAS# 107-06-2.SEC Purity 99%	(Lot FOGPK)	2,500.11	µg/mL	+/- 14.45359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene CAS# 71-43-2.SEC Purity 99%	(Lot B28Y008)	2,501.5	µg/mL	+/- 14.54439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene CAS # 79-01-6.SEC Purity 99%	(Lot H04X050)	2,501.0	µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane CAS # 108-87-2.SEC Purity 99%	(Lot 24MSD-CD)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot OGG01)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1.SEC Purity 99%	(Lot MUFZH)	50,007.1	µg/mL	+/- 290.7305 +/- 3,017.1500 +/- 3,024.3132	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FG101-01CH)	2,501.6	µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 487OA)	2,500.1	µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	2,500.0	µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2.SEC Purity 99%	(Lot MLWYK-LS)	2,500.5	µg/mL	+/- 14.53381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 99%	(Lot ZDMSL)	2,500.5	µg/mL	+/- 14.53381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 98%	(Lot 50346600)	2,500.88	µg/mL	+/- 14.54011 +/- 150.88866 +/- 151.24448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EHFC)	2,500.055	µg/mL	+/- 14.53381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot H09W044)	2,501.33	µg/mL	+/- 14.54425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane CAS# 124-48-1 SEC Purity 97%	(Lot 100815907)	2,500.4	µg/mL	+/- 14.5376 +/- 150.8613 +/- 151.2194	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS# 106-93-4 SEC Purity 99%	(Lot 33059000)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS# 108-90-7 SEC Purity 99%	(Lot 1116 19336)	2,501.0	µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS# 108-38-3 SEC Purity 99%	(Lot OUKWG-GB)	1,250.9	µg/mL	+/- 7.2727 +/- 75.4708 +/- 75.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS# 106-42-3 SEC Purity 99%	(Lot GW001)	1,250.5	µg/mL	+/- 7.2705 +/- 75.4482 +/- 75.6273	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4 SEC Purity 99%	(Lot P14SE)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6 SEC Purity 99%	(Lot GC01)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 SEC Purity 99%	(Lot FGL01-KTPK)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 SEC Purity 99%	(Lot OFIOL-1A)	2,500.4	µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 SEC Purity 99%	(Lot 2PHXG-IH)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	Bromoform CAS # 75-25-2 SEC Purity 99%	(Lot 51390000)	2,502.3	µg/mL	+/- 14.5483 +/- 150.9718 +/- 151.3303	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	Bromodichloromethane CAS # 75-27-4 SEC Purity 98%	(Lot 137780)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 SEC Purity 99%	(Lot CFA4D-AQ)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 SEC Purity 98%	(Lot OGI01)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene CAS # 110-57-6 SEC Purity 98%	(Lot 1007700-3)	2,501.0	µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 SEC Purity 99%	(Lot T21HFC-III)	2,500.0	µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS# Purity	108-86-1.SEC 99%	(Lot FEUHGEM)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS# Purity	108-67-8.SEC 99%	(Lot TOOOPF)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS# Purity	95-49-8.SEC 99%	(Lot SW8QGAO)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS# Purity	106-43-4.SEC 99%	(Lot PAXHJAO)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS# Purity	98-06-6.SEC 99%	(Lot OGN01-CAI)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS# Purity	95-63-6.SEC 99%	(Lot SC7LQ-QA)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS# Purity	135-98-8.SEC 99%	(Lot OGN01-IMA)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) CAS# Purity	99-87-6.SEC 99%	(Lot 5221800)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS# Purity	541-73-1.SEC 99%	(Lot FMDFD)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS# Purity	106-46-7.SEC 99%	(Lot 4Y5DC)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS# Purity	104-51-8.SEC 99%	(Lot OGN01-PNP)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS# Purity	95-50-1.SEC 99%	(Lot R6QDM)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS# Purity	96-12-8.SEC 98%	(Lot LC0040BW)	2,501.5 µg/mL	+/- 14.5436 +/- 150.9236 +/- 151.2819	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS# Purity	120-82-1.SEC 99%	(Lot 3LYYC)	2,502.5 µg/mL	+/- 14.5498 +/- 150.9869 +/- 151.3454	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS# Purity	87-68-3.SEC 97%	(Lot 5526800)	2,500.1 µg/mL	+/- 14.5433 +/- 150.9198 +/- 151.2781	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS# Purity	91-20-3.SEC 99%	(Lot SKZ5N)	2,500.8 µg/mL	+/- 14.5454 +/- 150.9417 +/- 151.3000	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72 | 1,2,3-Trichlorobenzene | CAS # 87-61-6 | Purity 98% | (Lot A0430855) | 2500.7 µg/mL | +/- 14.3394 µg/mL | Gravimetric
| | | | | | +/- 150.8792 µg/mL | Unstressed
| | | | | | +/- 151.2374 µg/mL | Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4um
Rtx-502.2 (cat.#10916)

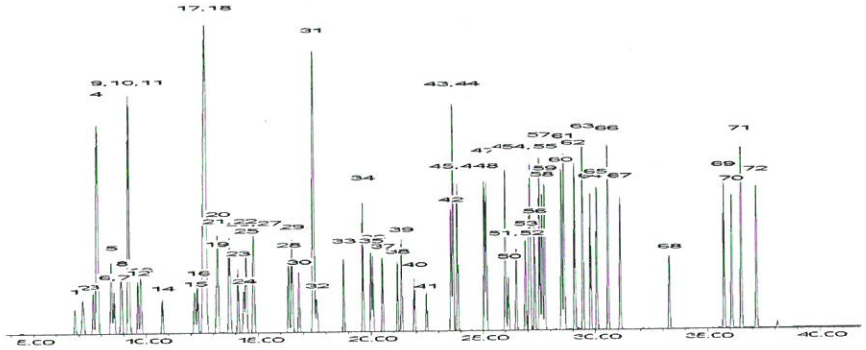
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C @ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 28-Dec-2016 **Balance:** 1112275101005

Jennifer J Pollino

Jennifer Pollino - Operations Tech ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOASPOLARAD2__00015

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY. READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 5719993 SEC **Lot No.:** A0126826

Description : 8260 List 3 / Std#1 Polar Additions (2017)

8260 List 3 / Std#1 Polar Additions (2017) 2500-25,000 µg/mL, 1 mL/ampul

Container Size : 2 mL **Pkg Amt:** ≥ 1 mL

Expiration Date : April 30, 2019 **Storage:** 0°C or colder

2181779
ID: VOASPOLARAD2_00015
Exp 04/30/19 Prpd RSB
8260 LIST 3 / Std #1 Pola

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; k=2)		
1	Acetonitrile CAS # 75-05-8 SEC Purity 99% (Lot 7KGDA)	25,066.5 µg/mL	+/- 146.7699 µg/mL	µg/mL	Gravimetric
			+/- 1,240.1074 µg/mL	µg/mL	Unstressed
			+/- 1,270.9378 µg/mL	µg/mL	Stressed
2	Diisopropyl ether (DIPE) CAS # 108-20-3 SEC Purity 98% (Lot LL7TN-SH)	2,510.3 µg/mL	+/- 14.7317 µg/mL	µg/mL	Gravimetric
			+/- 124.1938 µg/mL	µg/mL	Unstressed
			+/- 127.2812 µg/mL	µg/mL	Stressed
3	Ethyl-tert-butyl ether (ETBE) CAS # 637-92-3 SEC Purity 99% (Lot MHBJG-QK)	2,508.5 µg/mL	+/- 14.7213 µg/mL	µg/mL	Gravimetric
			+/- 124.1062 µg/mL	µg/mL	Unstressed
			+/- 127.1914 µg/mL	µg/mL	Stressed
4	Propionitrile CAS # 107-12-0 SEC Purity 99% (Lot SASVN)	25,096.0 µg/mL	+/- 146.9426 µg/mL	µg/mL	Gravimetric
			+/- 1,241.5669 µg/mL	µg/mL	Unstressed
			+/- 1,272.4335 µg/mL	µg/mL	Stressed
5	tert-Amyl alcohol CAS # 75-85-4 SEC Purity 99% (Lot MMGCJ)	25,001.2 µg/mL	+/- 146.4508 µg/mL	µg/mL	Gravimetric
			+/- 1,237.4112 µg/mL	µg/mL	Unstressed
			+/- 1,268.1745 µg/mL	µg/mL	Stressed
6	tert-Amyl methyl ether (TAME) CAS # 994-05-8 SEC Purity 99% (Lot 5614000)	24,999.0 µg/mL	+/- 146.6655 µg/mL	µg/mL	Gravimetric
			+/- 123.6362 µg/mL	µg/mL	Unstressed
			+/- 126.7098 µg/mL	µg/mL	Stressed

Solvent: P&T Methanol
Solvent: P&T Methanol
CAS # 67-56-1
CAS # 67-56-1
Purity 99%
Purity 99%

Column:
105m x 0.53mm x 3.0µm
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)
Rtx-502.2 (cat.#10910)

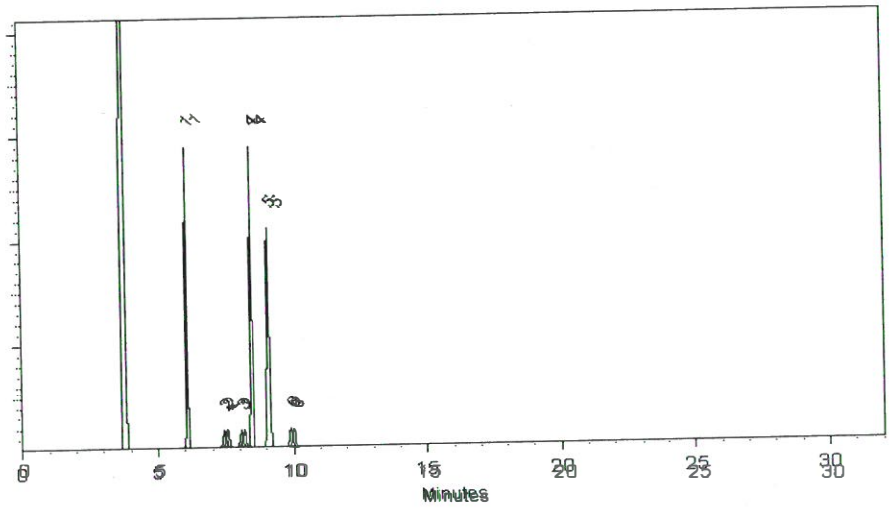
Carrier Gas:
hydrogen-constant pressure 11.0 psi.
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C
200°C

Det. Temp:
250°C
250°C

Det. Type:
FID
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 17-Apr-2017

Balance: [illegible]

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 19-Apr-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOASVA2__00035

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 569724.SEC **Lot No.:** A0138863

Description: 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: December 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,008.0 µg/mL	+/- 29.3897	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot F3Z5C)		+/- 302.1812	µg/mL	Unstressed
	Purity 99%		+/- 302.8985	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

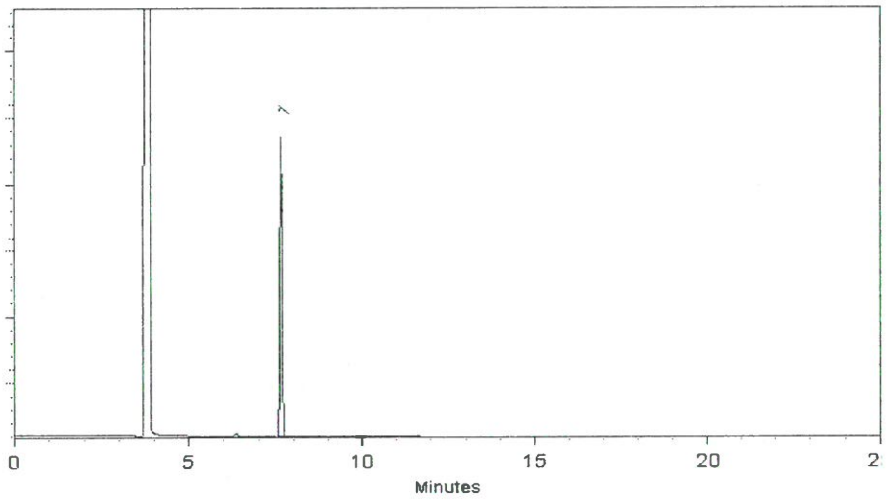
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 14-Jun-2018 **Balance:** 1127510105

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 18-Jun-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-VRX ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
775VMW-8_1018	280-115988-1	102	106	100	103
775MW-6_1018	280-115988-2	101	103	101	99
	MB 580-287774/24	98	101	101	103
	LCS 580-287774/25	100	101	99	98
	LCSD 580-287774/26	98	101	100	102

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J3018114.D

Lab ID: LCS 580-287774/25 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.79	98	78-124	
1,1,1-Trichloroethane	10.0	9.92	99	74-131	
1,1,2,2-Tetrachloroethane	10.0	9.60	96	71-121	
1,1,2-Trichloroethane	10.0	9.60	96	80-119	
1,1-Dichloroethane	10.0	10.0	100	77-125	
1,1-Dichloroethene	10.0	10.5	105	71-131	
1,1-Dichloropropene	10.0	9.75	98	79-125	
1,2,3-Trichlorobenzene	10.0	9.57	96	69-129	
1,2,3-Trichloropropane	10.0	9.45	94	73-122	
1,2,4-Trichlorobenzene	10.0	9.75	98	69-130	
1,2,4-Trimethylbenzene	10.0	9.67	97	76-124	
1,2-Dibromo-3-Chloropropane	10.0	9.15 J	92	62-128	
1,2-Dibromoethane	10.0	9.65	97	77-121	
1,2-Dichlorobenzene	10.0	9.77	98	80-119	
1,2-Dichloroethane	10.0	9.94	99	73-128	
1,2-Dichloropropane	10.0	9.99	100	78-122	
1,3,5-Trimethylbenzene	10.0	9.71	97	75-124	
1,3-Dichlorobenzene	10.0	9.62	96	80-119	
1,3-Dichloropropane	10.0	9.90	99	80-119	
1,4-Dichlorobenzene	10.0	10.0	100	79-118	
2,2-Dichloropropane	10.0	9.70	97	60-139	
2-Butanone (MEK)	50.0	46.3	93	56-143	
2-Chlorotoluene	10.0	9.36	94	79-122	
2-Hexanone	50.0	47.1	94	57-139	
4-Chlorotoluene	10.0	9.88	99	78-122	
4-Isopropyltoluene	10.0	9.75	98	77-127	
4-Methyl-2-pentanone (MIBK)	50.0	50.8	102	67-130	
Acetone	50.0	47.3 J	95	39-160	
Benzene	10.0	9.92	99	79-120	
Bromobenzene	10.0	9.66	97	80-120	
Bromochloromethane	10.0	9.76	98	78-123	
Bromodichloromethane	10.0	10.2	102	79-125	
Bromoform	10.0	9.42	94	66-130	
Bromomethane	10.0	10.4	104	53-141	
Carbon disulfide	10.0	10.1	101	64-133	
Carbon tetrachloride	10.0	9.81	98	72-136	
Chlorobenzene	10.0	9.95	99	82-118	
Chloroethane	10.0	10.4	104	60-138	
Chloroform	10.0	10.2	102	79-124	
Chloromethane	10.0	10.0 J	100	50-139	M
cis-1,2-Dichloroethene	10.0	10.0	100	78-123	
cis-1,3-Dichloropropene	10.0	9.66	97	75-124	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J3018114.D

Lab ID: LCS 580-287774/25 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dibromochloromethane	10.0	9.64	96	74-126	
Dibromomethane	10.0	9.63	96	79-123	
Dichlorodifluoromethane	10.0	9.57 J	96	32-152	
Diisopropyl ether	12.5	12.4	99	67-128	
Ethylbenzene	10.0	9.87	99	79-121	
Hexachlorobutadiene	10.0	9.90	99	66-134	
Isopropylbenzene	10.0	9.90	99	72-131	
m,p-Xylene	10.0	9.99	100	80-121	
Methyl iodide	10.0	9.89	99	69-131	
Methyl tert-butyl ether	10.0	9.63	96	71-124	
Methylene Chloride	10.0	10.5	105	74-124	
Naphthalene	10.0	9.60	96	61-128	
n-Butylbenzene	10.0	9.99	100	75-128	
N-Propylbenzene	10.0	9.73	97	76-126	
o-Xylene	10.0	9.99	100	78-122	
sec-Butylbenzene	10.0	9.69	97	77-126	
Styrene	10.0	9.41	94	78-123	
tert-Butylbenzene	10.0	9.83	98	78-124	
Tetrachloroethene	10.0	9.72	97	74-129	
Toluene	10.0	9.99	100	80-121	
trans-1,2-Dichloroethene	10.0	10.3	103	75-124	
trans-1,3-Dichloropropene	10.0	9.63	96	73-127	
Trichloroethene	10.0	9.77	98	79-123	
Trichlorofluoromethane	10.0	10.2	102	65-141	
Vinyl acetate	25.0	23.9	96	54-146	
Vinyl chloride	10.0	10.6	106	58-137	
Xylenes, Total	20.0	20.0	100	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J3018115.D

Lab ID: LCSD 580-287774/26 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.56	96	2	20	78-124	
1,1,1-Trichloroethane	10.0	9.66	97	3	20	74-131	
1,1,2,2-Tetrachloroethane	10.0	9.49	95	1	20	71-121	
1,1,2-Trichloroethane	10.0	9.90	99	3	20	80-119	
1,1-Dichloroethane	10.0	9.42	94	6	20	77-125	
1,1-Dichloroethene	10.0	10.0	100	5	20	71-131	
1,1-Dichloropropene	10.0	9.42	94	3	20	79-125	
1,2,3-Trichlorobenzene	10.0	9.33	93	3	20	69-129	
1,2,3-Trichloropropane	10.0	9.68	97	2	20	73-122	
1,2,4-Trichlorobenzene	10.0	9.52	95	2	20	69-130	
1,2,4-Trimethylbenzene	10.0	9.27	93	4	20	76-124	
1,2-Dibromo-3-Chloropropane	10.0	9.06 J	91	1	20	62-128	
1,2-Dibromoethane	10.0	9.92	99	3	20	77-121	
1,2-Dichlorobenzene	10.0	9.46	95	3	20	80-119	
1,2-Dichloroethane	10.0	9.98	100	0	20	73-128	
1,2-Dichloropropane	10.0	9.56	96	4	20	78-122	
1,3,5-Trimethylbenzene	10.0	9.22	92	5	20	75-124	
1,3-Dichlorobenzene	10.0	9.78	98	2	20	80-119	
1,3-Dichloropropane	10.0	10.2	102	3	20	80-119	
1,4-Dichlorobenzene	10.0	9.75	97	3	20	79-118	
2,2-Dichloropropane	10.0	9.17	92	6	20	60-139	
2-Butanone (MEK)	50.0	50.5	101	9	20	56-143	
2-Chlorotoluene	10.0	9.44	94	1	20	79-122	
2-Hexanone	50.0	54.0	108	14	20	57-139	
4-Chlorotoluene	10.0	9.57	96	3	20	78-122	
4-Isopropyltoluene	10.0	9.21	92	6	20	77-127	
4-Methyl-2-pentanone (MIBK)	50.0	52.5	105	3	20	67-130	
Acetone	50.0	52.8	106	11	20	39-160	
Benzene	10.0	9.32	93	6	20	79-120	
Bromobenzene	10.0	9.48	95	2	20	80-120	
Bromochloromethane	10.0	9.59	96	2	20	78-123	
Bromodichloromethane	10.0	9.60	96	6	20	79-125	
Bromoform	10.0	9.66	97	2	20	66-130	
Bromomethane	10.0	9.64	96	8	20	53-141	
Carbon disulfide	10.0	9.93	99	1	20	64-133	
Carbon tetrachloride	10.0	9.58	96	2	20	72-136	
Chlorobenzene	10.0	9.88	99	1	20	82-118	
Chloroethane	10.0	9.87	99	5	20	60-138	
Chloroform	10.0	9.61	96	6	20	79-124	
Chloromethane	10.0	9.58 J	96	5	20	50-139	
cis-1,2-Dichloroethene	10.0	9.47	95	6	20	78-123	
cis-1,3-Dichloropropene	10.0	9.47	95	2	20	75-124	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Matrix: Water Level: Low Lab File ID: J3018115.D

Lab ID: LCSD 580-287774/26 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromochloromethane	10.0	9.76	98	1	20	74-126	
Dibromomethane	10.0	9.76	98	1	20	79-123	
Dichlorodifluoromethane	10.0	9.17 J	92	4	20	32-152	
Diisopropyl ether	12.5	12.5	100	0	20	67-128	
Ethylbenzene	10.0	9.87	99	0	20	79-121	
Hexachlorobutadiene	10.0	9.77	98	1	20	66-134	
Isopropylbenzene	10.0	9.72	97	2	20	72-131	
m,p-Xylene	10.0	9.87	99	1	20	80-121	
Methyl iodide	10.0	9.94	99	0	20	69-131	
Methyl tert-butyl ether	10.0	9.74	97	1	20	71-124	
Methylene Chloride	10.0	10.6	106	1	20	74-124	
Naphthalene	10.0	9.58	96	0	20	61-128	
n-Butylbenzene	10.0	9.48	95	5	20	75-128	
N-Propylbenzene	10.0	9.34	93	4	20	76-126	
o-Xylene	10.0	9.60	96	4	20	78-122	
sec-Butylbenzene	10.0	9.21	92	5	20	77-126	
Styrene	10.0	9.37	94	0	20	78-123	
tert-Butylbenzene	10.0	9.49	95	3	20	78-124	
Tetrachloroethene	10.0	9.72	97	0	20	74-129	
Toluene	10.0	9.87	99	1	20	80-121	
trans-1,2-Dichloroethene	10.0	9.88	99	4	20	75-124	
trans-1,3-Dichloropropene	10.0	9.67	97	0	20	73-127	
Trichloroethene	10.0	9.42	94	4	20	79-123	
Trichlorofluoromethane	10.0	9.53	95	7	20	65-141	M
Vinyl acetate	25.0	22.0	88	8	20	54-146	
Vinyl chloride	10.0	9.89	99	7	20	58-137	
Xylenes, Total	20.0	19.5	97	3	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab File ID: J3018113.D Lab Sample ID: MB 580-287774/24

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: SEA102 Date Analyzed: 10/30/2018 20:38

GC Column: DB-VRX ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-287774/25	J3018114.D	10/30/2018 21:04
	LCSD 580-287774/26	J3018115.D	10/30/2018 21:30
775VMW-8_1018	280-115988-1	J3018022.D	10/31/2018 00:32
775MW-6_1018	280-115988-2	J3018023.D	10/31/2018 00:58

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab File ID: J3018102.D BFB Injection Date: 10/30/2018

Instrument ID: SEA102 BFB Injection Time: 15:52

Analysis Batch No.: 287774

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	46.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	95.0	
175	5.0 - 9.0 % of mass 174	7.2	(7.5) 1
176	95.0 - 101.0 % of mass 174	92.4	(97.2) 1
177	5.0 - 9.0 % of mass 176	6.3	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 580-287774/7	J3018107.D	10/30/2018	18:02
	ICV 580-287774/12	J3018112.D	10/30/2018	20:12
	MB 580-287774/24	J3018113.D	10/30/2018	20:38
	LCS 580-287774/25	J3018114.D	10/30/2018	21:04
	LCSD 580-287774/26	J3018115.D	10/30/2018	21:30
775VMW-8_1018	280-115988-1	J3018022.D	10/31/2018	00:32
775MW-6_1018	280-115988-2	J3018023.D	10/31/2018	00:58
	CCVC 580-287774/35	J3018024.D	10/31/2018	01:24

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Sample No.: ICIS 580-287774/7 Date Analyzed: 10/30/2018 18:02

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): J3018107.D Heated Purge: (Y/N) N

Calibration ID: 27006

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		305219	9.33	131167	12.26	150897	14.56
UPPER LIMIT		610438	9.83	262334	12.76	301794	15.06
LOWER LIMIT		152610	8.83	65584	11.76	75449	14.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-287774/12		301096	9.33	123327	12.26	138503	14.56
MB 580-287774/24		299676	9.33	124555	12.27	145960	14.56
LCS 580-287774/25		297315	9.33	122043	12.26	139691	14.56
LCSD 580-287774/26		298570	9.33	126207	12.26	146380	14.56
280-115988-1	775VMW-8_1018	284227	9.33	120130	12.26	144317	14.56
280-115988-2	775MW-6_1018	286010	9.33	114894	12.27	135894	14.56
CCVC 580-287774/35		294787	9.33	125179	12.27	141650	14.56

FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775VMW-8_1018 | Lab Sample ID: 280-115988-1

Matrix: Water | Lab File ID: J3018022.D

Analysis Method: 8260B | Date Collected: 10/23/2018 15:26

Sample wt/vol: 5(mL) | Date Analyzed: 10/31/2018 00:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.50	0.18
71-55-6	1,1,1-Trichloroethane	0.47	J	3.0	0.50	0.14
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	3.0	2.0	0.52
79-00-5	1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.24
75-34-3	1,1-Dichloroethane	0.50	U	2.0	0.50	0.22
75-35-4	1,1-Dichloroethene	2.0	U	4.0	2.0	0.78
563-58-6	1,1-Dichloropropene	1.0	U	3.0	1.0	0.29
87-61-6	1,2,3-Trichlorobenzene	1.0	U M	5.0	1.0	0.46
96-18-4	1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	1.0	U M	2.0	1.0	0.33
95-63-6	1,2,4-Trimethylbenzene	2.0	U M	3.0	2.0	0.61
96-12-8	1,2-Dibromo-3-Chloropropane	6.0	U	10	6.0	1.8
106-93-4	1,2-Dibromoethane	1.0	U	2.0	1.0	0.40
95-50-1	1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.46
107-06-2	1,2-Dichloroethane	2.0	U	2.0	2.0	0.53
78-87-5	1,2-Dichloropropane	0.50	U	1.0	0.50	0.18
108-67-8	1,3,5-Trimethylbenzene	2.0	U M	3.0	2.0	0.55
541-73-1	1,3-Dichlorobenzene	0.50	U	2.0	0.50	0.18
142-28-9	1,3-Dichloropropane	1.0	U	2.0	1.0	0.35
106-46-7	1,4-Dichlorobenzene	2.0	U	4.0	2.0	0.98
594-20-7	2,2-Dichloropropane	1.0	U	3.0	1.0	0.32
78-93-3	2-Butanone (MEK)	10	U	20	10	4.7
95-49-8	2-Chlorotoluene	1.0	U	3.0	1.0	0.51
591-78-6	2-Hexanone	10	U	20	10	4.0
106-43-4	4-Chlorotoluene	1.0	U	2.0	1.0	0.51
99-87-6	4-Isopropyltoluene	1.0	U	3.0	1.0	0.28
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	15	5.0	2.5
67-64-1	Acetone	18	U M	50	18	7.8
71-43-2	Benzene	2.0	U	3.0	2.0	0.53
108-86-1	Bromobenzene	0.50	U	2.0	0.50	0.18
74-97-5	Bromochloromethane	1.0	U	2.0	1.0	0.29
75-27-4	Bromodichloromethane	0.50	U M	2.0	0.50	0.14
75-25-2	Bromoform	2.0	U	3.0	2.0	0.56
74-83-9	Bromomethane	3.5	U	6.0	3.5	1.1
75-15-0	Carbon disulfide	2.0	U	3.0	2.0	0.53
56-23-5	Carbon tetrachloride	1.0	U	3.0	1.0	0.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775VMW-8_1018 | Lab Sample ID: 280-115988-1

Matrix: Water | Lab File ID: J3018022.D

Analysis Method: 8260B | Date Collected: 10/23/2018 15:26

Sample wt/vol: 5(mL) | Date Analyzed: 10/31/2018 00:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-90-7	Chlorobenzene	1.0	U	2.0	1.0	0.44
75-00-3	Chloroethane	3.5	U	5.0	3.5	1.1
67-66-3	Chloroform	1.0	U	5.0	1.0	0.50
74-87-3	Chloromethane	15	U	20	15	5.4
156-59-2	cis-1,2-Dichloroethene	2.0	U	3.0	2.0	0.69
10061-01-5	cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20
124-48-1	Dibromochloromethane	0.50	U	1.0	0.50	0.20
74-95-3	Dibromomethane	1.0	U	2.0	1.0	0.34
75-71-8	Dichlorodifluoromethane	6.0	U Q	10	6.0	2.3
108-20-3	Diisopropyl ether	1.3	U	2.0	1.3	0.35
100-41-4	Ethylbenzene	1.0	U	3.0	1.0	0.50
87-68-3	Hexachlorobutadiene	2.0	U	6.0	2.0	0.79
98-82-8	Isopropylbenzene	1.0	U	2.0	1.0	0.51
179601-23-1	m,p-Xylene	2.0	U M	3.0	2.0	0.75
74-88-4	Methyl iodide	0.50	U	5.0	0.50	0.24
1634-04-4	Methyl tert-butyl ether	1.0	U	2.0	1.0	0.44
75-09-2	Methylene Chloride	3.5	U	5.0	3.5	1.4
91-20-3	Naphthalene	2.0	U M	4.0	2.0	0.93
104-51-8	n-Butylbenzene	1.0	U M	3.0	1.0	0.44
103-65-1	N-Propylbenzene	1.0	U	3.0	1.0	0.50
95-47-6	o-Xylene	0.50	U	2.0	0.50	0.15
135-98-8	sec-Butylbenzene	1.0	U	3.0	1.0	0.49
100-42-5	Styrene	1.0	U M	5.0	1.0	0.51
98-06-6	tert-Butylbenzene	2.0	U M	3.0	2.0	0.58
127-18-4	Tetrachloroethene	1.0	U	3.0	1.0	0.41
108-88-3	Toluene	1.0	U	2.0	1.0	0.39
156-60-5	trans-1,2-Dichloroethene	1.0	U	3.0	1.0	0.39
10061-02-6	trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.16
79-01-6	Trichloroethene	23		3.0	2.0	0.85
75-69-4	Trichlorofluoromethane	2.0	U	3.0	2.0	0.63
108-05-4	Vinyl acetate	2.5	U	5.0	2.5	1.2
75-01-4	Vinyl chloride	0.50	U	1.0	0.50	0.22
1330-20-7	Xylenes, Total	2.0	U	3.0	2.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775VMW-8_1018 | Lab Sample ID: 280-115988-1

Matrix: Water | Lab File ID: J3018022.D

Analysis Method: 8260B | Date Collected: 10/23/2018 15:26

Sample wt/vol: 5(mL) | Date Analyzed: 10/31/2018 00:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		81-118
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D
Lims ID: 280-115988-A-1
Client ID: 775VMW-8_1018
Sample Type: Client
Inject. Date: 31-Oct-2018 00:32:30 ALS Bottle#: 22 Worklist Smp#: 33
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-115988-A-1
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:50:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
* 16 TBA-d9 (IS)	65	6.412	6.413	-0.001	0	145030	390.0	
38 Chloroform	83	8.184	8.185	-0.001	92	1564	0.1729	
$ 43 Dibromofluoromethane (Surr	113	8.288	8.290	-0.002	95	73469	19.8	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.675	8.677	-0.002	0	84231	20.7	
47 1,1,1-Trichloroethane	97	8.827	8.828	-0.001	99	2631	0.4655	
52 Benzene	78	9.172	9.168	0.004	53	680	0.0448	
* 54 Fluorobenzene (IS)	96	9.329	9.325	0.004	99	284227	19.5	
61 Trichloroethene	130	9.690	9.686	0.004	97	103298	23.3	
$ 73 Toluene-d8 (Surr)	98	10.908	10.904	0.004	93	281707	19.5	
* 85 Chlorobenzene-d5	82	12.262	12.263	-0.001	85	120130	19.5	
$ 97 4-Bromofluorobenzene (Surr	95	13.391	13.392	-0.001	96	111100	20.2	
* 109 1,4-Dichlorobenzene-d4	152	14.557	14.558	-0.001	94	144317	19.5	

Reagents:

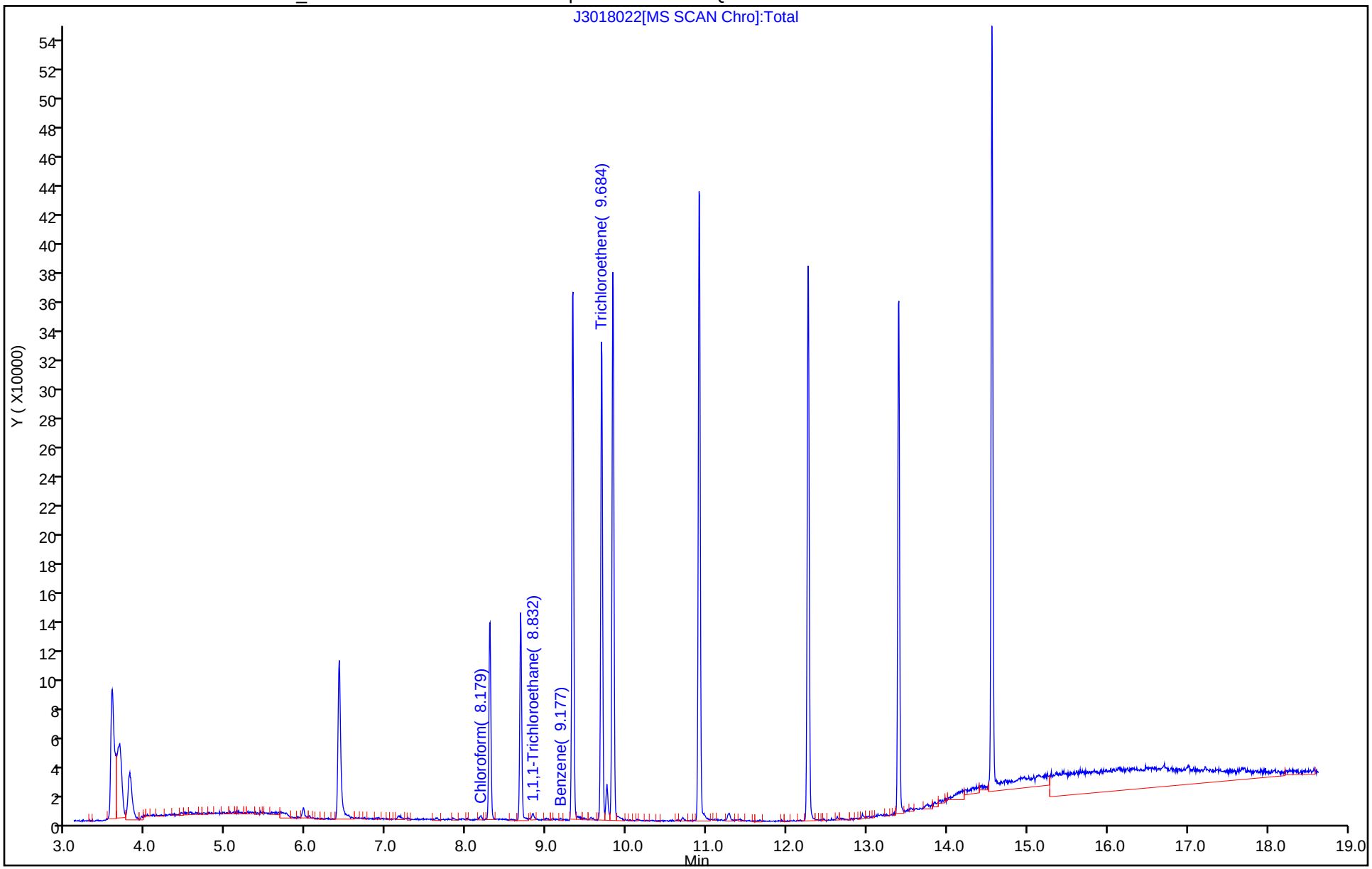
5X SUR/IS/TFT_00006 Amount Added: 2.00 Units: uL Run Reagent

Report Date: 31-Oct-2018 12:04:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D

Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1	Worklist Smp#:	33
Client ID:	775VMW-8_1018				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Recovery Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D
Lims ID: 280-115988-A-1
Client ID: 775VMW-8_1018
Sample Type: Client
Inject. Date: 31-Oct-2018 00:32:30 ALS Bottle#: 22 Worklist Smp#: 33
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-115988-A-1
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:50:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 43 Dibromofluoromethane (Surr)	19.5	19.8	101.77
$ 45 1,2-Dichloroethane-d4 (Surr)	19.5	20.7	105.92
$ 64 Trifluorotoluene (Surr)	0.0	0	0.00
$ 73 Toluene-d8 (Surr)	19.5	19.5	100.05
$ 97 4-Bromofluorobenzene (Surr)	19.5	20.2	103.34
$ 125 BFB	0.0	0	0.00

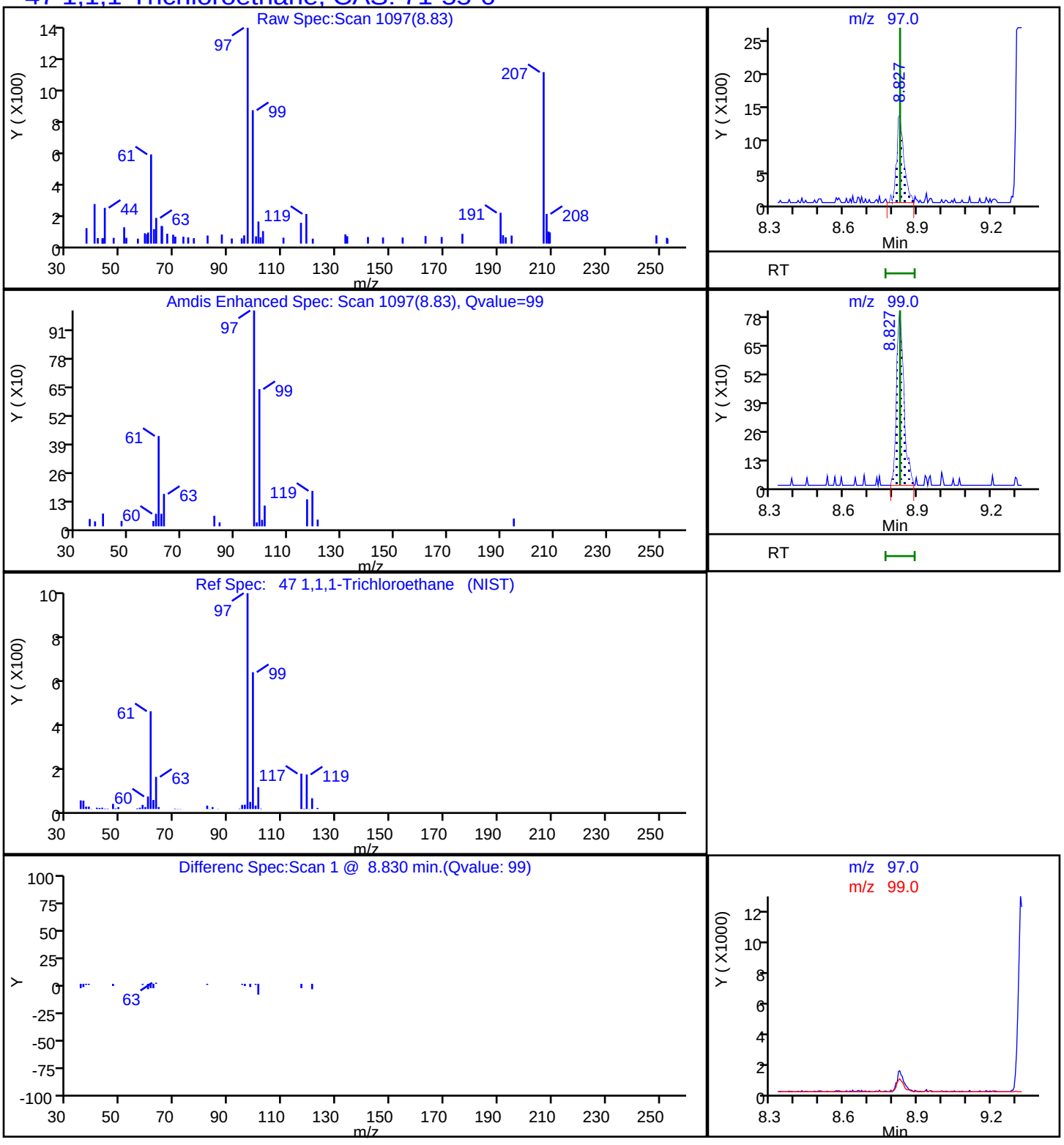
Report Date: 31-Oct-2018 12:04:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D

Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



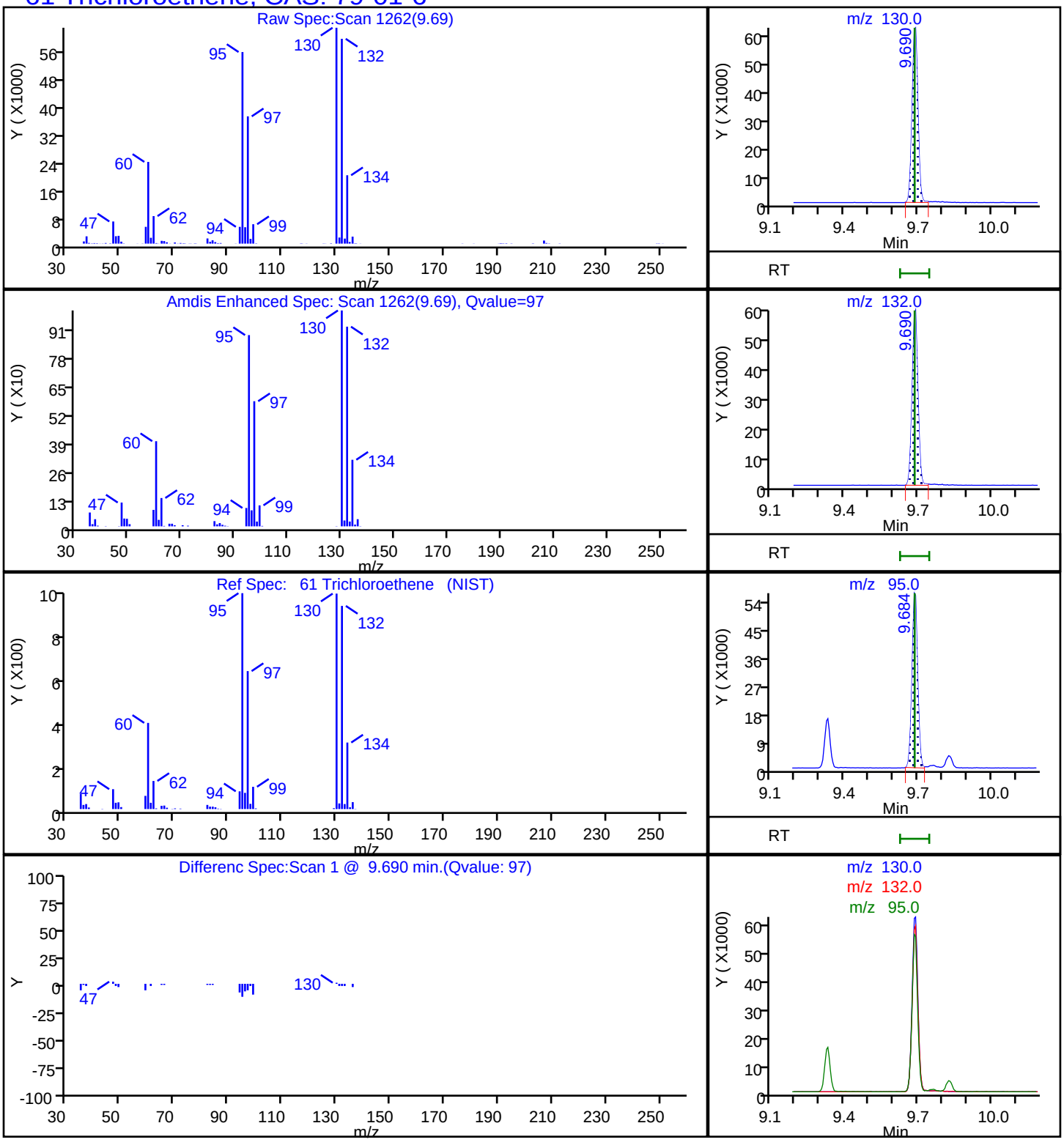
Report Date: 31-Oct-2018 12:04:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D

Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6



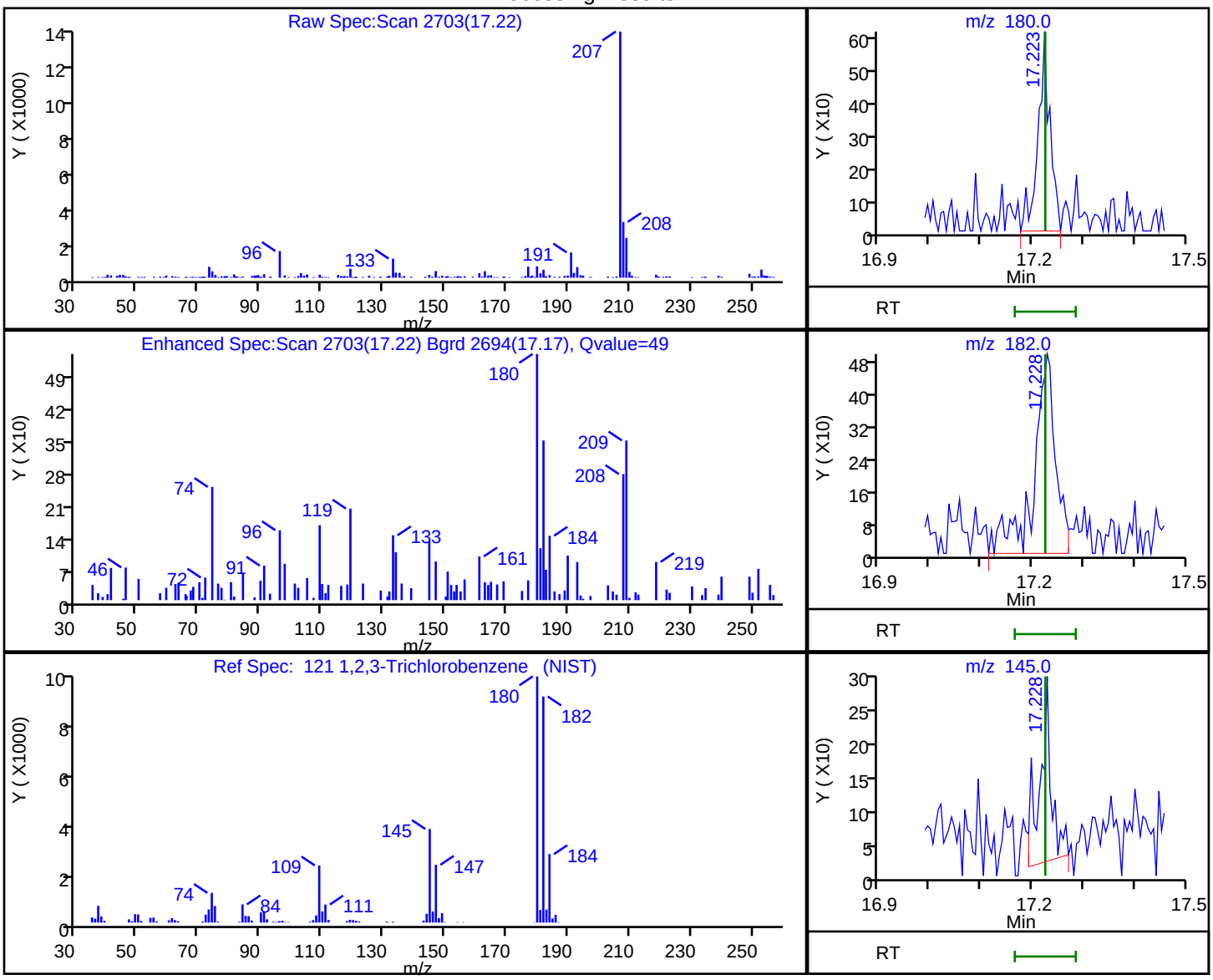
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

121 1,2,3-Trichlorobenzene, CAS: 87-61-6

Processing Results



RT	Mass	Response	Amount
17.22	180.00	991	-0.447012
17.23	182.00	1473	
17.23	145.00	418	

Reviewer: brennanr, 31-Oct-2018 11:50:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

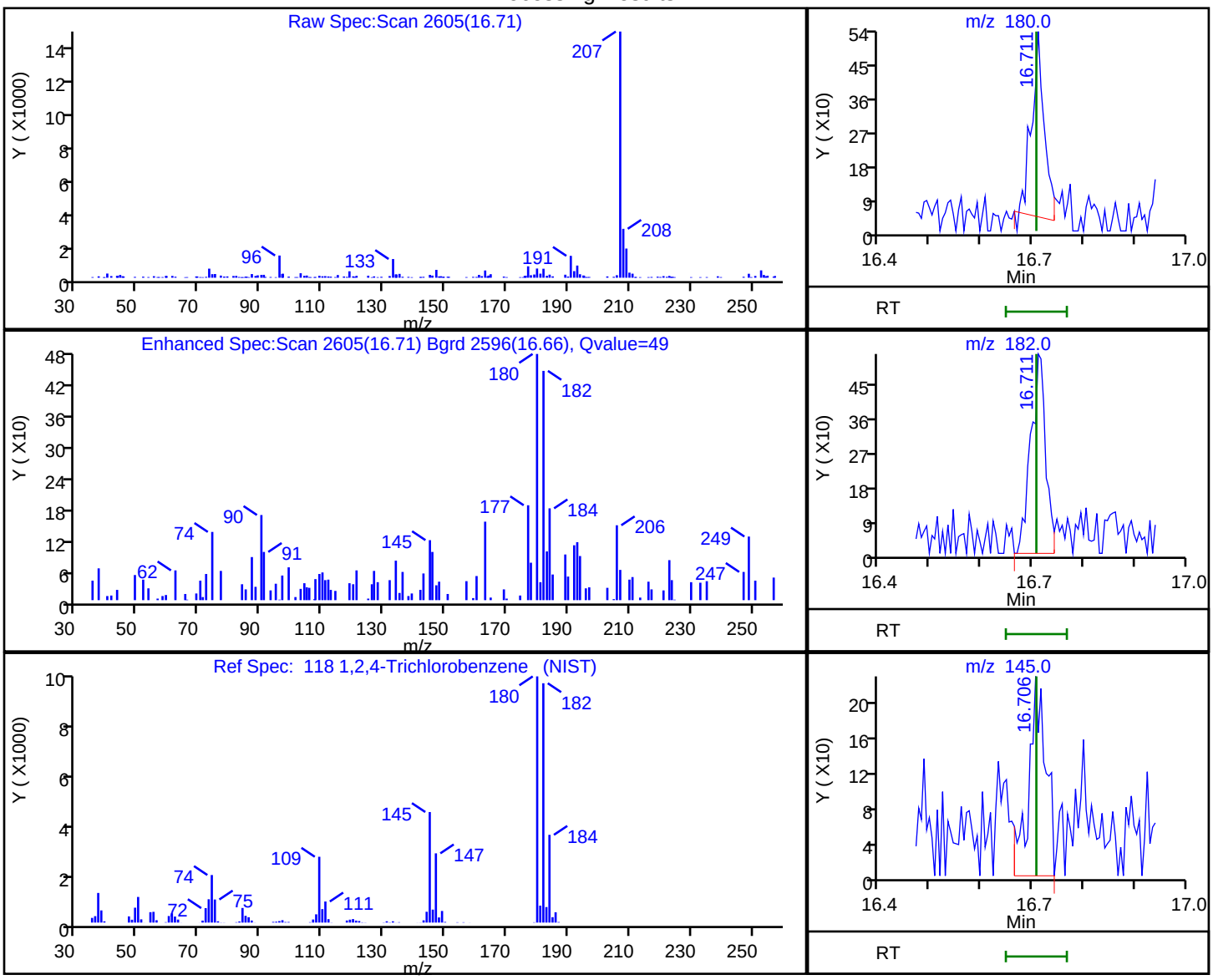
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

118 1,2,4-Trichlorobenzene, CAS: 120-82-1

Processing Results



RT	Mass	Response	Amount
16.71	180.00	846	-0.513767
16.71	182.00	1065	
16.71	145.00	530	

Reviewer: brennanr, 31-Oct-2018 11:50:18

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

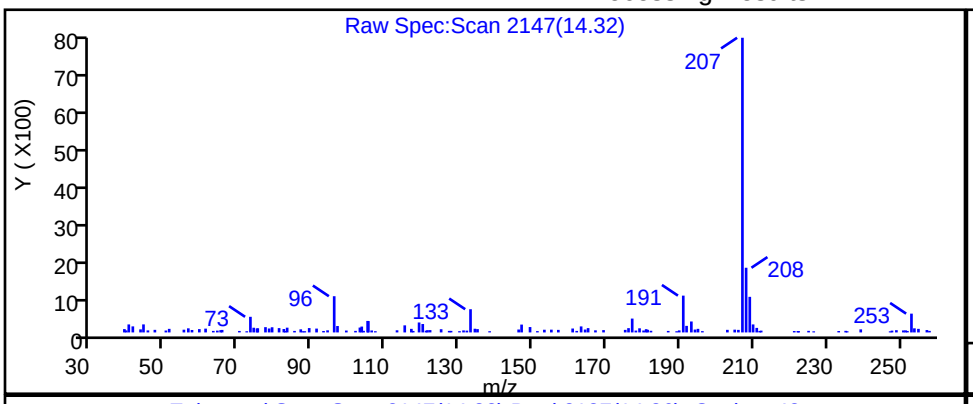
User Disabled Compound Report

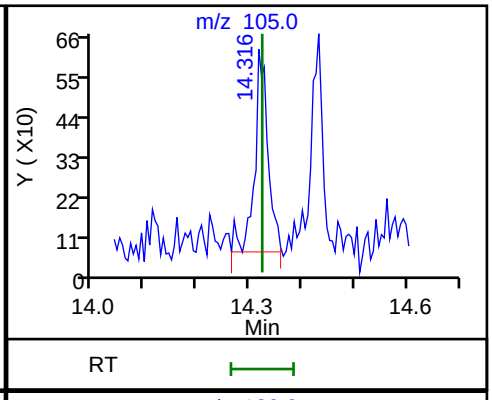
TestAmerica Seattle

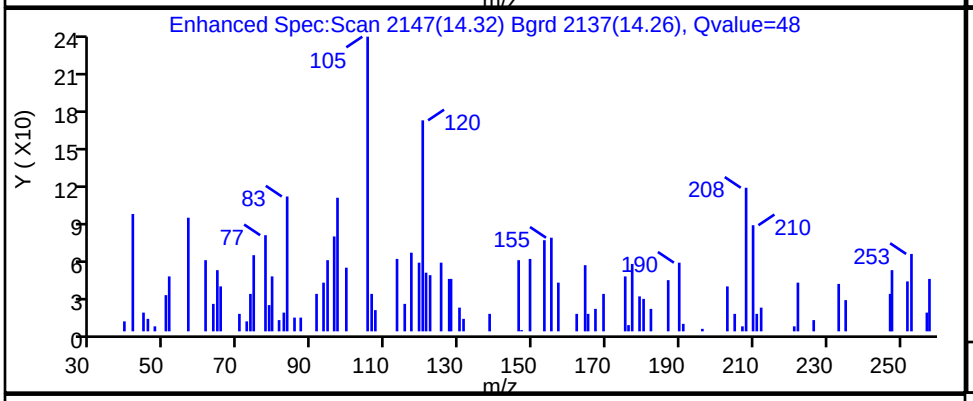
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Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

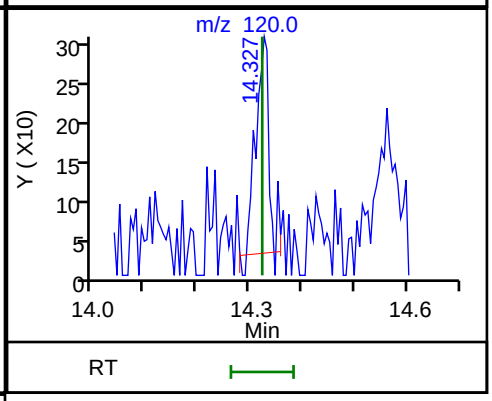
105 1,2,4-Trimethylbenzene, CAS: 95-63-6

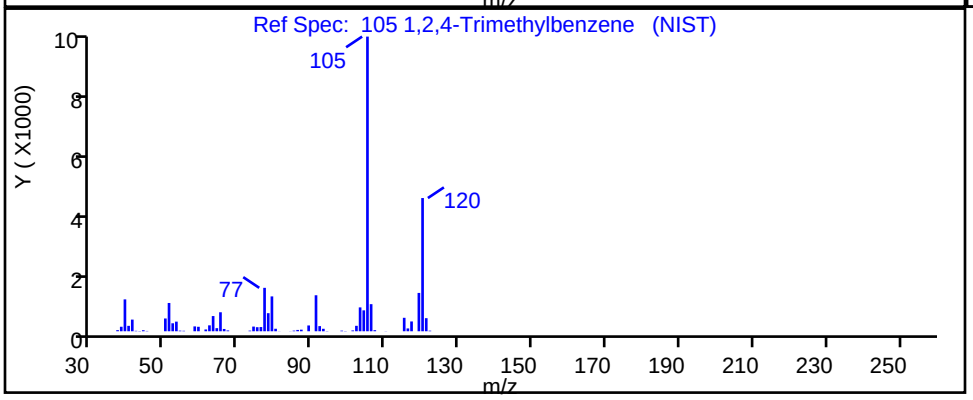
Processing Results











RT	Mass	Response	Amount
14.32	105.00	991	-0.196832
14.33	120.00	466	

Reviewer: brennanr, 31-Oct-2018 11:50:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

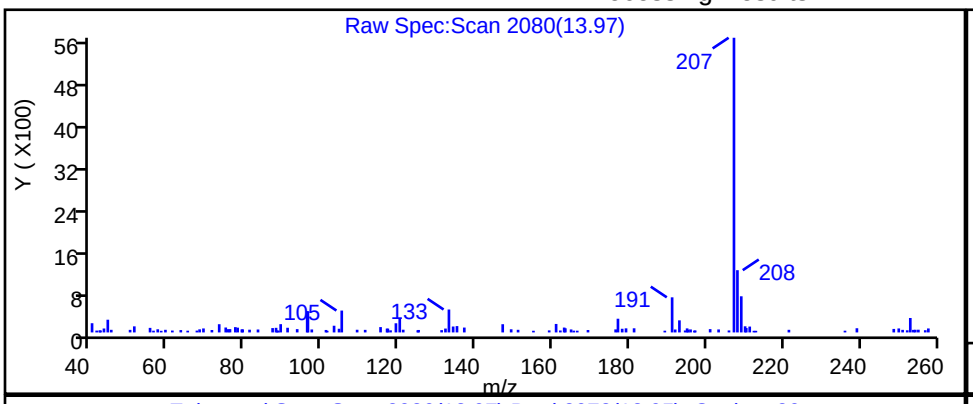
User Disabled Compound Report

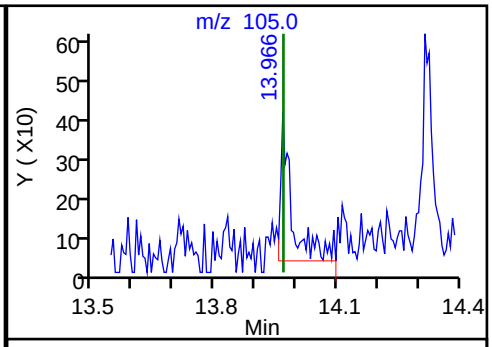
TestAmerica Seattle

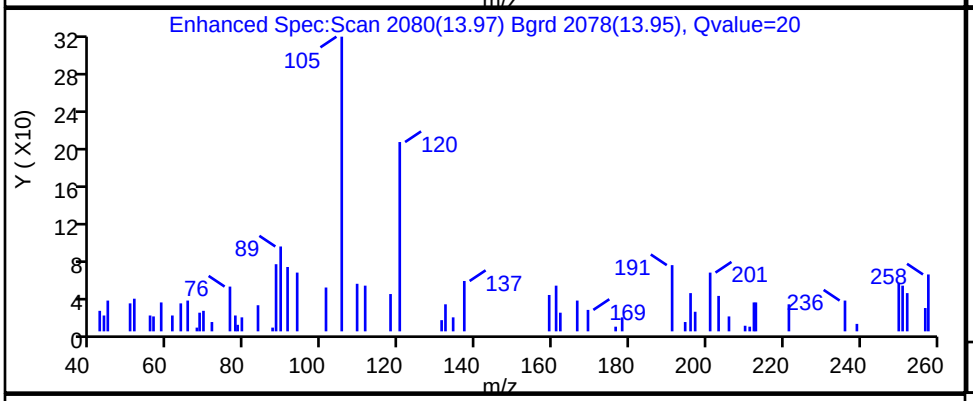
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

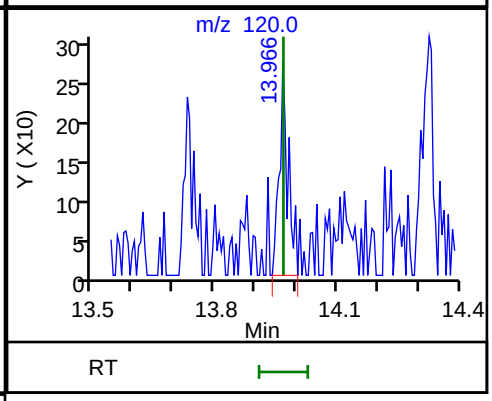
102 1,3,5-Trimethylbenzene, CAS: 108-67-8

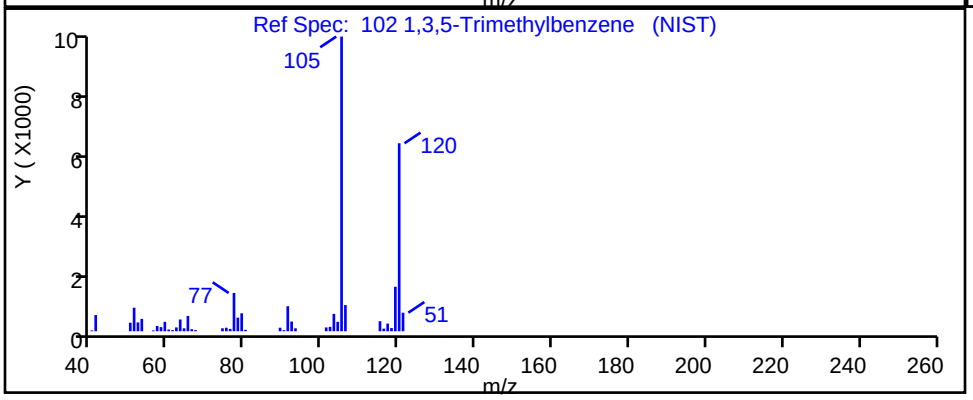
Processing Results











RT	Mass	Response	Amount
13.97	105.00	743	-0.102906
13.97	120.00	402	

Reviewer: brennanr, 31-Oct-2018 11:49:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

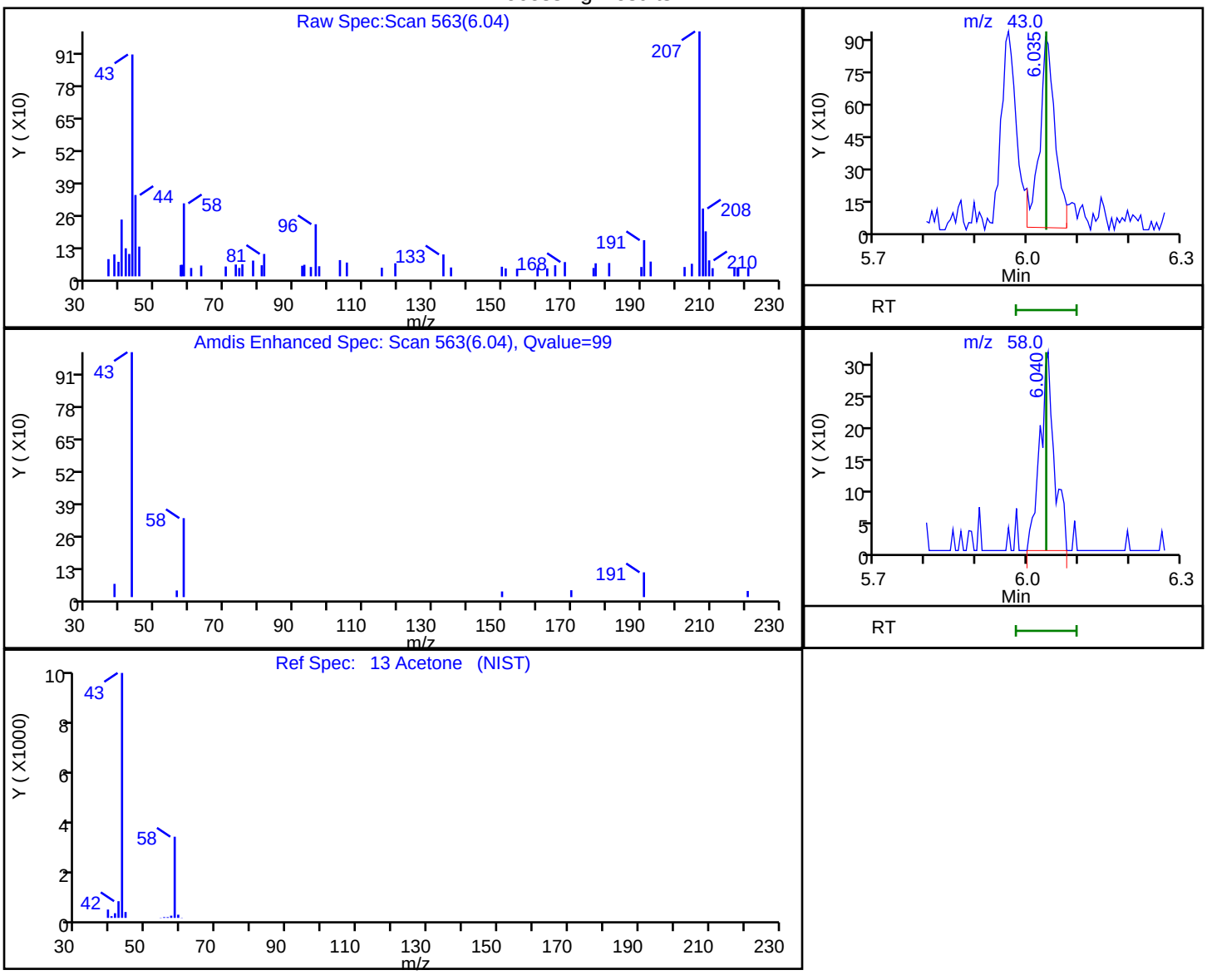
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

13 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
6.04	43.00	1914	-1.266026
6.04	58.00	626	

Reviewer: brennanr, 31-Oct-2018 11:48:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

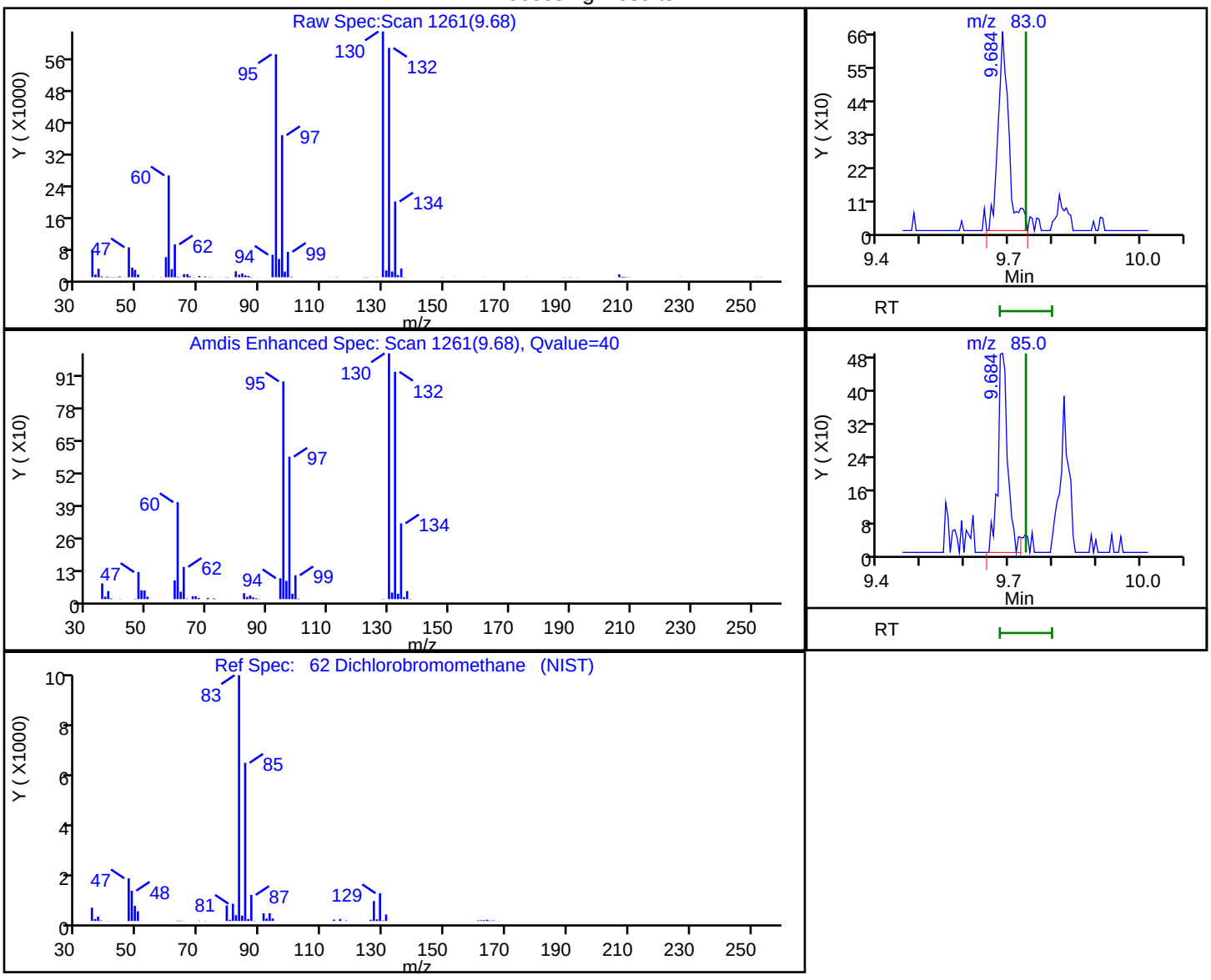
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

62 Dichlorobromomethane, CAS: 75-27-4

Processing Results



RT	Mass	Response	Amount
9.68	83.00	1137	-0.009536
9.68	85.00	750	

Reviewer: brennanr, 31-Oct-2018 11:49:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

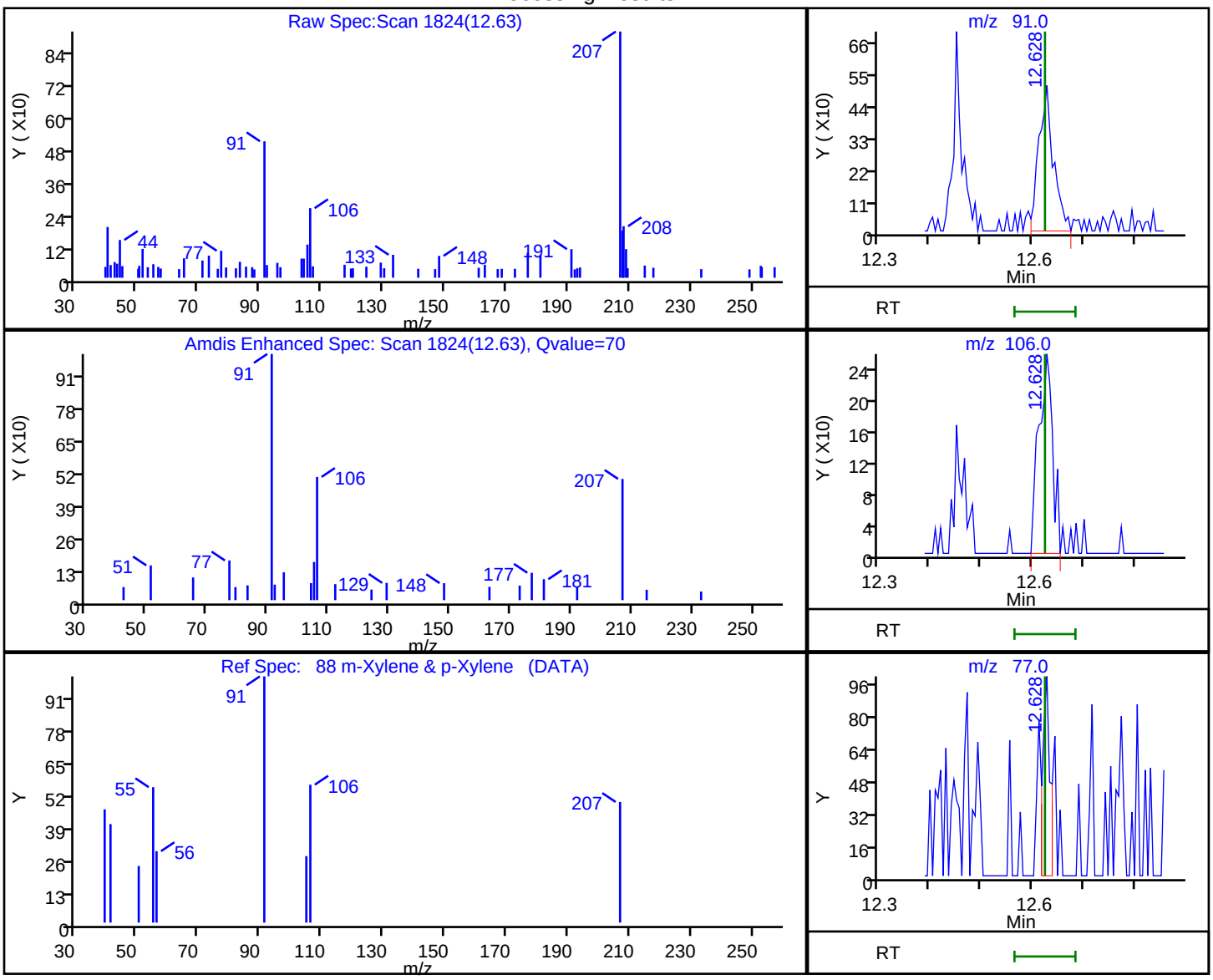
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

88 m-Xylene & p-Xylene, CAS: 179601-23-1

Processing Results



RT	Mass	Response	Amount
12.63	91.00	1011	-0.112043
12.63	106.00	486	
12.63	77.00	99	

Reviewer: brennanr, 31-Oct-2018 11:49:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

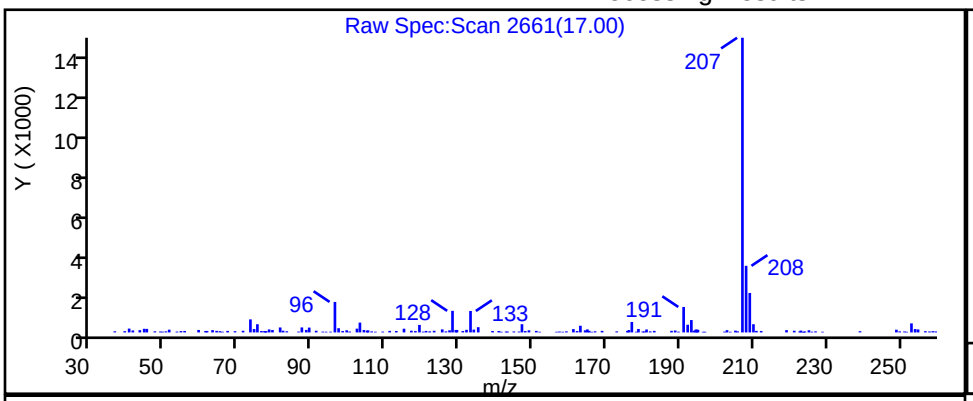
User Disabled Compound Report

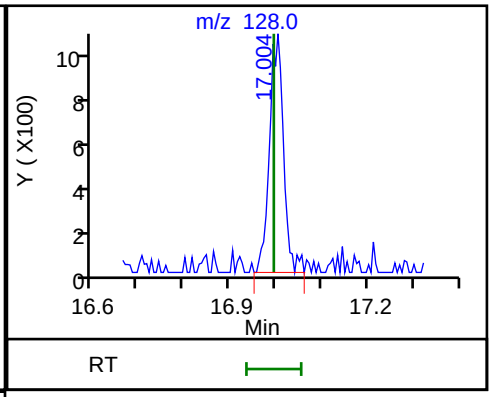
TestAmerica Seattle

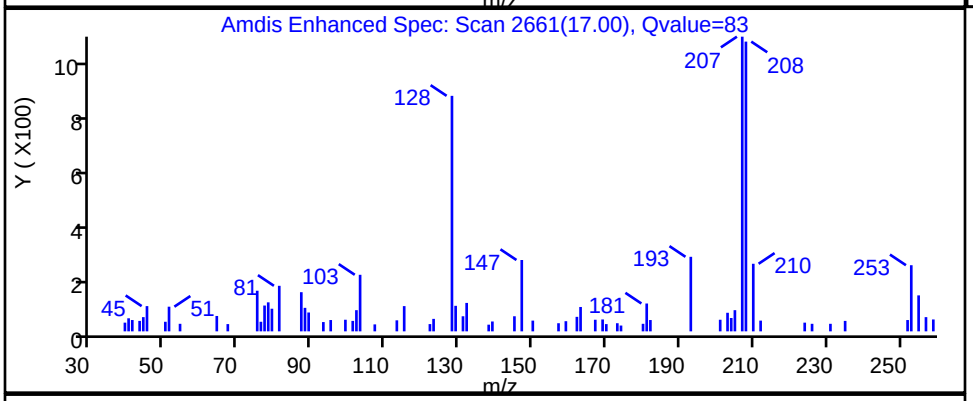
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

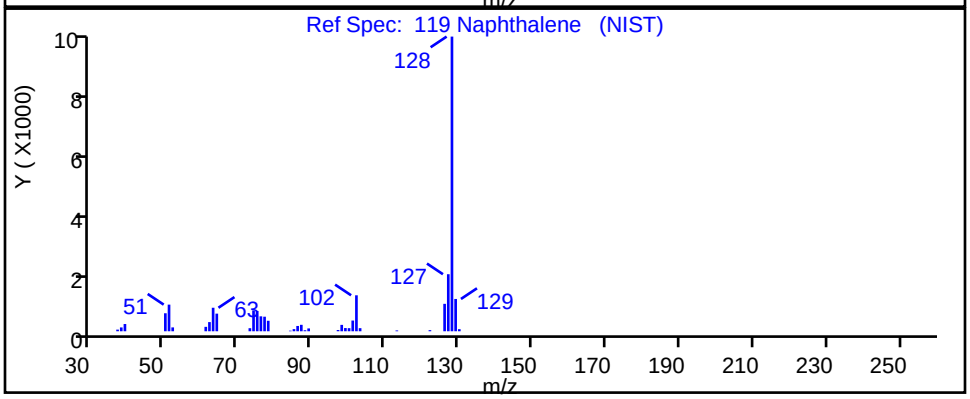
119 Naphthalene, CAS: 91-20-3

Processing Results









RT	Mass	Response	Amount
17.00	128.00	2192	-0.616496

Reviewer: brennanr, 31-Oct-2018 11:50:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

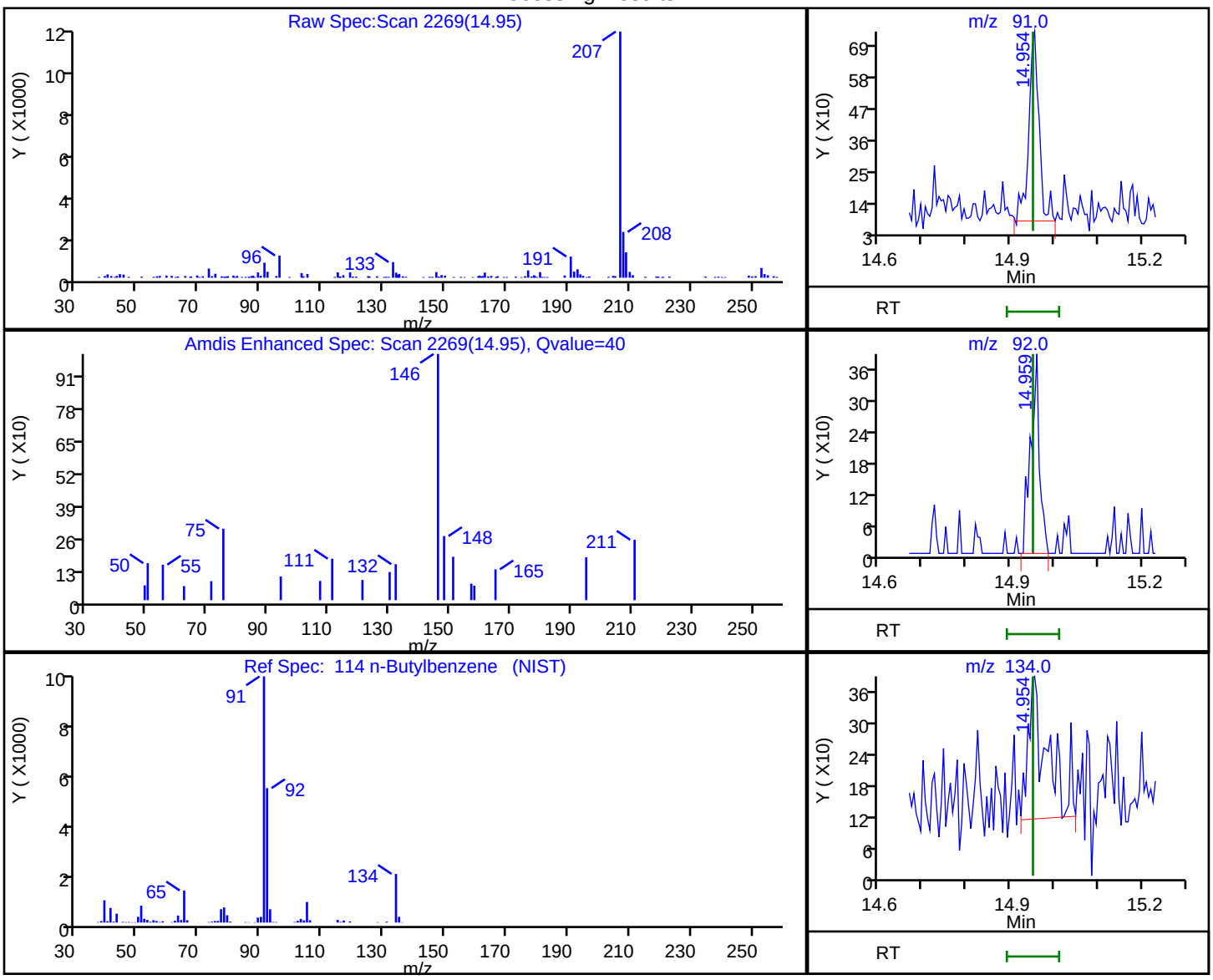
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

114 n-Butylbenzene, CAS: 104-51-8

Processing Results



RT	Mass	Response	Amount
14.95	91.00	1084	-0.208094
14.96	92.00	547	
14.95	134.00	827	

Reviewer: brennanr, 31-Oct-2018 11:50:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

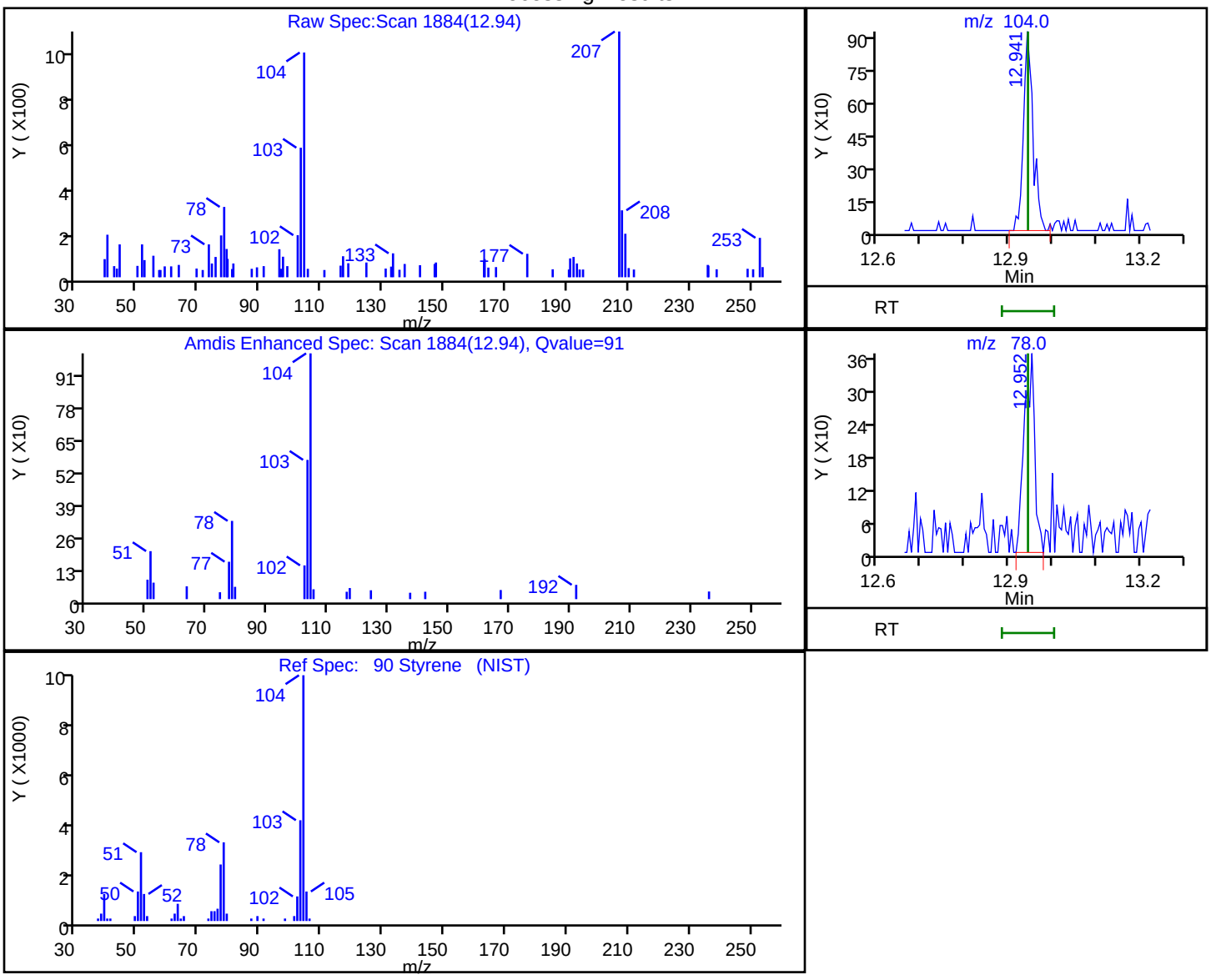
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

90 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
12.94	104.00	1432	-0.192953
12.95	78.00	599	

Reviewer: brennanr, 31-Oct-2018 11:49:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

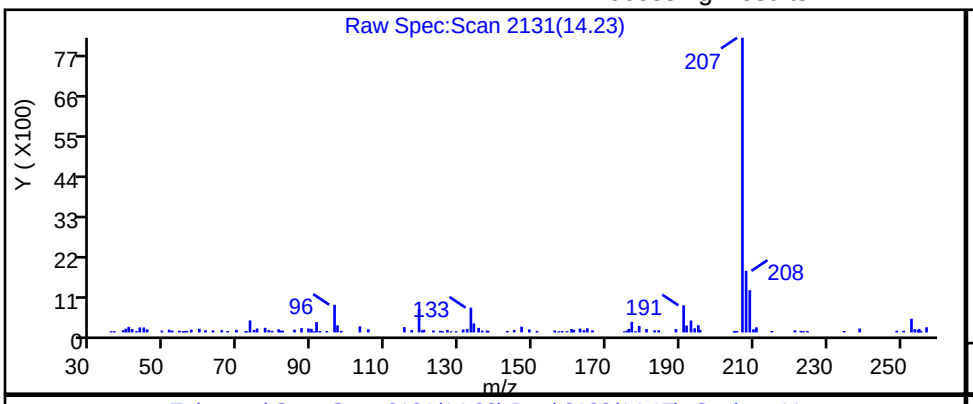
User Disabled Compound Report

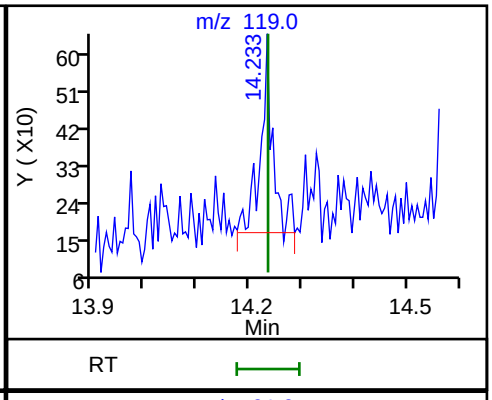
TestAmerica Seattle

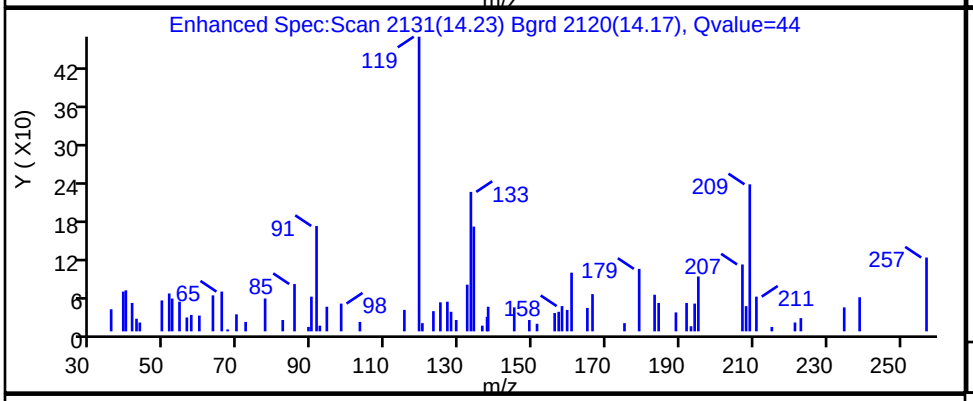
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018022.D				
Injection Date:	31-Oct-2018 00:32:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-1	Lab Sample ID:	580-115988-1		
Client ID:	775VMW-8_1018				
Operator ID:	DSO	ALS Bottle#:	22	Worklist Smp#:	33
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

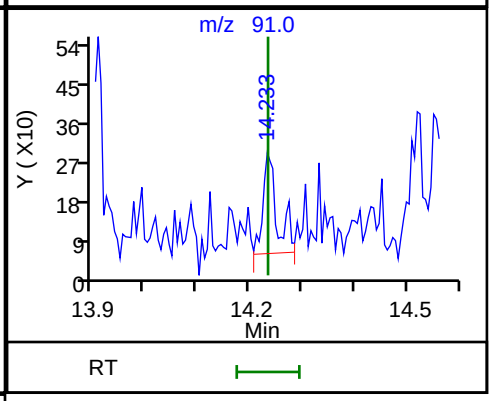
104 tert-Butylbenzene, CAS: 98-06-6

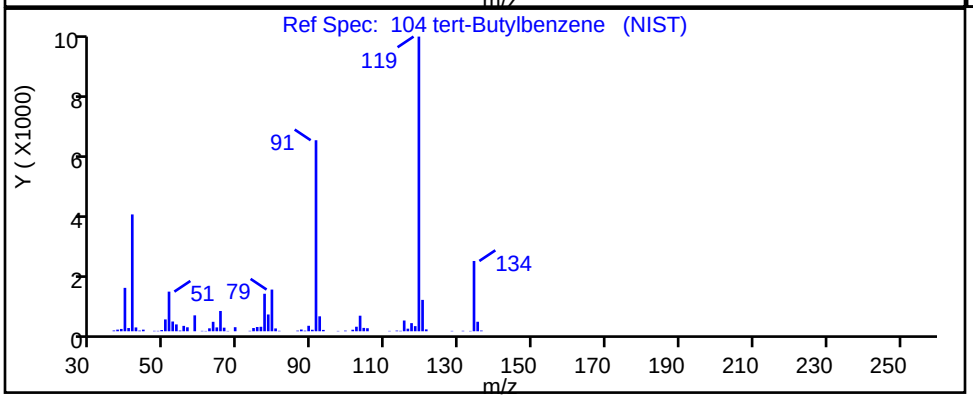
Processing Results











RT	Mass	Response	Amount
14.23	119.00	778	-0.149432
14.23	91.00	438	

Reviewer: brennanr, 31-Oct-2018 11:50:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775MW-6_1018 | Lab Sample ID: 280-115988-2

Matrix: Water | Lab File ID: J3018023.D

Analysis Method: 8260B | Date Collected: 10/23/2018 16:31

Sample wt/vol: 5(mL) | Date Analyzed: 10/31/2018 00:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.50	0.18
71-55-6	1,1,1-Trichloroethane	0.43	J	3.0	0.50	0.14
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	3.0	2.0	0.52
79-00-5	1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.24
75-34-3	1,1-Dichloroethane	0.50	U	2.0	0.50	0.22
75-35-4	1,1-Dichloroethene	2.0	U	4.0	2.0	0.78
563-58-6	1,1-Dichloropropene	1.0	U	3.0	1.0	0.29
87-61-6	1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.46
96-18-4	1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	1.0	U	2.0	1.0	0.33
95-63-6	1,2,4-Trimethylbenzene	2.0	U	3.0	2.0	0.61
96-12-8	1,2-Dibromo-3-Chloropropane	6.0	U	10	6.0	1.8
106-93-4	1,2-Dibromoethane	1.0	U	2.0	1.0	0.40
95-50-1	1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.46
107-06-2	1,2-Dichloroethane	2.0	U	2.0	2.0	0.53
78-87-5	1,2-Dichloropropane	0.50	U	1.0	0.50	0.18
108-67-8	1,3,5-Trimethylbenzene	2.0	U	3.0	2.0	0.55
541-73-1	1,3-Dichlorobenzene	0.50	U	2.0	0.50	0.18
142-28-9	1,3-Dichloropropane	1.0	U	2.0	1.0	0.35
106-46-7	1,4-Dichlorobenzene	2.0	U	4.0	2.0	0.98
594-20-7	2,2-Dichloropropane	1.0	U	3.0	1.0	0.32
78-93-3	2-Butanone (MEK)	10	U	20	10	4.7
95-49-8	2-Chlorotoluene	1.0	U	3.0	1.0	0.51
591-78-6	2-Hexanone	10	U	20	10	4.0
106-43-4	4-Chlorotoluene	1.0	U	2.0	1.0	0.51
99-87-6	4-Isopropyltoluene	1.0	U	3.0	1.0	0.28
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	15	5.0	2.5
67-64-1	Acetone	18	U M	50	18	7.8
71-43-2	Benzene	2.0	U	3.0	2.0	0.53
108-86-1	Bromobenzene	0.50	U	2.0	0.50	0.18
74-97-5	Bromochloromethane	1.0	U	2.0	1.0	0.29
75-27-4	Bromodichloromethane	0.50	U	2.0	0.50	0.14
75-25-2	Bromoform	2.0	U	3.0	2.0	0.56
74-83-9	Bromomethane	3.5	U	6.0	3.5	1.1
75-15-0	Carbon disulfide	2.0	U	3.0	2.0	0.53
56-23-5	Carbon tetrachloride	1.0	U	3.0	1.0	0.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775MW-6_1018 | Lab Sample ID: 280-115988-2

Matrix: Water | Lab File ID: J3018023.D

Analysis Method: 8260B | Date Collected: 10/23/2018 16:31

Sample wt/vol: 5(mL) | Date Analyzed: 10/31/2018 00:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-90-7	Chlorobenzene	1.0	U	2.0	1.0	0.44
75-00-3	Chloroethane	3.5	U	5.0	3.5	1.1
67-66-3	Chloroform	1.3	J	5.0	1.0	0.50
74-87-3	Chloromethane	15	U	20	15	5.4
156-59-2	cis-1,2-Dichloroethene	2.0	U	3.0	2.0	0.69
10061-01-5	cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20
124-48-1	Dibromochloromethane	0.50	U	1.0	0.50	0.20
74-95-3	Dibromomethane	1.0	U	2.0	1.0	0.34
75-71-8	Dichlorodifluoromethane	6.0	U Q	10	6.0	2.3
108-20-3	Diisopropyl ether	1.3	U	2.0	1.3	0.35
100-41-4	Ethylbenzene	1.0	U	3.0	1.0	0.50
87-68-3	Hexachlorobutadiene	2.0	U	6.0	2.0	0.79
98-82-8	Isopropylbenzene	1.0	U	2.0	1.0	0.51
179601-23-1	m,p-Xylene	2.0	U M	3.0	2.0	0.75
74-88-4	Methyl iodide	0.50	U	5.0	0.50	0.24
1634-04-4	Methyl tert-butyl ether	1.0	U	2.0	1.0	0.44
75-09-2	Methylene Chloride	3.5	U	5.0	3.5	1.4
91-20-3	Naphthalene	2.0	U M	4.0	2.0	0.93
104-51-8	n-Butylbenzene	1.0	U M	3.0	1.0	0.44
103-65-1	N-Propylbenzene	1.0	U	3.0	1.0	0.50
95-47-6	o-Xylene	0.50	U	2.0	0.50	0.15
135-98-8	sec-Butylbenzene	1.0	U M	3.0	1.0	0.49
100-42-5	Styrene	1.0	U M	5.0	1.0	0.51
98-06-6	tert-Butylbenzene	2.0	U	3.0	2.0	0.58
127-18-4	Tetrachloroethene	1.0	U	3.0	1.0	0.41
108-88-3	Toluene	1.0	U M	2.0	1.0	0.39
156-60-5	trans-1,2-Dichloroethene	1.0	U	3.0	1.0	0.39
10061-02-6	trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.16
79-01-6	Trichloroethene	27		3.0	2.0	0.85
75-69-4	Trichlorofluoromethane	2.0	U	3.0	2.0	0.63
108-05-4	Vinyl acetate	2.5	U	5.0	2.5	1.2
75-01-4	Vinyl chloride	0.50	U	1.0	0.50	0.22
1330-20-7	Xylenes, Total	2.0	U	3.0	2.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Client Sample ID: 775MW-6_1018 Lab Sample ID: 280-115988-2

Matrix: Water Lab File ID: J3018023.D

Analysis Method: 8260B Date Collected: 10/23/2018 16:31

Sample wt/vol: 5(mL) Date Analyzed: 10/31/2018 00:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 287774 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D
Lims ID: 280-115988-A-2
Client ID: 775MW-6_1018
Sample Type: Client
Inject. Date: 31-Oct-2018 00:58:30 ALS Bottle#: 23 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-115988-A-2
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:52:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
* 16 TBA-d9 (IS)	65	6.412	6.413	-0.001	0	157409	390.0	
38 Chloroform	83	8.185	8.185	0.000	93	7918	1.26	
$ 43 Dibromofluoromethane (Surr	113	8.289	8.290	-0.001	95	73036	19.6	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.676	8.677	-0.001	0	82660	20.1	
47 1,1,1-Trichloroethane	97	8.828	8.828	0.000	98	2435	0.4281	
52 Benzene	78	9.162	9.168	-0.006	45	877	0.0604	
* 54 Fluorobenzene (IS)	96	9.330	9.325	0.005	99	286010	19.5	
61 Trichloroethene	130	9.685	9.686	-0.001	96	113205	26.6	
62 Dichlorobromomethane	83	9.685	9.738	-0.053	39	1604	0.1011	
$ 73 Toluene-d8 (Surr)	98	10.903	10.904	-0.001	93	271330	19.6	
* 85 Chlorobenzene-d5	82	12.268	12.263	0.005	85	114894	19.5	
$ 97 4-Bromofluorobenzene (Surr	95	13.392	13.392	0.000	96	101536	19.3	
* 109 1,4-Dichlorobenzene-d4	152	14.558	14.558	0.000	94	135894	19.5	

Reagents:

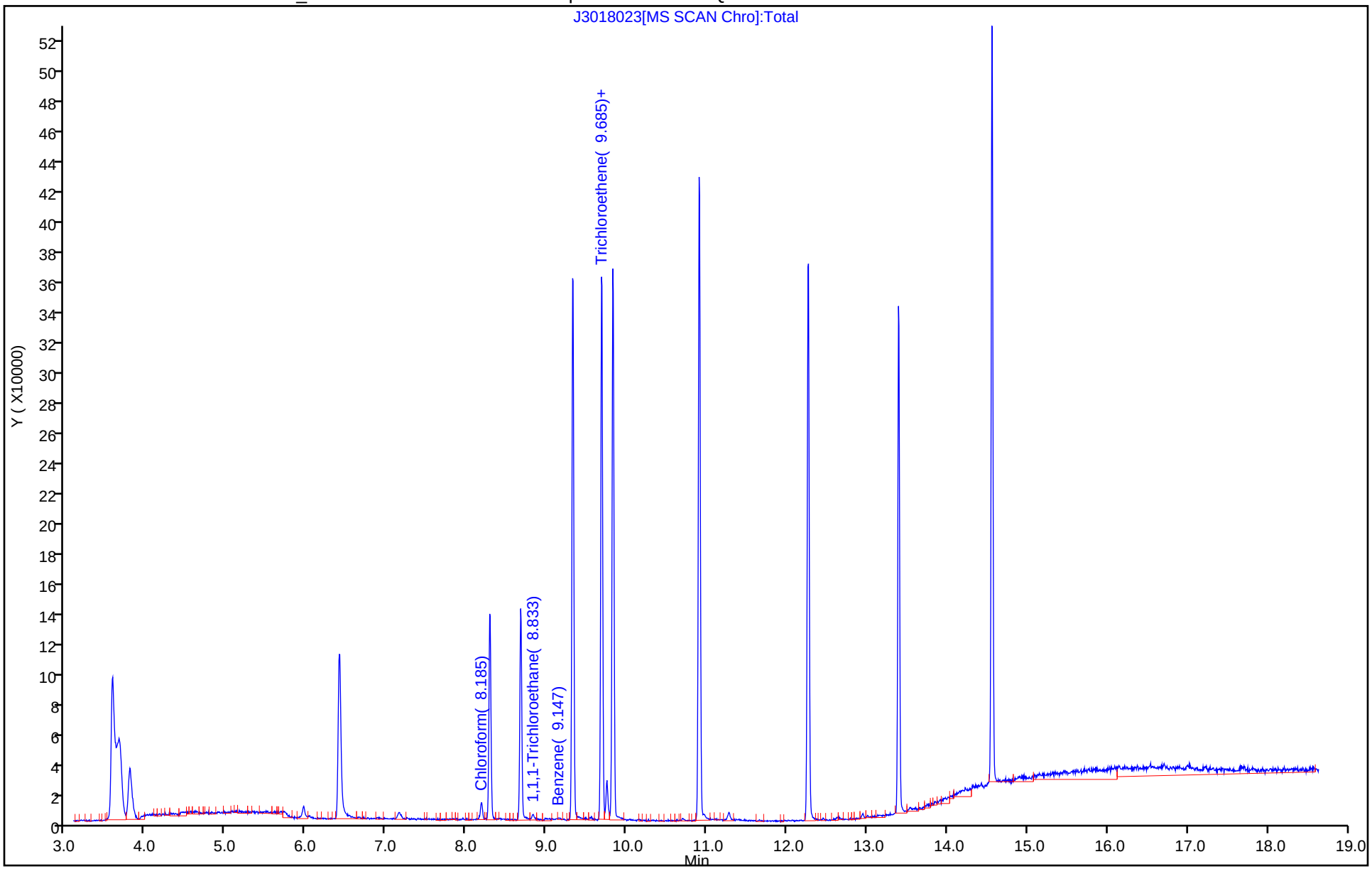
5X SUR/IS/TFT_00006 Amount Added: 2.00 Units: uL Run Reagent

Report Date: 31-Oct-2018 12:04:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D

Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2	Worklist Smp#:	34
Client ID:	775MW-6_1018				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Recovery Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D
Lims ID: 280-115988-A-2
Client ID: 775MW-6_1018
Sample Type: Client
Inject. Date: 31-Oct-2018 00:58:30 ALS Bottle#: 23 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-115988-A-2
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:52:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 43 Dibromofluoromethane (Surr)	19.5	19.6	100.53
$ 45 1,2-Dichloroethane-d4 (Surr)	19.5	20.1	103.29
$ 64 Trifluorotoluene (Surr)	0.0	0	0.00
$ 73 Toluene-d8 (Surr)	19.5	19.6	100.75
$ 97 4-Bromofluorobenzene (Surr)	19.5	19.3	98.75
$ 125 BFB	0.0	0	0.00

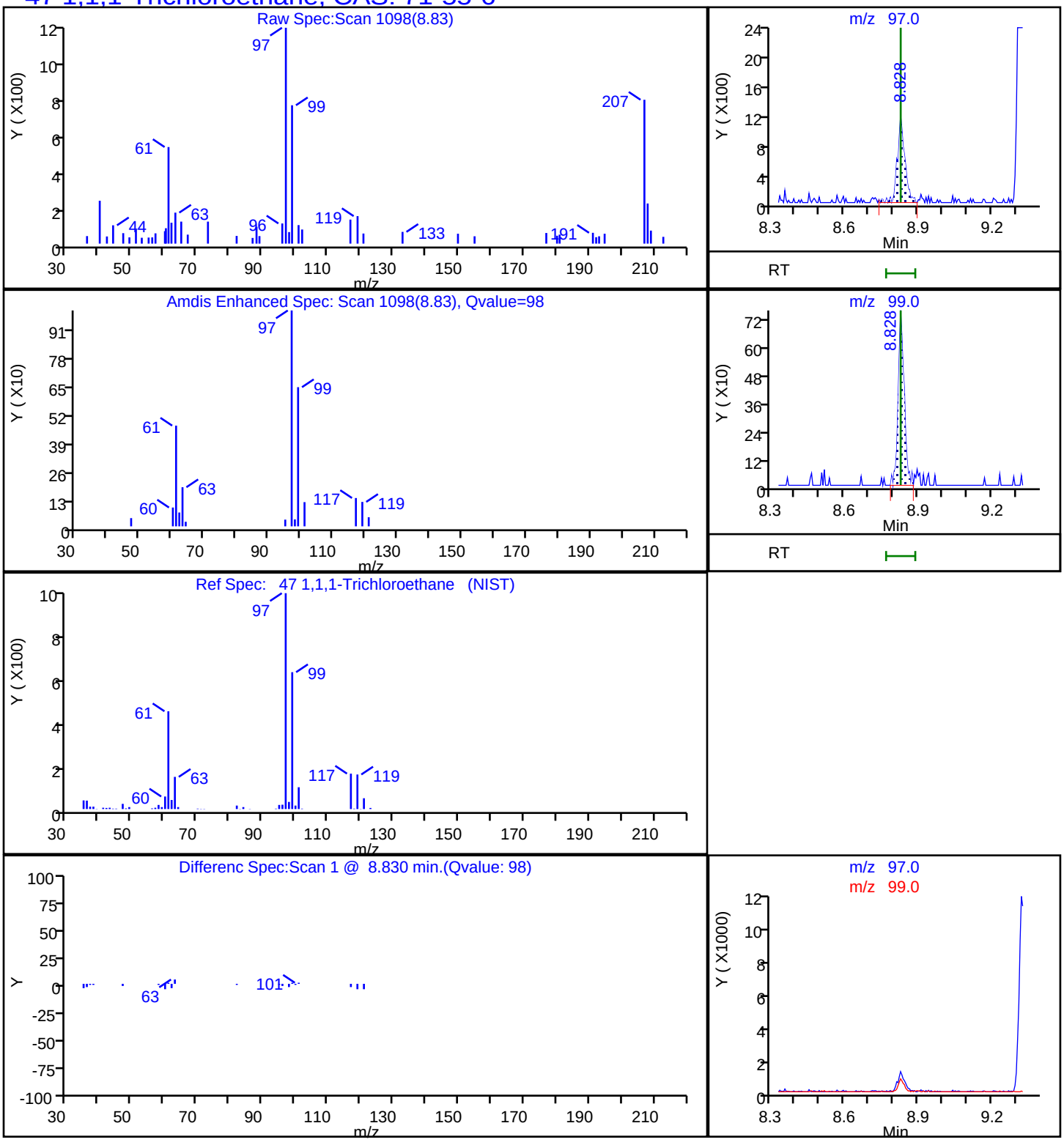
Report Date: 31-Oct-2018 12:04:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D

Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



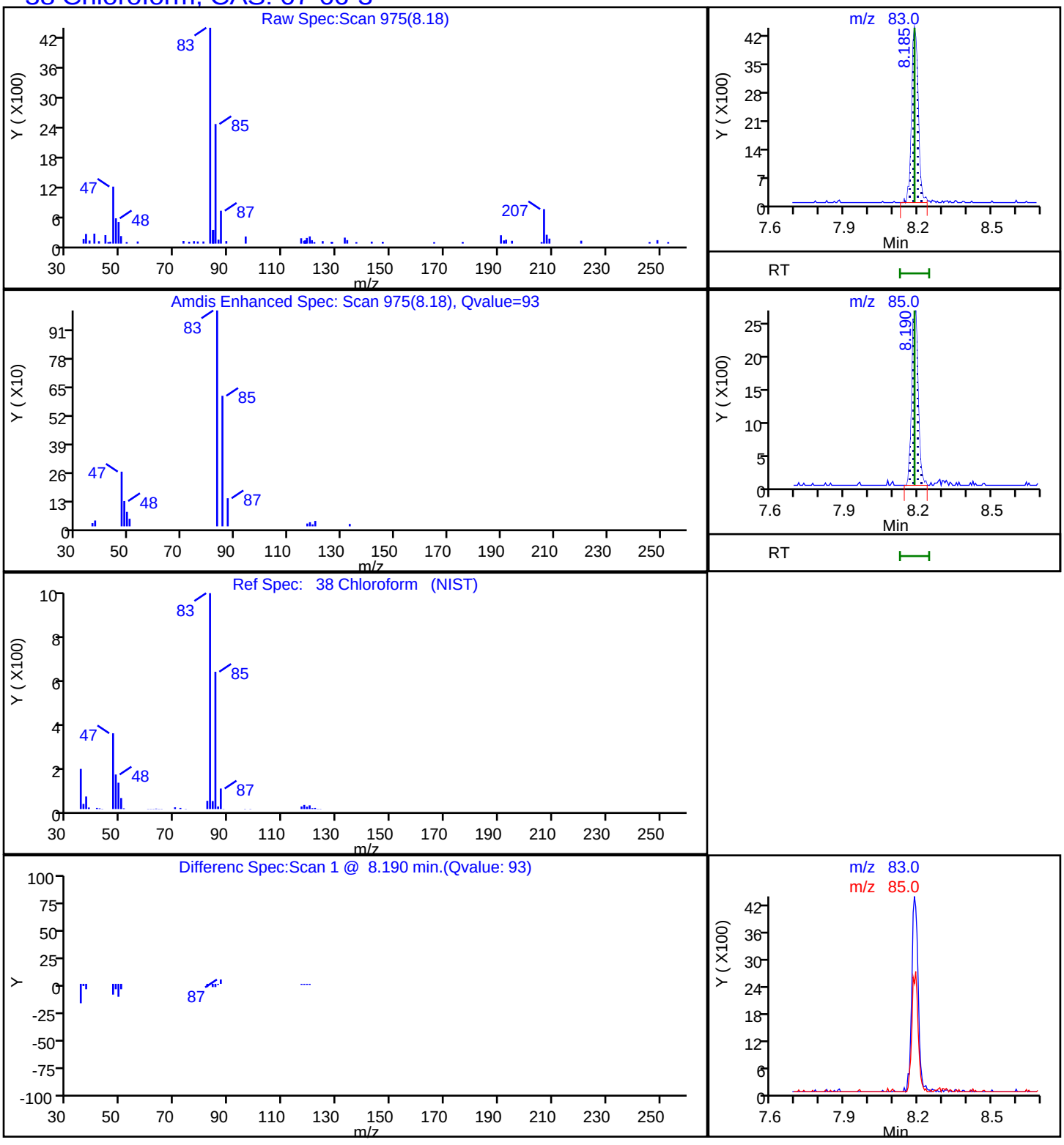
Report Date: 31-Oct-2018 12:04:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D

Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

38 Chloroform, CAS: 67-66-3



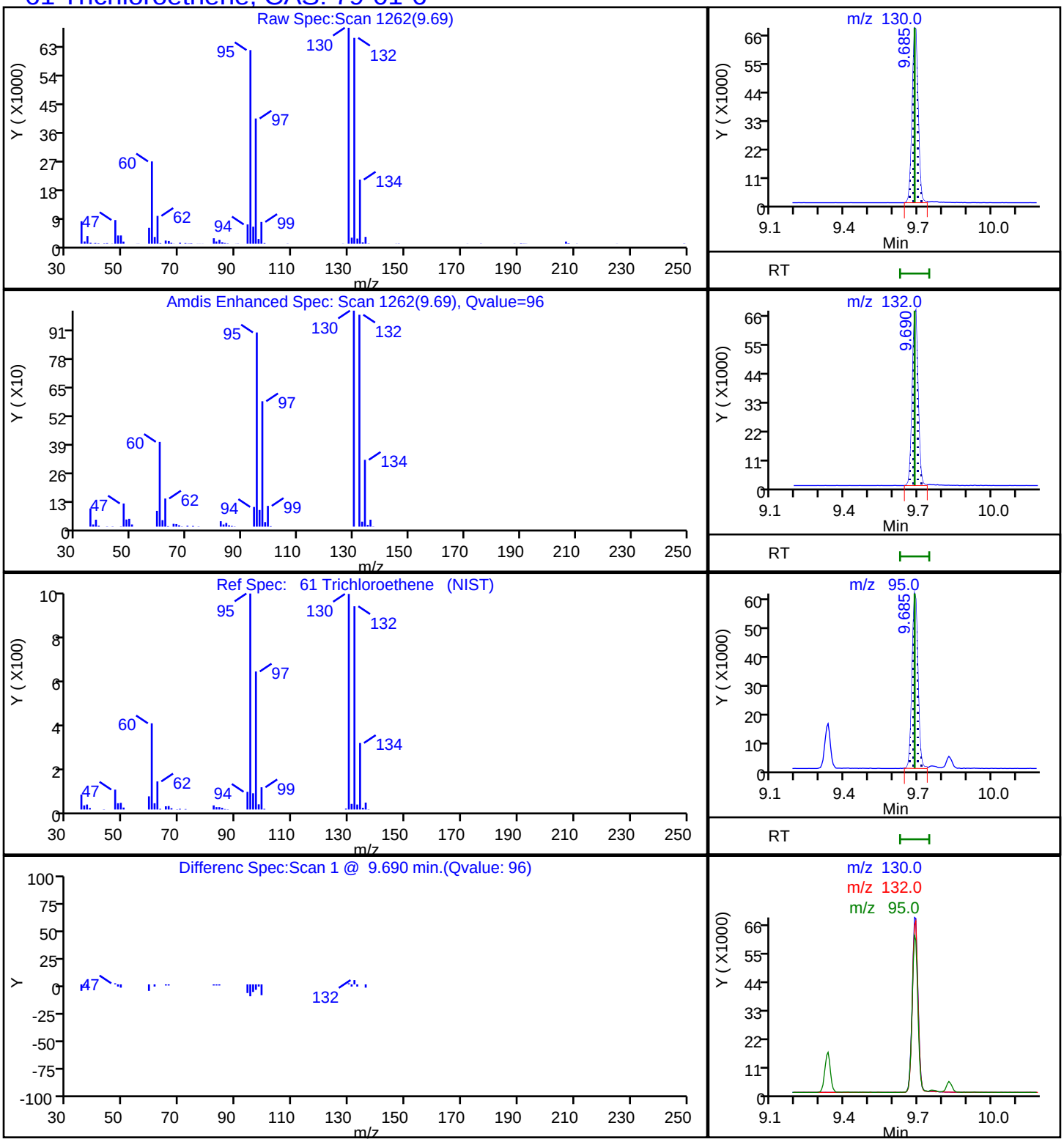
Report Date: 31-Oct-2018 12:04:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D

Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6



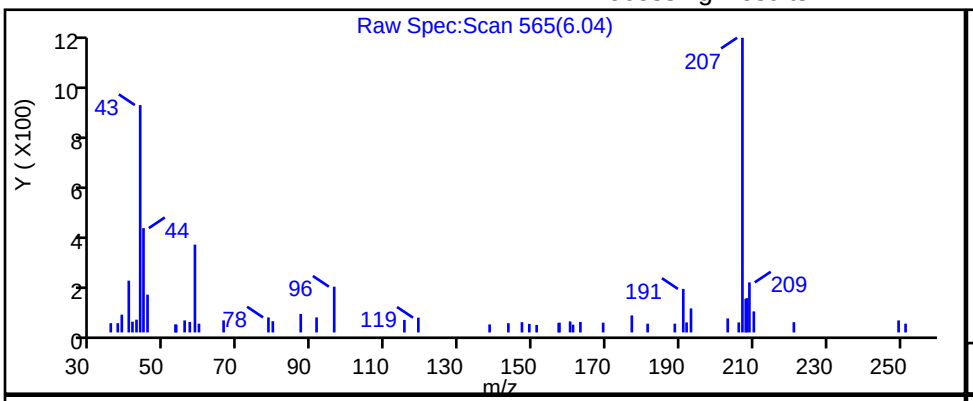
User Disabled Compound Report

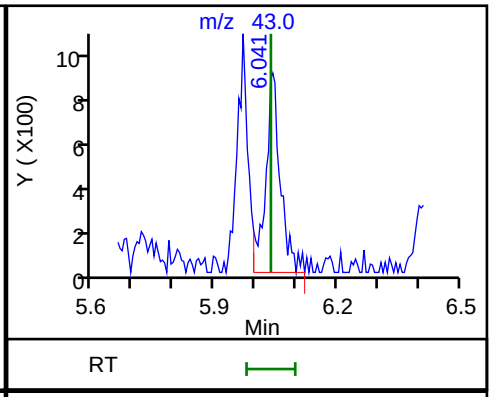
TestAmerica Seattle

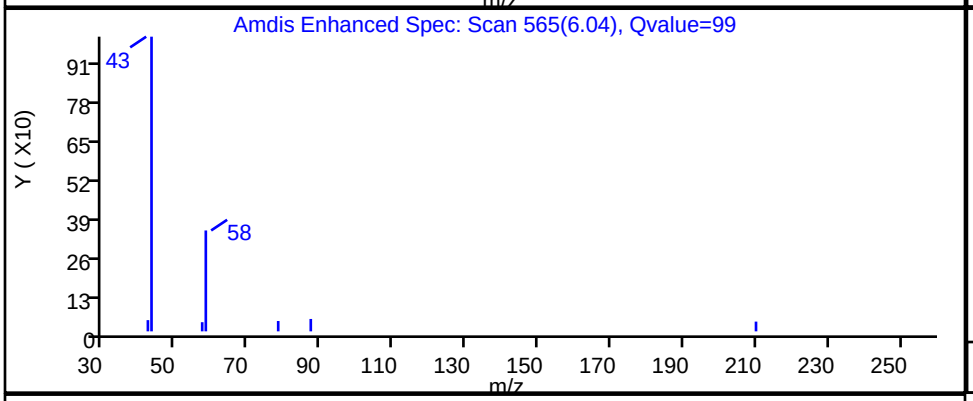
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D		
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2
Client ID:	775MW-6_1018		
Operator ID:	DSO	ALS Bottle#:	23 Worklist Smp#: 34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0
Column:		Detector	MS SCAN

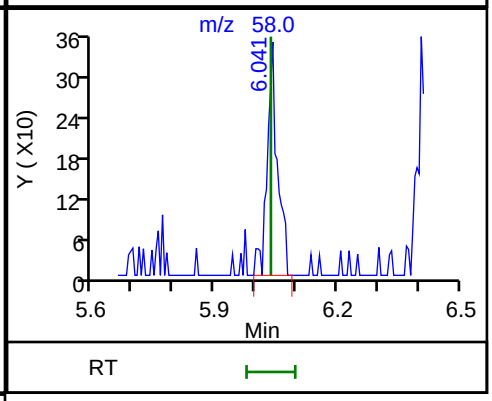
13 Acetone, CAS: 67-64-1

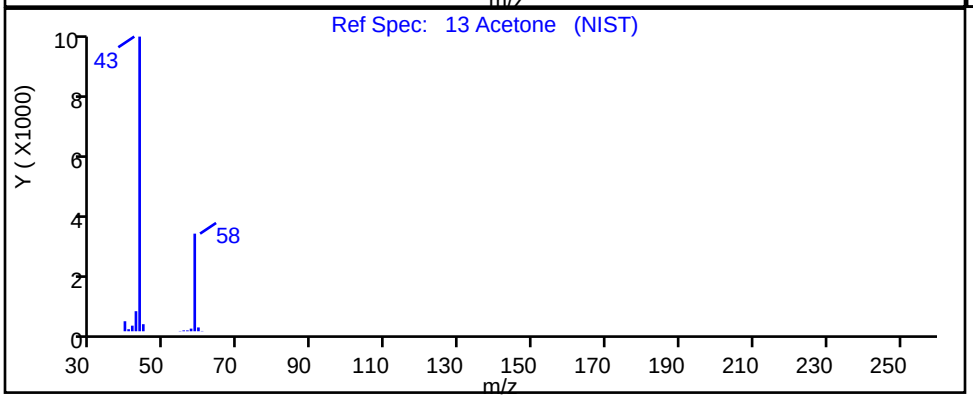
Processing Results











RT	Mass	Response	Amount
6.04	43.00	2314	-0.970685
6.04	58.00	620	

Reviewer: brennanr, 31-Oct-2018 11:50:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

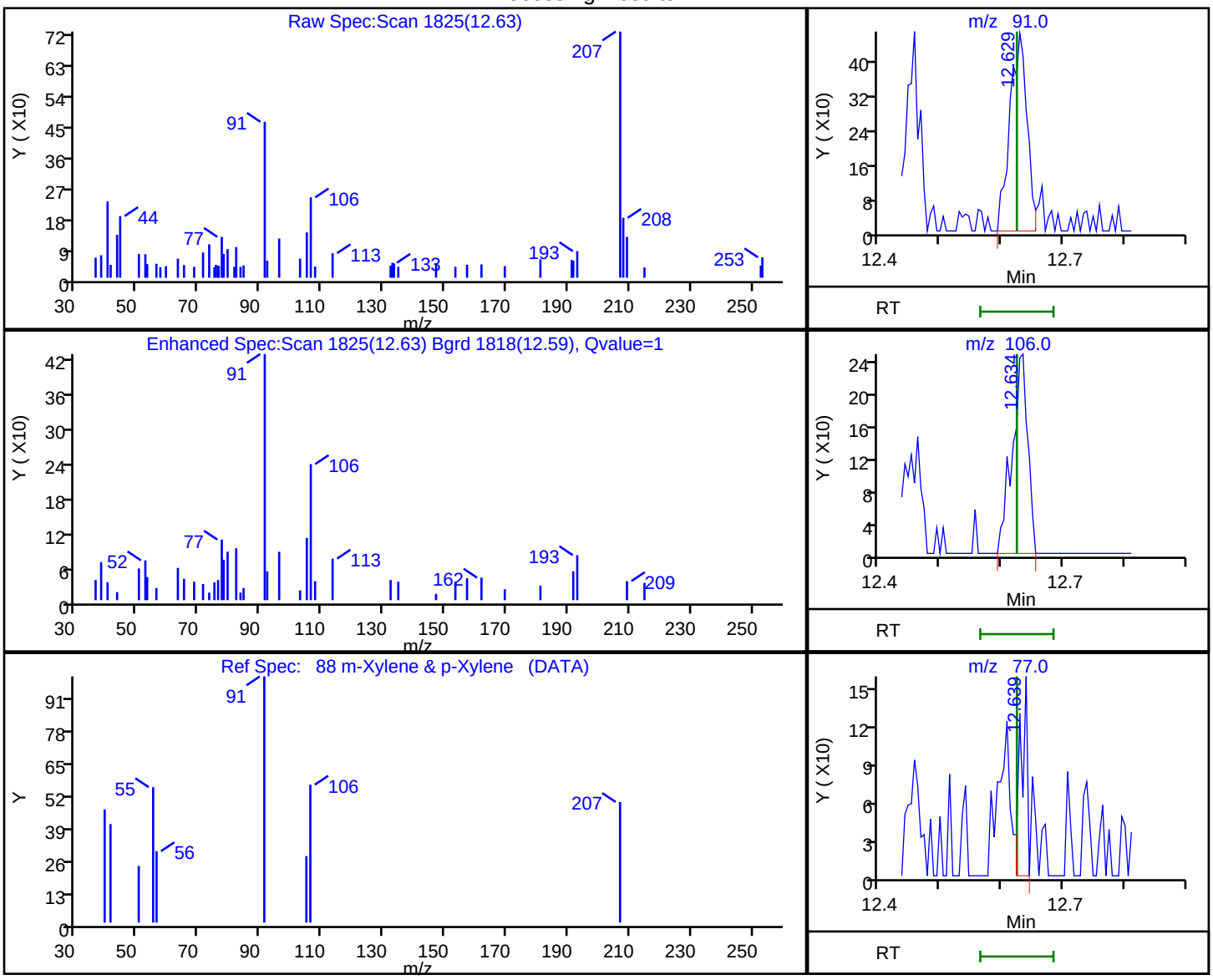
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

88 m-Xylene & p-Xylene, CAS: 179601-23-1

Processing Results



RT	Mass	Response	Amount
12.63	91.00	897	-0.117583
12.63	106.00	426	
12.64	77.00	115	

Reviewer: brennanr, 31-Oct-2018 11:51:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

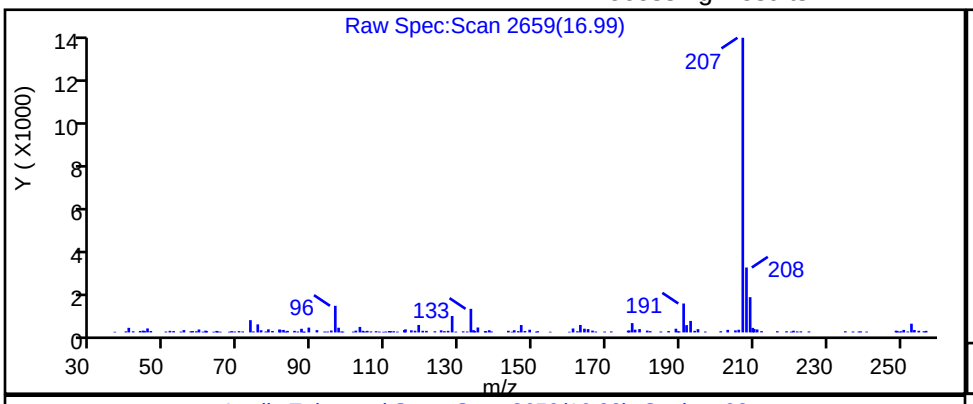
User Disabled Compound Report

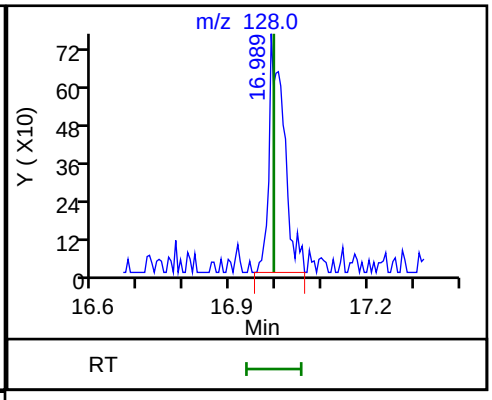
TestAmerica Seattle

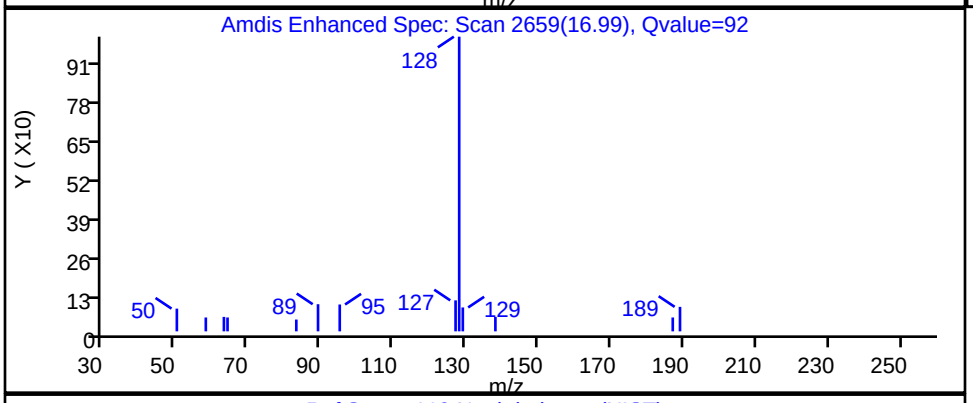
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

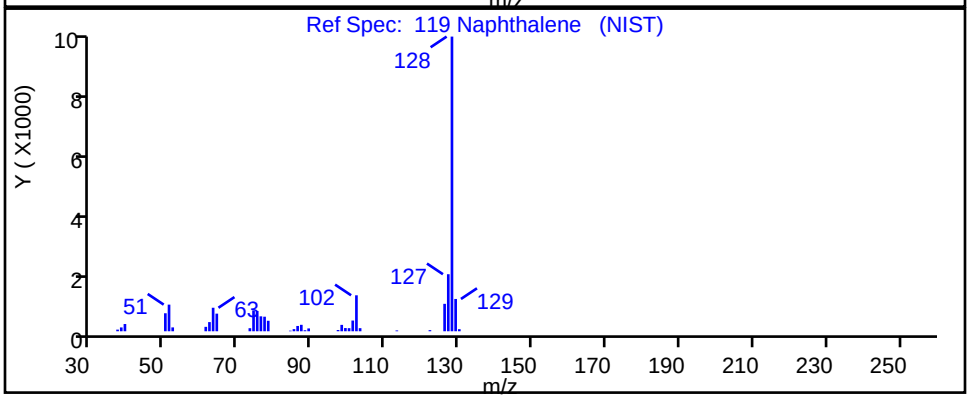
119 Naphthalene, CAS: 91-20-3

Processing Results









RT	Mass	Response	Amount
16.99	128.00	1738	-0.636450

Reviewer: brennanr, 31-Oct-2018 11:52:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

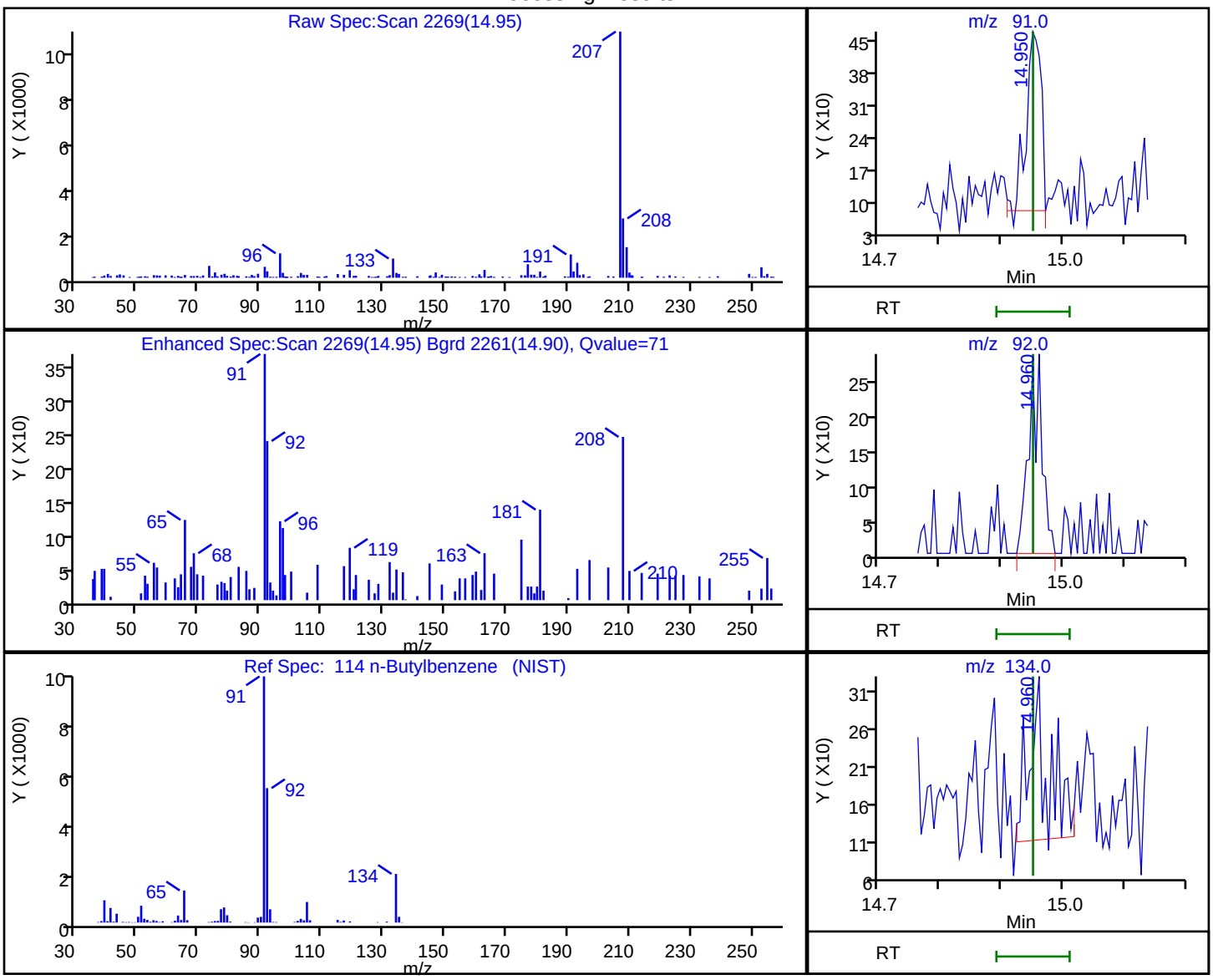
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

114 n-Butylbenzene, CAS: 104-51-8

Processing Results



RT	Mass	Response	Amount
14.95	91.00	640	-0.234993
14.96	92.00	419	
14.96	134.00	447	

Reviewer: brennanr, 31-Oct-2018 11:52:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

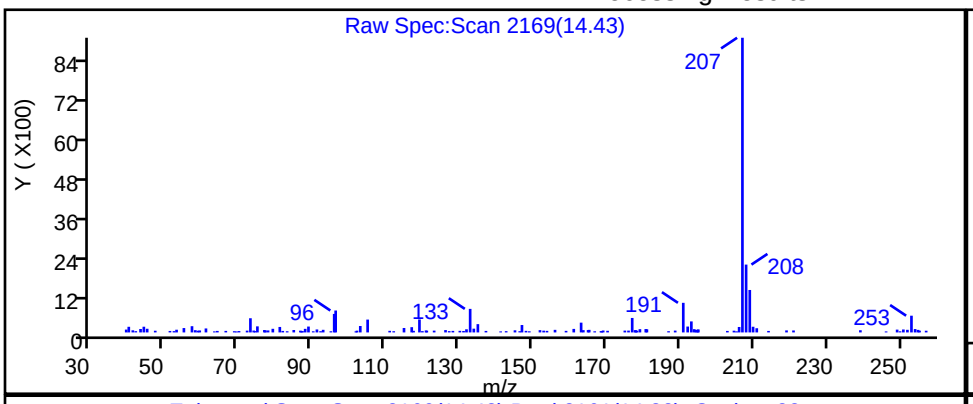
User Disabled Compound Report

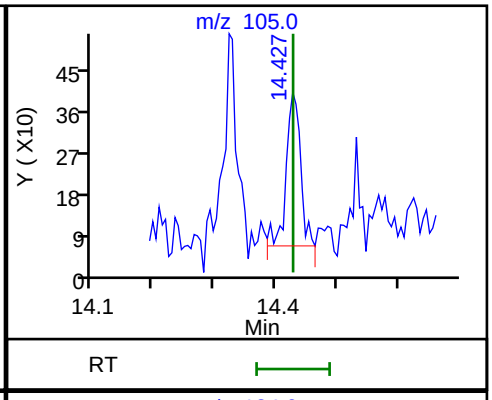
TestAmerica Seattle

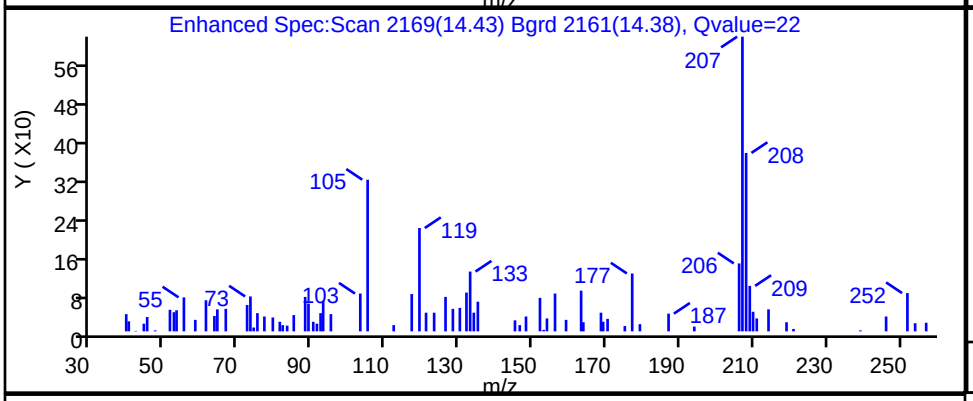
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

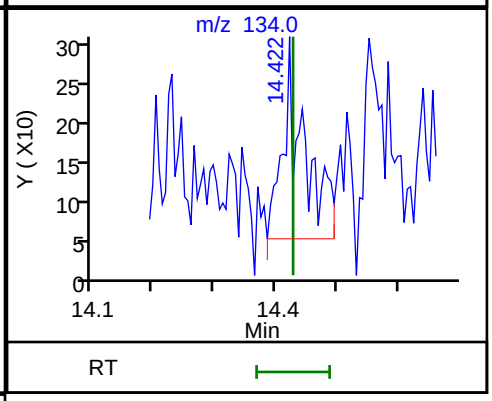
106 sec-Butylbenzene, CAS: 135-98-8

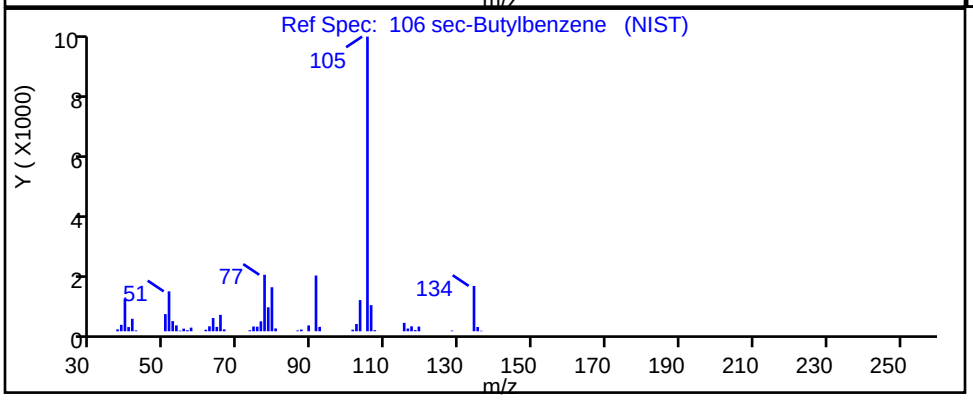
Processing Results











RT	Mass	Response	Amount
14.43	105.00	546	-0.099950
14.42	134.00	629	

Reviewer: brennanr, 31-Oct-2018 11:52:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

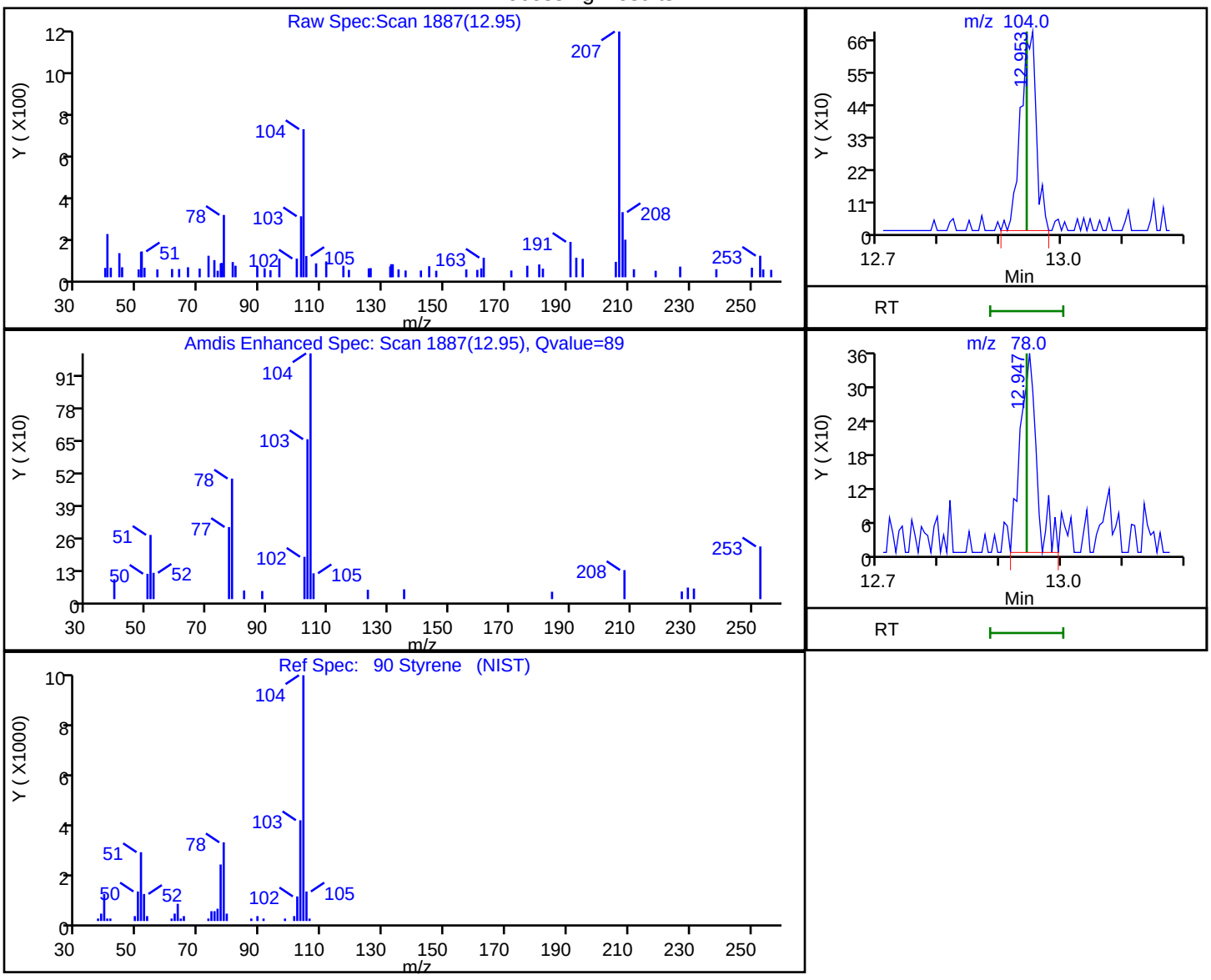
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

90 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
12.95	104.00	1213	-0.207433
12.95	78.00	648	

Reviewer: brennanr, 31-Oct-2018 11:51:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

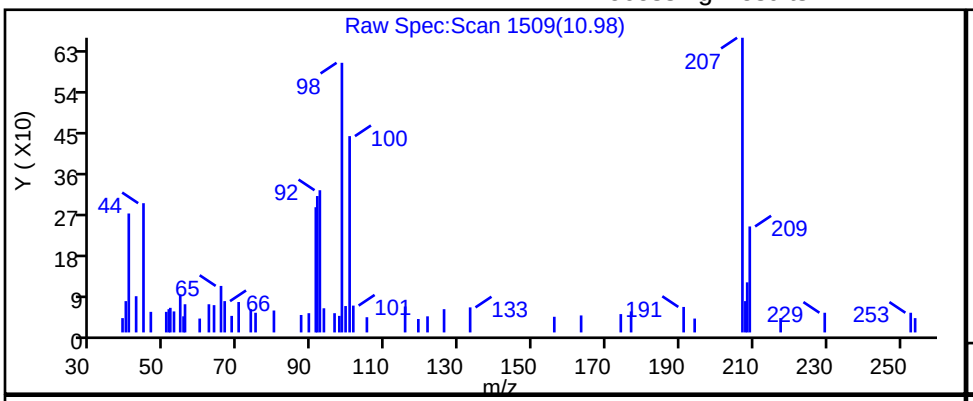
User Disabled Compound Report

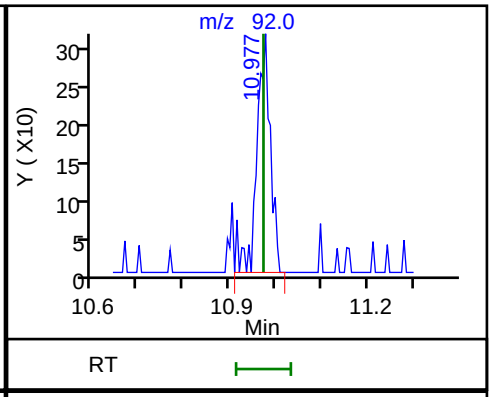
TestAmerica Seattle

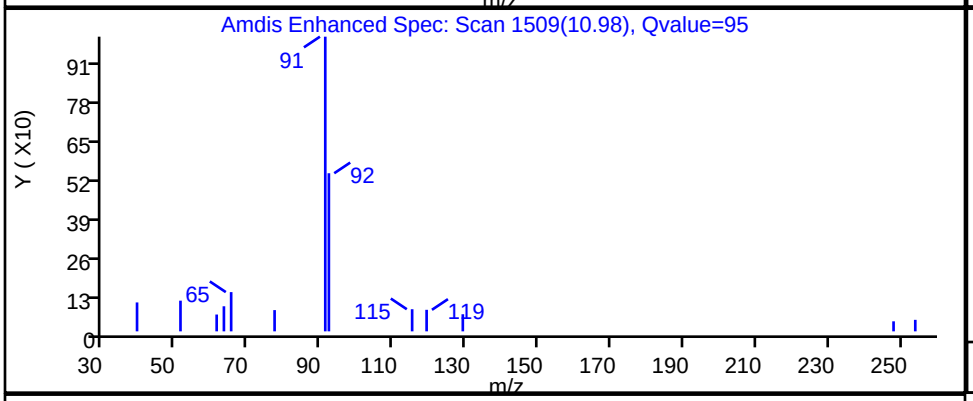
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018023.D				
Injection Date:	31-Oct-2018 00:58:30	Instrument ID:	SEA102		
Lims ID:	280-115988-A-2	Lab Sample ID:	580-115988-2		
Client ID:	775MW-6_1018				
Operator ID:	DSO	ALS Bottle#:	23	Worklist Smp#:	34
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

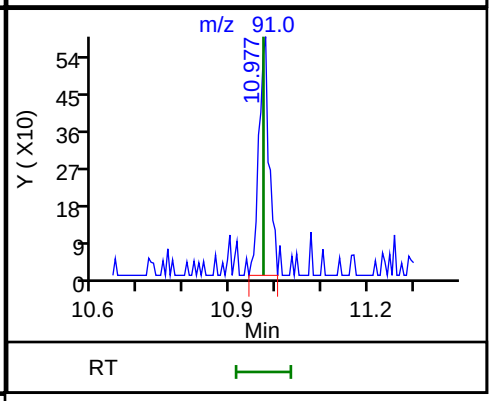
76 Toluene, CAS: 108-88-3

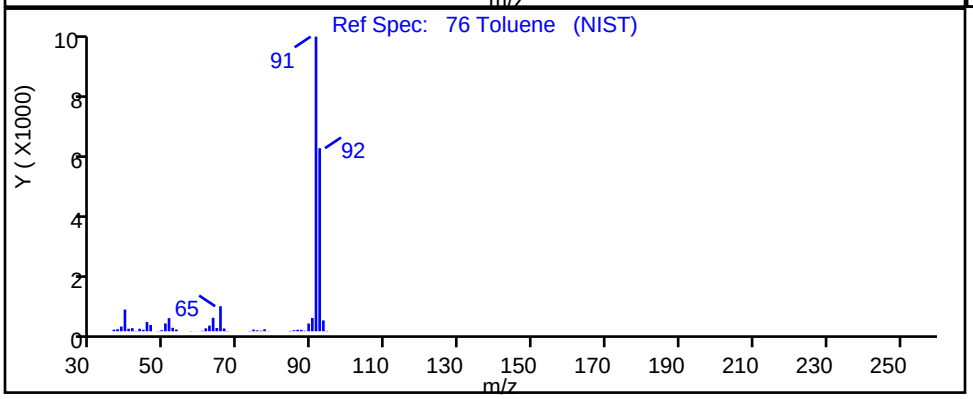
Processing Results











RT	Mass	Response	Amount
10.98	92.00	650	-0.052366
10.98	91.00	898	

Reviewer: brennanr, 31-Oct-2018 11:51:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: ICV 580-287774/12 Calibration Date: 10/30/2018 20:12

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018112.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Qua2		0.8601		24.4	20.0	21.9*	20.0
Chloromethane	Ave	0.3710	0.4258	0.1000	23.0	20.0	14.8	20.0
Vinyl chloride	Qua2		1.049		23.4	20.0	17.1	20.0
Butadiene	Ave	0.3571	0.4462		25.0	20.0	25.0*	20.0
Bromomethane	Qua1		0.6774		23.4	20.0	17.0	20.0
Chloroethane	Lin2		0.2391		22.4	20.0	12.2	20.0
Dichlorofluoromethane	Ave	0.5352	0.5868		21.9	20.0	9.6	20.0
Acrolein	Lin1		0.0454		125	120	4.2	20.0
Acetonitrile	Lin1		0.0303		244	250	-2.3	20.0
Trichlorofluoromethane	Qua2		0.9705		22.0	20.0	9.9	20.0
Isopropyl alcohol	Lin1		0.0163		190	200	-5.2	20.0
Acetone	Qua1		0.0766		82.4	100	-17.6	20.0
Ethyl ether	Ave	0.2016	0.2125		21.1	20.0	5.4	20.0
1,1-Dichloroethene	Lin1		0.6004		22.8	20.0	14.2	20.0
t-Butyl alcohol	Qua1		0.0252		197	200	-1.5	20.0
Acrylonitrile	Lin2		0.0706		204	200	2.1	20.0
Methyl iodide	Ave	0.4470	0.4798		21.5	20.0	7.4	20.0
Methylene Chloride	Qua2		0.2694		19.7	20.0	-1.4	20.0
Methyl acetate	Ave	0.1689	0.1617		38.3	40.0	-4.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Qua1		0.5256		22.9	20.0	14.5	20.0
3-Chloro-1-propene	Qua2		0.3583		21.7	20.0	8.5	20.0
Carbon disulfide	Lin1		0.9068		22.2	20.0	11.1	20.0
trans-1,2-Dichloroethene	Lin2		0.2575		21.5	20.0	7.5	20.0
Methyl tert-butyl ether	Ave	0.6599	0.6556		19.9	20.0	-0.7	20.0
Propionitrile	Qua1		0.0330		255	250	2.1	20.0
1,1-Dichloroethane	Ave	1.067	1.084	0.1000	20.3	20.0	1.6	20.0
Vinyl acetate	Lin1		0.0431		48.3	50.0	-3.4	20.0
2-Chloro-1,3-butadiene	Ave	0.8872	0.9332		21.0	20.0	5.2	20.0
Hexane	Lin1		0.3976		21.3	20.0	6.6	20.0
2-Butanone (MEK)	Lin1		0.0623		90.7	100	-9.3	20.0
Diisopropyl ether	Lin2		0.8156		25.5	25.0	2.2	20.0
Methacrylonitrile	Lin1		0.0307		193	200	-3.3	20.0
cis-1,2-Dichloroethene	Qua2		0.6873		20.6	20.0	3.0	20.0
Ethyl acetate	Qua1		0.1987		38.9	40.0	-2.6	20.0
Bromochloromethane	Ave	0.1442	0.1380		19.1	20.0	-4.3	20.0
Chloroform	Lin2		1.023		20.2	20.0	1.2	20.0
Tert-butyl ethyl ether	Ave	0.7904	0.7744		24.5	25.0	-2.0	20.0
Isobutanol	Qua1		0.0147		488	500	-2.5	20.0
2,2-Dichloropropane	Ave	0.3319	0.3277		19.7	20.0	-1.3	20.0
Tetrahydrofuran	Lin1		0.0647		38.4	40.0	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: ICV 580-287774/12 Calibration Date: 10/30/2018 20:12

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018112.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Lin2		0.3203		19.6	20.0	-2.0	20.0
1,1,1-Trichloroethane	Ave	0.3878	0.3864		19.9	20.0	-0.3	20.0
n-Butyl alcohol	Qua1		0.0067		467	500	-6.5	20.0
1,1-Dichloropropene	Ave	0.3521	0.3437		19.5	20.0	-2.4	20.0
Cyclohexane	Ave	0.9138	0.9670		21.2	20.0	5.8	20.0
Carbon tetrachloride	Ave	0.3247	0.3229		19.9	20.0	-0.6	20.0
Benzene	Ave	2.463	2.447		19.9	20.0	-0.7	20.0
Tert-amyl methyl ether	Ave	0.7158	0.6905		24.1	25.0	-3.5	20.0
Ethyl acrylate	Qua1		0.2940		19.2	20.0	-4.2	20.0
n-Heptane	Lin1		0.3188		20.1	20.0	0.7	20.0
Dibromomethane	Lin2		0.1445		19.3	20.0	-3.6	20.0
1,2-Dichloropropane	Lin2		0.6148		20.8	20.0	4.0	20.0
2-Nitropropane	Qua1		0.0691		37.4	40.0	-6.4	20.0
Trichloroethene	Ave	0.7210	0.7008		19.4	20.0	-2.8	20.0
Bromodichloromethane	Lin2		0.7828		19.5	20.0	-2.4	20.0
Methyl methacrylate	Lin1		0.1949		37.5	40.0	-6.2	20.0
2-Chloroethyl vinyl ether	Lin1		0.1999		18.4	20.0	-7.8	20.0
Methylcyclohexane	Lin1		1.027		20.4	20.0	2.1	20.0
cis-1,3-Dichloropropene	Lin2		0.8953		21.5	20.0	7.3	20.0
4-Methyl-2-pentanone (MIBK)	Qua2		0.4846		101	100	1.0	20.0
trans-1,3-Dichloropropene	Qua1		0.8336		19.4	20.0	-2.8	20.0
1,1,2-Trichloroethane	Lin1		0.4849		19.9	20.0	-0.5	20.0
Ethyl methacrylate	Qua1		0.5878		18.7	20.0	-6.6	20.0
Toluene	Lin2		1.512		20.1	20.0	0.7	20.0
1,3-Dichloropropane	Lin2		0.8172		20.0	20.0	0.1	20.0
2-Hexanone	Lin1		0.1808		90.8	100	-9.2	20.0
Dibromochloromethane	Lin2		0.6124		20.0	20.0	0.0	20.0
n-Butyl acetate	Lin2		0.7445		19.7	20.0	-1.3	20.0
1,2-Dibromoethane	Lin2		0.4957		19.6	20.0	-1.8	20.0
Tetrachloroethene	Ave	0.2427	0.2328		19.2	20.0	-4.1	20.0
1,1,1,2-Tetrachloroethane	Lin1		0.6309		19.6	20.0	-2.1	20.0
Chlorobenzene	Lin2		1.672	0.3000	19.8	20.0	-1.0	20.0
Ethylbenzene	Lin2		0.8785		19.5	20.0	-2.3	20.0
m,p-Xylene	Lin2		2.133		19.7	20.0	-1.4	20.0
Bromoform	Qua1		0.4164	0.1000	19.0	20.0	-5.1	20.0
Styrene	Lin1		1.657		17.7	20.0	-11.3	20.0
o-Xylene	Lin1		1.120		19.6	20.0	-1.9	20.0
1,1,2,2-Tetrachloroethane	Qua1		0.5306	0.3000	19.3	20.0	-3.3	20.0
trans-1,4-Dichloro-2-butene	Qua1		0.1584		19.9	20.0	-0.7	20.0
1,2,3-Trichloropropane	Lin1		0.1655		19.8	20.0	-0.9	20.0
Isopropylbenzene	Lin2		2.924		20.1	20.0	0.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: ICV 580-287774/12 Calibration Date: 10/30/2018 20:12

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018112.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromobenzene	Ave	0.7227	0.6913		19.1	20.0	-4.3	20.0
N-Propylbenzene	Lin1		0.7099		19.4	20.0	-3.1	20.0
2-Chlorotoluene	Lin1		0.6429		19.4	20.0	-3.1	20.0
4-Chlorotoluene	Lin1		1.813		19.5	20.0	-2.7	20.0
1,3,5-Trimethylbenzene	Lin1		2.216		19.4	20.0	-2.9	20.0
tert-Butylbenzene	Qua1		1.985		20.1	20.0	0.3	20.0
1,2,4-Trimethylbenzene	Lin1		2.279		19.1	20.0	-4.4	20.0
sec-Butylbenzene	Lin1		2.782		19.6	20.0	-1.9	20.0
Benzyl chloride	Lin1		1.266		20.0	20.0	0.0	20.0
1,3-Dichlorobenzene	Lin1		0.6222		18.4	20.0	-7.8	20.0
4-Isopropyltoluene	Lin1		2.498		19.5	20.0	-2.3	20.0
1,4-Dichlorobenzene	Lin1		1.394		19.7	20.0	-1.6	20.0
1,2,3-Trimethylbenzene	Lin1		2.510		19.7	20.0	-1.3	20.0
1,2-Dichlorobenzene	Qua1		1.359		19.7	20.0	-1.7	20.0
n-Butylbenzene	Lin2		2.086		20.3	20.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1638		19.2	20.0	-4.1	20.0
1,3,5-Trichlorobenzene	Qua1		1.152		19.7	20.0	-1.5	20.0
1,2,4-Trichlorobenzene	Qua1		1.294		19.9	20.0	-0.4	20.0
Naphthalene	Qua1		2.514		20.4	20.0	1.9	20.0
Hexachlorobutadiene	Lin1		0.2096		20.1	20.0	0.4	20.0
1,2,3-Trichlorobenzene	Lin1		1.088		20.1	20.0	0.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2541		19.5	19.5	0.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2798	0.2773		19.3	19.5	-0.9	20.0
Trifluorotoluene (Surr)	Ave	0.5164	0.5080		19.7	20.0	-1.6	20.0
Toluene-d8 (Surr)	Ave	2.344	2.352		19.6	19.5	0.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.8949	0.8816		19.2	19.5	-1.5	20.0

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018112.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Oct-2018 20:12:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: DSO Instrument ID: SEA102
Sublist:

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 10:09:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85	4.092	4.081	0.011	99	108796	20.0	24.4	
2 Chloromethane	50	4.390	4.385	0.005	100	131479	20.0	23.0	
3 Vinyl chloride	62	4.667	4.651	0.016	99	132624	20.0	23.4	
4 Butadiene	39	4.735	4.724	0.011	95	137795	20.0	25.0	
5 Bromomethane	94	5.138	5.132	0.006	90	85685	20.0	23.4	
6 Chloroethane	64	5.284	5.279	0.006	100	73834	20.0	22.4	
7 Dichlorofluoromethane	67	5.363	5.352	0.010	97	181201	20.0	21.9	
10 Acrolein	56	5.911	5.906	0.005	98	84038	120.0	125.0	
12 Acetonitrile	41	5.927	5.916	0.011	100	116981	250.0	244.1	
11 Trichlorofluoromethane	101	5.964	5.953	0.011	98	122755	20.0	22.0	
14 Isopropyl alcohol	45	5.969	5.963	0.006	28	50227	200.0	189.7	
13 Acetone	43	6.042	6.037	0.005	99	118224	100.0	82.4	
15 Ethyl ether	59	6.168	6.162	0.006	93	65629	20.0	21.1	
* 16 TBA-d9 (IS)	65	6.419	6.413	0.006	0	151353	390.0	390.0	
17 1,1-Dichloroethene	96	6.492	6.486	0.006	96	75947	20.0	22.8	
19 2-Methyl-2-propanol	59	6.502	6.497	0.005	99	77829	200.0	197.0	
18 Acrylonitrile	52	6.534	6.528	0.006	100	218070	200.0	204.3	
20 Iodomethane	142	6.549	6.544	0.005	96	148176	20.0	21.5	
21 Methylene Chloride	84	6.638	6.633	0.005	95	83202	20.0	19.7	
22 Methyl acetate	43	6.664	6.659	0.005	98	99857	40.0	38.3	
23 1,1,2-Trichloro-1,2,2-trif	151	6.690	6.685	0.005	89	74660	20.0	22.9	
9 3-Chloro-1-propene	76	6.722	6.716	0.006	91	45321	20.0	21.7	
24 Carbon disulfide	76	6.889	6.884	0.005	99	280021	20.0	22.2	
25 trans-1,2-Dichloroethene	96	7.276	7.270	0.006	99	79532	20.0	21.5	
26 Methyl tert-butyl ether	73	7.360	7.359	0.001	97	202473	20.0	19.9	
29 Propionitrile	54	7.496	7.490	0.006	99	127382	250.0	255.3	
28 1,1-Dichloroethane	63	7.501	7.495	0.006	97	137103	20.0	20.3	
30 Vinyl acetate	86	7.590	7.584	0.006	100	33246	50.0	48.3	
31 2-Chloro-1,3-butadiene	53	7.825	7.819	0.006	92	132566	20.0	21.0	
32 Hexane	57	7.841	7.840	0.001	95	122769	20.0	21.3	
34 2-Butanone (MEK)	72	7.861	7.856	0.005	95	39397	100.0	90.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Isopropyl ether	45	7.861	7.861	0.000	88	314840	25.0	25.5	
35 Methacrylonitrile	66	7.956	7.955	0.001	94	94792	200.0	193.4	
36 cis-1,2-Dichloroethene	96	8.008	8.008	0.000	79	86937	20.0	20.6	
40 Ethyl acetate	43	8.128	8.123	0.005	99	122738	40.0	38.9	
37 Chlorobromomethane	128	8.154	8.154	0.000	93	42601	20.0	19.1	
38 Chloroform	83	8.191	8.185	0.006	93	129381	20.0	20.2	
39 Tert-butyl ethyl ether	59	8.207	8.206	0.001	95	298920	25.0	24.5	
41 Isobutyl alcohol	43	8.238	8.232	0.006	96	113703	500.0	487.7	
42 2,2-Dichloropropane	77	8.259	8.253	0.006	87	101196	20.0	19.7	
$ 43 Dibromofluoromethane (Surr	113	8.295	8.290	0.005	94	76520	19.5	19.5	
44 Tetrahydrofuran	42	8.468	8.468	0.000	87	39956	40.0	38.4	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.677	8.677	0.000	0	83493	19.5	19.3	
46 1,2-Dichloroethane	62	8.745	8.745	0.000	97	98907	20.0	19.6	
47 1,1,1-Trichloroethane	97	8.834	8.828	0.006	99	119332	20.0	19.9	
49 n-Butanol	56	8.844	8.844	0.000	90	51937	500.0	467.5	
48 1,1-Dichloropropene	75	8.975	8.975	0.000	95	106145	20.0	19.5	
50 Cyclohexane	84	9.074	9.074	0.000	91	122314	20.0	21.2	
51 Carbon tetrachloride	119	9.142	9.142	0.000	98	99703	20.0	19.9	
52 Benzene	78	9.168	9.168	0.000	96	309511	20.0	19.9	
53 Tert-amyl methyl ether	73	9.263	9.262	0.001	98	266533	25.0	24.1	
* 54 Fluorobenzene (IS)	96	9.325	9.325	0.000	99	301096	19.5	19.5	
56 Ethyl acrylate	55	9.545	9.545	0.000	98	90783	20.0	19.2	
57 n-Heptane	43	9.555	9.555	0.000	93	98448	20.0	20.1	
58 Dibromomethane	93	9.639	9.639	0.000	89	44636	20.0	19.3	
59 1,2-Dichloropropane	63	9.655	9.654	0.001	92	77769	20.0	20.8	
60 2-Nitropropane	43	9.676	9.675	0.001	95	42694	40.0	37.4	
61 Trichloroethene	130	9.691	9.686	0.005	96	88637	20.0	19.4	
62 Dichlorobromomethane	83	9.738	9.738	0.000	99	99009	20.0	19.5	
63 Methyl methacrylate	41	9.796	9.796	0.000	96	120387	40.0	37.5	
$ 64 Trifluorotoluene (Surr)	146	9.832	9.827	0.005	90	156807	20.0	19.7	
65 2-Chloroethyl vinyl ether	43	10.042	10.036	0.006	93	25282	20.0	18.4	
66 Methylcyclohexane	83	10.136	10.135	0.001	91	129939	20.0	20.4	
67 cis-1,3-Dichloropropene	75	10.266	10.266	0.000	95	127179	20.0	21.5	
68 4-Methyl-2-pentanone (MIBK	43	10.334	10.334	0.000	97	306485	100.0	101.0	
69 trans-1,3-Dichloropropene	75	10.643	10.642	0.001	95	105436	20.0	19.4	
71 1,1,2-Trichloroethane	97	10.805	10.805	0.001	92	61340	20.0	19.9	
$ 73 Toluene-d8 (Surr)	98	10.904	10.904	0.000	93	290030	19.5	19.6	
75 Ethyl methacrylate	69	10.962	10.961	0.001	91	74352	20.0	18.7	a
76 Toluene	92	10.972	10.972	0.000	98	191218	20.0	20.1	
77 1,3-Dichloropropane	76	11.019	11.014	0.005	93	103372	20.0	20.0	
78 2-Hexanone	58	11.103	11.103	0.001	96	114313	100.0	90.8	
79 Chlorodibromomethane	129	11.296	11.296	0.000	90	77462	20.0	20.0	
80 n-Butyl acetate	43	11.369	11.369	0.000	99	94166	20.0	19.7	
81 Ethylene Dibromide	107	11.526	11.526	0.000	98	62694	20.0	19.6	
82 Tetrachloroethene	164	11.662	11.662	0.000	97	71896	20.0	19.2	
84 1,1,1,2-Tetrachloroethane	131	12.222	12.221	0.001	95	79805	20.0	19.6	
* 85 Chlorobenzene-d5	82	12.263	12.263	0.000	85	123327	19.5	19.5	
86 Chlorobenzene	112	12.300	12.300	0.000	96	211482	20.0	19.8	
87 Ethylbenzene	106	12.457	12.457	0.000	98	111126	20.0	19.5	
88 m-Xylene & p-Xylene	91	12.629	12.624	0.005	67	269769	20.0	19.7	
89 Bromoform	173	12.802	12.802	0.000	99	52668	20.0	19.0	
90 Styrene	104	12.943	12.943	0.000	95	209655	20.0	17.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
91 o-Xylene	106	13.011	13.011	0.000	98	141658	20.0	19.6	
92 1,1,2,2-Tetrachloroethane	83	13.016	13.016	0.000	94	75380	20.0	19.3	
93 trans-1,4-Dichloro-2-buten	53	13.142	13.141	0.001	95	22496	20.0	19.9	
94 1,2,3-Trichloropropane	110	13.152	13.152	0.000	86	23504	20.0	19.8	
96 Isopropylbenzene	105	13.340	13.340	0.000	95	369808	20.0	20.1	
$ 97 4-Bromofluorobenzene (Surr	95	13.393	13.392	0.001	97	108725	19.5	19.2	
98 Bromobenzene	156	13.607	13.607	0.000	89	98200	20.0	19.1	
99 N-Propylbenzene	120	13.733	13.732	0.001	99	100837	20.0	19.4	
100 2-Chlorotoluene	126	13.842	13.842	0.000	97	91330	20.0	19.4	
101 4-Chlorotoluene	91	13.905	13.905	0.000	97	257480	20.0	19.5	
102 1,3,5-Trimethylbenzene	105	13.968	13.967	0.001	96	314737	20.0	19.4	
104 tert-Butylbenzene	119	14.234	14.234	0.000	93	281952	20.0	20.1	
105 1,2,4-Trimethylbenzene	105	14.323	14.323	0.000	97	323704	20.0	19.1	
106 sec-Butylbenzene	105	14.428	14.428	0.000	94	395131	20.0	19.6	
107 Benzyl chloride	91	14.522	14.522	0.000	99	179846	20.0	20.0	
108 1,3-Dichlorobenzene	146	14.527	14.527	0.000	99	192147	20.0	18.4	
* 109 1,4-Dichlorobenzene-d4	152	14.559	14.558	0.001	95	138503	19.5	19.5	
110 4-Isopropyltoluene	119	14.579	14.579	0.000	97	354849	20.0	19.5	
111 1,4-Dichlorobenzene	146	14.585	14.584	0.001	96	198078	20.0	19.7	
112 1,2,3-Trimethylbenzene	105	14.721	14.720	0.001	98	356537	20.0	19.7	
113 1,2-Dichlorobenzene	146	14.914	14.914	0.000	99	193052	20.0	19.7	
114 n-Butylbenzene	91	14.951	14.950	0.001	97	296336	20.0	20.3	
116 1,2-Dibromo-3-Chloropropan	157	15.353	15.353	0.000	90	23263	20.0	19.2	
117 1,3,5-Trichlorobenzene	180	16.143	16.142	0.001	97	163624	20.0	19.7	
118 1,2,4-Trichlorobenzene	180	16.707	16.707	0.000	94	163668	20.0	19.9	
119 Naphthalene	128	16.995	16.994	0.001	96	357194	20.0	20.4	
120 Hexachlorobutadiene	190	17.021	17.021	0.000	92	29773	20.0	20.1	
121 1,2,3-Trichlorobenzene	180	17.225	17.224	0.001	95	154496	20.0	20.1	
$ 125 BFB	95	13.393	13.390	0.003	89	108719	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

a - User Assigned ID

Reagents:

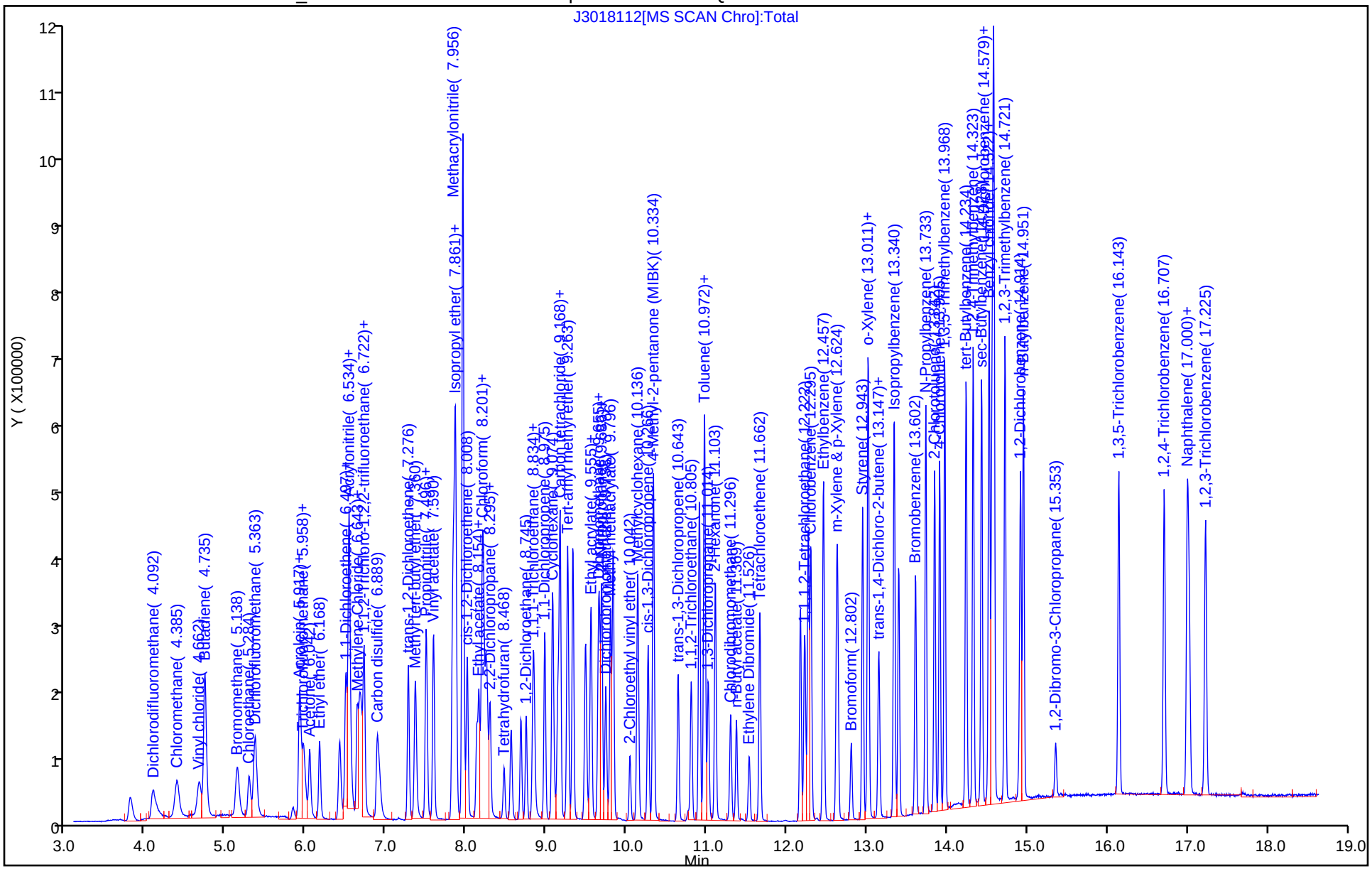
VOAMasterSEC_00021	Amount Added: 20.00	Units: uL	
5X SUR/IS/TFT_00006	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 31-Oct-2018 11:58:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018112.D

Injection Date:	30-Oct-2018 20:12:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



Manual Integration/User Assign Peak Report

TestAmerica Seattle

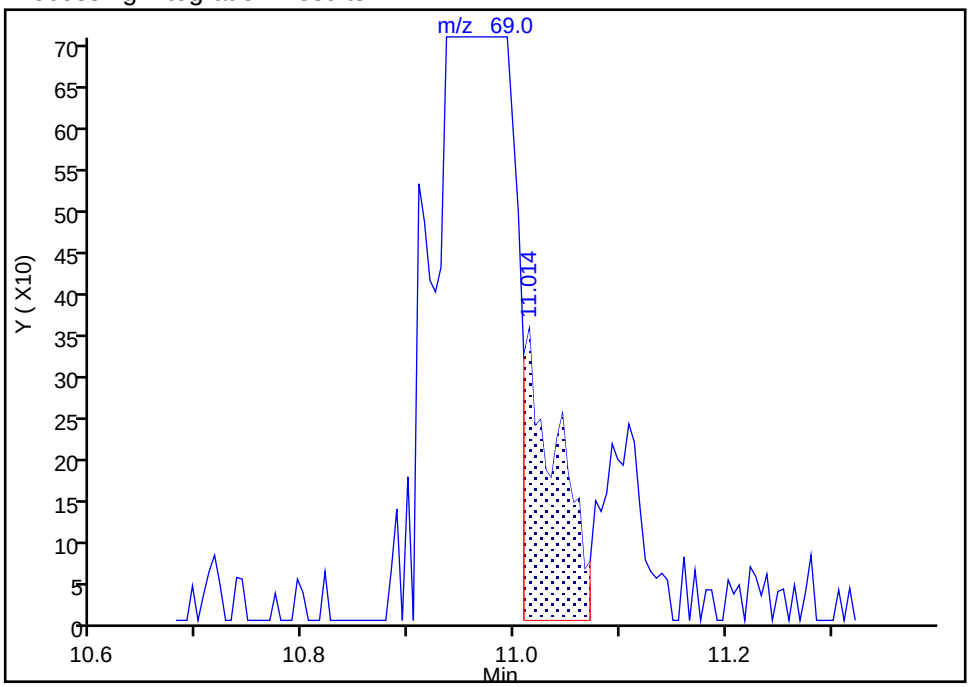
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018112.D
Injection Date: 30-Oct-2018 20:12:30 Instrument ID: SEA102
Lims ID: ICV
Client ID:
Operator ID: DSO ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

75 Ethyl methacrylate, CAS: 97-63-2

Signal: 1

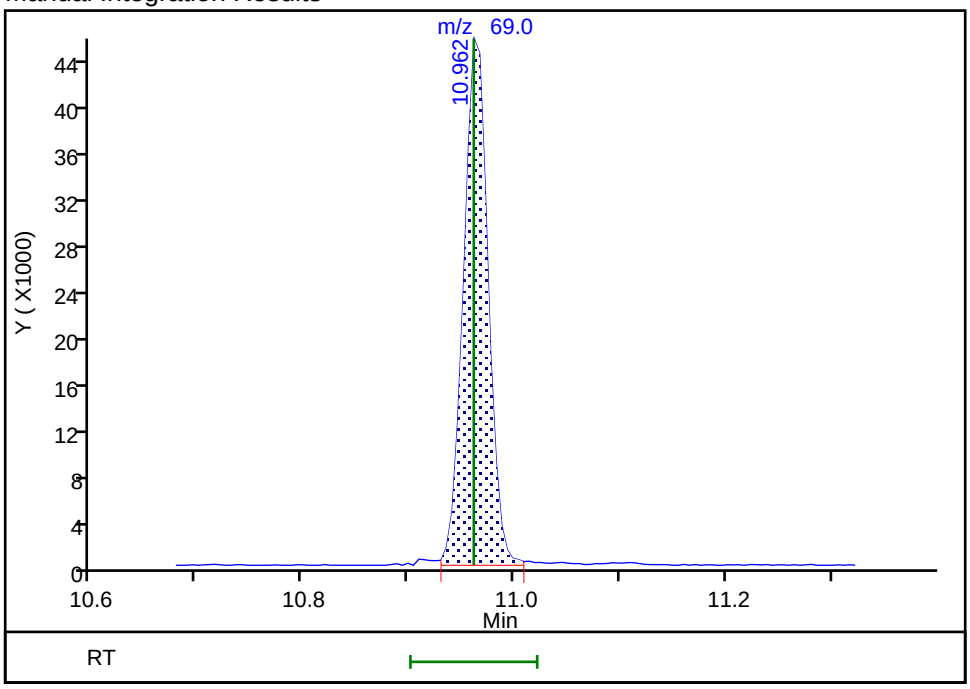
Processing Integration Results

RT: 11.01
Area: 808
Amount: -0.268489
Amount Units: ug/L



Manual Integration Results

RT: 10.96
Area: 74352
Amount: 18.684261
Amount Units: ug/L



Reviewer: brennanr, 31-Oct-2018 10:09:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: CCVC 580-287774/35 Calibration Date: 10/31/2018 01:24

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018024.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Qua2		0.6273		17.7	20.0	-11.7	50.0
Chloromethane	Ave	0.3710	0.3395	0.1000	18.3	20.0	-8.5	50.0
Vinyl chloride	Qua2		0.8267		18.4	20.0	-8.0	50.0
Butadiene	Ave	0.3571	0.3251		18.2	20.0	-8.9	50.0
Bromomethane	Qua1		0.5369		18.5	20.0	-7.5	50.0
Chloroethane	Lin2		0.2004		18.8	20.0	-6.1	50.0
Dichlorofluoromethane	Ave	0.5352	0.4990		18.6	20.0	-6.8	50.0
Acrolein	Lin1		0.0408		112	120	-6.4	50.0
Acetonitrile	Lin1		0.0290		233	250	-6.7	50.0
Isopropyl alcohol	Lin1		0.0168		196	200	-1.9	50.0
Trichlorofluoromethane	Qua2		0.8272		18.7	20.0	-6.6	50.0
Acetone	Qua1		0.0629		67.3	100	-32.7	50.0
Ethyl ether	Ave	0.2016	0.1811		18.0	20.0	-10.1	50.0
1,1-Dichloroethene	Lin1		0.4944		18.8	20.0	-6.2	50.0
t-Butyl alcohol	Qua1		0.0256		200	200	-0.1	50.0
Acrylonitrile	Lin2		0.0657		190	200	-5.1	50.0
Methyl iodide	Ave	0.4470	0.4237		19.0	20.0	-5.2	50.0
Methylene Chloride	Qua2		0.2499		18.3	20.0	-8.7	50.0
Methyl acetate	Ave	0.1689	0.1517		35.9	40.0	-10.2	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Qua1		0.4378		19.1	20.0	-4.6	50.0
3-Chloro-1-propene	Qua2		0.2859		17.2	20.0	-13.9	50.0
Carbon disulfide	Lin1		0.7643		18.7	20.0	-6.4	50.0
trans-1,2-Dichloroethene	Lin2		0.2244		18.7	20.0	-6.4	50.0
Methyl tert-butyl ether	Ave	0.6599	0.6294		19.1	20.0	-4.6	50.0
Propionitrile	Qua1		0.0310		240	250	-4.1	50.0
1,1-Dichloroethane	Ave	1.067	0.9587	0.1000	18.0	20.0	-10.1	50.0
Vinyl acetate	Lin1		0.0369		41.4	50.0	-17.3	50.0
2-Chloro-1,3-butadiene	Ave	0.8872	0.8287		18.7	20.0	-6.6	50.0
Hexane	Lin1		0.3398		18.2	20.0	-8.9	50.0
2-Butanone (MEK)	Lin1		0.0572		83.1	100	-16.9	50.0
Diisopropyl ether	Lin2		0.7504		23.5	25.0	-6.0	50.0
Methacrylonitrile	Lin1		0.0308		194	200	-2.9	50.0
cis-1,2-Dichloroethene	Qua2		0.6155		18.4	20.0	-8.0	50.0
Ethyl acetate	Qua1		0.2026		39.7	40.0	-0.7	50.0
Bromochloromethane	Ave	0.1442	0.1325		18.4	20.0	-8.1	50.0
Chloroform	Lin2		0.9318		18.4	20.0	-7.8	50.0
Tert-butyl ethyl ether	Ave	0.7904	0.7366		23.3	25.0	-6.8	50.0
Isobutanol	Qua1		0.0148		489	500	-2.3	50.0
2,2-Dichloropropane	Ave	0.3319	0.2840		17.1	20.0	-14.4	50.0
Tetrahydrofuran	Lin1		0.0619		36.7	40.0	-8.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: CCVC 580-287774/35 Calibration Date: 10/31/2018 01:24

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018024.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Lin2		0.3165		19.4	20.0	-3.2	50.0
1,1,1-Trichloroethane	Ave	0.3878	0.3647		18.8	20.0	-6.0	50.0
n-Butyl alcohol	Qua1		0.0073		507	500	1.4	50.0
1,1-Dichloropropene	Ave	0.3521	0.3230		18.3	20.0	-8.3	50.0
Cyclohexane	Ave	0.9138	0.8194		17.9	20.0	-10.3	50.0
Carbon tetrachloride	Ave	0.3247	0.3136		19.3	20.0	-3.4	50.0
Benzene	Ave	2.463	2.229		18.1	20.0	-9.5	50.0
Tert-amyl methyl ether	Ave	0.7158	0.6477		22.6	25.0	-9.5	50.0
Ethyl acrylate	Qua1		0.3135		20.4	20.0	2.2	50.0
n-Heptane	Lin1		0.2996		18.9	20.0	-5.4	50.0
Dibromomethane	Lin2		0.1455		19.4	20.0	-2.9	50.0
1,2-Dichloropropane	Lin2		0.5599		18.9	20.0	-5.4	50.0
2-Nitropropane	Qua1		0.0720		39.0	40.0	-2.5	50.0
Trichloroethene	Ave	0.7210	0.6672		18.5	20.0	-7.5	50.0
Bromodichloromethane	Lin2		0.7630		19.0	20.0	-4.9	50.0
Methyl methacrylate	Lin1		0.2015		38.8	40.0	-3.0	50.0
2-Chloroethyl vinyl ether	Lin1		0.1863		17.2	20.0	-14.1	50.0
Methylcyclohexane	Lin1		0.9421		18.7	20.0	-6.4	50.0
cis-1,3-Dichloropropene	Lin2		0.7894		18.9	20.0	-5.5	50.0
4-Methyl-2-pentanone (MIBK)	Qua2		0.4922		103	100	2.6	50.0
trans-1,3-Dichloropropene	Qua1		0.8205		19.1	20.0	-4.4	50.0
1,1,2-Trichloroethane	Lin1		0.4792		19.7	20.0	-1.6	50.0
Toluene	Lin2		1.447		19.3	20.0	-3.7	50.0
Ethyl methacrylate	Qua1		0.0070		3.50	20.0	-101.2*	50.0
1,3-Dichloropropane	Lin2		0.8109		19.9	20.0	-0.6	50.0
2-Hexanone	Lin1		0.1818		91.3	100	-8.7	50.0
Dibromochloromethane	Lin2		0.6082		19.9	20.0	-0.6	50.0
n-Butyl acetate	Lin2		0.7741		20.5	20.0	2.7	50.0
1,2-Dibromoethane	Lin2		0.4967		19.7	20.0	-1.6	50.0
Tetrachloroethene	Ave	0.2427	0.2296		18.9	20.0	-5.4	50.0
1,1,1,2-Tetrachloroethane	Lin1		0.6084		18.9	20.0	-5.6	50.0
Chlorobenzene	Lin2		1.655	0.3000	19.6	20.0	-2.1	50.0
Ethylbenzene	Lin2		0.8728		19.4	20.0	-3.0	50.0
m,p-Xylene	Lin2		2.085		19.3	20.0	-3.6	50.0
Bromoform	Qua1		0.4274	0.1000	19.5	20.0	-2.5	50.0
Styrene	Lin1		1.750		18.8	20.0	-6.2	50.0
o-Xylene	Lin1		1.094		19.2	20.0	-4.2	50.0
1,1,2,2-Tetrachloroethane	Qua1		0.5275	0.3000	19.2	20.0	-3.9	50.0
trans-1,4-Dichloro-2-butene	Qua1		0.1506		18.9	20.0	-5.7	50.0
1,2,3-Trichloropropane	Lin1		0.1682		20.2	20.0	0.8	50.0
Isopropylbenzene	Lin2		2.837		19.5	20.0	-2.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Lab Sample ID: CCVC 580-287774/35 Calibration Date: 10/31/2018 01:24

Instrument ID: SEA102 Calib Start Date: 10/30/2018 16:18

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 10/30/2018 19:20

Lab File ID: J3018024.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromobenzene	Ave	0.7227	0.6953		19.2	20.0	-3.8	50.0
N-Propylbenzene	Lin1		0.6987		19.1	20.0	-4.7	50.0
2-Chlorotoluene	Lin1		0.6284		18.9	20.0	-5.4	50.0
4-Chlorotoluene	Lin1		1.792		19.2	20.0	-3.8	50.0
1,3,5-Trimethylbenzene	Lin1		2.162		18.9	20.0	-5.3	50.0
tert-Butylbenzene	Qua1		1.945		19.7	20.0	-1.7	50.0
1,2,4-Trimethylbenzene	Lin1		2.229		18.7	20.0	-6.5	50.0
sec-Butylbenzene	Lin1		2.681		18.9	20.0	-5.5	50.0
Benzyl chloride	Lin1		1.085		17.1	20.0	-14.5	50.0
1,3-Dichlorobenzene	Lin1		0.6529		19.4	20.0	-3.2	50.0
4-Isopropyltoluene	Lin1		2.426		19.0	20.0	-5.2	50.0
1,4-Dichlorobenzene	Lin1		1.364		19.3	20.0	-3.7	50.0
1,2,3-Trimethylbenzene	Lin1		2.376		18.7	20.0	-6.6	50.0
1,2-Dichlorobenzene	Qua1		1.318		19.1	20.0	-4.7	50.0
n-Butylbenzene	Lin2		2.006		19.5	20.0	-2.6	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.1611		18.9	20.0	-5.7	50.0
1,3,5-Trichlorobenzene	Qua1		1.103		18.9	20.0	-5.7	50.0
1,2,4-Trichlorobenzene	Qua1		1.223		18.8	20.0	-6.0	50.0
Naphthalene	Qua1		2.391		19.4	20.0	-3.2	50.0
Hexachlorobutadiene	Lin1		0.1987		19.0	20.0	-5.0	50.0
1,2,3-Trichlorobenzene	Lin1		1.019		18.8	20.0	-6.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2515		19.3	19.5	-1.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2798	0.2843		19.8	19.5	1.6	50.0
Trifluorotoluene (Surr)	Ave	0.5164	0.5276		20.4	20.0	2.2	50.0
Toluene-d8 (Surr)	Ave	2.344	2.331		19.4	19.5	-0.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8949	0.8927		19.5	19.5	-0.3	50.0

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018024.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 31-Oct-2018 01:24:30 ALS Bottle#: 24 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: DSO Instrument ID: SEA102
Sublist: chrom-8260MeOHSoil_SEA102B*sub7

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 12:04:32 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:53:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85	4.083	4.081	0.002	100	80538	20.0	17.7	
2 Chloromethane	50	4.375	4.385	-0.010	99	102630	20.0	18.3	
3 Vinyl chloride	62	4.663	4.651	0.012	99	106132	20.0	18.4	
4 Butadiene	39	4.726	4.724	0.002	94	98306	20.0	18.2	
5 Bromomethane	94	5.134	5.132	0.002	90	68925	20.0	18.5	
6 Chloroethane	64	5.275	5.279	-0.003	99	60590	20.0	18.8	
7 Dichlorofluoromethane	67	5.353	5.352	0.001	97	150878	20.0	18.6	
10 Acrolein	56	5.902	5.906	-0.004	99	74028	120.0	112.3	
12 Acetonitrile	41	5.918	5.916	0.002	99	109517	250.0	233.3	
11 Trichlorofluoromethane	101	5.965	5.953	0.012	80	106207	20.0	18.7	
14 Isopropyl alcohol	45	5.954	5.963	-0.009	26	50827	200.0	196.3	
13 Acetone	43	6.038	6.037	0.001	99	95066	100.0	67.3	
15 Ethyl ether	59	6.158	6.162	-0.004	94	54759	20.0	18.0	
* 16 TBA-d9 (IS)	65	6.409	6.413	-0.004	0	154059	390.0	390.0	
17 1,1-Dichloroethene	96	6.488	6.486	0.002	94	63476	20.0	18.8	
19 2-Methyl-2-propanol	59	6.493	6.497	-0.004	95	77268	200.0	199.8	
18 Acrylonitrile	52	6.524	6.528	-0.004	99	198543	200.0	189.8	
20 Iodomethane	142	6.540	6.544	-0.004	96	128106	20.0	19.0	
21 Methylene Chloride	84	6.629	6.633	-0.004	95	75562	20.0	18.3	
22 Methyl acetate	43	6.660	6.659	0.001	99	91757	40.0	35.9	
23 1,1,2-Trichloro-1,2,2-trif	151	6.686	6.685	0.001	89	63598	20.0	19.1	
9 3-Chloro-1-propene	76	6.718	6.716	0.002	90	36712	20.0	17.2	
24 Carbon disulfide	76	6.890	6.884	0.006	99	231085	20.0	18.7	
25 trans-1,2-Dichloroethene	96	7.267	7.270	-0.003	98	67849	20.0	18.7	
26 Methyl tert-butyl ether	73	7.355	7.359	-0.004	97	190303	20.0	19.1	
29 Propionitrile	54	7.486	7.490	-0.004	99	117111	250.0	239.7	
28 1,1-Dichloroethane	63	7.497	7.495	0.002	97	123080	20.0	18.0	
30 Vinyl acetate	86	7.585	7.584	0.001	100	27880	50.0	41.4	
31 2-Chloro-1,3-butadiene	53	7.821	7.819	0.002	92	120389	20.0	18.7	
32 Hexane	57	7.836	7.840	-0.004	95	102746	20.0	18.2	
34 2-Butanone (MEK)	72	7.857	7.856	0.001	96	36743	100.0	83.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Isopropyl ether	45	7.857	7.861	-0.004	85	283589	25.0	23.5	
35 Methacrylonitrile	66	7.951	7.955	-0.004	95	93182	200.0	194.1	
36 cis-1,2-Dichloroethene	96	8.004	8.008	-0.004	80	79022	20.0	18.4	
40 Ethyl acetate	43	8.124	8.123	0.001	99	122506	40.0	39.7	
37 Chlorobromomethane	128	8.150	8.154	-0.004	92	40072	20.0	18.4	
38 Chloroform	83	8.187	8.185	0.002	93	119635	20.0	18.4	
39 Tert-butyl ethyl ether	59	8.208	8.206	0.002	98	278380	25.0	23.3	
41 Isobutyl alcohol	43	8.234	8.232	0.002	96	111554	500.0	488.7	
42 2,2-Dichloropropane	77	8.255	8.253	0.002	87	85868	20.0	17.1	
$ 43 Dibromofluoromethane (Surr	113	8.291	8.290	0.001	94	74136	19.5	19.3	
44 Tetrahydrofuran	42	8.464	8.468	-0.004	88	37398	40.0	36.7	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.673	8.677	-0.004	0	83821	19.5	19.8	
46 1,2-Dichloroethane	62	8.741	8.745	-0.004	97	95693	20.0	19.4	
47 1,1,1-Trichloroethane	97	8.830	8.828	0.002	98	110256	20.0	18.8	
49 n-Butanol	56	8.845	8.844	0.001	90	55039	500.0	507.0	
48 1,1-Dichloropropene	75	8.976	8.975	0.001	95	97667	20.0	18.3	
50 Cyclohexane	84	9.075	9.074	0.001	92	105198	20.0	17.9	
51 Carbon tetrachloride	119	9.138	9.142	-0.004	98	94808	20.0	19.3	
52 Benzene	78	9.164	9.168	-0.004	97	286153	20.0	18.1	
53 Tert-amyl methyl ether	73	9.258	9.262	-0.004	98	244797	25.0	22.6	
* 54 Fluorobenzene (IS)	96	9.326	9.325	0.001	99	294787	19.5	19.5	
56 Ethyl acrylate	55	9.541	9.545	-0.004	98	94788	20.0	20.4	
57 n-Heptane	43	9.551	9.555	-0.004	93	90567	20.0	18.9	
58 Dibromomethane	93	9.640	9.639	0.001	89	43996	20.0	19.4	
59 1,2-Dichloropropane	63	9.656	9.654	0.002	93	71884	20.0	18.9	
60 2-Nitropropane	43	9.671	9.675	-0.004	99	43536	40.0	39.0	
61 Trichloroethene	130	9.687	9.686	0.001	97	85656	20.0	18.5	
62 Dichlorobromomethane	83	9.734	9.738	-0.004	99	97957	20.0	19.0	
63 Methyl methacrylate	41	9.792	9.796	-0.004	95	121838	40.0	38.8	
$ 64 Trifluorotoluene (Surr)	146	9.828	9.827	0.001	87	159457	20.0	20.4	
65 2-Chloroethyl vinyl ether	43	10.037	10.036	0.001	93	23918	20.0	17.2	
66 Methylcyclohexane	83	10.137	10.135	0.002	92	120952	20.0	18.7	
67 cis-1,3-Dichloropropene	75	10.262	10.266	-0.004	94	114681	20.0	18.9	
68 4-Methyl-2-pentanone (MIBK	43	10.330	10.334	-0.004	97	315956	100.0	102.6	
69 trans-1,3-Dichloropropene	75	10.639	10.642	-0.003	95	105343	20.0	19.1	
71 1,1,2-Trichloroethane	97	10.806	10.805	0.002	91	61527	20.0	19.7	
S 70 Xylenes, Total	106				0		40.0	19.2	
$ 73 Toluene-d8 (Surr)	98	10.905	10.904	0.001	93	291796	19.5	19.4	
75 Ethyl methacrylate	69	11.010	10.961	0.049	56	900	20.0	-0.2482	
76 Toluene	92	10.973	10.972	0.001	98	185766	20.0	19.3	
77 1,3-Dichloropropane	76	11.015	11.014	0.001	93	104113	20.0	19.9	
78 2-Hexanone	58	11.104	11.103	0.002	97	116677	100.0	91.3	
79 Chlorodibromomethane	129	11.297	11.296	0.001	89	78083	20.0	19.9	
80 n-Butyl acetate	43	11.365	11.369	-0.004	98	99379	20.0	20.5	
81 Ethylene Dibromide	107	11.527	11.526	0.001	98	63775	20.0	19.7	
82 Tetrachloroethene	164	11.658	11.662	-0.004	98	69428	20.0	18.9	
84 1,1,1,2-Tetrachloroethane	131	12.223	12.221	0.002	93	78106	20.0	18.9	
* 85 Chlorobenzene-d5	82	12.265	12.263	0.002	85	125179	19.5	19.5	
86 Chlorobenzene	112	12.296	12.300	-0.004	95	212453	20.0	19.6	
87 Ethylbenzene	106	12.453	12.457	-0.004	98	112052	20.0	19.4	
88 m-Xylene & p-Xylene	91	12.625	12.624	0.001	68	267647	20.0	19.3	
89 Bromoform	173	12.803	12.802	0.001	99	54879	20.0	19.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
90 Styrene	104	12.944	12.943	0.001	95	224686	20.0	18.8	
91 o-Xylene	106	13.012	13.011	0.001	97	140439	20.0	19.2	
92 1,1,2,2-Tetrachloroethane	83	13.017	13.016	0.001	95	76635	20.0	19.2	
93 trans-1,4-Dichloro-2-buten	53	13.138	13.141	-0.003	95	21872	20.0	18.9	
94 1,2,3-Trichloropropane	110	13.153	13.152	0.001	86	24439	20.0	20.2	
96 Isopropylbenzene	105	13.336	13.340	-0.004	95	364290	20.0	19.5	
$ 97 4-Bromofluorobenzene (Surr	95	13.394	13.392	0.002	97	111744	19.5	19.5	
98 Bromobenzene	156	13.603	13.607	-0.004	90	101014	20.0	19.2	
99 N-Propylbenzene	120	13.734	13.732	0.002	99	101511	20.0	19.1	
100 2-Chlorotoluene	126	13.843	13.842	0.001	97	91295	20.0	18.9	
101 4-Chlorotoluene	91	13.906	13.905	0.001	97	260403	20.0	19.2	
102 1,3,5-Trimethylbenzene	105	13.969	13.967	0.002	96	314048	20.0	18.9	
104 tert-Butylbenzene	119	14.236	14.234	0.002	93	282643	20.0	19.7	
105 1,2,4-Trimethylbenzene	105	14.324	14.323	0.001	97	323901	20.0	18.7	
106 sec-Butylbenzene	105	14.429	14.428	0.001	94	389527	20.0	18.9	
107 Benzyl chloride	91	14.518	14.522	-0.004	99	157626	20.0	17.1	
108 1,3-Dichlorobenzene	146	14.528	14.527	0.001	99	197399	20.0	19.4	
* 109 1,4-Dichlorobenzene-d4	152	14.560	14.558	0.002	94	141650	19.5	19.5	
110 4-Isopropyltoluene	119	14.575	14.579	-0.004	98	352498	20.0	19.0	
111 1,4-Dichlorobenzene	146	14.586	14.584	0.002	96	198196	20.0	19.3	
112 1,2,3-Trimethylbenzene	105	14.722	14.720	0.002	98	345255	20.0	18.7	
113 1,2-Dichlorobenzene	146	14.915	14.914	0.001	99	191541	20.0	19.1	
114 n-Butylbenzene	91	14.952	14.950	0.002	97	291394	20.0	19.5	
116 1,2-Dibromo-3-Chloropropan	157	15.354	15.353	0.001	89	23404	20.0	18.9	
117 1,3,5-Trichlorobenzene	180	16.144	16.142	0.002	97	160296	20.0	18.9	
118 1,2,4-Trichlorobenzene	180	16.708	16.707	0.001	94	156995	20.0	18.8	
119 Naphthalene	128	16.996	16.994	0.002	97	347429	20.0	19.4	
120 Hexachlorobutadiene	190	17.022	17.021	0.001	92	28861	20.0	19.0	
121 1,2,3-Trichlorobenzene	180	17.226	17.224	0.002	95	148034	20.0	18.8	
S 123 1,3-Dichloropropene, Total	1				0			38.0	
$ 125 BFB	95	13.394	13.390	0.004	91	111438	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

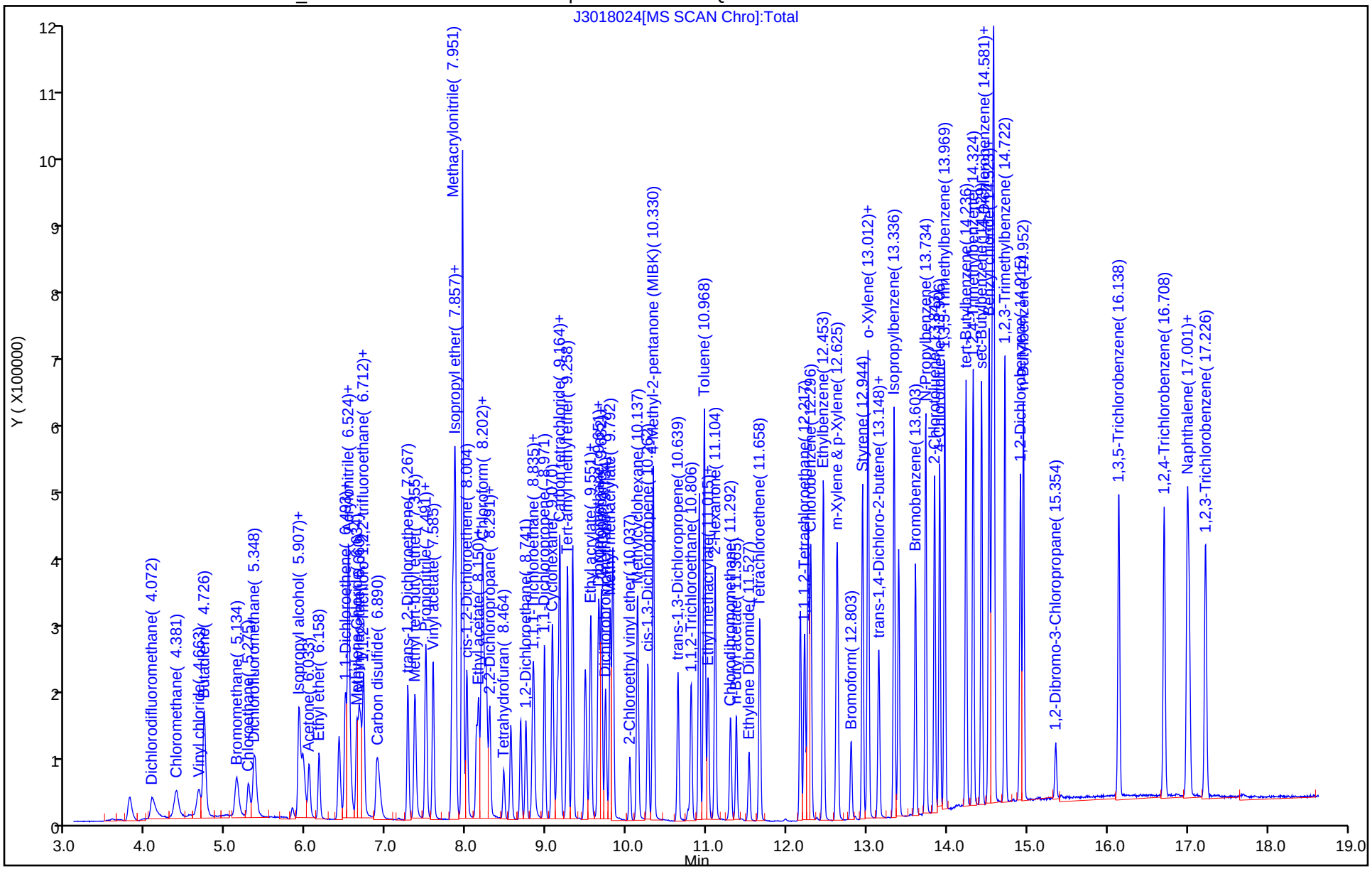
VOAMasterMix_00027	Amount Added: 20.00	Units: uL	
5X SUR/IS/TFT_00006	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 31-Oct-2018 12:04:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018024.D

Injection Date:	31-Oct-2018 01:24:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	CCVC			Worklist Smp#:	35
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018102.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 30-Oct-2018 15:52:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:54:32 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 09:55:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
* 16 TBA-d9 (IS)	65	6.408	6.408	0.000	0	155057	390.0	390.0	
$ 43 Dibromofluoromethane (Surr	113	8.290	8.290	0.000	95	77726	19.5	19.5	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.676	8.676	0.000	0	85835	19.5	19.5	
* 54 Fluorobenzene (IS)	96	9.325	9.325	0.000	99	306709	19.5	19.5	
$ 64 Trifluorotoluene (Surr)	146	9.827	9.827	0.000	88	167121	20.0	20.6	
$ 73 Toluene-d8 (Surr)	98	10.904	10.904	0.000	93	299841	19.5	19.5	
* 85 Chlorobenzene-d5	82	12.263	12.263	0.000	85	127753	19.5	19.5	
$ 97 4-Bromofluorobenzene (Surr	95	13.392	13.392	0.000	96	116964	19.5	19.9	
* 109 1,4-Dichlorobenzene-d4	152	14.558	14.558	0.000	93	151506	19.5	19.5	
$ 125 BFB	95	13.392	13.392	0.000	95	116964	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

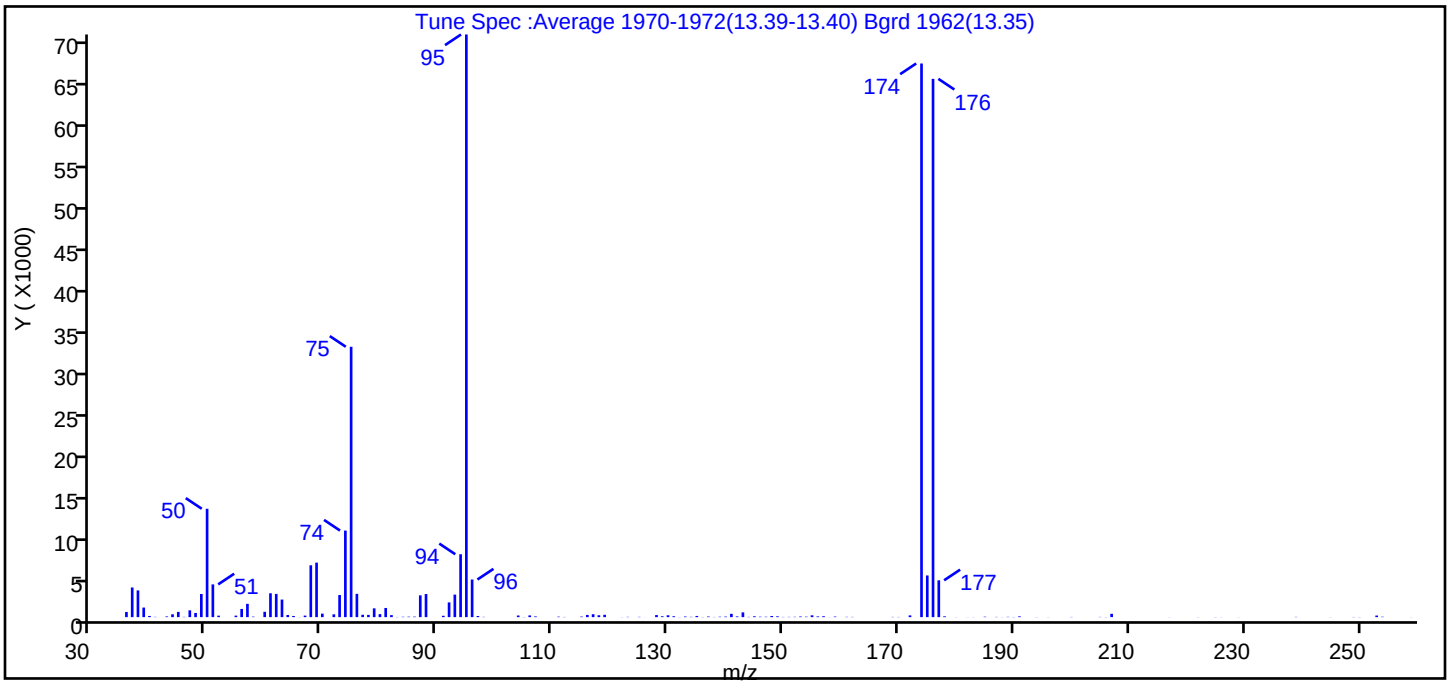
BFB_00002 Amount Added: 1.00 Units: uL
5X SUR/IS/TFT_00006 Amount Added: 2.00 Units: uL Run Reagent

MS Tune Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018102.D
Injection Date: 30-Oct-2018 15:52:30 Instrument ID: SEA102
Lims ID: BFB
Client ID:
Operator ID: DSO ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Tune Method: BFB Method 8260

$ 125 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	46.4
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	95.0
175	5 to 9% of m/z 174	7.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	92.4 (97.2)
177	5 to 9% of m/z 176	6.3 (6.8)

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018102.D\8260MeOHSoil_SEA102B.rslt\spe
Injection Date: 30-Oct-2018 15:52:30
Spectrum: Tune Spec :Average 1970-1972(13.39-13.40) Bgrd 1962(13.35)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	625	74.00	10407	125.00	34	169.00	29
37.00	3566	75.00	32504	126.00	5	170.00	24
38.00	3215	76.00	2799	128.00	251	172.00	210
39.00	1152	77.00	288	129.00	104	174.00	66560
40.00	143	78.00	271	130.00	225	175.00	5012
41.00	31	79.00	1058	131.00	107	176.00	64712
43.00	85	80.00	363	132.00	14	177.00	4428
44.00	344	81.00	1103	133.00	74	178.00	97
45.00	631	82.00	244	134.00	37	180.00	12
46.00	33	83.00	22	135.00	143	182.00	10
47.00	820	84.00	44	136.00	19	183.00	11
48.00	501	85.00	56	137.00	74	185.00	52
49.00	2785	86.00	63	138.00	22	187.00	29
50.00	13028	87.00	2621	139.00	51	188.00	12
51.00	3938	88.00	2777	140.00	67	189.00	36
52.00	180	91.00	163	141.00	398	190.00	21
53.00	2	92.00	1772	142.00	85	191.00	92
55.00	183	93.00	2711	143.00	574	193.00	1
56.00	986	94.00	7562	144.00	31	194.00	15
57.00	1599	95.00	70048	145.00	103	196.00	13
58.00	59	96.00	4523	146.00	53	200.00	24
59.00	2	97.00	134	147.00	49	205.00	28
60.00	645	98.00	32	148.00	139	206.00	16
61.00	2872	104.00	197	149.00	97	207.00	402
62.00	2791	105.00	17	150.00	24	217.00	11
63.00	2114	106.00	208	151.00	31	222.00	13
64.00	257	107.00	86	152.00	39	225.00	16
65.00	138	111.00	58	153.00	76	226.00	10
66.00	12	112.00	24	154.00	56	229.00	11
67.00	186	115.00	69	155.00	219	239.00	30
68.00	6234	116.00	268	156.00	85	245.00	13
69.00	6554	117.00	351	157.00	107	249.00	21
70.00	421	118.00	227	158.00	10	250.00	18

Report Date: 31-Oct-2018 11:54:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018102.D\8260MeOHSoil_SEA102B.rslt\spe
Injection Date: 30-Oct-2018 15:52:30
Spectrum: Tune Spec :Average 1970-1972(13.39-13.40) Bgrd 1962(13.35)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

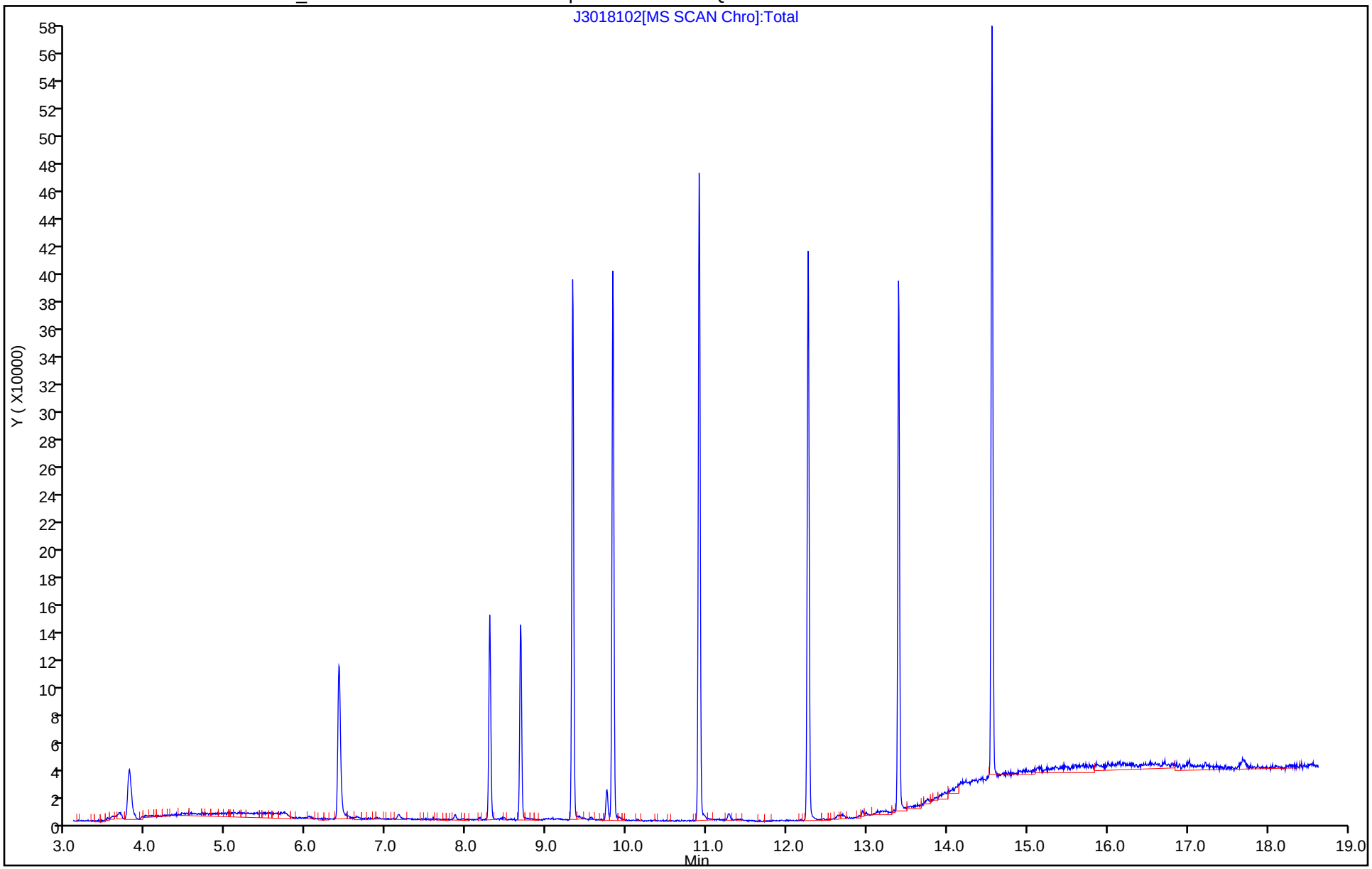
m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	1	119.00	284	159.00	68	253.00	191
72.00	338	122.00	13	161.00	35	254.00	50
73.00	2657	123.00	33	162.00	29	259.00	10

Report Date: 31-Oct-2018 11:54:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018102.D

Injection Date:	30-Oct-2018 15:52:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	BFB			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 580-287774/24

Matrix: Water | Lab File ID: J3018113.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 20:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	2.0	0.50	0.18
71-55-6	1,1,1-Trichloroethane	0.50	U	3.0	0.50	0.14
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	3.0	2.0	0.52
79-00-5	1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.24
75-34-3	1,1-Dichloroethane	0.50	U	2.0	0.50	0.22
75-35-4	1,1-Dichloroethene	2.0	U	4.0	2.0	0.78
563-58-6	1,1-Dichloropropene	1.0	U	3.0	1.0	0.29
87-61-6	1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.46
96-18-4	1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	1.0	U M	2.0	1.0	0.33
95-63-6	1,2,4-Trimethylbenzene	2.0	U M	3.0	2.0	0.61
96-12-8	1,2-Dibromo-3-Chloropropane	6.0	U	10	6.0	1.8
106-93-4	1,2-Dibromoethane	1.0	U M	2.0	1.0	0.40
95-50-1	1,2-Dichlorobenzene	1.0	U M	2.0	1.0	0.46
107-06-2	1,2-Dichloroethane	2.0	U M	2.0	2.0	0.53
78-87-5	1,2-Dichloropropane	0.50	U	1.0	0.50	0.18
108-67-8	1,3,5-Trimethylbenzene	2.0	U M	3.0	2.0	0.55
541-73-1	1,3-Dichlorobenzene	0.50	U	2.0	0.50	0.18
142-28-9	1,3-Dichloropropane	1.0	U	2.0	1.0	0.35
106-46-7	1,4-Dichlorobenzene	2.0	U	4.0	2.0	0.98
594-20-7	2,2-Dichloropropane	1.0	U	3.0	1.0	0.32
78-93-3	2-Butanone (MEK)	10	U	20	10	4.7
95-49-8	2-Chlorotoluene	1.0	U M	3.0	1.0	0.51
591-78-6	2-Hexanone	10	U M	20	10	4.0
106-43-4	4-Chlorotoluene	1.0	U M	2.0	1.0	0.51
99-87-6	4-Isopropyltoluene	1.0	U	3.0	1.0	0.28
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U M	15	5.0	2.5
67-64-1	Acetone	18	U	50	18	7.8
71-43-2	Benzene	2.0	U	3.0	2.0	0.53
108-86-1	Bromobenzene	0.50	U M	2.0	0.50	0.18
74-97-5	Bromochloromethane	1.0	U	2.0	1.0	0.29
75-27-4	Bromodichloromethane	0.50	U	2.0	0.50	0.14
75-25-2	Bromoform	2.0	U	3.0	2.0	0.56
74-83-9	Bromomethane	3.5	U	6.0	3.5	1.1
75-15-0	Carbon disulfide	2.0	U	3.0	2.0	0.53
56-23-5	Carbon tetrachloride	1.0	U	3.0	1.0	0.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 580-287774/24

Matrix: Water | Lab File ID: J3018113.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 20:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-90-7	Chlorobenzene	1.0	U	2.0	1.0	0.44
75-00-3	Chloroethane	3.5	U	5.0	3.5	1.1
67-66-3	Chloroform	1.0	U	5.0	1.0	0.50
74-87-3	Chloromethane	15	U	20	15	5.4
156-59-2	cis-1,2-Dichloroethene	2.0	U	3.0	2.0	0.69
10061-01-5	cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20
124-48-1	Dibromochloromethane	0.50	U	1.0	0.50	0.20
74-95-3	Dibromomethane	1.0	U	2.0	1.0	0.34
75-71-8	Dichlorodifluoromethane	6.0	U	10	6.0	2.3
108-20-3	Diisopropyl ether	1.3	U	2.0	1.3	0.35
100-41-4	Ethylbenzene	1.0	U M	3.0	1.0	0.50
87-68-3	Hexachlorobutadiene	2.0	U	6.0	2.0	0.79
98-82-8	Isopropylbenzene	1.0	U M	2.0	1.0	0.51
179601-23-1	m,p-Xylene	2.0	U M	3.0	2.0	0.75
74-88-4	Methyl iodide	0.50	U	5.0	0.50	0.24
1634-04-4	Methyl tert-butyl ether	1.0	U	2.0	1.0	0.44
75-09-2	Methylene Chloride	3.5	U	5.0	3.5	1.4
91-20-3	Naphthalene	2.0	U M	4.0	2.0	0.93
104-51-8	n-Butylbenzene	1.0	U	3.0	1.0	0.44
103-65-1	N-Propylbenzene	1.0	U	3.0	1.0	0.50
95-47-6	o-Xylene	0.50	U M	2.0	0.50	0.15
135-98-8	sec-Butylbenzene	1.0	U	3.0	1.0	0.49
100-42-5	Styrene	1.0	U M	5.0	1.0	0.51
98-06-6	tert-Butylbenzene	2.0	U M	3.0	2.0	0.58
127-18-4	Tetrachloroethene	1.0	U	3.0	1.0	0.41
108-88-3	Toluene	1.0	U M	2.0	1.0	0.39
156-60-5	trans-1,2-Dichloroethene	1.0	U M	3.0	1.0	0.39
10061-02-6	trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.16
79-01-6	Trichloroethene	2.0	U	3.0	2.0	0.85
75-69-4	Trichlorofluoromethane	2.0	U	3.0	2.0	0.63
108-05-4	Vinyl acetate	2.5	U	5.0	2.5	1.2
75-01-4	Vinyl chloride	0.50	U	1.0	0.50	0.22
1330-20-7	Xylenes, Total	2.0	U	3.0	2.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-287774/24

Matrix: Water Lab File ID: J3018113.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 10/30/2018 20:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 287774 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	101		89-112

Report Date: 31-Oct-2018 11:59:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Oct-2018 20:38:30 ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:27:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
4 Butadiene	39	4.696	4.724	-0.028	31	612		0.1115	
10 Acrolein	56	5.903	5.906	-0.003	81	2087		1.20	
12 Acetonitrile	41	5.919	5.916	0.003	97	8545		14.5	
14 Isopropyl alcohol	45	5.961	5.963	-0.002	25	4828		13.0	
8 Ethanol	45	5.961	5.999	-0.037	39	4828		NC	
13 Acetone	43	6.039	6.037	0.002	99	8488		3.43	
* 16 TBA-d9 (IS)	65	6.411	6.413	-0.002	0	160750	390.0	390.0	
19 2-Methyl-2-propanol	59	6.494	6.497	-0.003	98	6827		9.18	
18 Acrylonitrile	52	6.531	6.528	0.003	99	7524		5.15	
21 Methylene Chloride	84	6.635	6.633	0.002	86	1479		0.0405	
22 Methyl acetate	43	6.661	6.659	0.002	98	2707		1.04	
24 Carbon disulfide	76	6.892	6.884	0.008	99	5463		0.3367	
29 Propionitrile	54	7.498	7.490	0.008	100	8224		12.6	
32 Hexane	57	7.864	7.840	0.024	39	1826		0.2115	
34 2-Butanone (MEK)	72	7.864	7.856	0.008	100	3254		3.98	
41 Isobutyl alcohol	43	8.240	8.232	0.008	92	6541		14.2	
$ 43 Dibromofluoromethane (Surr	113	8.293	8.290	0.003	95	74669	19.5	19.1	
44 Tetrahydrofuran	42	8.470	8.468	0.002	87	2879		1.98	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.680	8.677	0.003	0	84269	19.5	19.6	
49 n-Butanol	56	8.852	8.844	0.008	89	4610		21.2	
50 Cyclohexane	84	9.072	9.074	-0.002	67	661		0.1132	
51 Carbon tetrachloride	119	9.150	9.142	0.008	37	441		0.0884	
52 Benzene	78	9.171	9.168	0.003	89	1017		0.0646	
* 54 Fluorobenzene (IS)	96	9.328	9.325	0.003	99	299676	19.5	19.5	
60 2-Nitropropane	43	9.673	9.675	-0.002	98	1746		1.03	
$ 64 Trifluorotoluene (Surr)	146	9.830	9.827	0.003	88	160650	20.0	20.2	
66 Methylcyclohexane	83	10.143	10.135	0.008	89	916		0.1009	
$ 73 Toluene-d8 (Surr)	98	10.907	10.904	0.003	93	293902	19.5	19.6	
* 85 Chlorobenzene-d5	82	12.266	12.263	0.003	85	124555	19.5	19.5	
95 Cyclohexanone	55	12.987	13.045	-0.058	92	1127		NC	
$ 97 4-Bromofluorobenzene (Surr	95	13.395	13.392	0.003	95	114429	19.5	20.0	
99 N-Propylbenzene	120	13.735	13.732	0.003	98	932		0.0183	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
106 sec-Butylbenzene	105	14.430	14.428	0.002	94	3406		0.0337	
* 109 1,4-Dichlorobenzene-d4	152	14.561	14.558	0.003	94	145960	19.5	19.5	
110 4-Isopropyltoluene	119	14.582	14.579	0.003	95	4457		0.0495	
114 n-Butylbenzene	91	14.953	14.950	0.003	96	4741		0.0317	
116 1,2-Dibromo-3-Chloropropan	157	15.356	15.353	0.003	48	1145		0.0218	
120 Hexachlorobutadiene	190	17.023	17.021	0.002	83	1538		0.5223	
121 1,2,3-Trichlorobenzene	180	17.222	17.224	-0.002	97	5240		0.0914	
$ 125 BFB	95	13.395	13.390	0.005	95	114536	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

Reagents:

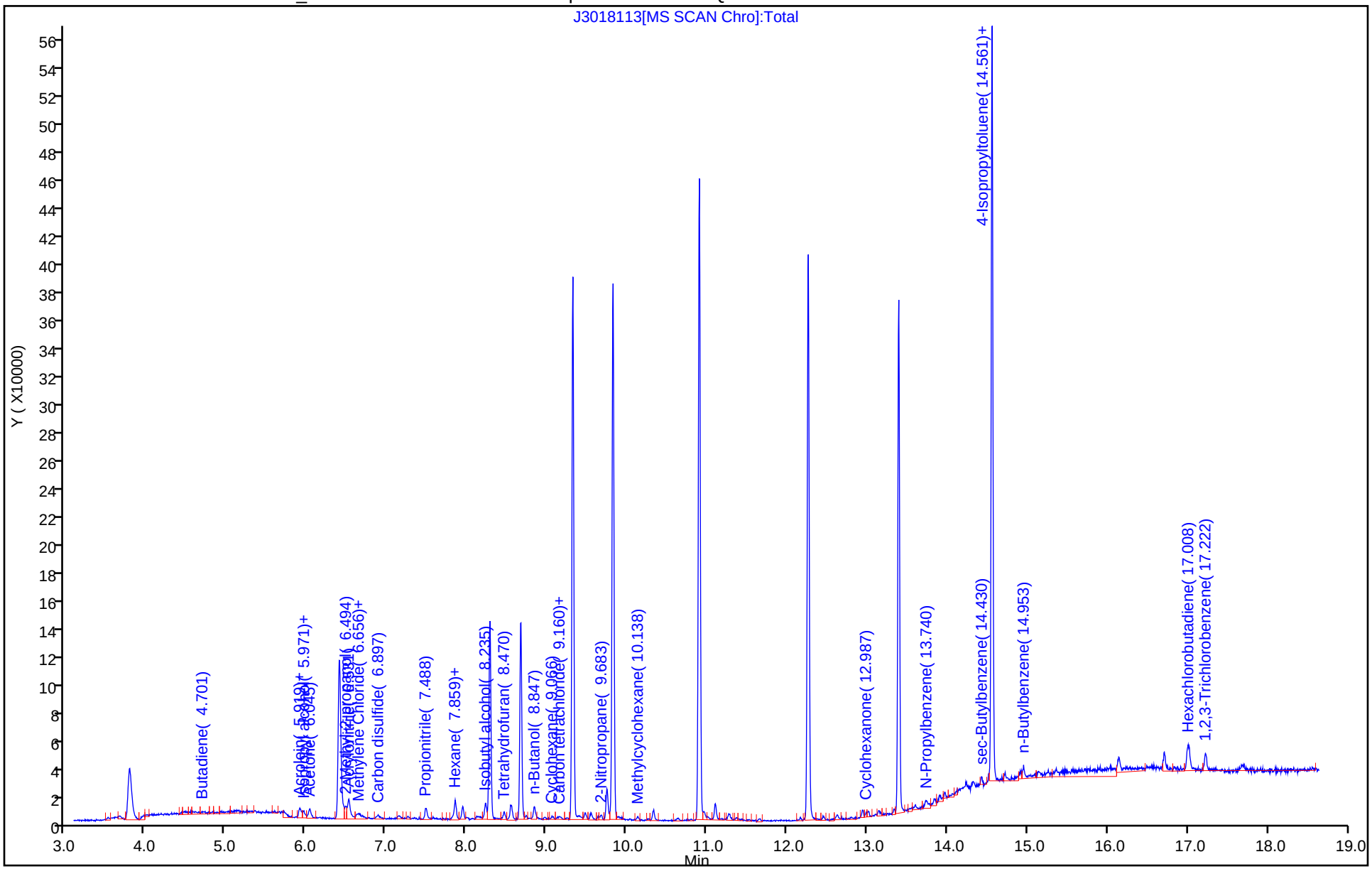
5X SUR/IS/TFT_00006 Amount Added: 2.00 Units: uL Run Reagent

Report Date: 31-Oct-2018 11:59:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D

Injection Date:	30-Oct-2018 20:38:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	MB			Worklist Smp#:	24
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Recovery Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Oct-2018 20:38:30 ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:27:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 43 Dibromofluoromethane (Surr)	19.5	19.1	98.10
$ 45 1,2-Dichloroethane-d4 (Surr)	19.5	19.6	100.50
$ 64 Trifluorotoluene (Surr)	20.0	20.2	101.26
$ 73 Toluene-d8 (Surr)	19.5	19.6	100.67
$ 97 4-Bromofluorobenzene (Surr)	19.5	20.0	102.66
$ 125 BFB	19.5	0	0.00

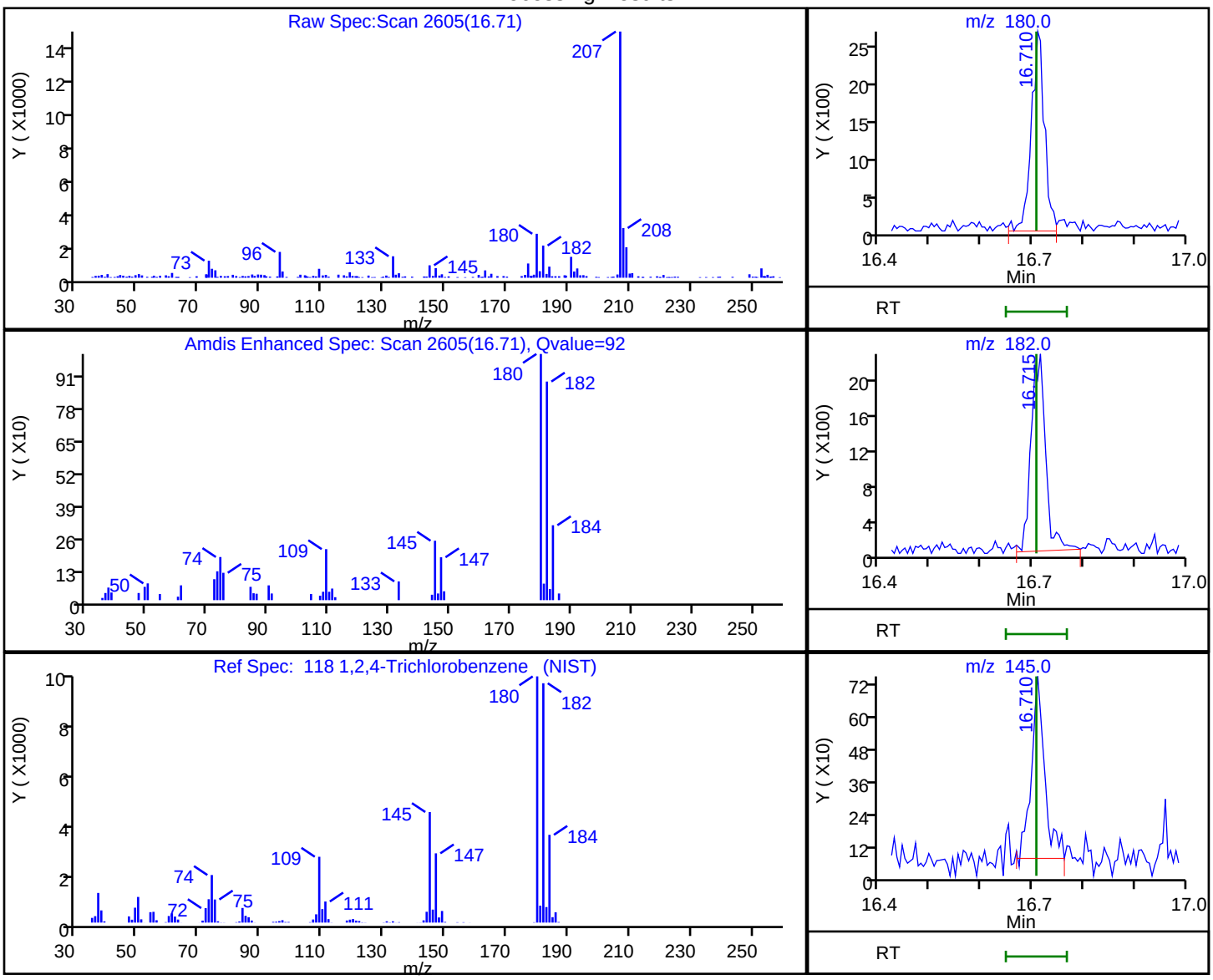
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

118 1,2,4-Trichlorobenzene, CAS: 120-82-1

Processing Results



RT	Mass	Response	Amount
16.71	180.00	4707	-0.036065
16.71	182.00	4331	
16.71	145.00	1231	

Reviewer: brennanr, 31-Oct-2018 11:26:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

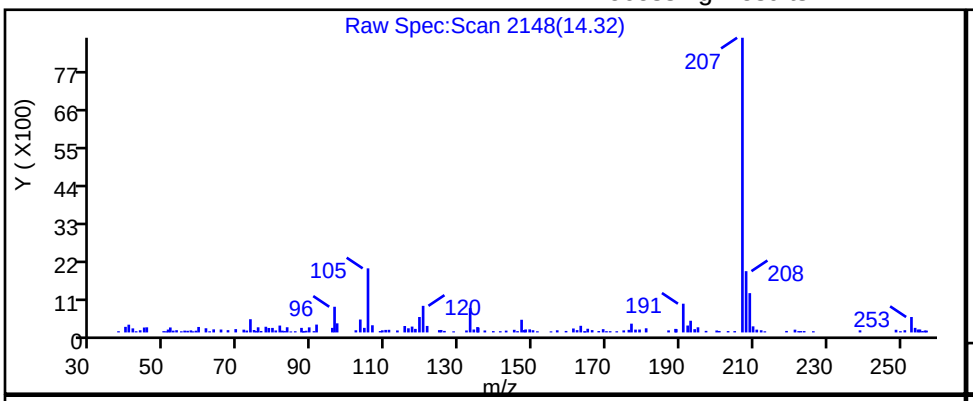
User Disabled Compound Report

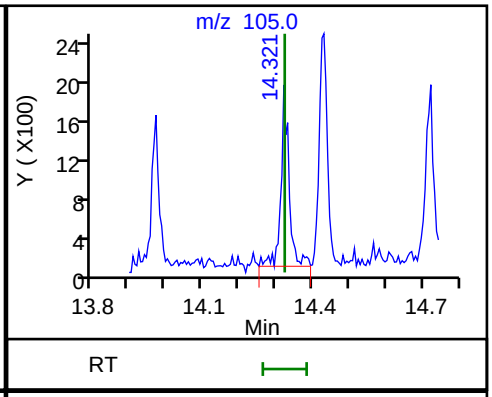
TestAmerica Seattle

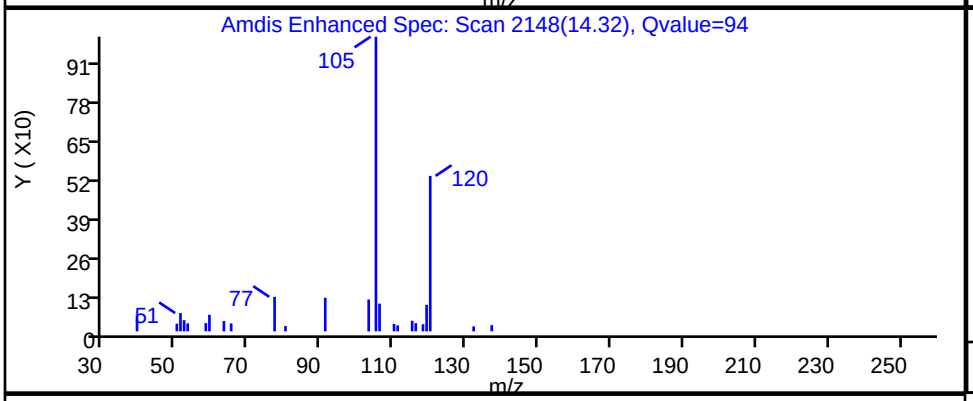
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

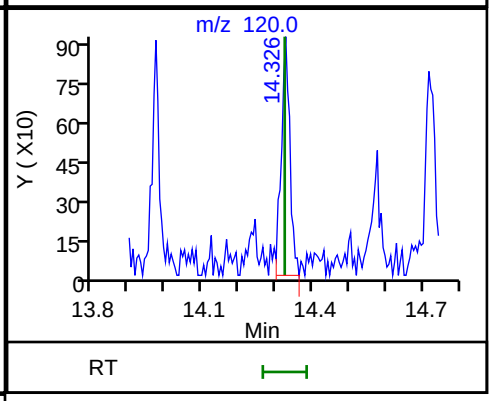
105 1,2,4-Trimethylbenzene, CAS: 95-63-6

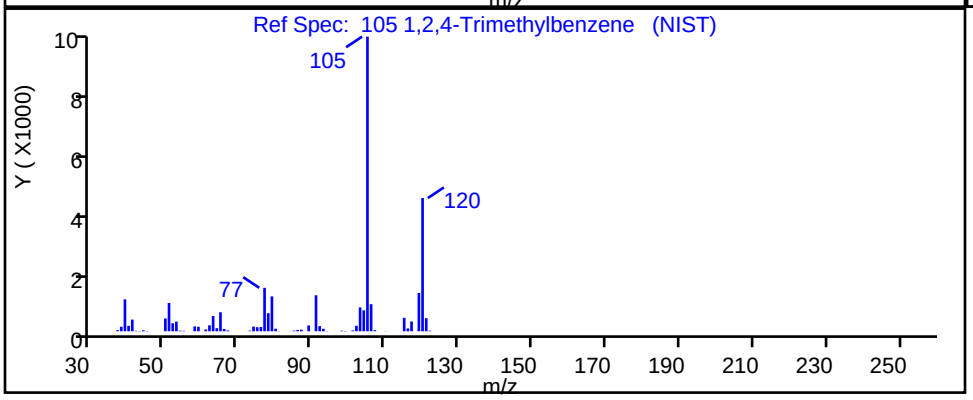
Processing Results











RT	Mass	Response	Amount
14.32	105.00	2801	-0.094664
14.33	120.00	1505	

Reviewer: brennanr, 31-Oct-2018 11:26:34
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

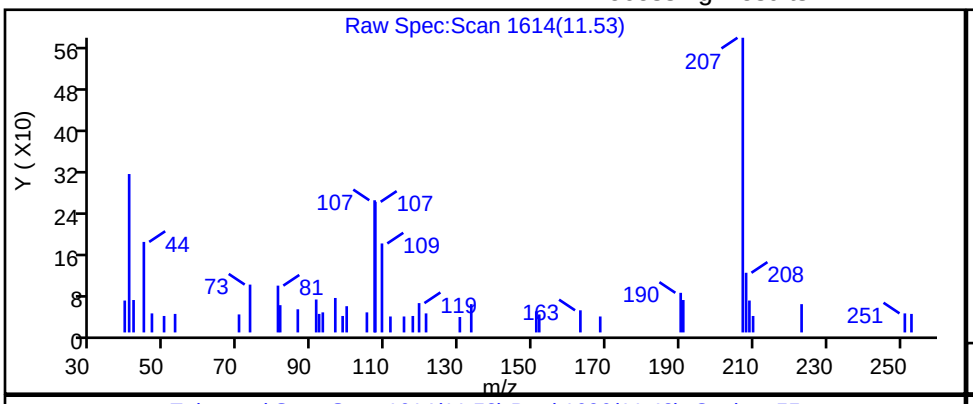
User Disabled Compound Report

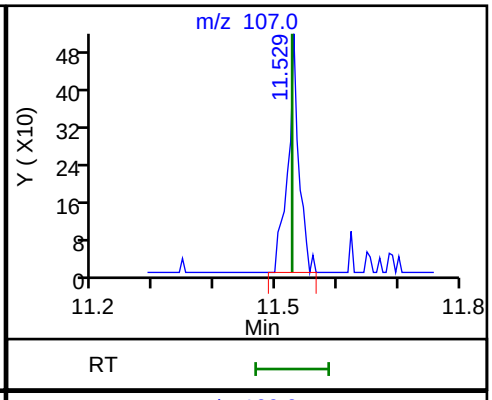
TestAmerica Seattle

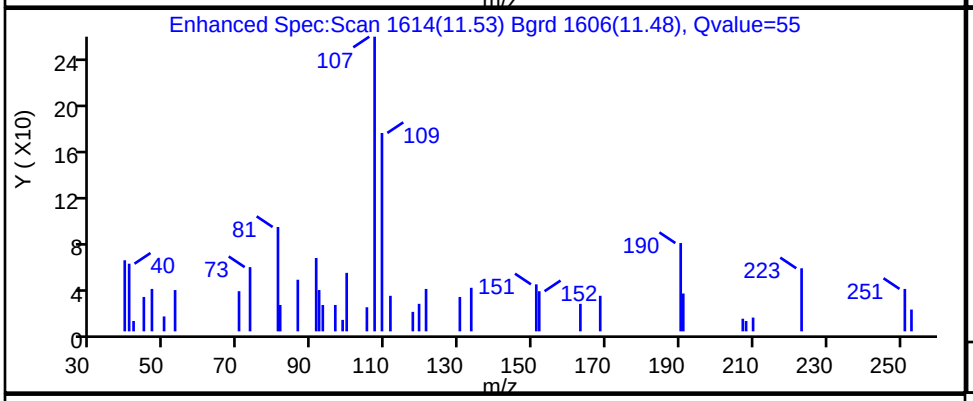
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

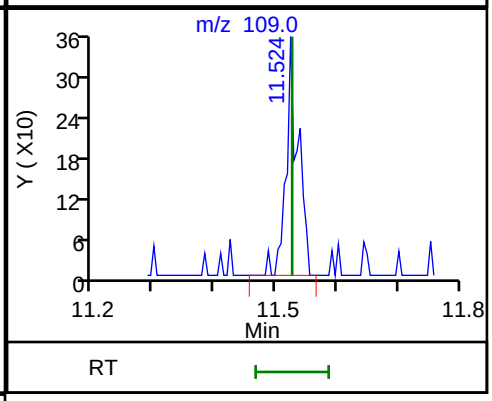
81 Ethylene Dibromide, CAS: 106-93-4

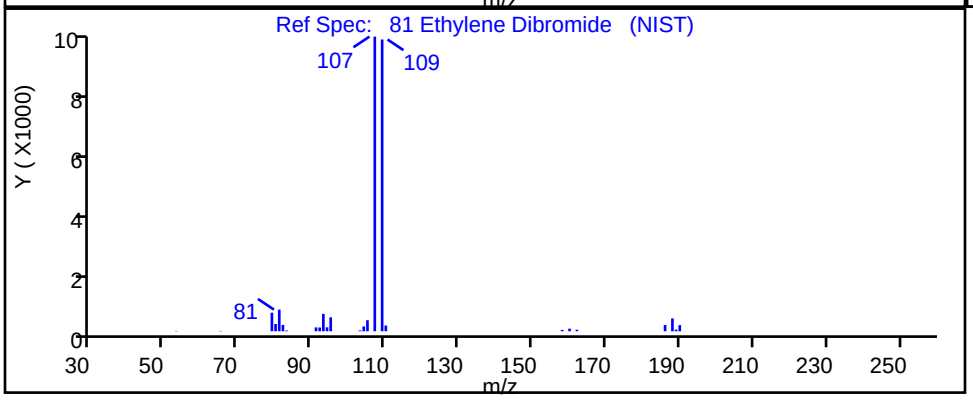
Processing Results











RT	Mass	Response	Amount
11.53	107.00	637	-0.155858
11.52	109.00	484	

Reviewer: brennanr, 31-Oct-2018 11:25:50
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

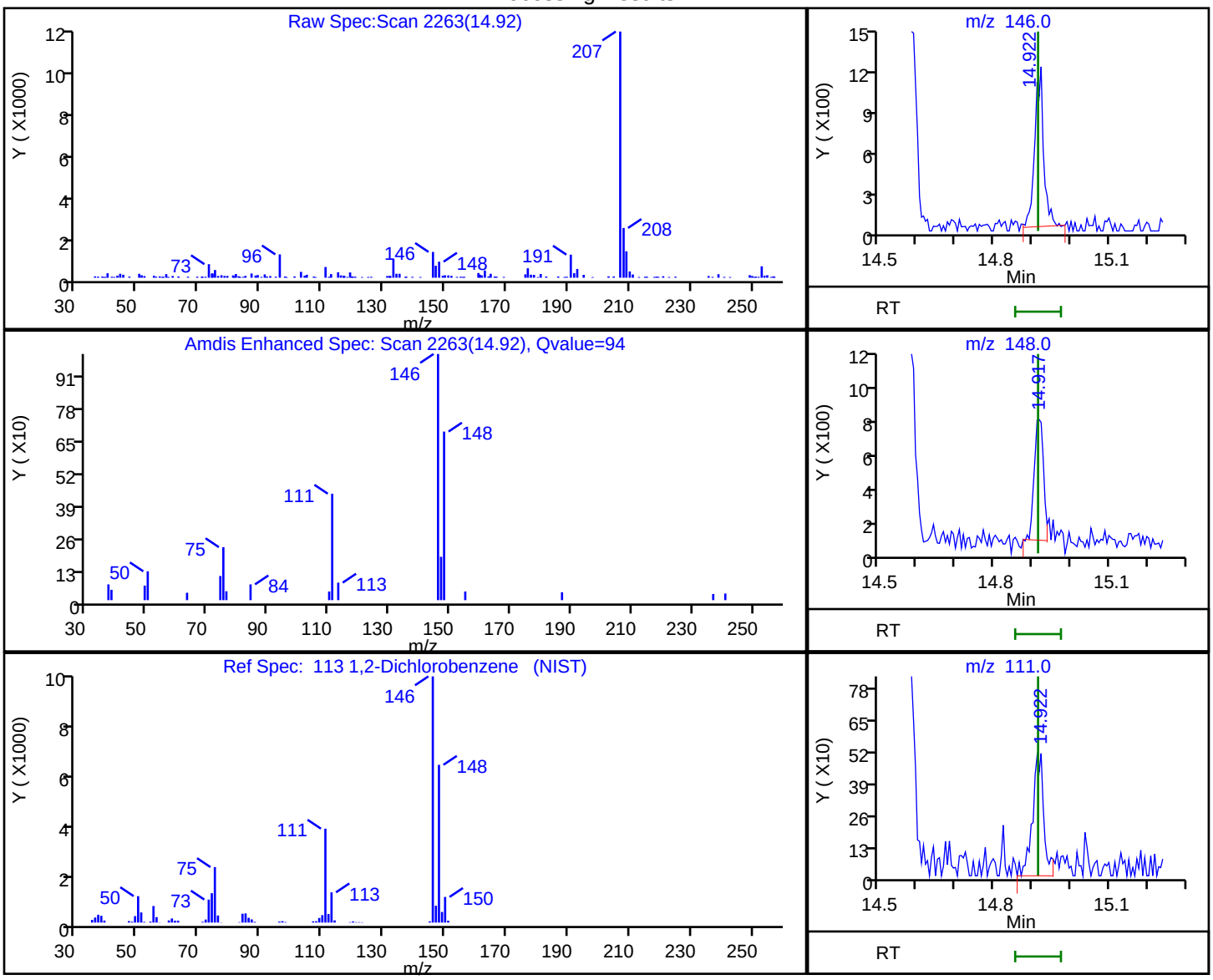
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

113 1,2-Dichlorobenzene, CAS: 95-50-1

Processing Results



RT	Mass	Response	Amount
14.92	146.00	1914	-0.362545
14.92	148.00	1192	
14.92	111.00	1051	

Reviewer: brennanr, 31-Oct-2018 11:26:51
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

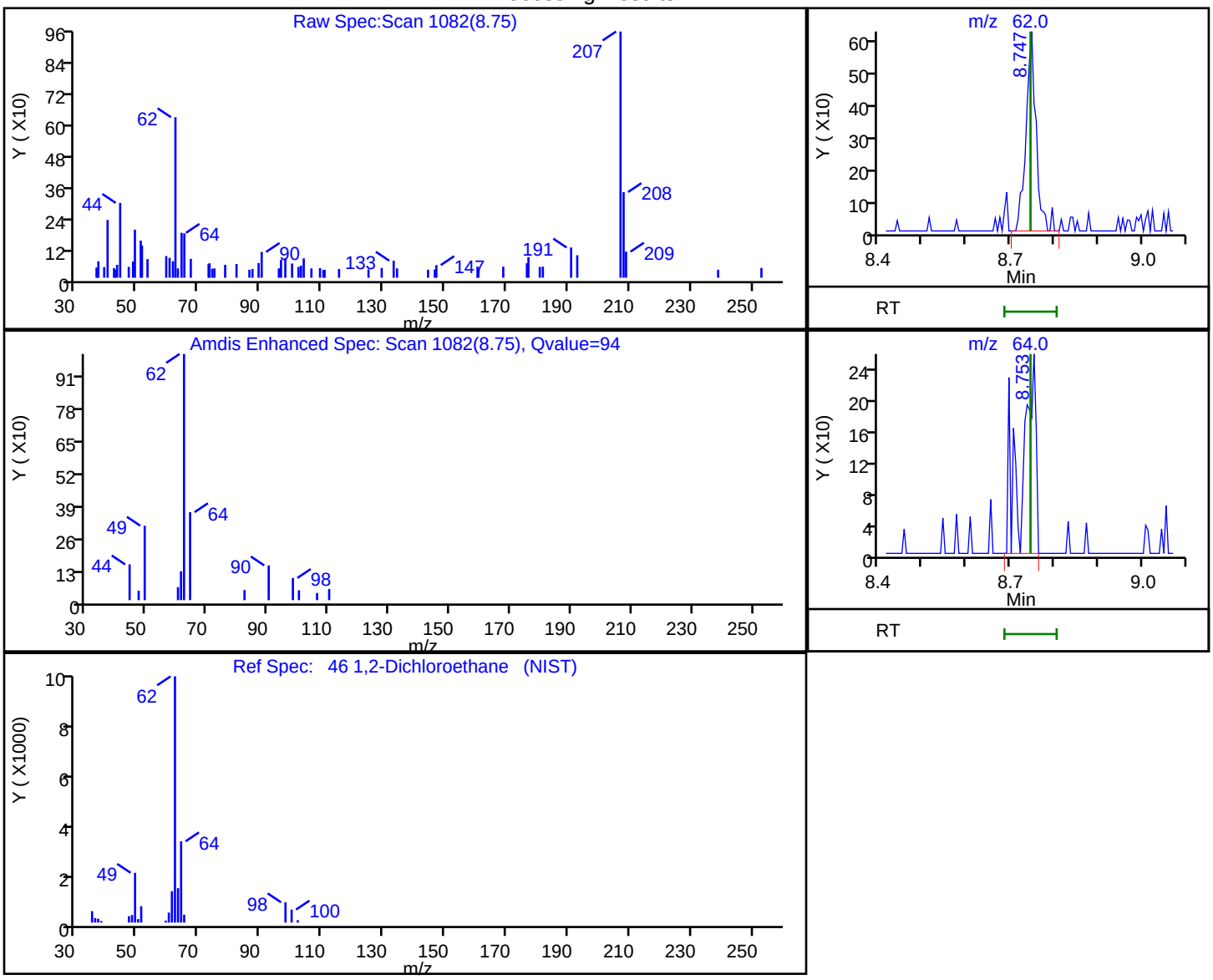
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.75	62.00	995	0.007486
8.75	64.00	547	

Reviewer: brennanr, 31-Oct-2018 11:24:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

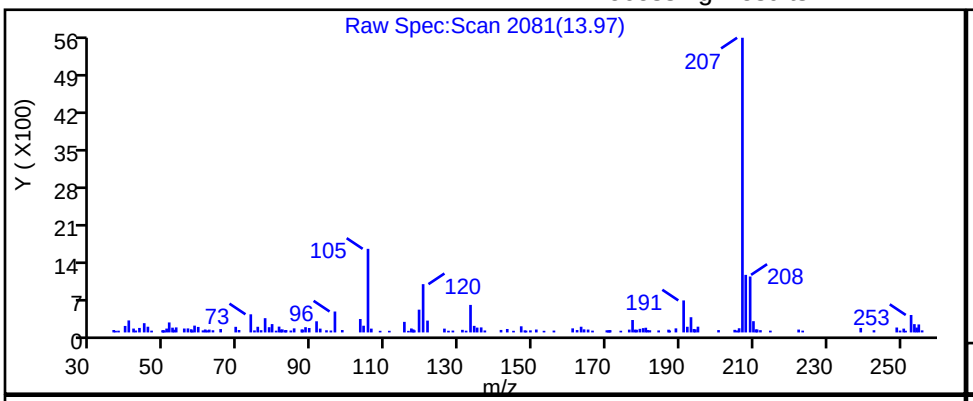
User Disabled Compound Report

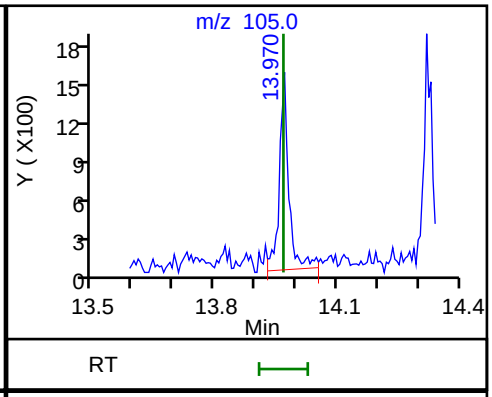
TestAmerica Seattle

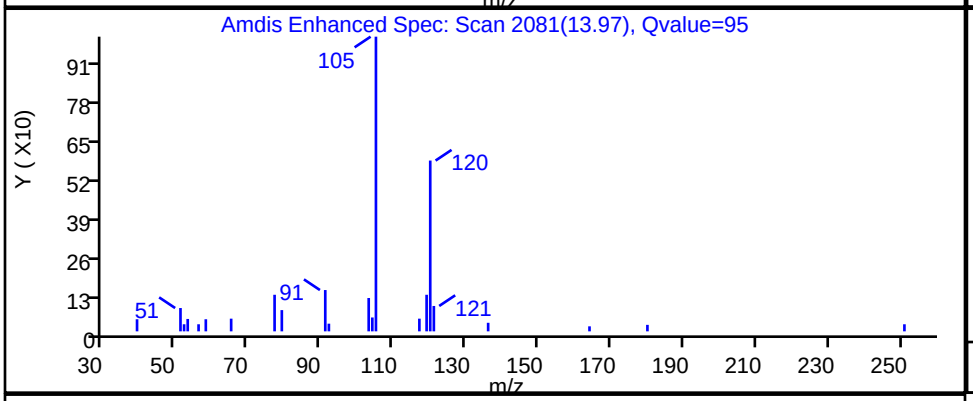
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

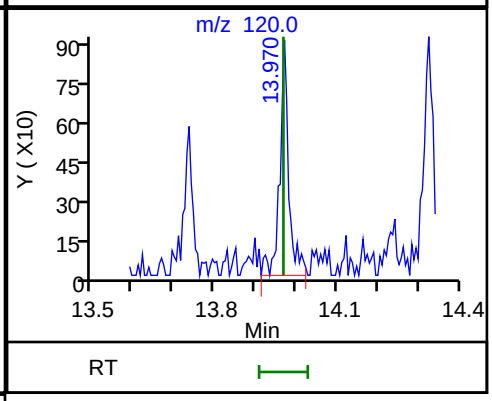
102 1,3,5-Trimethylbenzene, CAS: 108-67-8

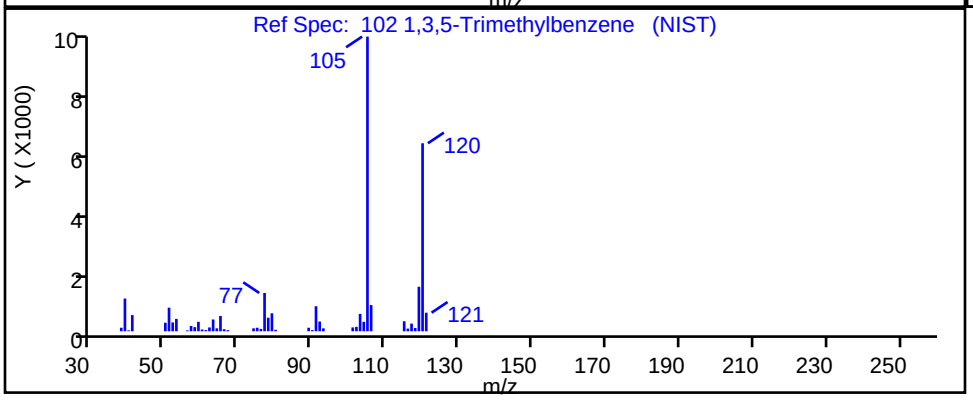
Processing Results











RT	Mass	Response	Amount
13.97	105.00	2500	0.000206
13.97	120.00	1392	

Reviewer: brennanr, 31-Oct-2018 11:26:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

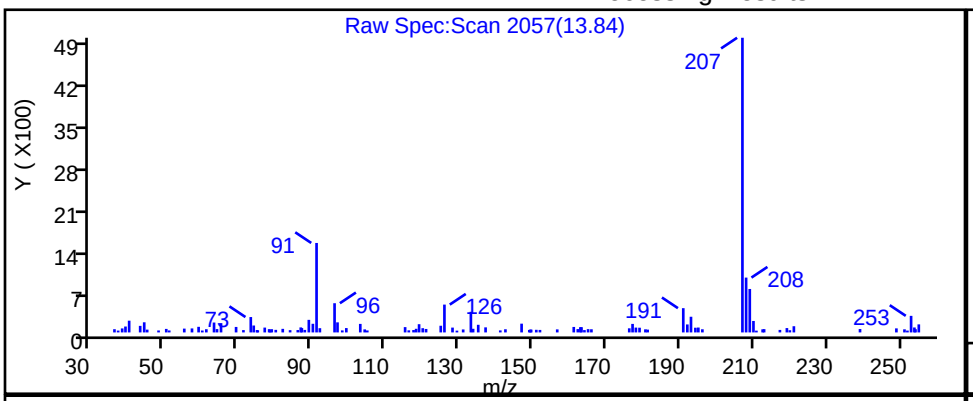
User Disabled Compound Report

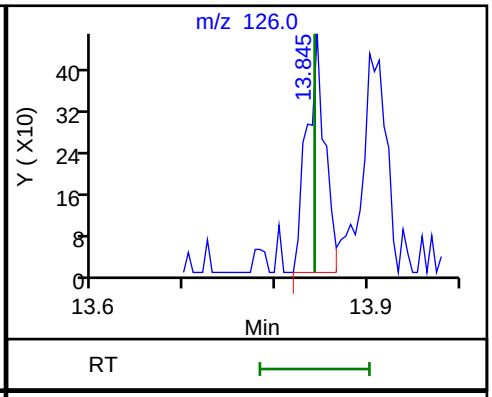
TestAmerica Seattle

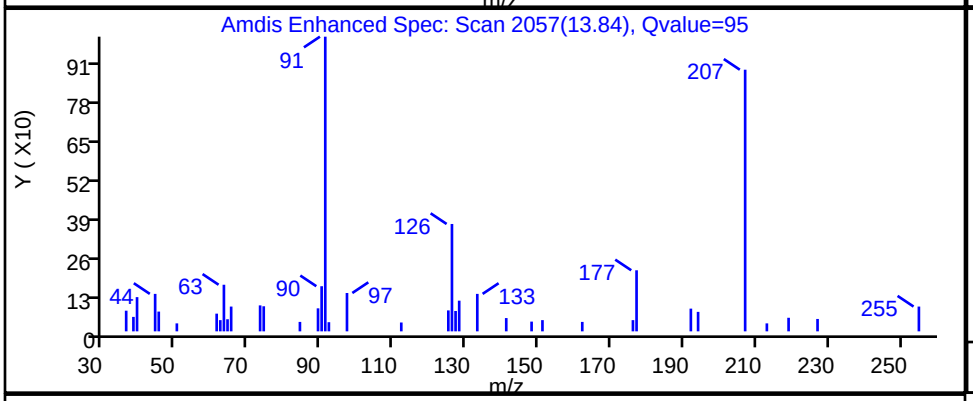
Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D				
Injection Date:	30-Oct-2018 20:38:30	Instrument ID:	SEA102		
Lims ID:	MB				
Client ID:					
Operator ID:	DSO	ALS Bottle#:	13	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

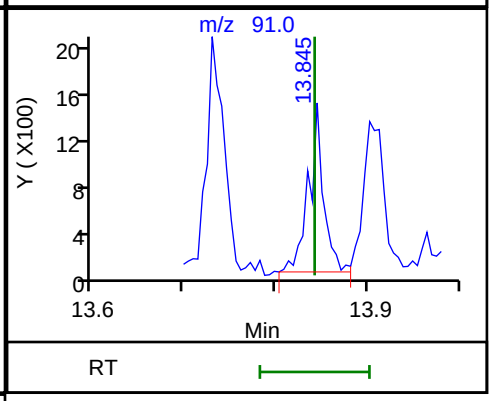
100 2-Chlorotoluene, CAS: 95-49-8

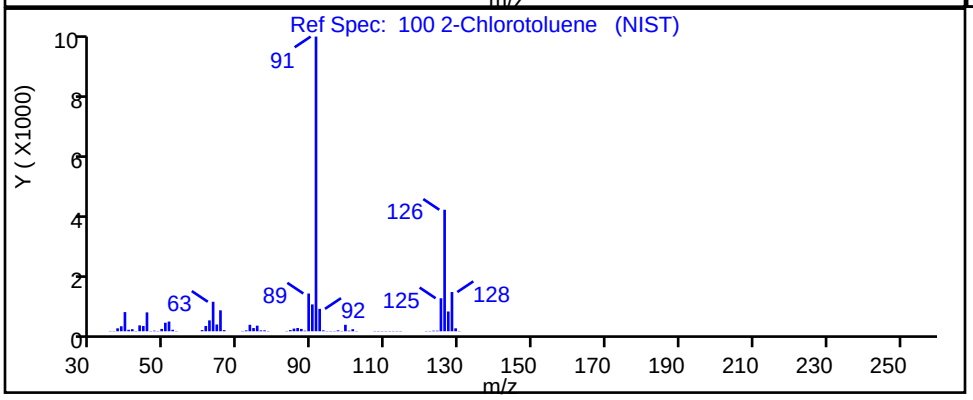
Processing Results











RT	Mass	Response	Amount
13.84	126.00	641	-0.149944
13.84	91.00	1626	

Reviewer: brennanr, 31-Oct-2018 11:26:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

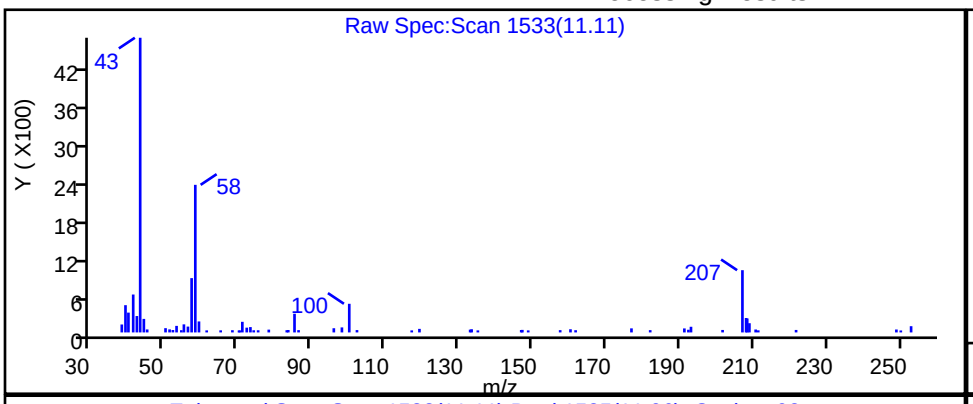
User Disabled Compound Report

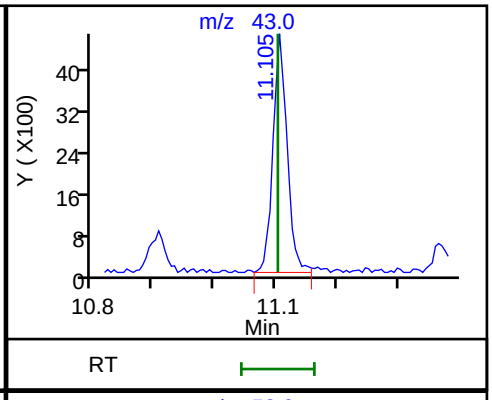
TestAmerica Seattle

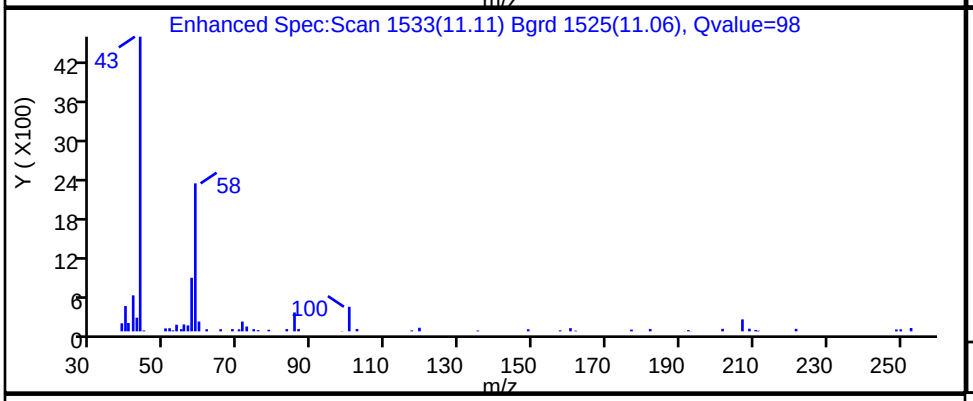
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

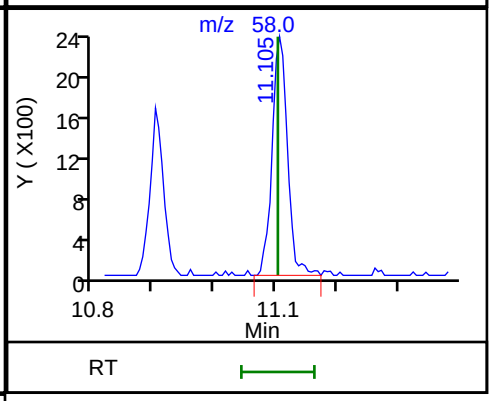
78 2-Hexanone, CAS: 591-78-6

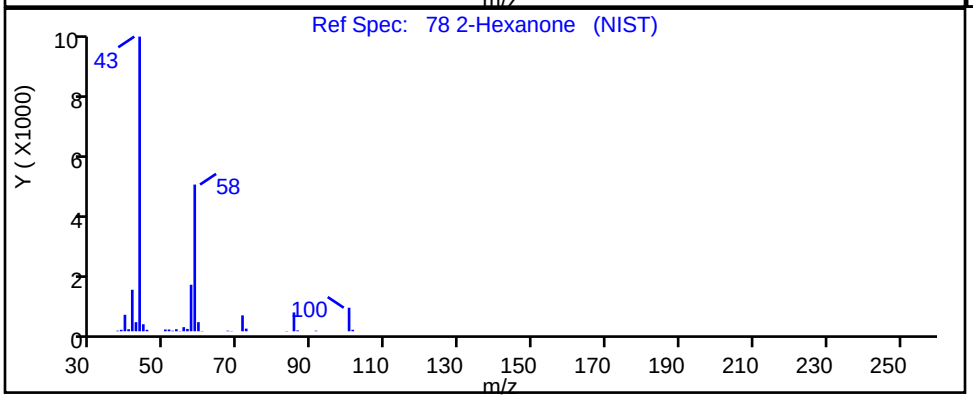
Processing Results











RT	Mass	Response	Amount
11.11	43.00	7478	
11.11	58.00	4077	-0.886328

Reviewer: brennanr, 31-Oct-2018 11:25:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

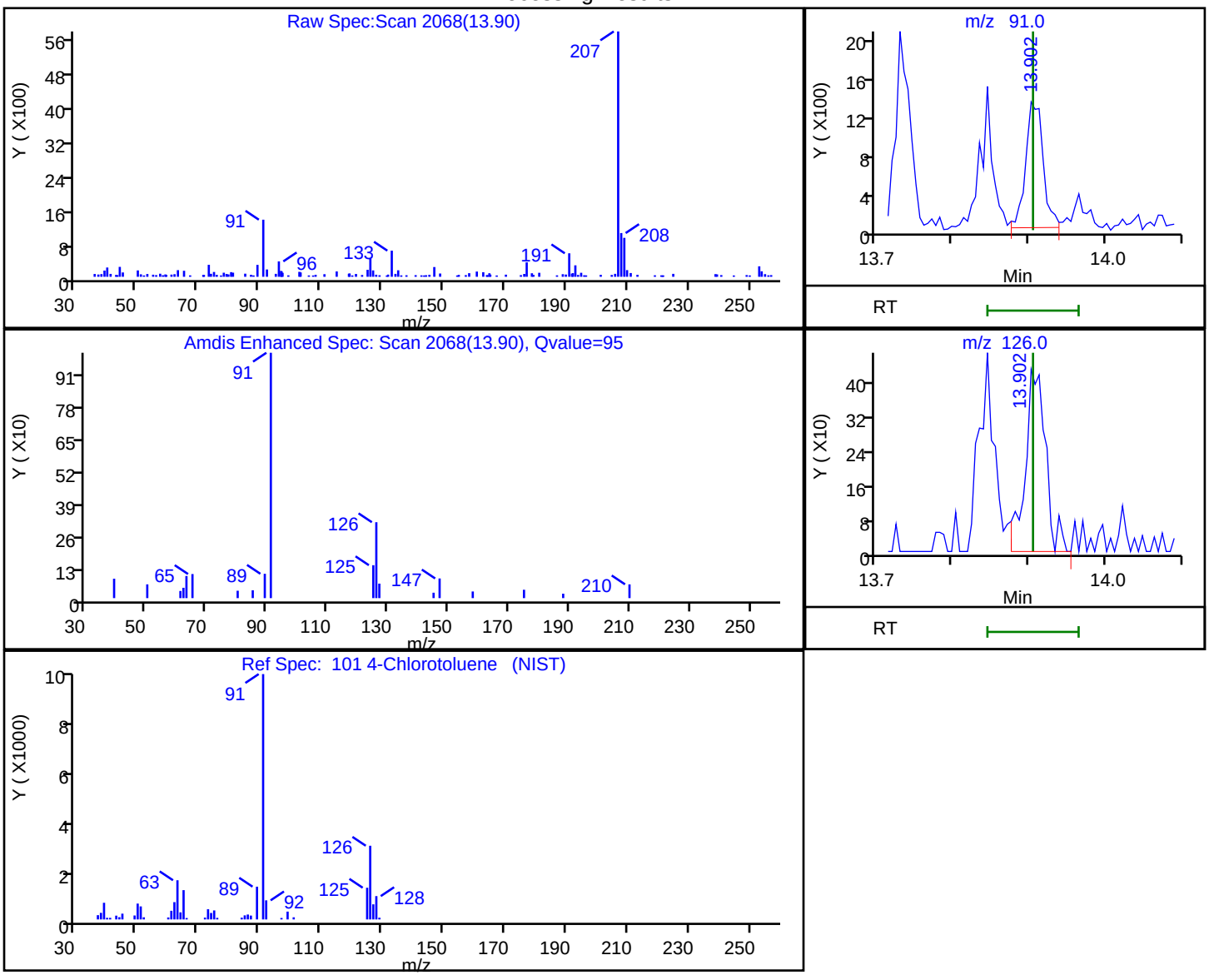
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

101 4-Chlorotoluene, CAS: 106-43-4

Processing Results



RT	Mass	Response	Amount
13.90	91.00	2064	-0.149335
13.90	126.00	794	

Reviewer: brennanr, 31-Oct-2018 11:26:28
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

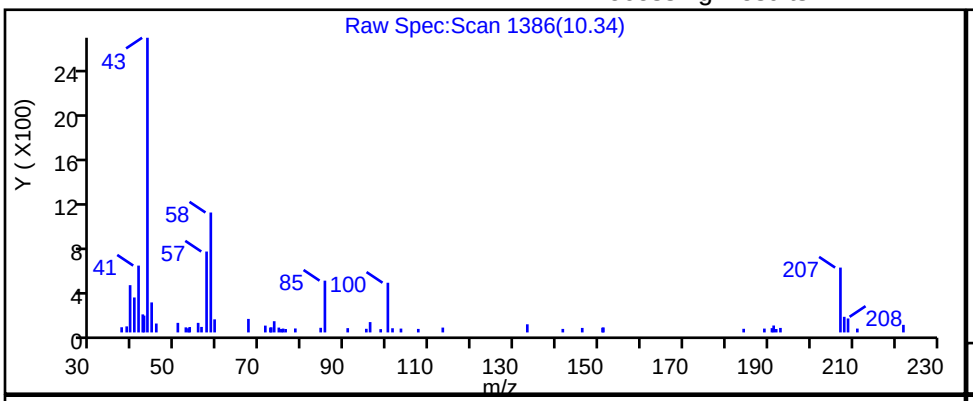
User Disabled Compound Report

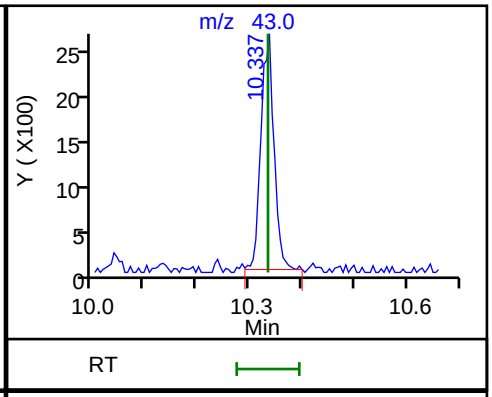
TestAmerica Seattle

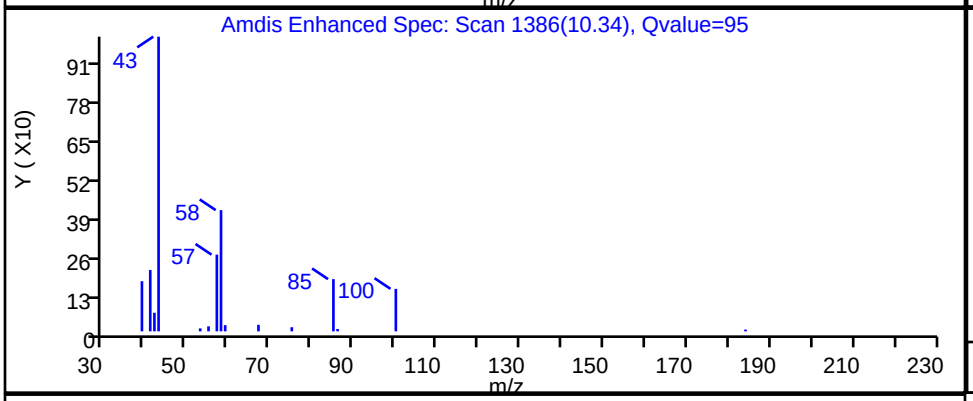
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

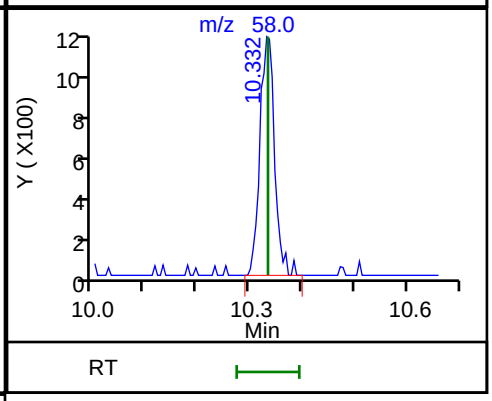
68 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

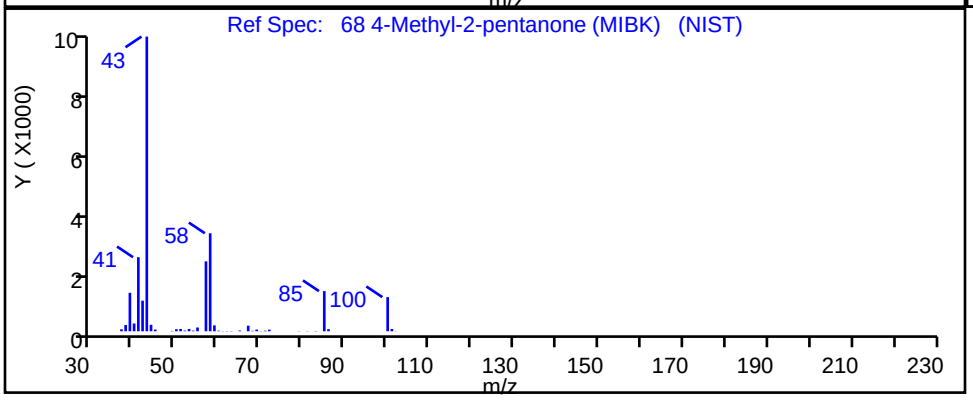
Processing Results











RT	Mass	Response	Amount
10.34	43.00	4601	-2.033038
10.33	58.00	2148	

Reviewer: brennanr, 31-Oct-2018 11:25:39
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

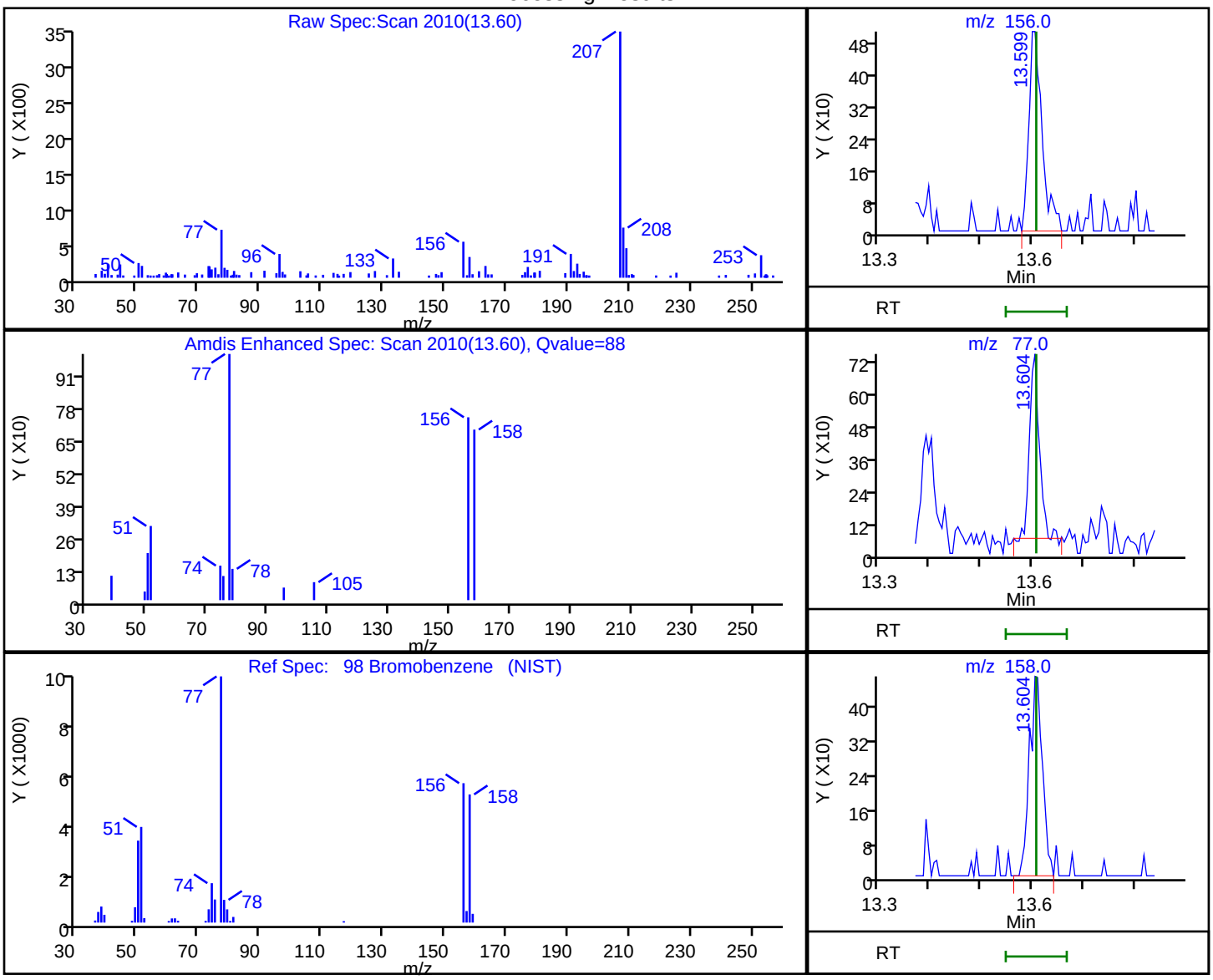
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

98 Bromobenzene, CAS: 108-86-1

Processing Results



RT	Mass	Response	Amount
13.60	156.00	916	0.169333
13.60	77.00	906	
13.60	158.00	825	

Reviewer: brennanr, 31-Oct-2018 11:26:17
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

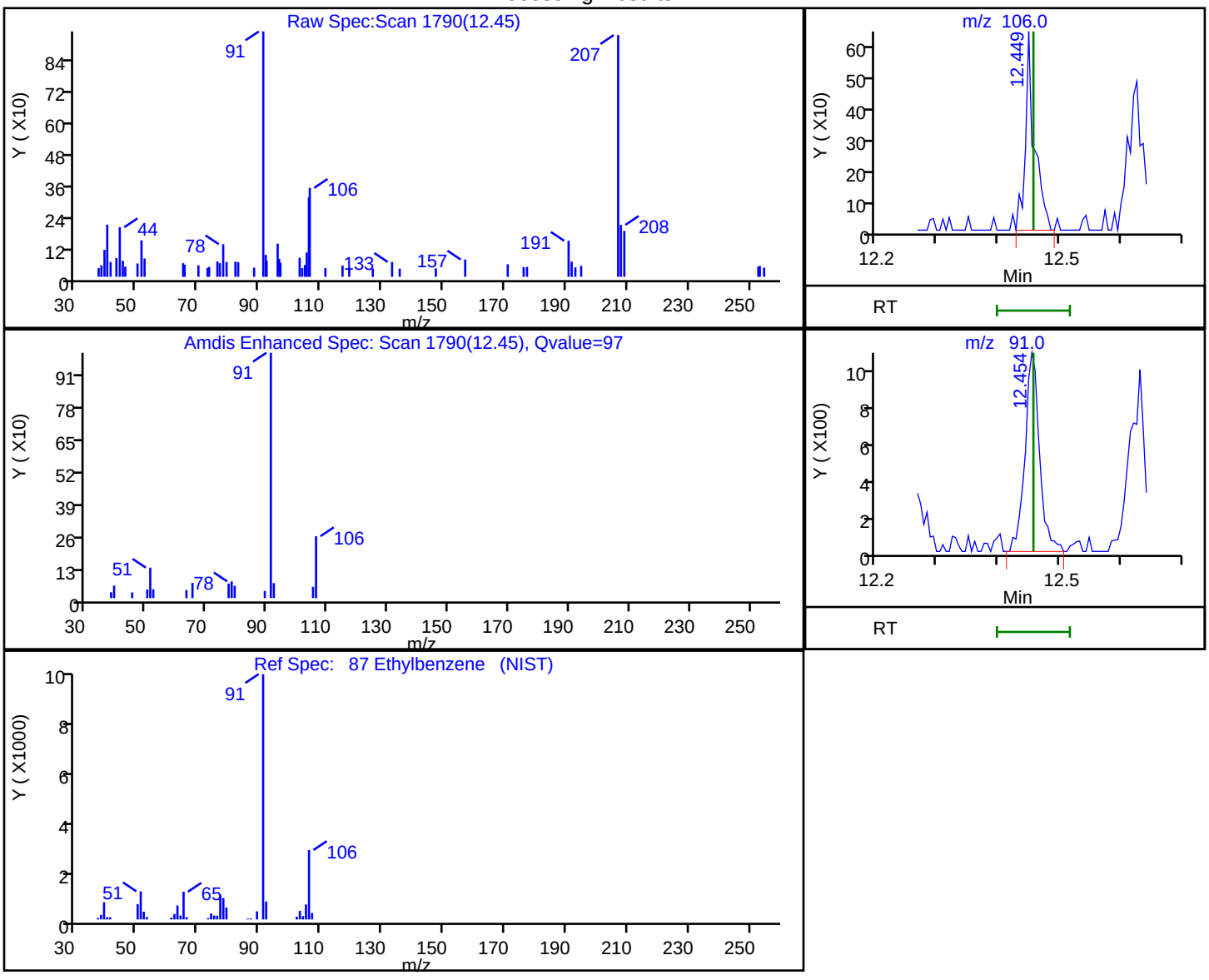
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

87 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
12.45	106.00	668	-0.069014
12.45	91.00	1794	

Reviewer: brennanr, 31-Oct-2018 11:25:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

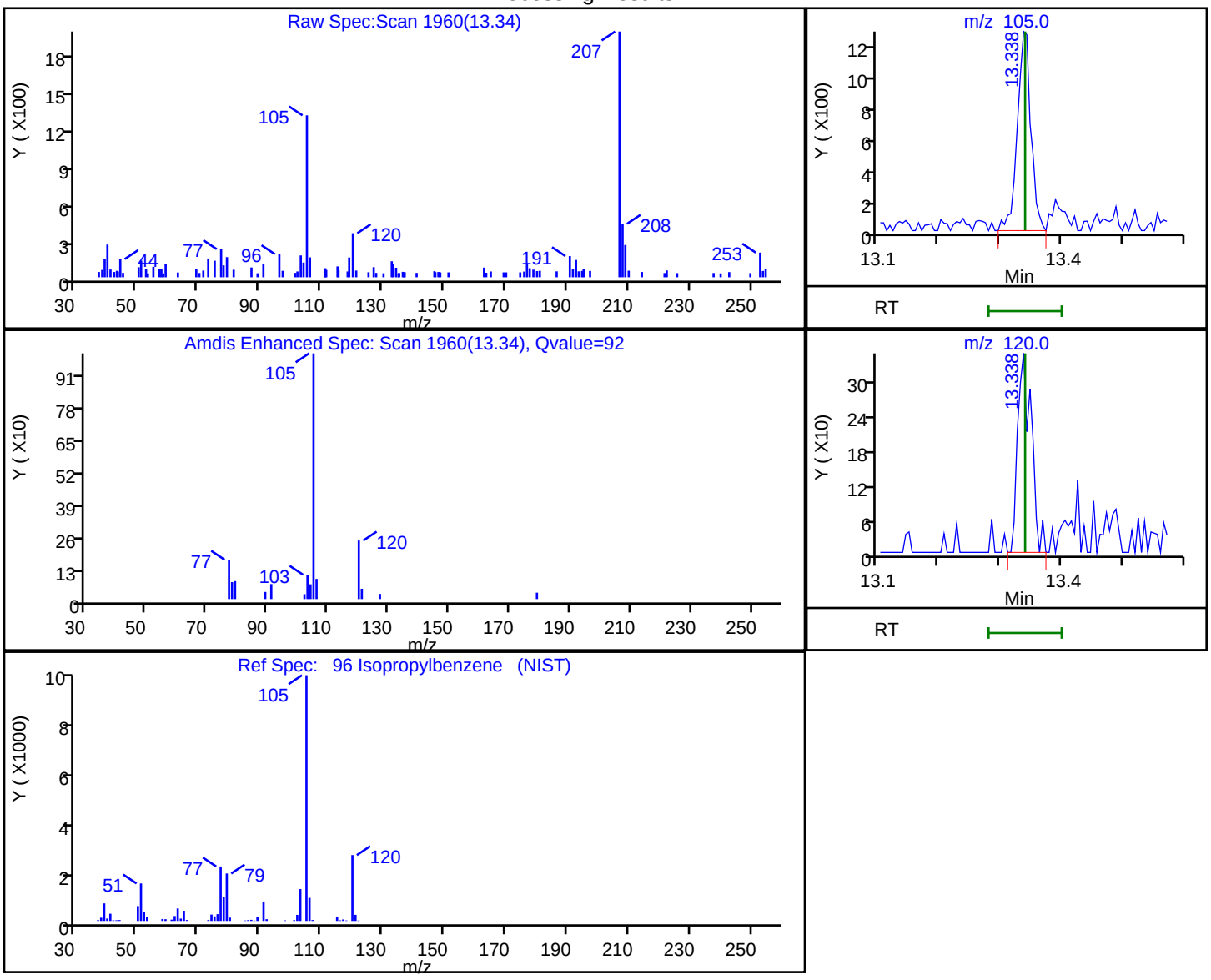
User Disabled Compound Report

TestAmerica Seattle

Data File:	\\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D				
Injection Date:	30-Oct-2018 20:38:30	Instrument ID:	SEA102		
Lims ID:	MB				
Client ID:					
Operator ID:	DSO	ALS Bottle#:	13	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		
Column:		Detector	MS SCAN		

96 Isopropylbenzene, CAS: 98-82-8

Processing Results



RT	Mass	Response	Amount
13.34	105.00	1942	-0.121204
13.34	120.00	528	

Reviewer: brennanr, 31-Oct-2018 11:26:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

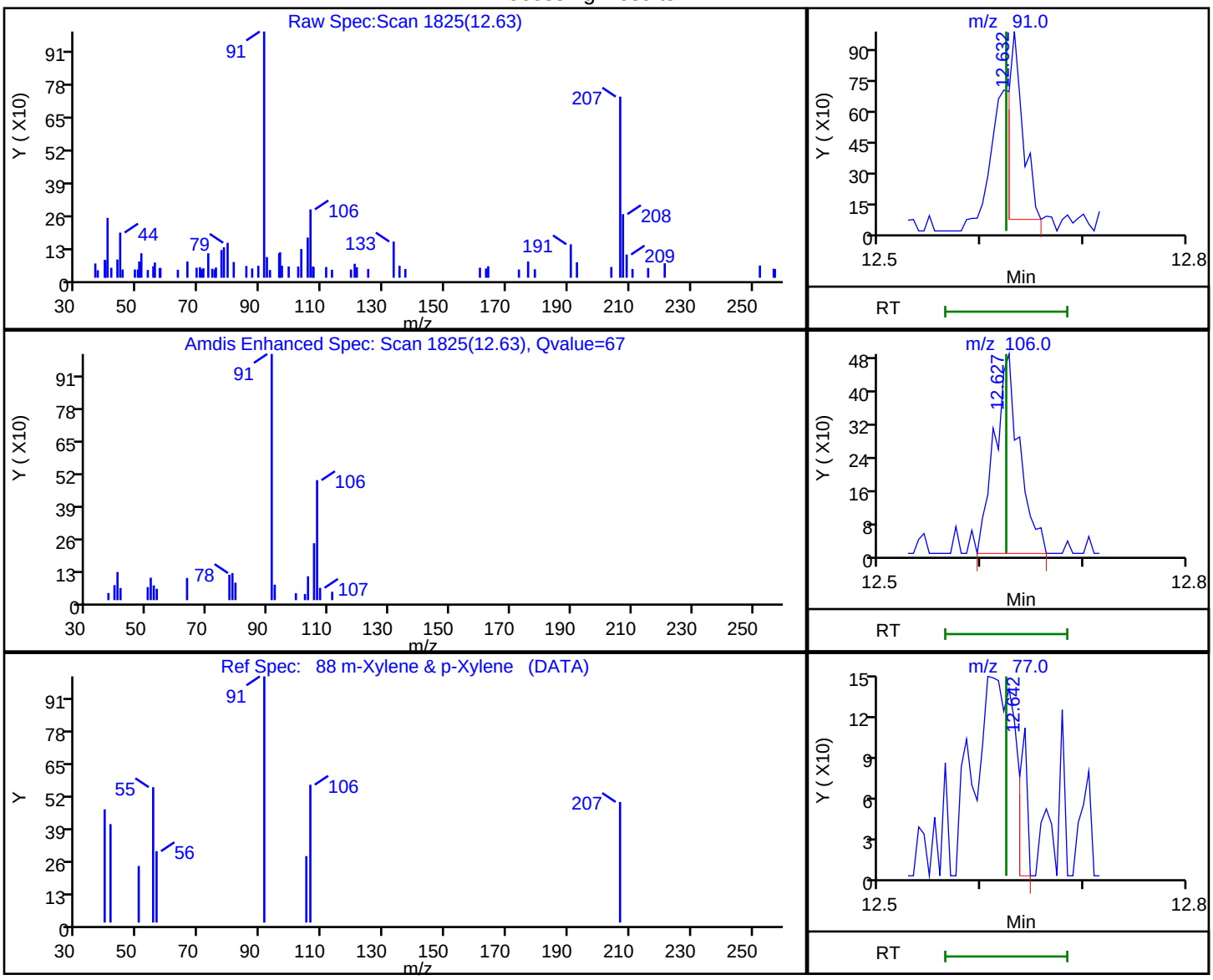
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

88 m-Xylene & p-Xylene, CAS: 179601-23-1

Processing Results



RT	Mass	Response	Amount
12.63	91.00	887	-0.123826
12.63	106.00	822	
12.64	77.00	56	

Reviewer: brennanr, 31-Oct-2018 11:25:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

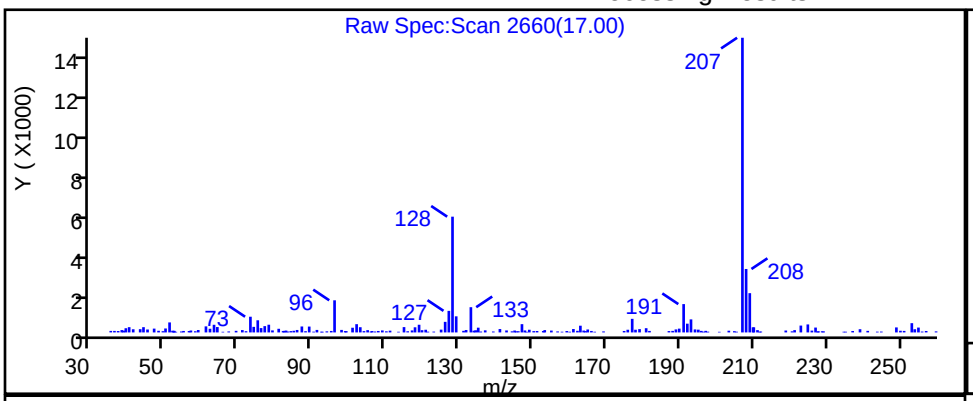
User Disabled Compound Report

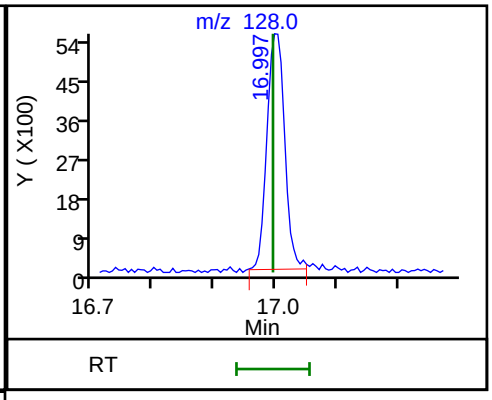
TestAmerica Seattle

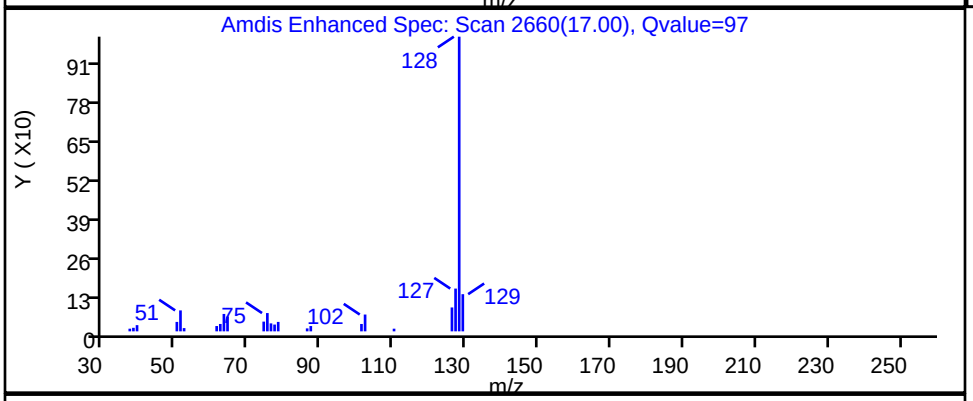
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

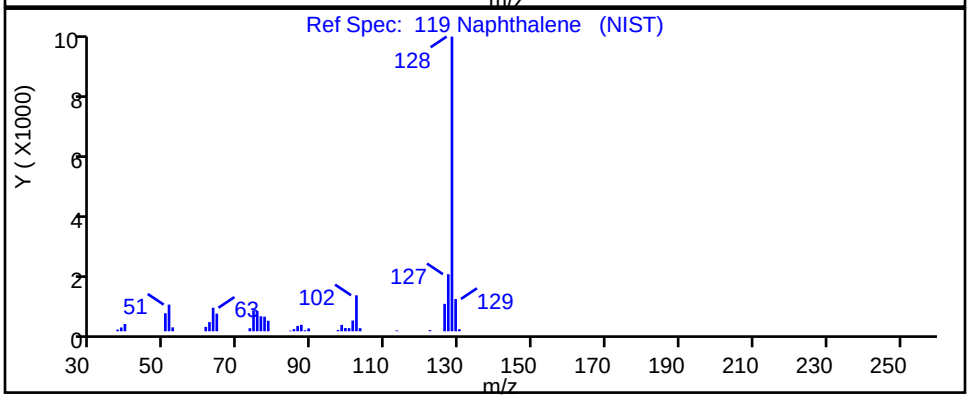
119 Naphthalene, CAS: 91-20-3

Processing Results









RT	Mass	Response	Amount
17.00	128.00	11080	-0.111699

Reviewer: brennanr, 31-Oct-2018 11:26:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

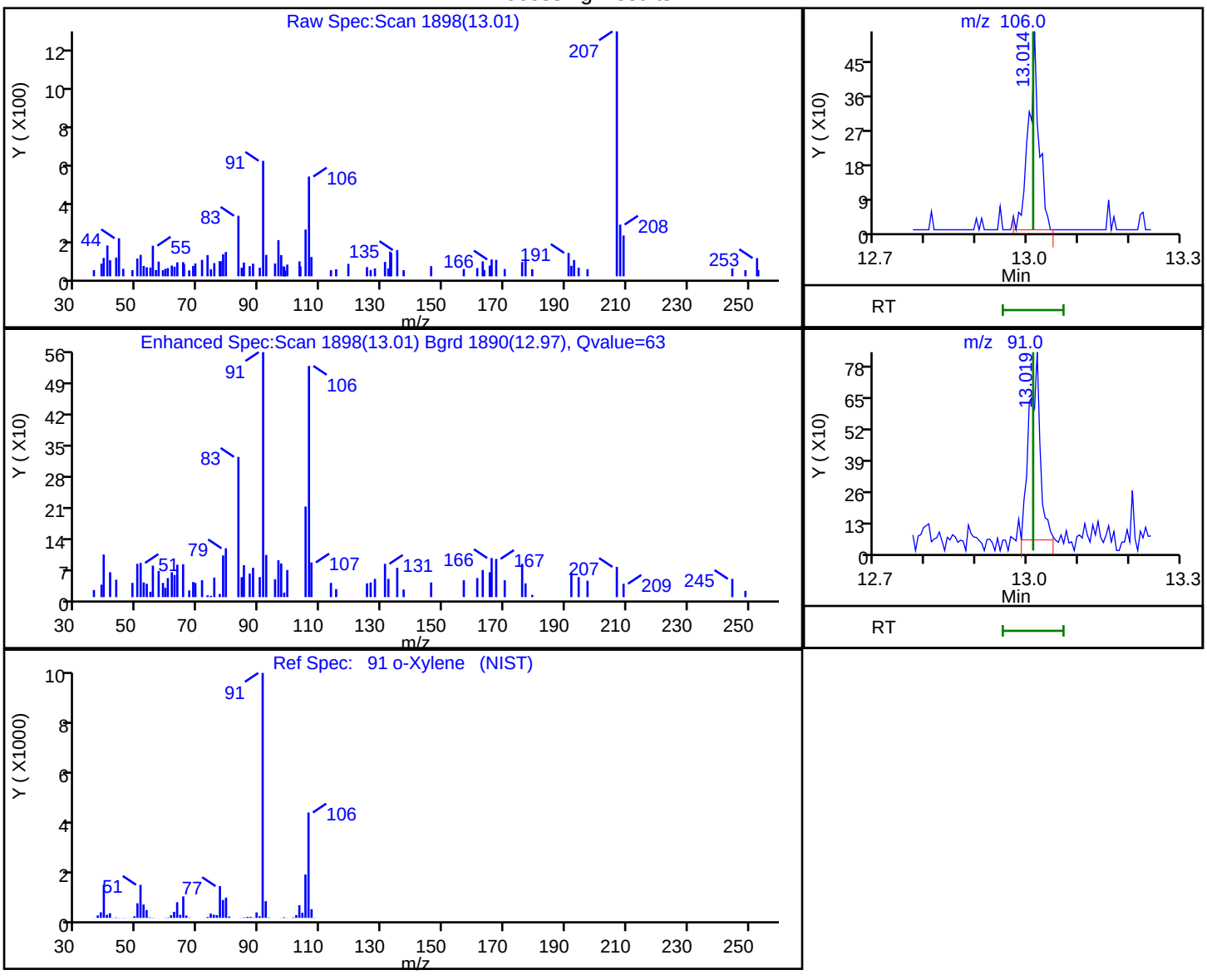
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

91 o-Xylene, CAS: 95-47-6

Processing Results



RT	Mass	Response	Amount
13.01	106.00	731	-0.098803
13.02	91.00	1182	

Reviewer: brennanr, 31-Oct-2018 11:26:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

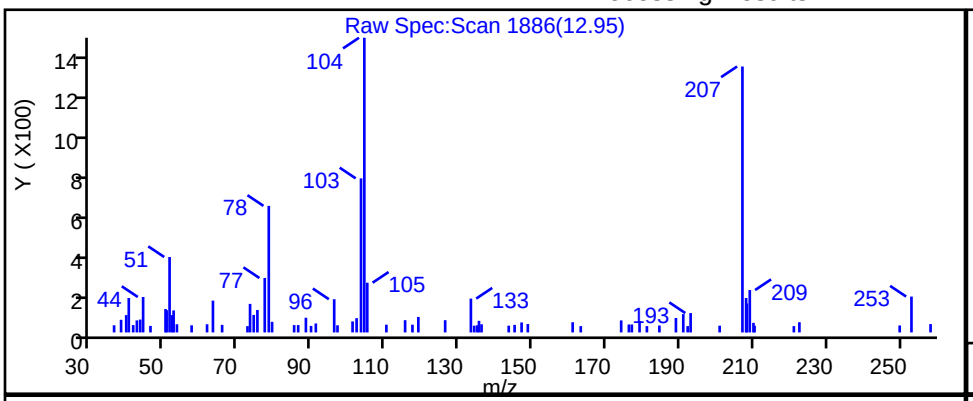
User Disabled Compound Report

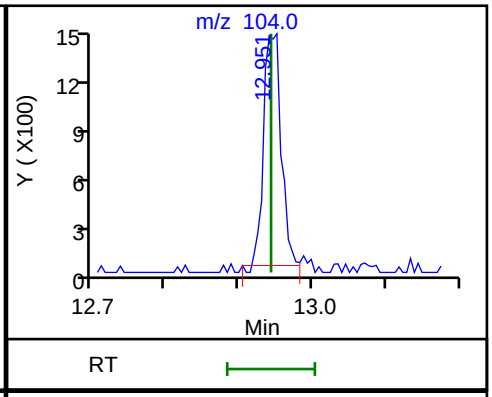
TestAmerica Seattle

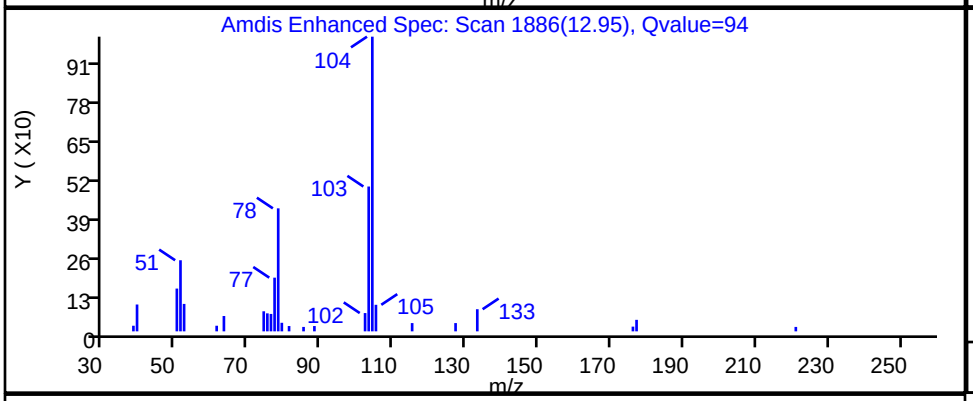
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

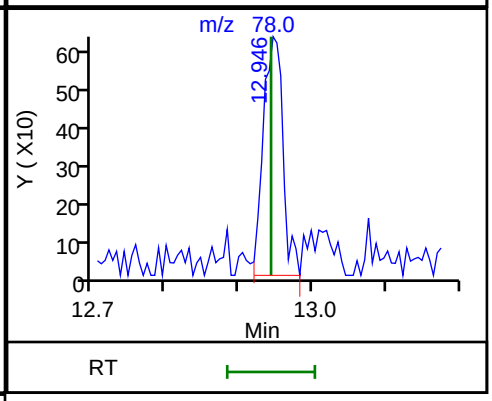
90 Styrene, CAS: 100-42-5

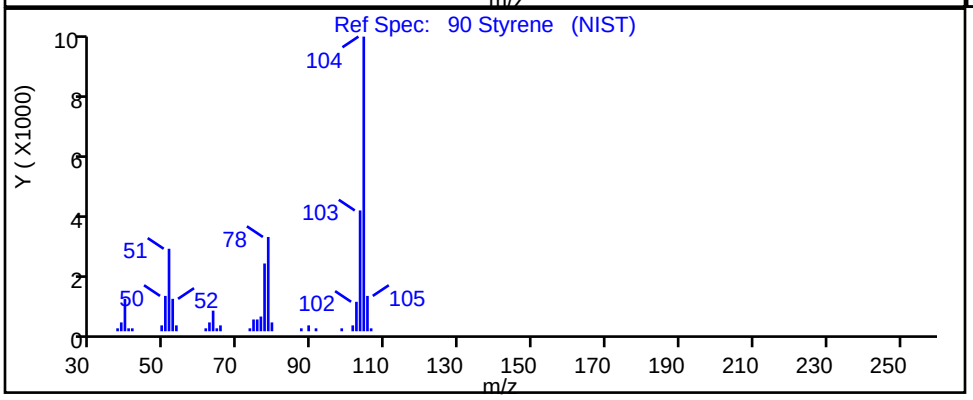
Processing Results











RT	Mass	Response	Amount
12.95	104.00	2320	-0.121707
12.95	78.00	1193	

Reviewer: brennanr, 31-Oct-2018 11:26:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

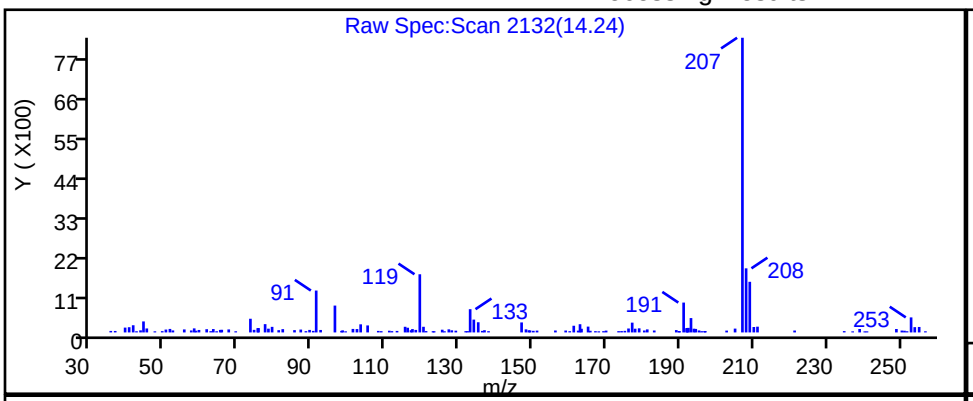
User Disabled Compound Report

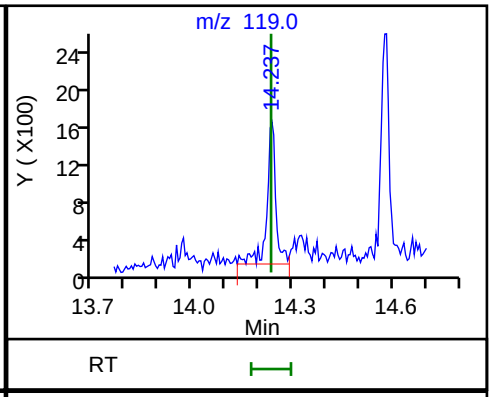
TestAmerica Seattle

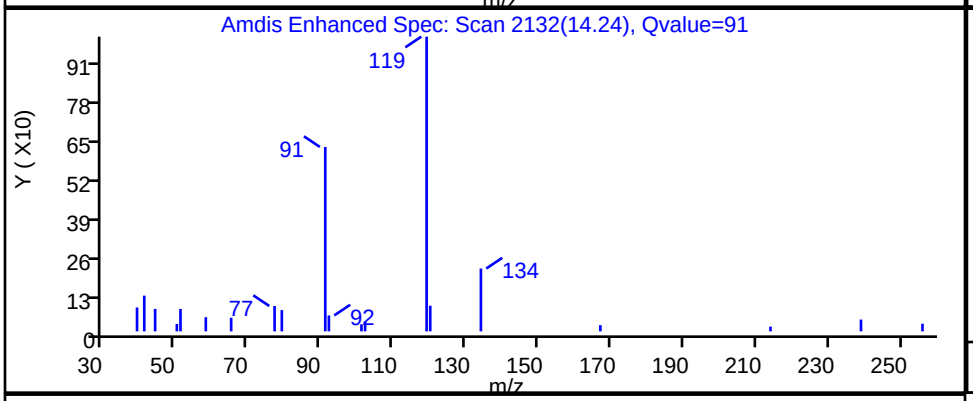
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

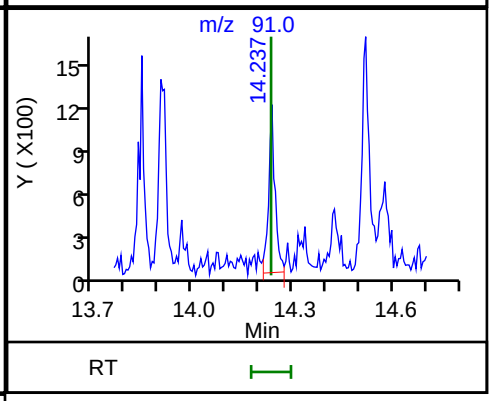
104 tert-Butylbenzene, CAS: 98-06-6

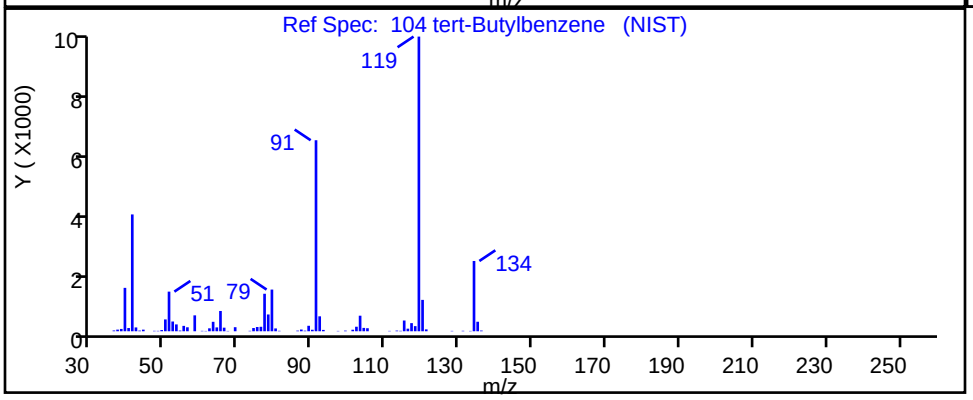
Processing Results











RT	Mass	Response	Amount
14.24	119.00	2785	-0.011187
14.24	91.00	1502	

Reviewer: brennanr, 31-Oct-2018 11:26:33
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

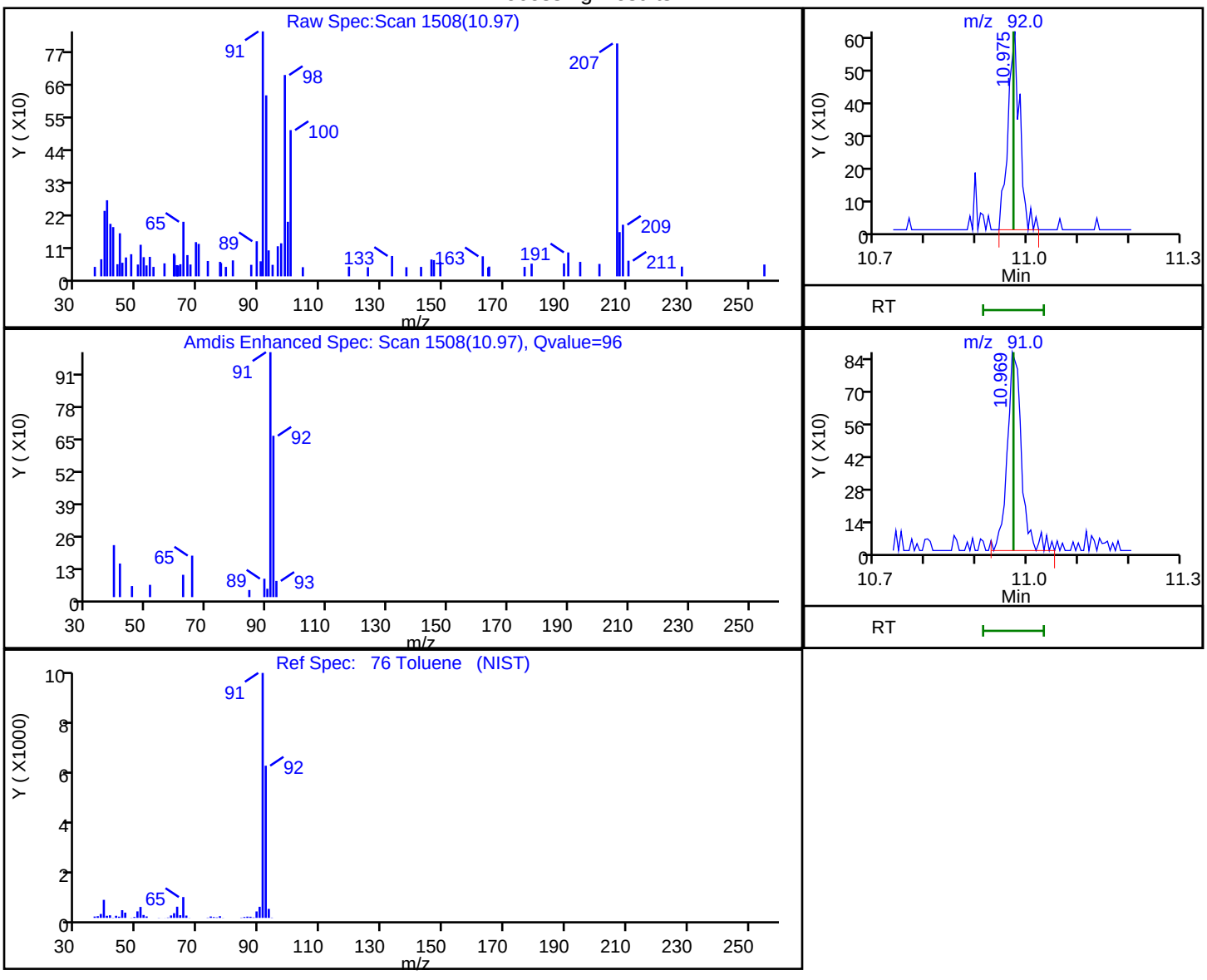
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

76 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
10.97	92.00	989	-0.022529
10.97	91.00	1704	

Reviewer: brennanr, 31-Oct-2018 11:25:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

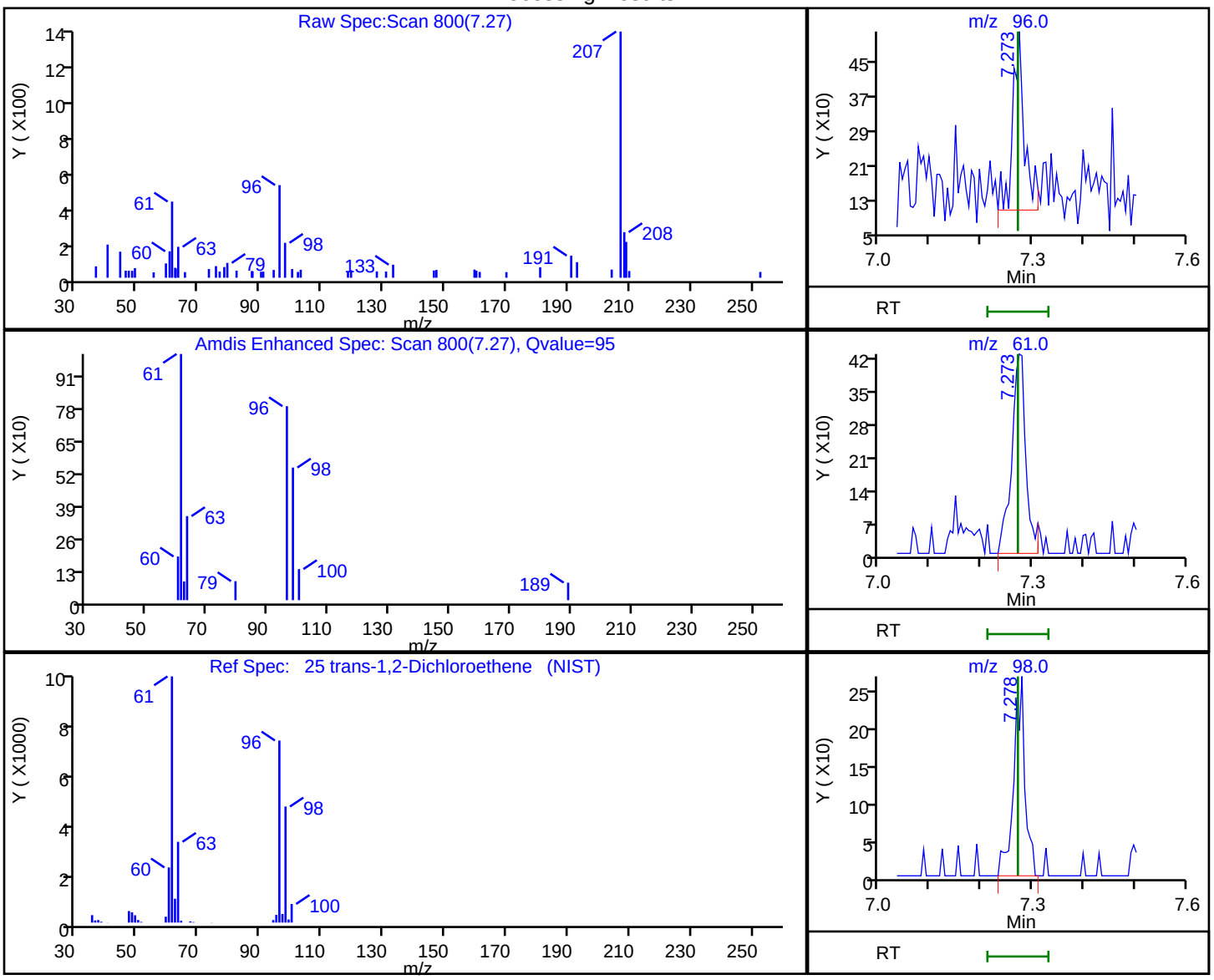
User Disabled Compound Report

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018113.D
Injection Date: 30-Oct-2018 20:38:30 Instrument ID: SEA102
Lims ID: MB
Client ID:
Operator ID: DSO ALS Bottle#: 13 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

25 trans-1,2-Dichloroethene, CAS: 156-60-5

Processing Results



RT	Mass	Response	Amount
7.27	96.00	653	-0.006199
7.27	61.00	819	
7.28	98.00	405	

Reviewer: brennanr, 31-Oct-2018 11:24:28
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 580-287774/25

Matrix: Water | Lab File ID: J3018114.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 21:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	9.79		2.0	0.50	0.18
71-55-6	1,1,1-Trichloroethane	9.92		3.0	0.50	0.14
79-34-5	1,1,2,2-Tetrachloroethane	9.60		3.0	2.0	0.52
79-00-5	1,1,2-Trichloroethane	9.60		1.0	0.50	0.24
75-34-3	1,1-Dichloroethane	10.0		2.0	0.50	0.22
75-35-4	1,1-Dichloroethene	10.5		4.0	2.0	0.78
563-58-6	1,1-Dichloropropene	9.75		3.0	1.0	0.29
87-61-6	1,2,3-Trichlorobenzene	9.57		5.0	1.0	0.46
96-18-4	1,2,3-Trichloropropane	9.45		2.0	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	9.75		2.0	1.0	0.33
95-63-6	1,2,4-Trimethylbenzene	9.67		3.0	2.0	0.61
96-12-8	1,2-Dibromo-3-Chloropropane	9.15	J	10	6.0	1.8
106-93-4	1,2-Dibromoethane	9.65		2.0	1.0	0.40
95-50-1	1,2-Dichlorobenzene	9.77		2.0	1.0	0.46
107-06-2	1,2-Dichloroethane	9.94		2.0	2.0	0.53
78-87-5	1,2-Dichloropropane	9.99		1.0	0.50	0.18
108-67-8	1,3,5-Trimethylbenzene	9.71		3.0	2.0	0.55
541-73-1	1,3-Dichlorobenzene	9.62		2.0	0.50	0.18
142-28-9	1,3-Dichloropropane	9.90		2.0	1.0	0.35
106-46-7	1,4-Dichlorobenzene	10.0		4.0	2.0	0.98
594-20-7	2,2-Dichloropropane	9.70		3.0	1.0	0.32
78-93-3	2-Butanone (MEK)	46.3		20	10	4.7
95-49-8	2-Chlorotoluene	9.36		3.0	1.0	0.51
591-78-6	2-Hexanone	47.1		20	10	4.0
106-43-4	4-Chlorotoluene	9.88		2.0	1.0	0.51
99-87-6	4-Isopropyltoluene	9.75		3.0	1.0	0.28
108-10-1	4-Methyl-2-pentanone (MIBK)	50.8		15	5.0	2.5
67-64-1	Acetone	47.3	J	50	18	7.8
71-43-2	Benzene	9.92		3.0	2.0	0.53
108-86-1	Bromobenzene	9.66		2.0	0.50	0.18
74-97-5	Bromochloromethane	9.76		2.0	1.0	0.29
75-27-4	Bromodichloromethane	10.2		2.0	0.50	0.14
75-25-2	Bromoform	9.42		3.0	2.0	0.56
74-83-9	Bromomethane	10.4		6.0	3.5	1.1
75-15-0	Carbon disulfide	10.1		3.0	2.0	0.53
56-23-5	Carbon tetrachloride	9.81		3.0	1.0	0.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 580-287774/25

Matrix: Water | Lab File ID: J3018114.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 21:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-90-7	Chlorobenzene	9.95		2.0	1.0	0.44
75-00-3	Chloroethane	10.4		5.0	3.5	1.1
67-66-3	Chloroform	10.2		5.0	1.0	0.50
74-87-3	Chloromethane	10.0	J M	20	15	5.4
156-59-2	cis-1,2-Dichloroethene	10.0		3.0	2.0	0.69
10061-01-5	cis-1,3-Dichloropropene	9.66		1.0	0.50	0.20
124-48-1	Dibromochloromethane	9.64		1.0	0.50	0.20
74-95-3	Dibromomethane	9.63		2.0	1.0	0.34
75-71-8	Dichlorodifluoromethane	9.57	J	10	6.0	2.3
108-20-3	Diisopropyl ether	12.4		2.0	1.3	0.35
100-41-4	Ethylbenzene	9.87		3.0	1.0	0.50
87-68-3	Hexachlorobutadiene	9.90		6.0	2.0	0.79
98-82-8	Isopropylbenzene	9.90		2.0	1.0	0.51
179601-23-1	m,p-Xylene	9.99		3.0	2.0	0.75
74-88-4	Methyl iodide	9.89		5.0	0.50	0.24
1634-04-4	Methyl tert-butyl ether	9.63		2.0	1.0	0.44
75-09-2	Methylene Chloride	10.5		5.0	3.5	1.4
91-20-3	Naphthalene	9.60		4.0	2.0	0.93
104-51-8	n-Butylbenzene	9.99		3.0	1.0	0.44
103-65-1	N-Propylbenzene	9.73		3.0	1.0	0.50
95-47-6	o-Xylene	9.99		2.0	0.50	0.15
135-98-8	sec-Butylbenzene	9.69		3.0	1.0	0.49
100-42-5	Styrene	9.41		5.0	1.0	0.51
98-06-6	tert-Butylbenzene	9.83		3.0	2.0	0.58
127-18-4	Tetrachloroethene	9.72		3.0	1.0	0.41
108-88-3	Toluene	9.99		2.0	1.0	0.39
156-60-5	trans-1,2-Dichloroethene	10.3		3.0	1.0	0.39
10061-02-6	trans-1,3-Dichloropropene	9.63		1.0	0.50	0.16
79-01-6	Trichloroethene	9.77		3.0	2.0	0.85
75-69-4	Trichlorofluoromethane	10.2		3.0	2.0	0.63
108-05-4	Vinyl acetate	23.9		5.0	2.5	1.2
75-01-4	Vinyl chloride	10.6		1.0	0.50	0.22
1330-20-7	Xylenes, Total	20.0		3.0	2.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-287774/25

Matrix: Water Lab File ID: J3018114.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 10/30/2018 21:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 287774 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018114.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 30-Oct-2018 21:04:30 ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:28:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85	4.074	4.081	-0.007	99	42852	10.0	9.57	
2 Chloromethane	50	4.367	4.385	-0.018	99	56757	10.0	10.0	a
3 Vinyl chloride	62	4.644	4.651	-0.007	98	59961	10.0	10.6	
4 Butadiene	39	4.723	4.724	-0.001	93	54531	10.0	10.0	
5 Bromomethane	94	5.125	5.132	-0.007	90	38028	10.0	10.4	
6 Chloroethane	64	5.282	5.279	0.004	100	33898	10.0	10.4	
7 Dichlorofluoromethane	67	5.350	5.352	-0.002	97	81273	10.0	9.96	
10 Acrolein	56	5.904	5.906	-0.002	98	39420	60.0	58.4	
12 Acetonitrile	41	5.915	5.916	-0.001	100	59046	125.0	123.0	
11 Trichlorofluoromethane	101	5.956	5.953	0.003	85	56910	10.0	10.2	
14 Isopropyl alcohol	45	5.962	5.963	-0.001	26	24937	100.0	92.4	
13 Acetone	43	6.035	6.037	-0.002	100	68463	50.0	47.3	
15 Ethyl ether	59	6.160	6.162	-0.002	94	29774	10.0	9.69	
* 16 TBA-d9 (IS)	65	6.406	6.413	-0.007	0	144866	390.0	390.0	
17 1,1-Dichloroethene	96	6.484	6.486	-0.002	97	35033	10.0	10.5	
19 2-Methyl-2-propanol	59	6.495	6.497	-0.002	99	37132	100.0	91.2	
18 Acrylonitrile	52	6.526	6.528	-0.002	98	105488	100.0	99.0	
20 Iodomethane	142	6.542	6.544	-0.002	97	67411	10.0	9.89	
21 Methylene Chloride	84	6.631	6.633	-0.002	94	44494	10.0	10.5	
22 Methyl acetate	43	6.657	6.659	-0.002	99	48080	20.0	18.7	
23 1,1,2-Trichloro-1,2,2-trif	151	6.683	6.685	-0.002	90	33166	10.0	10.1	
9 3-Chloro-1-propene	76	6.715	6.716	-0.001	90	19789	10.0	9.41	
24 Carbon disulfide	76	6.882	6.884	-0.002	99	126028	10.0	10.1	
25 trans-1,2-Dichloroethene	96	7.269	7.270	-0.001	99	38032	10.0	10.3	
26 Methyl tert-butyl ether	73	7.358	7.359	-0.001	97	96889	10.0	9.63	
29 Propionitrile	54	7.488	7.490	-0.002	99	58322	125.0	116.9	
28 1,1-Dichloroethane	63	7.499	7.495	0.004	96	66821	10.0	10.0	
30 Vinyl acetate	86	7.588	7.584	0.004	100	16282	25.0	23.9	
31 2-Chloro-1,3-butadiene	53	7.823	7.819	0.004	92	64883	10.0	10.2	
32 Hexane	57	7.839	7.840	-0.001	81	57095	10.0	9.99	
34 2-Butanone (MEK)	72	7.859	7.856	0.003	96	20672	50.0	46.3	
33 Isopropyl ether	45	7.859	7.861	-0.002	87	151812	12.5	12.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
35 Methacrylonitrile	66	7.948	7.955	-0.007	94	46119	100.0	94.2	
36 cis-1,2-Dichloroethene	96	8.006	8.008	-0.002	79	42482	10.0	10.0	
40 Ethyl acetate	43	8.126	8.123	0.003	99	58269	20.0	18.7	
37 Chlorobromomethane	128	8.152	8.154	-0.002	93	21458	10.0	9.76	
38 Chloroform	83	8.184	8.185	-0.001	94	65046	10.0	10.2	
39 Tert-butyl ethyl ether	59	8.205	8.206	-0.002	98	143264	12.5	11.9	
41 Isobutyl alcohol	43	8.236	8.232	0.004	96	53470	250.0	225.8	
42 2,2-Dichloropropane	77	8.252	8.253	-0.001	90	49068	10.0	9.70	
$ 43 Dibromofluoromethane (Surr	113	8.288	8.290	-0.002	94	75602	19.5	19.5	
44 Tetrahydrofuran	42	8.466	8.468	-0.002	89	19522	20.0	18.6	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.675	8.677	-0.002	0	83730	19.5	19.6	
46 1,2-Dichloroethane	62	8.738	8.745	-0.007	97	50024	10.0	9.94	
47 1,1,1-Trichloroethane	97	8.827	8.828	-0.001	98	58630	10.0	9.92	
49 n-Butanol	56	8.842	8.844	-0.002	91	25476	250.0	223.3	
48 1,1-Dichloropropene	75	8.973	8.975	-0.002	95	52360	10.0	9.75	
50 Cyclohexane	84	9.072	9.074	-0.002	92	57704	10.0	10.1	
51 Carbon tetrachloride	119	9.140	9.142	-0.002	98	48592	10.0	9.81	
52 Benzene	78	9.166	9.168	-0.002	97	152895	10.0	9.92	
53 Tert-amyl methyl ether	73	9.261	9.262	-0.001	97	128516	12.5	11.8	
* 54 Fluorobenzene (IS)	96	9.329	9.325	0.004	99	297315	19.5	19.5	
56 Ethyl acrylate	55	9.543	9.545	-0.002	98	43989	10.0	9.33	
57 n-Heptane	43	9.553	9.555	-0.002	93	45537	10.0	9.46	
58 Dibromomethane	93	9.642	9.639	0.003	87	22204	10.0	9.63	
59 1,2-Dichloropropane	63	9.653	9.654	-0.001	93	37281	10.0	9.99	
60 2-Nitropropane	43	9.674	9.675	-0.001	89	19575	20.0	17.2	
61 Trichloroethene	130	9.684	9.686	-0.002	94	44066	10.0	9.77	
62 Dichlorobromomethane	83	9.736	9.738	-0.002	100	51820	10.0	10.2	
63 Methyl methacrylate	41	9.794	9.796	-0.002	96	57588	20.0	18.0	
$ 64 Trifluorotoluene (Surr)	146	9.830	9.827	0.003	87	155559	20.0	19.8	
65 2-Chloroethyl vinyl ether	43	10.040	10.036	0.004	93	12386	10.0	9.05	
66 Methylcyclohexane	83	10.134	10.135	-0.001	92	63713	10.0	10.1	
67 cis-1,3-Dichloropropene	75	10.264	10.266	-0.002	94	58347	10.0	9.66	
68 4-Methyl-2-pentanone (MIBK	43	10.332	10.334	-0.002	97	156655	50.0	50.8	
69 trans-1,3-Dichloropropene	75	10.641	10.642	-0.001	95	52203	10.0	9.63	
71 1,1,2-Trichloroethane	97	10.803	10.805	-0.001	90	29839	10.0	9.60	
S 70 Xylenes, Total	106				0		20.0	10.0	
$ 73 Toluene-d8 (Surr)	98	10.902	10.904	-0.002	93	284143	19.5	19.4	
75 Ethyl methacrylate	69	10.960	10.961	-0.001	91	36817	10.0	9.11	
76 Toluene	92	10.970	10.972	-0.002	98	94458	10.0	9.99	
77 1,3-Dichloropropane	76	11.017	11.014	0.003	92	51382	10.0	9.90	
78 2-Hexanone	58	11.106	11.103	0.004	97	61059	50.0	47.1	
79 Chlorodibromomethane	129	11.294	11.296	-0.002	90	37656	10.0	9.64	
80 n-Butyl acetate	43	11.367	11.369	-0.002	98	47839	10.0	9.78	
81 Ethylene Dibromide	107	11.524	11.526	-0.002	98	31059	10.0	9.65	
82 Tetrachloroethene	164	11.660	11.662	-0.002	97	35947	10.0	9.72	
84 1,1,1,2-Tetrachloroethane	131	12.220	12.221	-0.001	92	40160	10.0	9.79	
* 85 Chlorobenzene-d5	82	12.261	12.263	-0.002	85	122043	19.5	19.5	
86 Chlorobenzene	112	12.298	12.300	-0.002	95	106649	10.0	9.95	
87 Ethylbenzene	106	12.455	12.457	-0.002	98	56069	10.0	9.87	
88 m-Xylene & p-Xylene	91	12.627	12.624	0.003	67	136450	10.0	9.99	
89 Bromoform	173	12.800	12.802	-0.002	99	26474	10.0	9.42	
90 Styrene	104	12.941	12.943	-0.002	95	111741	10.0	9.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
91 o-Xylene	106	13.009	13.011	-0.002	97	72087	10.0	10.0	
92 1,1,2,2-Tetrachloroethane	83	13.014	13.016	-0.002	95	38962	10.0	9.60	
93 trans-1,4-Dichloro-2-buten	53	13.140	13.141	-0.001	78	10894	10.0	9.26	
94 1,2,3-Trichloropropane	110	13.150	13.152	-0.002	86	11788	10.0	9.45	
96 Isopropylbenzene	105	13.338	13.340	-0.002	95	182465	10.0	9.90	
$ 97 4-Bromofluorobenzene (Surr	95	13.396	13.392	0.004	96	107127	19.5	19.1	
98 Bromobenzene	156	13.605	13.607	-0.002	89	50031	10.0	9.66	
99 N-Propylbenzene	120	13.730	13.732	-0.002	99	51457	10.0	9.73	
100 2-Chlorotoluene	126	13.840	13.842	-0.002	97	45178	10.0	9.36	
101 4-Chlorotoluene	91	13.903	13.905	-0.002	97	133805	10.0	9.88	
102 1,3,5-Trimethylbenzene	105	13.971	13.967	0.004	96	159994	10.0	9.71	
104 tert-Butylbenzene	119	14.238	14.234	0.004	93	139708	10.0	9.83	
105 1,2,4-Trimethylbenzene	105	14.321	14.323	-0.002	97	167177	10.0	9.67	
106 sec-Butylbenzene	105	14.426	14.428	-0.002	94	198227	10.0	9.69	
107 Benzyl chloride	91	14.520	14.522	-0.002	99	84006	10.0	9.07	
108 1,3-Dichlorobenzene	146	14.525	14.527	-0.002	99	100765	10.0	9.62	
* 109 1,4-Dichlorobenzene-d4	152	14.557	14.558	-0.001	94	139691	19.5	19.5	
110 4-Isopropyltoluene	119	14.577	14.579	-0.002	98	180364	10.0	9.75	
111 1,4-Dichlorobenzene	146	14.583	14.584	-0.001	97	102513	10.0	10.0	
112 1,2,3-Trimethylbenzene	105	14.719	14.720	-0.001	98	175483	10.0	9.48	
113 1,2-Dichlorobenzene	146	14.912	14.914	-0.002	99	99318	10.0	9.77	
114 n-Butylbenzene	91	14.954	14.950	0.004	97	149441	10.0	10.0	
116 1,2-Dibromo-3-Chloropropan	157	15.351	15.353	-0.002	90	11756	10.0	9.15	
117 1,3,5-Trichlorobenzene	180	16.141	16.142	-0.001	97	85760	10.0	10.1	
118 1,2,4-Trichlorobenzene	180	16.710	16.707	0.003	94	81653	10.0	9.75	
119 Naphthalene	128	16.998	16.994	0.004	97	175059	10.0	9.60	
120 Hexachlorobutadiene	190	17.019	17.021	-0.002	91	15160	10.0	9.90	
121 1,2,3-Trichlorobenzene	180	17.223	17.224	-0.001	95	76451	10.0	9.57	
$ 125 BFB	95	13.396	13.390	0.006	95	107294	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

a - User Assigned ID

Reagents:

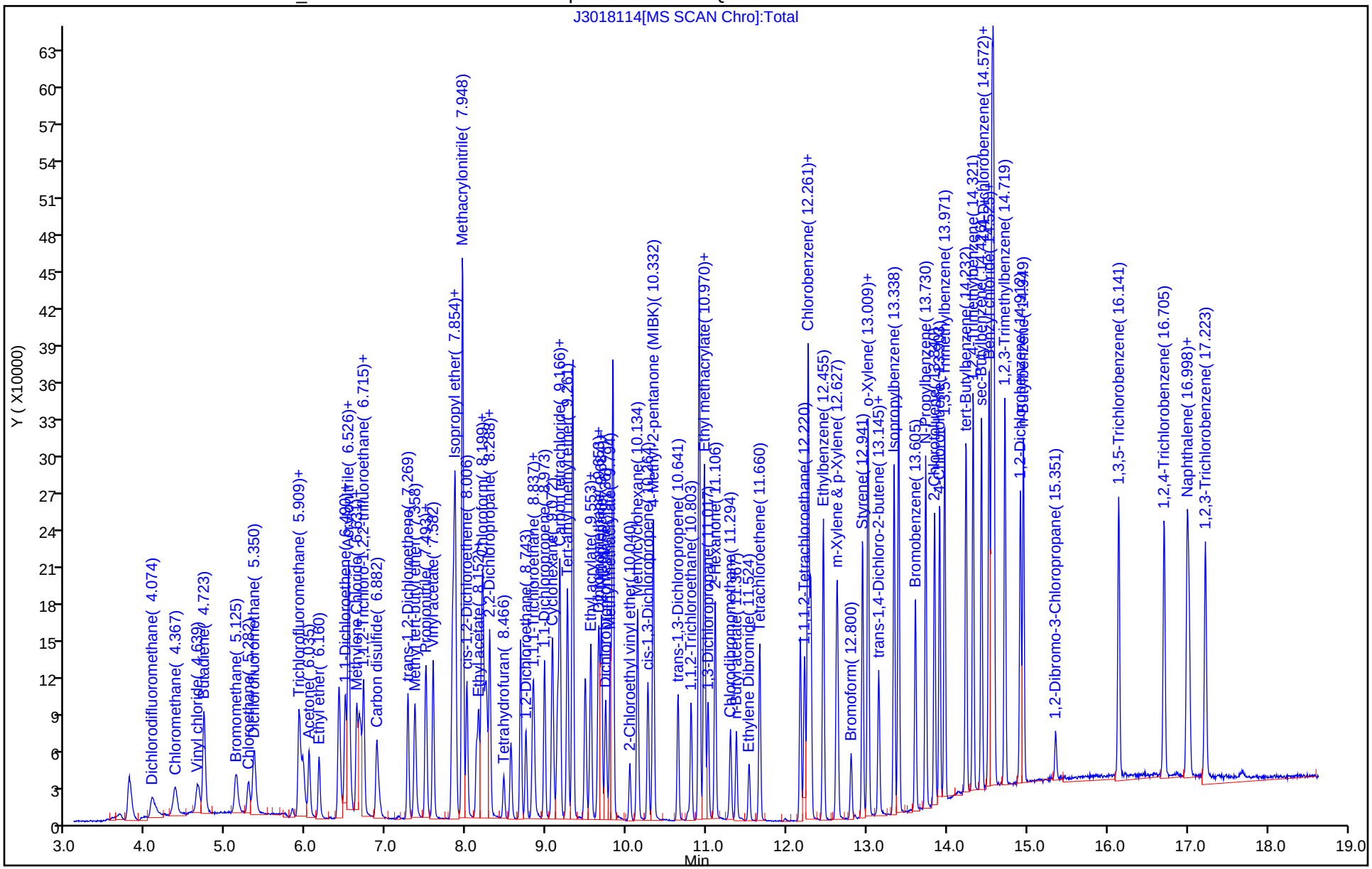
VOAMasterMix_00027	Amount Added: 10.00	Units: uL	
5X SUR/IS/TFT_00006	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 31-Oct-2018 12:00:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018114.D

Injection Date:	30-Oct-2018 21:04:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	LCS			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Recovery Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018114.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 30-Oct-2018 21:04:30 ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:28:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 43 Dibromofluoromethane (Surr)	19.5	19.5	100.11
$ 45 1,2-Dichloroethane-d4 (Surr)	19.5	19.6	100.65
$ 64 Trifluorotoluene (Surr)	20.0	19.8	98.83
$ 73 Toluene-d8 (Surr)	19.5	19.4	99.33
$ 97 4-Bromofluorobenzene (Surr)	19.5	19.1	98.09
$ 125 BFB	19.5	0	0.00

Manual Integration/User Assign Peak Report

TestAmerica Seattle

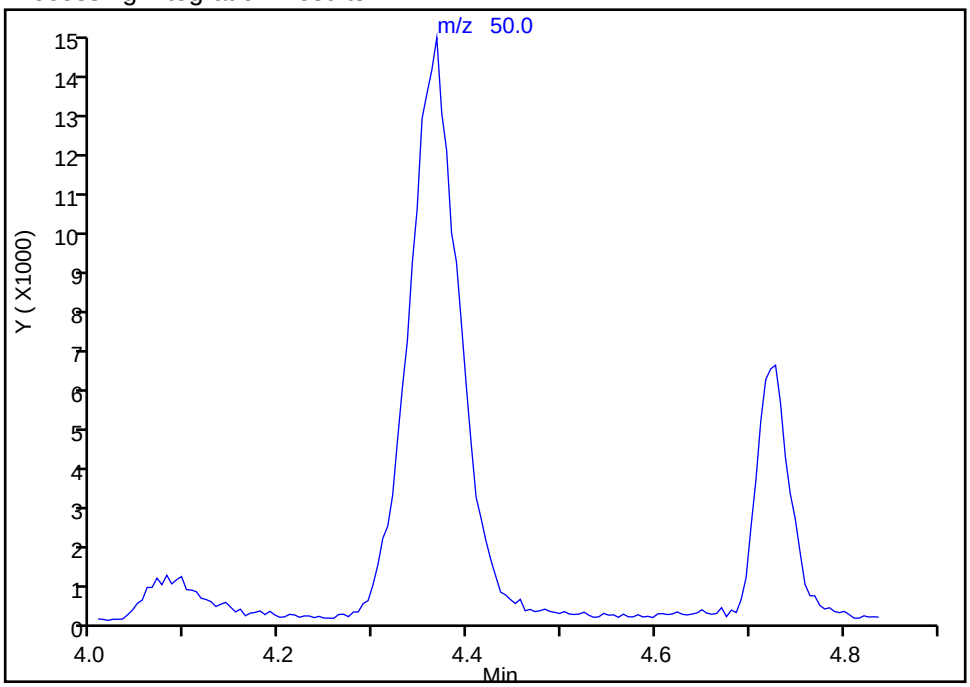
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018114.D
Injection Date: 30-Oct-2018 21:04:30 Instrument ID: SEA102
Lims ID: LCS
Client ID:
Operator ID: DSO ALS Bottle#: 14 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

2 Chloromethane, CAS: 74-87-3

Signal: 1

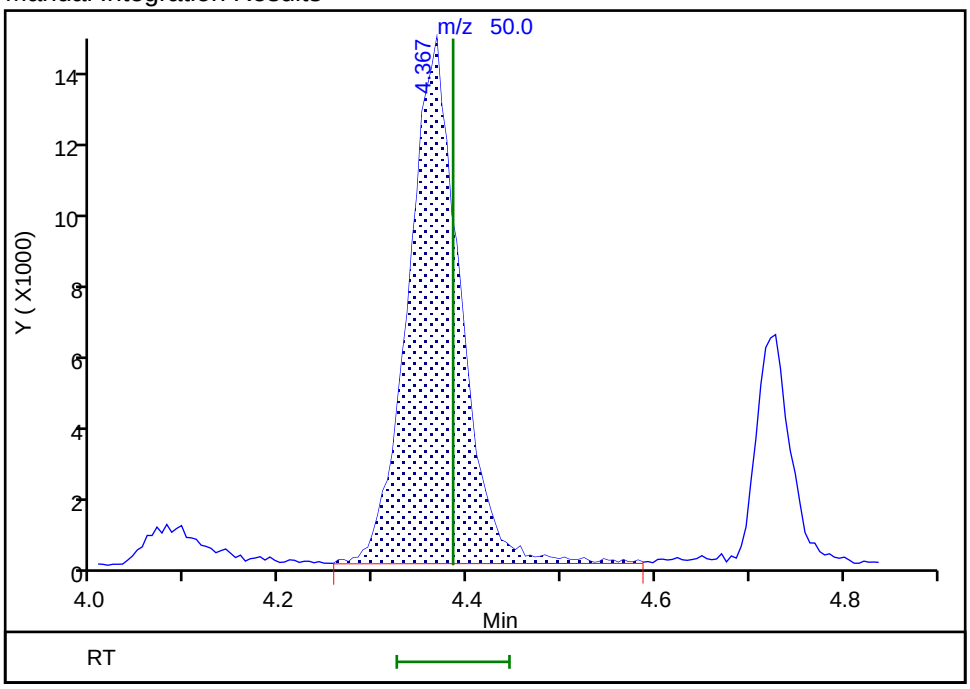
Not Detected
Expected RT: 4.38

Processing Integration Results



Manual Integration Results

RT: 4.37
Area: 56757
Amount: 10.035070
Amount Units: ug/L



Reviewer: brennanr, 31-Oct-2018 11:27:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 580-287774/26

Matrix: Water | Lab File ID: J3018115.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 21:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	9.56		2.0	0.50	0.18
71-55-6	1,1,1-Trichloroethane	9.66		3.0	0.50	0.14
79-34-5	1,1,2,2-Tetrachloroethane	9.49		3.0	2.0	0.52
79-00-5	1,1,2-Trichloroethane	9.90		1.0	0.50	0.24
75-34-3	1,1-Dichloroethane	9.42		2.0	0.50	0.22
75-35-4	1,1-Dichloroethene	10.0		4.0	2.0	0.78
563-58-6	1,1-Dichloropropene	9.42		3.0	1.0	0.29
87-61-6	1,2,3-Trichlorobenzene	9.33		5.0	1.0	0.46
96-18-4	1,2,3-Trichloropropane	9.68		2.0	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	9.52		2.0	1.0	0.33
95-63-6	1,2,4-Trimethylbenzene	9.27		3.0	2.0	0.61
96-12-8	1,2-Dibromo-3-Chloropropane	9.06	J	10	6.0	1.8
106-93-4	1,2-Dibromoethane	9.92		2.0	1.0	0.40
95-50-1	1,2-Dichlorobenzene	9.46		2.0	1.0	0.46
107-06-2	1,2-Dichloroethane	9.98		2.0	2.0	0.53
78-87-5	1,2-Dichloropropane	9.56		1.0	0.50	0.18
108-67-8	1,3,5-Trimethylbenzene	9.22		3.0	2.0	0.55
541-73-1	1,3-Dichlorobenzene	9.78		2.0	0.50	0.18
142-28-9	1,3-Dichloropropane	10.2		2.0	1.0	0.35
106-46-7	1,4-Dichlorobenzene	9.75		4.0	2.0	0.98
594-20-7	2,2-Dichloropropane	9.17		3.0	1.0	0.32
78-93-3	2-Butanone (MEK)	50.5		20	10	4.7
95-49-8	2-Chlorotoluene	9.44		3.0	1.0	0.51
591-78-6	2-Hexanone	54.0		20	10	4.0
106-43-4	4-Chlorotoluene	9.57		2.0	1.0	0.51
99-87-6	4-Isopropyltoluene	9.21		3.0	1.0	0.28
108-10-1	4-Methyl-2-pentanone (MIBK)	52.5		15	5.0	2.5
67-64-1	Acetone	52.8		50	18	7.8
71-43-2	Benzene	9.32		3.0	2.0	0.53
108-86-1	Bromobenzene	9.48		2.0	0.50	0.18
74-97-5	Bromochloromethane	9.59		2.0	1.0	0.29
75-27-4	Bromodichloromethane	9.60		2.0	0.50	0.14
75-25-2	Bromoform	9.66		3.0	2.0	0.56
74-83-9	Bromomethane	9.64		6.0	3.5	1.1
75-15-0	Carbon disulfide	9.93		3.0	2.0	0.53
56-23-5	Carbon tetrachloride	9.58		3.0	1.0	0.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle | Job No.: 280-115988-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 580-287774/26

Matrix: Water | Lab File ID: J3018115.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 10/30/2018 21:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-VRX ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 287774 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-90-7	Chlorobenzene	9.88		2.0	1.0	0.44
75-00-3	Chloroethane	9.87		5.0	3.5	1.1
67-66-3	Chloroform	9.61		5.0	1.0	0.50
74-87-3	Chloromethane	9.58	J	20	15	5.4
156-59-2	cis-1,2-Dichloroethene	9.47		3.0	2.0	0.69
10061-01-5	cis-1,3-Dichloropropene	9.47		1.0	0.50	0.20
124-48-1	Dibromochloromethane	9.76		1.0	0.50	0.20
74-95-3	Dibromomethane	9.76		2.0	1.0	0.34
75-71-8	Dichlorodifluoromethane	9.17	J	10	6.0	2.3
108-20-3	Diisopropyl ether	12.5		2.0	1.3	0.35
100-41-4	Ethylbenzene	9.87		3.0	1.0	0.50
87-68-3	Hexachlorobutadiene	9.77		6.0	2.0	0.79
98-82-8	Isopropylbenzene	9.72		2.0	1.0	0.51
179601-23-1	m,p-Xylene	9.87		3.0	2.0	0.75
74-88-4	Methyl iodide	9.94		5.0	0.50	0.24
1634-04-4	Methyl tert-butyl ether	9.74		2.0	1.0	0.44
75-09-2	Methylene Chloride	10.6		5.0	3.5	1.4
91-20-3	Naphthalene	9.58		4.0	2.0	0.93
104-51-8	n-Butylbenzene	9.48		3.0	1.0	0.44
103-65-1	N-Propylbenzene	9.34		3.0	1.0	0.50
95-47-6	o-Xylene	9.60		2.0	0.50	0.15
135-98-8	sec-Butylbenzene	9.21		3.0	1.0	0.49
100-42-5	Styrene	9.37		5.0	1.0	0.51
98-06-6	tert-Butylbenzene	9.49		3.0	2.0	0.58
127-18-4	Tetrachloroethene	9.72		3.0	1.0	0.41
108-88-3	Toluene	9.87		2.0	1.0	0.39
156-60-5	trans-1,2-Dichloroethene	9.88		3.0	1.0	0.39
10061-02-6	trans-1,3-Dichloropropene	9.67		1.0	0.50	0.16
79-01-6	Trichloroethene	9.42		3.0	2.0	0.85
75-69-4	Trichlorofluoromethane	9.53	M	3.0	2.0	0.63
108-05-4	Vinyl acetate	22.0		5.0	2.5	1.2
75-01-4	Vinyl chloride	9.89		1.0	0.50	0.22
1330-20-7	Xylenes, Total	19.5		3.0	2.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-287774/26

Matrix: Water Lab File ID: J3018115.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 10/30/2018 21:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 287774 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Seattle
Target Compound Quantitation Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018115.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 30-Oct-2018 21:30:30 ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:29:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85	4.082	4.081	0.001	100	42478	10.0	9.17	
2 Chloromethane	50	4.375	4.385	-0.010	99	54420	10.0	9.58	
3 Vinyl chloride	62	4.662	4.651	0.011	98	58057	10.0	9.89	
4 Butadiene	39	4.730	4.724	0.006	95	54177	10.0	9.91	
5 Bromomethane	94	5.138	5.132	0.006	90	36514	10.0	9.64	
6 Chloroethane	64	5.284	5.279	0.006	99	32418	10.0	9.87	
7 Dichlorofluoromethane	67	5.358	5.352	0.006	97	80483	10.0	9.82	
10 Acrolein	56	5.907	5.906	0.001	97	39822	60.0	58.7	
12 Acetonitrile	41	5.922	5.916	0.006	100	65749	125.0	136.8	
11 Trichlorofluoromethane	101	5.964	5.953	0.011	73	55122	10.0	9.53	a
14 Isopropyl alcohol	45	5.964	5.963	0.001	28	27939	100.0	103.8	
13 Acetone	43	6.037	6.037	0.000	99	76348	50.0	52.8	
15 Ethyl ether	59	6.163	6.162	0.001	94	28872	10.0	9.35	
* 16 TBA-d9 (IS)	65	6.408	6.413	-0.005	0	159154	390.0	390.0	
17 1,1-Dichloroethene	96	6.487	6.486	0.001	96	34390	10.0	10.0	
19 2-Methyl-2-propanol	59	6.492	6.497	-0.005	84	42185	100.0	104.3	
18 Acrylonitrile	52	6.529	6.528	0.001	99	108275	100.0	101.3	
20 Iodomethane	142	6.539	6.544	-0.005	96	68003	10.0	9.94	
21 Methylene Chloride	84	6.633	6.633	0.000	94	45282	10.0	10.6	
22 Methyl acetate	43	6.659	6.659	0.000	98	49555	20.0	19.2	
23 1,1,2-Trichloro-1,2,2-trif	151	6.680	6.685	-0.005	90	33226	10.0	9.62	
9 3-Chloro-1-propene	76	6.717	6.716	0.001	91	20496	10.0	9.43	
24 Carbon disulfide	76	6.889	6.884	0.005	99	124825	10.0	9.93	
25 trans-1,2-Dichloroethene	96	7.271	7.270	0.001	98	36605	10.0	9.88	
26 Methyl tert-butyl ether	73	7.360	7.359	0.001	97	98370	10.0	9.74	
29 Propionitrile	54	7.491	7.490	0.001	99	64561	125.0	129.3	
28 1,1-Dichloroethane	63	7.496	7.495	0.001	97	65012	10.0	9.42	
30 Vinyl acetate	86	7.585	7.584	0.001	100	15051	25.0	22.0	
31 2-Chloro-1,3-butadiene	53	7.820	7.819	0.001	92	61513	10.0	9.24	
32 Hexane	57	7.836	7.840	-0.004	95	55796	10.0	9.72	
34 2-Butanone (MEK)	72	7.857	7.856	0.001	96	23135	50.0	50.5	
33 Isopropyl ether	45	7.862	7.861	0.001	87	153016	12.5	12.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
35 Methacrylonitrile	66	7.951	7.955	-0.004	94	49765	100.0	101.4	
36 cis-1,2-Dichloroethene	96	8.003	8.008	-0.005	81	41449	10.0	9.47	
40 Ethyl acetate	43	8.123	8.123	0.000	99	65322	20.0	20.9	
37 Chlorobromomethane	128	8.155	8.154	0.001	93	21180	10.0	9.59	
38 Chloroform	83	8.186	8.185	0.001	94	63107	10.0	9.61	
39 Tert-butyl ethyl ether	59	8.207	8.206	0.001	98	144525	12.5	11.9	
41 Isobutyl alcohol	43	8.233	8.232	0.001	95	60948	250.0	258.1	
42 2,2-Dichloropropane	77	8.254	8.253	0.001	86	46598	10.0	9.17	
$ 43 Dibromofluoromethane (Surr	113	8.291	8.290	0.001	95	74681	19.5	19.2	
44 Tetrahydrofuran	42	8.468	8.468	0.000	88	20600	20.0	19.6	
$ 45 1,2-Dichloroethane-d4 (Sur	65	8.677	8.677	0.000	0	84417	19.5	19.7	
46 1,2-Dichloroethane	62	8.745	8.745	0.000	97	50397	10.0	9.98	
47 1,1,1-Trichloroethane	97	8.829	8.828	0.001	98	57354	10.0	9.66	
49 n-Butanol	56	8.845	8.844	0.001	91	29910	250.0	264.4	
48 1,1-Dichloropropene	75	8.975	8.975	0.000	95	50802	10.0	9.42	
50 Cyclohexane	84	9.070	9.074	-0.004	92	55821	10.0	9.44	
51 Carbon tetrachloride	119	9.137	9.142	-0.005	98	47637	10.0	9.58	
52 Benzene	78	9.164	9.168	-0.004	96	148627	10.0	9.32	
53 Tert-amyl methyl ether	73	9.258	9.262	-0.004	98	129292	12.5	11.8	
* 54 Fluorobenzene (IS)	96	9.326	9.325	0.001	99	298570	19.5	19.5	
56 Ethyl acrylate	55	9.545	9.545	0.000	98	49168	10.0	10.4	
57 n-Heptane	43	9.550	9.555	-0.005	94	47189	10.0	9.76	
58 Dibromomethane	93	9.639	9.639	0.000	90	22598	10.0	9.76	
59 1,2-Dichloropropane	63	9.655	9.654	0.001	93	36945	10.0	9.56	
60 2-Nitropropane	43	9.671	9.675	-0.004	98	22544	20.0	19.8	
61 Trichloroethene	130	9.686	9.686	0.000	95	43979	10.0	9.42	
62 Dichlorobromomethane	83	9.733	9.738	-0.005	99	50478	10.0	9.60	
63 Methyl methacrylate	41	9.791	9.796	-0.005	96	64376	20.0	20.1	
$ 64 Trifluorotoluene (Surr)	146	9.828	9.827	0.001	88	160544	20.0	20.3	
65 2-Chloroethyl vinyl ether	43	10.037	10.036	0.001	94	13913	10.0	9.85	
66 Methylcyclohexane	83	10.136	10.135	0.001	93	62105	10.0	9.51	
67 cis-1,3-Dichloropropene	75	10.267	10.266	0.001	94	59965	10.0	9.47	
68 4-Methyl-2-pentanone (MIBK	43	10.329	10.334	-0.005	97	167008	50.0	52.5	
69 trans-1,3-Dichloropropene	75	10.638	10.642	-0.004	96	54234	10.0	9.67	
71 1,1,2-Trichloroethane	97	10.800	10.805	-0.004	91	31791	10.0	9.90	
S 70 Xylenes, Total	106				0		20.0	9.60	
$ 73 Toluene-d8 (Surr)	98	10.905	10.904	0.001	93	296199	19.5	19.5	
75 Ethyl methacrylate	69	10.962	10.961	0.001	92	40466	10.0	9.71	
76 Toluene	92	10.973	10.972	0.000	97	96490	10.0	9.87	
77 1,3-Dichloropropane	76	11.014	11.014	0.000	93	54530	10.0	10.2	
78 2-Hexanone	58	11.103	11.103	0.001	96	71622	50.0	54.0	
79 Chlorodibromomethane	129	11.297	11.296	0.001	90	39424	10.0	9.76	
80 n-Butyl acetate	43	11.365	11.369	-0.004	99	53451	10.0	10.6	
81 Ethylene Dibromide	107	11.527	11.526	0.001	99	32980	10.0	9.92	
82 Tetrachloroethene	164	11.663	11.662	0.001	97	36130	10.0	9.72	
84 1,1,1,2-Tetrachloroethane	131	12.222	12.221	0.001	94	40607	10.0	9.56	
* 85 Chlorobenzene-d5	82	12.264	12.263	0.001	85	126207	19.5	19.5	
86 Chlorobenzene	112	12.295	12.300	-0.005	95	109623	10.0	9.88	
87 Ethylbenzene	106	12.457	12.457	0.000	98	57964	10.0	9.87	
88 m-Xylene & p-Xylene	91	12.625	12.624	0.001	67	139419	10.0	9.87	
89 Bromoform	173	12.802	12.802	0.000	98	28024	10.0	9.66	
90 Styrene	104	12.943	12.943	0.000	95	115114	10.0	9.37	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
91 o-Xylene	106	13.011	13.011	0.000	97	71701	10.0	9.60	
92 1,1,2,2-Tetrachloroethane	83	13.017	13.016	0.001	95	40377	10.0	9.49	
93 trans-1,4-Dichloro-2-buten	53	13.142	13.141	0.001	76	12066	10.0	9.82	
94 1,2,3-Trichloropropane	110	13.153	13.152	0.001	86	12640	10.0	9.68	
96 Isopropylbenzene	105	13.336	13.340	-0.004	96	185393	10.0	9.72	
$ 97 4-Bromofluorobenzene (Surr	95	13.393	13.392	0.001	96	115140	19.5	19.9	
98 Bromobenzene	156	13.602	13.607	-0.005	90	51427	10.0	9.48	
99 N-Propylbenzene	120	13.733	13.732	0.001	99	51803	10.0	9.34	
100 2-Chlorotoluene	126	13.843	13.842	0.001	97	47747	10.0	9.44	
101 4-Chlorotoluene	91	13.905	13.905	0.000	97	135978	10.0	9.57	
102 1,3,5-Trimethylbenzene	105	13.968	13.967	0.001	96	159314	10.0	9.22	
104 tert-Butylbenzene	119	14.235	14.234	0.001	93	141435	10.0	9.49	
105 1,2,4-Trimethylbenzene	105	14.324	14.323	0.001	97	168181	10.0	9.27	
106 sec-Butylbenzene	105	14.428	14.428	0.000	94	197400	10.0	9.21	
107 Benzyl chloride	91	14.517	14.522	-0.005	98	88024	10.0	9.07	
108 1,3-Dichlorobenzene	146	14.522	14.527	-0.005	99	102792	10.0	9.78	
* 109 1,4-Dichlorobenzene-d4	152	14.559	14.558	0.001	95	146380	19.5	19.5	
110 4-Isopropyltoluene	119	14.575	14.579	-0.004	98	178738	10.0	9.21	
111 1,4-Dichlorobenzene	146	14.585	14.584	0.001	96	104760	10.0	9.75	
112 1,2,3-Trimethylbenzene	105	14.721	14.720	0.001	98	178580	10.0	9.20	
113 1,2-Dichlorobenzene	146	14.914	14.914	0.000	99	100934	10.0	9.46	
114 n-Butylbenzene	91	14.951	14.950	0.001	97	148776	10.0	9.48	
116 1,2-Dibromo-3-Chloropropan	157	15.359	15.353	0.006	86	12202	10.0	9.06	
117 1,3,5-Trichlorobenzene	180	16.143	16.142	0.001	98	85182	10.0	9.51	
118 1,2,4-Trichlorobenzene	180	16.708	16.707	0.001	94	82516	10.0	9.52	
119 Naphthalene	128	16.995	16.994	0.001	96	183013	10.0	9.58	
120 Hexachlorobutadiene	190	17.021	17.021	0.000	92	15696	10.0	9.77	
121 1,2,3-Trichlorobenzene	180	17.225	17.224	0.001	96	78184	10.0	9.33	
$ 125 BFB	95	13.393	13.390	0.003	93	115204	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

a - User Assigned ID

Reagents:

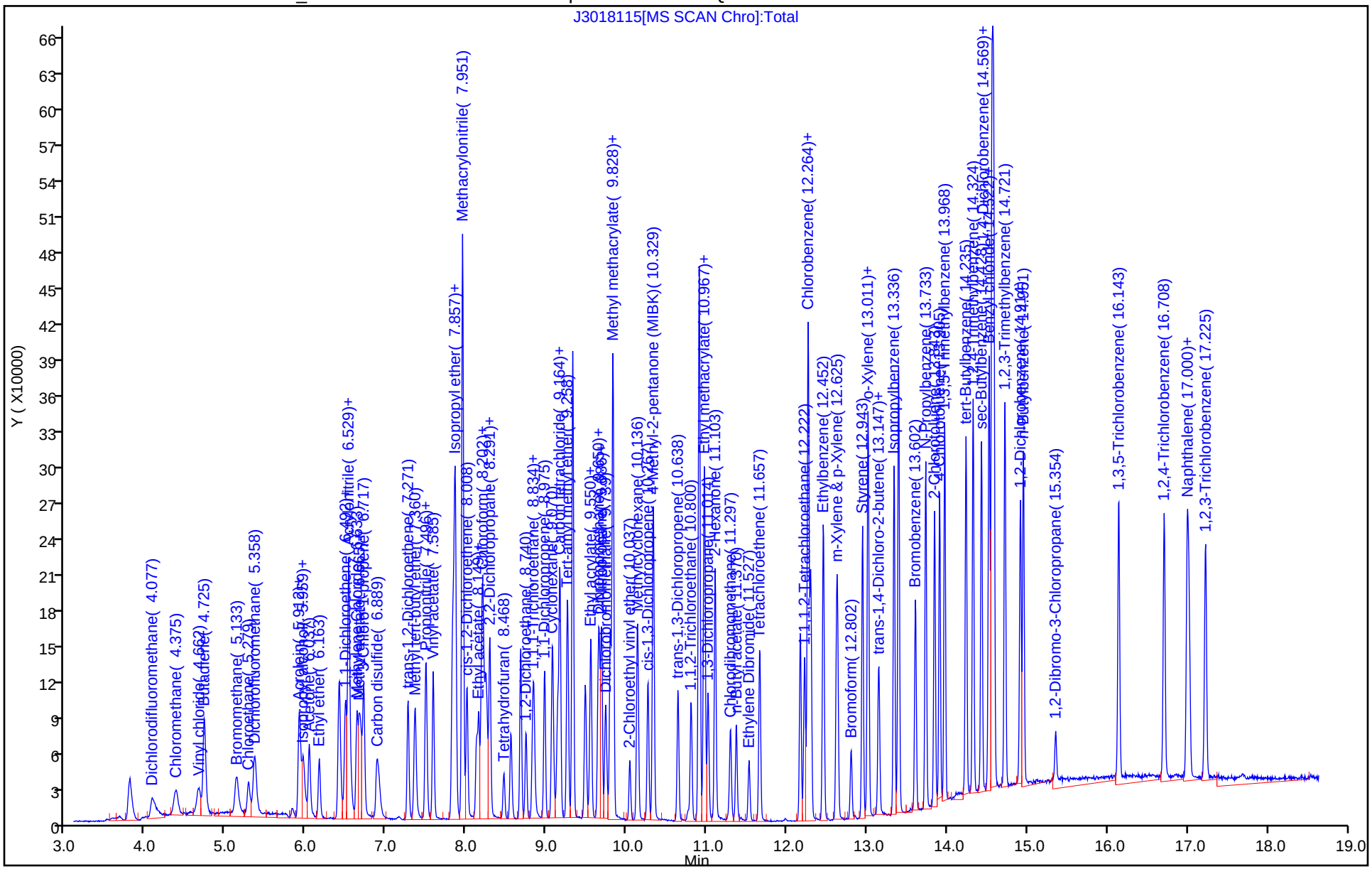
VOAMasterMix_00027	Amount Added: 10.00	Units: uL	
5X SUR/IS/TFT_00006	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 31-Oct-2018 12:00:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Seattle

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018115.D

Injection Date:	30-Oct-2018 21:30:30	Instrument ID:	SEA102	Operator ID:	DSO
Lims ID:	LCSD			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260MeOHSoil_SEA102B	Limit Group:	8260B QSM 5.0		



TestAmerica Seattle
Recovery Report

Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018115.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 30-Oct-2018 21:30:30 ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: DSO Instrument ID: SEA102

Method: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\8260MeOHSoil_SEA102B.m
Limit Group: 8260B QSM 5.0
Last Update: 31-Oct-2018 11:57:18 Calib Date: 30-Oct-2018 19:20:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018110.D

Column 1 : Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: brennanr Date: 31-Oct-2018 11:29:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 43 Dibromofluoromethane (Surr)	19.5	19.2	98.47
$ 45 1,2-Dichloroethane-d4 (Surr)	19.5	19.7	101.05
$ 64 Trifluorotoluene (Surr)	20.0	20.3	101.57
$ 73 Toluene-d8 (Surr)	19.5	19.5	100.13
$ 97 4-Bromofluorobenzene (Surr)	19.5	19.9	101.94
$ 125 BFB	19.5	0	0.00

Manual Integration/User Assign Peak Report

TestAmerica Seattle

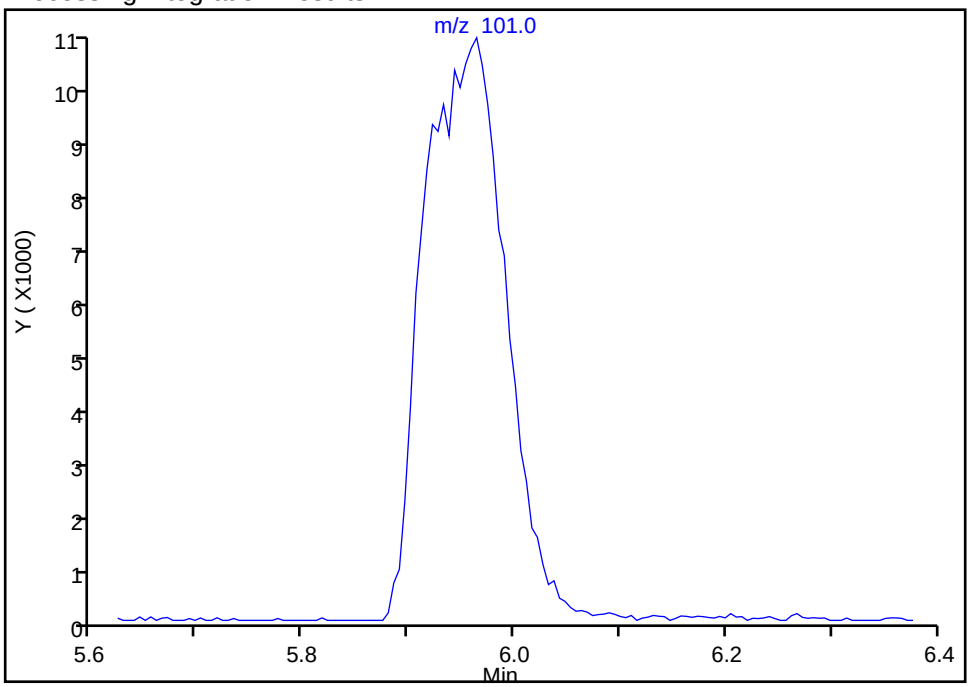
Data File: \\Chromna\Seattle\ChromData\SEA102\20181030-62146.b\J3018115.D
Injection Date: 30-Oct-2018 21:30:30 Instrument ID: SEA102
Lims ID: LCSD
Client ID:
Operator ID: DSO ALS Bottle#: 15 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260MeOHSoil_SEA102B Limit Group: 8260B QSM 5.0
Column: Detector MS SCAN

11 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

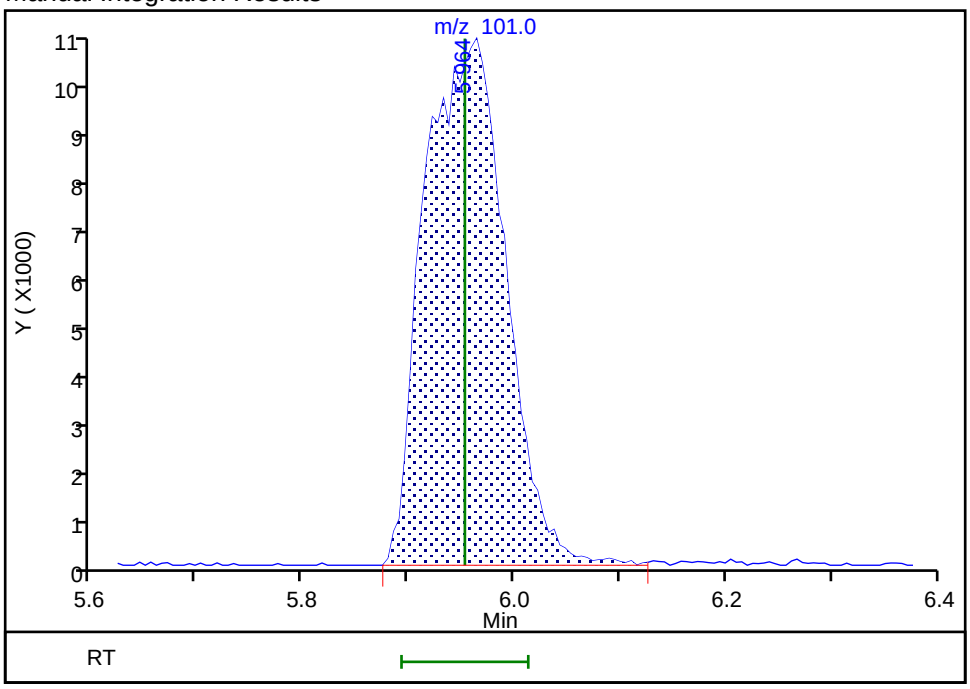
Not Detected
Expected RT: 5.95

Processing Integration Results



Manual Integration Results

RT: 5.96
Area: 55122
Amount: 9.532849
Amount Units: ug/L



Reviewer: brennanr, 31-Oct-2018 11:28:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Instrument ID: SEA102 Start Date: 10/30/2018 15:52

Analysis Batch Number: 287774 End Date: 10/31/2018 01:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-287774/2		10/30/2018 15:52	1	J3018102.D	DB-VRX 0.25(mm)
IC 580-287774/3		10/30/2018 16:18	1		DB-VRX 0.25(mm)
IC 580-287774/4		10/30/2018 16:44	1		DB-VRX 0.25(mm)
IC 580-287774/5		10/30/2018 17:10	1		DB-VRX 0.25(mm)
IC 580-287774/6		10/30/2018 17:36	1		DB-VRX 0.25(mm)
ICIS 580-287774/7		10/30/2018 18:02	1	J3018107.D	DB-VRX 0.25(mm)
IC 580-287774/8		10/30/2018 18:28	1		DB-VRX 0.25(mm)
IC 580-287774/9		10/30/2018 18:54	1		DB-VRX 0.25(mm)
IC 580-287774/10		10/30/2018 19:20	1		DB-VRX 0.25(mm)
ICV 580-287774/12		10/30/2018 20:12	1	J3018112.D	DB-VRX 0.25(mm)
MB 580-287774/24		10/30/2018 20:38	1	J3018113.D	DB-VRX 0.25(mm)
LCS 580-287774/25		10/30/2018 21:04	1	J3018114.D	DB-VRX 0.25(mm)
LCSD 580-287774/26		10/30/2018 21:30	1	J3018115.D	DB-VRX 0.25(mm)
280-115988-1		10/31/2018 00:32	1	J3018022.D	DB-VRX 0.25(mm)
280-115988-2		10/31/2018 00:58	1	J3018023.D	DB-VRX 0.25(mm)
CCVC 580-287774/35		10/31/2018 01:24	1	J3018024.D	DB-VRX 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Batch Number: 287774 Batch Start Date: 10/30/18 15:52 Batch Analyst: Brennan, Richard S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00006	BFB 00002	VOAMasterMix 00027
BFB 580-287774/2		8260B		5 mL	5 mL		2 uL	1 uL	
ICIS 580-287774/7		8260B		5 mL	5 mL		2 uL		20 uL
ICV 580-287774/12		8260B		5 mL	5 mL		2 uL		
MB 580-287774/24		8260B		5 mL	5 mL		2 uL		
LCS 580-287774/25		8260B		5 mL	5 mL		2 uL		10 uL
LCSD 580-287774/26		8260B		5 mL	5 mL		2 uL		10 uL
280-115988-A-1	775VMW-8_1018	8260B	T	5 mL	5 mL	<2 SU	2 uL		
280-115988-A-2	775MW-6_1018	8260B	T	5 mL	5 mL	<2 SU	2 uL		
CCVC 580-287774/35		8260B		5 mL	5 mL		2 uL		20 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VOAMasterSEC 00021					
BFB 580-287774/2		8260B							
ICIS 580-287774/7		8260B							
ICV 580-287774/12		8260B		20 uL					
MB 580-287774/24		8260B							
LCS 580-287774/25		8260B							
LCSD 580-287774/26		8260B							
280-115988-A-1	775VMW-8_1018	8260B	T						
280-115988-A-2	775MW-6_1018	8260B	T						
CCVC 580-287774/35		8260B							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Seattle Job No.: 280-115988-1

SDG No.:

Batch Number: 287774 Batch Start Date: 10/30/18 15:52 Batch Analyst: Brennan, Richard S

Batch Method: 8260B Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Subcontract Data

Shipping and Receiving Documents

bhate ENVIRONMENT INFRASTRUCTURE
1608 13th Avenue South, Suite 300
Birmingham, Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Project Number: AFCGSA3.0012.00AA

Chain of Custody Number [1]: 10-23-2018

LIMS Number: ____

Facility/Base I.D.:

Project Name / Site Name: Former Griffis AFB

Client Name: NYSDEC

Collected by: Derrick Berry

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Number of containers	Sample Analysis Requested [5]: VOCs 8260	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
775VMW-8_1018		23-Oct-2018	1526	-	N	01	WG	3	X				
775MW-6_1018		"	1631	-	N	01	WG	3	X				
				-									
				-									
				-									
				-									
				-									
				-									
				-									
				-									
				-									

280-115988 Chain of Custody

COMMENTS: *Urgent* 775MW-6 + 775VMW-8 require 48hr TAT

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received By (signed)	Date	Time
1.	[signature]	10-23-18	1830	[redacted]	10/24/18	0945
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped No.: ____

Method of Shipment: ____ Airbill Number: ____

Analytical Lab: ____ Delivery Location: ____

Lab Recipient: ____ Delivery Date/Time: ____

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc.), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control)

Temp: 3.4°C IR 9, CF -0.2°C Kim 10/24/18

DISTRIBUTION: WHITE COPY - Project File YELLOW COPY - Lab Copy PINK COPY - Working File

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Ide, Jamie N	Carrier Tracking No(s):	COC No: 280-459608.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jamie.ide@testamericainc.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA; DoD ELAP - L-A-B; NELAP - New York		Job #: 280-115988-1
Address: 5755 8th Street East,	Due Date Requested: 10/26/2018			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO#:			
Email:	WO#:			
Project Name: Griffiss AFB, NY (BRAC Eastern)	Project #: 28015823			
Site: Bhate - Griffiss AFB	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_DOD5/5030B Total VOCs -- LTM QAPP List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
775VMW-8_1018 (280-115988-1)	10/23/18	15:26 Eastern		Water			X	3	Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)
775MW-6_1018 (280-115988-2)	10/23/18	16:31 Eastern		Water			X	3	Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Laura Castro	10-24-18 1615	JALDa		10-25-18 900	TASEB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4=1.2

Ver: 09/20/2016

Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-115988-1

Login Number: 115988
List Number: 1
Creator: Ide, Jamie N

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-115988-1

Login Number: 115988
List Number: 2
Creator: Zboralski, Edward R

List Source: TestAmerica Seattle
List Creation: 10/26/18 04:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-116017-1

Job Description: Griffiss AFB, NY - SD052

For:
Bhate Environmental
445 Union Blvd Ste.129
Lakewood, CO 80226

Attention: Marcia Olive



Approved for release.
Kayse 1 Zalmai
Project Manager I
11/19/2018 2:37 PM

Kayse 1 Zalmai, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
kayse.zalmai@testamericainc.com
11/19/2018

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
D	The reported value is from a dilution.
H	Sample was prepped or analyzed beyond the specified holding time
Q	One or more quality control criteria failed.

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.

Glossary

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

CASE NARRATIVE
Client: Bhate Environmental
Project: Griffiss AFB, NY - SD052
Report Number: 280-116017-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interfererences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/24/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.1 C.

RECEIPT EXCEPTION

Lab received only one set of Trip Blanks. Two sets are documented on the chain of custody. Additionally, the two trip blank vials that were received were not labeled with a client ID. TBs are labeled per the COC.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC)

Samples LF6TW-38_1018 (280-116017-1), LF6TW-36_1018 (280-116017-2), 775VMW-19R_1018 (280-116017-3), 775VMW-28_1018 (280-116017-4), 775VMW-9_1018 (280-116017-5), 775VMW-10_1018 (280-116017-6), 775VMW-10_1018-a (280-116017-7), 775VMW-20_1018 (280-116017-8), 775VMW-20R_1018 (280-116017-9), 775VMW-5_1018 (280-116017-10), 775VMW-5_1018-a (280-116017-11) and 775VMW-4_1018 (280-116017-12) were analyzed for volatile organic compounds (GC) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/03/2018, 11/06/2018 and 11/10/2018.

Methylene Chloride was detected in method blank MB 280-436409/4 at a level that was above the detection limit but below half the limit of quantitation (1/2 LOQ); therefore, the data have been reported.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 280-436409 recovered outside control limits for the following analytes: 1,1,2-Trichloroethane: LCS: 125%, LCSD: 124%, Limits: 80-119%, 1,2-Dichloropropane: LCS: 127%, LCSD: 124%, Limits: 78-122%. These analytes were biased high in the LCS and LCSD and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: LF6TW-38_1018 (280-116017-1), (LCS 280-436409/5) and (LCSD 280-436409/6). Method 8260B

Samples LF6TW-38_1018 (280-116017-1)[4X] and LF6TW-36_1018 (280-116017-2)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The following samples were analyzed outside of analytical holding time: LF6TW-38_1018 (280-116017-1), 775VMW-20R_1018 (280-116017-9), 775VMW-5_1018 (280-116017-10), 775VMW-5_1018-a (280-116017-11) and 775VMW-4_1018 (280-116017-12).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 280-437146 recovered above the upper control limit for Bromomethane @ 22.9%D. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported with NCM and flags.

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

METHANE

Samples LF6TW-38_1018 (280-116017-1) and LF6TW-36_1018 (280-116017-2) were analyzed for Methane in accordance with RSK_175. The samples were analyzed on 11/02/2018.

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

SULFATE

Samples LF6TW-38_1018 (280-116017-1) and LF6TW-36_1018 (280-116017-2) were analyzed for sulfate in accordance with 9056A. The samples were analyzed on 11/09/2018.

Sulfate was detected in method blank MB 280-436996/6 at a level that was above the detection limit but below half the limit of quantitation (1/2 LOQ); therefore, the data have been reported.

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

DISSOLVED ORGANIC CARBON

Samples LF6TW-38_1018 (280-116017-1) and LF6TW-36_1018 (280-116017-2) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060A; Dissolved. The samples were analyzed on 10/30/2018 and 11/07/2018.

Dissolved Organic Carbon - Quad was detected in method blank MB 280-435563/2-A at a level that was above the detection limit but below half the limit of quantitation (1/2 LOQ); therefore, the data have been reported.

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

Detection Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Client Sample ID: LF6TW-38_1018 — Lab Sample ID: 280-116017-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	29		1.0	0.24	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	29		1.0	0.15	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.19	J	1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene - DL	88	H D	4.0	0.64	ug/L	4		8260B	Total/NA
Sulfate	31		5.0	0.23	mg/L	1		9056A	Total/NA
Dissolved Organic Carbon - Quad	0.76	J	1.0	0.16	mg/L	1		9060A	Dissolved
Dissolved Organic Carbon - Quad	0.92	J	1.0	0.16	mg/L	1		9060A	Dissolved

Client Sample ID: LF6TW-36_1018 — Lab Sample ID: 280-116017-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	37		1.0	0.24	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	36		1.0	0.15	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.3		1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene - DL	180	D	4.0	0.64	ug/L	4		8260B	Total/NA
Methane	0.73	J	5.0	0.64	ug/L	1		RSK-175	Total/NA
Sulfate	27		5.0	0.23	mg/L	1		9056A	Total/NA
Dissolved Organic Carbon - Quad	0.84	J	1.0	0.16	mg/L	1		9060A	Dissolved
Dissolved Organic Carbon - Quad	0.91	J	1.0	0.16	mg/L	1		9060A	Dissolved

Client Sample ID: 775VMW-19R_1018 — Lab Sample ID: 280-116017-3

No Detections.

Client Sample ID: 775VMW-28_1018 — Lab Sample ID: 280-116017-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.35	J	1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-9_1018 — Lab Sample ID: 280-116017-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.72	J	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	21		1.0	0.16	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.34	J	2.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-10_1018 — Lab Sample ID: 280-116017-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.60	J	1.0	0.16	ug/L	1		8260B	Total/NA
Chloroform	1.4		1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	47		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-10_1018-a — Lab Sample ID: 280-116017-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.60	J	1.0	0.16	ug/L	1		8260B	Total/NA
Chloroform	1.5		1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	47		1.0	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Client Sample ID: 775VMW-20_1018 — Lab Sample ID: 280-116017-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.28	J	1.0	0.16	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	1.4		1.0	0.22	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.92	J	1.0	0.23	ug/L	1		8260B	Total/NA
1,2-Dichloroethene, Total	0.25	J	1.0	0.24	ug/L	1		8260B	Total/NA
Chloroform	0.58	J	1.0	0.16	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.25	J	1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene	28		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-20R_1018 — Lab Sample ID: 280-116017-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.8	J H	10	1.9	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-5_1018 — Lab Sample ID: 280-116017-10

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.17	J H	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	2.2	J H	10	1.9	ug/L	1		8260B	Total/NA
Trichloroethene	44	H	1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-5_1018-a — Lab Sample ID: 280-116017-11

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.16	J H	1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	6.9	J H	10	1.9	ug/L	1		8260B	Total/NA
Trichloroethene	47	H	1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: 775VMW-4_1018 — Lab Sample ID: 280-116017-12

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.37	J H	1.0	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	4.4	H	1.0	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LF6TW-38_1018

Date Collected: 10/22/18 08:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 18:08	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 18:08	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 18:08	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 18:08	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 18:08	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 18:08	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 18:08	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 18:08	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 18:08	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 18:08	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 18:08	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 18:08	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 18:08	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 18:08	1
1,2-Dichloroethene, Total	**29**		1.0	0.24	ug/L			11/03/18 18:08	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 18:08	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 18:08	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 18:08	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 18:08	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 18:08	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 18:08	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 18:08	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 18:08	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 18:08	1
Acetone	6.4	U M	10	1.9	ug/L			11/03/18 18:08	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 18:08	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 18:08	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 18:08	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 18:08	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 18:08	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 18:08	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 18:08	1
cis-1,2-Dichloroethene	**29**		1.0	0.15	ug/L			11/03/18 18:08	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 18:08	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 18:08	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 18:08	1

Client Sample ID: LF6TW-38_1018
Date Collected: 10/22/18 08:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 18:08	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 18:08	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 18:08	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 18:08	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 18:08	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 18:08	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 18:08	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 18:08	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:08	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 18:08	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 18:08	1
trans-1,2-Dichloroethene	**0.19**	**J**	1.0	0.15	ug/L			11/03/18 18:08	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 18:08	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 18:08	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 18:08	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 18:08	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*11/03/18 18:08*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/03/18 18:08*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*11/03/18 18:08*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/03/18 18:08*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**88**	**H D**	4.0	0.64	ug/L			11/06/18 05:13	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*81 - 118*		*11/06/18 05:13*	*4*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/06/18 05:13*	*4*
Dibromofluoromethane (Surr)	*119*		*80 - 119*		*11/06/18 05:13*	*4*
Toluene-d8 (Surr)	*107*		*89 - 112*		*11/06/18 05:13*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.80	U	5.0	0.64	ug/L			11/02/18 11:48	1
Ethane	1.5	U	5.0	0.57	ug/L			11/02/18 11:48	1
Ethene	1.4	U	5.0	0.40	ug/L			11/02/18 11:48	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**31**		5.0	0.23	mg/L			11/09/18 20:42	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	**0.76**	**J**	1.0	0.16	mg/L			10/30/18 23:42	1
Dissolved Organic Carbon - Quad	**0.92**	**J**	1.0	0.16	mg/L			11/07/18 05:56	1

Client Sample ID: LF6TW-36_1018

Date Collected: 10/22/18 09:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 18:27	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 18:27	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 18:27	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 18:27	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 18:27	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 18:27	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 18:27	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 18:27	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 18:27	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 18:27	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 18:27	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 18:27	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 18:27	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 18:27	1
1,2-Dichloroethene, Total	**37**		1.0	0.24	ug/L			11/03/18 18:27	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 18:27	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 18:27	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 18:27	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 18:27	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 18:27	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 18:27	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 18:27	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 18:27	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 18:27	1
Acetone	6.4	U M	10	1.9	ug/L			11/03/18 18:27	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 18:27	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 18:27	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 18:27	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 18:27	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 18:27	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 18:27	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 18:27	1
cis-1,2-Dichloroethene	**36**		1.0	0.15	ug/L			11/03/18 18:27	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 18:27	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 18:27	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 18:27	1

Client Sample ID: LF6TW-36_1018

Date Collected: 10/22/18 09:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 18:27	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 18:27	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 18:27	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 18:27	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 18:27	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 18:27	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 18:27	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 18:27	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 18:27	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 18:27	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 18:27	1
trans-1,2-Dichloroethene	**1.3**		1.0	0.15	ug/L			11/03/18 18:27	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 18:27	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 18:27	1
Vinyl acetate	2.0	U M	3.0	0.94	ug/L			11/03/18 18:27	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 18:27	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*11/03/18 18:27*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/18 18:27*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*11/03/18 18:27*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/03/18 18:27*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**180**	**D**	4.0	0.64	ug/L			11/03/18 18:45	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 118*		*11/03/18 18:45*	*4*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/03/18 18:45*	*4*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*11/03/18 18:45*	*4*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/03/18 18:45*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.73**	**J**	5.0	0.64	ug/L			11/02/18 12:15	1
Ethane	1.5	U	5.0	0.57	ug/L			11/02/18 12:15	1
Ethene	1.4	U	5.0	0.40	ug/L			11/02/18 12:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**27**		5.0	0.23	mg/L			11/09/18 21:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	**0.84**	**J**	1.0	0.16	mg/L			10/30/18 23:23	1
Dissolved Organic Carbon - Quad	**0.91**	**J**	1.0	0.16	mg/L			11/07/18 05:10	1

Client Sample ID: 775VMW-19R_1018

Date Collected: 10/22/18 11:46
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:04	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:04	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 19:04	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 19:04	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 19:04	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:04	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:04	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 19:04	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:04	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:04	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 19:04	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 19:04	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:04	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 19:04	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 19:04	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:04	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 19:04	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 19:04	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:04	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 19:04	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 19:04	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 19:04	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 19:04	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 19:04	1
Acetone	6.4	U M	10	1.9	ug/L			11/03/18 19:04	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 19:04	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 19:04	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 19:04	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 19:04	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 19:04	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 19:04	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 19:04	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:04	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 19:04	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 19:04	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 19:04	1

Client Sample ID: 775VMW-19R_1018
Lab Sample ID: 280-116017-3
Date Collected: 10/22/18 11:46
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 19:04	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 19:04	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 19:04	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 19:04	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 19:04	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 19:04	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 19:04	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 19:04	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 19:04	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:04	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:04	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:04	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/03/18 19:04	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 19:04	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 19:04	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 19:04	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*		*11/03/18 19:04*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/03/18 19:04*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*11/03/18 19:04*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/03/18 19:04*	*1*

Client Sample ID: 775VMW-28_1018
Lab Sample ID: 280-116017-4
Date Collected: 10/22/18 12:41
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:41	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:41	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 19:41	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 19:41	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 19:41	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:41	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:41	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 19:41	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:41	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:41	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 19:41	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 19:41	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:41	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 19:41	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 19:41	1

Client Sample ID: 775VMW-28_1018
Date Collected: 10/22/18 12:41
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:41	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 19:41	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 19:41	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:41	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 19:41	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 19:41	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 19:41	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 19:41	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 19:41	1
Acetone	6.4	U	10	1.9	ug/L			11/03/18 19:41	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 19:41	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 19:41	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 19:41	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 19:41	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 19:41	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 19:41	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 19:41	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:41	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 19:41	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 19:41	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 19:41	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 19:41	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 19:41	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 19:41	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 19:41	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 19:41	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 19:41	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 19:41	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 19:41	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:41	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 19:41	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:41	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:41	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:41	1

Client Sample ID: 775VMW-28_1018
Lab Sample ID: 280-116017-4
Date Collected: 10/22/18 12:41
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**0.35**	**J**	1.0	0.16	ug/L			11/03/18 19:41	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 19:41	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 19:41	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 19:41	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*11/03/18 19:41*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/03/18 19:41*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 119*		*11/03/18 19:41*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/03/18 19:41*	*1*

Client Sample ID: 775VMW-9_1018
Lab Sample ID: 280-116017-5
Date Collected: 10/22/18 13:56
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:59	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 19:59	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 19:59	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 19:59	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 19:59	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:59	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:59	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 19:59	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 19:59	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:59	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 19:59	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 19:59	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 19:59	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 19:59	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 19:59	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:59	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 19:59	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 19:59	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 19:59	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 19:59	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 19:59	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 19:59	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 19:59	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 19:59	1
Acetone	6.4	U M	10	1.9	ug/L			11/03/18 19:59	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 19:59	1

Client Sample ID: 775VMW-9_1018

Date Collected: 10/22/18 13:56
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 19:59	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 19:59	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 19:59	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 19:59	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 19:59	1
Chloroform	**0.72**	**J**	1.0	0.16	ug/L			11/03/18 19:59	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 19:59	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:59	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 19:59	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 19:59	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 19:59	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 19:59	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 19:59	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 19:59	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 19:59	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 19:59	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 19:59	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 19:59	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 19:59	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 19:59	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 19:59	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 19:59	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 19:59	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 19:59	1
Trichloroethene	**21**		1.0	0.16	ug/L			11/03/18 19:59	1
Trichlorofluoromethane	**0.34**	**J**	2.0	0.29	ug/L			11/03/18 19:59	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 19:59	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 19:59	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*		*11/03/18 19:59*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/03/18 19:59*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 119*		*11/03/18 19:59*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*11/03/18 19:59*	*1*

Client Sample ID: 775VMW-10_1018
Lab Sample ID: 280-116017-6

Date Collected: 10/22/18 15:16
Matrix: Water

Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 20:18	1
1,1,1-Trichloroethane	**0.60**	**J**	1.0	0.16	ug/L			11/03/18 20:18	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 20:18	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 20:18	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 20:18	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 20:18	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 20:18	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 20:18	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 20:18	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 20:18	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 20:18	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 20:18	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 20:18	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 20:18	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 20:18	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 20:18	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 20:18	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 20:18	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 20:18	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 20:18	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 20:18	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 20:18	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 20:18	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 20:18	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 20:18	1
Acetone	6.4	U	10	1.9	ug/L			11/03/18 20:18	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 20:18	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 20:18	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 20:18	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 20:18	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 20:18	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 20:18	1
Chloroform	**1.4**		1.0	0.16	ug/L			11/03/18 20:18	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 20:18	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 20:18	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 20:18	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 20:18	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 20:18	1

Client Sample ID: 775VMW-10_1018
Lab Sample ID: 280-116017-6
Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 20:18	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 20:18	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 20:18	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 20:18	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 20:18	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 20:18	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 20:18	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 20:18	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:18	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 20:18	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 20:18	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 20:18	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 20:18	1
Trichloroethene	**47**		1.0	0.16	ug/L			11/03/18 20:18	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 20:18	1
Vinyl acetate	2.0	U M	3.0	0.94	ug/L			11/03/18 20:18	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 20:18	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*81 - 118*		*11/03/18 20:18*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/03/18 20:18*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 119*		*11/03/18 20:18*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/03/18 20:18*	*1*

Client Sample ID: 775VMW-10_1018-a
Lab Sample ID: 280-116017-7
Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 20:36	1
1,1,1-Trichloroethane	**0.60**	**J**	1.0	0.16	ug/L			11/03/18 20:36	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 20:36	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 20:36	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 20:36	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 20:36	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 20:36	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 20:36	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 20:36	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 20:36	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 20:36	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 20:36	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 20:36	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 20:36	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 20:36	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 20:36	1

Client Sample ID: 775VMW-10_1018-a
Lab Sample ID: 280-116017-7

Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 20:36	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 20:36	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 20:36	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 20:36	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 20:36	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 20:36	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 20:36	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 20:36	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 20:36	1
Acetone	6.4	U	10	1.9	ug/L			11/03/18 20:36	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 20:36	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 20:36	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 20:36	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 20:36	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 20:36	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 20:36	1
Chloroform	**1.5**		1.0	0.16	ug/L			11/03/18 20:36	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 20:36	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 20:36	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 20:36	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 20:36	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 20:36	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 20:36	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 20:36	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 20:36	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 20:36	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 20:36	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 20:36	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 20:36	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 20:36	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 20:36	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 20:36	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 20:36	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 20:36	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 20:36	1

Client Sample ID: 775VMW-10_1018-a
Lab Sample ID: 280-116017-7
Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**47**		1.0	0.16	ug/L			11/03/18 20:36	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 20:36	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 20:36	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 20:36	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*81 - 118*		*11/03/18 20:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/03/18 20:36*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 119*		*11/03/18 20:36*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*11/03/18 20:36*	*1*

Client Sample ID: 775VMW-20_1018
Lab Sample ID: 280-116017-8
Date Collected: 10/22/18 16:31
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 21:13	1
1,1,1-Trichloroethane	**0.28**	**J**	1.0	0.16	ug/L			11/03/18 21:13	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 21:13	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 21:13	1
1,1-Dichloroethane	**1.4**		1.0	0.22	ug/L			11/03/18 21:13	1
1,1-Dichloroethene	**0.92**	**J**	1.0	0.23	ug/L			11/03/18 21:13	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 21:13	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 21:13	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 21:13	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 21:13	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 21:13	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 21:13	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 21:13	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 21:13	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 21:13	1
1,2-Dichloroethene, Total	**0.25**	**J**	1.0	0.24	ug/L			11/03/18 21:13	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 21:13	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 21:13	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 21:13	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 21:13	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 21:13	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 21:13	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 21:13	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 21:13	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 21:13	1
Acetone	6.4	U	10	1.9	ug/L			11/03/18 21:13	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 21:13	1

Client Sample ID: 775VMW-20_1018

Date Collected: 10/22/18 16:31
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-8

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 21:13	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 21:13	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 21:13	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 21:13	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 21:13	1
Chloroform	**0.58**	**J**	1.0	0.16	ug/L			11/03/18 21:13	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 21:13	1
cis-1,2-Dichloroethene	**0.25**	**J**	1.0	0.15	ug/L			11/03/18 21:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 21:13	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 21:13	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 21:13	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 21:13	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 21:13	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 21:13	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 21:13	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 21:13	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 21:13	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 21:13	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 21:13	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 21:13	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 21:13	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 21:13	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 21:13	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 21:13	1
Trichloroethene	**28**		1.0	0.16	ug/L			11/03/18 21:13	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 21:13	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 21:13	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 21:13	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*		*11/03/18 21:13*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/18 21:13*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 119*		*11/03/18 21:13*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/03/18 21:13*	*1*

Client Sample ID: 775VMW-20R_1018

Date Collected: 10/23/18 08:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-9

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:01	1
1,1,1-Trichloroethane	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:01	1
1,1,2-Trichloroethane	0.80	U H	1.0	0.27	ug/L			11/10/18 14:01	1
1,1-Dichloroethane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:01	1
1,1-Dichloroethene	0.80	U H	1.0	0.23	ug/L			11/10/18 14:01	1
1,1-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:01	1
1,2,3-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:01	1
1,2,3-Trichloropropane	0.80	U H	3.0	0.33	ug/L			11/10/18 14:01	1
1,2,4-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:01	1
1,2,4-Trimethylbenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:01	1
1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	0.47	ug/L			11/10/18 14:01	1
1,2-Dibromoethane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:01	1
1,2-Dichlorobenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:01	1
1,2-Dichloroethane	0.40	U H	1.0	0.13	ug/L			11/10/18 14:01	1
1,2-Dichloroethene, Total	0.20	U H	1.0	0.24	ug/L			11/10/18 14:01	1
1,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:01	1
1,3,5-Trimethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
1,3-Dichlorobenzene	0.40	U H	1.0	0.13	ug/L			11/10/18 14:01	1
1,3-Dichloropropane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:01	1
1,4-Dichlorobenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
2,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:01	1
2-Butanone (MEK)	4.0	U H	6.0	2.0	ug/L			11/10/18 14:01	1
2-Chlorotoluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
2-Hexanone	4.0	U H	5.0	1.7	ug/L			11/10/18 14:01	1
4-Chlorotoluene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:01	1
4-Isopropyltoluene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:01	1
4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	0.98	ug/L			11/10/18 14:01	1
Acetone	**4.8**	**J H**	10	1.9	ug/L			11/10/18 14:01	1
Benzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Bromobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Bromochloromethane	0.20	U H	1.0	0.10	ug/L			11/10/18 14:01	1
Bromodichloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Bromoform	0.40	U H	1.0	0.19	ug/L			11/10/18 14:01	1
Bromomethane	0.80	U H Q	2.0	0.21	ug/L			11/10/18 14:01	1
Carbon disulfide	1.6	U H	2.0	0.45	ug/L			11/10/18 14:01	1
Carbon tetrachloride	0.40	U H	2.0	0.19	ug/L			11/10/18 14:01	1
Chlorobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Chloroethane	1.6	U H	2.0	0.41	ug/L			11/10/18 14:01	1
Chloroform	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Chloromethane	0.80	U H	2.0	0.30	ug/L			11/10/18 14:01	1
cis-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:01	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Dibromochloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Dibromomethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Dichlorodifluoromethane	0.80	U H	2.0	0.31	ug/L			11/10/18 14:01	1
Diisopropyl ether	2.0	U H	10	0.74	ug/L			11/10/18 14:01	1
Ethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Hexachlorobutadiene	0.80	U H	1.0	0.36	ug/L			11/10/18 14:01	1

Client Sample ID: 775VMW-20R_1018
Lab Sample ID: 280-116017-9
Date Collected: 10/23/18 08:26
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:01	1
m,p-Xylene	0.80	U H	2.0	0.34	ug/L			11/10/18 14:01	1
Methyl iodide	0.80	U H	2.0	0.23	ug/L			11/10/18 14:01	1
Methyl tert-butyl ether	0.80	U H	5.0	0.25	ug/L			11/10/18 14:01	1
Methylene Chloride	0.80	U H	5.0	0.32	ug/L			11/10/18 14:01	1
Naphthalene	0.80	U H	1.0	0.22	ug/L			11/10/18 14:01	1
n-Butylbenzene	0.80	U H	1.0	0.32	ug/L			11/10/18 14:01	1
N-Propylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
o-Xylene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:01	1
sec-Butylbenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
Styrene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
tert-Butylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Tetrachloroethene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:01	1
Toluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:01	1
trans-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:01	1
trans-1,3-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:01	1
Trichloroethene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:01	1
Trichlorofluoromethane	0.80	U H	2.0	0.29	ug/L			11/10/18 14:01	1
Vinyl acetate	2.0	U H	3.0	0.94	ug/L			11/10/18 14:01	1
Vinyl chloride	0.20	U H	1.5	0.10	ug/L			11/10/18 14:01	1
Xylenes, Total	0.80	U H	1.0	0.19	ug/L			11/10/18 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/10/18 14:01*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*11/10/18 14:01*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/10/18 14:01*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*11/10/18 14:01*	*1*

Client Sample ID: 775VMW-5_1018
Lab Sample ID: 280-116017-10
Date Collected: 10/23/18 10:41
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:21	1
1,1,1-Trichloroethane	**0.17**	**J H**	1.0	0.16	ug/L			11/10/18 14:21	1
1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:21	1
1,1,2-Trichloroethane	0.80	U H	1.0	0.27	ug/L			11/10/18 14:21	1
1,1-Dichloroethane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:21	1
1,1-Dichloroethene	0.80	U H	1.0	0.23	ug/L			11/10/18 14:21	1
1,1-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:21	1
1,2,3-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:21	1
1,2,3-Trichloropropane	0.80	U H	3.0	0.33	ug/L			11/10/18 14:21	1
1,2,4-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:21	1
1,2,4-Trimethylbenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:21	1
1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	0.47	ug/L			11/10/18 14:21	1
1,2-Dibromoethane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:21	1
1,2-Dichlorobenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:21	1
1,2-Dichloroethane	0.40	U H	1.0	0.13	ug/L			11/10/18 14:21	1
1,2-Dichloroethene, Total	0.20	U H	1.0	0.24	ug/L			11/10/18 14:21	1

Client Sample ID: 775VMW-5_1018

Date Collected: 10/23/18 10:41
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:21	1
1,3,5-Trimethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
1,3-Dichlorobenzene	0.40	U H	1.0	0.13	ug/L			11/10/18 14:21	1
1,3-Dichloropropane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:21	1
1,4-Dichlorobenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
2,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:21	1
2-Butanone (MEK)	4.0	U H	6.0	2.0	ug/L			11/10/18 14:21	1
2-Chlorotoluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
2-Hexanone	4.0	U H	5.0	1.7	ug/L			11/10/18 14:21	1
4-Chlorotoluene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:21	1
4-Isopropyltoluene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:21	1
4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	0.98	ug/L			11/10/18 14:21	1
Acetone	**2.2**	**J H**	10	1.9	ug/L			11/10/18 14:21	1
Benzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
Bromobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Bromochloromethane	0.20	U H	1.0	0.10	ug/L			11/10/18 14:21	1
Bromodichloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Bromoform	0.40	U H	1.0	0.19	ug/L			11/10/18 14:21	1
Bromomethane	0.80	U H Q	2.0	0.21	ug/L			11/10/18 14:21	1
Carbon disulfide	1.6	U H	2.0	0.45	ug/L			11/10/18 14:21	1
Carbon tetrachloride	0.40	U H	2.0	0.19	ug/L			11/10/18 14:21	1
Chlorobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Chloroethane	1.6	U H	2.0	0.41	ug/L			11/10/18 14:21	1
Chloroform	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
Chloromethane	0.80	U H	2.0	0.30	ug/L			11/10/18 14:21	1
cis-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:21	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
Dibromochloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Dibromomethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Dichlorodifluoromethane	0.80	U H	2.0	0.31	ug/L			11/10/18 14:21	1
Diisopropyl ether	2.0	U H	10	0.74	ug/L			11/10/18 14:21	1
Ethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
Hexachlorobutadiene	0.80	U H	1.0	0.36	ug/L			11/10/18 14:21	1
Isopropylbenzene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:21	1
m,p-Xylene	0.80	U H	2.0	0.34	ug/L			11/10/18 14:21	1
Methyl iodide	0.80	U H	2.0	0.23	ug/L			11/10/18 14:21	1
Methyl tert-butyl ether	0.80	U H	5.0	0.25	ug/L			11/10/18 14:21	1
Methylene Chloride	0.80	U H	5.0	0.32	ug/L			11/10/18 14:21	1
Naphthalene	0.80	U H	1.0	0.22	ug/L			11/10/18 14:21	1
n-Butylbenzene	0.80	U H	1.0	0.32	ug/L			11/10/18 14:21	1
N-Propylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
o-Xylene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:21	1
sec-Butylbenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
Styrene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
tert-Butylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:21	1
Tetrachloroethene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:21	1
Toluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:21	1
trans-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:21	1
trans-1,3-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:21	1

Client Sample ID: 775VMW-5_1018
Lab Sample ID: 280-116017-10
Date Collected: 10/23/18 10:41
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**44**	**H**	1.0	0.16	ug/L			11/10/18 14:21	1
Trichlorofluoromethane	0.80	U H	2.0	0.29	ug/L			11/10/18 14:21	1
Vinyl acetate	2.0	U H	3.0	0.94	ug/L			11/10/18 14:21	1
Vinyl chloride	0.20	U H	1.5	0.10	ug/L			11/10/18 14:21	1
Xylenes, Total	0.80	U H	1.0	0.19	ug/L			11/10/18 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/10/18 14:21*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/10/18 14:21*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/10/18 14:21*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 14:21*	*1*

Client Sample ID: 775VMW-5_1018-a
Lab Sample ID: 280-116017-11
Date Collected: 10/23/18 10:41
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:42	1
1,1,1-Trichloroethane	**0.16**	**J H**	1.0	0.16	ug/L			11/10/18 14:42	1
1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 14:42	1
1,1,2-Trichloroethane	0.80	U H	1.0	0.27	ug/L			11/10/18 14:42	1
1,1-Dichloroethane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:42	1
1,1-Dichloroethene	0.80	U H	1.0	0.23	ug/L			11/10/18 14:42	1
1,1-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:42	1
1,2,3-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:42	1
1,2,3-Trichloropropane	0.80	U H	3.0	0.33	ug/L			11/10/18 14:42	1
1,2,4-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:42	1
1,2,4-Trimethylbenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:42	1
1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	0.47	ug/L			11/10/18 14:42	1
1,2-Dibromoethane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:42	1
1,2-Dichlorobenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:42	1
1,2-Dichloroethane	0.40	U H	1.0	0.13	ug/L			11/10/18 14:42	1
1,2-Dichloroethene, Total	0.20	U H	1.0	0.24	ug/L			11/10/18 14:42	1
1,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:42	1
1,3,5-Trimethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
1,3-Dichlorobenzene	0.40	U H	1.0	0.13	ug/L			11/10/18 14:42	1
1,3-Dichloropropane	0.80	U H	1.0	0.22	ug/L			11/10/18 14:42	1
1,4-Dichlorobenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
2,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 14:42	1
2-Butanone (MEK)	4.0	U H	6.0	2.0	ug/L			11/10/18 14:42	1
2-Chlorotoluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
2-Hexanone	4.0	U H	5.0	1.7	ug/L			11/10/18 14:42	1
4-Chlorotoluene	0.80	U H	1.0	0.21	ug/L			11/10/18 14:42	1
4-Isopropyltoluene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:42	1
4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	0.98	ug/L			11/10/18 14:42	1
Acetone	**6.9**	**J H**	10	1.9	ug/L			11/10/18 14:42	1
Benzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
Bromobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Bromochloromethane	0.20	U H	1.0	0.10	ug/L			11/10/18 14:42	1

Client Sample ID: 775VMW-5_1018-a
Date Collected: 10/23/18 10:41
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Bromoform	0.40	U H	1.0	0.19	ug/L			11/10/18 14:42	1
Bromomethane	0.80	U H Q	2.0	0.21	ug/L			11/10/18 14:42	1
Carbon disulfide	1.6	U H	2.0	0.45	ug/L			11/10/18 14:42	1
Carbon tetrachloride	0.40	U H	2.0	0.19	ug/L			11/10/18 14:42	1
Chlorobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Chloroethane	1.6	U H	2.0	0.41	ug/L			11/10/18 14:42	1
Chloroform	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
Chloromethane	0.80	U H	2.0	0.30	ug/L			11/10/18 14:42	1
cis-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:42	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
Dibromochloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Dibromomethane	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Dichlorodifluoromethane	0.80	U H	2.0	0.31	ug/L			11/10/18 14:42	1
Diisopropyl ether	2.0	U H	10	0.74	ug/L			11/10/18 14:42	1
Ethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
Hexachlorobutadiene	0.80	U H	1.0	0.36	ug/L			11/10/18 14:42	1
Isopropylbenzene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:42	1
m,p-Xylene	0.80	U H	2.0	0.34	ug/L			11/10/18 14:42	1
Methyl iodide	0.80	U H	2.0	0.23	ug/L			11/10/18 14:42	1
Methyl tert-butyl ether	0.80	U H	5.0	0.25	ug/L			11/10/18 14:42	1
Methylene Chloride	0.80	U H	5.0	0.32	ug/L			11/10/18 14:42	1
Naphthalene	0.80	U H	1.0	0.22	ug/L			11/10/18 14:42	1
n-Butylbenzene	0.80	U H	1.0	0.32	ug/L			11/10/18 14:42	1
N-Propylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
o-Xylene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:42	1
sec-Butylbenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
Styrene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
tert-Butylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 14:42	1
Tetrachloroethene	0.40	U H	1.0	0.20	ug/L			11/10/18 14:42	1
Toluene	0.40	U H	1.0	0.17	ug/L			11/10/18 14:42	1
trans-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 14:42	1
trans-1,3-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 14:42	1
Trichloroethene	**47**	**H**	1.0	0.16	ug/L			11/10/18 14:42	1
Trichlorofluoromethane	0.80	U H	2.0	0.29	ug/L			11/10/18 14:42	1
Vinyl acetate	2.0	U H	3.0	0.94	ug/L			11/10/18 14:42	1
Vinyl chloride	0.20	U H	1.5	0.10	ug/L			11/10/18 14:42	1
Xylenes, Total	0.80	U H	1.0	0.19	ug/L			11/10/18 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/10/18 14:42*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*11/10/18 14:42*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/10/18 14:42*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*11/10/18 14:42*	*1*

Client Sample ID: 775VMW-4_1018

Date Collected: 10/23/18 12:16
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-12

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 15:02	1
1,1,1-Trichloroethane	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.21	ug/L			11/10/18 15:02	1
1,1,2-Trichloroethane	0.80	U H	1.0	0.27	ug/L			11/10/18 15:02	1
1,1-Dichloroethane	0.80	U H	1.0	0.22	ug/L			11/10/18 15:02	1
1,1-Dichloroethene	0.80	U H	1.0	0.23	ug/L			11/10/18 15:02	1
1,1-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 15:02	1
1,2,3-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 15:02	1
1,2,3-Trichloropropane	0.80	U H	3.0	0.33	ug/L			11/10/18 15:02	1
1,2,4-Trichlorobenzene	0.80	U H	1.0	0.21	ug/L			11/10/18 15:02	1
1,2,4-Trimethylbenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 15:02	1
1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	0.47	ug/L			11/10/18 15:02	1
1,2-Dibromoethane	0.40	U H	1.0	0.18	ug/L			11/10/18 15:02	1
1,2-Dichlorobenzene	0.40	U H	1.0	0.15	ug/L			11/10/18 15:02	1
1,2-Dichloroethane	0.40	U H	1.0	0.13	ug/L			11/10/18 15:02	1
1,2-Dichloroethene, Total	0.20	U H	1.0	0.24	ug/L			11/10/18 15:02	1
1,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 15:02	1
1,3,5-Trimethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
1,3-Dichlorobenzene	0.40	U H	1.0	0.13	ug/L			11/10/18 15:02	1
1,3-Dichloropropane	0.80	U H	1.0	0.22	ug/L			11/10/18 15:02	1
1,4-Dichlorobenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
2,2-Dichloropropane	0.40	U H	1.0	0.18	ug/L			11/10/18 15:02	1
2-Butanone (MEK)	4.0	U H	6.0	2.0	ug/L			11/10/18 15:02	1
2-Chlorotoluene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
2-Hexanone	4.0	U H	5.0	1.7	ug/L			11/10/18 15:02	1
4-Chlorotoluene	0.80	U H	1.0	0.21	ug/L			11/10/18 15:02	1
4-Isopropyltoluene	0.40	U H	1.0	0.20	ug/L			11/10/18 15:02	1
4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	0.98	ug/L			11/10/18 15:02	1
Acetone	6.4	U H	10	1.9	ug/L			11/10/18 15:02	1
Benzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
Bromobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Bromochloromethane	0.20	U H	1.0	0.10	ug/L			11/10/18 15:02	1
Bromodichloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Bromoform	0.40	U H	1.0	0.19	ug/L			11/10/18 15:02	1
Bromomethane	0.80	U H Q	2.0	0.21	ug/L			11/10/18 15:02	1
Carbon disulfide	1.6	U H	2.0	0.45	ug/L			11/10/18 15:02	1
Carbon tetrachloride	0.40	U H	2.0	0.19	ug/L			11/10/18 15:02	1
Chlorobenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Chloroethane	1.6	U H	2.0	0.41	ug/L			11/10/18 15:02	1
Chloroform	**0.37**	**J H**	1.0	0.16	ug/L			11/10/18 15:02	1
Chloromethane	0.80	U H	2.0	0.30	ug/L			11/10/18 15:02	1
cis-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 15:02	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
Dibromochloromethane	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Dibromomethane	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Dichlorodifluoromethane	0.80	U H	2.0	0.31	ug/L			11/10/18 15:02	1
Diisopropyl ether	2.0	U H	10	0.74	ug/L			11/10/18 15:02	1
Ethylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
Hexachlorobutadiene	0.80	U H	1.0	0.36	ug/L			11/10/18 15:02	1

Client Sample ID: 775VMW-4_1018
Lab Sample ID: 280-116017-12
Date Collected: 10/23/18 12:16
Matrix: Water
Date Received: 10/24/18 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.40	U H	1.0	0.19	ug/L			11/10/18 15:02	1
m,p-Xylene	0.80	U H	2.0	0.34	ug/L			11/10/18 15:02	1
Methyl iodide	0.80	U H	2.0	0.23	ug/L			11/10/18 15:02	1
Methyl tert-butyl ether	0.80	U H	5.0	0.25	ug/L			11/10/18 15:02	1
Methylene Chloride	0.80	U H	5.0	0.32	ug/L			11/10/18 15:02	1
Naphthalene	0.80	U H	1.0	0.22	ug/L			11/10/18 15:02	1
n-Butylbenzene	0.80	U H	1.0	0.32	ug/L			11/10/18 15:02	1
N-Propylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
o-Xylene	0.40	U H	1.0	0.19	ug/L			11/10/18 15:02	1
sec-Butylbenzene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
Styrene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
tert-Butylbenzene	0.40	U H	1.0	0.16	ug/L			11/10/18 15:02	1
Tetrachloroethene	0.40	U H	1.0	0.20	ug/L			11/10/18 15:02	1
Toluene	0.40	U H	1.0	0.17	ug/L			11/10/18 15:02	1
trans-1,2-Dichloroethene	0.40	U H	1.0	0.15	ug/L			11/10/18 15:02	1
trans-1,3-Dichloropropene	0.40	U H	1.0	0.19	ug/L			11/10/18 15:02	1
Trichloroethene	**4.4**	**H**	1.0	0.16	ug/L			11/10/18 15:02	1
Trichlorofluoromethane	0.80	U H	2.0	0.29	ug/L			11/10/18 15:02	1
Vinyl acetate	2.0	U H	3.0	0.94	ug/L			11/10/18 15:02	1
Vinyl chloride	0.20	U H	1.5	0.10	ug/L			11/10/18 15:02	1
Xylenes, Total	0.80	U H	1.0	0.19	ug/L			11/10/18 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/10/18 15:02*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*11/10/18 15:02*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/10/18 15:02*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/10/18 15:02*	*1*

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.27	ug/L	8260B
1,1-Dichloroethane	1.0	0.22	ug/L	8260B
1,1-Dichloroethene	1.0	0.23	ug/L	8260B
1,1-Dichloropropene	1.0	0.19	ug/L	8260B
1,2,3-Trichlorobenzene	1.0	0.21	ug/L	8260B
1,2,3-Trichloropropane	3.0	0.33	ug/L	8260B
1,2,4-Trichlorobenzene	1.0	0.21	ug/L	8260B
1,2,4-Trimethylbenzene	1.0	0.15	ug/L	8260B
1,2-Dibromo-3-Chloropropane	5.0	0.47	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichlorobenzene	1.0	0.15	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.24	ug/L	8260B
1,2-Dichloropropane	1.0	0.18	ug/L	8260B
1,3,5-Trimethylbenzene	1.0	0.16	ug/L	8260B
1,3-Dichlorobenzene	1.0	0.13	ug/L	8260B
1,3-Dichloropropane	1.0	0.22	ug/L	8260B
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260B
2,2-Dichloropropane	1.0	0.18	ug/L	8260B
2-Butanone (MEK)	6.0	2.0	ug/L	8260B
2-Chlorotoluene	1.0	0.17	ug/L	8260B
2-Hexanone	5.0	1.7	ug/L	8260B
4-Chlorotoluene	1.0	0.21	ug/L	8260B
4-Isopropyltoluene	1.0	0.20	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Dibromomethane	1.0	0.17	ug/L	8260B
Dichlorodifluoromethane	2.0	0.31	ug/L	8260B
Diisopropyl ether	10	0.74	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Hexachlorobutadiene	1.0	0.36	ug/L	8260B
Isopropylbenzene	1.0	0.19	ug/L	8260B
m,p-Xylene	2.0	0.34	ug/L	8260B
Methyl iodide	2.0	0.23	ug/L	8260B

Default Detection Limits

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units	Method
Methyl tert-butyl ether	5.0	0.25	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Naphthalene	1.0	0.22	ug/L	8260B
n-Butylbenzene	1.0	0.32	ug/L	8260B
N-Propylbenzene	1.0	0.16	ug/L	8260B
o-Xylene	1.0	0.19	ug/L	8260B
sec-Butylbenzene	1.0	0.17	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
tert-Butylbenzene	1.0	0.16	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,2-Dichloroethene	1.0	0.15	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Trichlorofluoromethane	2.0	0.29	ug/L	8260B
Vinyl acetate	3.0	0.94	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	1.0	0.19	ug/L	8260B

Method: RSK-175 - Dissolved Gases (GC)

Analyte	LOQ	DL	Units	Method
Ethane	5.0	0.57	ug/L	RSK-175
Ethene	5.0	0.40	ug/L	RSK-175
Methane	5.0	0.64	ug/L	RSK-175

General Chemistry

Analyte	LOQ	DL	Units	Method
Sulfate	5.0	0.23	mg/L	9056A

General Chemistry - Dissolved

Analyte	LOQ	DL	Units	Method
Dissolved Organic Carbon - Quad	1.0	0.16	mg/L	9060A

Surrogate Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-116017-1	LF6TW-38_1018	107	99	110	102
280-116017-1 - DL	LF6TW-38_1018	116	97	119	107
280-116017-2	LF6TW-36_1018	108	97	112	104
280-116017-2 - DL	LF6TW-36_1018	110	100	113	104
280-116017-3	775VMW-19R_1018	109	101	113	102
280-116017-4	775VMW-28_1018	111	100	114	104
280-116017-5	775VMW-9_1018	114	98	115	105
280-116017-6	775VMW-10_1018	112	96	114	102
280-116017-7	775VMW-10_1018-a	113	98	111	106
280-116017-8	775VMW-20_1018	114	97	115	102
280-116017-9	775VMW-20R_1018	96	105	100	99
280-116017-10	775VMW-5_1018	93	102	97	100
280-116017-11	775VMW-5_1018-a	96	104	99	99
280-116017-12	775VMW-4_1018	95	103	100	94
LCS 280-436199/5	Lab Control Sample	107	94	110	103
LCS 280-436199/7	Lab Control Sample	111	101	113	102
LCS 280-436409/5	Lab Control Sample	115	89	114	100
LCS 280-437146/4	Lab Control Sample	93	99	98	96
LCS 280-437146/6	Lab Control Sample	87	100	98	95
LCSD 280-436409/6	Lab Control Sample Dup	117	91	116	100
LCSD 280-437146/5	Lab Control Sample Dup	91	95	98	95
LCSD 280-437146/7	Lab Control Sample Dup	88	98	99	95
MB 280-436199/4	Method Blank	108	98	112	100
MB 280-436409/4	Method Blank	114	100	117	106
MB 280-437146/8	Method Blank	89	100	96	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-436199/4
Matrix: Water
Analysis Batch: 436199

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 13:24	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/03/18 13:24	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/03/18 13:24	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/03/18 13:24	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/03/18 13:24	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 13:24	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 13:24	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/03/18 13:24	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/03/18 13:24	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/03/18 13:24	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/03/18 13:24	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/03/18 13:24	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/03/18 13:24	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/03/18 13:24	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/03/18 13:24	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 13:24	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/03/18 13:24	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/03/18 13:24	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/03/18 13:24	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/03/18 13:24	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/03/18 13:24	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/03/18 13:24	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/03/18 13:24	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/03/18 13:24	1
Acetone	6.4	U	10	1.9	ug/L			11/03/18 13:24	1
Benzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/03/18 13:24	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/03/18 13:24	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/03/18 13:24	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/03/18 13:24	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/03/18 13:24	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/03/18 13:24	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/03/18 13:24	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 13:24	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/03/18 13:24	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/03/18 13:24	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-436199/4
Matrix: Water
Analysis Batch: 436199

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/03/18 13:24	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/03/18 13:24	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/03/18 13:24	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/03/18 13:24	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/03/18 13:24	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/03/18 13:24	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/03/18 13:24	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/03/18 13:24	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/03/18 13:24	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
Styrene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/03/18 13:24	1
Toluene	0.40	U	1.0	0.17	ug/L			11/03/18 13:24	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/03/18 13:24	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/03/18 13:24	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/03/18 13:24	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/03/18 13:24	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/03/18 13:24	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/03/18 13:24	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/03/18 13:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*11/03/18 13:24*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/03/18 13:24*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*11/03/18 13:24*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/03/18 13:24*	*1*

Lab Sample ID: LCS 280-436199/5
Matrix: Water
Analysis Batch: 436199

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.89		ug/L		98	78 - 124
1,1,1-Trichloroethane	5.00	5.20		ug/L		104	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.95		ug/L		99	71 - 121
1,1,2-Trichloroethane	5.00	5.57		ug/L		111	80 - 119
1,1-Dichloroethane	5.00	5.36		ug/L		107	77 - 125
1,1-Dichloroethene	5.00	5.47		ug/L		109	71 - 131
1,1-Dichloropropene	5.00	5.17		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	5.00	4.89		ug/L		98	69 - 129
1,2,3-Trichloropropane	5.00	5.06		ug/L		101	73 - 122
1,2,4-Trichlorobenzene	5.00	4.67		ug/L		93	69 - 130
1,2,4-Trimethylbenzene	5.00	4.73		ug/L		95	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	4.35	J	ug/L		87	62 - 128
1,2-Dibromoethane	5.00	4.96		ug/L		99	77 - 121
1,2-Dichlorobenzene	5.00	4.87		ug/L		97	80 - 119

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-436199/5
Matrix: Water
Analysis Batch: 436199

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	5.00	5.01		ug/L		100	73 - 128
1,2-Dichloroethene, Total	10.0	10.8		ug/L		108	79 - 121
1,2-Dichloropropane	5.00	5.58		ug/L		112	78 - 122
1,3,5-Trimethylbenzene	5.00	4.70		ug/L		94	75 - 124
1,3-Dichlorobenzene	5.00	4.77		ug/L		95	80 - 119
1,3-Dichloropropane	5.00	4.94		ug/L		99	80 - 119
1,4-Dichlorobenzene	5.00	4.83		ug/L		97	79 - 118
2,2-Dichloropropane	5.00	5.20		ug/L		104	60 - 139
2-Butanone (MEK)	20.0	16.9		ug/L		84	56 - 143
2-Chlorotoluene	5.00	4.85		ug/L		97	79 - 122
2-Hexanone	20.0	18.0		ug/L		90	57 - 139
4-Chlorotoluene	5.00	4.83		ug/L		97	78 - 122
4-Isopropyltoluene	5.00	4.81		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	21.1		ug/L		106	67 - 130
Acetone	20.0	18.8		ug/L		94	39 - 160
Benzene	5.00	5.31		ug/L		106	79 - 120
Bromobenzene	5.00	4.73		ug/L		95	80 - 120
Bromochloromethane	5.00	5.44		ug/L		109	78 - 123
Bromodichloromethane	5.00	5.09		ug/L		102	79 - 125
Bromoform	5.00	4.46		ug/L		89	66 - 130
Bromomethane	5.00	5.43		ug/L		109	53 - 141
Carbon disulfide	5.00	5.31		ug/L		106	64 - 133
Carbon tetrachloride	5.00	5.15		ug/L		103	72 - 136
Chlorobenzene	5.00	5.01		ug/L		100	82 - 118
Chloroethane	5.00	5.44		ug/L		109	60 - 138
Chloroform	5.00	5.25		ug/L		105	79 - 124
Chloromethane	5.00	4.68		ug/L		94	50 - 139
cis-1,2-Dichloroethene	5.00	5.29		ug/L		106	78 - 123
cis-1,3-Dichloropropene	5.00	4.91		ug/L		98	75 - 124
Dibromochloromethane	5.00	4.51		ug/L		90	74 - 126
Dibromomethane	5.00	5.13		ug/L		103	79 - 123
Dichlorodifluoromethane	5.00	4.25		ug/L		85	32 - 152
Ethylbenzene	5.00	4.93		ug/L		99	79 - 121
Hexachlorobutadiene	5.00	4.61		ug/L		92	66 - 134
Isopropylbenzene	5.00	4.80		ug/L		96	72 - 131
m,p-Xylene	5.00	5.11		ug/L		102	80 - 121
Methyl iodide	5.00	5.35		ug/L		107	69 - 131
Methyl tert-butyl ether	5.00	4.81	J	ug/L		96	71 - 124
Methylene Chloride	5.00	5.18		ug/L		104	74 - 124
Naphthalene	5.00	4.28		ug/L		86	61 - 128
n-Butylbenzene	5.00	4.86		ug/L		97	75 - 128
N-Propylbenzene	5.00	4.88		ug/L		98	76 - 126
o-Xylene	5.00	5.12		ug/L		102	78 - 122
sec-Butylbenzene	5.00	4.84		ug/L		97	77 - 126
Styrene	5.00	5.10		ug/L		102	78 - 123
tert-Butylbenzene	5.00	4.77		ug/L		95	78 - 124
Tetrachloroethene	5.00	4.99		ug/L		100	74 - 129
Toluene	5.00	5.36		ug/L		107	80 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-436199/5
Matrix: Water
Analysis Batch: 436199

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	5.00	5.51		ug/L		110	75 - 124
trans-1,3-Dichloropropene	5.00	4.65		ug/L		93	73 - 127
Trichloroethene	5.00	5.12		ug/L		102	79 - 123
Trichlorofluoromethane	5.00	5.08		ug/L		102	65 - 141
Vinyl acetate	10.0	9.65		ug/L		96	54 - 146
Vinyl chloride	5.00	4.85		ug/L		97	58 - 137
Xylenes, Total	10.0	10.2		ug/L		102	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*110*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Lab Sample ID: LCS 280-436199/7
Matrix: Water
Analysis Batch: 436199

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diisopropyl ether	5.00	5.39	J	ug/L		108	67 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*113*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: MB 280-436409/4
Matrix: Water
Analysis Batch: 436409

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/05/18 20:31	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/05/18 20:31	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/05/18 20:31	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/05/18 20:31	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/05/18 20:31	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/05/18 20:31	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/05/18 20:31	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/05/18 20:31	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/05/18 20:31	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/05/18 20:31	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/05/18 20:31	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/05/18 20:31	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/05/18 20:31	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/05/18 20:31	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/05/18 20:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-436409/4
Matrix: Water
Analysis Batch: 436409

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/05/18 20:31	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/05/18 20:31	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/05/18 20:31	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/05/18 20:31	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/05/18 20:31	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/05/18 20:31	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/05/18 20:31	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/05/18 20:31	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/05/18 20:31	1
Acetone	6.4	U	10	1.9	ug/L			11/05/18 20:31	1
Benzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/05/18 20:31	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/05/18 20:31	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/05/18 20:31	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/05/18 20:31	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/05/18 20:31	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/05/18 20:31	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/05/18 20:31	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/05/18 20:31	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/05/18 20:31	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/05/18 20:31	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/05/18 20:31	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/05/18 20:31	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/05/18 20:31	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/05/18 20:31	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/05/18 20:31	1
Methylene Chloride	0.472	J	5.0	0.32	ug/L			11/05/18 20:31	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/05/18 20:31	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/05/18 20:31	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/05/18 20:31	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
Styrene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/05/18 20:31	1
Toluene	0.40	U	1.0	0.17	ug/L			11/05/18 20:31	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/05/18 20:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-436409/4
Matrix: Water
Analysis Batch: 436409

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/05/18 20:31	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/05/18 20:31	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/05/18 20:31	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/05/18 20:31	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/05/18 20:31	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/05/18 20:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*		*11/05/18 20:31*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/05/18 20:31*	*1*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*11/05/18 20:31*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*11/05/18 20:31*	*1*

Lab Sample ID: LCS 280-436409/5
Matrix: Water
Analysis Batch: 436409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.14		ug/L		103	78 - 124
1,1,1-Trichloroethane	5.00	5.58		ug/L		112	74 - 131
1,1,2,2-Tetrachloroethane	5.00	5.24		ug/L		105	71 - 121
1,1,2-Trichloroethane	5.00	6.24	Q	ug/L		125	80 - 119
1,1-Dichloroethane	5.00	5.94		ug/L		119	77 - 125
1,1-Dichloroethene	5.00	5.75		ug/L		115	71 - 131
1,1-Dichloropropene	5.00	5.64		ug/L		113	79 - 125
1,2,3-Trichlorobenzene	5.00	5.04		ug/L		101	69 - 129
1,2,3-Trichloropropane	5.00	5.19		ug/L		104	73 - 122
1,2,4-Trichlorobenzene	5.00	4.71		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	5.00	4.70		ug/L		94	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	5.32		ug/L		106	62 - 128
1,2-Dibromoethane	5.00	5.26		ug/L		105	77 - 121
1,2-Dichlorobenzene	5.00	4.78		ug/L		96	80 - 119
1,2-Dichloroethane	5.00	5.76		ug/L		115	73 - 128
1,2-Dichloroethene, Total	10.0	11.7		ug/L		117	79 - 121
1,2-Dichloropropane	5.00	6.33	Q	ug/L		127	78 - 122
1,3,5-Trimethylbenzene	5.00	4.65		ug/L		93	75 - 124
1,3-Dichlorobenzene	5.00	4.76		ug/L		95	80 - 119
1,3-Dichloropropane	5.00	5.33		ug/L		107	80 - 119
1,4-Dichlorobenzene	5.00	4.77		ug/L		95	79 - 118
2,2-Dichloropropane	5.00	5.33		ug/L		107	60 - 139
2-Butanone (MEK)	20.0	19.8		ug/L		99	56 - 143
2-Chlorotoluene	5.00	4.82		ug/L		96	79 - 122
2-Hexanone	20.0	20.2		ug/L		101	57 - 139
4-Chlorotoluene	5.00	4.73		ug/L		95	78 - 122
4-Isopropyltoluene	5.00	4.80		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	23.8		ug/L		119	67 - 130
Acetone	20.0	21.7		ug/L		109	39 - 160
Benzene	5.00	5.78		ug/L		116	79 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-436409/5
Matrix: Water
Analysis Batch: 436409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	5.00	4.73		ug/L		95	80 - 120
Bromochloromethane	5.00	5.80		ug/L		116	78 - 123
Bromodichloromethane	5.00	5.77		ug/L		115	79 - 125
Bromoform	5.00	4.53		ug/L		91	66 - 130
Bromomethane	5.00	5.83		ug/L		117	53 - 141
Carbon disulfide	5.00	5.55		ug/L		111	64 - 133
Carbon tetrachloride	5.00	5.49		ug/L		110	72 - 136
Chlorobenzene	5.00	5.05		ug/L		101	82 - 118
Chloroethane	5.00	5.89		ug/L		118	60 - 138
Chloroform	5.00	5.86		ug/L		117	79 - 124
Chloromethane	5.00	5.09		ug/L		102	50 - 139
cis-1,2-Dichloroethene	5.00	5.87		ug/L		117	78 - 123
cis-1,3-Dichloropropene	5.00	5.10		ug/L		102	75 - 124
Dibromochloromethane	5.00	4.80		ug/L		96	74 - 126
Dibromomethane	5.00	5.72		ug/L		114	79 - 123
Dichlorodifluoromethane	5.00	4.58		ug/L		92	32 - 152
Ethylbenzene	5.00	4.91		ug/L		98	79 - 121
Hexachlorobutadiene	5.00	4.55		ug/L		91	66 - 134
Isopropylbenzene	5.00	4.74		ug/L		95	72 - 131
m,p-Xylene	5.00	5.19		ug/L		104	80 - 121
Methyl iodide	5.00	5.62		ug/L		112	69 - 131
Methyl tert-butyl ether	5.00	5.51		ug/L		110	71 - 124
Methylene Chloride	5.00	5.74		ug/L		115	74 - 124
Naphthalene	5.00	4.95		ug/L		99	61 - 128
n-Butylbenzene	5.00	4.74		ug/L		95	75 - 128
N-Propylbenzene	5.00	4.84		ug/L		97	76 - 126
o-Xylene	5.00	5.18		ug/L		104	78 - 122
sec-Butylbenzene	5.00	4.80		ug/L		96	77 - 126
Styrene	5.00	5.06		ug/L		101	78 - 123
tert-Butylbenzene	5.00	4.79		ug/L		96	78 - 124
Tetrachloroethene	5.00	4.89		ug/L		98	74 - 129
Toluene	5.00	5.95		ug/L		119	80 - 121
trans-1,2-Dichloroethene	5.00	5.83		ug/L		117	75 - 124
trans-1,3-Dichloropropene	5.00	5.19		ug/L		104	73 - 127
Trichloroethene	5.00	5.57		ug/L		111	79 - 123
Trichlorofluoromethane	5.00	5.38		ug/L		108	65 - 141
Vinyl acetate	10.0	10.8		ug/L		108	54 - 146
Vinyl chloride	5.00	5.50		ug/L		110	58 - 137
Xylenes, Total	10.0	10.4		ug/L		104	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*114*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-436409/6
Matrix: Water
Analysis Batch: 436409

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.17		ug/L		103	78 - 124	1	20
1,1,1-Trichloroethane	5.00	5.65		ug/L		113	74 - 131	1	20
1,1,2,2-Tetrachloroethane	5.00	5.24		ug/L		105	71 - 121	0	20
1,1,2-Trichloroethane	5.00	6.21	Q	ug/L		124	80 - 119	1	20
1,1-Dichloroethane	5.00	5.93		ug/L		119	77 - 125	0	20
1,1-Dichloroethene	5.00	5.98		ug/L		120	71 - 131	4	20
1,1-Dichloropropene	5.00	5.71		ug/L		114	79 - 125	1	20
1,2,3-Trichlorobenzene	5.00	5.20		ug/L		104	69 - 129	3	20
1,2,3-Trichloropropane	5.00	5.12		ug/L		102	73 - 122	1	20
1,2,4-Trichlorobenzene	5.00	4.74		ug/L		95	69 - 130	1	20
1,2,4-Trimethylbenzene	5.00	4.83		ug/L		97	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	5.00	4.76	J	ug/L		95	62 - 128	11	20
1,2-Dibromoethane	5.00	5.32		ug/L		106	77 - 121	1	20
1,2-Dichlorobenzene	5.00	4.99		ug/L		100	80 - 119	4	20
1,2-Dichloroethane	5.00	5.83		ug/L		117	73 - 128	1	20
1,2-Dichloroethene, Total	10.0	11.7		ug/L		117	79 - 121	0	20
1,2-Dichloropropane	5.00	6.20	Q	ug/L		124	78 - 122	2	20
1,3,5-Trimethylbenzene	5.00	4.88		ug/L		98	75 - 124	5	20
1,3-Dichlorobenzene	5.00	4.86		ug/L		97	80 - 119	2	20
1,3-Dichloropropane	5.00	5.19		ug/L		104	80 - 119	3	20
1,4-Dichlorobenzene	5.00	4.97		ug/L		99	79 - 118	4	20
2,2-Dichloropropane	5.00	5.23		ug/L		105	60 - 139	2	20
2-Butanone (MEK)	20.0	18.2		ug/L		91	56 - 143	8	20
2-Chlorotoluene	5.00	4.92		ug/L		98	79 - 122	2	20
2-Hexanone	20.0	18.6		ug/L		93	57 - 139	8	20
4-Chlorotoluene	5.00	5.04		ug/L		101	78 - 122	7	20
4-Isopropyltoluene	5.00	4.97		ug/L		99	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)	20.0	23.8		ug/L		119	67 - 130	0	20
Acetone	20.0	21.9		ug/L		109	39 - 160	1	20
Benzene	5.00	5.93		ug/L		119	79 - 120	2	20
Bromobenzene	5.00	4.94		ug/L		99	80 - 120	4	20
Bromochloromethane	5.00	6.03		ug/L		121	78 - 123	4	20
Bromodichloromethane	5.00	5.88		ug/L		118	79 - 125	2	20
Bromoform	5.00	5.06		ug/L		101	66 - 130	11	20
Bromomethane	5.00	6.15		ug/L		123	53 - 141	5	20
Carbon disulfide	5.00	5.83		ug/L		117	64 - 133	5	20
Carbon tetrachloride	5.00	5.52		ug/L		110	72 - 136	1	20
Chlorobenzene	5.00	5.07		ug/L		101	82 - 118	0	20
Chloroethane	5.00	6.16		ug/L		123	60 - 138	5	20
Chloroform	5.00	5.82		ug/L		116	79 - 124	1	20
Chloromethane	5.00	5.32		ug/L		106	50 - 139	4	20
cis-1,2-Dichloroethene	5.00	5.70		ug/L		114	78 - 123	3	20
cis-1,3-Dichloropropene	5.00	5.17		ug/L		103	75 - 124	1	20
Dibromochloromethane	5.00	4.73		ug/L		95	74 - 126	2	20
Dibromomethane	5.00	5.92		ug/L		118	79 - 123	4	20
Dichlorodifluoromethane	5.00	5.32		ug/L		106	32 - 152	15	20
Ethylbenzene	5.00	5.01		ug/L		100	79 - 121	2	20
Hexachlorobutadiene	5.00	4.68		ug/L		94	66 - 134	3	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-436409/6
Matrix: Water
Analysis Batch: 436409

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene			5.00	4.84		ug/L		97	72 - 131	2	20
m,p-Xylene			5.00	5.16		ug/L		103	80 - 121	1	20
Methyl iodide			5.00	5.78		ug/L		116	69 - 131	3	20
Methyl tert-butyl ether			5.00	5.59		ug/L		112	71 - 124	1	20
Methylene Chloride			5.00	5.57		ug/L		111	74 - 124	3	20
Naphthalene			5.00	4.75		ug/L		95	61 - 128	4	20
n-Butylbenzene			5.00	4.96		ug/L		99	75 - 128	5	20
N-Propylbenzene			5.00	4.95		ug/L		99	76 - 126	2	20
o-Xylene			5.00	5.15		ug/L		103	78 - 122	1	20
sec-Butylbenzene			5.00	5.02		ug/L		100	77 - 126	4	20
Styrene			5.00	4.97		ug/L		99	78 - 123	2	20
tert-Butylbenzene			5.00	4.83		ug/L		97	78 - 124	1	20
Tetrachloroethene			5.00	5.05		ug/L		101	74 - 129	3	20
Toluene			5.00	5.88		ug/L		118	80 - 121	1	20
trans-1,2-Dichloroethene			5.00	5.96		ug/L		119	75 - 124	2	20
trans-1,3-Dichloropropene			5.00	5.16		ug/L		103	73 - 127	0	20
Trichloroethene			5.00	5.62		ug/L		112	79 - 123	1	20
Trichlorofluoromethane			5.00	5.82		ug/L		116	65 - 141	8	20
Vinyl acetate			10.0	10.2		ug/L		102	54 - 146	6	20
Vinyl chloride			5.00	5.68		ug/L		114	58 - 137	3	20
Xylenes, Total			10.0	10.3		ug/L		103	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*117*		*81 - 118*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*116*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Lab Sample ID: MB 280-437146/8
Matrix: Water
Analysis Batch: 437146

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/10/18 12:38	1
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.21	ug/L			11/10/18 12:38	1
1,1,2-Trichloroethane	0.80	U	1.0	0.27	ug/L			11/10/18 12:38	1
1,1-Dichloroethane	0.80	U	1.0	0.22	ug/L			11/10/18 12:38	1
1,1-Dichloroethene	0.80	U	1.0	0.23	ug/L			11/10/18 12:38	1
1,1-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/10/18 12:38	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/10/18 12:38	1
1,2,3-Trichloropropane	0.80	U	3.0	0.33	ug/L			11/10/18 12:38	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.21	ug/L			11/10/18 12:38	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.15	ug/L			11/10/18 12:38	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.47	ug/L			11/10/18 12:38	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/10/18 12:38	1
1,2-Dichlorobenzene	0.40	U	1.0	0.15	ug/L			11/10/18 12:38	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/10/18 12:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-437146/8
Matrix: Water
Analysis Batch: 437146

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	0.20	U	1.0	0.24	ug/L			11/10/18 12:38	1
1,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/10/18 12:38	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
1,3-Dichlorobenzene	0.40	U	1.0	0.13	ug/L			11/10/18 12:38	1
1,3-Dichloropropane	0.80	U	1.0	0.22	ug/L			11/10/18 12:38	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
2,2-Dichloropropane	0.40	U	1.0	0.18	ug/L			11/10/18 12:38	1
2-Butanone (MEK)	4.0	U	6.0	2.0	ug/L			11/10/18 12:38	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
2-Hexanone	4.0	U	5.0	1.7	ug/L			11/10/18 12:38	1
4-Chlorotoluene	0.80	U	1.0	0.21	ug/L			11/10/18 12:38	1
4-Isopropyltoluene	0.40	U	1.0	0.20	ug/L			11/10/18 12:38	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	0.98	ug/L			11/10/18 12:38	1
Acetone	6.4	U	10	1.9	ug/L			11/10/18 12:38	1
Benzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Bromobenzene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/10/18 12:38	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/10/18 12:38	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/10/18 12:38	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/10/18 12:38	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/10/18 12:38	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/10/18 12:38	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/10/18 12:38	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/10/18 12:38	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			11/10/18 12:38	1
Diisopropyl ether	2.0	U	10	0.74	ug/L			11/10/18 12:38	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Hexachlorobutadiene	0.80	U	1.0	0.36	ug/L			11/10/18 12:38	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			11/10/18 12:38	1
m,p-Xylene	0.80	U	2.0	0.34	ug/L			11/10/18 12:38	1
Methyl iodide	0.80	U	2.0	0.23	ug/L			11/10/18 12:38	1
Methyl tert-butyl ether	0.80	U	5.0	0.25	ug/L			11/10/18 12:38	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/10/18 12:38	1
Naphthalene	0.80	U	1.0	0.22	ug/L			11/10/18 12:38	1
n-Butylbenzene	0.80	U	1.0	0.32	ug/L			11/10/18 12:38	1
N-Propylbenzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
o-Xylene	0.40	U	1.0	0.19	ug/L			11/10/18 12:38	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
Styrene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/10/18 12:38	1
Toluene	0.40	U	1.0	0.17	ug/L			11/10/18 12:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-437146/8
Matrix: Water
Analysis Batch: 437146

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.40	U	1.0	0.15	ug/L			11/10/18 12:38	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/10/18 12:38	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/10/18 12:38	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			11/10/18 12:38	1
Vinyl acetate	2.0	U	3.0	0.94	ug/L			11/10/18 12:38	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/10/18 12:38	1
Xylenes, Total	0.80	U	1.0	0.19	ug/L			11/10/18 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/10/18 12:38*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/10/18 12:38*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/10/18 12:38*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*11/10/18 12:38*	*1*

Lab Sample ID: LCS 280-437146/4
Matrix: Water
Analysis Batch: 437146

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.11		ug/L		102	78 - 124
1,1,1-Trichloroethane	5.00	4.93		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.93		ug/L		99	71 - 121
1,1,2-Trichloroethane	5.00	5.30		ug/L		106	80 - 119
1,1-Dichloroethane	5.00	5.02		ug/L		100	77 - 125
1,1-Dichloroethene	5.00	4.95		ug/L		99	71 - 131
1,1-Dichloropropene	5.00	5.11		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	5.00	5.23		ug/L		105	69 - 129
1,2,3-Trichloropropane	5.00	4.73		ug/L		95	73 - 122
1,2,4-Trichlorobenzene	5.00	5.31		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	5.00	4.83		ug/L		97	76 - 124
1,2-Dibromo-3-Chloropropane	5.00	4.97	J	ug/L		99	62 - 128
1,2-Dibromoethane	5.00	4.91		ug/L		98	77 - 121
1,2-Dichlorobenzene	5.00	4.96		ug/L		99	80 - 119
1,2-Dichloroethane	5.00	4.84		ug/L		97	73 - 128
1,2-Dichloroethene, Total	10.0	10.3		ug/L		103	79 - 121
1,2-Dichloropropane	5.00	5.58		ug/L		112	78 - 122
1,3,5-Trimethylbenzene	5.00	4.75		ug/L		95	75 - 124
1,3-Dichlorobenzene	5.00	4.98		ug/L		100	80 - 119
1,3-Dichloropropane	5.00	4.83		ug/L		97	80 - 119
1,4-Dichlorobenzene	5.00	4.95		ug/L		99	79 - 118
2,2-Dichloropropane	5.00	4.89		ug/L		98	60 - 139
2-Butanone (MEK)	20.0	15.3		ug/L		77	56 - 143
2-Chlorotoluene	5.00	4.82		ug/L		96	79 - 122
2-Hexanone	20.0	16.2		ug/L		81	57 - 139
4-Chlorotoluene	5.00	4.78		ug/L		96	78 - 122
4-Isopropyltoluene	5.00	4.74		ug/L		95	77 - 127
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	67 - 130
Acetone	20.0	18.1		ug/L		90	39 - 160

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-437146/4
Matrix: Water
Analysis Batch: 437146

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.23		ug/L		105	79 - 120
Bromobenzene	5.00	5.00		ug/L		100	80 - 120
Bromochloromethane	5.00	5.19		ug/L		104	78 - 123
Bromodichloromethane	5.00	5.12		ug/L		102	79 - 125
Bromoform	5.00	5.43		ug/L		109	66 - 130
Bromomethane	5.00	6.40		ug/L		128	53 - 141
Carbon disulfide	5.00	5.22		ug/L		104	64 - 133
Carbon tetrachloride	5.00	4.88		ug/L		98	72 - 136
Chlorobenzene	5.00	4.92		ug/L		98	82 - 118
Chloroethane	5.00	5.10		ug/L		102	60 - 138
Chloroform	5.00	5.16		ug/L		103	79 - 124
Chloromethane	5.00	4.36		ug/L		87	50 - 139
cis-1,2-Dichloroethene	5.00	5.09		ug/L		102	78 - 123
cis-1,3-Dichloropropene	5.00	5.22		ug/L		104	75 - 124
Dibromochloromethane	5.00	4.96		ug/L		99	74 - 126
Dibromomethane	5.00	5.21		ug/L		104	79 - 123
Dichlorodifluoromethane	5.00	4.61		ug/L		92	32 - 152
Ethylbenzene	5.00	4.94		ug/L		99	79 - 121
Hexachlorobutadiene	5.00	5.04		ug/L		101	66 - 134
Isopropylbenzene	5.00	4.59		ug/L		92	72 - 131
m,p-Xylene	5.00	4.83		ug/L		97	80 - 121
Methyl iodide	5.00	5.07		ug/L		101	69 - 131
Methyl tert-butyl ether	5.00	4.96	J	ug/L		99	71 - 124
Methylene Chloride	5.00	4.79	J	ug/L		96	74 - 124
Naphthalene	5.00	5.24		ug/L		105	61 - 128
n-Butylbenzene	5.00	4.82		ug/L		96	75 - 128
N-Propylbenzene	5.00	4.60		ug/L		92	76 - 126
o-Xylene	5.00	5.11		ug/L		102	78 - 122
sec-Butylbenzene	5.00	4.69		ug/L		94	77 - 126
Styrene	5.00	4.91		ug/L		98	78 - 123
tert-Butylbenzene	5.00	4.52		ug/L		90	78 - 124
Tetrachloroethene	5.00	4.85		ug/L		97	74 - 129
Toluene	5.00	5.30		ug/L		106	80 - 121
trans-1,2-Dichloroethene	5.00	5.19		ug/L		104	75 - 124
trans-1,3-Dichloropropene	5.00	4.80		ug/L		96	73 - 127
Trichloroethene	5.00	4.95		ug/L		99	79 - 123
Trichlorofluoromethane	5.00	5.22		ug/L		104	65 - 141
Vinyl acetate	10.0	9.49		ug/L		95	54 - 146
Vinyl chloride	5.00	5.29		ug/L		106	58 - 137
Xylenes, Total	10.0	9.94		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-437146/6
Matrix: Water
Analysis Batch: 437146

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diisopropyl ether			5.00	4.71	J	ug/L		94	67 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Lab Sample ID: LCSD 280-437146/5
Matrix: Water
Analysis Batch: 437146

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.42		ug/L		108	78 - 124	6	20
1,1,1-Trichloroethane			5.00	5.02		ug/L		100	74 - 131	2	20
1,1,2,2-Tetrachloroethane			5.00	5.12		ug/L		102	71 - 121	4	20
1,1,2-Trichloroethane			5.00	5.45		ug/L		109	80 - 119	3	20
1,1-Dichloroethane			5.00	5.25		ug/L		105	77 - 125	4	20
1,1-Dichloroethene			5.00	5.14		ug/L		103	71 - 131	4	20
1,1-Dichloropropene			5.00	5.25		ug/L		105	79 - 125	3	20
1,2,3-Trichlorobenzene			5.00	5.45		ug/L		109	69 - 129	4	20
1,2,3-Trichloropropane			5.00	4.89		ug/L		98	73 - 122	3	20
1,2,4-Trichlorobenzene			5.00	5.43		ug/L		109	69 - 130	2	20
1,2,4-Trimethylbenzene			5.00	5.05		ug/L		101	76 - 124	4	20
1,2-Dibromo-3-Chloropropane			5.00	5.08		ug/L		102	62 - 128	2	20
1,2-Dibromoethane			5.00	5.07		ug/L		101	77 - 121	3	20
1,2-Dichlorobenzene			5.00	5.22		ug/L		104	80 - 119	5	20
1,2-Dichloroethane			5.00	5.03		ug/L		101	73 - 128	4	20
1,2-Dichloroethene, Total			10.0	10.5		ug/L		105	79 - 121	2	20
1,2-Dichloropropane			5.00	5.77		ug/L		115	78 - 122	3	20
1,3,5-Trimethylbenzene			5.00	4.99		ug/L		100	75 - 124	5	20
1,3-Dichlorobenzene			5.00	5.14		ug/L		103	80 - 119	3	20
1,3-Dichloropropane			5.00	5.00		ug/L		100	80 - 119	4	20
1,4-Dichlorobenzene			5.00	5.20		ug/L		104	79 - 118	5	20
2,2-Dichloropropane			5.00	5.03		ug/L		101	60 - 139	3	20
2-Butanone (MEK)			20.0	13.7		ug/L		69	56 - 143	11	20
2-Chlorotoluene			5.00	5.13		ug/L		103	79 - 122	6	20
2-Hexanone			20.0	16.8		ug/L		84	57 - 139	4	20
4-Chlorotoluene			5.00	5.15		ug/L		103	78 - 122	7	20
4-Isopropyltoluene			5.00	5.05		ug/L		101	77 - 127	6	20
4-Methyl-2-pentanone (MIBK)			20.0	19.1		ug/L		96	67 - 130	7	20
Acetone			20.0	17.0		ug/L		85	39 - 160	6	20
Benzene			5.00	5.45		ug/L		109	79 - 120	4	20
Bromobenzene			5.00	5.20		ug/L		104	80 - 120	4	20
Bromochloromethane			5.00	5.46		ug/L		109	78 - 123	5	20
Bromodichloromethane			5.00	5.28		ug/L		106	79 - 125	3	20
Bromoform			5.00	5.60		ug/L		112	66 - 130	3	20
Bromomethane			5.00	6.56		ug/L		131	53 - 141	2	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-437146/5
Matrix: Water
Analysis Batch: 437146

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide	5.00	5.33		ug/L		107	64 - 133	2	20
Carbon tetrachloride	5.00	5.05		ug/L		101	72 - 136	3	20
Chlorobenzene	5.00	5.18		ug/L		104	82 - 118	5	20
Chloroethane	5.00	5.01		ug/L		100	60 - 138	2	20
Chloroform	5.00	5.29		ug/L		106	79 - 124	2	20
Chloromethane	5.00	4.25		ug/L		85	50 - 139	3	20
cis-1,2-Dichloroethene	5.00	5.22		ug/L		104	78 - 123	3	20
cis-1,3-Dichloropropene	5.00	5.44		ug/L		109	75 - 124	4	20
Dibromochloromethane	5.00	5.07		ug/L		101	74 - 126	2	20
Dibromomethane	5.00	5.50		ug/L		110	79 - 123	5	20
Dichlorodifluoromethane	5.00	4.56		ug/L		91	32 - 152	1	20
Ethylbenzene	5.00	5.24		ug/L		105	79 - 121	6	20
Hexachlorobutadiene	5.00	5.19		ug/L		104	66 - 134	3	20
Isopropylbenzene	5.00	4.87		ug/L		97	72 - 131	6	20
m,p-Xylene	5.00	5.09		ug/L		102	80 - 121	5	20
Methyl iodide	5.00	5.23		ug/L		105	69 - 131	3	20
Methyl tert-butyl ether	5.00	5.12		ug/L		102	71 - 124	3	20
Methylene Chloride	5.00	4.97	J	ug/L		99	74 - 124	4	20
Naphthalene	5.00	5.30		ug/L		106	61 - 128	1	20
n-Butylbenzene	5.00	5.00		ug/L		100	75 - 128	4	20
N-Propylbenzene	5.00	4.83		ug/L		97	76 - 126	5	20
o-Xylene	5.00	5.54		ug/L		111	78 - 122	8	20
sec-Butylbenzene	5.00	4.94		ug/L		99	77 - 126	5	20
Styrene	5.00	5.11		ug/L		102	78 - 123	4	20
tert-Butylbenzene	5.00	4.85		ug/L		97	78 - 124	7	20
Tetrachloroethene	5.00	5.10		ug/L		102	74 - 129	5	20
Toluene	5.00	5.56		ug/L		111	80 - 121	5	20
trans-1,2-Dichloroethene	5.00	5.30		ug/L		106	75 - 124	2	20
trans-1,3-Dichloropropene	5.00	4.97		ug/L		99	73 - 127	3	20
Trichloroethene	5.00	5.23		ug/L		105	79 - 123	6	20
Trichlorofluoromethane	5.00	5.37		ug/L		107	65 - 141	3	20
Vinyl acetate	10.0	9.23		ug/L		92	54 - 146	3	20
Vinyl chloride	5.00	5.24		ug/L		105	58 - 137	1	20
Xylenes, Total	10.0	10.6		ug/L		106	79 - 121	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Lab Sample ID: LCSD 280-437146/7
Matrix: Water
Analysis Batch: 437146

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diisopropyl ether	5.00	5.17	J	ug/L		103	67 - 128	9	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-437146/7
Matrix: Water
Analysis Batch: 437146

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-436025/4
Matrix: Water
Analysis Batch: 436025

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.80	U	5.0	0.64	ug/L			11/02/18 10:53	1
Ethane	1.5	U	5.0	0.57	ug/L			11/02/18 10:53	1
Ethene	1.4	U	5.0	0.40	ug/L			11/02/18 10:53	1

Lab Sample ID: LCS 280-436025/2
Matrix: Water
Analysis Batch: 436025

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	73.0	71.4		ug/L		98	73 - 125
Ethane	137	156		ug/L		114	74 - 131
Ethene	128	140		ug/L		110	72 - 133

Lab Sample ID: LCSD 280-436025/3
Matrix: Water
Analysis Batch: 436025

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	73.0	63.4		ug/L		87	73 - 125	12	20
Ethane	137	139		ug/L		101	74 - 131	12	20
Ethene	128	126		ug/L		99	72 - 133	11	20

Lab Sample ID: 280-116017-1 DU
Matrix: Water
Analysis Batch: 436025

Client Sample ID: LF6TW-38_1018
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methane	0.80	U	0.80	U	ug/L		NC	20
Ethane	1.5	U	1.5	U	ug/L		NC	20
Ethene	1.4	U	1.4	U	ug/L		NC	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-436996/6
Matrix: Water
Analysis Batch: 436996

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.246	J	5.0	0.23	mg/L			11/09/18 10:30	1

Lab Sample ID: LCS 280-436996/4
Matrix: Water
Analysis Batch: 436996

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			100	100	M	mg/L		100	87 - 112		

Lab Sample ID: LCSD 280-436996/5
Matrix: Water
Analysis Batch: 436996

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			100	100	M	mg/L		100	87 - 112	0	10

Lab Sample ID: MRL 280-436996/3
Matrix: Water
Analysis Batch: 436996

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			2.50	2.75	J	mg/L		110	50 - 150		

Lab Sample ID: 280-116017-1 MS
Matrix: Water
Analysis Batch: 436996

Client Sample ID: LF6TW-38_1018
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	31		25.0	56.2		mg/L		99	87 - 112		

Lab Sample ID: 280-116017-1 MSD
Matrix: Water
Analysis Batch: 436996

Client Sample ID: LF6TW-38_1018
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	31		25.0	56.7		mg/L		101	87 - 112	1	10

Lab Sample ID: 280-116017-1 DU
Matrix: Water
Analysis Batch: 436996

Client Sample ID: LF6TW-38_1018
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	31		30.5		mg/L				3	10

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 280-435563/2-A
Matrix: Water
Analysis Batch: 435723

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	0.286	J	1.0	0.16	mg/L			10/30/18 19:11	1

Lab Sample ID: LCS 280-435563/1-A
Matrix: Water
Analysis Batch: 435723

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon - Quad	25.0	22.9		mg/L		91	88 - 112

Lab Sample ID: 280-116017-1 MS
Matrix: Water
Analysis Batch: 435723

Client Sample ID: LF6TW-38_1018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon - Quad	0.76	J	25.0	23.8		mg/L		92	88 - 112

Lab Sample ID: 280-116017-1 MSD
Matrix: Water
Analysis Batch: 435723

Client Sample ID: LF6TW-38_1018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon - Quad	0.76	J	25.0	23.8		mg/L		92	88 - 112	0	15

Lab Sample ID: MB 280-436465/2-A
Matrix: Water
Analysis Batch: 436637

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	0.349	J	1.0	0.16	mg/L			11/07/18 04:32	1

Lab Sample ID: LCS 280-436465/1-A
Matrix: Water
Analysis Batch: 436637

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon - Quad	25.0	23.5		mg/L		94	88 - 112

Lab Sample ID: 280-116017-2 MS
Matrix: Water
Analysis Batch: 436637

Client Sample ID: LF6TW-36_1018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon - Quad	0.91	J	25.0	24.2		mg/L		93	88 - 112

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: 280-116017-2 MSD
Matrix: Water
Analysis Batch: 436637

Client Sample ID: LF6TW-36_1018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon - Quad	0.91	J	25.0	25.0		mg/L		96	88 - 112	3	15

GC/MS VOA

Analysis Batch: 436199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Total/NA	Water	8260B	
280-116017-2	LF6TW-36_1018	Total/NA	Water	8260B	
280-116017-2 - DL	LF6TW-36_1018	Total/NA	Water	8260B	
280-116017-3	775VMW-19R_1018	Total/NA	Water	8260B	
280-116017-4	775VMW-28_1018	Total/NA	Water	8260B	
280-116017-5	775VMW-9_1018	Total/NA	Water	8260B	
280-116017-6	775VMW-10_1018	Total/NA	Water	8260B	
280-116017-7	775VMW-10_1018-a	Total/NA	Water	8260B	
280-116017-8	775VMW-20_1018	Total/NA	Water	8260B	
MB 280-436199/4	Method Blank	Total/NA	Water	8260B	
LCS 280-436199/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-436199/7	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 436409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1 - DL	LF6TW-38_1018	Total/NA	Water	8260B	
MB 280-436409/4	Method Blank	Total/NA	Water	8260B	
LCS 280-436409/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-436409/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 437146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-9	775VMW-20R_1018	Total/NA	Water	8260B	
280-116017-10	775VMW-5_1018	Total/NA	Water	8260B	
280-116017-11	775VMW-5_1018-a	Total/NA	Water	8260B	
280-116017-12	775VMW-4_1018	Total/NA	Water	8260B	
MB 280-437146/8	Method Blank	Total/NA	Water	8260B	
LCS 280-437146/4	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-437146/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-437146/5	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 280-437146/7	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 436025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Total/NA	Water	RSK-175	
280-116017-2	LF6TW-36_1018	Total/NA	Water	RSK-175	
MB 280-436025/4	Method Blank	Total/NA	Water	RSK-175	
LCS 280-436025/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 280-436025/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	
280-116017-1 DU	LF6TW-38_1018	Total/NA	Water	RSK-175	

General Chemistry

Filtration Batch: 435563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Dissolved	Water	FILTRATION	
280-116017-2	LF6TW-36_1018	Dissolved	Water	FILTRATION	
MB 280-435563/2-A	Method Blank	Dissolved	Water	FILTRATION	

General Chemistry (Continued)

Filtration Batch: 435563 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-435563/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
280-116017-1 MS	LF6TW-38_1018	Dissolved	Water	FILTRATION	
280-116017-1 MSD	LF6TW-38_1018	Dissolved	Water	FILTRATION	

Analysis Batch: 435723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Dissolved	Water	9060A	435563
280-116017-2	LF6TW-36_1018	Dissolved	Water	9060A	435563
MB 280-435563/2-A	Method Blank	Dissolved	Water	9060A	435563
LCS 280-435563/1-A	Lab Control Sample	Dissolved	Water	9060A	435563
280-116017-1 MS	LF6TW-38_1018	Dissolved	Water	9060A	435563
280-116017-1 MSD	LF6TW-38_1018	Dissolved	Water	9060A	435563

Filtration Batch: 436465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Dissolved	Water	FILTRATION	
280-116017-2	LF6TW-36_1018	Dissolved	Water	FILTRATION	
MB 280-436465/2-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-436465/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
280-116017-2 MS	LF6TW-36_1018	Dissolved	Water	FILTRATION	
280-116017-2 MSD	LF6TW-36_1018	Dissolved	Water	FILTRATION	

Analysis Batch: 436637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Dissolved	Water	9060A	436465
280-116017-2	LF6TW-36_1018	Dissolved	Water	9060A	436465
MB 280-436465/2-A	Method Blank	Dissolved	Water	9060A	436465
LCS 280-436465/1-A	Lab Control Sample	Dissolved	Water	9060A	436465
280-116017-2 MS	LF6TW-36_1018	Dissolved	Water	9060A	436465
280-116017-2 MSD	LF6TW-36_1018	Dissolved	Water	9060A	436465

Analysis Batch: 436996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116017-1	LF6TW-38_1018	Total/NA	Water	9056A	
280-116017-2	LF6TW-36_1018	Total/NA	Water	9056A	
MB 280-436996/6	Method Blank	Total/NA	Water	9056A	
LCS 280-436996/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-436996/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-436996/3	Lab Control Sample	Total/NA	Water	9056A	
280-116017-1 MS	LF6TW-38_1018	Total/NA	Water	9056A	
280-116017-1 MSD	LF6TW-38_1018	Total/NA	Water	9056A	
280-116017-1 DU	LF6TW-38_1018	Total/NA	Water	9056A	

Lab Chronicle

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Client Sample ID: LF6TW-38_1018
Date Collected: 10/22/18 08:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 18:08	RSN	TAL DEN
Total/NA	Analysis	8260B	DL	4	20 mL	20 mL	436409	11/06/18 05:13	RSN	TAL DEN
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	436025	11/02/18 11:48	JLW	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	436996	11/09/18 20:42	A1D	TAL DEN
Dissolved	Filtration	FILTRATION			20 mL	20 mL	435563	10/30/18 13:58	LPL	TAL DEN
Dissolved	Analysis	9060A		1			435723	10/30/18 23:42	LPL	TAL DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	436465	11/06/18 09:17	LPL	TAL DEN
Dissolved	Analysis	9060A		1			436637	11/07/18 05:56	LPL	TAL DEN

Client Sample ID: LF6TW-36_1018
Date Collected: 10/22/18 09:26
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 18:27	RSN	TAL DEN
Total/NA	Analysis	8260B	DL	4	20 mL	20 mL	436199	11/03/18 18:45	RSN	TAL DEN
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	436025	11/02/18 12:15	JLW	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	436996	11/09/18 21:57	A1D	TAL DEN
Dissolved	Filtration	FILTRATION			20 mL	20 mL	435563	10/30/18 13:58	LPL	TAL DEN
Dissolved	Analysis	9060A		1			435723	10/30/18 23:23	LPL	TAL DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	436465	11/06/18 09:17	LPL	TAL DEN
Dissolved	Analysis	9060A		1			436637	11/07/18 05:10	LPL	TAL DEN

Client Sample ID: 775VMW-19R_1018
Date Collected: 10/22/18 11:46
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 19:04	RSN	TAL DEN

Client Sample ID: 775VMW-28_1018
Date Collected: 10/22/18 12:41
Date Received: 10/24/18 09:45

Lab Sample ID: 280-116017-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 19:41	RSN	TAL DEN

Client Sample ID: 775VMW-9_1018
Lab Sample ID: 280-116017-5
Date Collected: 10/22/18 13:56
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 19:59	RSN	TAL DEN

Client Sample ID: 775VMW-10_1018
Lab Sample ID: 280-116017-6
Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 20:18	RSN	TAL DEN

Client Sample ID: 775VMW-10_1018-a
Lab Sample ID: 280-116017-7
Date Collected: 10/22/18 15:16
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 20:36	RSN	TAL DEN

Client Sample ID: 775VMW-20_1018
Lab Sample ID: 280-116017-8
Date Collected: 10/22/18 16:31
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436199	11/03/18 21:13	RSN	TAL DEN

Client Sample ID: 775VMW-20R_1018
Lab Sample ID: 280-116017-9
Date Collected: 10/23/18 08:26
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437146	11/10/18 14:01	GPM	TAL DEN

Client Sample ID: 775VMW-5_1018
Lab Sample ID: 280-116017-10
Date Collected: 10/23/18 10:41
Matrix: Water
Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437146	11/10/18 14:21	GPM	TAL DEN

Client Sample ID: 775VMW-5_1018-a

Lab Sample ID: 280-116017-11

Date Collected: 10/23/18 10:41

Matrix: Water

Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437146	11/10/18 14:42	GPM	TAL DEN

Client Sample ID: 775VMW-4_1018

Lab Sample ID: 280-116017-12

Date Collected: 10/23/18 12:16

Matrix: Water

Date Received: 10/24/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437146	11/10/18 15:02	GPM	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
9060A		Water	Dissolved Organic Carbon - Quad

New York	NELAP	2	11964	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,1,1-Trichloroethane
8260B		Water	1,1,2,2-Tetrachloroethane
8260B		Water	1,1,2-Trichloroethane
8260B		Water	1,1-Dichloroethane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,3-Trichloropropane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	1,2-Dibromoethane
8260B		Water	1,2-Dichlorobenzene
8260B		Water	1,2-Dichloroethane
8260B		Water	1,2-Dichloroethene, Total
8260B		Water	1,2-Dichloropropane
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichlorobenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Butanone (MEK)
8260B		Water	2-Chlorotoluene
8260B		Water	2-Hexanone
8260B		Water	4-Chlorotoluene
8260B		Water	4-Isopropyltoluene
8260B		Water	4-Methyl-2-pentanone (MIBK)
8260B		Water	Acetone
8260B		Water	Benzene
8260B		Water	Bromobenzene
8260B		Water	Bromochloromethane
8260B		Water	Bromodichloromethane
8260B		Water	Bromoform
8260B		Water	Bromomethane
8260B		Water	Carbon disulfide
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chloroethane
8260B		Water	Chloroform
8260B		Water	Chloromethane
8260B		Water	cis-1,2-Dichloroethene

Laboratory: TestAmerica Denver (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11964	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	cis-1,3-Dichloropropene
8260B		Water	Dibromochloromethane
8260B		Water	Dibromomethane
8260B		Water	Dichlorodifluoromethane
8260B		Water	Diisopropyl ether
8260B		Water	Ethylbenzene
8260B		Water	Hexachlorobutadiene
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	Methyl iodide
8260B		Water	Methyl tert-butyl ether
8260B		Water	Methylene Chloride
8260B		Water	Naphthalene
8260B		Water	n-Butylbenzene
8260B		Water	N-Propylbenzene
8260B		Water	o-Xylene
8260B		Water	sec-Butylbenzene
8260B		Water	Styrene
8260B		Water	tert-Butylbenzene
8260B		Water	Tetrachloroethene
8260B		Water	Toluene
8260B		Water	trans-1,2-Dichloroethene
8260B		Water	trans-1,3-Dichloropropene
8260B		Water	Trichloroethene
8260B		Water	Trichlorofluoromethane
8260B		Water	Vinyl acetate
8260B		Water	Vinyl chloride
8260B		Water	Xylenes, Total
9056A		Water	Sulfate
9060A		Water	Dissolved Organic Carbon - Quad
RSK-175		Water	Ethane
RSK-175		Water	Ethene
RSK-175		Water	Methane

Method Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
RSK-175	Dissolved Gases (GC)	RSK	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

None = None

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Bhate Environmental
Project/Site: Griffiss AFB, NY - SD052

TestAmerica Job ID: 280-116017-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-116017-1	LF6TW-38_1018	Water	10/22/18 08:26	10/24/18 09:45
280-116017-2	LF6TW-36_1018	Water	10/22/18 09:26	10/24/18 09:45
280-116017-3	775VMW-19R_1018	Water	10/22/18 11:46	10/24/18 09:45
280-116017-4	775VMW-28_1018	Water	10/22/18 12:41	10/24/18 09:45
280-116017-5	775VMW-9_1018	Water	10/22/18 13:56	10/24/18 09:45
280-116017-6	775VMW-10_1018	Water	10/22/18 15:16	10/24/18 09:45
280-116017-7	775VMW-10_1018-a	Water	10/22/18 15:16	10/24/18 09:45
280-116017-8	775VMW-20_1018	Water	10/22/18 16:31	10/24/18 09:45
280-116017-9	775VMW-20R_1018	Water	10/23/18 08:26	10/24/18 09:45
280-116017-10	775VMW-5_1018	Water	10/23/18 10:41	10/24/18 09:45
280-116017-11	775VMW-5_1018-a	Water	10/23/18 10:41	10/24/18 09:45
280-116017-12	775VMW-4_1018	Water	10/23/18 12:16	10/24/18 09:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 426490

Lab Sample ID: STD010 280-426490/18 IC Client Sample ID:

Date Analyzed: 08/17/18 01:38 Lab File ID: P9170.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
n-Butanol		Invalid Compound ID	seifertj	08/17/18 20:29

Lab Sample ID: STD020 280-426490/19 IC Client Sample ID:

Date Analyzed: 08/17/18 01:56 Lab File ID: P9171.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	4.93	Assign Peak	seifertj	08/17/18 20:30
Acetonitrile	5.59	Split Peak	seifertj	08/17/18 20:30
n-Butanol	7.62	Wrong peak	seifertj	08/17/18 20:32

Lab Sample ID: STD050 280-426490/20 IC Client Sample ID:

Date Analyzed: 08/17/18 02:15 Lab File ID: P9172.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	5.34	Assign Peak	seifertj	08/17/18 20:33

Lab Sample ID: STD30 280-426490/22 IC Client Sample ID:

Date Analyzed: 08/17/18 02:52 Lab File ID: P9174.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	5.32	Assign Peak	seifertj	08/17/18 20:34

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 434433

Lab Sample ID: STD005 280-434433/10 IC Client Sample ID:

Date Analyzed: 10/22/18 22:40 Lab File ID: P1532.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	7.37	Assign Peak	seifertj	10/23/18 08:13
Isobutyl alcohol		Invalid Compound ID	seifertj	10/23/18 08:13
Methyl acetate		Invalid Compound ID	seifertj	10/23/18 08:29

Lab Sample ID: STD01 280-434433/11 IC Client Sample ID:

Date Analyzed: 10/22/18 22:59 Lab File ID: P1533.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)	6.64	Assign Peak	newcomer	10/26/18 10:26
sec-Butyl Alcohol	6.68	Baseline	seifertj	10/23/18 12:15
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:27

Lab Sample ID: STD02 280-434433/12 IC Client Sample ID:

Date Analyzed: 10/22/18 23:17 Lab File ID: P1534.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)	6.63	Split Peak	seifertj	10/23/18 08:24
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:25
1,4-Dioxane	8.10	Assign Peak	seifertj	10/23/18 08:25

Lab Sample ID: STD05 280-434433/13 IC Client Sample ID:

Date Analyzed: 10/22/18 23:36 Lab File ID: P1535.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Wrong peak	seifertj	10/23/18 08:21
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 434433

Lab Sample ID: ICIS 280-434433/14 Client Sample ID:

Date Analyzed: 10/22/18 23:54 Lab File ID: P1536.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:16
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:21

Lab Sample ID: STD25 280-434433/15 IC Client Sample ID:

Date Analyzed: 10/23/18 00:13 Lab File ID: P1537.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Wrong peak	seifertj	10/23/18 08:18

Lab Sample ID: STD60 280-434433/16 IC Client Sample ID:

Date Analyzed: 10/23/18 00:32 Lab File ID: P1538.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.09	Wrong peak	seifertj	10/23/18 08:20
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:21

Lab Sample ID: ICV 280-434433/17 Client Sample ID:

Date Analyzed: 10/23/18 01:12 Lab File ID: P1540.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:31
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:31

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 436199

Lab Sample ID: CCV 280-436199/2 Client Sample ID:

Date Analyzed: 11/03/18 12:47 Lab File ID: P2134.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Incomplete Integration	newcomer	11/05/18 17:52
1,4-Dioxane	8.10	Incomplete Integration	newcomer	11/12/18 21:58

Lab Sample ID: 280-116017-1 Client Sample ID: LF6TW-38_1018

Date Analyzed: 11/03/18 18:08 Lab File ID: P2151.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	11/05/18 18:29

Lab Sample ID: 280-116017-2 Client Sample ID: LF6TW-36_1018

Date Analyzed: 11/03/18 18:27 Lab File ID: P2152.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	11/05/18 18:30
Vinyl acetate		Invalid Compound ID	newcomer	11/05/18 18:31

Lab Sample ID: 280-116017-3 Client Sample ID: 775VMW-19R_1018

Date Analyzed: 11/03/18 19:04 Lab File ID: P2154.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	11/05/18 18:33

Lab Sample ID: 280-116017-5 Client Sample ID: 775VMW-9_1018

Date Analyzed: 11/03/18 19:59 Lab File ID: P2157.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	newcomer	11/05/18 18:42

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 436199

Lab Sample ID: 280-116017-6 Client Sample ID:

Date Analyzed: 11/03/18 20:18 Lab File ID: P2158.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TBA-d9 (IS)	5.62	Assign Peak	newcomer	11/05/18 18:42
Vinyl acetate		Invalid Compound ID	newcomer	11/05/18 18:42

Lab Sample ID: CCVC 280-436199/37 Client Sample ID:

Date Analyzed: 11/03/18 22:27 Lab File ID: P2165.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Incomplete Integration	newcomer	11/05/18 18:52
1,4-Dioxane	8.10	Incomplete Integration	newcomer	11/05/18 18:52

Lab Sample ID: CCVC 280-436199/38 Client Sample ID:

Date Analyzed: 11/03/18 22:46 Lab File ID: P2166.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	4.99	Incomplete Integration	newcomer	11/05/18 18:54
Acetonitrile	5.59	Incomplete Integration	newcomer	11/05/18 18:54

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 436409

Lab Sample ID: CCV 280-436409/3 Client Sample ID:

Date Analyzed: 11/05/18 20:12 Lab File ID: P2203.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	5.02	Incomplete Integration	newcomer	11/05/18 22:18
Acetonitrile	5.60	Incomplete Integration	newcomer	11/05/18 22:18

Lab Sample ID: CCVC 280-436409/37 Client Sample ID:

Date Analyzed: 11/06/18 06:09 Lab File ID: P2235.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Incomplete Integration	newcomer	11/07/18 18:42

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 423985

Lab Sample ID: IC 280-423985/10 Client Sample ID:

Date Analyzed: 07/27/18 18:20 Lab File ID: 07271811.D GC Column: Rt-Alumina KC ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.25	Peak assignment corrected	waldorfj	07/27/18 18:32

Lab Sample ID: IC 280-423985/10 Client Sample ID:

Date Analyzed: 07/27/18 18:20 Lab File ID: 07271811.D GC Column: HP-Plot Q ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methane	1.62	Peak assignment corrected	waldorfj	07/27/18 18:32

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 436025

Lab Sample ID: CCV 280-436025/30 Client Sample ID:

Date Analyzed: 11/02/18 13:38 Lab File ID: 11021816.D GC Column: Rt-Alumina KC ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethene	1.84	Baseline Smoothing	sanvillem	11/02/18 13:47

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_IonChrom8 Analysis Batch Number: 428352

Lab Sample ID: STD 280-428352/2 IC Client Sample ID:

Date Analyzed: 09/01/18 11:56 Lab File ID: 02.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	11.51	Incomplete Integration	phantl	09/04/18 17:03

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_IonChrom8 Analysis Batch Number: 436996

Lab Sample ID: CCV 280-436996/1 Client Sample ID:

Date Analyzed: 11/09/18 08:57 Lab File ID: 01.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.96	Peak not integrated	duplina	11/09/18 12:18

Lab Sample ID: LCS 280-436996/4 Client Sample ID:

Date Analyzed: 11/09/18 09:52 Lab File ID: 04.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.95	Peak not integrated	duplina	11/09/18 12:20

Lab Sample ID: LCSD 280-436996/5 Client Sample ID:

Date Analyzed: 11/09/18 10:11 Lab File ID: 05.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.96	Peak not integrated	duplina	11/09/18 12:25

Lab Sample ID: CCV 280-436996/17 Client Sample ID:

Date Analyzed: 11/09/18 18:19 Lab File ID: 17.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.95	Peak not integrated	mosera	11/09/18 18:41

Lab Sample ID: CCV 280-436996/29 Client Sample ID:

Date Analyzed: 11/09/18 22:16 Lab File ID: 29.0000.d GC Column: Ion PAC AS 17 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	10.96	Peak not integrated	duplina	11/12/18 12:11

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC CAL cl/so4_00217	09/06/18	08/31/18	Di Water, Lot na	100 mL	IC CL cal_00054	25 mL	Chloride	250 mg/L
					IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC CL cal_00054	08/30/19	SPEX CertiPrep, Lot 4-101CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00053	08/30/19	SPEX CertiPrep, Lot 4-131SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00228	11/10/18	11/03/18	Di Water, Lot na	100 mL	IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC sulfatecal_00053	08/30/19	SPEX CertiPrep, Lot 4-131SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00396	09/06/18	08/31/18	Di Water, Lot NA	100 mL	IC Br cal_00015	5 mL	Bromide	50 mg/L
					IC FL cal_00012	5 mL	Fluoride	50 mg/L
.IC Br cal_00015	01/31/19	Ricca, Lot 4707D55			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00012	10/31/18	Ricca, Lot 4704K15			(Purchased Reagent)		Fluoride	1000 mg/L
IC LCS_01397	11/10/18	11/09/18	Di Water, Lot 27	200 mL	IC sulfatecal_00053	20 mL	Sulfate	100 mg/L
.IC sulfatecal_00053	08/30/19	SPEX CertiPrep, Lot 4-131SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC SO4 ICV_00017	06/30/19	ERA, Lot 210617			(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00563	11/10/18	11/03/18	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00021	5 mL	Sulfate	2500.26 mg/L
.IC SPK 6 ANIO_00021	10/01/19	10/01/18	Di Water, Lot NA	1000 mL	IC MS/MSD S04_00005	9.0704 g	Sulfate	5000.51 mg/L
..IC MS/MSD S04_00005	09/29/20	FISHER, Lot 147276			(Purchased Reagent)		Sulfate	0.5513 g/g
MV-568718-D_00008	03/31/21	RESTEK, Lot A0118105			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-568718-D_00010	05/31/22	RESTEK, Lot A0127975			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00101	01/25/19	07/25/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-ARCH SS A_00107	04/18/19	10/18/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00026							1,2-Dichloroethene, Total	

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-BFB_00027							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-MegaMain B_00002	10/31/18	09/29/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569724.sec_00020	1000 uL	Vinyl acetate	100 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569724.sec_00020	12/31/18		RESTEK, Lot A0138863		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00003	11/30/18	11/01/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569724.sec_00020	1000 uL	Vinyl acetate	100 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569724.sec_00020	12/31/18		RESTEK, Lot A0138863		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-568720_00022	1266 uL	Acrolein	500.07 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00004	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00007	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					MV-CUS17739_00004	2500 uL	1-Chlorohexane	50 ug/mL
							2-Pentanone	200 ug/mL
							sec-Butyl Alcohol	1500 ug/mL
.MV-568720_00022	10/31/18		RESTEK, Lot A0137497		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00004	12/31/20		RESTEK, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00007	02/29/20		RESTEK, Lot A0124672		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00004	10/31/20		Ultra, Lot CS-4707		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-571992_00001	1000 uL	1,2-Dichloroethene, Total	100 ug/mL
							Xylenes, Total	100 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00005	11/30/18	11/01/18	P&T Methanol, Lot 181124	50 mL	MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00006	11/30/18	11/07/18	P&T Methanol, Lot 181124	50 mL	MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m,p-Xylene	50 ug/mL
							Methyl iodide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m,p-Xylene	2500 ug/mL
							Methyl iodide	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Supp A_00031	11/20/18	06/30/18	P&T Methanol, Lot 12799	10 mL	mv-570808_00004	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitropropane	80 ug/mL
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
					mv-570809_00004	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-571993_00002	160 uL	Acetonitrile	400 ug/mL
							Diisopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-VO-TAOH-5_00005	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
							Ethylene oxide	4000 ug/mL
.mv-570808_00004	05/31/19		Restek, Lot A0132816		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
.mv-570809_00004	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00002	11/30/19		RESTEK, Lot A0132831		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-VO-TAOH-5_00005	11/20/18		SPEX, Lot EN180524019		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
							Ethylene oxide	50000 ug/mL
MV-Supp A_00032	11/20/18	08/03/18	P&T Methanol, Lot 12799	10 mL	mv-570808_00004	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	80 ug/mL
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
							n-Butanol	1000 ug/mL
					mv-570809_00004	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-571993_00002	160 uL	Acetonitrile	400 ug/mL
							Diisopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-571994_00002	240 uL	Ethanol	2400 ug/mL
					mv-VO-TAOH-5_00005	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
							Ethylene oxide	4000 ug/mL
.mv-570808_00004	05/31/19		Restek, Lot A0132816		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butanol	62500 ug/mL
.mv-570809_00004	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-571993_00002	11/30/19		RESTEK, Lot A0132831		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00002	11/30/20		RESTEK, Lot A0132270		(Purchased Reagent)		Ethanol	100000 ug/mL
.mv-VO-TAOH-5_00005	11/20/18		SPEX, Lot EN180524019		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL
							Ethylene oxide	50000 ug/mL
MV-Supp B_00021	09/30/18	06/30/18	P&T Methanol, Lot 127999	10 mL	mv-571993.sec_00002	160 uL	Diisopropyl ether	40 ug/mL
.mv-571993.sec_00002	04/30/19		RESTEK, Lot A0126826		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
MV-Supp B_00022	12/31/18	10/01/18	P&T Methanol, Lot 127999	10 mL	mv-571993.sec_00002	160 uL	Diisopropyl ether	40 ug/mL
.mv-571993.sec_00002	04/30/19		RESTEK, Lot A0126826		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
RSK175methane_00006	09/30/18		Supelco Analytical, Lot 403-102900		(Purchased Reagent)		Methane	650500 ug/L
RSK7gasMathes_00020	10/13/18		Matheson, Lot 9306622072		(Purchased Reagent)		Ethane	12317 ug/L
							Ethene	11490 ug/L
							Methane	6570.3 ug/L
RSK7gasMathes_00021	11/17/18		Matheson, Lot 9306622291		(Purchased Reagent)		Acetylene	10667 ug/L
							Ethane	12317 ug/L
							Ethene	11490 ug/L
							Methane	6570.3 ug/L
RSK7gasMathes_00026	04/03/20		Matheson, Lot 9308630516		(Purchased Reagent)		Ethane	12317 ug/L
							Ethene	11490 ug/L
							Methane	6570.3 ug/L
TOC ICV Std_00036	07/31/19		Ricca, Lot 1807G06		(Purchased Reagent)		Dissolved Organic Carbon - Quad	1000 ppm
							DOC Result 1	1000 ppm
							DOC Result 2	1000 ppm
							DOC Result 3	1000 ppm
							DOC Result 4	1000 ppm
TOC LCS Std_00042	09/30/20		Ultra Scientific, Lot CS-2402		(Purchased Reagent)		Dissolved Organic Carbon - Quad	1000 ppm
							DOC Result 1	1000 ppm
							DOC Result 2	1000 ppm
							DOC Result 3	1000 ppm
							DOC Result 4	1000 ppm

Reagent

IC Br cal_00015

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4707D55 **Product Number:** 1180

Manufacture Date: JUL 20, 2017
Expiration Date: JAN 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs (07/20/2017)
Quality Control Supervisor

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC CL cal_00054

Reference Materials Producer
Cert#2495-01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert#2495-02

Catalog Number: AS-CL9-2X **Lot No.** 4-101CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This Ion Chromatography Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 998 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 07131A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 998 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 997 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.05	NO_3^-	<0.04
F^-	<0.006	$PO4^{-3}$	<0.06
NO_2^-	<0.03	$SO4^{-2}$	<0.05

Balances are calibrated regularly with weight sets traceable to NIST #32666, #32667 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2018 Certifying Officer: Kathleen Cullen

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Reagent

IC FL cal_00012

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Certificate of Analysis

Fluoride Standard, 1000 ppm F^-

Lot Number: 4704K15 **Product Number:** 3173

Manufacture Date: APR 26, 2017
Expiration Date: OCT 2018

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1000 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F^-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F^-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jim Gibbs (04/26/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC MS/MSD S04_00005

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

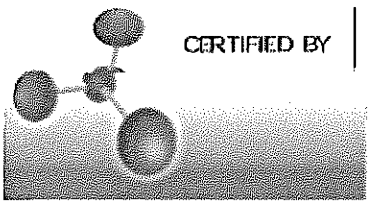
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**P304**	**Quality Test / Release Date**	**3/2/2015**
Lot Number	**147276**		
Description	**POTASSIUM SULFATE, CRYSTAL, CERTIFIED, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Feb-2020**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is not manufactured from, or with, any type of animal product, nor any derivative of an animal product. As such, this product should not be considered a vector for BSE or TSE.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	FINE WHITE CRYSTALS
ASSAY	%	>= 99	99.4
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
MAGNESIUM	%	<= 0.005	<0.0050
NITROGEN COMPOUNDS	ppm	<= 5	<5
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.5	5.5
SODIUM (Na)	%	<= 0.02	<0.020



Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC SO4 ICV_00017

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Sulfate (SO_4)
CATALOG NUMBER:	062 -125 mL; 995 - 500 mL
LOT NUMBER:	210617
ISSUE DATE:	June 27, 2017
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Sulfate (K_2SO_4)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9987 ± 0.0008 g/mL at 22.5°C and 757 mm Hg
TRACEABILITY[3]:	99.5%
NIST/SRM:	3181 Sulfate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 6/2019**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009 ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED
CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC sulfatecal_00053

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEX CertiPrep®

Certificate of Reference Material

ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-SO4-2X **Lot No.** 4131SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This Ion Chromatography Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1003 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# 0713D. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 1002 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as $BaSO_4$.

Instrumental Analysis by Ion Chromatography: 1004 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.04	NO_2^-	<0.08
Cl^-	<0.5	NO_3^-	<0.08
F^-	<0.006	PO_4^{3-}	<0.06

Balances are calibrated regularly with weight sets traceable to NIST #22856, #22857 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG --.--.2018

Certifying Officer: Katherine Cullinan, QC Manager

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Reagent

MV-567650_00027

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

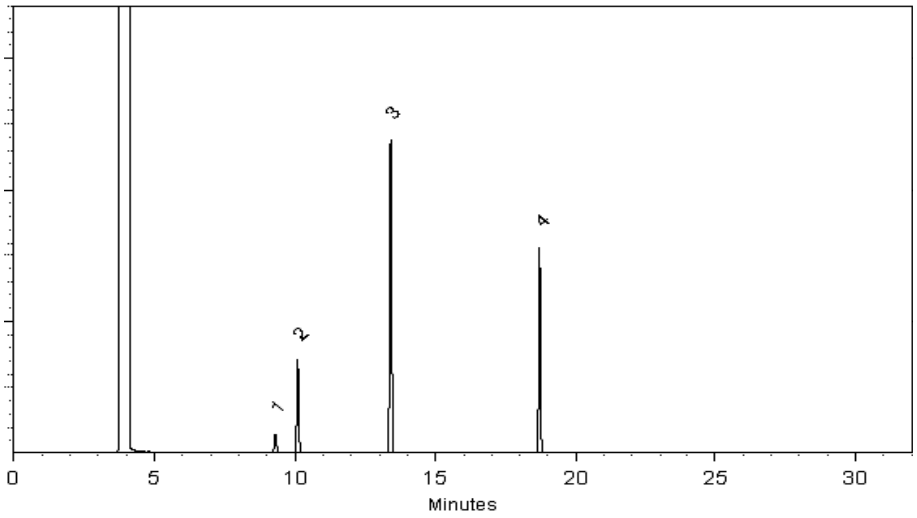
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00008

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 568718 **Lot No.:** A0118105

Description: 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size: 5 mL **Pkg Amt:** > 5 mL

Expiration Date: March 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol		5,023.8 µg/mL	+/- 29.2073	µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot I201P6)		+/- 107.5597	µg/mL	Unstressed
	Purity 99%			+/- 110.6867	µg/mL	Stressed
2	2-Butanone-d5		1,251.1 µg/mL	+/- 7.2740	µg/mL	Gravimetric
	CAS # 24313-50-6	(Lot M276)		+/- 26.7862	µg/mL	Unstressed
	Purity 99%			+/- 27.5649	µg/mL	Stressed
3	Fluorobenzene		250.2 µg/mL	+/- 1.4578	µg/mL	Gravimetric
	CAS # 462-06-6	(Lot BCBK8171V)		+/- 5.3567	µg/mL	Unstressed
	Purity 99%			+/- 5.5123	µg/mL	Stressed
4	1,4-Dioxane-d8		5,005.7 µg/mL	+/- 29.1020	µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot I-19239)		+/- 107.1722	µg/mL	Unstressed
	Purity 99%			+/- 110.2879	µg/mL	Stressed
5	Chlorobenzene-d5		250.1 µg/mL	+/- 1.4575	µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-23926)		+/- 5.3556	µg/mL	Unstressed
	Purity 99%			+/- 5.5112	µg/mL	Stressed
6	1,4-Dichlorobenzene-d4		250.0 µg/mL	+/- 1.4566	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)		+/- 5.3524	µg/mL	Unstressed
	Purity 99%			+/- 5.5079	µg/mL	Stressed

Reagent

MV-568718-D_00010

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol	5,022.1 µg/mL	+/- 29.1976 µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot I-201)		+/- 107.5241 µg/mL	Unstressed
	Purity 99%		+/- 110.6500 µg/mL	Stressed
2	2-Butanone-d5	1,257.5 µg/mL	+/- 7.3114 µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M-276)		+/- 26.9239 µg/mL	Unstressed
	Purity 99%		+/- 27.7067 µg/mL	Stressed
3	Fluorobenzene	250.8 µg/mL	+/- 1.4613 µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/- 5.3699 µg/mL	Unstressed
	Purity 99%		+/- 5.5259 µg/mL	Stressed
4	1,4-Dioxane-d8	5,009.4 µg/mL	+/- 29.1236 µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot I-19942)		+/- 107.2514 µg/mL	Unstressed
	Purity 99%		+/- 110.3694 µg/mL	Stressed
5	Chlorobenzene-d5	251.7 µg/mL	+/- 1.4666 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-21944)		+/- 5.3891 µg/mL	Unstressed
	Purity 99%		+/- 5.5458 µg/mL	Stressed
6	1,4-Dichlorobenzene-d4	251.3 µg/mL	+/- 1.4645 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 5.3813 µg/mL	Unstressed
	Purity 99%		+/- 5.5377 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

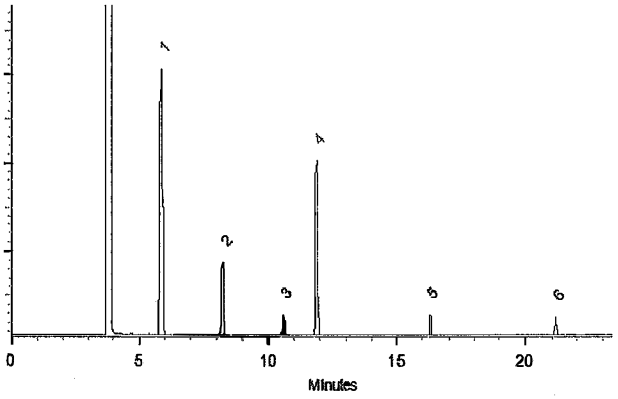
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568720_00022

Reagent

MV-569721.sec_00005

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

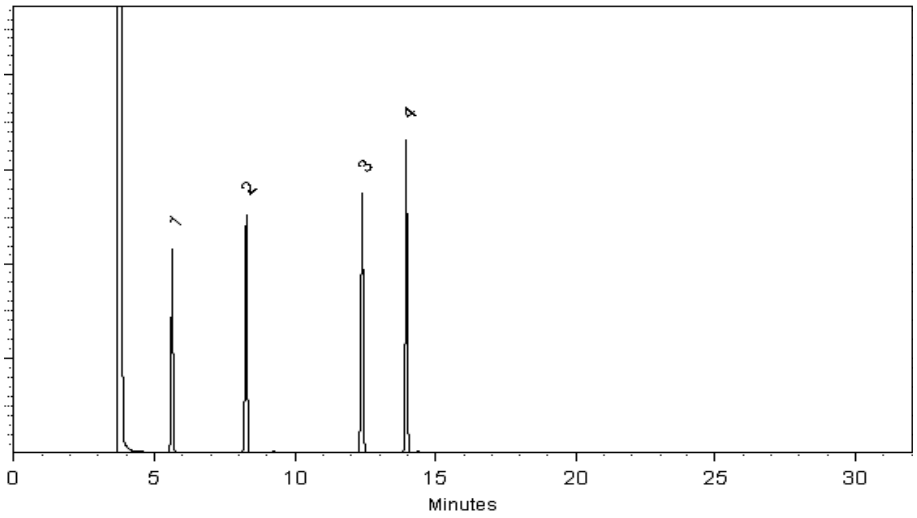
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00006

Reagent

MV-569722.sec_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0128832

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,505.9 µg/mL	+/- 22.3986 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 141.5312 µg/mL	Unstressed
	Purity 99%		+/- 144.7955 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.7 µg/mL	+/- 24.8413 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.8153 µg/mL	Unstressed
	Purity 99%		+/- 145.0675 µg/mL	Stressed
3	Vinyl chloride	2,503.2 µg/mL	+/- 25.9197 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.9813 µg/mL	Unstressed
	Purity 99%		+/- 145.2285 µg/mL	Stressed
4	1,3-Butadiene	2,508.9 µg/mL	+/- 20.6969 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 141.4379 µg/mL	Unstressed
	Purity 99%		+/- 144.7121 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.6 µg/mL	+/- 26.2540 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 142.0076 µg/mL	Unstressed
	Purity 99%		+/- 145.2526 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,510.6 µg/mL	+/- 24.9094 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 142.2038 µg/mL	Unstressed
	Purity 99%		+/- 145.4650 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,510.9 µg/mL	+/- 25.6719 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 142.3575 µg/mL	Unstressed
	Purity 99%		+/- 145.6160 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.9	µg/mL	+/-	18.9312	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 253600)			+/-	140.9660	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

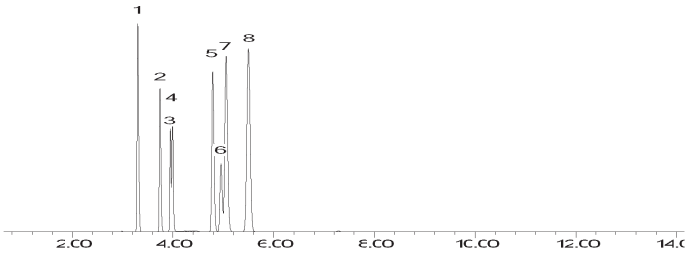
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569722_00008

Reagent

MV-569723_00004

Reagent

MV-569724.sec_00020

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MV-569724_00016

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MV-569727_00007

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0124672

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,006.0 µg/mL	+/- 146.4156 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.8223 µg/mL	Unstressed
	Purity 99%		+/- 1,512.4040 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

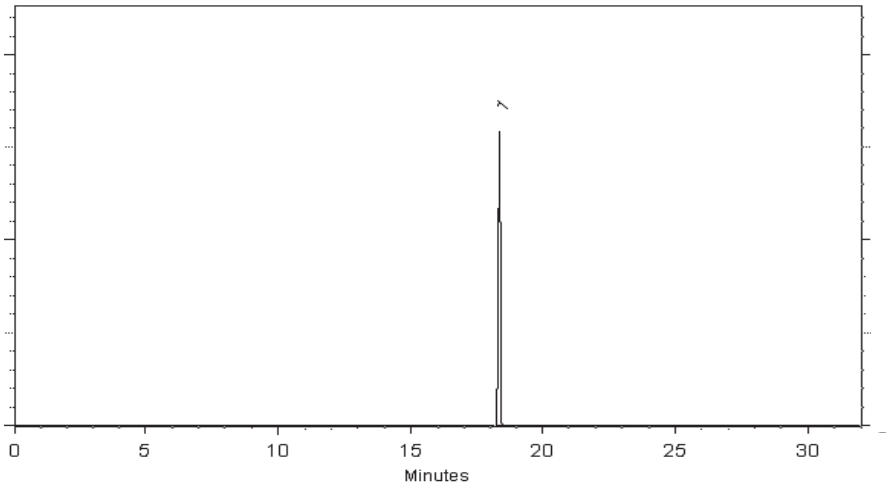
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

mv-570808_00004

Reagent

mv-570809_00004

Reagent

MV-571992.sec_00001

Reagent

MV-571992_00001

Reagent

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mv-571993.sec_00002

Reagent

mv-571993_00002

Reagent

mv-571994_00002

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001,, and calibrated Class A glassware in the manufacturing off these standards.

John Russo
President

Vincent Wang, Ph.D.
Director off QA/RA

ISO 9001
Registered
TUV USA, Inc.

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Reagent

RSK175methane_00006

AIR LIQUIDE
SPECIALTY GASES

CERTIFICATE OF ANALYSIS

Certification of Batch/Lot #: **403-102900**

Product: METHANE **Grade:**

Customer:	SIGMA-ALDRICH	**Test Cylinder #:**	ST0000161365
Date of Certification:	9/29/2015	**Item Number:**	A0049327
Sales Order:	423724	**Valve:**	NR
Job:	102900	**Cylinder Size:**	14

ANALYSIS REPORT

Component	Requested Purity	Actual Purity
Methane	99.0%	>99.0%

Rec'd 12/24/15 cde

Notes: ST0000161365 P/N 22562
ST0000161366
ST0000161367
ST0000161368

EXP 9/30/2018

Certified By: Lynn Matonis
LYNN MATONIS

Air Liquide America Specialty Gases LLC
6141 Easton Rd. PO Box 310 Plumsteadville, PA 18949
Phone: 215-766-7404

Reagent

RSK7gasMathes_00020

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Analysis Report

To: MATHESON LINWELD
4705 NOME ST
P O BOX 39126
DENVER, CO 80239

MTG Customer No: 504445

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

CYLINDER NUMBER(S)

*DL087167

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	0.999	%	±10%	±2%
Acetylene	1.00	1.00	%	±10%	±2%
Isobutylene	1.00	0.999	%	±10%	±2%
Propane	1.00	0.998	%	±10%	±2%
Ethane	1.00	0.998	%	±10%	±2%
Ethylene	1.00	1.07	%	±10%	±2%
Methane	1.00	1.00	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

Lot No: 9306622072
Fill Date: 10/12/2016
Expiration Date: 10/13/2018

Analysis Date: 10/13/2016

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Andrew L. Couch — 10/13/2016
Andrew Couch - Analyst — Date

12/13/2016
Amanda Miller - QA Approval — Date

Reagent

RSK7gasMathes_00021

MATHESON
ask. . .The Gas Professionals™

Analysis Report

To: MATHESON LINWELD
4705 NOME ST
P O BOX 39126
DENVER, CO 80239

MTG Customer No: 504445

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

CYLINDER NUMBER(S)

*DL024962

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.01	%	±10%	±2%
Acetylene	1.00	0.999	%	±10%	±2%
Isobutylene	1.00	1.00	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	0.999	%	±10%	±2%
Ethylene	1.00	1.00	%	±10%	±2%
Methane	1.00	1.01	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

Lot No: 9306622291
Fill Date: 11/16/2016
Expiration Date: 11/17/2018

Analysis Date: 11/17/2016

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Andrew L. Couch — 11/17/2016
Andrew Couch - Analyst — Date

12/13/2016
Amanda Miller - QA Approval — Date

Reagent

TOC ICV Std_00036

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Organic Carbon Standard, 1000 ppm C

Lot Number: 1807G06 **Product Number:** 1847

Manufacture Date: JUL 18, 2018
Expiration Date: JUL 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Phosphoric Acid	7664-38-2	ACS
Potassium Acid Phthalate	877-24-7	ACS Acidimetric

Test	Specification	Result
Appearance	Colorless liquid	Passed
Carbon (C)	995-1005 ppm	1000 ppm

Specification	Reference
Organic Carbon Stock Solution	APHA (5310 B)
Potassium Hydrogen Phthalate, Stock Solution	EPA (SW-846) (9060)
Potassium Hydrogen Phthalate, Stock Solution, 1000 mg Carbon/liter	EPA (415.1)
Organic Carbon Solution, Standard (1 mL = 1 mg C)	ASTM (D 2579)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1847-16	500 mL amber glass	12 months
1847-32	1 L amber glass	12 months
1847-4	120 mL amber glass	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Israel Alamudun (07/18/2018)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Reagent

TOC LCS Std_00042

Certificate of Analysis
ISO Guide 34

Product Number: QC-106
Lot Number: CS-4110

Lot Issue Date: 10-Aug-2018
Expiration Date: 30-Sep-2020

Maintenance of Certification:
The real-time, long-term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, Agilent Technologies will notify the purchaser.

Monica Bourgeois
QMS Representative

Certificate of Analysis
ISO Guide 34

Product Number: IQC-106
Lot Number: CS-4110

Lot Issue Date: 10-Aug 2018
Expiration Date: 30-Sep 2020

Product Name: Total Organic Carbon (TOC) Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under Agilent's ISO 9001 registered quality system. The neat materials used for this product have been verified by Agilent's ISO 17025 laboratory and under Agilent's ISO Guide 34 accreditation. The analyte concentrations were verified by Agilent's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Analyte Concentration	Traceability & Method
TOC	potassium hydrogen phthalate	RM10433	99.96	1001 ± 5 µg/mL	NZ04250; TOC Analyzer

Solvent: water (low TOC, <50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No. AR 1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

250 SMITH STREET NORTH KINGSTOWN, RHODE ISLAND 02852 WWW.ULTRASCI.COM

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 (60. ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
LF6TW-38_1018	280-116017-1	110	107	102	99
LF6TW-38_1018 DL	280-116017-1 DL	119	116	107	97
LF6TW-36_1018	280-116017-2	112	108	104	97
LF6TW-36_1018 DL	280-116017-2 DL	113	110	104	100
775VMW-19R_1018	280-116017-3	113	109	102	101
775VMW-28_1018	280-116017-4	114	111	104	100
775VMW-9_1018	280-116017-5	115	114	105	98
775VMW-10_1018	280-116017-6	114	112	102	96
775VMW-10_1018-a	280-116017-7	111	113	106	98
775VMW-20_1018	280-116017-8	115	114	102	97
775VMW-20R_1018	280-116017-9	100	96	99	105
775VMW-5_1018	280-116017-10	97	93	100	102
775VMW-5_1018-a	280-116017-11	99	96	99	104
775VMW-4_1018	280-116017-12	100	95	94	103
	MB 280-436199/4	112	108	100	98
	MB 280-436409/4	117	114	106	100
	MB 280-437146/8	96	89	99	100
	LCS 280-436199/5	110	107	103	94
	LCS 280-436199/7	113	111	102	101
	LCS 280-436409/5	114	115	100	89
	LCS 280-437146/4	98	93	96	99
	LCS 280-437146/6	98	87	95	100
	LCSD 280-436409/6	116	117	100	91
	LCSD 280-437146/5	98	91	95	95
	LCSD 280-437146/7	99	88	95	98

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2137.D

Lab ID: LCS 280-436199/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.89	98	78-124	
1,1,1-Trichloroethane	5.00	5.20	104	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.95	99	71-121	
1,1,2-Trichloroethane	5.00	5.57	111	80-119	
1,1-Dichloroethane	5.00	5.36	107	77-125	
1,1-Dichloroethene	5.00	5.47	109	71-131	
1,1-Dichloropropene	5.00	5.17	103	79-125	
1,2,3-Trichlorobenzene	5.00	4.89	98	69-129	
1,2,3-Trichloropropane	5.00	5.06	101	73-122	
1,2,4-Trichlorobenzene	5.00	4.67	93	69-130	
1,2,4-Trimethylbenzene	5.00	4.73	95	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.35 J	87	62-128	
1,2-Dibromoethane	5.00	4.96	99	77-121	
1,2-Dichlorobenzene	5.00	4.87	97	80-119	
1,2-Dichloroethane	5.00	5.01	100	73-128	
1,2-Dichloroethene, Total	10.0	10.8	108	79-121	
1,2-Dichloropropane	5.00	5.58	112	78-122	
1,3,5-Trimethylbenzene	5.00	4.70	94	75-124	
1,3-Dichlorobenzene	5.00	4.77	95	80-119	
1,3-Dichloropropane	5.00	4.94	99	80-119	
1,4-Dichlorobenzene	5.00	4.83	97	79-118	
2,2-Dichloropropane	5.00	5.20	104	60-139	
2-Butanone (MEK)	20.0	16.9	84	56-143	
2-Chlorotoluene	5.00	4.85	97	79-122	
2-Hexanone	20.0	18.0	90	57-139	
4-Chlorotoluene	5.00	4.83	97	78-122	
4-Isopropyltoluene	5.00	4.81	96	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	21.1	106	67-130	
Acetone	20.0	18.8	94	39-160	
Benzene	5.00	5.31	106	79-120	
Bromobenzene	5.00	4.73	95	80-120	
Bromochloromethane	5.00	5.44	109	78-123	
Bromodichloromethane	5.00	5.09	102	79-125	
Bromoform	5.00	4.46	89	66-130	
Bromomethane	5.00	5.43	109	53-141	
Carbon disulfide	5.00	5.31	106	64-133	
Carbon tetrachloride	5.00	5.15	103	72-136	
Chlorobenzene	5.00	5.01	100	82-118	
Chloroethane	5.00	5.44	109	60-138	
Chloroform	5.00	5.25	105	79-124	
Chloromethane	5.00	4.68	94	50-139	
cis-1,2-Dichloroethene	5.00	5.29	106	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2137.D

Lab ID: LCS 280-436199/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	4.91	98	75-124	
Dibromochloromethane	5.00	4.51	90	74-126	
Dibromomethane	5.00	5.13	103	79-123	
Dichlorodifluoromethane	5.00	4.25	85	32-152	
Ethylbenzene	5.00	4.93	99	79-121	
Hexachlorobutadiene	5.00	4.61	92	66-134	
Isopropylbenzene	5.00	4.80	96	72-131	
m,p-Xylene	5.00	5.11	102	80-121	
Methyl iodide	5.00	5.35	107	69-131	
Methyl tert-butyl ether	5.00	4.81 J	96	71-124	
Methylene Chloride	5.00	5.18	104	74-124	
Naphthalene	5.00	4.28	86	61-128	
n-Butylbenzene	5.00	4.86	97	75-128	
N-Propylbenzene	5.00	4.88	98	76-126	
o-Xylene	5.00	5.12	102	78-122	
sec-Butylbenzene	5.00	4.84	97	77-126	
Styrene	5.00	5.10	102	78-123	
tert-Butylbenzene	5.00	4.77	95	78-124	
Tetrachloroethene	5.00	4.99	100	74-129	
Toluene	5.00	5.36	107	80-121	
trans-1,2-Dichloroethene	5.00	5.51	110	75-124	
trans-1,3-Dichloropropene	5.00	4.65	93	73-127	
Trichloroethene	5.00	5.12	102	79-123	
Trichlorofluoromethane	5.00	5.08	102	65-141	
Vinyl acetate	10.0	9.65	96	54-146	
Vinyl chloride	5.00	4.85	97	58-137	
Xylenes, Total	10.0	10.2	102	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2138.D

Lab ID: LCS 280-436199/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diisopropyl ether	5.00	5.39 J	108	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2218.D

Lab ID: LCS 280-436409/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.14	103	78-124	
1,1,1-Trichloroethane	5.00	5.58	112	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.24	105	71-121	
1,1,2-Trichloroethane	5.00	6.24	125	80-119	Q
1,1-Dichloroethane	5.00	5.94	119	77-125	
1,1-Dichloroethene	5.00	5.75	115	71-131	
1,1-Dichloropropene	5.00	5.64	113	79-125	
1,2,3-Trichlorobenzene	5.00	5.04	101	69-129	
1,2,3-Trichloropropane	5.00	5.19	104	73-122	
1,2,4-Trichlorobenzene	5.00	4.71	94	69-130	
1,2,4-Trimethylbenzene	5.00	4.70	94	76-124	
1,2-Dibromo-3-Chloropropane	5.00	5.32	106	62-128	
1,2-Dibromoethane	5.00	5.26	105	77-121	
1,2-Dichlorobenzene	5.00	4.78	96	80-119	
1,2-Dichloroethane	5.00	5.76	115	73-128	
1,2-Dichloroethene, Total	10.0	11.7	117	79-121	
1,2-Dichloropropane	5.00	6.33	127	78-122	Q
1,3,5-Trimethylbenzene	5.00	4.65	93	75-124	
1,3-Dichlorobenzene	5.00	4.76	95	80-119	
1,3-Dichloropropane	5.00	5.33	107	80-119	
1,4-Dichlorobenzene	5.00	4.77	95	79-118	
2,2-Dichloropropane	5.00	5.33	107	60-139	
2-Butanone (MEK)	20.0	19.8	99	56-143	
2-Chlorotoluene	5.00	4.82	96	79-122	
2-Hexanone	20.0	20.2	101	57-139	
4-Chlorotoluene	5.00	4.73	95	78-122	
4-Isopropyltoluene	5.00	4.80	96	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	23.8	119	67-130	
Acetone	20.0	21.7	109	39-160	
Benzene	5.00	5.78	116	79-120	
Bromobenzene	5.00	4.73	95	80-120	
Bromochloromethane	5.00	5.80	116	78-123	
Bromodichloromethane	5.00	5.77	115	79-125	
Bromoform	5.00	4.53	91	66-130	
Bromomethane	5.00	5.83	117	53-141	
Carbon disulfide	5.00	5.55	111	64-133	
Carbon tetrachloride	5.00	5.49	110	72-136	
Chlorobenzene	5.00	5.05	101	82-118	
Chloroethane	5.00	5.89	118	60-138	
Chloroform	5.00	5.86	117	79-124	
Chloromethane	5.00	5.09	102	50-139	
cis-1,2-Dichloroethene	5.00	5.87	117	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2218.D

Lab ID: LCS 280-436409/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.10	102	75-124	
Dibromochloromethane	5.00	4.80	96	74-126	
Dibromomethane	5.00	5.72	114	79-123	
Dichlorodifluoromethane	5.00	4.58	92	32-152	
Ethylbenzene	5.00	4.91	98	79-121	
Hexachlorobutadiene	5.00	4.55	91	66-134	
Isopropylbenzene	5.00	4.74	95	72-131	
m,p-Xylene	5.00	5.19	104	80-121	
Methyl iodide	5.00	5.62	112	69-131	
Methyl tert-butyl ether	5.00	5.51	110	71-124	
Methylene Chloride	5.00	5.74	115	74-124	
Naphthalene	5.00	4.95	99	61-128	
n-Butylbenzene	5.00	4.74	95	75-128	
N-Propylbenzene	5.00	4.84	97	76-126	
o-Xylene	5.00	5.18	104	78-122	
sec-Butylbenzene	5.00	4.80	96	77-126	
Styrene	5.00	5.06	101	78-123	
tert-Butylbenzene	5.00	4.79	96	78-124	
Tetrachloroethene	5.00	4.89	98	74-129	
Toluene	5.00	5.95	119	80-121	
trans-1,2-Dichloroethene	5.00	5.83	117	75-124	
trans-1,3-Dichloropropene	5.00	5.19	104	73-127	
Trichloroethene	5.00	5.57	111	79-123	
Trichlorofluoromethane	5.00	5.38	108	65-141	
Vinyl acetate	10.0	10.8	108	54-146	
Vinyl chloride	5.00	5.50	110	58-137	
Xylenes, Total	10.0	10.4	104	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75273.D

Lab ID: LCS 280-437146/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.11	102	78-124	
1,1,1-Trichloroethane	5.00	4.93	99	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.93	99	71-121	
1,1,2-Trichloroethane	5.00	5.30	106	80-119	
1,1-Dichloroethane	5.00	5.02	100	77-125	
1,1-Dichloroethene	5.00	4.95	99	71-131	
1,1-Dichloropropene	5.00	5.11	102	79-125	
1,2,3-Trichlorobenzene	5.00	5.23	105	69-129	
1,2,3-Trichloropropane	5.00	4.73	95	73-122	
1,2,4-Trichlorobenzene	5.00	5.31	106	69-130	
1,2,4-Trimethylbenzene	5.00	4.83	97	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.97 J	99	62-128	
1,2-Dibromoethane	5.00	4.91	98	77-121	
1,2-Dichlorobenzene	5.00	4.96	99	80-119	
1,2-Dichloroethane	5.00	4.84	97	73-128	
1,2-Dichloroethene, Total	10.0	10.3	103	79-121	
1,2-Dichloropropane	5.00	5.58	112	78-122	
1,3,5-Trimethylbenzene	5.00	4.75	95	75-124	
1,3-Dichlorobenzene	5.00	4.98	100	80-119	
1,3-Dichloropropane	5.00	4.83	97	80-119	
1,4-Dichlorobenzene	5.00	4.95	99	79-118	
2,2-Dichloropropane	5.00	4.89	98	60-139	
2-Butanone (MEK)	20.0	15.3	77	56-143	
2-Chlorotoluene	5.00	4.82	96	79-122	
2-Hexanone	20.0	16.2	81	57-139	
4-Chlorotoluene	5.00	4.78	96	78-122	
4-Isopropyltoluene	5.00	4.74	95	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	17.9	90	67-130	
Acetone	20.0	18.1	90	39-160	
Benzene	5.00	5.23	105	79-120	
Bromobenzene	5.00	5.00	100	80-120	
Bromochloromethane	5.00	5.19	104	78-123	
Bromodichloromethane	5.00	5.12	102	79-125	
Bromoform	5.00	5.43	109	66-130	
Bromomethane	5.00	6.40	128	53-141	
Carbon disulfide	5.00	5.22	104	64-133	
Carbon tetrachloride	5.00	4.88	98	72-136	
Chlorobenzene	5.00	4.92	98	82-118	
Chloroethane	5.00	5.10	102	60-138	
Chloroform	5.00	5.16	103	79-124	
Chloromethane	5.00	4.36	87	50-139	
cis-1,2-Dichloroethene	5.00	5.09	102	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75273.D

Lab ID: LCS 280-437146/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.22	104	75-124	
Dibromochloromethane	5.00	4.96	99	74-126	
Dibromomethane	5.00	5.21	104	79-123	
Dichlorodifluoromethane	5.00	4.61	92	32-152	
Ethylbenzene	5.00	4.94	99	79-121	
Hexachlorobutadiene	5.00	5.04	101	66-134	
Isopropylbenzene	5.00	4.59	92	72-131	
m,p-Xylene	5.00	4.83	97	80-121	
Methyl iodide	5.00	5.07	101	69-131	
Methyl tert-butyl ether	5.00	4.96 J	99	71-124	
Methylene Chloride	5.00	4.79 J	96	74-124	
Naphthalene	5.00	5.24	105	61-128	
n-Butylbenzene	5.00	4.82	96	75-128	
N-Propylbenzene	5.00	4.60	92	76-126	
o-Xylene	5.00	5.11	102	78-122	
sec-Butylbenzene	5.00	4.69	94	77-126	
Styrene	5.00	4.91	98	78-123	
tert-Butylbenzene	5.00	4.52	90	78-124	
Tetrachloroethene	5.00	4.85	97	74-129	
Toluene	5.00	5.30	106	80-121	
trans-1,2-Dichloroethene	5.00	5.19	104	75-124	
trans-1,3-Dichloropropene	5.00	4.80	96	73-127	
Trichloroethene	5.00	4.95	99	79-123	
Trichlorofluoromethane	5.00	5.22	104	65-141	
Vinyl acetate	10.0	9.49	95	54-146	
Vinyl chloride	5.00	5.29	106	58-137	
Xylenes, Total	10.0	9.94	99	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75275.D

Lab ID: LCS 280-437146/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diisopropyl ether	5.00	4.71 J	94	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2233.D

Lab ID: LCSD 280-436409/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.17	103	1	20	78-124	
1,1,1-Trichloroethane	5.00	5.65	113	1	20	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.24	105	0	20	71-121	
1,1,2-Trichloroethane	5.00	6.21	124	1	20	80-119	Q
1,1-Dichloroethane	5.00	5.93	119	0	20	77-125	
1,1-Dichloroethene	5.00	5.98	120	4	20	71-131	
1,1-Dichloropropene	5.00	5.71	114	1	20	79-125	
1,2,3-Trichlorobenzene	5.00	5.20	104	3	20	69-129	
1,2,3-Trichloropropane	5.00	5.12	102	1	20	73-122	
1,2,4-Trichlorobenzene	5.00	4.74	95	1	20	69-130	
1,2,4-Trimethylbenzene	5.00	4.83	97	3	20	76-124	
1,2-Dibromo-3-Chloropropane	5.00	4.76 J	95	11	20	62-128	
1,2-Dibromoethane	5.00	5.32	106	1	20	77-121	
1,2-Dichlorobenzene	5.00	4.99	100	4	20	80-119	
1,2-Dichloroethane	5.00	5.83	117	1	20	73-128	
1,2-Dichloroethene, Total	10.0	11.7	117	0	20	79-121	
1,2-Dichloropropane	5.00	6.20	124	2	20	78-122	Q
1,3,5-Trimethylbenzene	5.00	4.88	98	5	20	75-124	
1,3-Dichlorobenzene	5.00	4.86	97	2	20	80-119	
1,3-Dichloropropane	5.00	5.19	104	3	20	80-119	
1,4-Dichlorobenzene	5.00	4.97	99	4	20	79-118	
2,2-Dichloropropane	5.00	5.23	105	2	20	60-139	
2-Butanone (MEK)	20.0	18.2	91	8	20	56-143	
2-Chlorotoluene	5.00	4.92	98	2	20	79-122	
2-Hexanone	20.0	18.6	93	8	20	57-139	
4-Chlorotoluene	5.00	5.04	101	7	20	78-122	
4-Isopropyltoluene	5.00	4.97	99	3	20	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	23.8	119	0	20	67-130	
Acetone	20.0	21.9	109	1	20	39-160	
Benzene	5.00	5.93	119	2	20	79-120	
Bromobenzene	5.00	4.94	99	4	20	80-120	
Bromochloromethane	5.00	6.03	121	4	20	78-123	
Bromodichloromethane	5.00	5.88	118	2	20	79-125	
Bromoform	5.00	5.06	101	11	20	66-130	
Bromomethane	5.00	6.15	123	5	20	53-141	
Carbon disulfide	5.00	5.83	117	5	20	64-133	
Carbon tetrachloride	5.00	5.52	110	1	20	72-136	
Chlorobenzene	5.00	5.07	101	0	20	82-118	
Chloroethane	5.00	6.16	123	5	20	60-138	
Chloroform	5.00	5.82	116	1	20	79-124	
Chloromethane	5.00	5.32	106	4	20	50-139	
cis-1,2-Dichloroethene	5.00	5.70	114	3	20	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2233.D

Lab ID: LCSD 280-436409/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.17	103	1	20	75-124	
Dibromochloromethane	5.00	4.73	95	2	20	74-126	
Dibromomethane	5.00	5.92	118	4	20	79-123	
Dichlorodifluoromethane	5.00	5.32	106	15	20	32-152	
Ethylbenzene	5.00	5.01	100	2	20	79-121	
Hexachlorobutadiene	5.00	4.68	94	3	20	66-134	
Isopropylbenzene	5.00	4.84	97	2	20	72-131	
m,p-Xylene	5.00	5.16	103	1	20	80-121	
Methyl iodide	5.00	5.78	116	3	20	69-131	
Methyl tert-butyl ether	5.00	5.59	112	1	20	71-124	
Methylene Chloride	5.00	5.57	111	3	20	74-124	
Naphthalene	5.00	4.75	95	4	20	61-128	
n-Butylbenzene	5.00	4.96	99	5	20	75-128	
N-Propylbenzene	5.00	4.95	99	2	20	76-126	
o-Xylene	5.00	5.15	103	1	20	78-122	
sec-Butylbenzene	5.00	5.02	100	4	20	77-126	
Styrene	5.00	4.97	99	2	20	78-123	
tert-Butylbenzene	5.00	4.83	97	1	20	78-124	
Tetrachloroethene	5.00	5.05	101	3	20	74-129	
Toluene	5.00	5.88	118	1	20	80-121	
trans-1,2-Dichloroethene	5.00	5.96	119	2	20	75-124	
trans-1,3-Dichloropropene	5.00	5.16	103	0	20	73-127	
Trichloroethene	5.00	5.62	112	1	20	79-123	
Trichlorofluoromethane	5.00	5.82	116	8	20	65-141	
Vinyl acetate	10.0	10.2	102	6	20	54-146	
Vinyl chloride	5.00	5.68	114	3	20	58-137	
Xylenes, Total	10.0	10.3	103	1	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75274.D

Lab ID: LCSD 280-437146/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.42	108	6	20	78-124	
1,1,1-Trichloroethane	5.00	5.02	100	2	20	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.12	102	4	20	71-121	
1,1,2-Trichloroethane	5.00	5.45	109	3	20	80-119	
1,1-Dichloroethane	5.00	5.25	105	4	20	77-125	
1,1-Dichloroethene	5.00	5.14	103	4	20	71-131	
1,1-Dichloropropene	5.00	5.25	105	3	20	79-125	
1,2,3-Trichlorobenzene	5.00	5.45	109	4	20	69-129	
1,2,3-Trichloropropane	5.00	4.89	98	3	20	73-122	
1,2,4-Trichlorobenzene	5.00	5.43	109	2	20	69-130	
1,2,4-Trimethylbenzene	5.00	5.05	101	4	20	76-124	
1,2-Dibromo-3-Chloropropane	5.00	5.08	102	2	20	62-128	
1,2-Dibromoethane	5.00	5.07	101	3	20	77-121	
1,2-Dichlorobenzene	5.00	5.22	104	5	20	80-119	
1,2-Dichloroethane	5.00	5.03	101	4	20	73-128	
1,2-Dichloroethene, Total	10.0	10.5	105	2	20	79-121	
1,2-Dichloropropane	5.00	5.77	115	3	20	78-122	
1,3,5-Trimethylbenzene	5.00	4.99	100	5	20	75-124	
1,3-Dichlorobenzene	5.00	5.14	103	3	20	80-119	
1,3-Dichloropropane	5.00	5.00	100	4	20	80-119	
1,4-Dichlorobenzene	5.00	5.20	104	5	20	79-118	
2,2-Dichloropropane	5.00	5.03	101	3	20	60-139	
2-Butanone (MEK)	20.0	13.7	69	11	20	56-143	
2-Chlorotoluene	5.00	5.13	103	6	20	79-122	
2-Hexanone	20.0	16.8	84	4	20	57-139	
4-Chlorotoluene	5.00	5.15	103	7	20	78-122	
4-Isopropyltoluene	5.00	5.05	101	6	20	77-127	
4-Methyl-2-pentanone (MIBK)	20.0	19.1	96	7	20	67-130	
Acetone	20.0	17.0	85	6	20	39-160	
Benzene	5.00	5.45	109	4	20	79-120	
Bromobenzene	5.00	5.20	104	4	20	80-120	
Bromochloromethane	5.00	5.46	109	5	20	78-123	
Bromodichloromethane	5.00	5.28	106	3	20	79-125	
Bromoform	5.00	5.60	112	3	20	66-130	
Bromomethane	5.00	6.56	131	2	20	53-141	
Carbon disulfide	5.00	5.33	107	2	20	64-133	
Carbon tetrachloride	5.00	5.05	101	3	20	72-136	
Chlorobenzene	5.00	5.18	104	5	20	82-118	
Chloroethane	5.00	5.01	100	2	20	60-138	
Chloroform	5.00	5.29	106	2	20	79-124	
Chloromethane	5.00	4.25	85	3	20	50-139	
cis-1,2-Dichloroethene	5.00	5.22	104	3	20	78-123	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75274.D

Lab ID: LCSD 280-437146/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	5.00	5.44	109	4	20	75-124	
Dibromochloromethane	5.00	5.07	101	2	20	74-126	
Dibromomethane	5.00	5.50	110	5	20	79-123	
Dichlorodifluoromethane	5.00	4.56	91	1	20	32-152	
Ethylbenzene	5.00	5.24	105	6	20	79-121	
Hexachlorobutadiene	5.00	5.19	104	3	20	66-134	
Isopropylbenzene	5.00	4.87	97	6	20	72-131	
m,p-Xylene	5.00	5.09	102	5	20	80-121	
Methyl iodide	5.00	5.23	105	3	20	69-131	
Methyl tert-butyl ether	5.00	5.12	102	3	20	71-124	
Methylene Chloride	5.00	4.97 J	99	4	20	74-124	
Naphthalene	5.00	5.30	106	1	20	61-128	
n-Butylbenzene	5.00	5.00	100	4	20	75-128	
N-Propylbenzene	5.00	4.83	97	5	20	76-126	
o-Xylene	5.00	5.54	111	8	20	78-122	
sec-Butylbenzene	5.00	4.94	99	5	20	77-126	
Styrene	5.00	5.11	102	4	20	78-123	
tert-Butylbenzene	5.00	4.85	97	7	20	78-124	
Tetrachloroethene	5.00	5.10	102	5	20	74-129	
Toluene	5.00	5.56	111	5	20	80-121	
trans-1,2-Dichloroethene	5.00	5.30	106	2	20	75-124	
trans-1,3-Dichloropropene	5.00	4.97	99	3	20	73-127	
Trichloroethene	5.00	5.23	105	6	20	79-123	
Trichlorofluoromethane	5.00	5.37	107	3	20	65-141	
Vinyl acetate	10.0	9.23	92	3	20	54-146	
Vinyl chloride	5.00	5.24	105	1	20	58-137	
Xylenes, Total	10.0	10.6	106	7	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Q75276.D

Lab ID: LCSD 280-437146/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Diisopropyl ether	5.00	5.17 J	103	9	20	67-128	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P2136.D Lab Sample ID: MB 280-436199/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_P Date Analyzed: 11/03/2018 13:24

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-436199/5	P2137.D	11/03/2018 13:49
	LCS 280-436199/7	P2138.D	11/03/2018 14:07
LF6TW-38_1018	280-116017-1	P2151.D	11/03/2018 18:08
LF6TW-36_1018	280-116017-2	P2152.D	11/03/2018 18:27
LF6TW-36_1018 DL	280-116017-2 DL	P2153.D	11/03/2018 18:45
775VMW-19R_1018	280-116017-3	P2154.D	11/03/2018 19:04
775VMW-28_1018	280-116017-4	P2156.D	11/03/2018 19:41
775VMW-9_1018	280-116017-5	P2157.D	11/03/2018 19:59
775VMW-10_1018	280-116017-6	P2158.D	11/03/2018 20:18
775VMW-10_1018-a	280-116017-7	P2159.D	11/03/2018 20:36
775VMW-20_1018	280-116017-8	P2161.D	11/03/2018 21:13

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P2204.D Lab Sample ID: MB 280-436409/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_P Date Analyzed: 11/05/2018 20:31

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-436409/5	P2218.D	11/06/2018 00:52
LF6TW-38_1018 DL	280-116017-1 DL	P2232.D	11/06/2018 05:13
	LCSD 280-436409/6	P2233.D	11/06/2018 05:31

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: Q75277.D Lab Sample ID: MB 280-437146/8

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_Q Date Analyzed: 11/10/2018 12:38

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-437146/4	Q75273.D	11/10/2018 11:16
	LCSD 280-437146/5	Q75274.D	11/10/2018 11:36
	LCS 280-437146/6	Q75275.D	11/10/2018 11:57
	LCSD 280-437146/7	Q75276.D	11/10/2018 12:17
775VMW-20R_1018	280-116017-9	Q75281.D	11/10/2018 14:01
775VMW-5_1018	280-116017-10	Q75282.D	11/10/2018 14:21
775VMW-5_1018-a	280-116017-11	Q75283.D	11/10/2018 14:42
775VMW-4_1018	280-116017-12	Q75284.D	11/10/2018 15:02

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P9151.D BFB Injection Date: 08/16/2018

Instrument ID: VMS_P BFB Injection Time: 19:34

Analysis Batch No.: 426490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.9	
75	30.0 - 60.0 % of mass 95	53.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	63.9	
175	5.0 - 9.0 % of mass 174	4.4	(6.8) 1
176	95.0 - 101.0 % of mass 174	63.3	(99.1) 1
177	5.0 - 9.0 % of mass 176	3.4	(5.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-426490/18	P9170.D	08/17/2018	01:38
	STD020 280-426490/19	P9171.D	08/17/2018	01:56
	STD050 280-426490/20	P9172.D	08/17/2018	02:15
	STD10 280-426490/21	P9173.D	08/17/2018	02:33
	STD30 280-426490/22	P9174.D	08/17/2018	02:52
	STD60 280-426490/23	P9175.D	08/17/2018	03:10
	ICV 280-426490/24	P9176.D	08/17/2018	03:28

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P1530.D BFB Injection Date: 10/22/2018

Instrument ID: VMS_P BFB Injection Time: 21:54

Analysis Batch No.: 434433

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.2	
75	30.0 - 60.0 % of mass 95	56.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	8.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	70.9	
175	5.0 - 9.0 % of mass 174	5.3	(7.4) 1
176	95.0 - 101.0 % of mass 174	68.0	(95.9) 1
177	5.0 - 9.0 % of mass 176	5.3	(7.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-434433/10	P1532.D	10/22/2018	22:40
	STD01 280-434433/11	P1533.D	10/22/2018	22:59
	STD02 280-434433/12	P1534.D	10/22/2018	23:17
	STD05 280-434433/13	P1535.D	10/22/2018	23:36
	ICIS 280-434433/14	P1536.D	10/22/2018	23:54
	STD25 280-434433/15	P1537.D	10/23/2018	00:13
	STD60 280-434433/16	P1538.D	10/23/2018	00:32
	ICV 280-434433/17	P1540.D	10/23/2018	01:12

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P2132.D BFB Injection Date: 11/03/2018

Instrument ID: VMS_P BFB Injection Time: 12:06

Analysis Batch No.: 436199

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.7	
75	30.0 - 60.0 % of mass 95	53.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	71.4	
175	5.0 - 9.0 % of mass 174	5.4	(7.6) 1
176	95.0 - 101.0 % of mass 174	69.6	(97.5) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-436199/2	P2134.D	11/03/2018	12:47
	CCV 280-436199/3	P2135.D	11/03/2018	13:05
	MB 280-436199/4	P2136.D	11/03/2018	13:24
	LCS 280-436199/5	P2137.D	11/03/2018	13:49
	LCS 280-436199/7	P2138.D	11/03/2018	14:07
LF6TW-38_1018	280-116017-1	P2151.D	11/03/2018	18:08
LF6TW-36_1018	280-116017-2	P2152.D	11/03/2018	18:27
LF6TW-36_1018 DL	280-116017-2 DL	P2153.D	11/03/2018	18:45
775VMW-19R_1018	280-116017-3	P2154.D	11/03/2018	19:04
775VMW-28_1018	280-116017-4	P2156.D	11/03/2018	19:41
775VMW-9_1018	280-116017-5	P2157.D	11/03/2018	19:59
775VMW-10_1018	280-116017-6	P2158.D	11/03/2018	20:18
775VMW-10_1018-a	280-116017-7	P2159.D	11/03/2018	20:36
775VMW-20_1018	280-116017-8	P2161.D	11/03/2018	21:13
	CCVC 280-436199/37	P2165.D	11/03/2018	22:27
	CCVC 280-436199/38	P2166.D	11/03/2018	22:46

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: P2201.D BFB Injection Date: 11/05/2018

Instrument ID: VMS_P BFB Injection Time: 19:28

Analysis Batch No.: 436409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.8	
75	30.0 - 60.0 % of mass 95	51.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	8.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	81.0	
175	5.0 - 9.0 % of mass 174	6.1	(7.5) 1
176	95.0 - 101.0 % of mass 174	78.4	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-436409/2	P2202.D	11/05/2018	19:53
	CCV 280-436409/3	P2203.D	11/05/2018	20:12
	MB 280-436409/4	P2204.D	11/05/2018	20:31
	LCS 280-436409/5	P2218.D	11/06/2018	00:52
LF6TW-38_1018 DL	280-116017-1 DL	P2232.D	11/06/2018	05:13
	LCSD 280-436409/6	P2233.D	11/06/2018	05:31
	CCVC 280-436409/37	P2235.D	11/06/2018	06:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: Q74583.D BFB Injection Date: 10/20/2018

Instrument ID: VMS_Q BFB Injection Time: 10:39

Analysis Batch No.: 434257

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.0
75	30.0 - 60.0 % of mass 95	51.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	70.7
175	5.0 - 9.0 % of mass 174	5.2 (7.3) 1
176	95.0 - 101.0 % of mass 174	69.1 (97.7) 1
177	5.0 - 9.0 % of mass 176	5.0 (7.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-434257/13	Q74593.D	10/20/2018	13:58
	STD020 280-434257/14	Q74594.D	10/20/2018	14:19
	STD050 280-434257/15	Q74595.D	10/20/2018	14:39
	ICIS 280-434257/16	Q74596.D	10/20/2018	15:00
	STD30 280-434257/17	Q74597.D	10/20/2018	15:20
	STD60 280-434257/18	Q74598.D	10/20/2018	15:41

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: Q74583.D BFB Injection Date: 10/22/2018

Instrument ID: VMS_Q BFB Injection Time: 11:34

Analysis Batch No.: 434393

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.1	
75	30.0 - 60.0 % of mass 95	54.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	4.9	(6.8) 1
176	95.0 - 101.0 % of mass 174	68.9	(96.8) 1
177	5.0 - 9.0 % of mass 176	3.8	(5.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-434393/12	Q74586.D	10/22/2018	11:44
	STD010 280-434393/13	Q74587.D	10/22/2018	12:05
	STD020 280-434393/14	Q74588.D	10/22/2018	12:26
	STD050 280-434393/15	Q74589.D	10/22/2018	12:46
	ICIS 280-434393/16	Q74590.D	10/22/2018	13:07
	STD30 280-434393/17	Q74591.D	10/22/2018	13:27
	STD60 280-434393/18	Q74592.D	10/22/2018	13:48
	ICV 280-434393/19	Q74594.D	10/22/2018	14:29

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: Q74632.D BFB Injection Date: 10/23/2018

Instrument ID: VMS_Q BFB Injection Time: 12:57

Analysis Batch No.: 434575

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.5	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	68.5	
175	5.0 - 9.0 % of mass 174	5.3	(7.7) 1
176	95.0 - 101.0 % of mass 174	66.4	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.0	(7.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-434575/12	Q74634.D	10/23/2018	13:27
	STD010 280-434575/13	Q74635.D	10/23/2018	13:48
	STD020 280-434575/14	Q74636.D	10/23/2018	14:08
	STD050 280-434575/15	Q74637.D	10/23/2018	14:29
	ICIS 280-434575/16	Q74638.D	10/23/2018	14:49
	STD30 280-434575/17	Q74639.D	10/23/2018	15:10
	STD60 280-434575/18	Q74640.D	10/23/2018	15:30
	ICV 280-434575/19	Q74642.D	10/23/2018	16:40
	ICV 280-434575/45	Q74643.D	10/23/2018	17:00

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab File ID: Q75270.D BFB Injection Date: 11/10/2018

Instrument ID: VMS_Q BFB Injection Time: 10:21

Analysis Batch No.: 437146

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.3	
75	30.0 - 60.0 % of mass 95	53.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	6.1	(7.8) 1
176	95.0 - 101.0 % of mass 174	77.9	(99.1) 1
177	5.0 - 9.0 % of mass 176	6.0	(7.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437146/2	Q75271.D	11/10/2018	10:30
	CCV 280-437146/3	Q75272.D	11/10/2018	10:51
	LCS 280-437146/4	Q75273.D	11/10/2018	11:16
	LCSD 280-437146/5	Q75274.D	11/10/2018	11:36
	LCS 280-437146/6	Q75275.D	11/10/2018	11:57
	LCSD 280-437146/7	Q75276.D	11/10/2018	12:17
	MB 280-437146/8	Q75277.D	11/10/2018	12:38
775VMW-20R_1018	280-116017-9	Q75281.D	11/10/2018	14:01
775VMW-5_1018	280-116017-10	Q75282.D	11/10/2018	14:21
775VMW-5_1018-a	280-116017-11	Q75283.D	11/10/2018	14:42
775VMW-4_1018	280-116017-12	Q75284.D	11/10/2018	15:02
	CCVC 280-437146/38	Q75294.D	11/10/2018	22:06
	CCVC 280-437146/39	Q75295.D	11/10/2018	22:27

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434433/14 Date Analyzed: 10/22/2018 23:54

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P1536.D Heated Purge: (Y/N) N

Calibration ID: 34114

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		153710	5.61	1484900	7.56	293843	9.83
UPPER LIMIT		307420	6.11	2969800	8.06	587686	10.33
LOWER LIMIT		76855	5.11	742450	7.06	146922	9.33
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434433/17		194486	5.60	1789372	7.56	359716	9.83
CCV 280-436199/2		140634	5.60	1298511	7.55	285567	9.82
CCV 280-436199/3		154765	5.59	1424109	7.55	309123	9.82
MB 280-436199/4		138212	5.62	1292789	7.55	278892	9.82
LCS 280-436199/5		150890	5.61	1368650	7.56	288850	9.83
LCS 280-436199/7		149055	5.60	1316991	7.55	287399	9.83
280-116017-1	LF6TW-38_1018	129598	5.60	1238122	7.55	262440	9.82
280-116017-2	LF6TW-36_1018	126635	5.60	1199889	7.55	251053	9.82
280-116017-2 DL	LF6TW-36_1018 DL	120709	5.60	1152487	7.55	243640	9.82
280-116017-3	775VMW-19R_1018	120940	5.59	1179776	7.55	252854	9.82
280-116017-4	775VMW-28_1018	116288	5.61	1112481	7.55	238079	9.82
280-116017-5	775VMW-9_1018	116956	5.60	1105272	7.55	240000	9.82
280-116017-6	775VMW-10_1018	114171	5.62	1093821	7.55	232344	9.83
280-116017-7	775VMW-10_1018-a	108161	5.59	1068310	7.55	225114	9.82
280-116017-8	775VMW-20_1018	111833	5.60	1050527	7.55	227670	9.82
CCVC 280-436199/37		127036	5.60	1092750	7.55	242321	9.82
CCVC 280-436199/38		142261	5.59	1199091	7.55	268291	9.82
CCV 280-436409/2		186358	5.59	1499771	7.56	337678	9.83
CCV 280-436409/3		177001	5.60	1531885	7.56	347248	9.83
MB 280-436409/4		163322	5.59	1384565	7.55	301943	9.83
LCS 280-436409/5		156367	5.60	1193310	7.56	270340	9.83
280-116017-1 DL	LF6TW-38_1018 DL	140729	5.60	1167483	7.56	255424	9.83
LCSD 280-436409/6		144032	5.61	1167488	7.56	268892	9.83
CCVC 280-436409/37		173647	5.59	1278574	7.56	301375	9.83

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434433/14 Date Analyzed: 10/22/2018 23:54

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P1536.D Heated Purge: (Y/N) N

Calibration ID: 34114

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		434345	11.64				
UPPER LIMIT		868690	12.14				
LOWER LIMIT		217173	11.14				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434433/17		529963	11.64				
CCV 280-436199/2		450091	11.64				
CCV 280-436199/3		444050	11.64				
MB 280-436199/4		395435	11.64				
LCS 280-436199/5		455947	11.64				
LCS 280-436199/7		405094	11.64				
280-116017-1	LF6TW-38_1018	366268	11.64				
280-116017-2	LF6TW-36_1018	365819	11.64				
280-116017-2 DL	LF6TW-36_1018 DL	340316	11.64				
280-116017-3	775VMW-19R_1018	348361	11.64				
280-116017-4	775VMW-28_1018	338633	11.64				
280-116017-5	775VMW-9_1018	344854	11.64				
280-116017-6	775VMW-10_1018	330112	11.64				
280-116017-7	775VMW-10_1018-a	326564	11.64				
280-116017-8	775VMW-20_1018	326056	11.64				
CCVC 280-436199/37		383397	11.64				
CCVC 280-436199/38		376141	11.64				
CCV 280-436409/2		541032	11.65				
CCV 280-436409/3		508152	11.64				
MB 280-436409/4		443912	11.64				
LCS 280-436409/5		432771	11.64				
280-116017-1 DL	LF6TW-38_1018 DL	376061	11.64				
LCSD 280-436409/6		424651	11.64				
CCVC 280-436409/37		468136	11.64				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434393/16 Date Analyzed: 10/22/2018 13:07

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q74590.D Heated Purge: (Y/N) N

Calibration ID: 34110

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		268297	5.87	2573447	7.80	540770	10.03
UPPER LIMIT		536594	6.37	5146894	8.30	1081540	10.53
LOWER LIMIT		134149	5.37	1286724	7.30	270385	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434393/19		264921	5.87	2891340	7.80	618050	10.03

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434393/16 Date Analyzed: 10/22/2018 13:07

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q74590.D Heated Purge: (Y/N) N

Calibration ID: 34110

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		781600	11.87				
UPPER LIMIT		1563200	12.37				
LOWER LIMIT		390800	11.37				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434393/19		814760	11.87				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434575/16 Date Analyzed: 10/23/2018 14:49

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q74638.D Heated Purge: (Y/N) N

Calibration ID: 34122

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		190191	5.87	2211987	7.80	461271	10.03
UPPER LIMIT		380382	6.37	4423974	8.30	922542	10.53
LOWER LIMIT		95096	5.37	1105994	7.30	230636	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434575/19		222178	5.86	2594879	7.80	489873	10.03
ICV 280-434575/45		200436	5.88	2705067	7.80	484428	10.03
CCV 280-437146/2		230349	5.87	2782642	7.80	602579	10.03
CCV 280-437146/3		255415	5.87	2928541	7.80	609945	10.03
LCS 280-437146/4		223552	5.87	2714620	7.80	565688	10.03
LCSD 280-437146/5		230559	5.88	2805600	7.80	577034	10.03
LCS 280-437146/6		243787	5.88	3019849	7.80	629544	10.03
LCSD 280-437146/7		218747	5.87	2825745	7.80	577629	10.03
MB 280-437146/8		228859	5.88	2649371	7.80	523580	10.03
280-116017-9	775VMW-20R_1018	205187	5.87	2324080	7.80	475040	10.03
280-116017-10	775VMW-5_1018	201773	5.87	2335934	7.80	466560	10.03
280-116017-11	775VMW-5_1018-a	160694	5.87	2275195	7.80	470869	10.03
280-116017-12	775VMW-4_1018	185554	5.87	2198006	7.80	465280	10.04
CCVC 280-437146/38		197883	5.87	2438190	7.79	510350	10.02
CCVC 280-437146/39		205875	5.87	2808480	7.80	577019	10.03

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Sample No.: ICIS 280-434575/16 Date Analyzed: 10/23/2018 14:49

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q74638.D Heated Purge: (Y/N) N

Calibration ID: 34122

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		609497	11.87				
UPPER LIMIT		1218994	12.37				
LOWER LIMIT		304749	11.37				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434575/19		712929	11.87				
ICV 280-434575/45		612603	11.87				
CCV 280-437146/2		815750	11.87				
CCV 280-437146/3		849415	11.87				
LCS 280-437146/4		837083	11.87				
LCSD 280-437146/5		851091	11.87				
LCS 280-437146/6		789107	11.87				
LCSD 280-437146/7		780668	11.87				
MB 280-437146/8		714083	11.87				
280-116017-9	775VMW-20R_1018	621808	11.87				
280-116017-10	775VMW-5_1018	659026	11.87				
280-116017-11	775VMW-5_1018-a	603718	11.87				
280-116017-12	775VMW-4_1018	630774	11.87				
CCVC 280-437146/38		727002	11.86				
CCVC 280-437146/39		732714	11.86				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 | Lab Sample ID: 280-116017-1

Matrix: Water | Lab File ID: P2151.D

Analysis Method: 8260B | Date Collected: 10/22/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	29		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 | Lab Sample ID: 280-116017-1

Matrix: Water | Lab File ID: P2151.D

Analysis Method: 8260B | Date Collected: 10/22/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	29		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.19	J	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 | Lab Sample ID: 280-116017-1

Matrix: Water | Lab File ID: P2151.D

Analysis Method: 8260B | Date Collected: 10/22/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D
Lims ID: 280-116017-D-1
Client ID: LF6TW-38_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 18:08:30 ALS Bottle#: 28 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-D-1 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:30:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	93	129598	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1238122	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.820	-0.001	90	262440	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	366268	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.009	7.009	0.000	92	264042	11.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	97	246485	10.7	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1133845	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	323072	9.88	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	U
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96	5.908	5.916	-0.008	96	6843	0.1922	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96	6.673	6.674	-0.001	85	987938	29.3	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83		6.881				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.839	7.839	0.000	95	3006417	87.5	E
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1				0		29.5	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

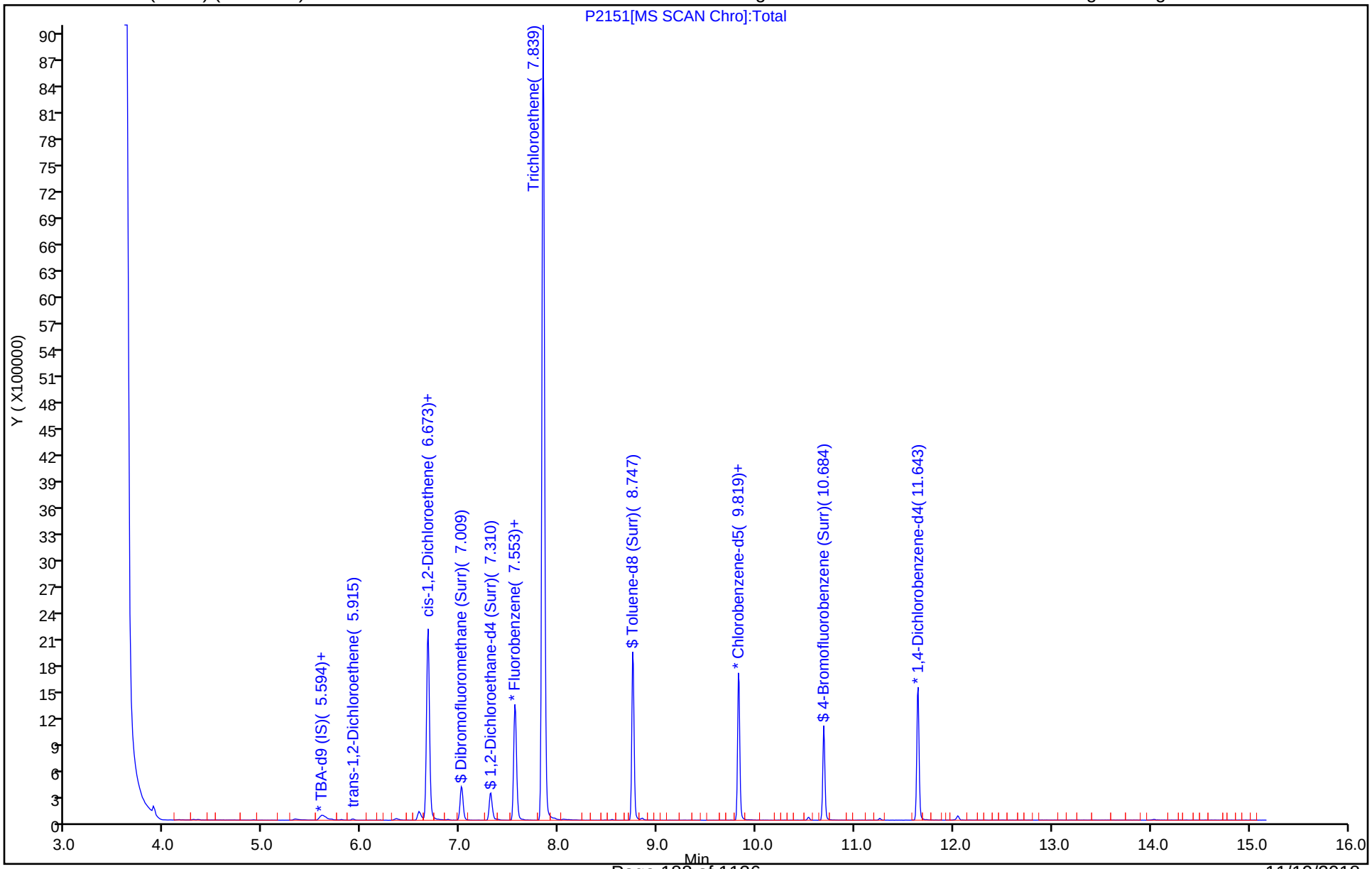
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D

Injection Date:	03-Nov-2018 18:08:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-D-1	Lab Sample ID:	280-116017-1	Worklist Smp#:	23
Client ID:	LF6TW-38_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D
Lims ID: 280-116017-D-1
Client ID: LF6TW-38_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 18:08:30 ALS Bottle#: 28 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-D-1 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

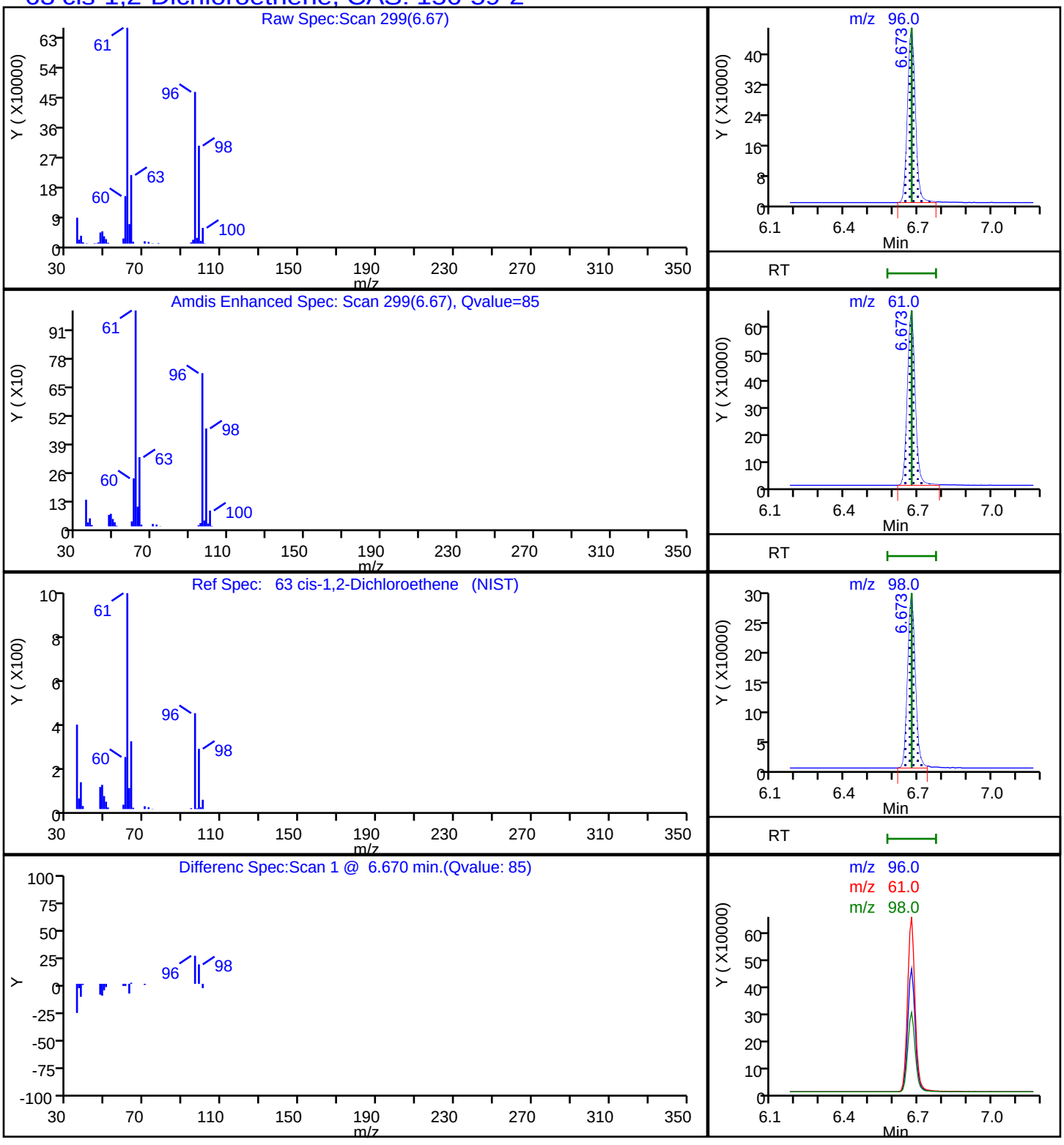
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:30:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.0	109.68
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.66
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.11
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.88	98.76

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D
Injection Date: 03-Nov-2018 18:08:30 Instrument ID: VMS_P
Lims ID: 280-116017-D-1 Lab Sample ID: 280-116017-1
Client ID: LF6TW-38_1018
Operator ID: newcomer ALS Bottle#: 28 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

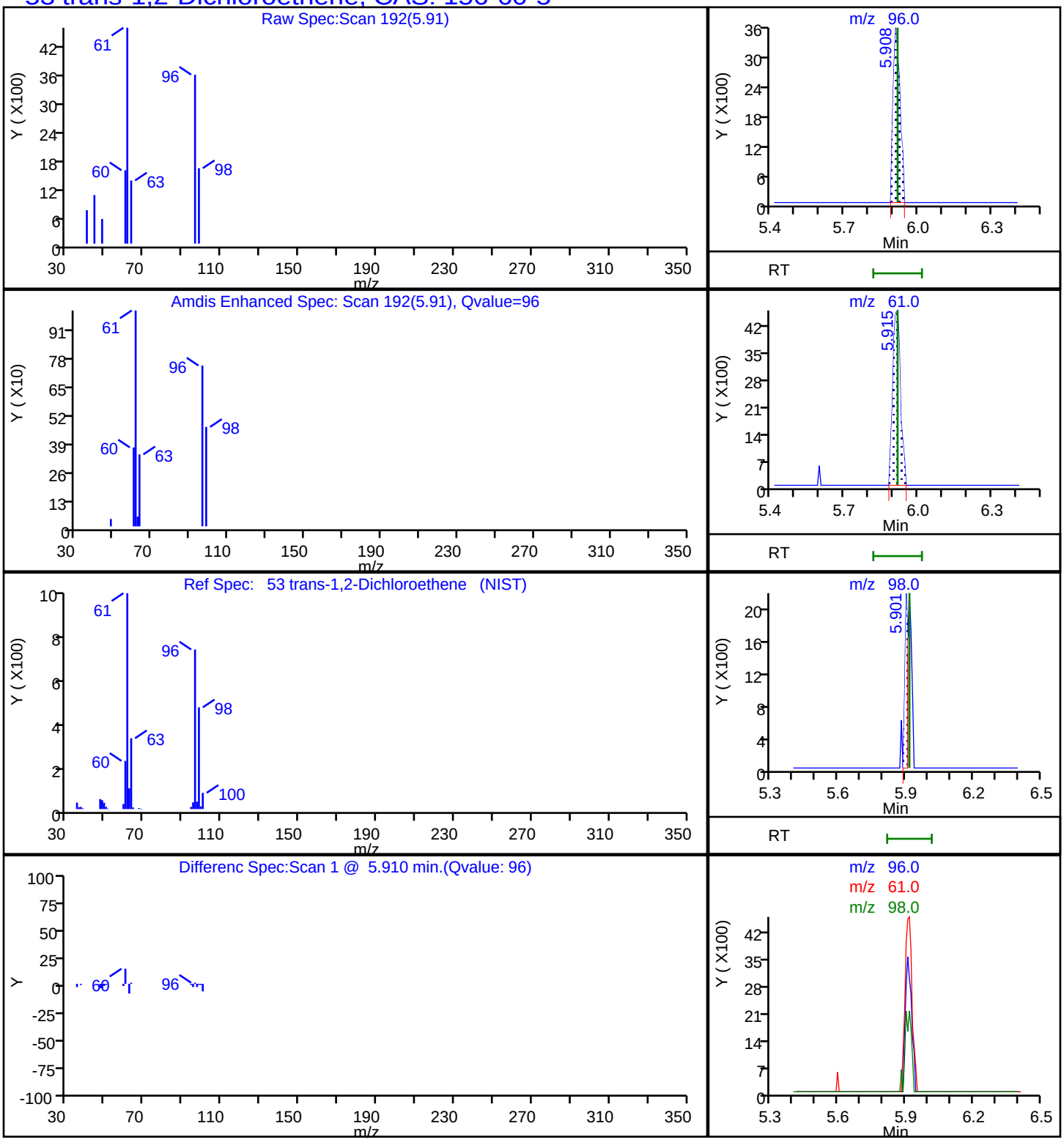
63 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D				
Injection Date:	03-Nov-2018 18:08:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-D-1	Lab Sample ID:	280-116017-1		
Client ID:	LF6TW-38_1018				
Operator ID:	newcomer	ALS Bottle#:	28	Worklist Smp#:	23
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

53 trans-1,2-Dichloroethene, CAS: 156-60-5



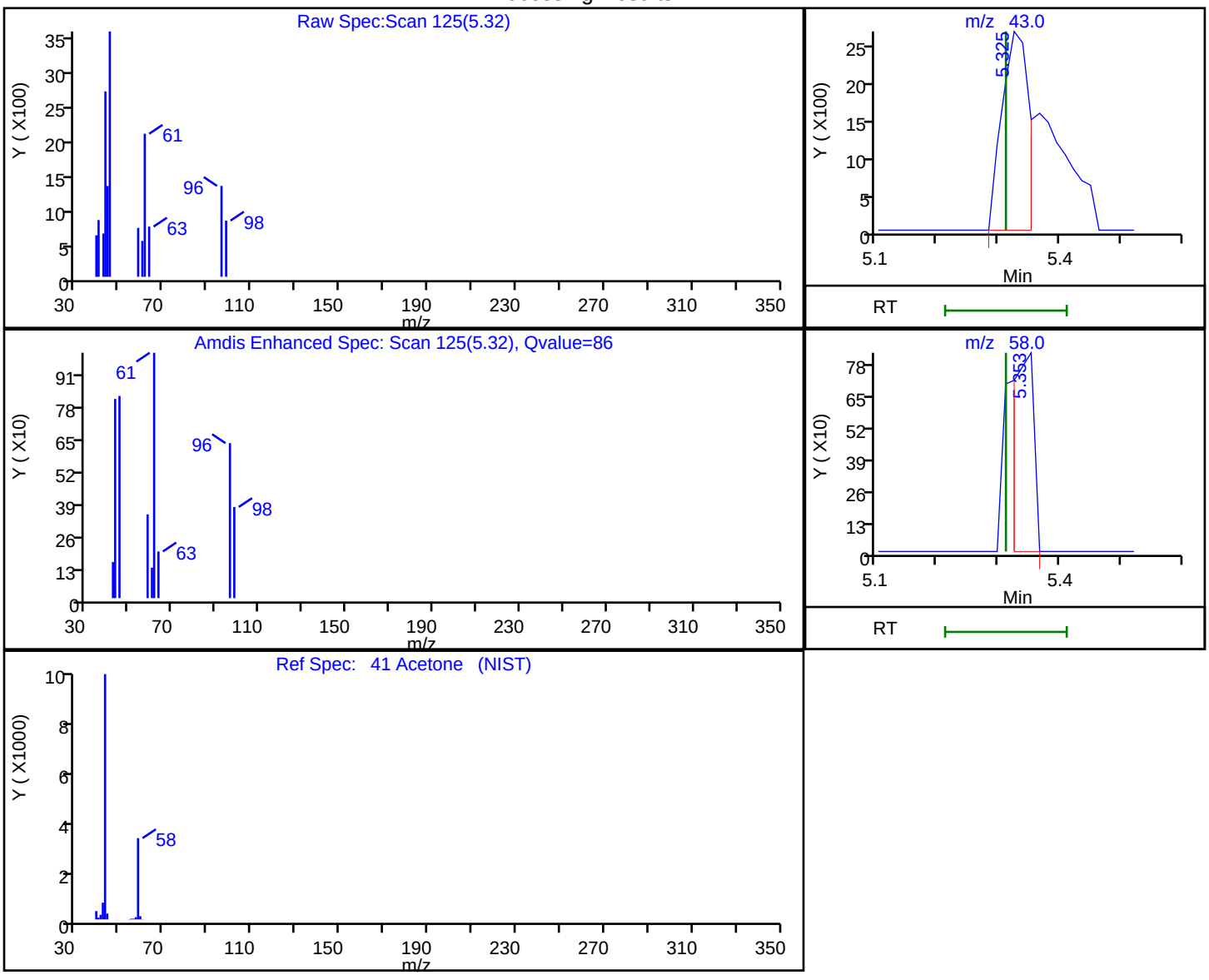
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2151.D				
Injection Date:	03-Nov-2018 18:08:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-D-1	Lab Sample ID:	280-116017-1		
Client ID:	LF6TW-38_1018				
Operator ID:	newcomer	ALS Bottle#:	28	Worklist Smp#:	23
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.32	43.00	8282	2.353071
5.35	58.00	1926	

Reviewer: newcomer, 05-Nov-2018 18:29:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 DL | Lab Sample ID: 280-116017-1 DL

Matrix: Water | Lab File ID: P2232.D

Analysis Method: 8260B | Date Collected: 10/22/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/06/2018 05:13

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
79-01-6	Trichloroethene	88	H D	4.0	1.6	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	119		80-119
2037-26-5	Toluene-d8 (Surr)	107		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2232.D
Lims ID: 280-116017-E-1
Client ID: LF6TW-38_1018
Sample Type: Client
Inject. Date: 06-Nov-2018 05:13:30 ALS Bottle#: 40 Worklist Smp#: 36
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-E-1 pH<2 5mL
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 07-Nov-2018 18:41:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.593	0.007	93	140729	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1167483	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	255424	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.649	-0.007	98	376061	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	269500	11.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	253720	11.6	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	96	1155247	10.7	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.684	0.007	85	325528	9.69	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.083				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.572				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.893				ND	
41 Acetone	43		5.312				ND	
43 1,1-Dichloroethene	96		5.326				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.607				ND	
50 Methylene Chloride	84	5.700	5.693	0.007	93	5541	0.1885	
51 Methyl tert-butyl ether	73		5.872				ND	
53 trans-1,2-Dichloroethene	96		5.915				ND	
55 Vinyl acetate	43		6.179				ND	
56 Isopropyl ether	87		6.179				ND	
57 1,1-Dichloroethane	63		6.244				ND	
61 2-Butanone (MEK)	43		6.630				ND	
63 cis-1,2-Dichloroethene	96	6.680	6.673	0.007	85	237778	7.49	
64 2,2-Dichloropropane	77		6.701				ND	
67 Chlorobromomethane	128		6.880				ND	
68 Chloroform	83		6.887				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.195				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.230				ND	
76 1,2-Dichloroethane	62		7.373				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.845	7.845	0.000	95	709651	21.9	
83 1,2-Dichloropropane	63		8.038				ND	
85 Dibromomethane	93		8.146				ND	
86 Dichlorobromomethane	83		8.217				ND	
89 cis-1,3-Dichloropropene	75		8.532				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.589				ND	
91 Toluene	91		8.803				ND	
93 trans-1,3-Dichloropropene	75		8.911				ND	
94 1,1,2-Trichloroethane	97		9.068				ND	
95 2-Hexanone	43		9.182				ND	
96 1,3-Dichloropropane	76		9.204				ND	
97 Tetrachloroethene	164		9.211				ND	
98 Chlorodibromomethane	129		9.397				ND	
100 Ethylene Dibromide	107		9.518				ND	
102 Chlorobenzene	112		9.847				ND	
103 Ethylbenzene	106		9.883				ND	
104 1,1,1,2-Tetrachloroethane	131		9.890				ND	
105 m-Xylene & p-Xylene	106		9.962				ND	
107 o-Xylene	106		10.276				ND	
106 Styrene	104		10.276				ND	
108 Bromoform	173		10.484				ND	
109 Isopropylbenzene	105		10.534				ND	
112 1,1,2,2-Tetrachloroethane	83		10.748				ND	
114 1,2,3-Trichloropropane	110		10.820				ND	
115 N-Propylbenzene	120		10.848				ND	
116 Bromobenzene	156		10.856				ND	
117 1,3,5-Trimethylbenzene	105		10.956				ND	
118 2-Chlorotoluene	126		10.977				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.256				ND	
121 1,2,4-Trimethylbenzene	105		11.285				ND	
122 sec-Butylbenzene	134		11.435				ND	
123 4-Isopropyltoluene	119		11.520				ND	
124 1,3-Dichlorobenzene	146		11.599				ND	
126 1,4-Dichlorobenzene	146		11.671				ND	
127 n-Butylbenzene	91		11.885				ND	
128 1,2-Dichlorobenzene	146		12.028				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.786				ND	
130 1,2,4-Trichlorobenzene	180		13.716				ND	
131 Hexachlorobutadiene	225		13.851				ND	
132 Naphthalene	128		14.087				ND	
133 1,2,3-Trichlorobenzene	180		14.409				ND	
S 138 1,2-Dichloroethene, Total	1				0		7.49	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

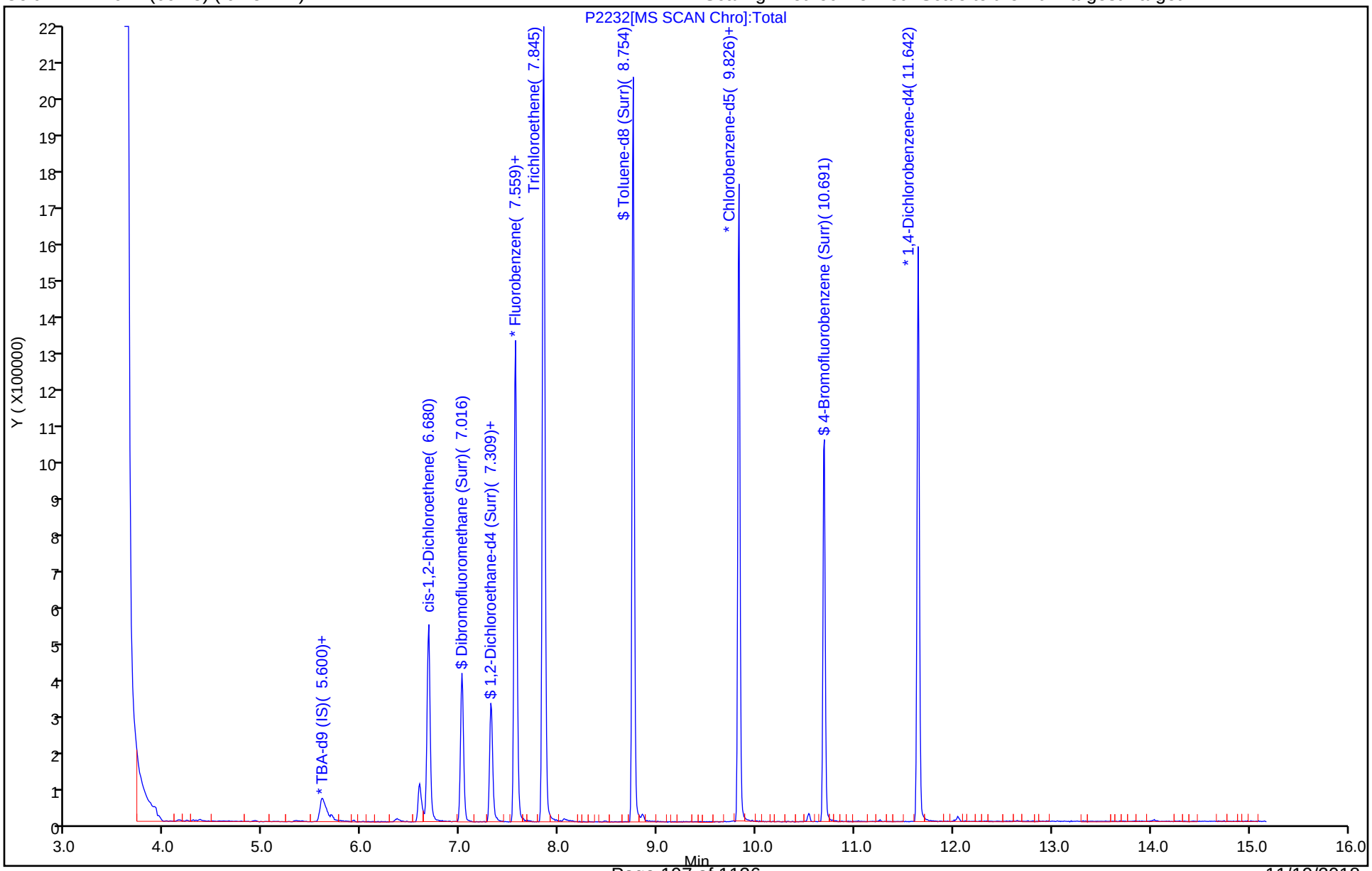
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2232.D

Injection Date:	06-Nov-2018 05:13:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-E-1	Lab Sample ID:	280-116017-1	Worklist Smp#:	36
Client ID:	LF6TW-38_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2232.D				
Lims ID:	280-116017-E-1				
Client ID:	LF6TW-38_1018				
Sample Type:	Client				
Inject. Date:	06-Nov-2018 05:13:30	ALS Bottle#:	40	Worklist Smp#:	36
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-E-1 pH<2 5mL				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	07-Nov-2018 18:50:10	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0322				

First Level Reviewer: newcomer Date: 07-Nov-2018 18:41:19

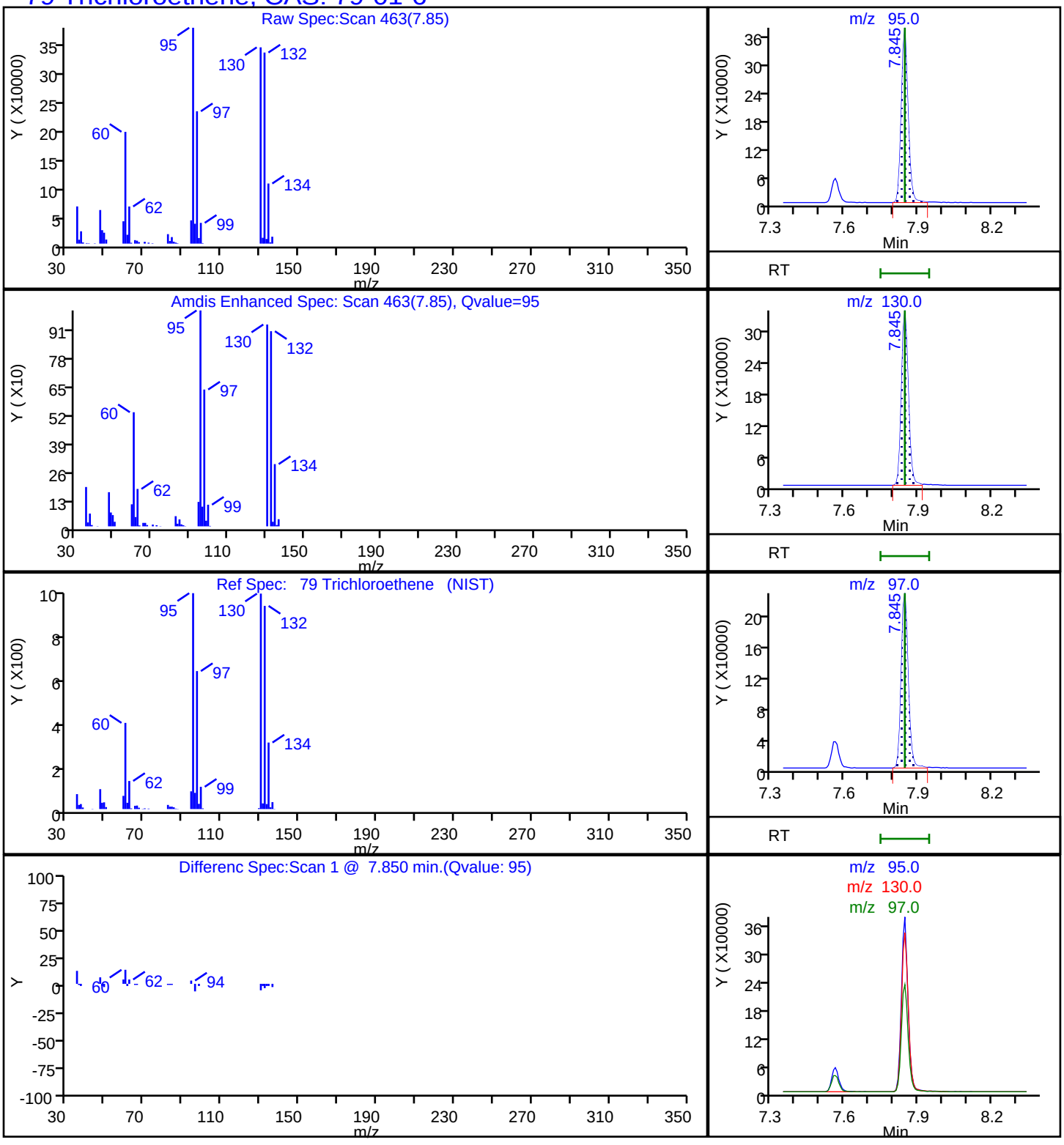
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.9	118.73
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.6	116.44
$ 7 Toluene-d8 (Surr)	10.0	10.7	106.89
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.69	96.92

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2232.D

Injection Date:	06-Nov-2018 05:13:30	Instrument ID:	VMS_P
Lims ID:	280-116017-E-1	Lab Sample ID:	280-116017-1
Client ID:	LF6TW-38_1018		
Operator ID:	newcomer	ALS Bottle#:	40 Worklist Smp#: 36
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 | Lab Sample ID: 280-116017-2

Matrix: Water | Lab File ID: P2152.D

Analysis Method: 8260B | Date Collected: 10/22/2018 09:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	37		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 | Lab Sample ID: 280-116017-2

Matrix: Water | Lab File ID: P2152.D

Analysis Method: 8260B | Date Collected: 10/22/2018 09:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	36		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	1.3		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U M	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 | Lab Sample ID: 280-116017-2

Matrix: Water | Lab File ID: P2152.D

Analysis Method: 8260B | Date Collected: 10/22/2018 09:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D
Lims ID: 280-116017-E-2
Client ID: LF6TW-36_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 18:27:30 ALS Bottle#: 29 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-E-2 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:32:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.601	-0.001	98	126635	250.0	
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1199889	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.820	-0.001	90	251053	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.643	-0.001	97	365819	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.009	0.007	92	260899	11.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	242342	10.8	
$ 7 Toluene-d8 (Surr)	98	8.746	8.747	-0.001	95	1104649	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	316129	9.68	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	U
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96	5.907	5.916	-0.009	94	43185	1.25	
55 Vinyl acetate	43		6.173				ND	U
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96	6.673	6.674	-0.002	85	1175847	36.0	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83		6.881				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.838	7.839	-0.001	93	6245234	187.5	E
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1				0		37.3	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

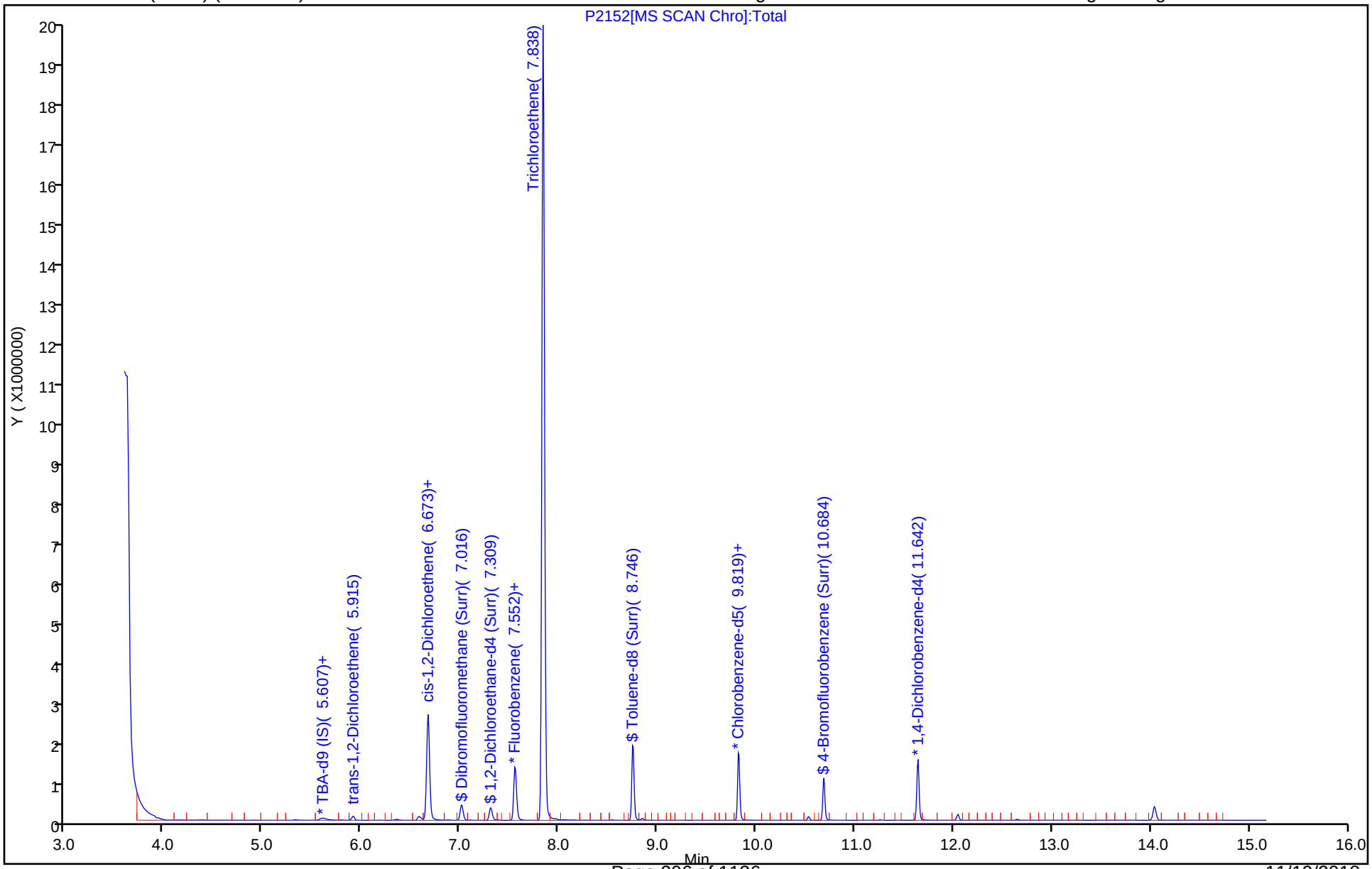
Report Date: 10-Nov-2018 00:06:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D

Injection Date:	03-Nov-2018 18:27:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2	Worklist Smp#:	24
Client ID:	LF6TW-36_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D
Lims ID: 280-116017-E-2
Client ID: LF6TW-36_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 18:27:30 ALS Bottle#: 29 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-E-2 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

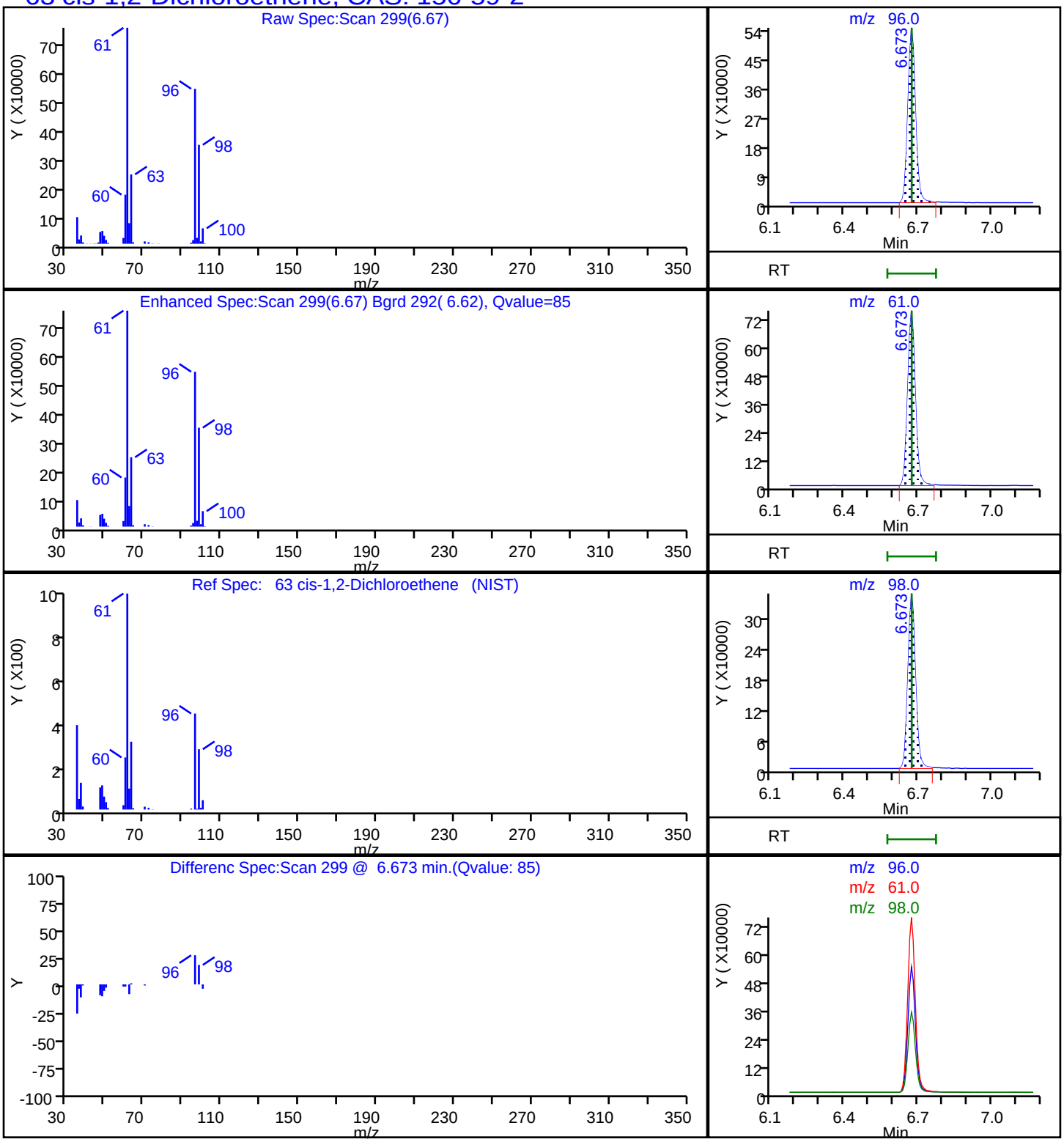
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:32:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.2	111.83
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.21
$ 7 Toluene-d8 (Surr)	10.0	10.4	103.99
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.68	96.76

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D
Injection Date: 03-Nov-2018 18:27:30 Instrument ID: VMS_P
Lims ID: 280-116017-E-2 Lab Sample ID: 280-116017-2
Client ID: LF6TW-36_1018
Operator ID: newcomer ALS Bottle#: 29 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

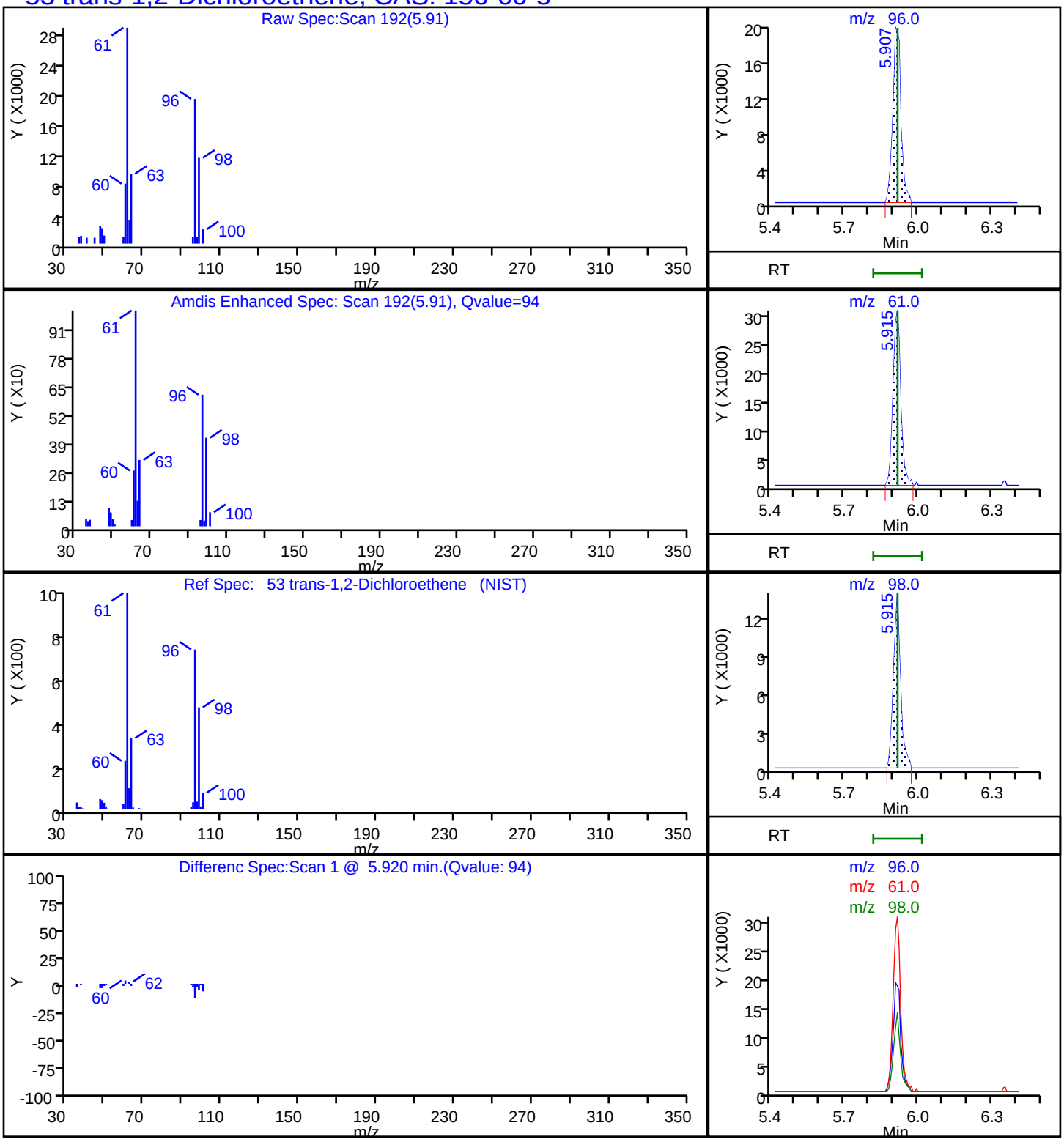
63 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D				
Injection Date:	03-Nov-2018 18:27:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2		
Client ID:	LF6TW-36_1018				
Operator ID:	newcomer	ALS Bottle#:	29	Worklist Smp#:	24
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

53 trans-1,2-Dichloroethene, CAS: 156-60-5



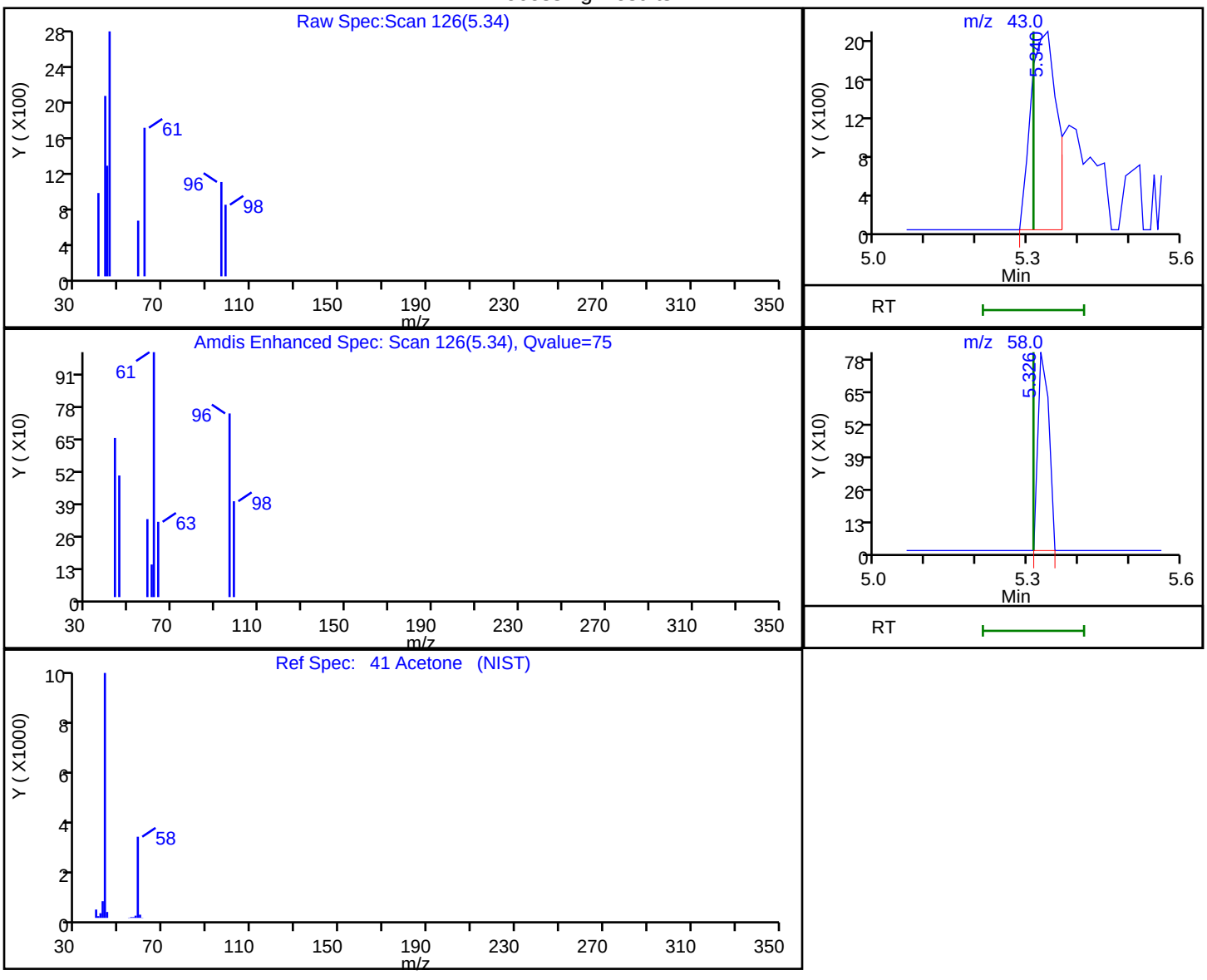
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D				
Injection Date:	03-Nov-2018 18:27:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2		
Client ID:	LF6TW-36_1018				
Operator ID:	newcomer	ALS Bottle#:	29	Worklist Smp#:	24
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.34	43.00	7288	2.136636
5.33	58.00	1202	

Reviewer: newcomer, 05-Nov-2018 18:30:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

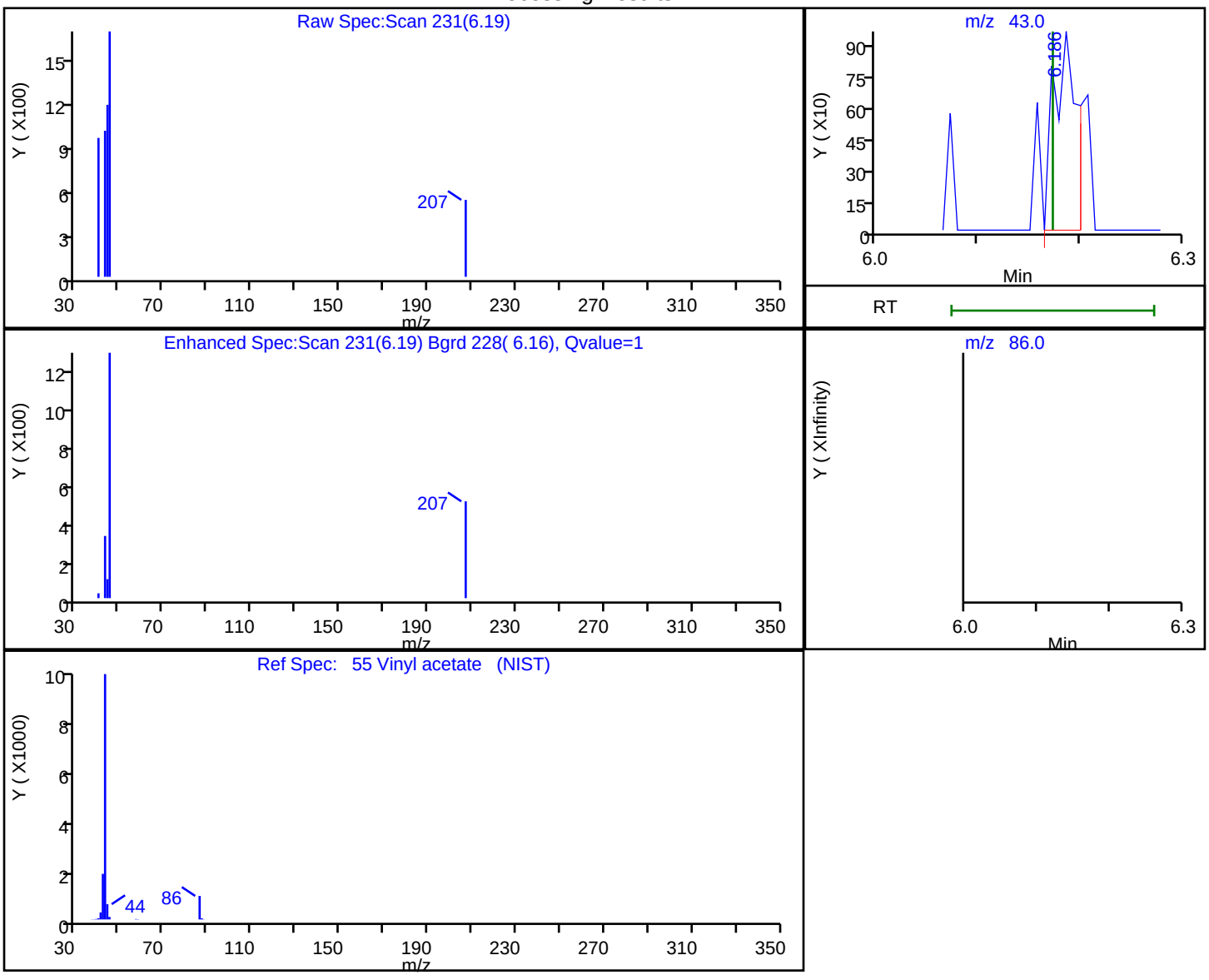
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2152.D				
Injection Date:	03-Nov-2018 18:27:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2		
Client ID:	LF6TW-36_1018				
Operator ID:	newcomer	ALS Bottle#:	29	Worklist Smp#:	24
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

55 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.19	43.00	1503	0.434367
6.17	86.00	0	

Reviewer: newcomer, 05-Nov-2018 18:31:06

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 DL | Lab Sample ID: 280-116017-2 DL

Matrix: Water | Lab File ID: P2153.D

Analysis Method: 8260B | Date Collected: 10/22/2018 09:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 18:45

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
79-01-6	Trichloroethene	180	D	4.0	1.6	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2153.D
Lims ID: 280-116017-E-2
Client ID: LF6TW-36_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 18:45:30 ALS Bottle#: 30 Worklist Smp#: 25
Purge Vol: 20.000 mL Dil. Factor: 4.0000
Sample Info: 280-116017-E-2 pH<2 5mL
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:32:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.602	5.601	0.001	93	120709	250.0	
* 1 Fluorobenzene	96	7.554	7.553	0.001	98	1152487	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	243640	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	340316	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	91	253574	11.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	236281	11.0	
$ 7 Toluene-d8 (Surr)	98	8.748	8.747	0.001	95	1076153	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	304056	10.0	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	95	11197	0.3379	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96	6.674	6.674	0.000	86	276691	8.82	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83		6.881				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.840	7.839	0.001	95	1438594	45.0	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1				0		9.16	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

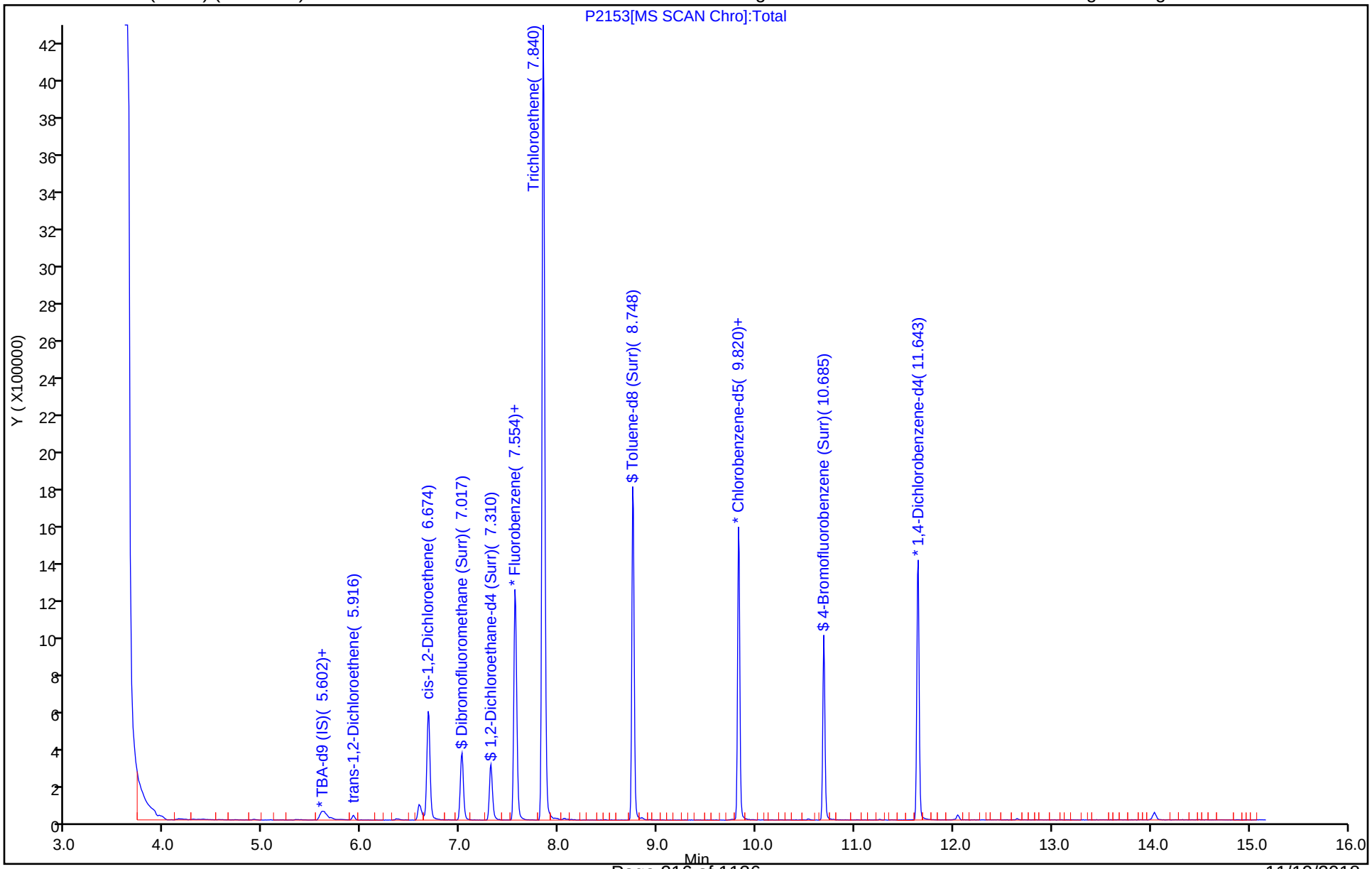
Report Date: 10-Nov-2018 00:06:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2153.D

Injection Date:	03-Nov-2018 18:45:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2	Worklist Smp#:	25
Client ID:	LF6TW-36_1018				
Purge Vol:	20.000 mL	Dil. Factor:	4.0000	ALS Bottle#:	30
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2153.D				
Lims ID:	280-116017-E-2				
Client ID:	LF6TW-36_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 18:45:30	ALS Bottle#:	30	Worklist Smp#:	25
Purge Vol:	20.000 mL	Dil. Factor:	4.0000		
Sample Info:	280-116017-E-2 pH<2 5mL				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:32:53

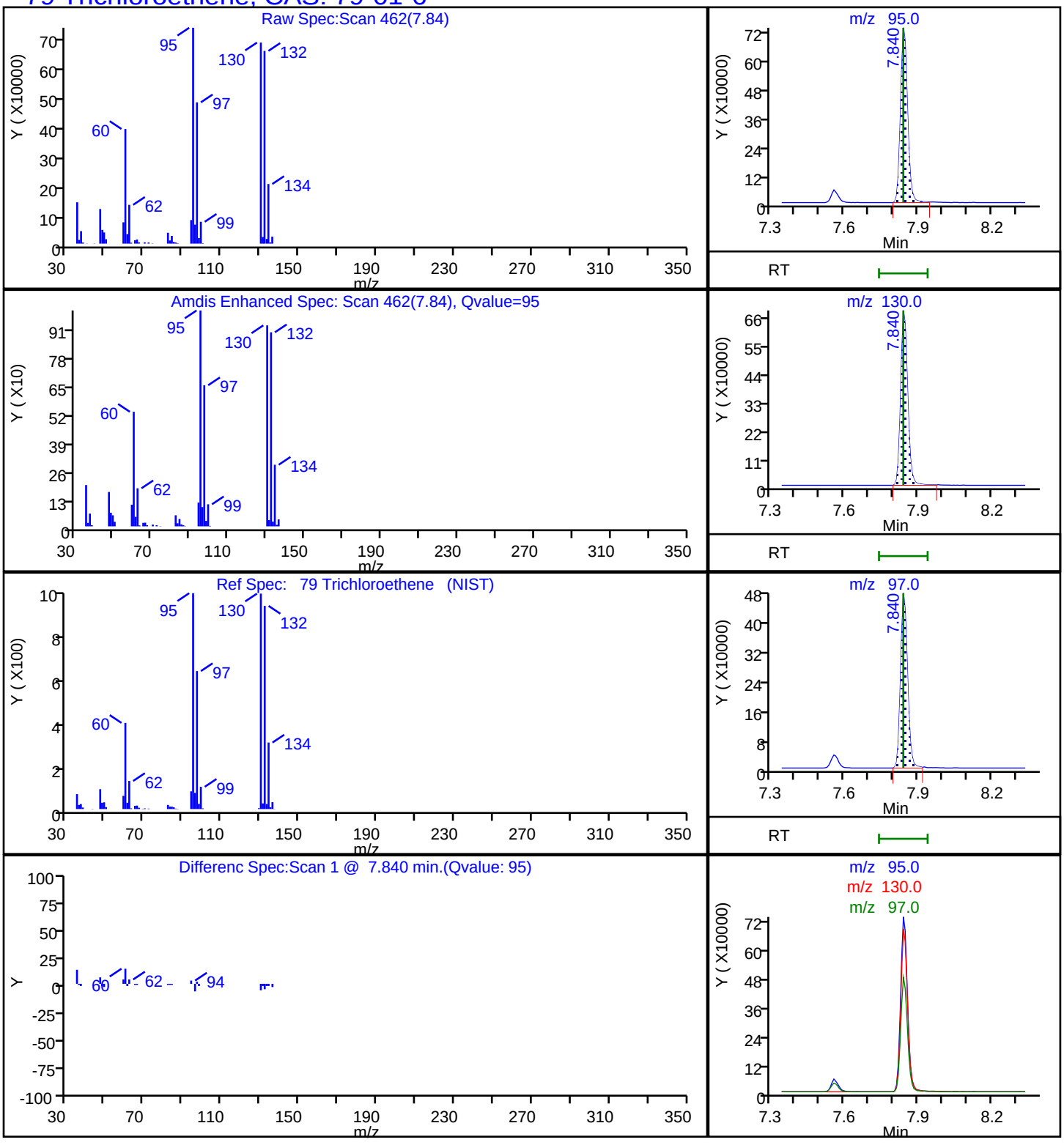
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.3	113.16
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.84
$ 7 Toluene-d8 (Surr)	10.0	10.4	104.39
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.0	100.04

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2153.D

Injection Date:	03-Nov-2018 18:45:30	Instrument ID:	VMS_P
Lims ID:	280-116017-E-2	Lab Sample ID:	280-116017-2
Client ID:	LF6TW-36_1018		
Operator ID:	newcomer	ALS Bottle#:	30 Worklist Smp#: 25
Purge Vol:	20.000 mL	Dil. Factor:	4.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-19R_1018 | Lab Sample ID: 280-116017-3

Matrix: Water | Lab File ID: P2154.D

Analysis Method: 8260B | Date Collected: 10/22/2018 11:46

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-19R_1018 | Lab Sample ID: 280-116017-3

Matrix: Water | Lab File ID: P2154.D

Analysis Method: 8260B | Date Collected: 10/22/2018 11:46

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-19R_1018 | Lab Sample ID: 280-116017-3

Matrix: Water | Lab File ID: P2154.D

Analysis Method: 8260B | Date Collected: 10/22/2018 11:46

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2154.D
Lims ID: 280-116017-A-3
Client ID: 775VMW-19R_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 19:04:30 ALS Bottle#: 31 Worklist Smp#: 26
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-3 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:33:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.601	-0.007	93	120940	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1179776	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	252854	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	348361	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	92	259815	11.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.303	7.310	-0.007	99	240784	10.9	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1087253	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	314434	10.1	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	U
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83		6.881				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95		7.839				ND	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

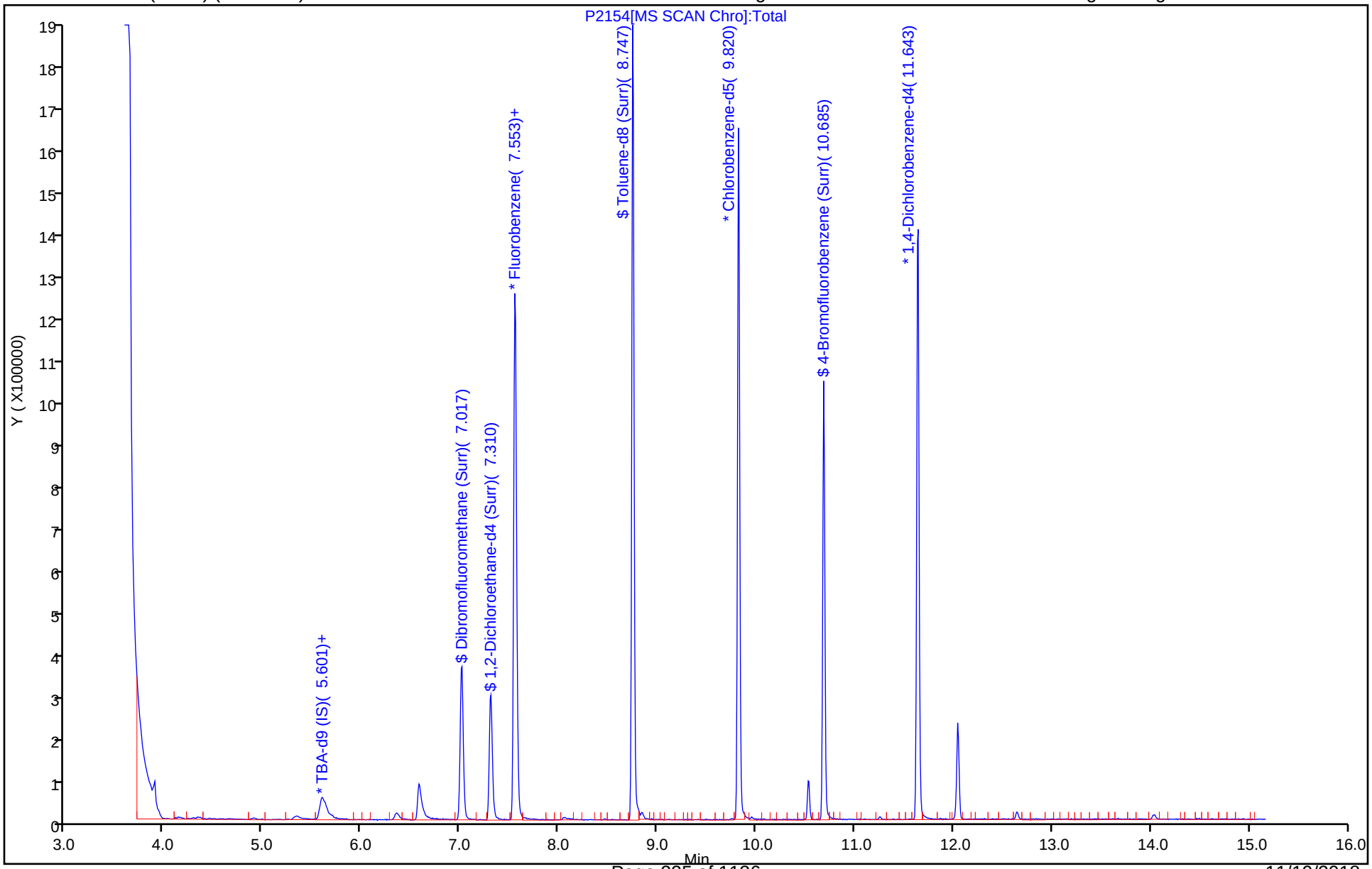
Report Date: 10-Nov-2018 00:07:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2154.D

Injection Date:	03-Nov-2018 19:04:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-A-3	Lab Sample ID:	280-116017-3	Worklist Smp#:	26
Client ID:	775VMW-19R_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2154.D				
Lims ID:	280-116017-A-3				
Client ID:	775VMW-19R_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 19:04:30	ALS Bottle#:	31	Worklist Smp#:	26
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-A-3 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:33:25

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.3	113.27
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	109.35
$ 7 Toluene-d8 (Surr)	10.0	10.2	101.62
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.1	101.06

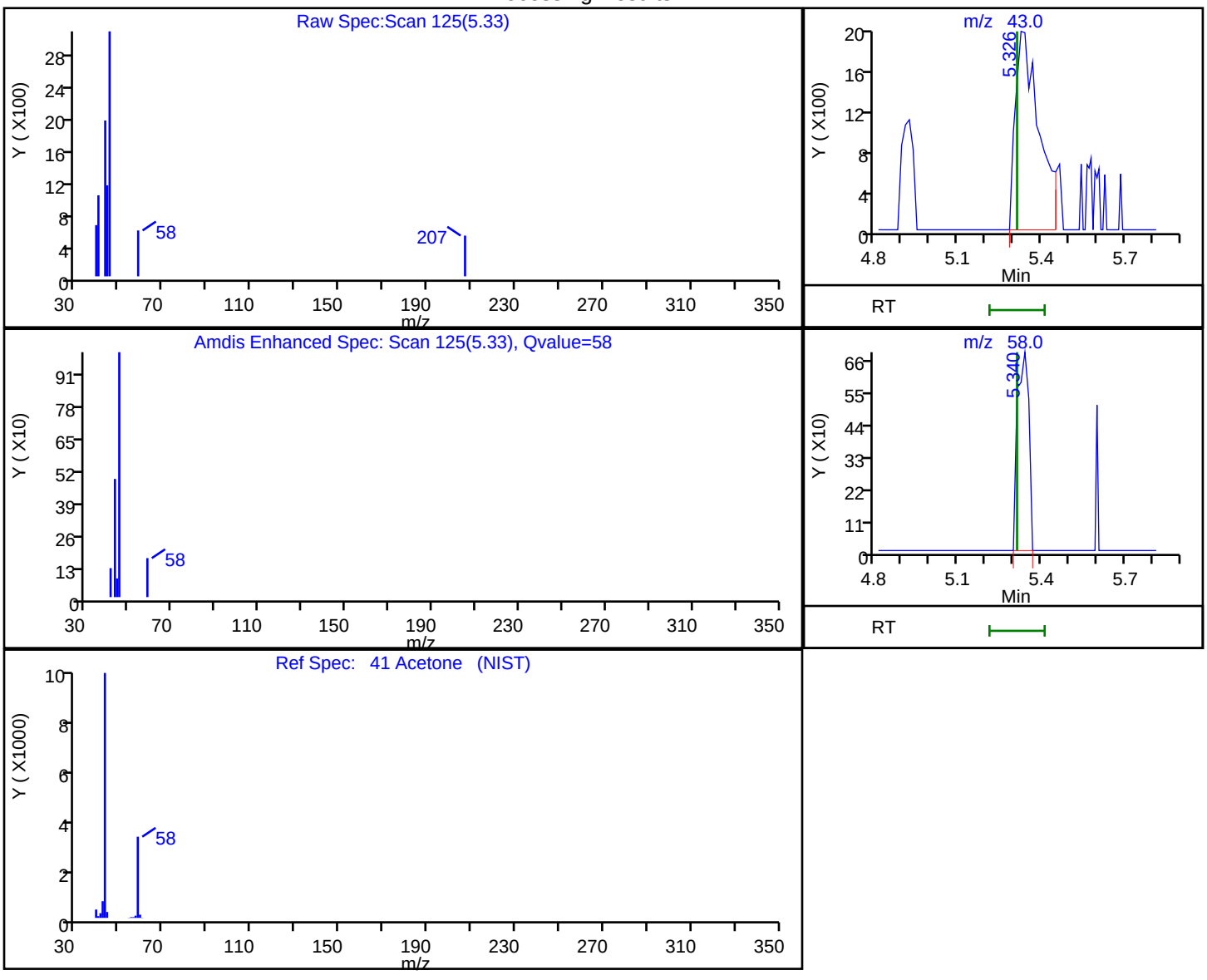
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2154.D				
Injection Date:	03-Nov-2018 19:04:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-3	Lab Sample ID:	280-116017-3		
Client ID:	775VMW-19R_1018				
Operator ID:	newcomer	ALS Bottle#:	31	Worklist Smp#:	26
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.33	43.00	11722	3.495146
5.34	58.00	1963	

Reviewer: newcomer, 05-Nov-2018 18:33:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-28_1018 | Lab Sample ID: 280-116017-4

Matrix: Water | Lab File ID: P2156.D

Analysis Method: 8260B | Date Collected: 10/22/2018 12:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-28_1018 | Lab Sample ID: 280-116017-4

Matrix: Water | Lab File ID: P2156.D

Analysis Method: 8260B | Date Collected: 10/22/2018 12:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.35	J	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-28_1018 Lab Sample ID: 280-116017-4

Matrix: Water Lab File ID: P2156.D

Analysis Method: 8260B Date Collected: 10/22/2018 12:41

Sample wt/vol: 20(mL) Date Analyzed: 11/03/2018 19:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436199 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	114		80-119
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2156.D
Lims ID: 280-116017-B-4
Client ID: 775VMW-28_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 19:41:30 ALS Bottle#: 33 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-B-4 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:34:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.608	5.601	0.007	94	116288	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1112481	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	238079	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	338633	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	92	246160	11.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	230580	11.1	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1045395	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	301046	9.95	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83		6.881				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.846	7.839	0.007	94	10754	0.3483	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91	8.804	8.804	0.000	93	17417	0.1443	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

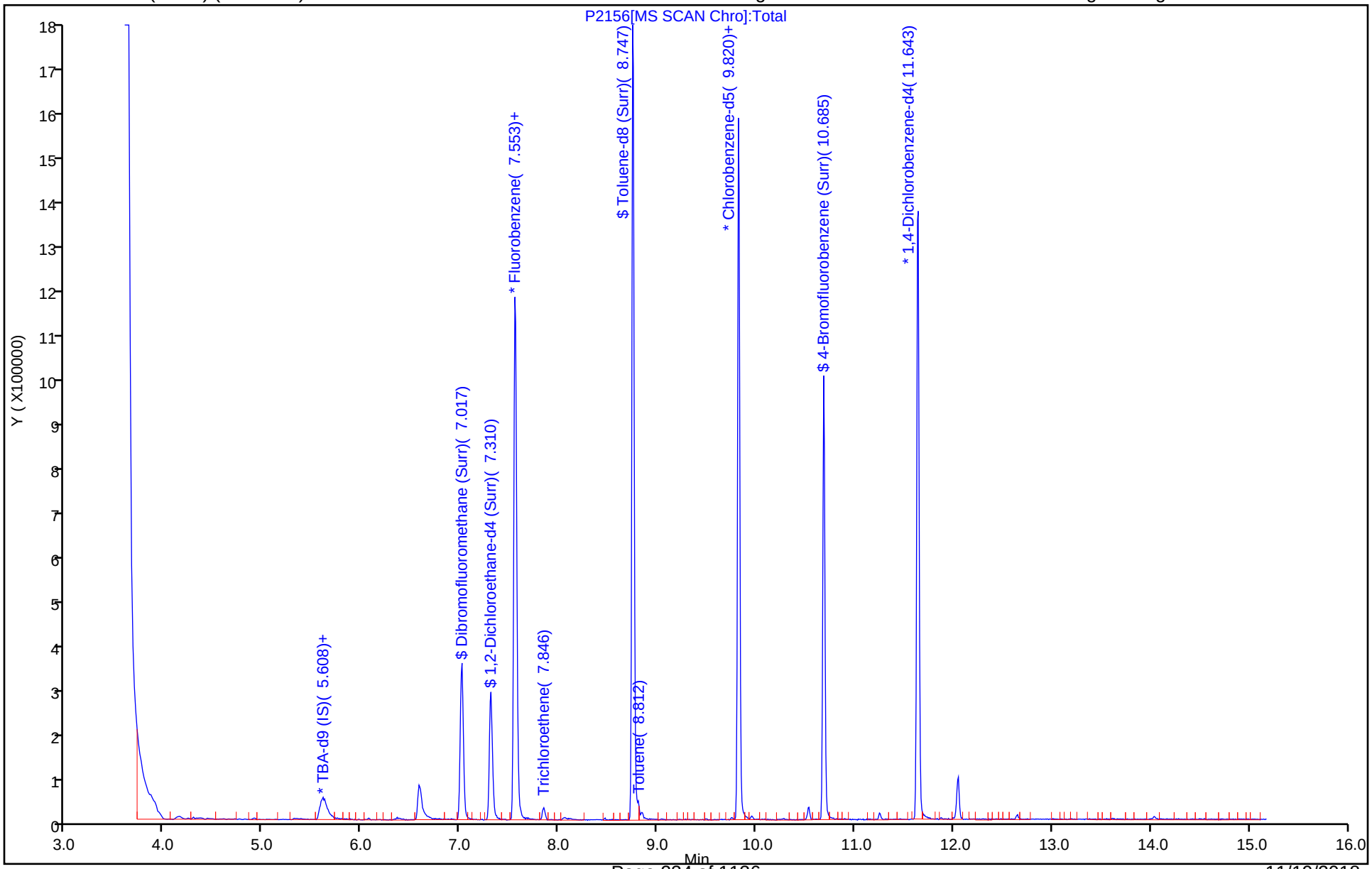
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2156.D

Injection Date:	03-Nov-2018 19:41:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-B-4	Lab Sample ID:	280-116017-4	Worklist Smp#:	28
Client ID:	775VMW-28_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2156.D				
Lims ID:	280-116017-B-4				
Client ID:	775VMW-28_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 19:41:30	ALS Bottle#:	33	Worklist Smp#:	28
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-B-4 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

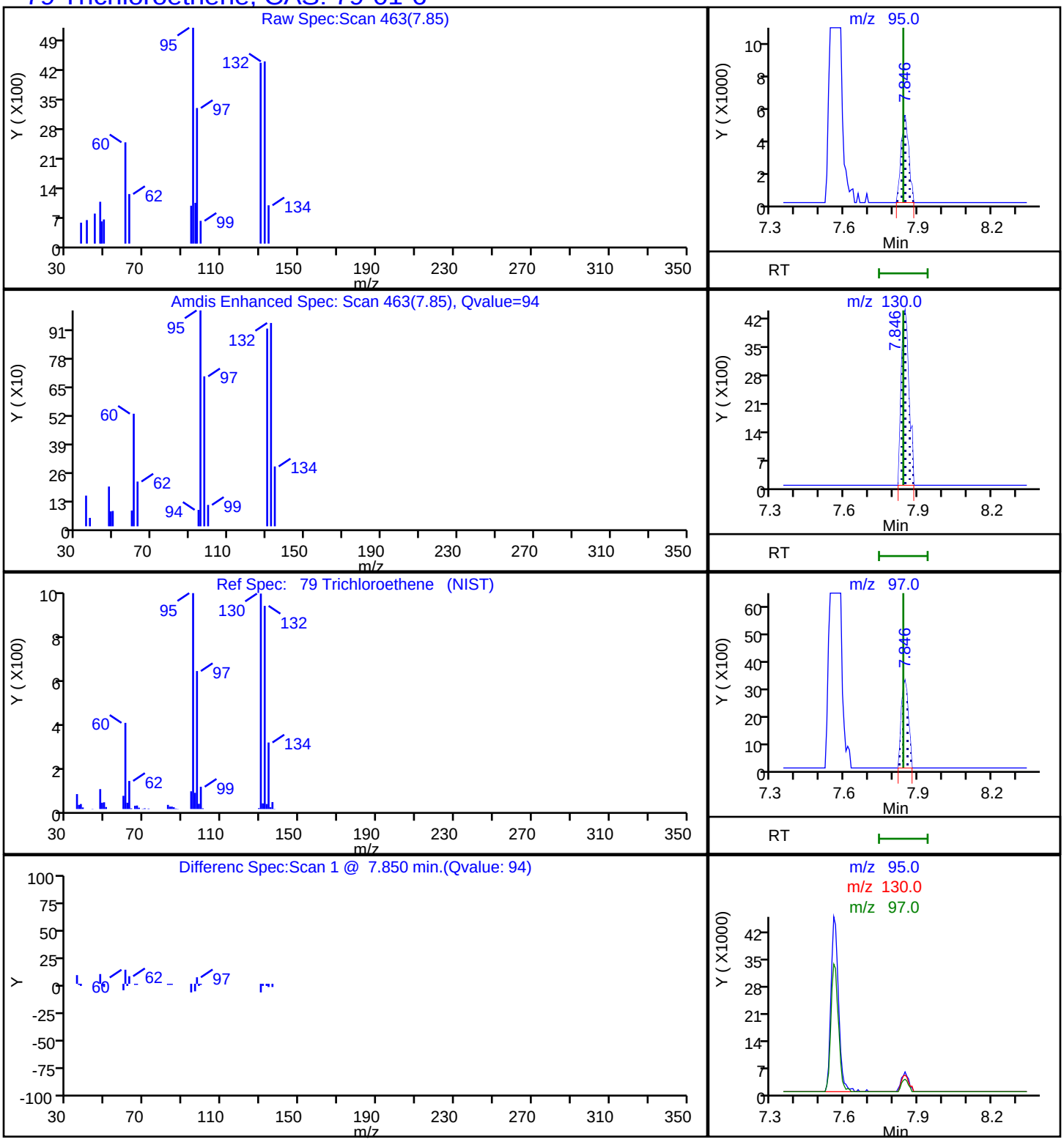
First Level Reviewer: newcomer Date: 05-Nov-2018 18:34:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.4	113.80
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.05
$ 7 Toluene-d8 (Surr)	10.0	10.4	103.77
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.95	99.54

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2156.D				
Injection Date:	03-Nov-2018 19:41:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-B-4	Lab Sample ID:	280-116017-4		
Client ID:	775VMW-28_1018				
Operator ID:	newcomer	ALS Bottle#:	33	Worklist Smp#:	28
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-9_1018 | Lab Sample ID: 280-116017-5

Matrix: Water | Lab File ID: P2157.D

Analysis Method: 8260B | Date Collected: 10/22/2018 13:56

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-9_1018 | Lab Sample ID: 280-116017-5

Matrix: Water | Lab File ID: P2157.D

Analysis Method: 8260B | Date Collected: 10/22/2018 13:56

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 19:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.72	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	21		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.34	J	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-9_1018 Lab Sample ID: 280-116017-5

Matrix: Water Lab File ID: P2157.D

Analysis Method: 8260B Date Collected: 10/22/2018 13:56

Sample wt/vol: 20(mL) Date Analyzed: 11/03/2018 19:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436199 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	115		80-119
2037-26-5	Toluene-d8 (Surr)	105		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D
Lims ID: 280-116017-A-5
Client ID: 775VMW-9_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 19:59:30 ALS Bottle#: 34 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-5 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:42:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	93	116956	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1105272	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	240000	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	97	344854	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	91	247034	11.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	99	234801	11.4	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1061742	10.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	83	302798	9.83	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101	4.906	4.892	0.014	93	21246	0.3371	
41 Acetone	43		5.311				ND	U
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83	6.881	6.881	0.000	98	35389	0.7216	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	90	7072	0.1411	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.839	7.839	0.000	95	641343	20.9	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

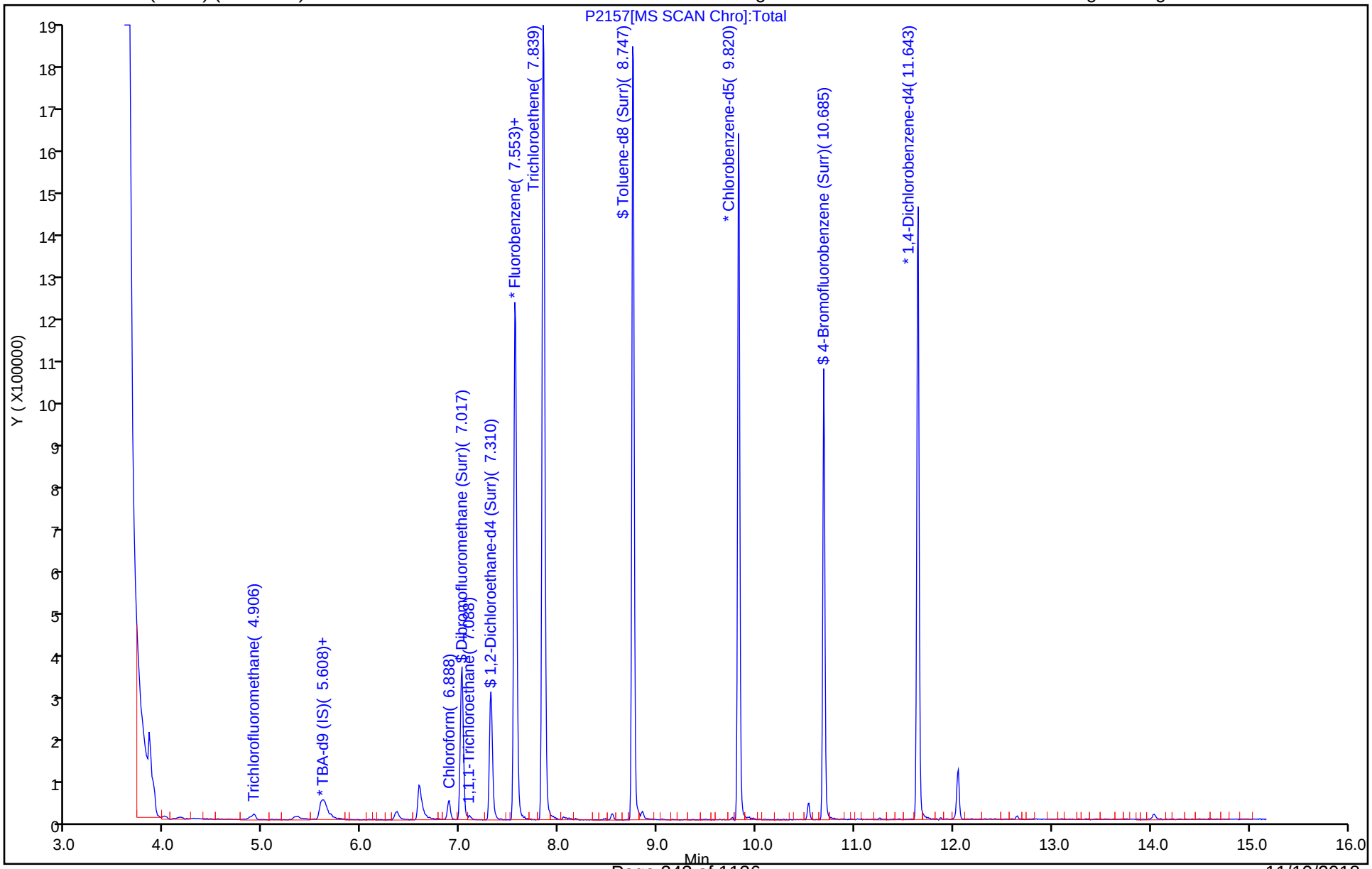
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D

Injection Date:	03-Nov-2018 19:59:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-A-5	Lab Sample ID:	280-116017-5	Worklist Smp#:	29
Client ID:	775VMW-9_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D				
Lims ID:	280-116017-A-5				
Client ID:	775VMW-9_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 19:59:30	ALS Bottle#:	34	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-A-5 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:42:30

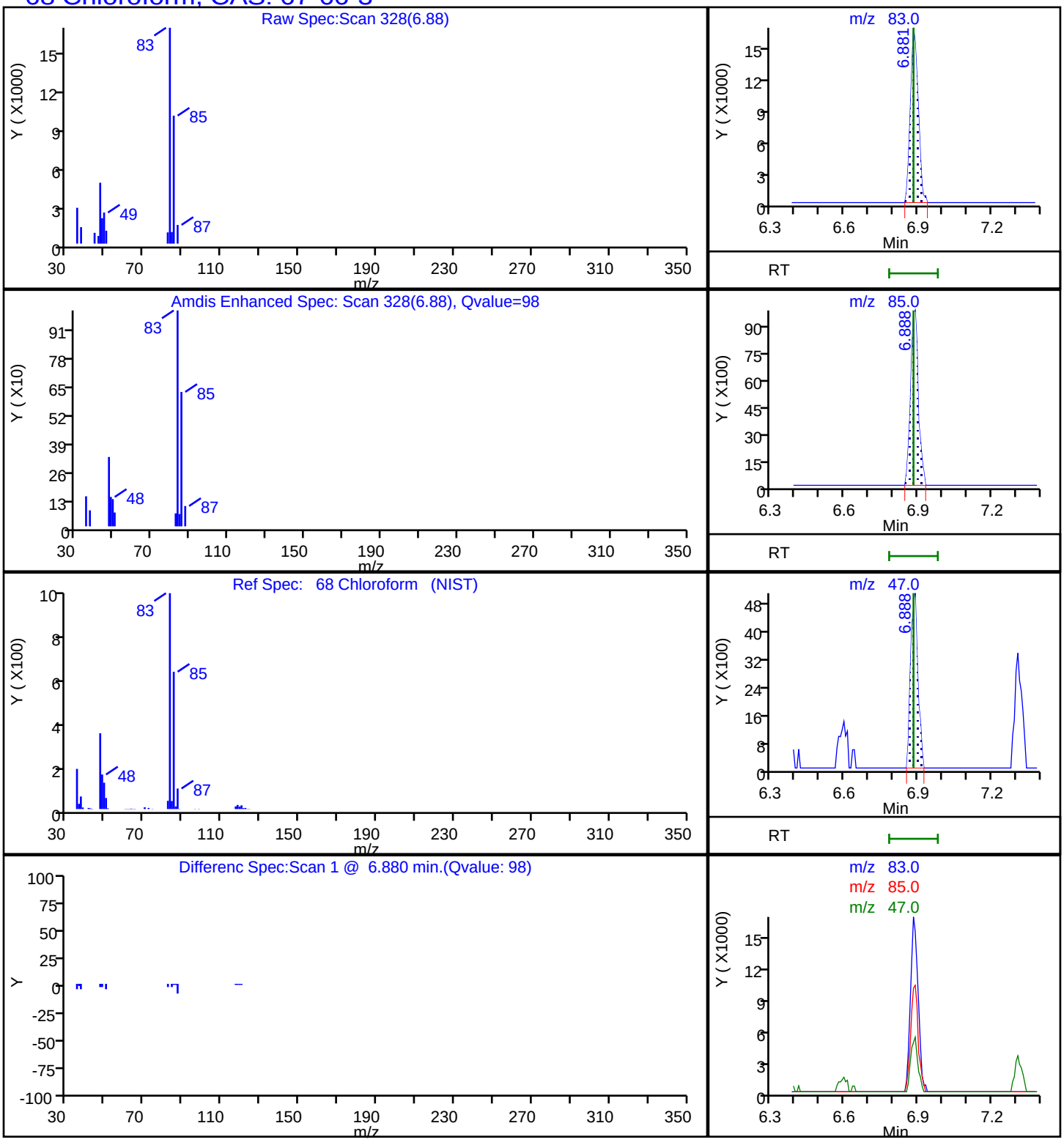
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.5	114.95
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	113.82
$ 7 Toluene-d8 (Surr)	10.0	10.5	104.55
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.83	98.31

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D

Injection Date:	03-Nov-2018 19:59:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-5	Lab Sample ID:	280-116017-5		
Client ID:	775VMW-9_1018				
Operator ID:	newcomer	ALS Bottle#:	34	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

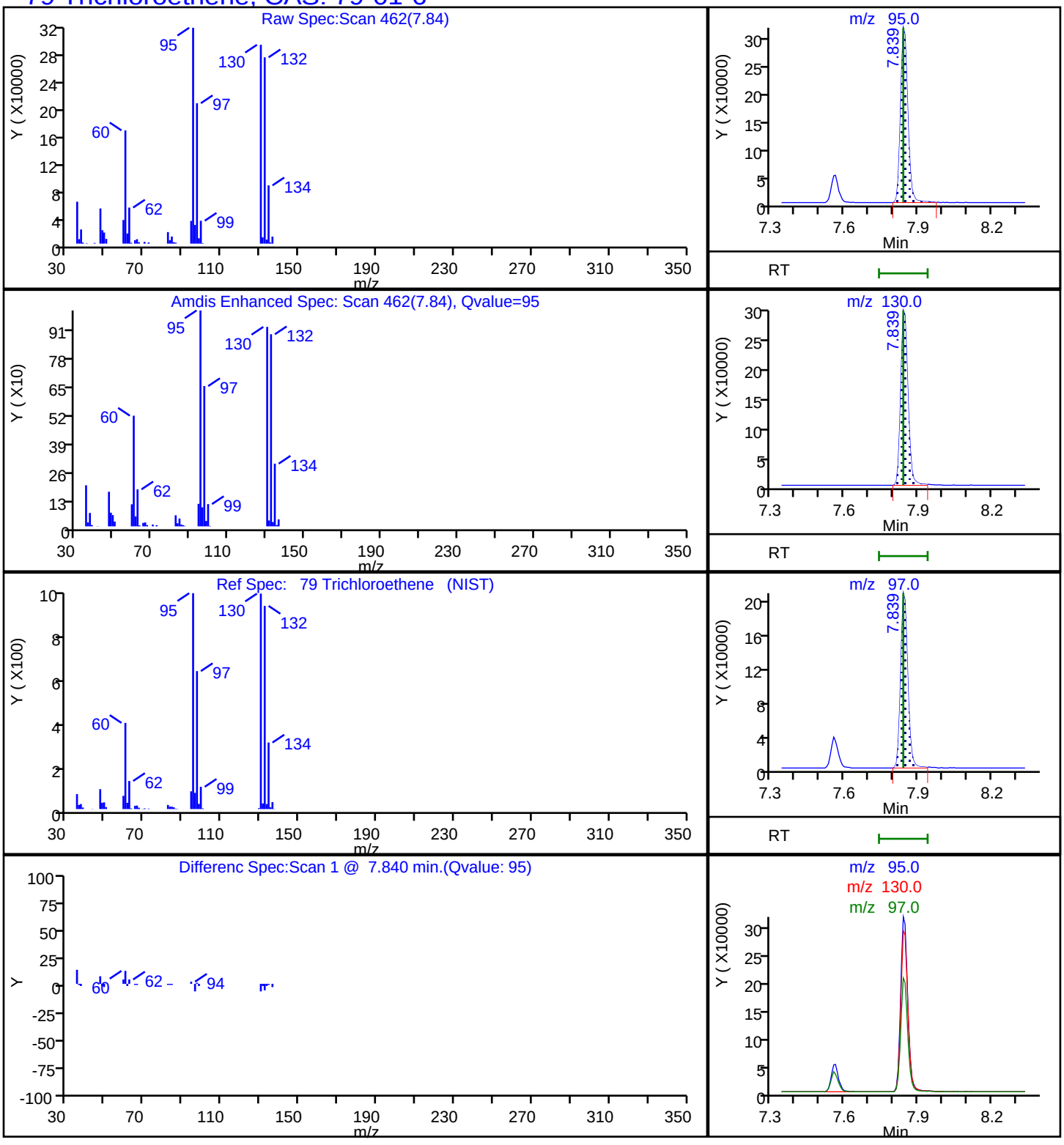
68 Chloroform, CAS: 67-66-3



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D				
Injection Date:	03-Nov-2018 19:59:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-5	Lab Sample ID:	280-116017-5		
Client ID:	775VMW-9_1018				
Operator ID:	newcomer	ALS Bottle#:	34	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

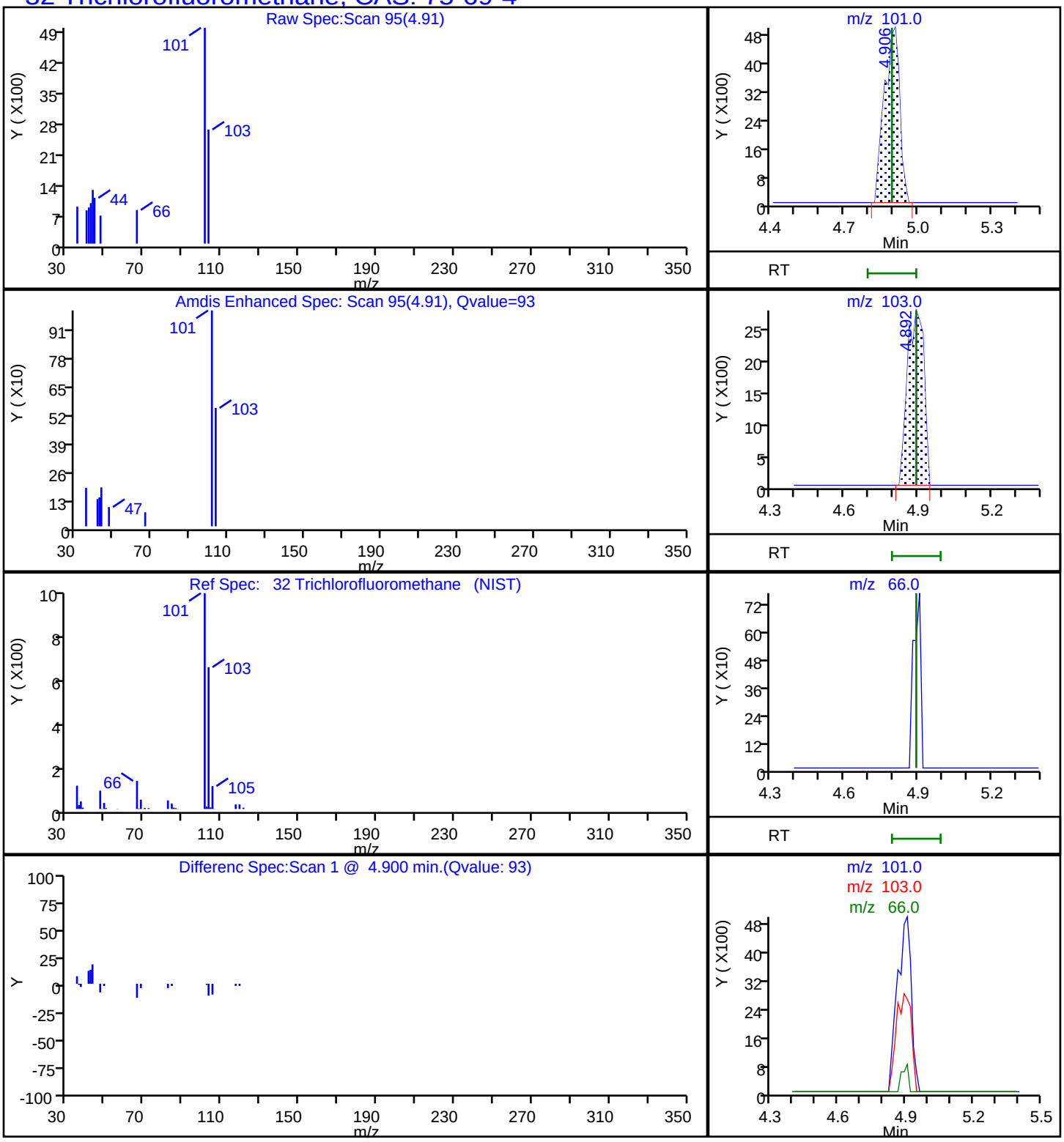
79 Trichloroethene, CAS: 79-01-6



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D				
Injection Date:	03-Nov-2018 19:59:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-5	Lab Sample ID:	280-116017-5		
Client ID:	775VMW-9_1018				
Operator ID:	newcomer	ALS Bottle#:	34	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

32 Trichlorofluoromethane, CAS: 75-69-4



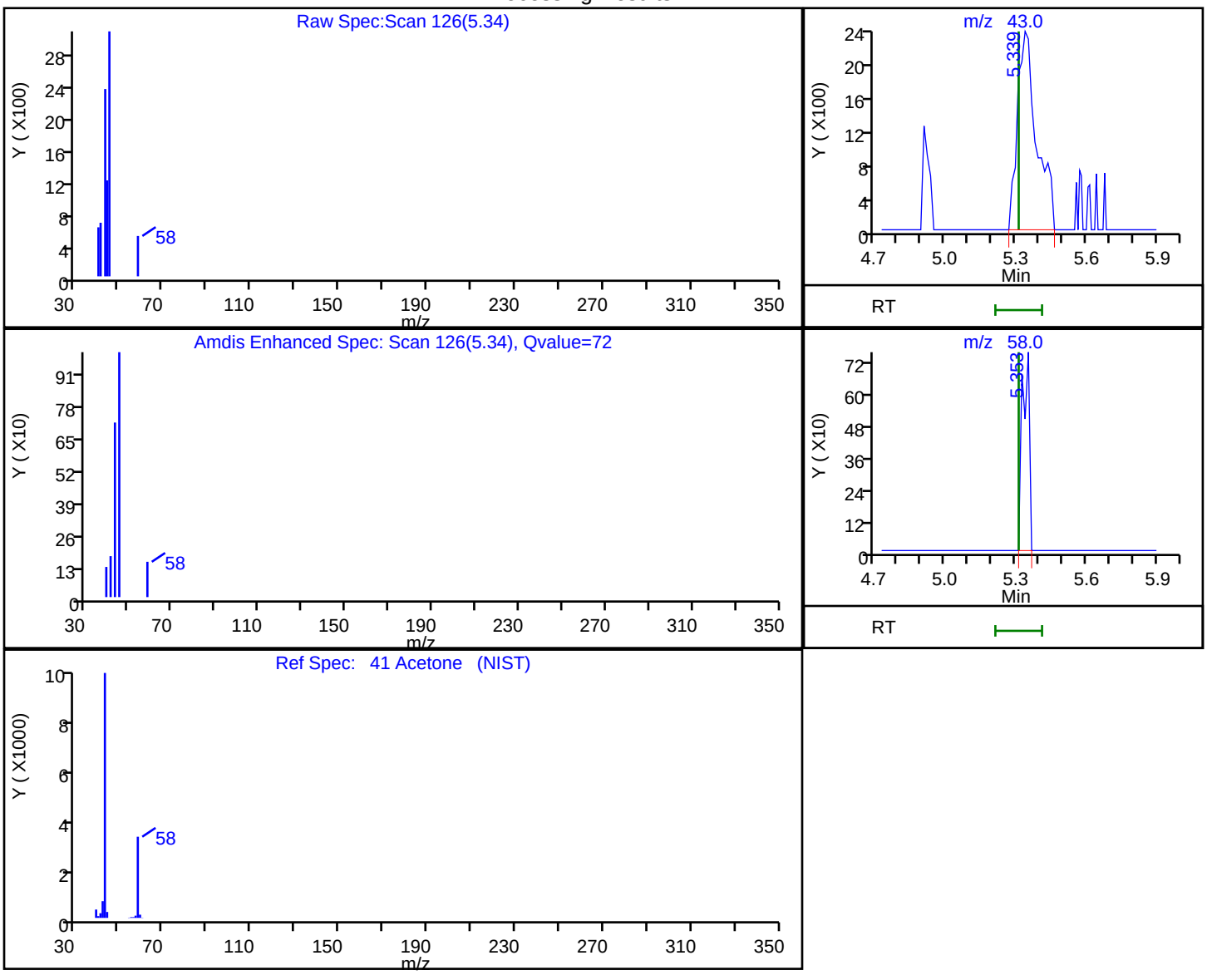
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2157.D				
Injection Date:	03-Nov-2018 19:59:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-5	Lab Sample ID:	280-116017-5		
Client ID:	775VMW-9_1018				
Operator ID:	newcomer	ALS Bottle#:	34	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.34	43.00	13454	4.281988
5.35	58.00	1626	

Reviewer: newcomer, 05-Nov-2018 18:42:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018 | Lab Sample ID: 280-116017-6

Matrix: Water | Lab File ID: P2158.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.60	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018 | Lab Sample ID: 280-116017-6

Matrix: Water | Lab File ID: P2158.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.4		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	47		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U M	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018 | Lab Sample ID: 280-116017-6

Matrix: Water | Lab File ID: P2158.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	114		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D
Lims ID: 280-116017-A-6
Client ID: 775VMW-10_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 20:18:30 ALS Bottle#: 35 Worklist Smp#: 30
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-6 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:43:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.615	5.601	0.014	92	114171	250.0	a
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1093821	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.820	0.006	90	232344	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.643	-0.001	98	330112	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.009	0.007	92	243316	11.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	227910	11.2	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1006560	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	283467	9.61	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101	4.892	4.892	0.000	98	15009	0.2406	
41 Acetone	43		5.311				ND	
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	U
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83	6.888	6.881	0.007	97	70229	1.45	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	97	29800	0.6007	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.838	7.839	-0.001	94	1439502	47.4	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

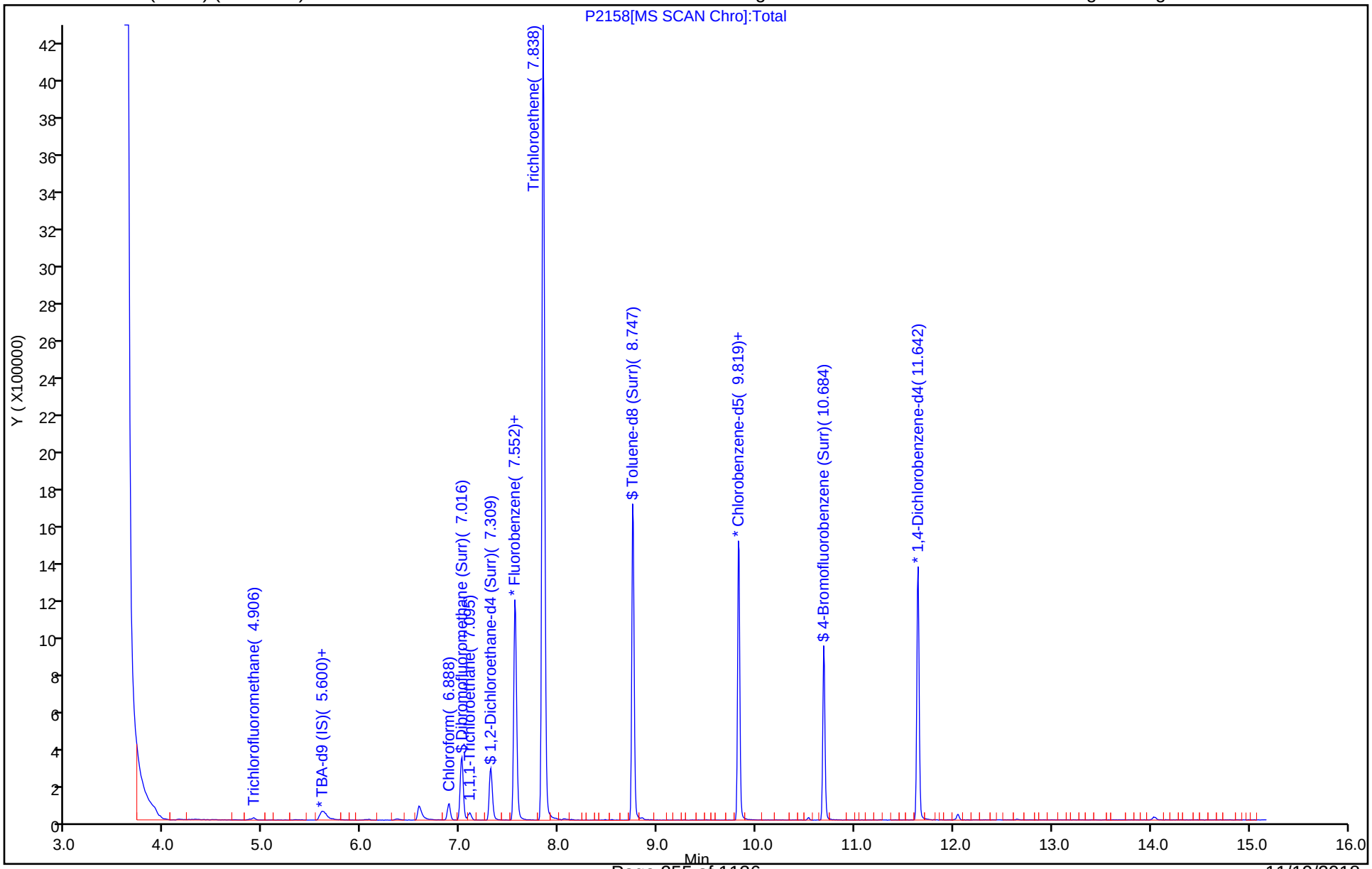
Report Date: 10-Nov-2018 00:07:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D

Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6	Worklist Smp#:	30
Client ID:	775VMW-10_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D				
Lims ID:	280-116017-A-6				
Client ID:	775VMW-10_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 20:18:30	ALS Bottle#:	35	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-A-6 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:43:05

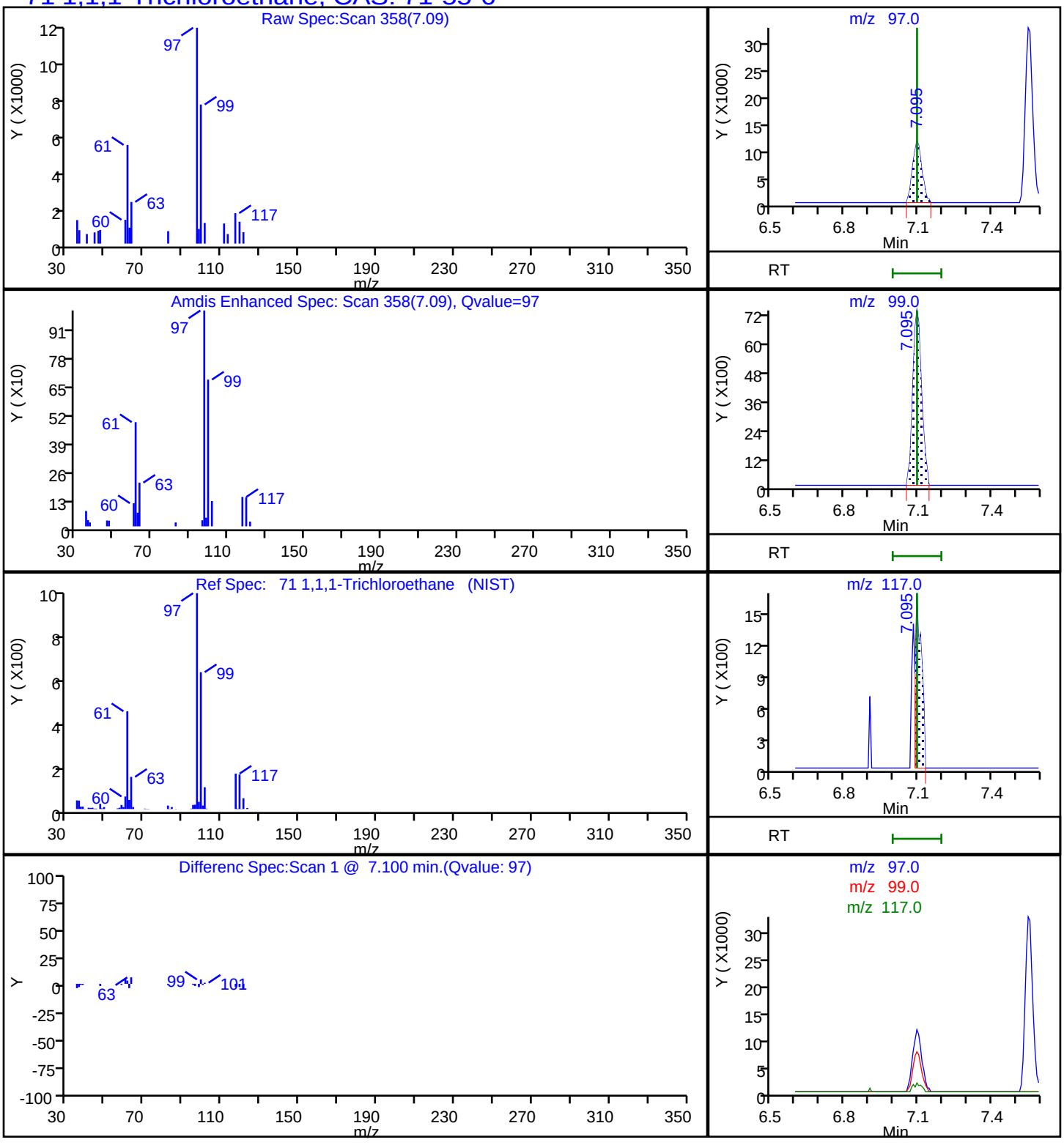
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.4	114.41
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.2	111.63
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.39
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.61	96.15

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D

Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6		
Client ID:	775VMW-10_1018				
Operator ID:	newcomer	ALS Bottle#:	35	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

71 1,1,1-Trichloroethane, CAS: 71-55-6

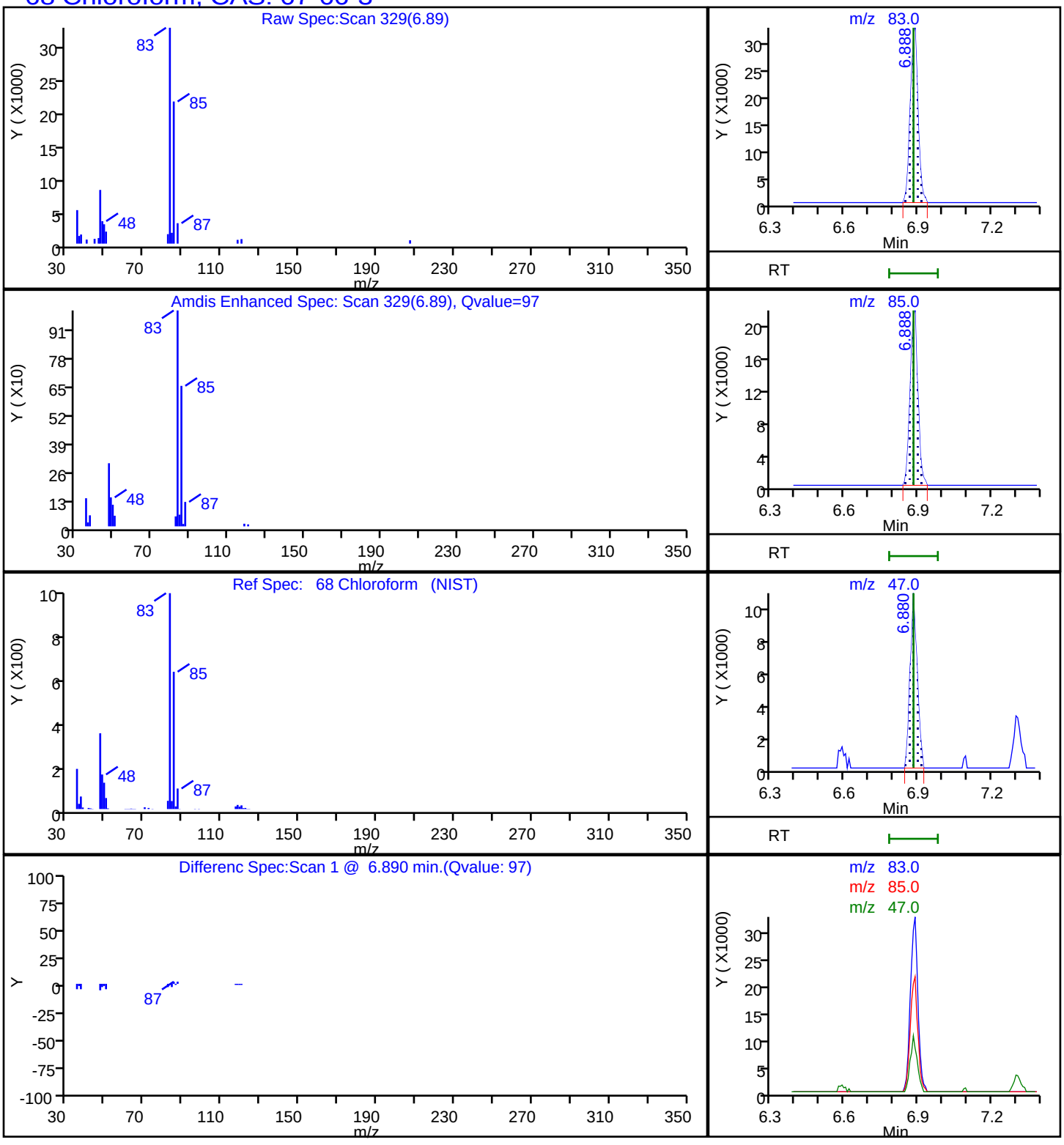


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D

Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6
Client ID:	775VMW-10_1018		
Operator ID:	newcomer	ALS Bottle#:	35 Worklist Smp#: 30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

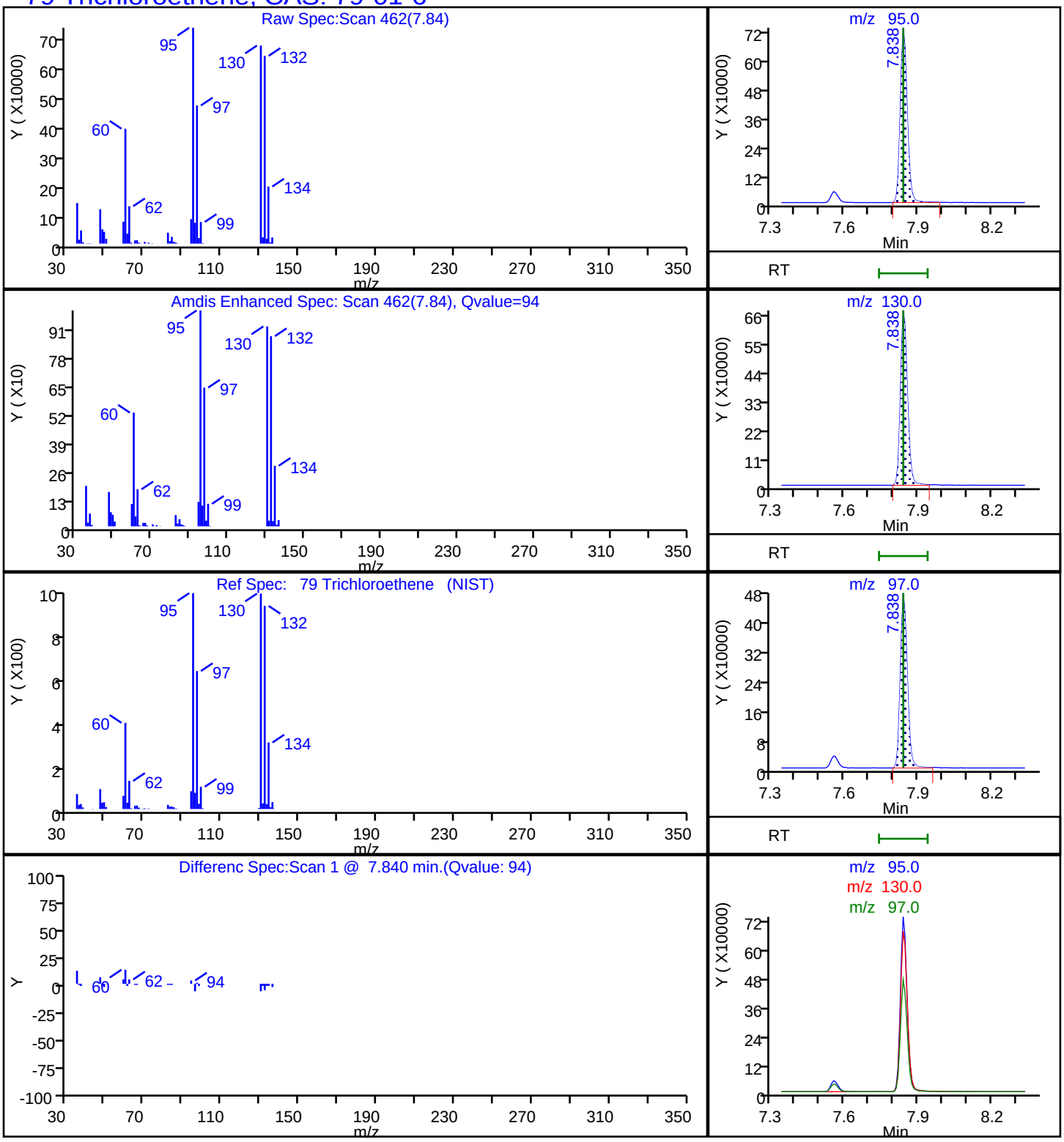
68 Chloroform, CAS: 67-66-3



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D				
Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6		
Client ID:	775VMW-10_1018				
Operator ID:	newcomer	ALS Bottle#:	35	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

79 Trichloroethene, CAS: 79-01-6



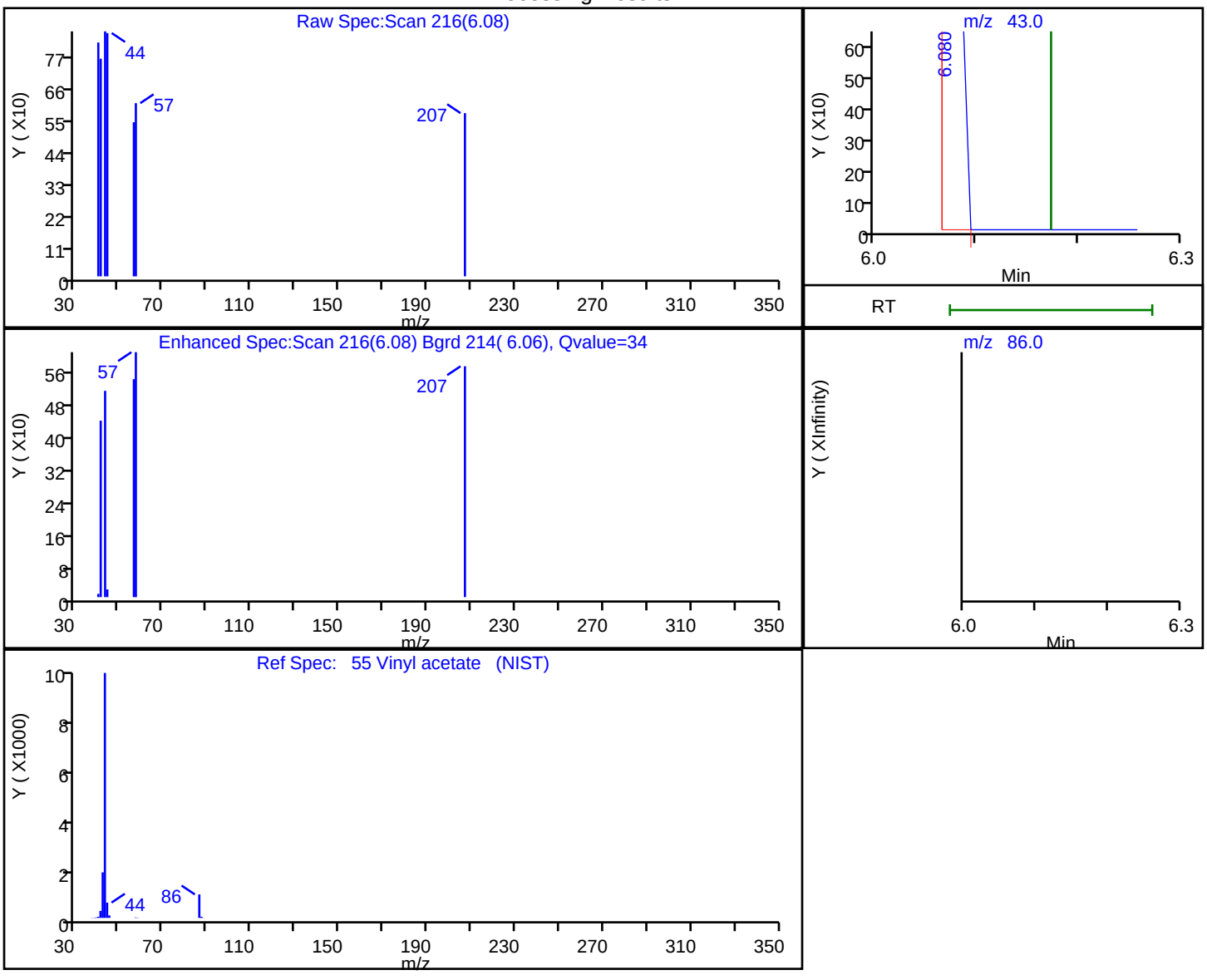
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D				
Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6		
Client ID:	775VMW-10_1018				
Operator ID:	newcomer	ALS Bottle#:	35	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

55 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.08	43.00	1201	0.427773
6.17	86.00	0	

Reviewer: newcomer, 05-Nov-2018 18:42:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

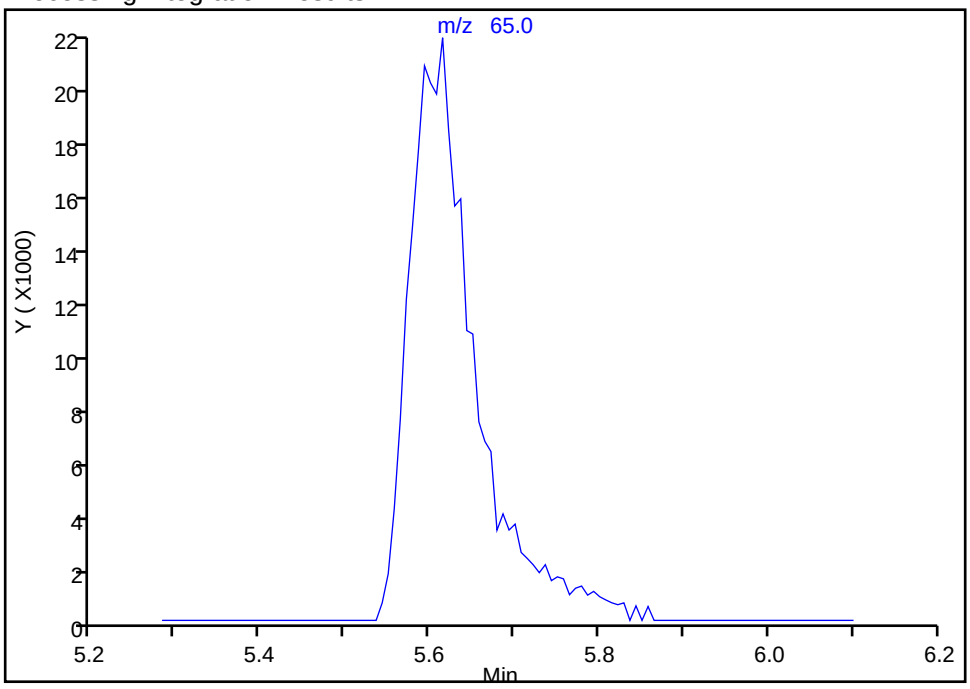
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2158.D				
Injection Date:	03-Nov-2018 20:18:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-6	Lab Sample ID:	280-116017-6		
Client ID:	775VMW-10_1018				
Operator ID:	newcomer	ALS Bottle#:	35	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

* 150 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

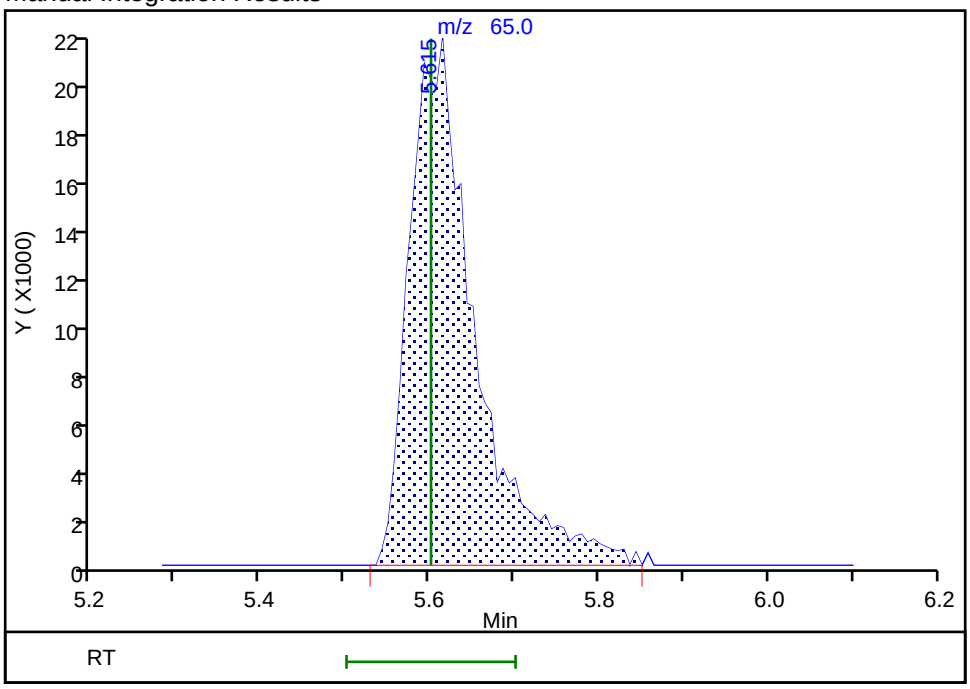
Not Detected
Expected RT: 5.60

Processing Integration Results



RT: 5.61
Area: 114171
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: newcomer, 05-Nov-2018 18:42:38
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018-a | Lab Sample ID: 280-116017-7

Matrix: Water | Lab File ID: P2159.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.60	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018-a | Lab Sample ID: 280-116017-7

Matrix: Water | Lab File ID: P2159.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	1.5		1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	47		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-10_1018-a | Lab Sample ID: 280-116017-7

Matrix: Water | Lab File ID: P2159.D

Analysis Method: 8260B | Date Collected: 10/22/2018 15:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 20:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
2037-26-5	Toluene-d8 (Surr)	106		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D
Lims ID: 280-116017-A-7
Client ID: 775VMW-10_1018-a
Sample Type: Client
Inject. Date: 03-Nov-2018 20:36:30 ALS Bottle#: 36 Worklist Smp#: 31
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-7 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:45:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.601	-0.007	94	108161	250.0	
* 1 Fluorobenzene	96	7.554	7.553	0.001	98	1068310	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	225114	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.636	11.643	-0.007	98	326564	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.010	7.009	0.001	92	231599	11.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.303	7.310	-0.007	99	225580	11.3	
$ 7 Toluene-d8 (Surr)	98	8.748	8.747	0.001	95	1007166	10.6	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	285628	9.79	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101	4.879	4.892	-0.013	96	15069	0.2473	
41 Acetone	43		5.311				ND	
43 1,1-Dichloroethene	96		5.325				ND	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83	6.874	6.881	-0.007	98	69235	1.46	
71 1,1,1-Trichloroethane	97	7.096	7.095	0.001	96	29278	0.6042	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.840	7.839	0.001	95	1398265	47.2	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

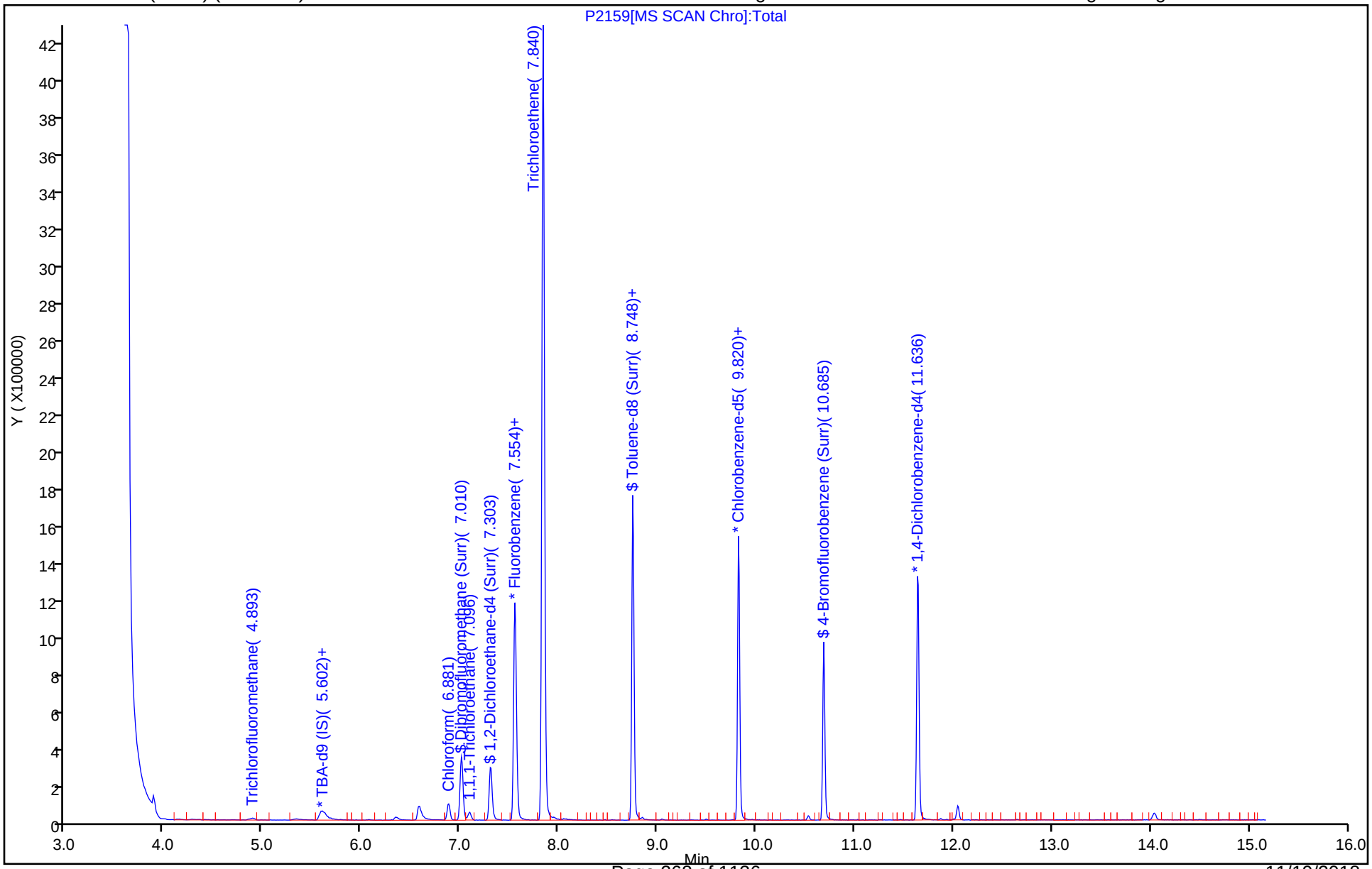
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D

Injection Date:	03-Nov-2018 20:36:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-A-7	Lab Sample ID:	280-116017-7	Worklist Smp#:	31
Client ID:	775VMW-10_1018-a				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D
Lims ID: 280-116017-A-7
Client ID: 775VMW-10_1018-a
Sample Type: Client
Inject. Date: 03-Nov-2018 20:36:30 ALS Bottle#: 36 Worklist Smp#: 31
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-7 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

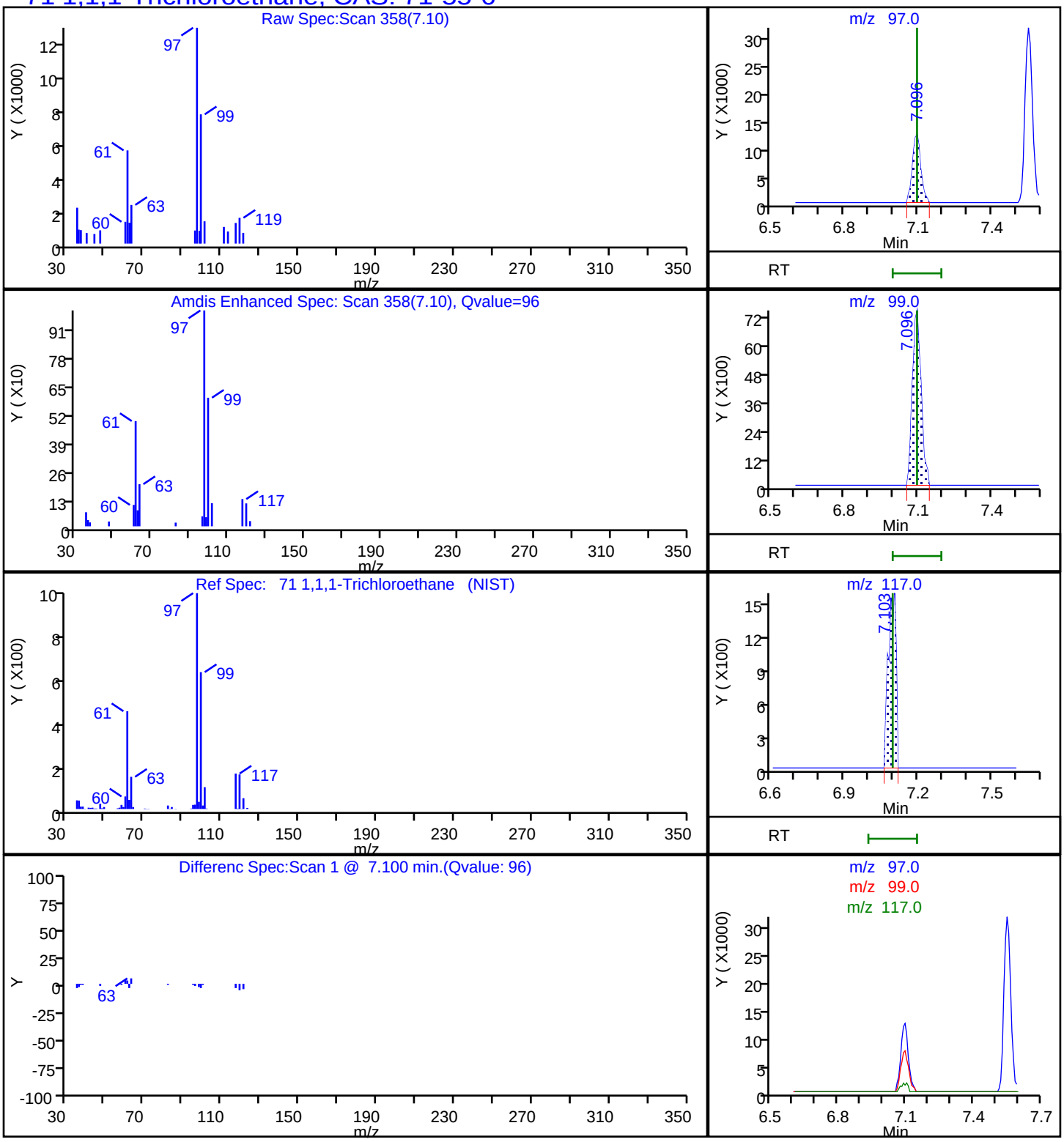
First Level Reviewer: newcomer Date: 05-Nov-2018 18:45:25

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.1	111.50
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.3	113.13
$ 7 Toluene-d8 (Surr)	10.0	10.6	105.74
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.79	97.93

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D				
Injection Date:	03-Nov-2018 20:36:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-7	Lab Sample ID:	280-116017-7		
Client ID:	775VMW-10_1018-a				
Operator ID:	newcomer	ALS Bottle#:	36	Worklist Smp#:	31
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

71 1,1,1-Trichloroethane, CAS: 71-55-6

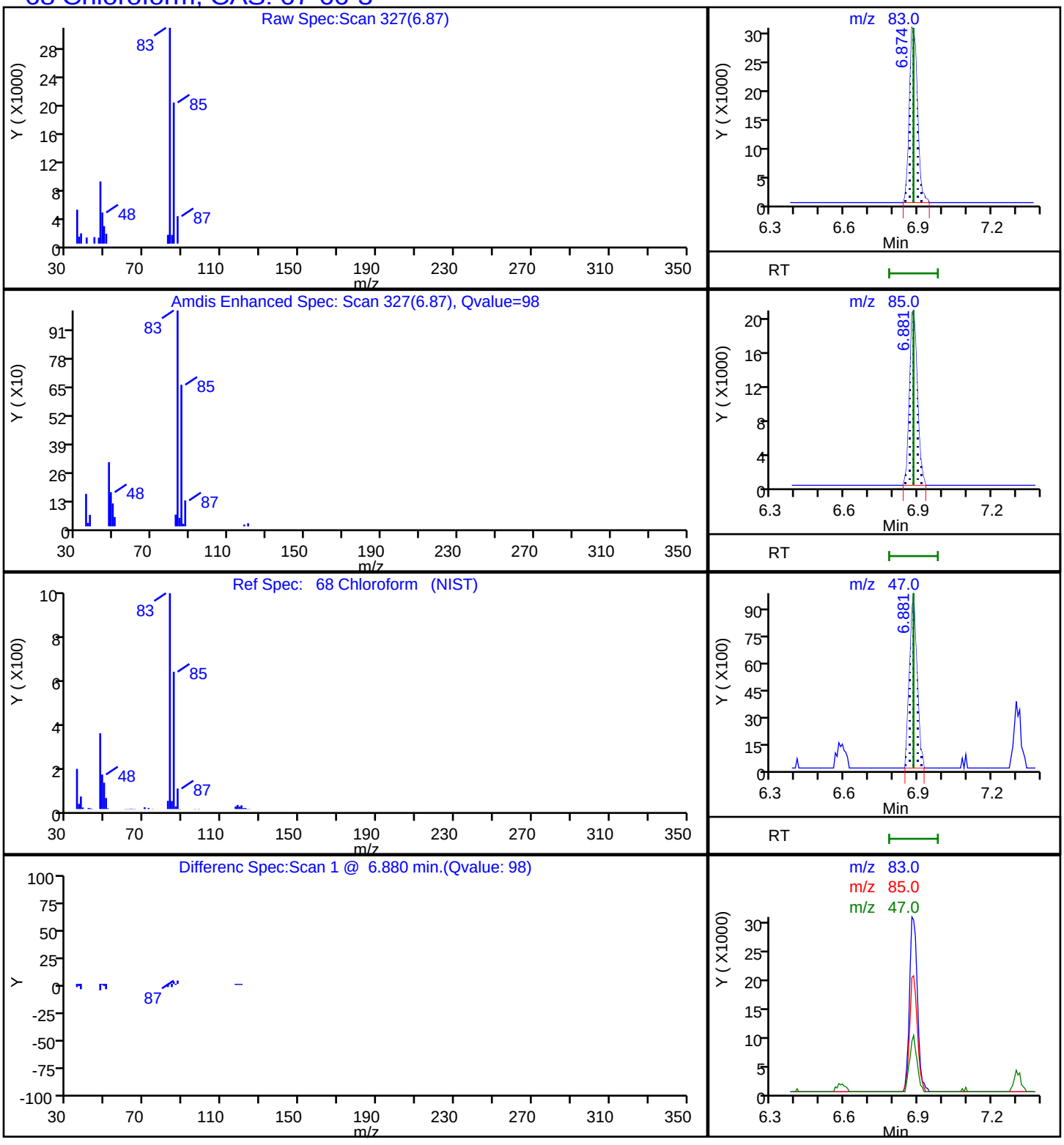


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D

Injection Date:	03-Nov-2018 20:36:30	Instrument ID:	VMS_P
Lims ID:	280-116017-A-7	Lab Sample ID:	280-116017-7
Client ID:	775VMW-10_1018-a		
Operator ID:	newcomer	ALS Bottle#:	36 Worklist Smp#: 31
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

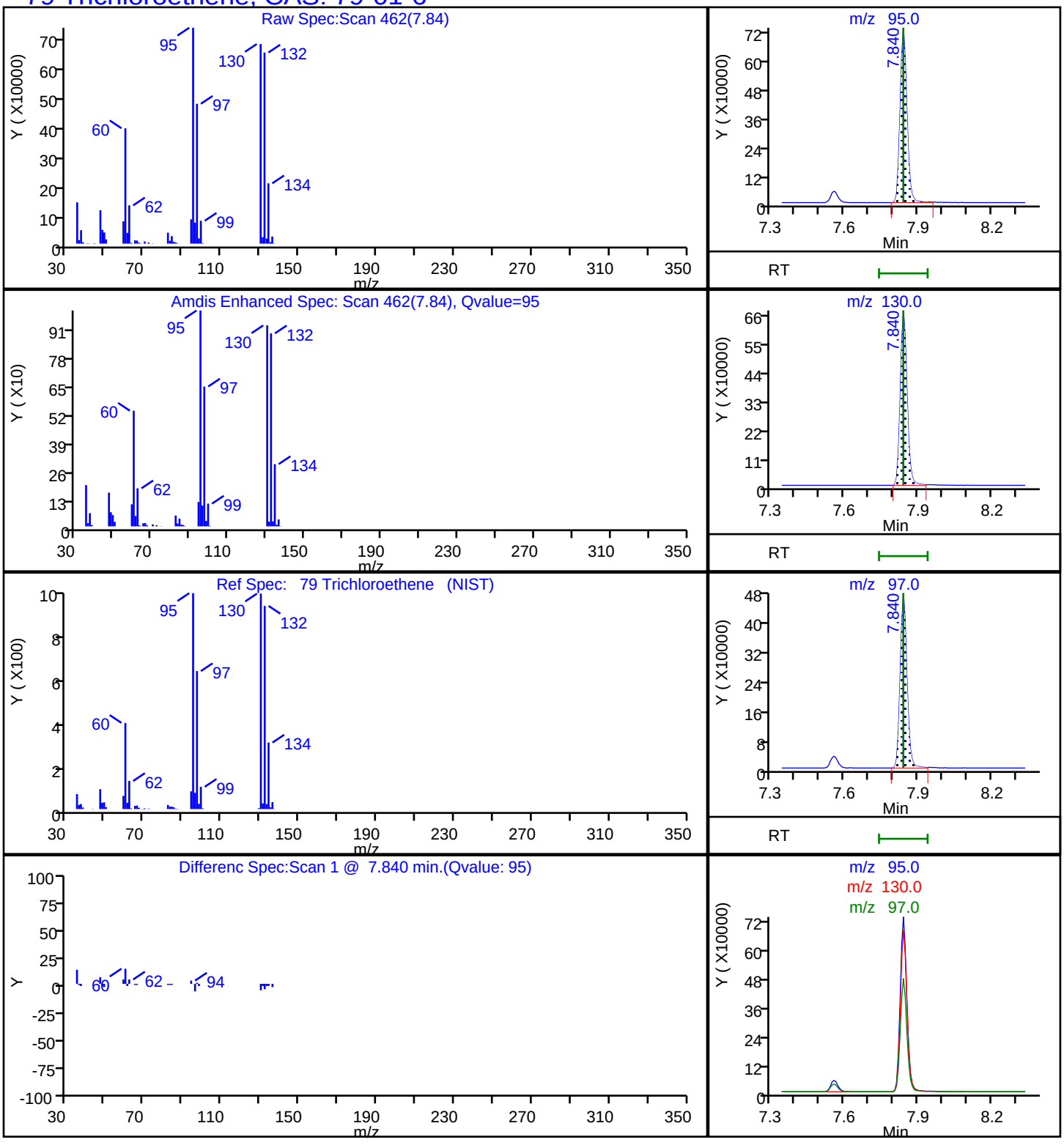
68 Chloroform, CAS: 67-66-3



TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2159.D				
Injection Date:	03-Nov-2018 20:36:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-7	Lab Sample ID:	280-116017-7		
Client ID:	775VMW-10_1018-a				
Operator ID:	newcomer	ALS Bottle#:	36	Worklist Smp#:	31
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20_1018 | Lab Sample ID: 280-116017-8

Matrix: Water | Lab File ID: P2161.D

Analysis Method: 8260B | Date Collected: 10/22/2018 16:31

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 21:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.28	J	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	1.4		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.92	J	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.25	J	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20_1018 | Lab Sample ID: 280-116017-8

Matrix: Water | Lab File ID: P2161.D

Analysis Method: 8260B | Date Collected: 10/22/2018 16:31

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 21:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.58	J	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.25	J	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	28		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20_1018 Lab Sample ID: 280-116017-8

Matrix: Water Lab File ID: P2161.D

Analysis Method: 8260B Date Collected: 10/22/2018 16:31

Sample wt/vol: 20(mL) Date Analyzed: 11/03/2018 21:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436199 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	115		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D
Lims ID: 280-116017-A-8
Client ID: 775VMW-20_1018
Sample Type: Client
Inject. Date: 03-Nov-2018 21:13:30 ALS Bottle#: 38 Worklist Smp#: 33
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-8 pH<2
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 05-Nov-2018 18:47:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	95	111833	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1050527	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	227670	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	97	326056	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	92	234507	11.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	223839	11.4	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	983361	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	281481	9.67	
23 Dichlorodifluoromethane	85		3.845				ND	
26 Chloromethane	50		4.082				ND	
27 Vinyl chloride	62		4.208				ND	
29 Bromomethane	94		4.571				ND	
30 Chloroethane	64		4.641				ND	
32 Trichlorofluoromethane	101		4.892				ND	
41 Acetone	43		5.311				ND	
43 1,1-Dichloroethene	96	5.328	5.325	0.003	97	28188	0.9176	
44 Iodomethane	142		5.522				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84		5.694				ND	
51 Methyl tert-butyl ether	73		5.866				ND	
53 trans-1,2-Dichloroethene	96		5.916				ND	
55 Vinyl acetate	43		6.173				ND	
56 Isopropyl ether	87		6.180				ND	
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	76603	1.45	
61 2-Butanone (MEK)	43		6.624				ND	
63 cis-1,2-Dichloroethene	96	6.666	6.674	-0.008	81	7169	0.2508	
64 2,2-Dichloropropane	77		6.695				ND	
67 Chlorobromomethane	128		6.874				ND	
68 Chloroform	83	6.881	6.881	0.000	98	26985	0.5789	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	94	13504	0.2834	
73 1,1-Dichloropropene	75		7.196				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.231				ND	
76 1,2-Dichloroethane	62		7.367				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95	7.839	7.839	0.000	94	827463	28.4	
83 1,2-Dichloropropane	63		8.032				ND	
85 Dibromomethane	93		8.147				ND	
86 Dichlorobromomethane	83		8.211				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	
91 Toluene	91		8.804				ND	
93 trans-1,3-Dichloropropene	75		8.904				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.176				ND	
96 1,3-Dichloropropane	76		9.198				ND	
97 Tetrachloroethene	164		9.212				ND	
98 Chlorodibromomethane	129		9.391				ND	
100 Ethylene Dibromide	107		9.519				ND	
102 Chlorobenzene	112		9.848				ND	
103 Ethylbenzene	106		9.877				ND	
104 1,1,1,2-Tetrachloroethane	131		9.884				ND	
105 m-Xylene & p-Xylene	106		9.956				ND	
107 o-Xylene	106		10.270				ND	
106 Styrene	104		10.270				ND	
108 Bromoform	173		10.477				ND	
109 Isopropylbenzene	105		10.528				ND	
112 1,1,2,2-Tetrachloroethane	83		10.742				ND	
114 1,2,3-Trichloropropane	110		10.814				ND	
115 N-Propylbenzene	120		10.842				ND	
116 Bromobenzene	156		10.849				ND	
117 1,3,5-Trimethylbenzene	105		10.957				ND	
118 2-Chlorotoluene	126		10.971				ND	
119 4-Chlorotoluene	126		11.049				ND	
120 tert-Butylbenzene	119		11.250				ND	
121 1,2,4-Trimethylbenzene	105		11.278				ND	
122 sec-Butylbenzene	134		11.428				ND	
123 4-Isopropyltoluene	119		11.514				ND	
124 1,3-Dichlorobenzene	146		11.593				ND	
126 1,4-Dichlorobenzene	146		11.664				ND	
127 n-Butylbenzene	91		11.879				ND	
128 1,2-Dichlorobenzene	146		12.022				ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773				ND	
130 1,2,4-Trichlorobenzene	180		13.709				ND	
131 Hexachlorobutadiene	225		13.845				ND	
132 Naphthalene	128		14.081				ND	
133 1,2,3-Trichlorobenzene	180		14.396				ND	
S 138 1,2-Dichloroethene, Total	1				0		0.2508	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

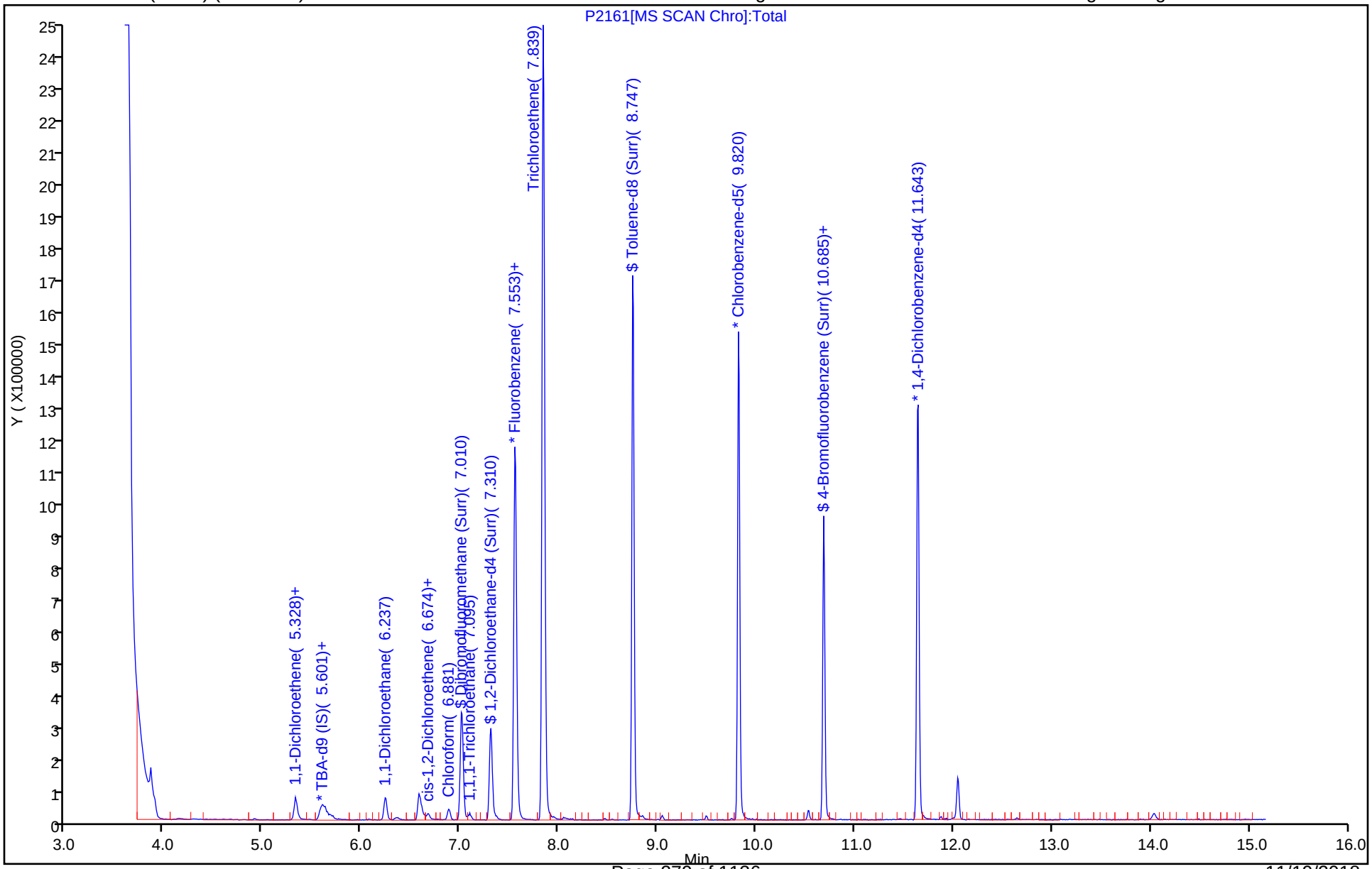
Report Date: 10-Nov-2018 00:08:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D

Injection Date:	03-Nov-2018 21:13:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	280-116017-A-8	Lab Sample ID:	280-116017-8	Worklist Smp#:	33
Client ID:	775VMW-20_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D				
Lims ID:	280-116017-A-8				
Client ID:	775VMW-20_1018				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 21:13:30	ALS Bottle#:	38	Worklist Smp#:	33
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-A-8 pH<2				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:47:52

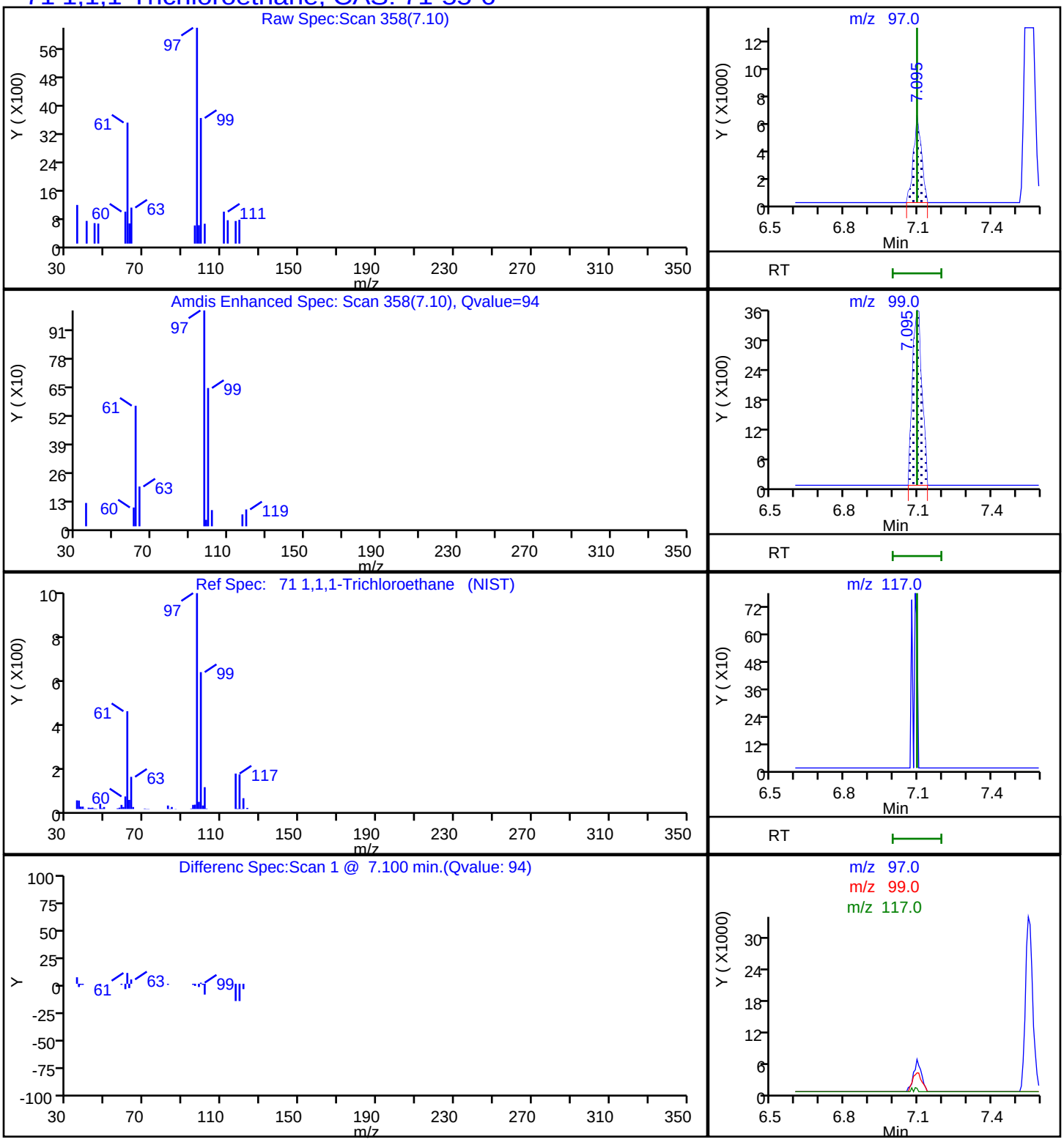
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.5	114.81
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	114.16
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.08
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.67	96.66

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D

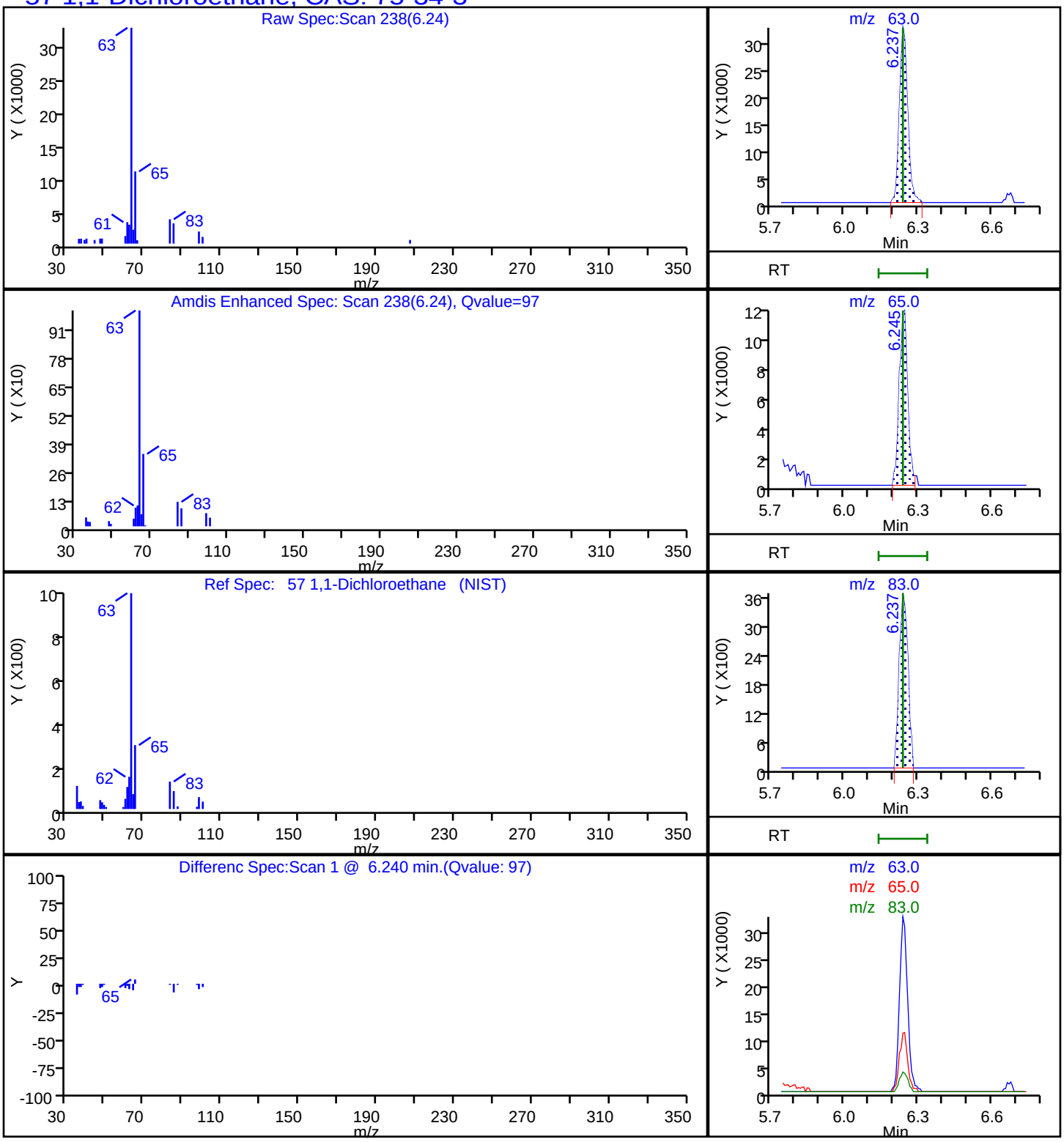
Injection Date:	03-Nov-2018 21:13:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-8	Lab Sample ID:	280-116017-8		
Client ID:	775VMW-20_1018				
Operator ID:	newcomer	ALS Bottle#:	38	Worklist Smp#:	33
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

71 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D
Injection Date: 03-Nov-2018 21:13:30 Instrument ID: VMS_P
Lims ID: 280-116017-A-8 Lab Sample ID: 280-116017-8
Client ID: 775VMW-20_1018
Operator ID: newcomer ALS Bottle#: 38 Worklist Smp#: 33
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

57 1,1-Dichloroethane, CAS: 75-34-3

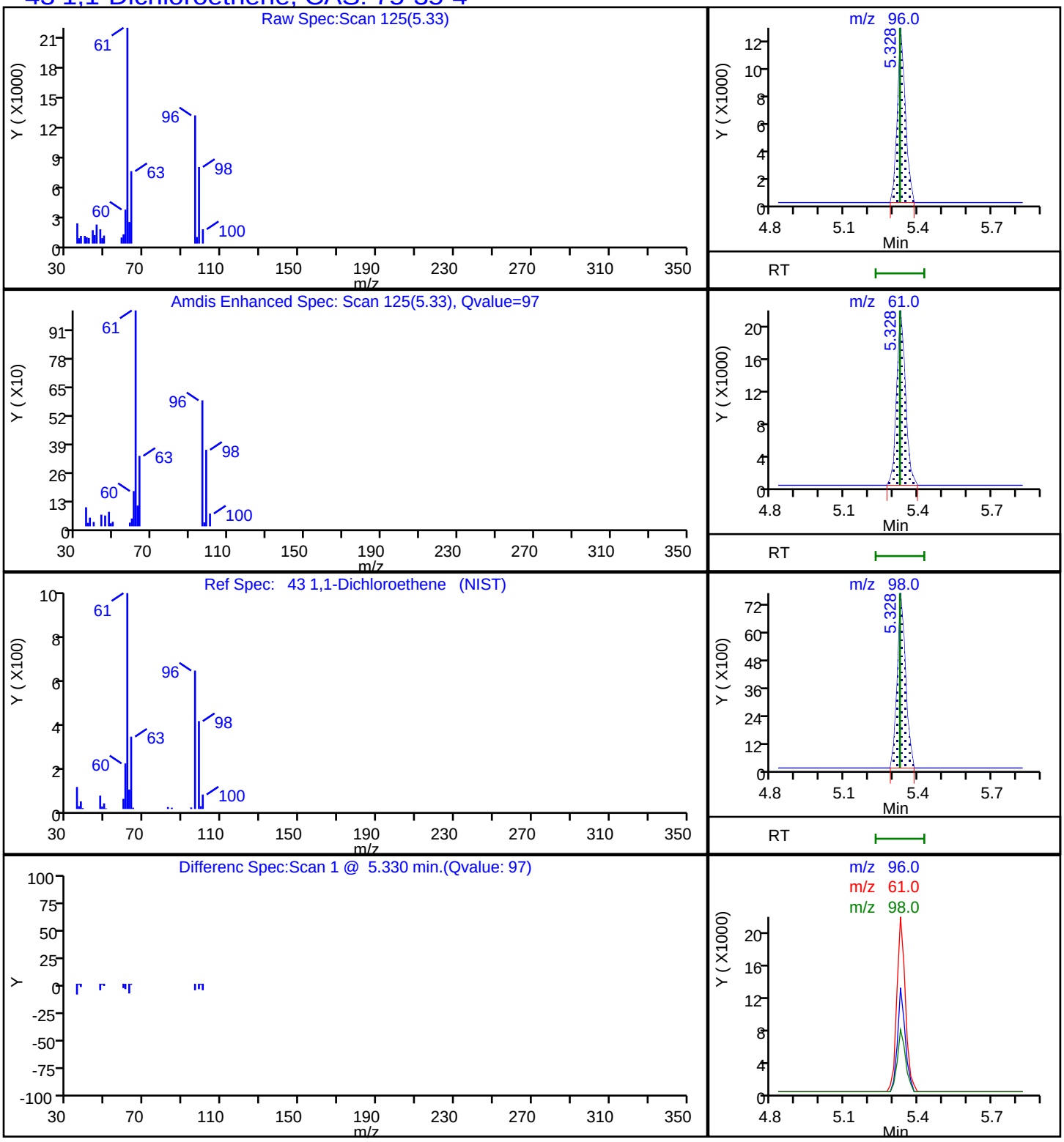


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D

Injection Date:	03-Nov-2018 21:13:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-8	Lab Sample ID:	280-116017-8		
Client ID:	775VMW-20_1018				
Operator ID:	newcomer	ALS Bottle#:	38	Worklist Smp#:	33
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

43 1,1-Dichloroethene, CAS: 75-35-4

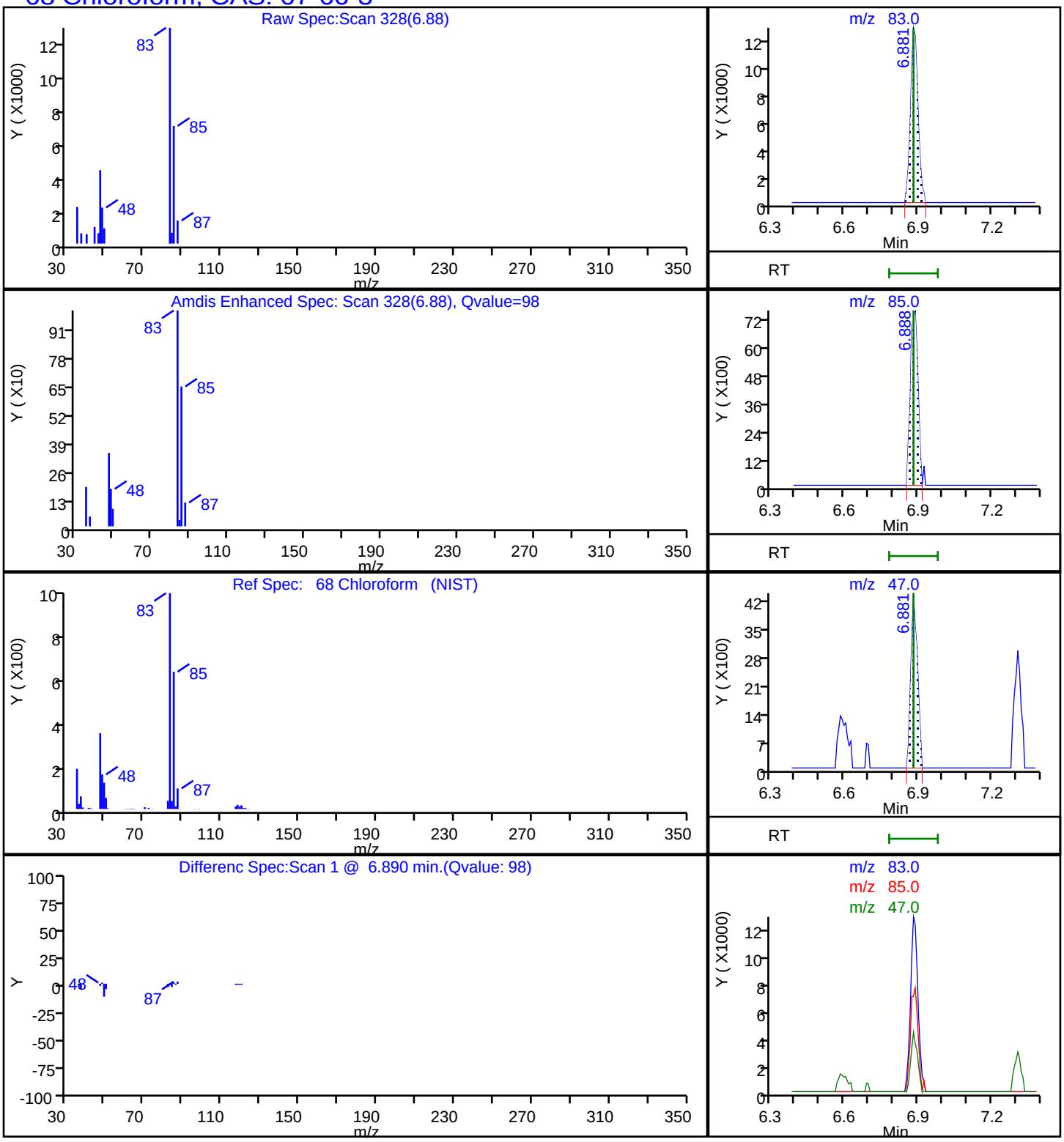


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D

Injection Date:	03-Nov-2018 21:13:30	Instrument ID:	VMS_P
Lims ID:	280-116017-A-8	Lab Sample ID:	280-116017-8
Client ID:	775VMW-20_1018		
Operator ID:	newcomer	ALS Bottle#:	38 Worklist Smp#: 33
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

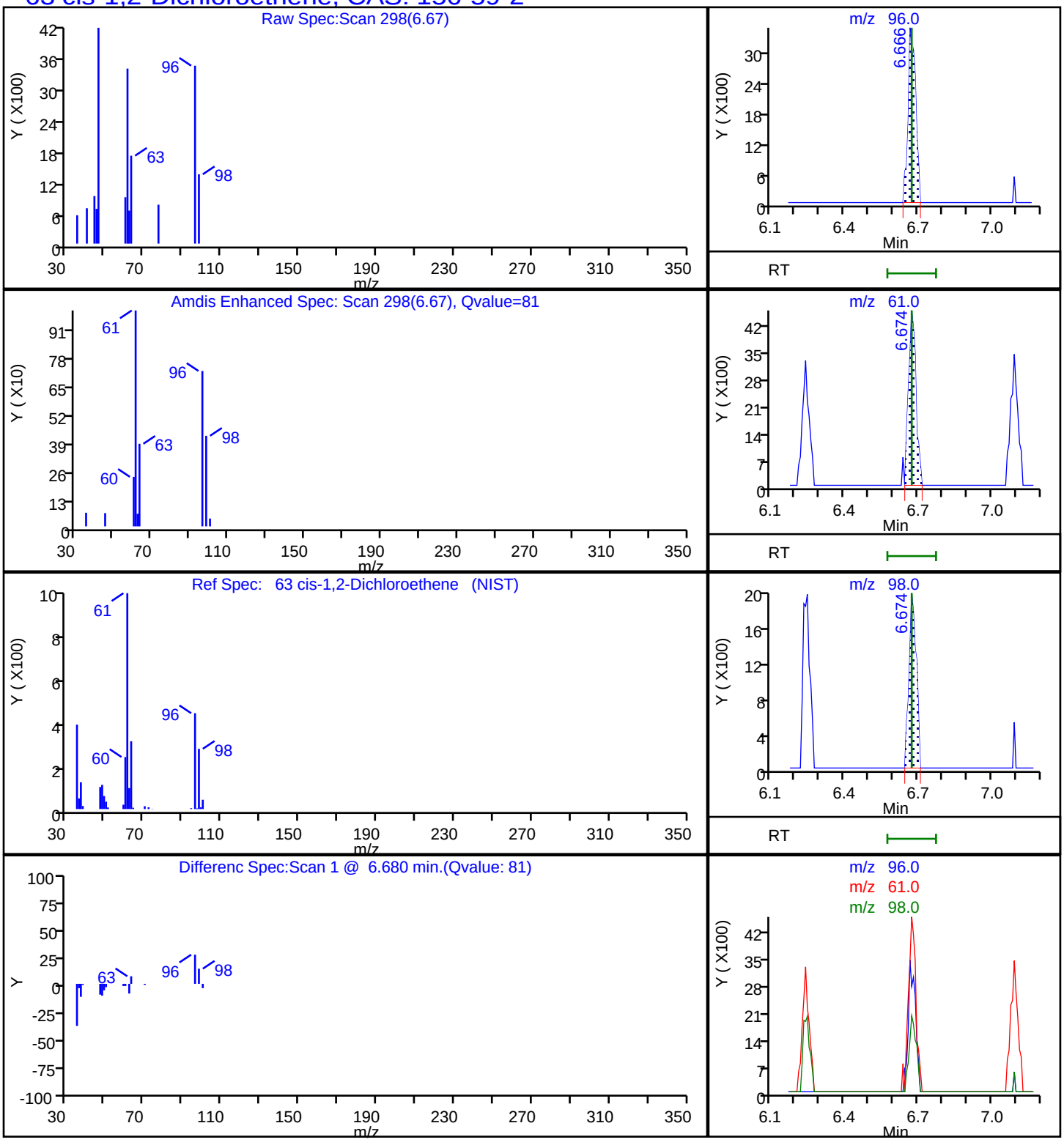
68 Chloroform, CAS: 67-66-3



TestAmerica Denver

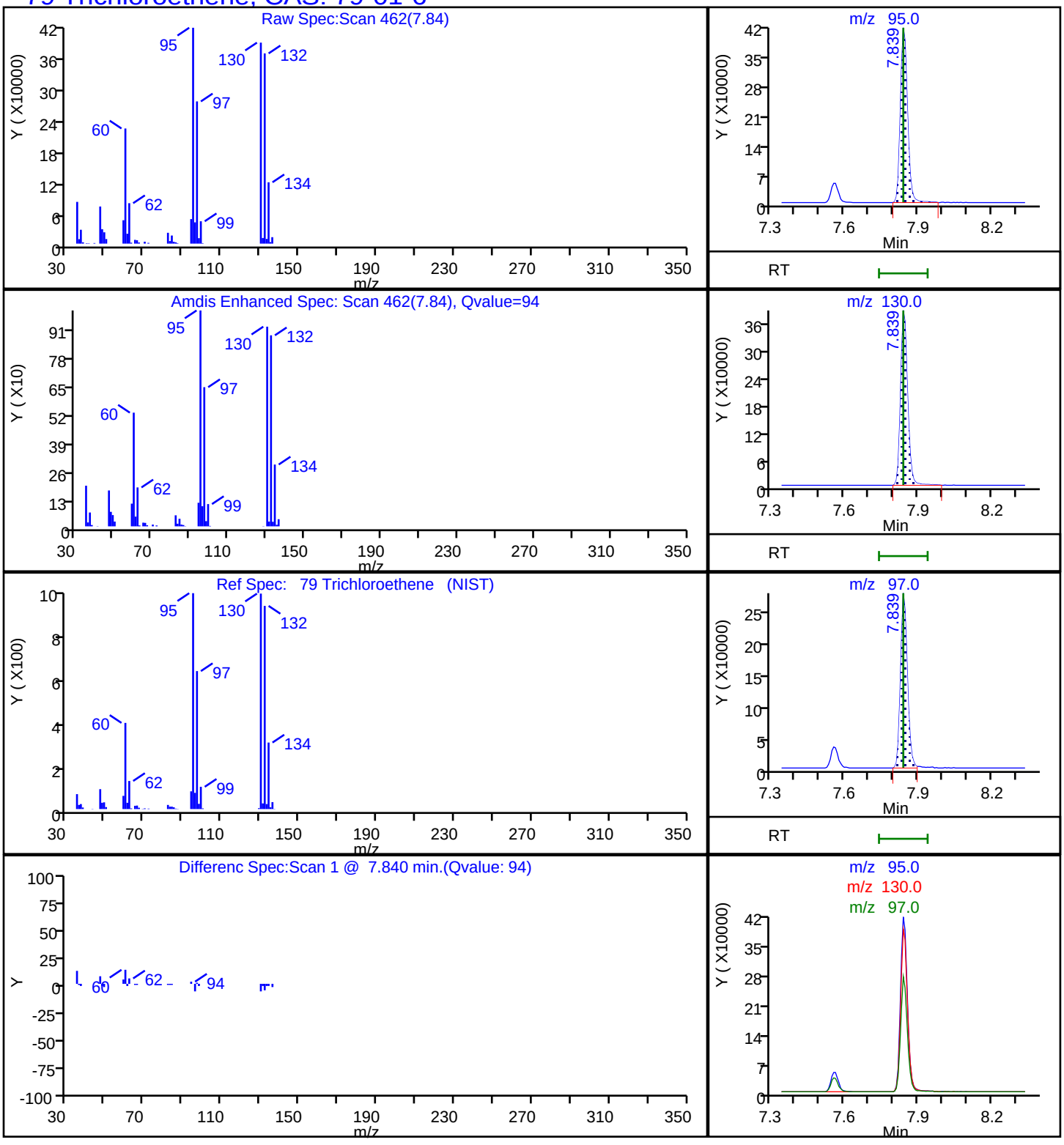
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D				
Injection Date:	03-Nov-2018 21:13:30	Instrument ID:	VMS_P		
Lims ID:	280-116017-A-8	Lab Sample ID:	280-116017-8		
Client ID:	775VMW-20_1018				
Operator ID:	newcomer	ALS Bottle#:	38	Worklist Smp#:	33
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

63 cis-1,2-Dichloroethene, CAS: 156-59-2



Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2161.D
Injection Date: 03-Nov-2018 21:13:30 Instrument ID: VMS_P
Lims ID: 280-116017-A-8 Lab Sample ID: 280-116017-8
Client ID: 775VMW-20_1018
Operator ID: newcomer ALS Bottle#: 38 Worklist Smp#: 33
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20R_1018 | Lab Sample ID: 280-116017-9

Matrix: Water | Lab File ID: Q75281.D

Analysis Method: 8260B | Date Collected: 10/23/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U H	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U H	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U H	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U H	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U H	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U H	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U H	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U H	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U H	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U H	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U H	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U H	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U H	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98
67-64-1	Acetone	4.8	J H	10	6.4	1.9
71-43-2	Benzene	0.40	U H	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U H	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U H	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U H	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U H	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U H Q	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U H	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20R_1018 | Lab Sample ID: 280-116017-9

Matrix: Water | Lab File ID: Q75281.D

Analysis Method: 8260B | Date Collected: 10/23/2018 08:26

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U H	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U H	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U H	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U H	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U H	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U H	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U H	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U H	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U H	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U H	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U H	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U H	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U H	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U H	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U H	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U H	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U H	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U H	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U H	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U H	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U H	1.0	0.40	0.17
100-42-5	Styrene	0.40	U H	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U H	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U H	1.0	0.40	0.20
108-88-3	Toluene	0.40	U H	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U H	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U H	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U H	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U H	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U H	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-20R_1018 Lab Sample ID: 280-116017-9

Matrix: Water Lab File ID: Q75281.D

Analysis Method: 8260B Date Collected: 10/23/2018 08:26

Sample wt/vol: 20(mL) Date Analyzed: 11/10/2018 14:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437146 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	105		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75281.D
Lims ID: 280-116017-C-9
Client ID: 775VMW-20R_1018
Sample Type: Client
Inject. Date: 10-Nov-2018 14:01:30 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-C-9 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 16-Nov-2018 14:29:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.872	0.002	0	205187	250.0	
* 1 Fluorobenzene	96	7.798	7.802	-0.004	100	2324080	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	99	475040	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.873	11.871	0.002	100	621808	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.254	7.259	-0.005	91	520582	9.00	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.545	0.002	0	404859	8.60	
$ 7 Toluene-d8 (Surr)	98	8.963	8.961	0.002	100	2287620	8.92	
$ 8 4-Bromofluorobenzene (Surr	95	10.894	10.899	-0.005	86	632095	9.46	
23 Dichlorodifluoromethane	85		4.199				ND	
26 Chloromethane	50		4.449				ND	
27 Vinyl chloride	62		4.578				ND	
29 Bromomethane	94		4.914				ND	
30 Chloroethane	64		4.964				ND	
32 Trichlorofluoromethane	101		5.186				ND	
41 Acetone	43	5.617	5.608	0.009	59	20581	4.75	
43 1,1-Dichloroethene	96		5.629				ND	
44 Iodomethane	142		5.808				ND	
48 Carbon disulfide	76	5.910	5.908	0.002	99	42841	0.1604	
50 Methylene Chloride	84		5.972				ND	
51 Methyl tert-butyl ether	73		6.158				ND	
53 trans-1,2-Dichloroethene	96		6.194				ND	
55 Vinyl acetate	43		6.437				ND	
56 Isopropyl ether	87		6.458				ND	
57 1,1-Dichloroethane	63		6.501				ND	
61 2-Butanone (MEK)	43		6.880				ND	
63 cis-1,2-Dichloroethene	96		6.930				ND	
64 2,2-Dichloropropane	77		6.966				ND	
67 Chlorobromomethane	128		7.123				ND	
68 Chloroform	83		7.130				ND	
71 1,1,1-Trichloroethane	97		7.359				ND	
73 1,1-Dichloropropene	75		7.452				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.631				ND	
79 Trichloroethene	95		8.081				ND	
83 1,2-Dichloropropane	63		8.260				ND	
85 Dibromomethane	93		8.360				ND	
86 Dichlorobromomethane	83		8.425				ND	
89 cis-1,3-Dichloropropene	75		8.732				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789				ND	
91 Toluene	91		9.011				ND	
93 trans-1,3-Dichloropropene	75		9.104				ND	
94 1,1,2-Trichloroethane	97		9.254				ND	
95 2-Hexanone	43		9.376				ND	
96 1,3-Dichloropropane	76		9.390				ND	
97 Tetrachloroethene	164		9.426				ND	
98 Chlorodibromomethane	129		9.590				ND	
100 Ethylene Dibromide	107		9.719				ND	
102 Chlorobenzene	112		10.055				ND	
104 1,1,1,2-Tetrachloroethane	131		10.083				ND	
103 Ethylbenzene	106		10.091				ND	
105 m-Xylene & p-Xylene	106		10.162				ND	
107 o-Xylene	106		10.484				ND	
106 Styrene	104		10.484				ND	
108 Bromoform	173		10.684				ND	
109 Isopropylbenzene	105		10.741				ND	
112 1,1,2,2-Tetrachloroethane	83		10.942				ND	
114 1,2,3-Trichloropropane	110		11.020				ND	
115 N-Propylbenzene	120		11.063				ND	
116 Bromobenzene	156		11.070				ND	
117 1,3,5-Trimethylbenzene	105		11.170				ND	
118 2-Chlorotoluene	126		11.192				ND	
119 4-Chlorotoluene	126		11.263				ND	
120 tert-Butylbenzene	119		11.471				ND	
121 1,2,4-Trimethylbenzene	105		11.506				ND	
122 sec-Butylbenzene	134		11.657				ND	
123 4-Isopropyltoluene	119		11.749				ND	
124 1,3-Dichlorobenzene	146		11.821				ND	
126 1,4-Dichlorobenzene	146		11.892				ND	
127 n-Butylbenzene	91		12.121				ND	
128 1,2-Dichlorobenzene	146		12.257				ND	
129 1,2-Dibromo-3-Chloropropan	157		13.015				ND	
130 1,2,4-Trichlorobenzene	180		13.987				ND	
131 Hexachlorobutadiene	225		14.138				ND	
132 Naphthalene	128		14.359				ND	
133 1,2,3-Trichlorobenzene	180		14.688				ND	
S 139 Xylenes, Total	106		0.000				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

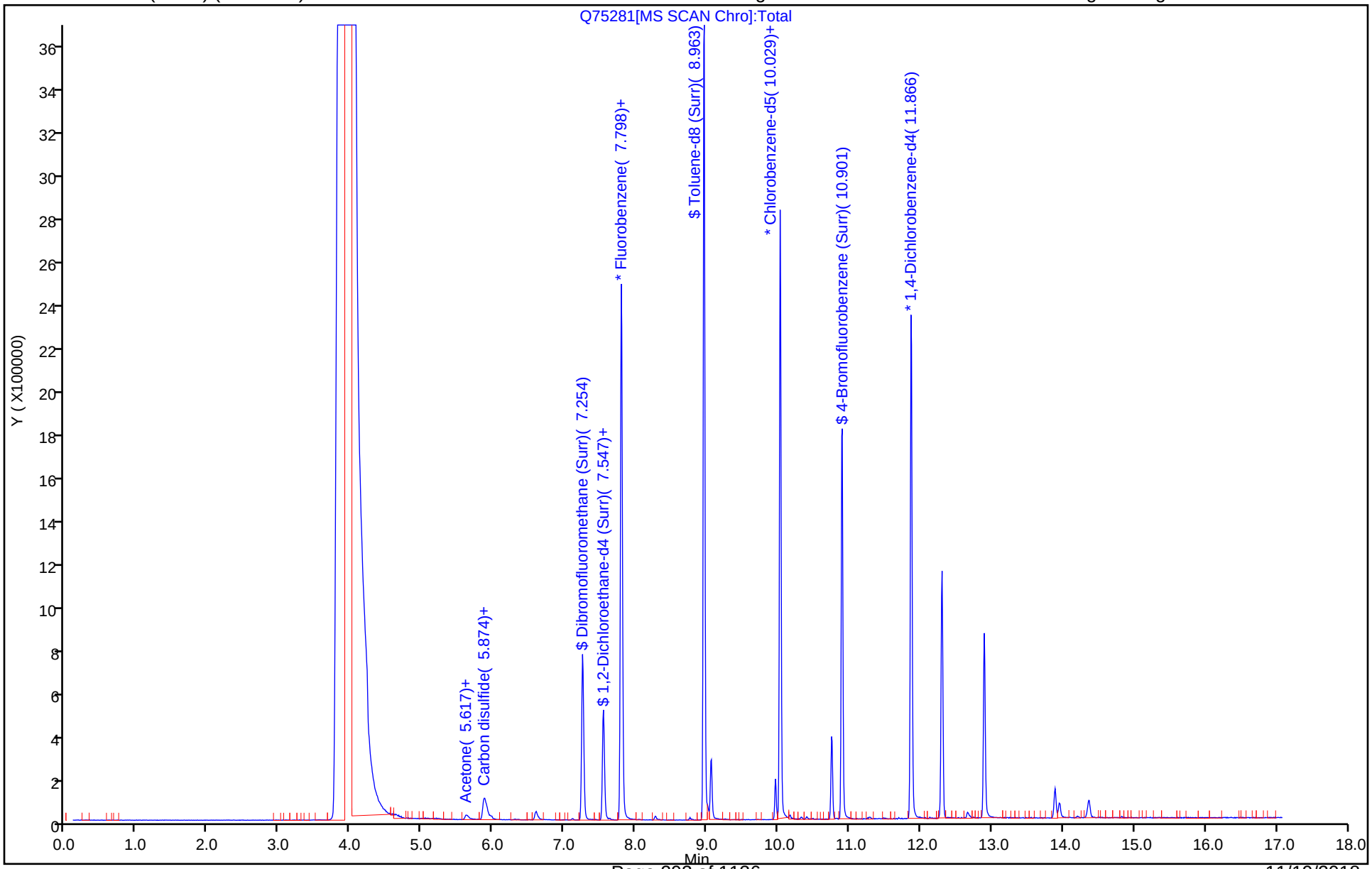
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75281.D

Injection Date:	10-Nov-2018 14:01:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116017-C-9	Lab Sample ID:	280-116017-9	Worklist Smp#:	15
Client ID:	775VMW-20R_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75281.D				
Lims ID:	280-116017-C-9				
Client ID:	775VMW-20R_1018				
Sample Type:	Client				
Inject. Date:	10-Nov-2018 14:01:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-C-9 ph<2				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 14:51:53	Calib Date:	23-Oct-2018 15:30:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: meierg Date: 16-Nov-2018 14:29:49

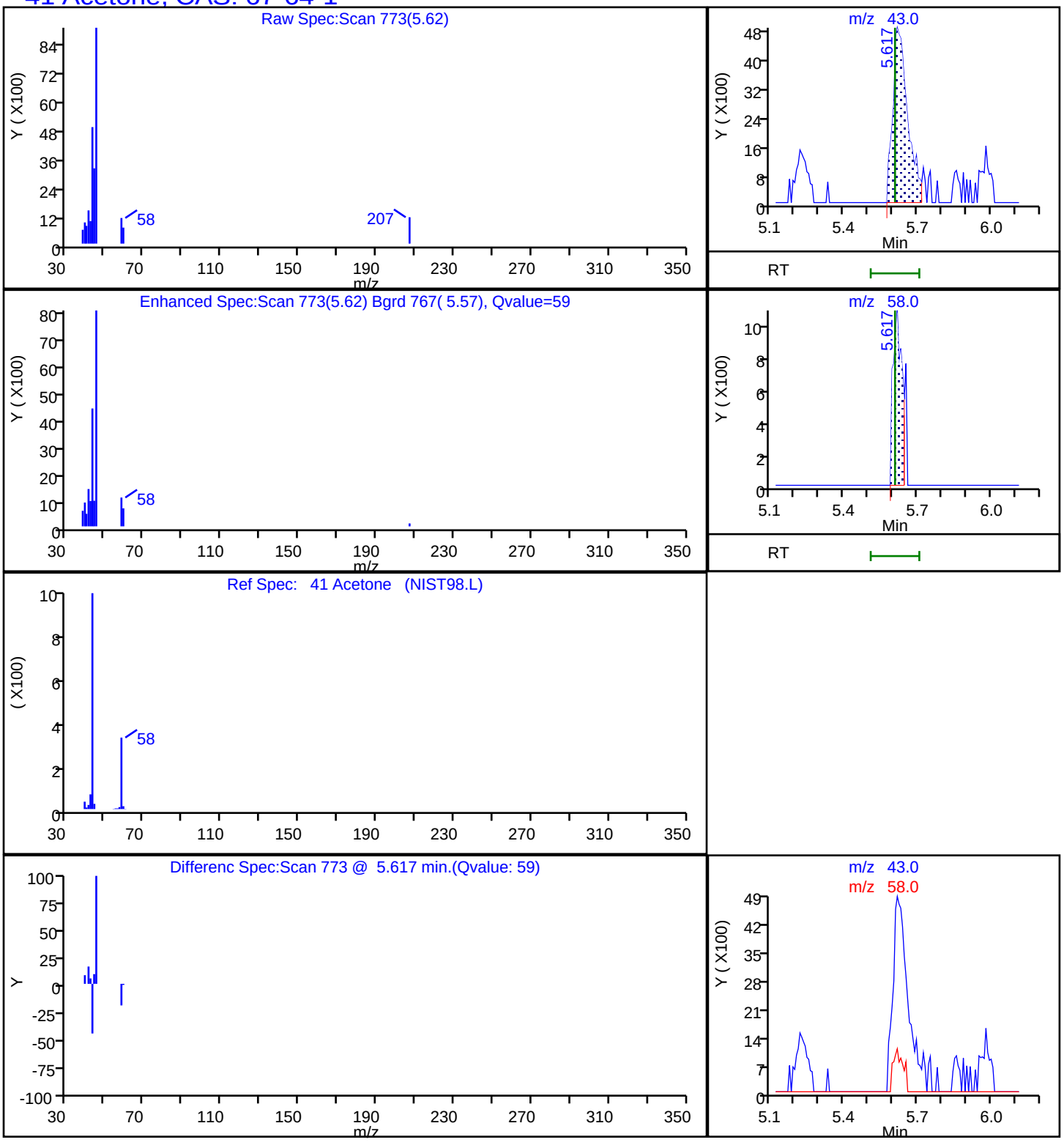
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	9.00	100.02
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.60	95.57
$ 7 Toluene-d8 (Surr)	9.00	8.92	99.12
$ 8 4-Bromofluorobenzene (Surr)	9.00	9.46	105.07

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75281.D

Injection Date:	10-Nov-2018 14:01:30	Instrument ID:	VMS_Q
Lims ID:	280-116017-C-9	Lab Sample ID:	280-116017-9
Client ID:	775VMW-20R_1018		
Operator ID:	meierg	ALS Bottle#:	11 Worklist Smp#: 15
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

41 Acetone, CAS: 67-64-1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018 | Lab Sample ID: 280-116017-10

Matrix: Water | Lab File ID: Q75282.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.17	J H	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U H	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U H	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U H	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U H	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U H	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U H	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U H	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U H	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U H	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U H	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U H	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U H	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98
67-64-1	Acetone	2.2	J H	10	6.4	1.9
71-43-2	Benzene	0.40	U H	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U H	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U H	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U H	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U H	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U H Q	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U H	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018 | Lab Sample ID: 280-116017-10

Matrix: Water | Lab File ID: Q75282.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U H	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U H	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U H	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U H	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U H	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U H	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U H	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U H	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U H	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U H	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U H	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U H	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U H	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U H	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U H	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U H	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U H	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U H	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U H	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U H	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U H	1.0	0.40	0.17
100-42-5	Styrene	0.40	U H	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U H	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U H	1.0	0.40	0.20
108-88-3	Toluene	0.40	U H	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19
79-01-6	Trichloroethene	44	H	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U H	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U H	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U H	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U H	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018 | Lab Sample ID: 280-116017-10

Matrix: Water | Lab File ID: Q75282.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	97		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D
Lims ID: 280-116017-A-10
Client ID: 775VMW-5_1018
Sample Type: Client
Inject. Date: 10-Nov-2018 14:21:30 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-10 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 16-Nov-2018 14:30:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	201773	250.0	
* 1 Fluorobenzene	96	7.803	7.802	0.001	100	2335934	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	99	466560	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	659026	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.259	7.259	0.000	91	504871	8.69	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	397531	8.39	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	99	2266150	9.00	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	86	650985	9.19	
23 Dichlorodifluoromethane	85		4.199				ND	
26 Chloromethane	50		4.449				ND	
27 Vinyl chloride	62		4.578				ND	
29 Bromomethane	94		4.914				ND	
30 Chloroethane	64		4.964				ND	
32 Trichlorofluoromethane	101		5.186				ND	
41 Acetone	43	5.629	5.608	0.021	69	9743	2.24	
43 1,1-Dichloroethene	96		5.629				ND	
44 Iodomethane	142		5.808				ND	
48 Carbon disulfide	76		5.908				ND	
50 Methylene Chloride	84		5.972				ND	
51 Methyl tert-butyl ether	73		6.158				ND	
53 trans-1,2-Dichloroethene	96		6.194				ND	
55 Vinyl acetate	43		6.437				ND	
56 Isopropyl ether	87		6.458				ND	
57 1,1-Dichloroethane	63		6.501				ND	
61 2-Butanone (MEK)	43		6.880				ND	
63 cis-1,2-Dichloroethene	96		6.930				ND	
64 2,2-Dichloropropane	77		6.966				ND	
67 Chlorobromomethane	128		7.123				ND	
68 Chloroform	83		7.130				ND	
71 1,1,1-Trichloroethane	97	7.359	7.359	0.000	95	18036	0.1655	
73 1,1-Dichloropropene	75		7.452				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.631				ND	
79 Trichloroethene	95	8.082	8.081	0.001	97	3286162	44.0	
83 1,2-Dichloropropane	63		8.260				ND	
85 Dibromomethane	93		8.360				ND	
86 Dichlorobromomethane	83		8.425				ND	
89 cis-1,3-Dichloropropene	75		8.732				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789				ND	
91 Toluene	91		9.011				ND	
93 trans-1,3-Dichloropropene	75		9.104				ND	
94 1,1,2-Trichloroethane	97		9.254				ND	
95 2-Hexanone	43		9.376				ND	
96 1,3-Dichloropropane	76		9.390				ND	
97 Tetrachloroethene	164		9.426				ND	
98 Chlorodibromomethane	129		9.590				ND	
100 Ethylene Dibromide	107		9.719				ND	
102 Chlorobenzene	112		10.055				ND	
104 1,1,1,2-Tetrachloroethane	131		10.083				ND	
103 Ethylbenzene	106		10.091				ND	
105 m-Xylene & p-Xylene	106		10.162				ND	
107 o-Xylene	106		10.484				ND	
106 Styrene	104		10.484				ND	
108 Bromoform	173		10.684				ND	
109 Isopropylbenzene	105		10.741				ND	
112 1,1,2,2-Tetrachloroethane	83		10.942				ND	
114 1,2,3-Trichloropropane	110		11.020				ND	
115 N-Propylbenzene	120		11.063				ND	
116 Bromobenzene	156		11.070				ND	
117 1,3,5-Trimethylbenzene	105		11.170				ND	
118 2-Chlorotoluene	126		11.192				ND	
119 4-Chlorotoluene	126		11.263				ND	
120 tert-Butylbenzene	119		11.471				ND	
121 1,2,4-Trimethylbenzene	105		11.506				ND	
122 sec-Butylbenzene	134		11.657				ND	
123 4-Isopropyltoluene	119		11.749				ND	
124 1,3-Dichlorobenzene	146		11.821				ND	
126 1,4-Dichlorobenzene	146		11.892				ND	
127 n-Butylbenzene	91		12.121				ND	
128 1,2-Dichlorobenzene	146		12.257				ND	
129 1,2-Dibromo-3-Chloropropan	157		13.015				ND	
130 1,2,4-Trichlorobenzene	180		13.987				ND	
131 Hexachlorobutadiene	225		14.138				ND	
132 Naphthalene	128		14.359				ND	
133 1,2,3-Trichlorobenzene	180		14.688				ND	
S 139 Xylenes, Total	106		0.000				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

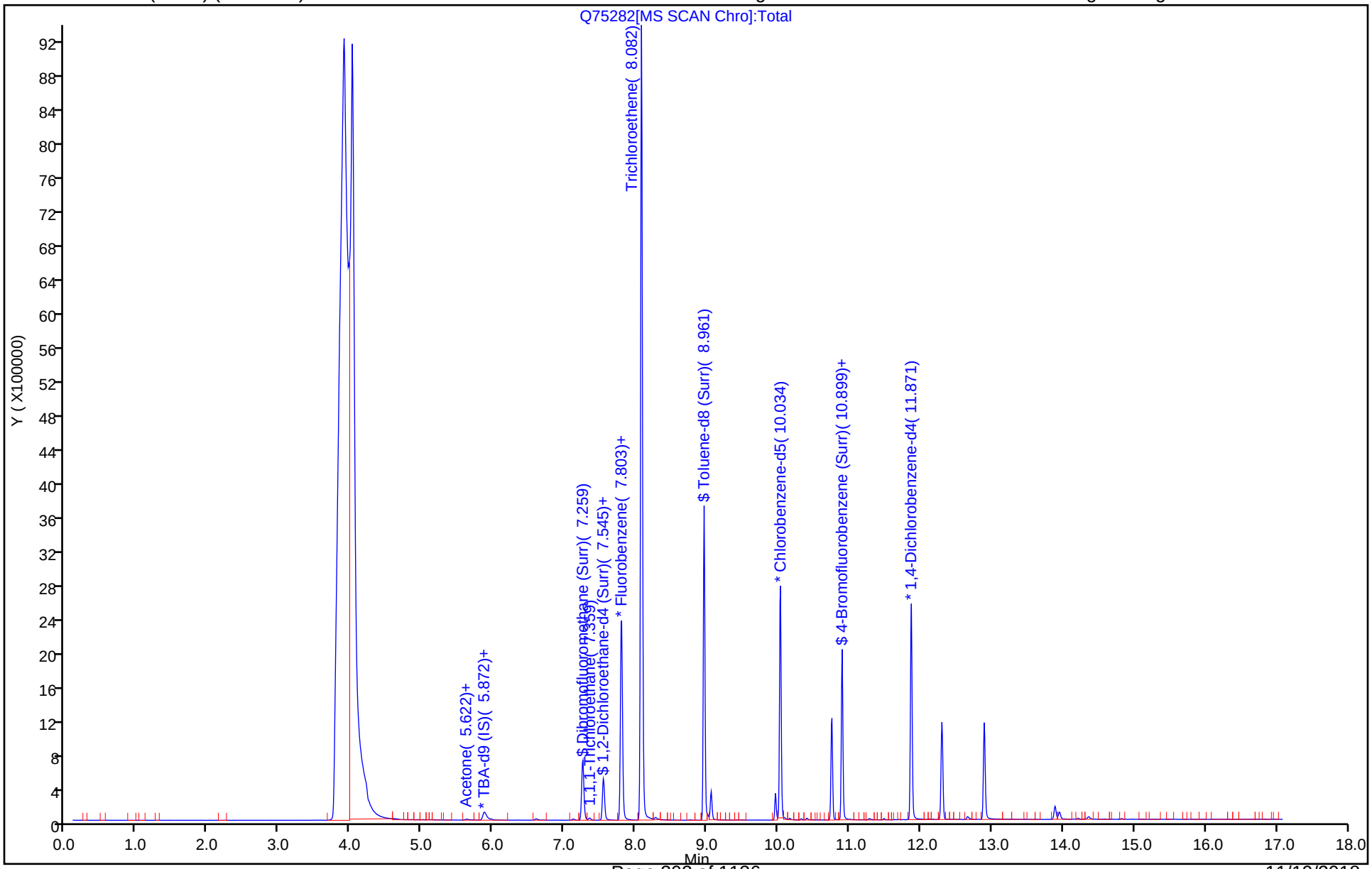
Report Date: 16-Nov-2018 14:52:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D

Injection Date:	10-Nov-2018 14:21:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116017-A-10	Lab Sample ID:	280-116017-10	Worklist Smp#:	16
Client ID:	775VMW-5_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D
Lims ID: 280-116017-A-10
Client ID: 775VMW-5_1018
Sample Type: Client
Inject. Date: 10-Nov-2018 14:21:30 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-10 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 16-Nov-2018 14:30:02

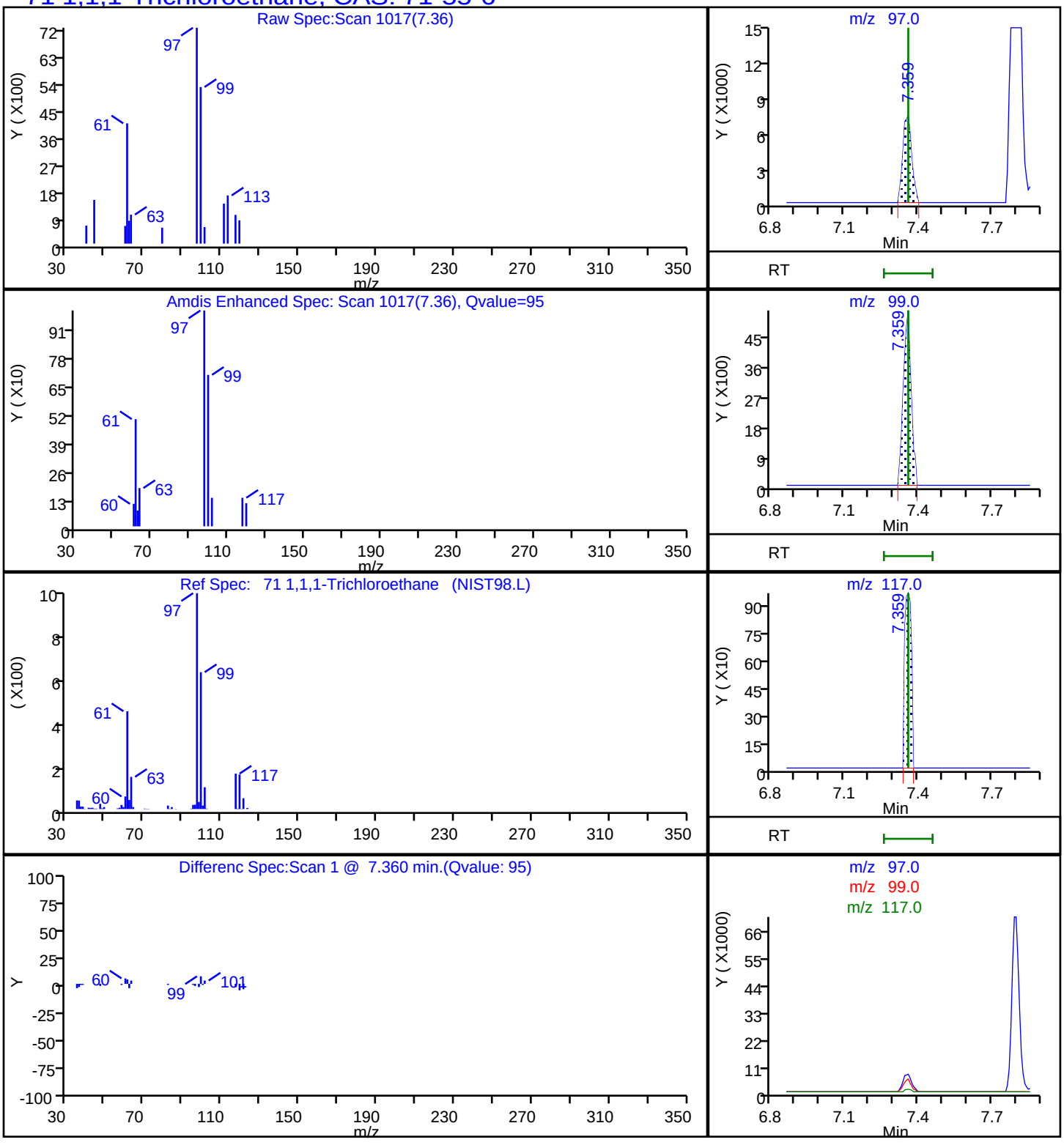
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.69	96.51
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.39	93.26
$ 7 Toluene-d8 (Surr)	9.00	9.00	100.03
$ 8 4-Bromofluorobenzene (Surr)	9.00	9.19	102.10

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D

Injection Date:	10-Nov-2018 14:21:30	Instrument ID:	VMS_Q		
Lims ID:	280-116017-A-10	Lab Sample ID:	280-116017-10		
Client ID:	775VMW-5_1018				
Operator ID:	meierg	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

71 1,1,1-Trichloroethane, CAS: 71-55-6

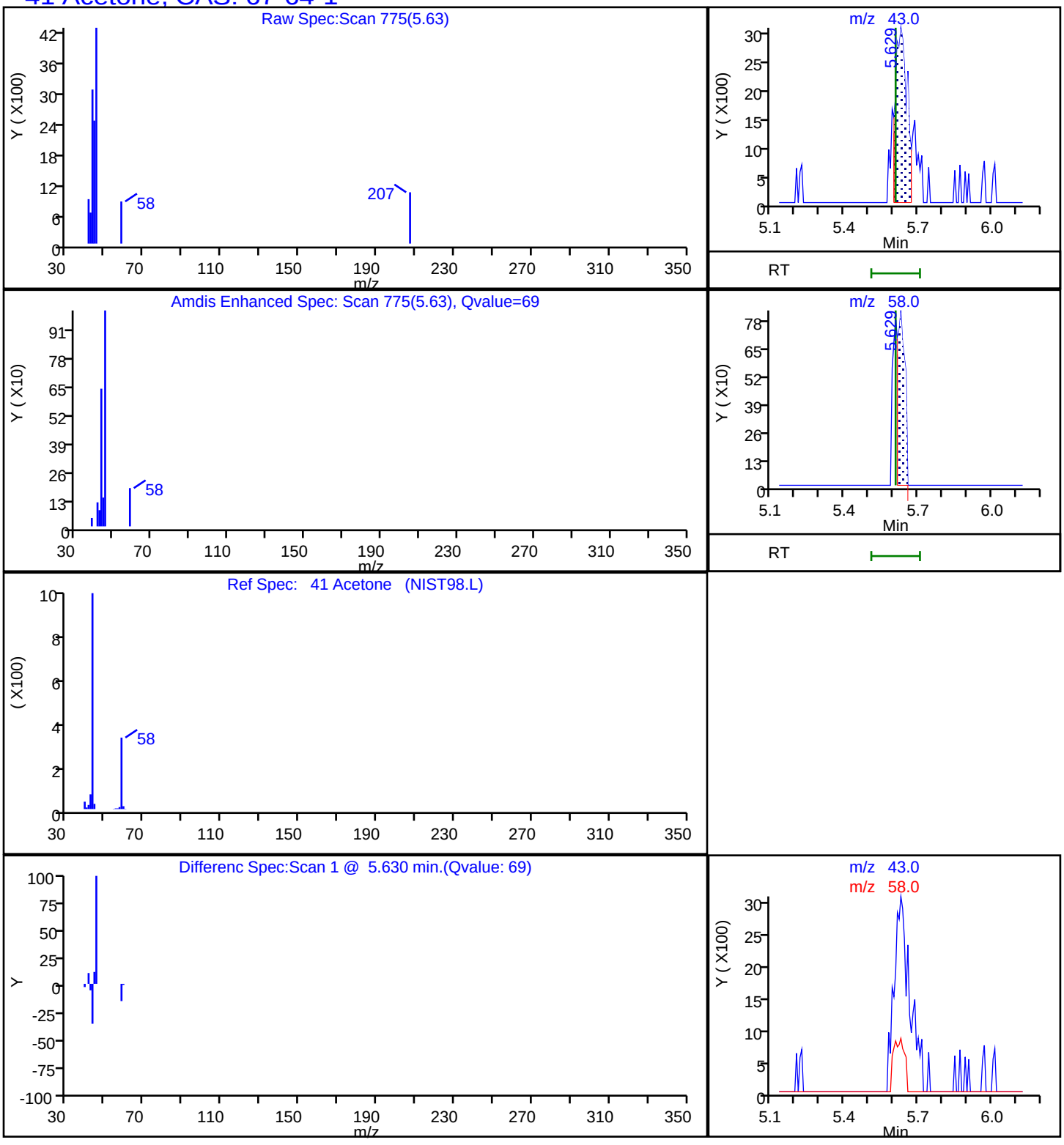


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D

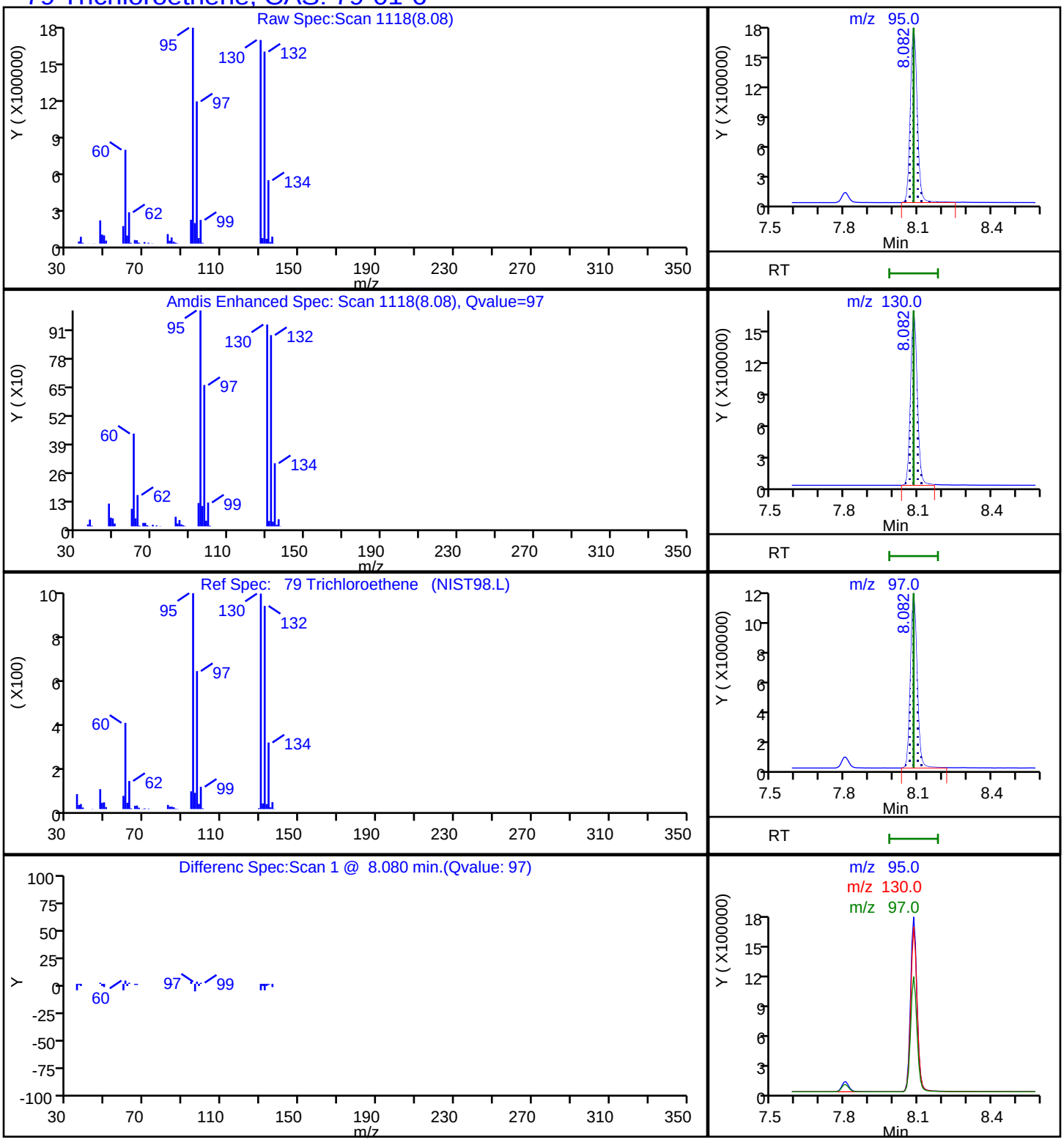
Injection Date:	10-Nov-2018 14:21:30	Instrument ID:	VMS_Q
Lims ID:	280-116017-A-10	Lab Sample ID:	280-116017-10
Client ID:	775VMW-5_1018		
Operator ID:	meierg	ALS Bottle#:	12 Worklist Smp#: 16
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

41 Acetone, CAS: 67-64-1



Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75282.D
Injection Date: 10-Nov-2018 14:21:30 Instrument ID: VMS_Q
Lims ID: 280-116017-A-10 Lab Sample ID: 280-116017-10
Client ID: 775VMW-5_1018
Operator ID: meierg ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018-a | Lab Sample ID: 280-116017-11

Matrix: Water | Lab File ID: Q75283.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.16	J H	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U H	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U H	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U H	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U H	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U H	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U H	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U H	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U H	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U H	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U H	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U H	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U H	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98
67-64-1	Acetone	6.9	J H	10	6.4	1.9
71-43-2	Benzene	0.40	U H	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U H	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U H	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U H	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U H	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U H Q	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U H	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018-a | Lab Sample ID: 280-116017-11

Matrix: Water | Lab File ID: Q75283.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U H	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U H	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U H	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U H	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U H	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U H	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U H	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U H	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U H	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U H	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U H	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U H	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U H	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U H	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U H	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U H	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U H	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U H	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U H	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U H	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U H	1.0	0.40	0.17
100-42-5	Styrene	0.40	U H	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U H	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U H	1.0	0.40	0.20
108-88-3	Toluene	0.40	U H	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19
79-01-6	Trichloroethene	47	H	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U H	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U H	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U H	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U H	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-5_1018-a | Lab Sample ID: 280-116017-11

Matrix: Water | Lab File ID: Q75283.D

Analysis Method: 8260B | Date Collected: 10/23/2018 10:41

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 14:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	99		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D
Lims ID: 280-116017-B-11
Client ID: 775VMW-5_1018-a
Sample Type: Client
Inject. Date: 10-Nov-2018 14:42:30 ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-B-11 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 16-Nov-2018 14:30:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.870	5.872	-0.002	0	160694	250.0	
* 1 Fluorobenzene	96	7.801	7.802	-0.001	100	2275195	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.032	10.033	-0.001	99	470869	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.869	11.871	-0.002	100	603718	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.257	7.259	-0.002	91	504576	8.91	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.543	7.545	-0.002	0	399048	8.66	
$ 7 Toluene-d8 (Surr)	98	8.959	8.961	-0.002	100	2270385	8.93	
$ 8 4-Bromofluorobenzene (Surr	95	10.897	10.899	-0.002	86	606195	9.34	
23 Dichlorodifluoromethane	85		4.199				ND	
26 Chloromethane	50		4.449				ND	
27 Vinyl chloride	62		4.578				ND	
29 Bromomethane	94		4.914				ND	
30 Chloroethane	64		4.964				ND	
32 Trichlorofluoromethane	101		5.186				ND	
41 Acetone	43	5.620	5.608	0.012	46	29072	6.86	
43 1,1-Dichloroethene	96		5.629				ND	
44 Iodomethane	142		5.808				ND	
48 Carbon disulfide	76		5.908				ND	
50 Methylene Chloride	84		5.972				ND	
51 Methyl tert-butyl ether	73		6.158				ND	
53 trans-1,2-Dichloroethene	96		6.194				ND	
55 Vinyl acetate	43		6.437				ND	
56 Isopropyl ether	87		6.458				ND	
57 1,1-Dichloroethane	63		6.501				ND	
61 2-Butanone (MEK)	43		6.880				ND	
63 cis-1,2-Dichloroethene	96		6.930				ND	
64 2,2-Dichloropropane	77		6.966				ND	
67 Chlorobromomethane	128		7.123				ND	
68 Chloroform	83		7.130				ND	
71 1,1,1-Trichloroethane	97	7.350	7.359	-0.009	97	17412	0.1641	
73 1,1-Dichloropropene	75		7.452				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.631				ND	
79 Trichloroethene	95	8.080	8.081	-0.001	97	3421126	47.1	
83 1,2-Dichloropropane	63		8.260				ND	
85 Dibromomethane	93		8.360				ND	
86 Dichlorobromomethane	83		8.425				ND	
89 cis-1,3-Dichloropropene	75		8.732				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789				ND	
91 Toluene	91	9.009	9.011	-0.002	98	25998	0.1004	
93 trans-1,3-Dichloropropene	75		9.104				ND	
94 1,1,2-Trichloroethane	97		9.254				ND	
95 2-Hexanone	43		9.376				ND	
96 1,3-Dichloropropane	76		9.390				ND	
97 Tetrachloroethene	164		9.426				ND	
98 Chlorodibromomethane	129		9.590				ND	
100 Ethylene Dibromide	107		9.719				ND	
102 Chlorobenzene	112		10.055				ND	
104 1,1,1,2-Tetrachloroethane	131		10.083				ND	
103 Ethylbenzene	106		10.091				ND	
105 m-Xylene & p-Xylene	106		10.162				ND	
107 o-Xylene	106		10.484				ND	
106 Styrene	104		10.484				ND	
108 Bromoform	173		10.684				ND	
109 Isopropylbenzene	105		10.741				ND	
112 1,1,2,2-Tetrachloroethane	83		10.942				ND	
114 1,2,3-Trichloropropane	110		11.020				ND	
115 N-Propylbenzene	120		11.063				ND	
116 Bromobenzene	156		11.070				ND	
117 1,3,5-Trimethylbenzene	105		11.170				ND	
118 2-Chlorotoluene	126		11.192				ND	
119 4-Chlorotoluene	126		11.263				ND	
120 tert-Butylbenzene	119		11.471				ND	
121 1,2,4-Trimethylbenzene	105		11.506				ND	
122 sec-Butylbenzene	134		11.657				ND	
123 4-Isopropyltoluene	119		11.749				ND	
124 1,3-Dichlorobenzene	146		11.821				ND	
126 1,4-Dichlorobenzene	146		11.892				ND	
127 n-Butylbenzene	91		12.121				ND	
128 1,2-Dichlorobenzene	146		12.257				ND	
129 1,2-Dibromo-3-Chloropropan	157		13.015				ND	
130 1,2,4-Trichlorobenzene	180		13.987				ND	
131 Hexachlorobutadiene	225		14.138				ND	
132 Naphthalene	128		14.359				ND	
133 1,2,3-Trichlorobenzene	180		14.688				ND	
S 139 Xylenes, Total	106		0.000				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

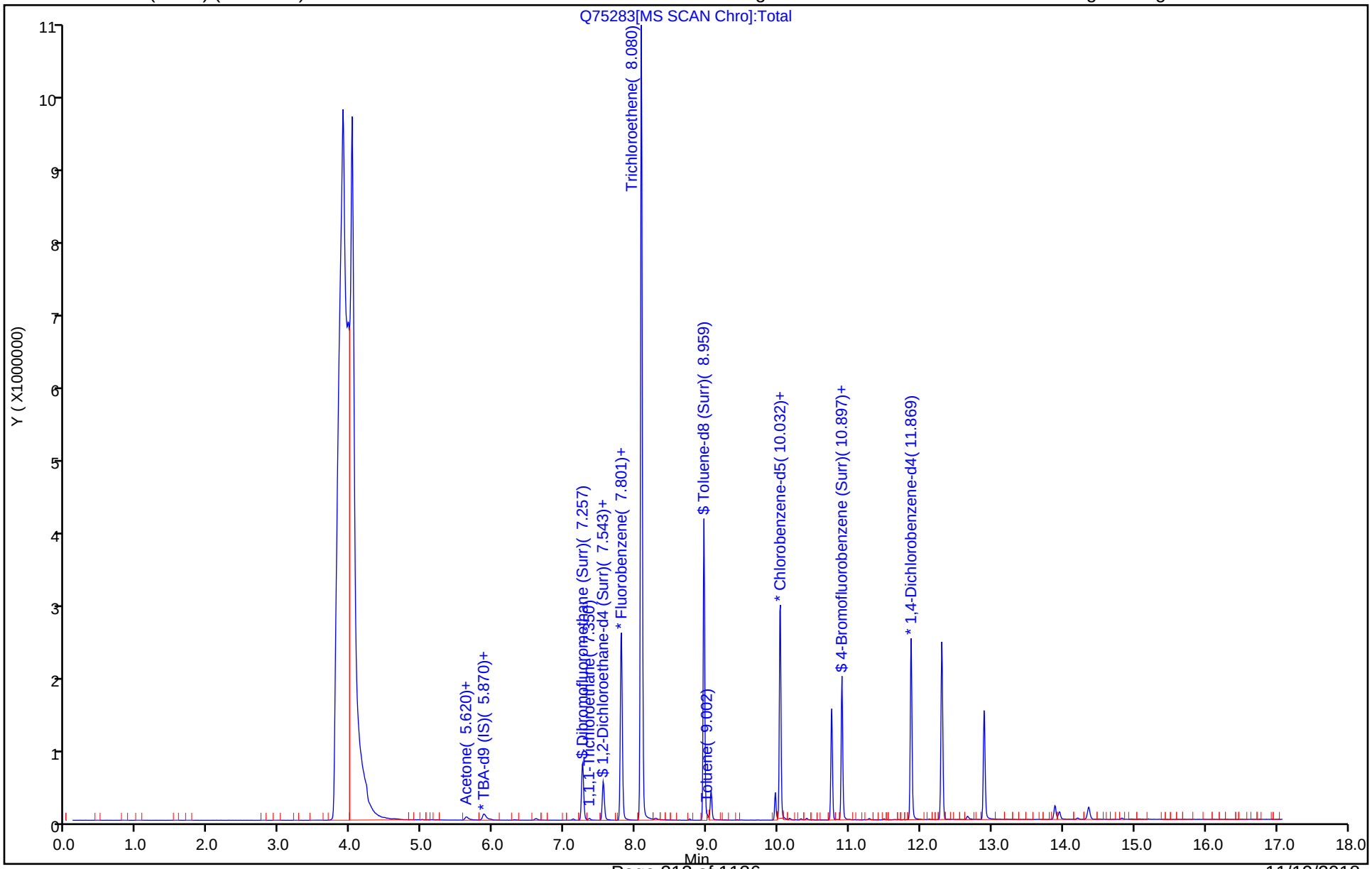
Report Date: 16-Nov-2018 14:52:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D

Injection Date:	10-Nov-2018 14:42:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116017-B-11	Lab Sample ID:	280-116017-11	Worklist Smp#:	17
Client ID:	775VMW-5_1018-a				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

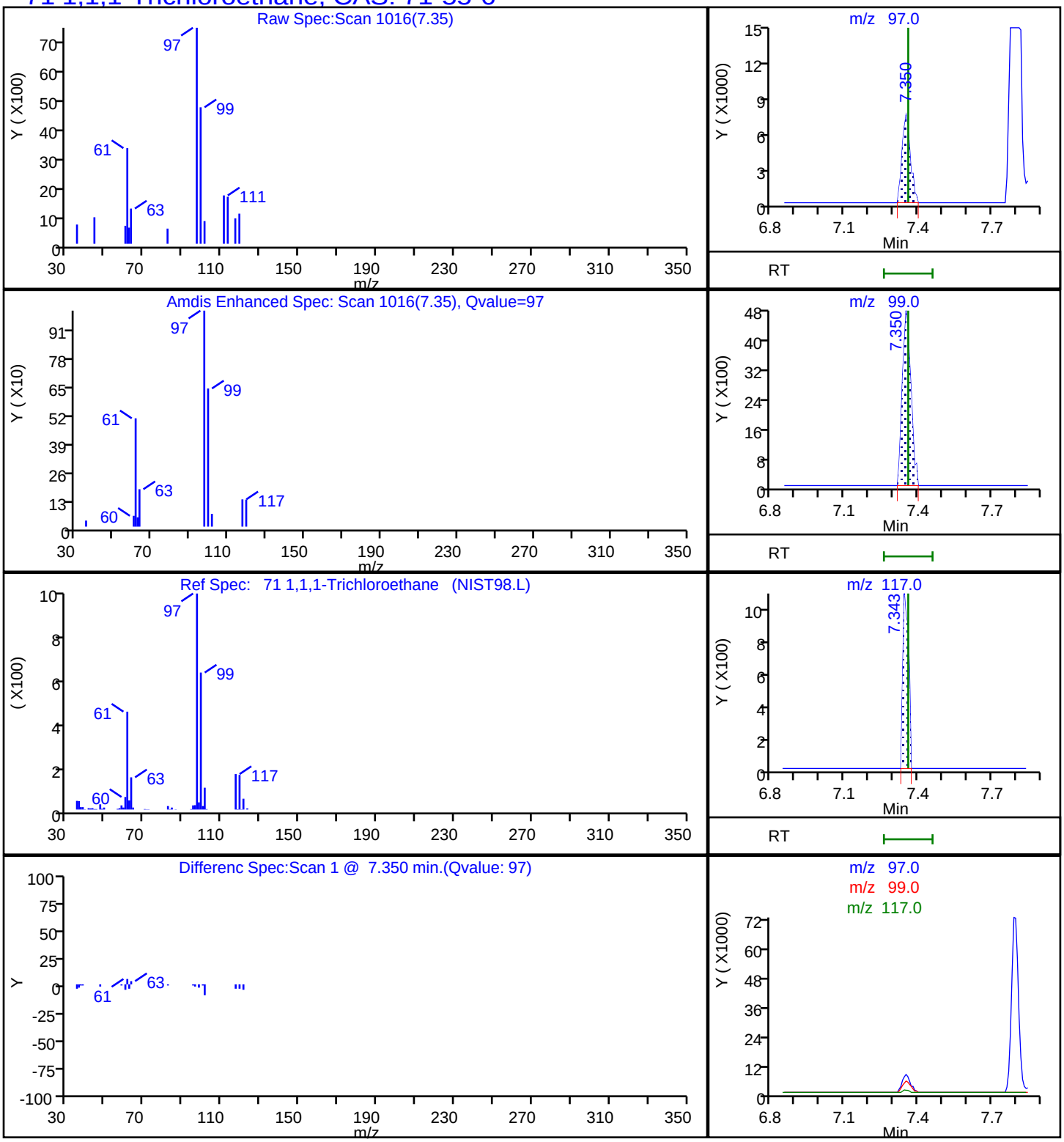
Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D				
Lims ID:	280-116017-B-11				
Client ID:	775VMW-5_1018-a				
Sample Type:	Client				
Inject. Date:	10-Nov-2018 14:42:30	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116017-B-11 ph<2				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 14:51:53	Calib Date:	23-Oct-2018 15:30:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: meierg Date: 16-Nov-2018 14:30:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.91	99.03
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.66	96.26
$ 7 Toluene-d8 (Surr)	9.00	8.93	99.25
$ 8 4-Bromofluorobenzene (Surr)	9.00	9.34	103.79

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D
Injection Date: 10-Nov-2018 14:42:30 Instrument ID: VMS_Q
Lims ID: 280-116017-B-11 Lab Sample ID: 280-116017-11
Client ID: 775VMW-5_1018-a
Operator ID: meierg ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

71 1,1,1-Trichloroethane, CAS: 71-55-6

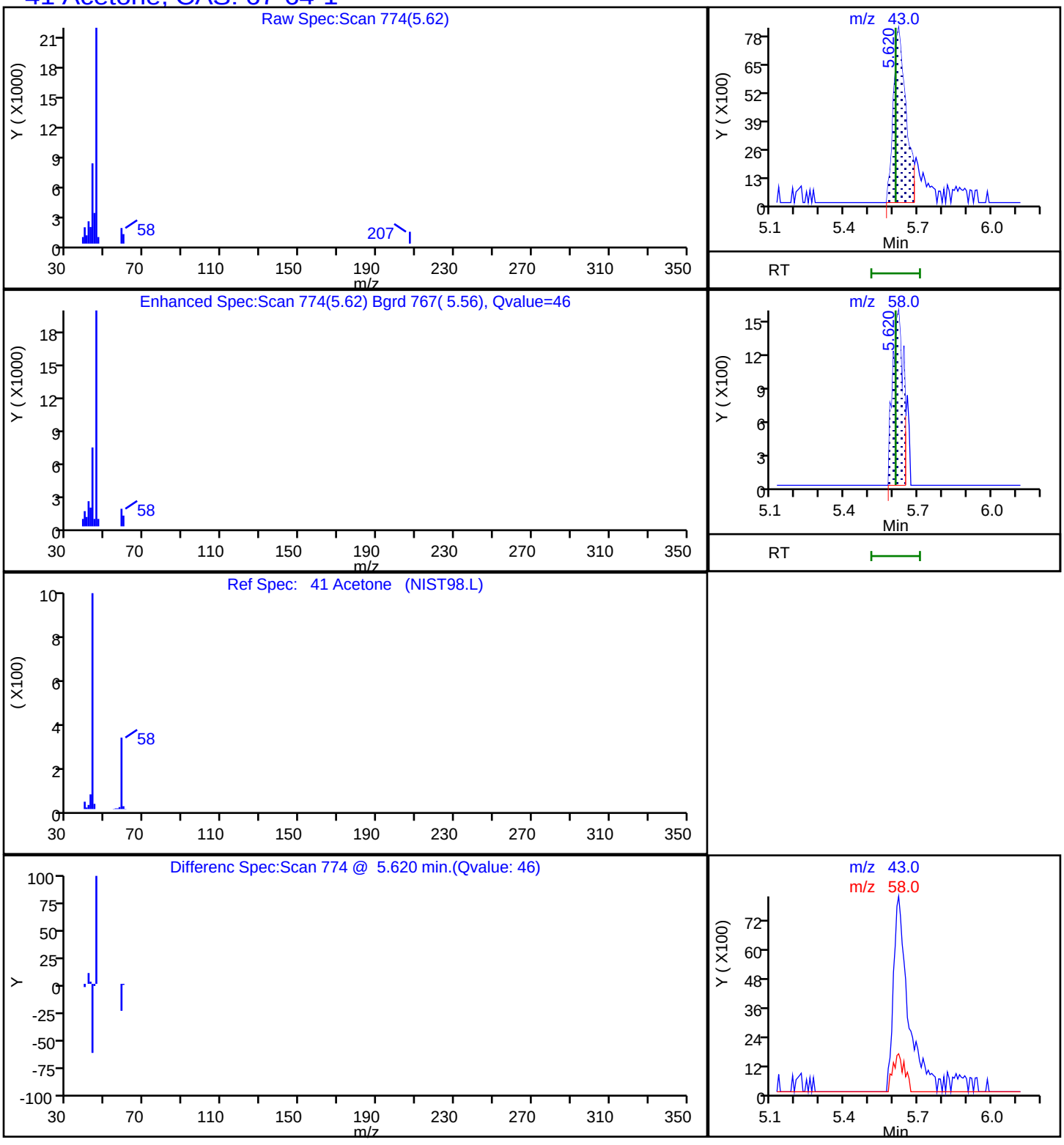


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D

Injection Date:	10-Nov-2018 14:42:30	Instrument ID:	VMS_Q
Lims ID:	280-116017-B-11	Lab Sample ID:	280-116017-11
Client ID:	775VMW-5_1018-a		
Operator ID:	meierg	ALS Bottle#:	13 Worklist Smp#: 17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

41 Acetone, CAS: 67-64-1

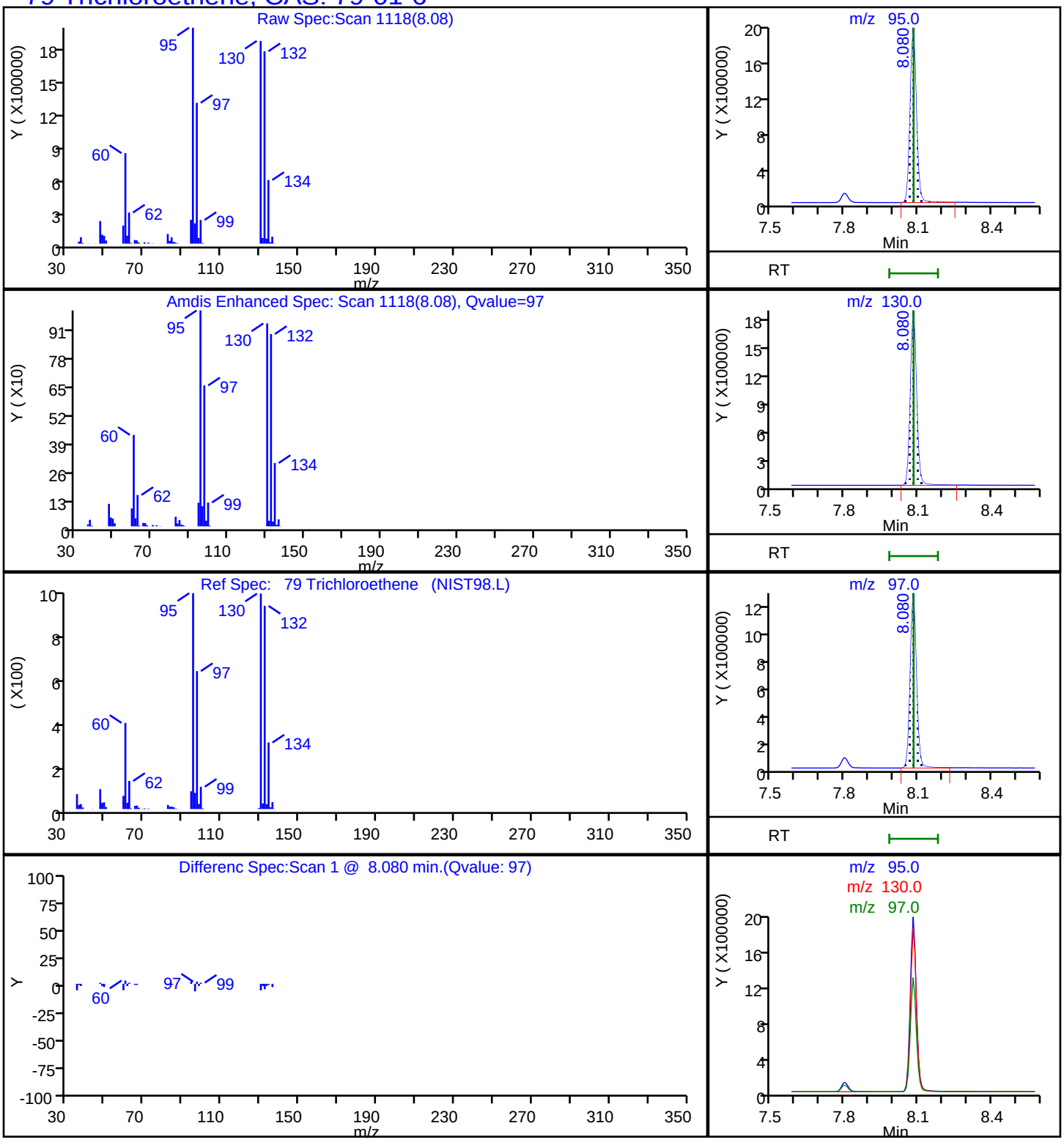


TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75283.D

Injection Date:	10-Nov-2018 14:42:30	Instrument ID:	VMS_Q
Lims ID:	280-116017-B-11	Lab Sample ID:	280-116017-11
Client ID:	775VMW-5_1018-a		
Operator ID:	meierg	ALS Bottle#:	13 Worklist Smp#: 17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-4_1018 | Lab Sample ID: 280-116017-12

Matrix: Water | Lab File ID: Q75284.D

Analysis Method: 8260B | Date Collected: 10/23/2018 12:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 15:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U H	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U H	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U H	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U H	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U H	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U H	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U H	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U H	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U H	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U H	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U H	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U H	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U H	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U H	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U H	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98
67-64-1	Acetone	6.4	U H	10	6.4	1.9
71-43-2	Benzene	0.40	U H	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U H	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U H	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U H	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U H	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U H Q	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U H	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-4_1018 | Lab Sample ID: 280-116017-12

Matrix: Water | Lab File ID: Q75284.D

Analysis Method: 8260B | Date Collected: 10/23/2018 12:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 15:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U H	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U H	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U H	2.0	1.6	0.41
67-66-3	Chloroform	0.37	J H	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U H	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U H	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U H	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U H	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U H	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U H	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U H	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U H	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U H	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U H	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U H	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U H	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U H	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U H	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U H	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U H	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U H	1.0	0.40	0.17
100-42-5	Styrene	0.40	U H	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U H	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U H	1.0	0.40	0.20
108-88-3	Toluene	0.40	U H	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U H	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19
79-01-6	Trichloroethene	4.4	H	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U H	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U H	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U H	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U H	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: 775VMW-4_1018 | Lab Sample ID: 280-116017-12

Matrix: Water | Lab File ID: Q75284.D

Analysis Method: 8260B | Date Collected: 10/23/2018 12:16

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 15:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75284.D
Lims ID: 280-116017-A-12
Client ID: 775VMW-4_1018
Sample Type: Client
Inject. Date: 10-Nov-2018 15:02:30 ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-12 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 16-Nov-2018 14:30:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.873	5.872	0.001	0	185554	250.0	
* 1 Fluorobenzene	96	7.797	7.802	-0.005	100	2198006	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.035	10.033	0.002	100	465280	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.872	11.871	0.001	99	630774	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.253	7.259	-0.006	91	491029	8.98	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.546	7.545	0.001	0	379833	8.53	
$ 7 Toluene-d8 (Surr)	98	8.962	8.961	0.001	100	2139287	8.49	
$ 8 4-Bromofluorobenzene (Surr	95	10.900	10.899	0.001	86	629679	9.29	
23 Dichlorodifluoromethane	85		4.199				ND	
26 Chloromethane	50		4.449				ND	
27 Vinyl chloride	62		4.578				ND	
29 Bromomethane	94		4.914				ND	
30 Chloroethane	64		4.964				ND	
32 Trichlorofluoromethane	101		5.186				ND	
41 Acetone	43	5.616	5.608	0.008	88	6329	1.54	
43 1,1-Dichloroethene	96		5.629				ND	
44 Iodomethane	142		5.808				ND	
48 Carbon disulfide	76		5.908				ND	
50 Methylene Chloride	84		5.972				ND	
51 Methyl tert-butyl ether	73		6.158				ND	
53 trans-1,2-Dichloroethene	96		6.194				ND	
55 Vinyl acetate	43		6.437				ND	
56 Isopropyl ether	87		6.458				ND	
57 1,1-Dichloroethane	63		6.501				ND	
61 2-Butanone (MEK)	43		6.880				ND	
63 cis-1,2-Dichloroethene	96		6.930				ND	
64 2,2-Dichloropropane	77		6.966				ND	
67 Chlorobromomethane	128		7.123				ND	
68 Chloroform	83	7.132	7.130	0.002	95	39476	0.3654	
71 1,1,1-Trichloroethane	97	7.361	7.359	0.002	95	12650	0.1234	
73 1,1-Dichloropropene	75		7.452				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.631				ND	
79 Trichloroethene	95	8.083	8.081	0.002	95	310492	4.42	
83 1,2-Dichloropropane	63		8.260				ND	
85 Dibromomethane	93		8.360				ND	
86 Dichlorobromomethane	83		8.425				ND	
89 cis-1,3-Dichloropropene	75		8.732				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789				ND	
91 Toluene	91		9.011				ND	
93 trans-1,3-Dichloropropene	75		9.104				ND	
94 1,1,2-Trichloroethane	97		9.254				ND	
95 2-Hexanone	43		9.376				ND	
96 1,3-Dichloropropane	76		9.390				ND	
97 Tetrachloroethene	164		9.426				ND	
98 Chlorodibromomethane	129		9.590				ND	
100 Ethylene Dibromide	107		9.719				ND	
102 Chlorobenzene	112		10.055				ND	
104 1,1,1,2-Tetrachloroethane	131		10.083				ND	
103 Ethylbenzene	106		10.091				ND	
105 m-Xylene & p-Xylene	106		10.162				ND	
107 o-Xylene	106		10.484				ND	
106 Styrene	104		10.484				ND	
108 Bromoform	173		10.684				ND	
109 Isopropylbenzene	105		10.741				ND	
112 1,1,2,2-Tetrachloroethane	83		10.942				ND	
114 1,2,3-Trichloropropane	110		11.020				ND	
115 N-Propylbenzene	120		11.063				ND	
116 Bromobenzene	156		11.070				ND	
117 1,3,5-Trimethylbenzene	105		11.170				ND	
118 2-Chlorotoluene	126		11.192				ND	
119 4-Chlorotoluene	126		11.263				ND	
120 tert-Butylbenzene	119		11.471				ND	
121 1,2,4-Trimethylbenzene	105		11.506				ND	
122 sec-Butylbenzene	134		11.657				ND	
123 4-Isopropyltoluene	119		11.749				ND	
124 1,3-Dichlorobenzene	146		11.821				ND	
126 1,4-Dichlorobenzene	146		11.892				ND	
127 n-Butylbenzene	91		12.121				ND	
128 1,2-Dichlorobenzene	146		12.257				ND	
129 1,2-Dibromo-3-Chloropropan	157		13.015				ND	
130 1,2,4-Trichlorobenzene	180		13.987				ND	
131 Hexachlorobutadiene	225		14.138				ND	
132 Naphthalene	128		14.359				ND	
133 1,2,3-Trichlorobenzene	180		14.688				ND	
S 139 Xylenes, Total	106		0.000				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

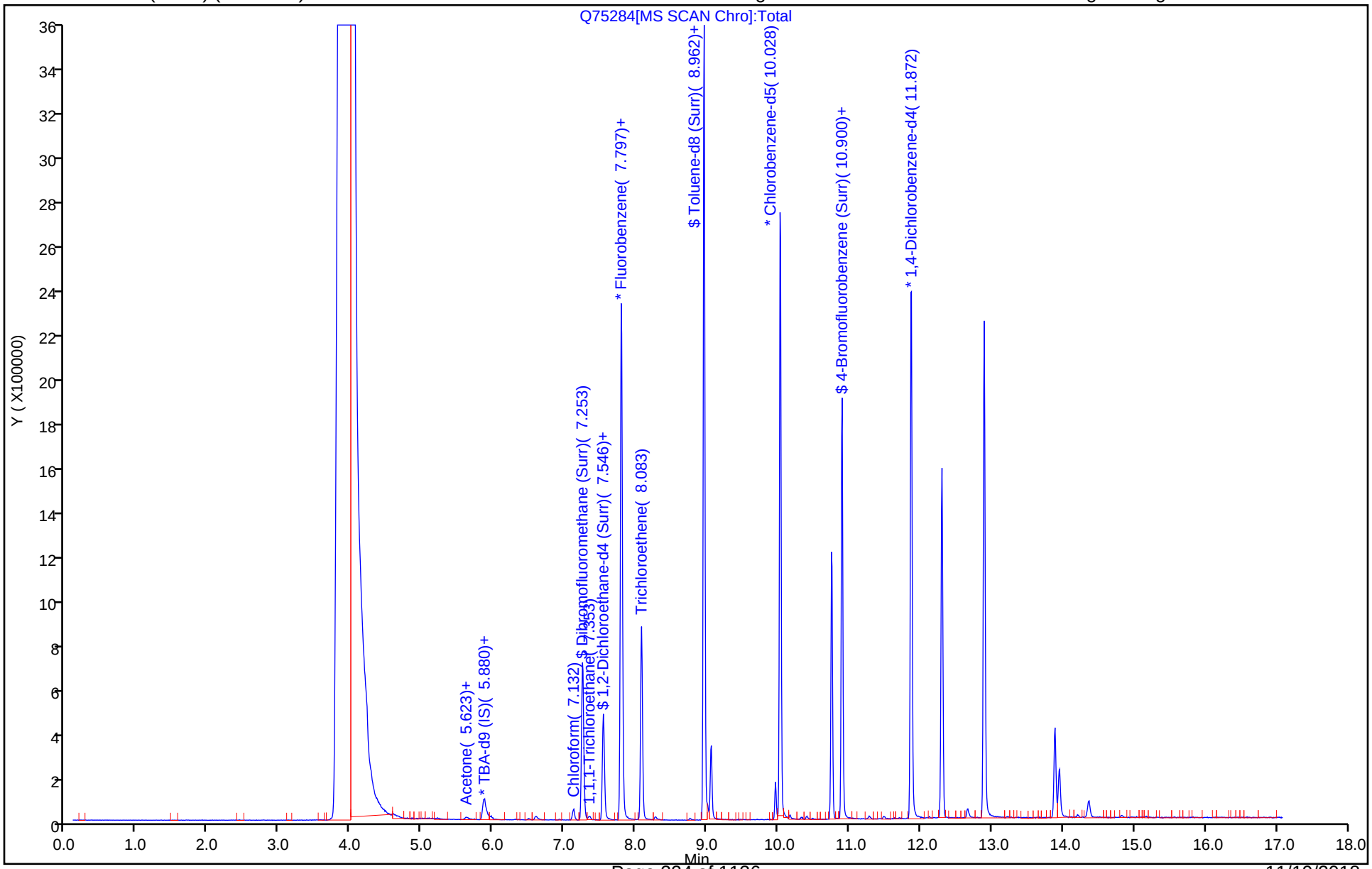
Report Date: 16-Nov-2018 14:52:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75284.D

Injection Date:	10-Nov-2018 15:02:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116017-A-12	Lab Sample ID:	280-116017-12	Worklist Smp#:	18
Client ID:	775VMW-4_1018				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75284.D
Lims ID: 280-116017-A-12
Client ID: 775VMW-4_1018
Sample Type: Client
Inject. Date: 10-Nov-2018 15:02:30 ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-A-12 ph<2
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:51:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

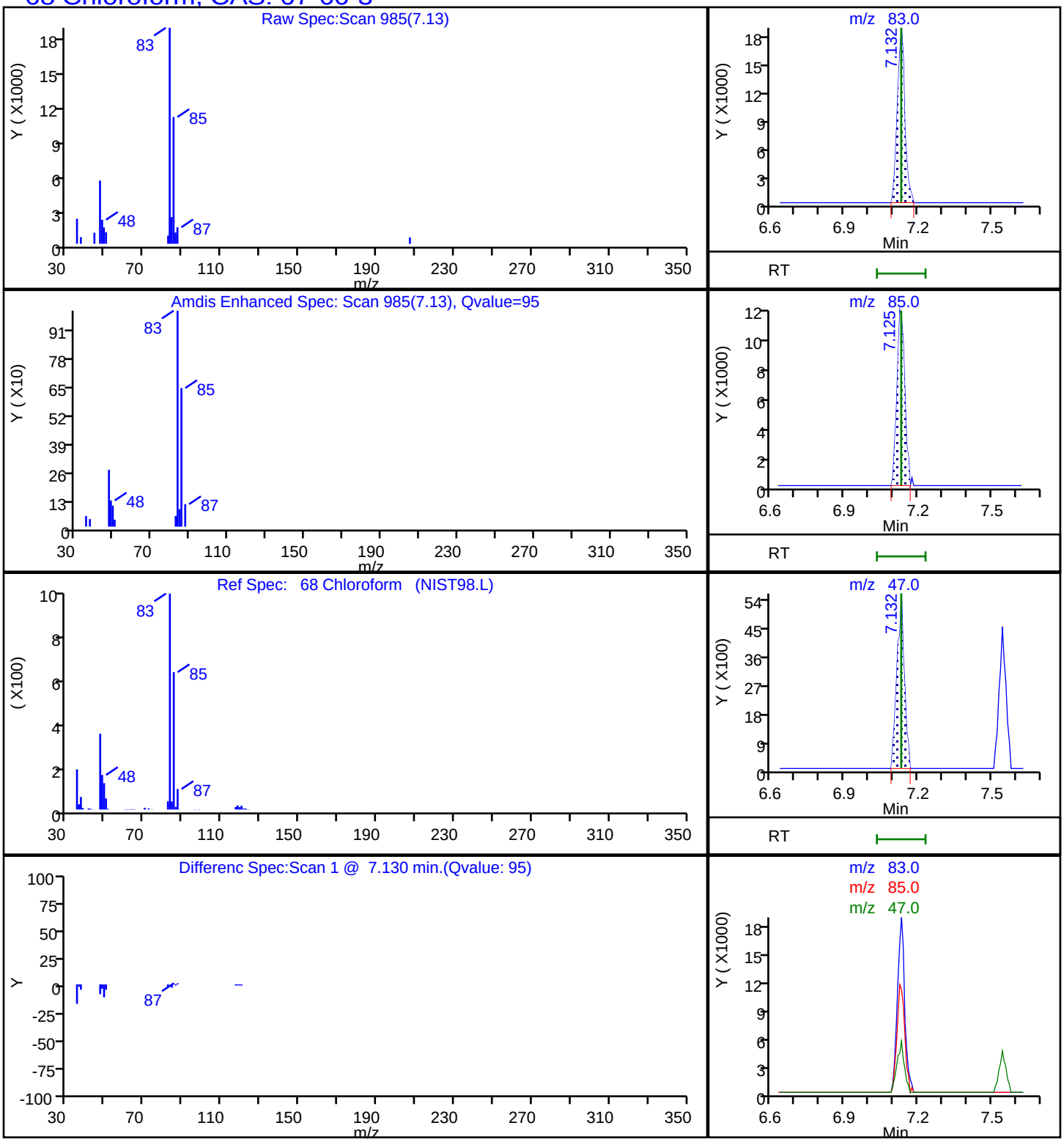
First Level Reviewer: meierg Date: 16-Nov-2018 14:30:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.98	99.76
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.53	94.77
$ 7 Toluene-d8 (Surr)	9.00	8.49	94.33
$ 8 4-Bromofluorobenzene (Surr)	9.00	9.29	103.19

TestAmerica Denver

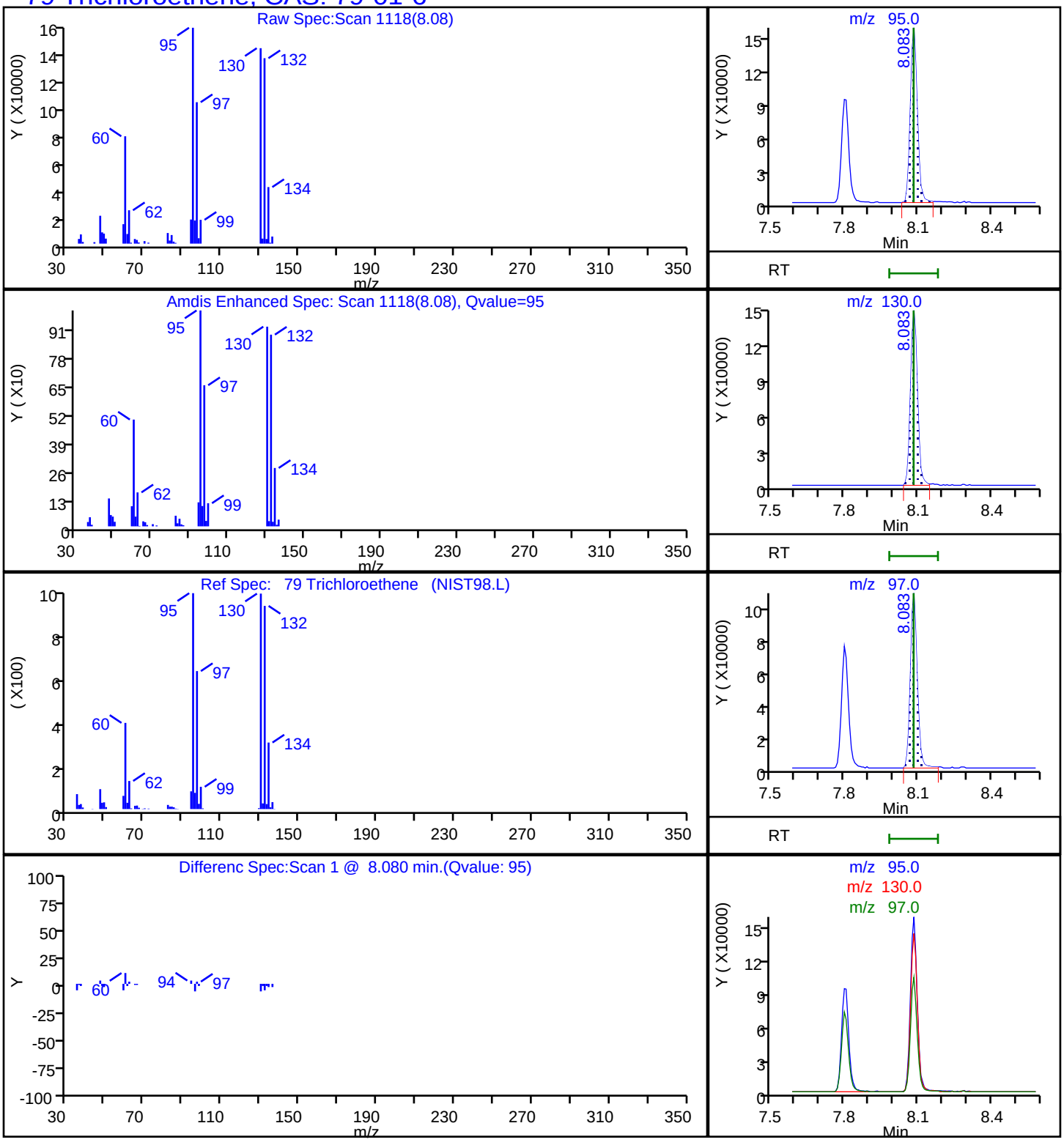
Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75284.D
Injection Date: 10-Nov-2018 15:02:30 Instrument ID: VMS_Q
Lims ID: 280-116017-A-12 Lab Sample ID: 280-116017-12
Client ID: 775VMW-4_1018
Operator ID: meierg ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

68 Chloroform, CAS: 67-66-3



Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75284.D
Injection Date: 10-Nov-2018 15:02:30 Instrument ID: VMS_Q
Lims ID: 280-116017-A-12 Lab Sample ID: 280-116017-12
Client ID: 775VMW-4_1018
Operator ID: meierg ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

79 Trichloroethene, CAS: 79-01-6



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 426490

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/17/2018 01:38 Calibration End Date: 08/17/2018 03:10 Calibration ID: 33399

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-426490/18	P9170.D
Level 2	STD020 280-426490/19	P9171.D
Level 3	STD050 280-426490/20	P9172.D
Level 4	STD10 280-426490/21	P9173.D
Level 5	STD30 280-426490/22	P9174.D
Level 6	STD60 280-426490/23	P9175.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethylene oxide	0.0040 0.0028	0.0030	0.0034	0.0035	0.0032	Ave		0.0033				12.6		15.0			
Ethanol	+++++ 0.1398	0.2049	0.1346	0.1420	0.1428	Lin1	5.3503	0.1376							0.9980		0.9900
Isopropyl alcohol	0.9063 0.9081	1.0698	1.0756	0.8744	0.9793	Ave		0.9689				9.0		15.0			
Acetonitrile	0.0060 0.0097	0.0096	0.0077	0.0090	0.0103	Lin1	-0.038	0.0099							0.9970		0.9900
Diisopropyl ether	0.1752 0.1923	0.1853	0.1918	0.1935	0.1942	Ave		0.1887				3.9		15.0			
2-Chloro-1,3-butadiene	0.5788 0.6130	0.6071	0.6365	0.6321	0.6274	Ave		0.6158				3.5		15.0			
Tert-butyl ethyl ether	0.5609 0.5882	0.5712	0.5951	0.6044	0.6070	Ave		0.5878				3.1		15.0			
Ethyl acetate	0.0898 0.0752	0.0806	0.0835	0.0799	0.0803	Ave		0.0815				5.9		15.0			
Propionitrile	0.0069 0.0102	0.0072	0.0096	0.0095	0.0110	Lin2	-0.039	0.0102							0.9930		0.9900
Methacrylonitrile	0.0579 0.0621	0.0618	0.0655	0.0673	0.0677	Ave		0.0637				5.9		15.0			
Tert-amyl methyl ether	0.3999 0.4167	0.4063	0.4290	0.4427	0.4440	Ave		0.4231				4.4		15.0			
n-Butanol	+++++ 0.3934	0.0682	0.2366	0.3150	0.3255	Lin2	-15.50	0.3731							0.9950		0.9900
Methyl methacrylate	0.0134 0.0211	0.0158	0.0188	0.0203	0.0213	Lin2	-0.016	0.0210							0.9980		0.9900
2-Nitropropane	0.0209 0.0170	0.0174	0.0144	0.0160	0.0174	Ave		0.0172				12.5		15.0			
cis-1,4-Dichloro-2-butene	0.0598 0.0767	0.0614	0.0699	0.0731	0.0773	Ave		0.0697				10.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 426490

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/17/2018 01:38 Calibration End Date: 08/17/2018 03:10 Calibration ID: 33399

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	3.5237 3.9217	3.8837	3.8823	3.5770	3.9497	Ave		3.7897				5.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 426490

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/17/2018 01:38 Calibration End Date: 08/17/2018 03:10 Calibration ID: 33399

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-426490/18	P9170.D
Level 2	STD020 280-426490/19	P9171.D
Level 3	STD050 280-426490/20	P9172.D
Level 4	STD10 280-426490/21	P9173.D
Level 5	STD30 280-426490/22	P9174.D
Level 6	STD60 280-426490/23	P9175.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene oxide	FB	Ave	55095 2432536	82439	232947	482349	1337176	100 6000	200	500	1000	3000
Ethanol	TBAd9	Lin1	+++++ 308734	15149	25677	57666	172340	+++++ 3600	120	300	600	1800
Isopropyl alcohol	TBAd9	Ave	5408 334225	13183	34202	59198	197042	10.0 600	20.0	50.0	100	300
Acetonitrile	FB	Lin1	8288 847619	26273	52434	123762	424452	10.0 600	20.0	50.0	100	300
Diisopropyl ether	FB	Ave	24171 1672553	50724	130384	267129	803583	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	79843 5330862	166159	432651	872480	2596724	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	77371 5114795	156346	404497	834198	2512161	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	24762 1308584	44143	113520	220459	664417	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Lin2	9502 884182	19613	65116	130772	454511	10.0 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	79919 5396887	169213	445453	928950	2800228	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	55161 3623880	111211	291617	611104	1837612	1.00 60.0	2.00	5.00	10.0	30.0
n-Butanol	TBAd9	Lin2	+++++ 362003	2100	18805	53320	163738	+++++ 1500	50.0	125	250	750
Methyl methacrylate	FB	Lin2	3705 366520	8645	25623	55936	176545	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	5772 294946	9498	19641	44075	143999	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd4	Ave	3765 331267	7777	22008	48148	156984	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd4	Ave	110906 8470064	246155	611126	1178435	4011442	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 426490

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/17/2018 01:38 Calibration End Date: 08/17/2018 03:10 Calibration ID: 33399

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9170.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 17-Aug-2018 01:38:30 ALS Bottle#: 28 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD010
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:41:53 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:29:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.587	5.600	-0.013	97	149176	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.552	0.001	97	1724346	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.826	-0.006	91	308849	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	98	393427	12.5	12.5	
28 Ethylene oxide	43	4.517	4.515	0.002	99	55095	100.0	120.1	
33 Ethanol	45		4.934				ND	ND	
38 Propene oxide	58	5.160	5.157	0.003	96	175490	100.0	96.8	
42 Isopropyl alcohol	45	5.341	5.325	0.016	57	5408	10.0	9.35	
46 Acetonitrile	41	5.580	5.572	0.008	24	8288	10.0	9.95	
56 Isopropyl ether	87	6.180	6.179	0.001	96	24171	1.00	0.9284	
58 2-Chloro-1,3-butadiene	53	6.302	6.301	0.001	95	79843	1.00	0.9399	
59 Tert-butyl ethyl ether	59	6.459	6.458	0.001	98	77371	1.00	0.9542	
60 Ethyl acetate	43	6.602	6.601	0.001	95	24762	2.00	2.20	
65 Propionitrile	54	6.702	6.694	0.008	97	9502	10.0	10.5	
66 Methacrylonitrile	41	6.817	6.809	0.008	95	79919	10.0	9.09	
75 Tert-amyl methyl ether	73	7.360	7.359	0.001	53	55161	1.00	0.9451	
78 n-Butanol	56		7.602				ND	ND	U
81 Methyl methacrylate	100	7.989	7.981	0.008	92	3705	2.00	2.06	
88 2-Nitropropane	41	8.361	8.360	0.001	86	5772	2.00	2.44	
99 Tetrahydrothiophene	60		9.433				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.571	10.570	0.001	89	3765	2.00	1.72	
125 1,2,3-Trimethylbenzene	105	11.657	11.656	0.001	98	110906	1.00	0.9298	
16 1,3,5-Trichlorobenzene	180	12.973	12.972	0.001	92	35942	1.00	0.9345	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MV-Supp A_00032	Amount Added:	0.50	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

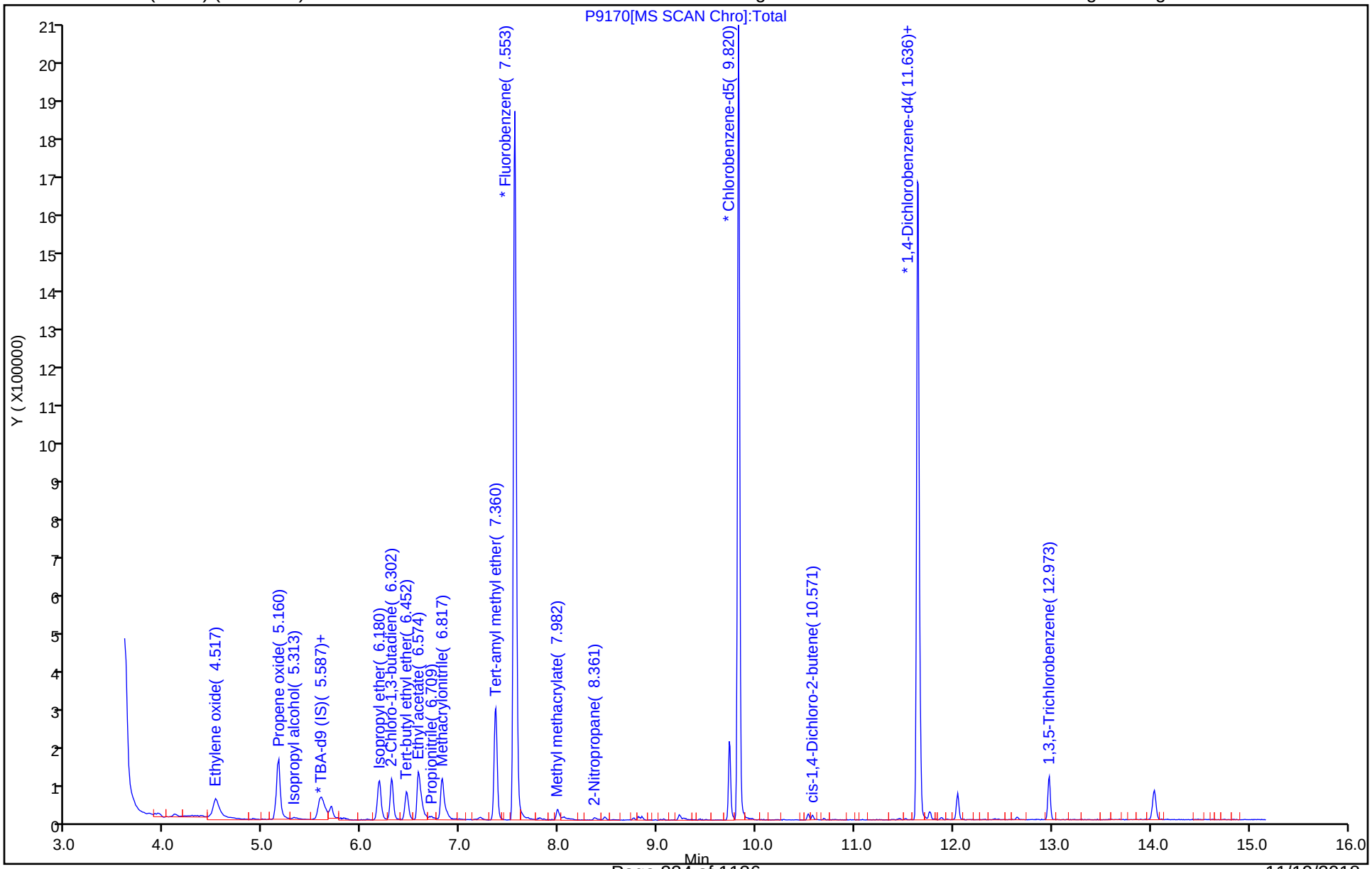
Report Date: 17-Aug-2018 20:41:54 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9170.D

Injection Date:	17-Aug-2018 01:38:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD010			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



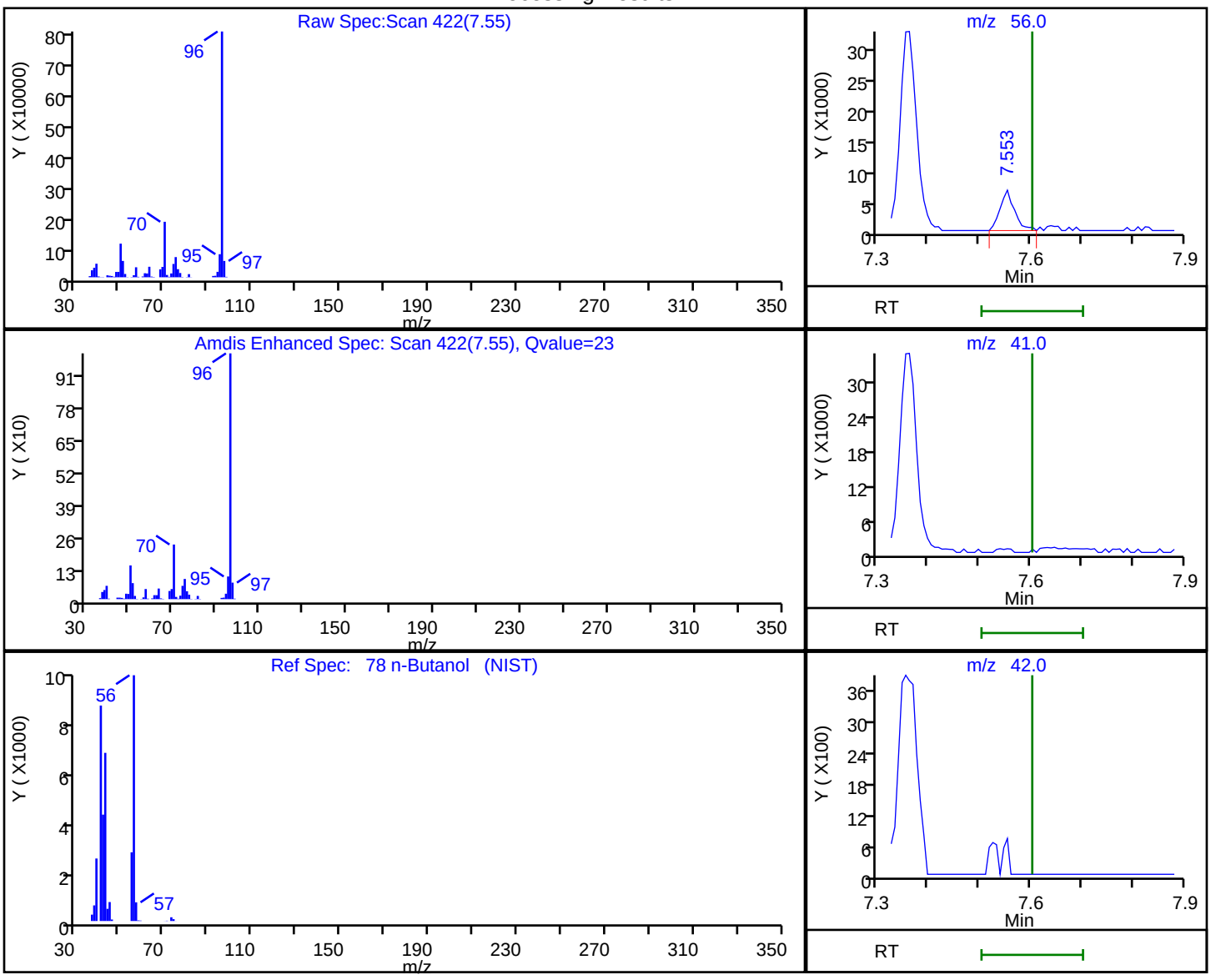
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9170.D				
Injection Date:	17-Aug-2018 01:38:30	Instrument ID:	VMS_P		
Lims ID:	STD010				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	28	Worklist Smp#:	18
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

78 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
7.55	56.00	13128	82.464491
7.62	41.00	0	
7.62	42.00	0	

Reviewer: seifertj, 17-Aug-2018 20:29:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9171.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 17-Aug-2018 01:56:30 ALS Bottle#: 29 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD020
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:41:57 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:31:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.600	0.000	98	154037	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.552	0.000	98	1710598	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.826	-0.007	91	303385	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	396136	12.5	12.5	
28 Ethylene oxide	43	4.515	4.515	0.000	99	82439	200.0	181.1	
33 Ethanol	45	4.934	4.934	0.000	14	15149	120.0	139.8	Ma
38 Propene oxide	58	5.157	5.157	0.000	96	360319	200.0	200.3	
42 Isopropyl alcohol	45	5.325	5.325	0.000	94	13183	20.0	22.1	
46 Acetonitrile	41	5.586	5.572	0.014	61	26273	20.0	23.3	M
56 Isopropyl ether	87	6.179	6.179	0.000	95	50724	2.00	1.96	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	94	166159	2.00	1.97	
59 Tert-butyl ethyl ether	59	6.458	6.458	0.000	97	156346	2.00	1.94	
60 Ethyl acetate	43	6.608	6.601	0.007	99	44143	4.00	3.96	
65 Propionitrile	54	6.708	6.694	0.014	97	19613	20.0	17.8	
66 Methacrylonitrile	41	6.816	6.809	0.007	96	169213	20.0	19.4	
75 Tert-amyl methyl ether	73	7.359	7.359	0.000	52	111211	2.00	1.92	
78 n-Butanol	56	7.624	7.602	0.022	28	2100	50.0	50.7	Ma
81 Methyl methacrylate	100	7.981	7.981	0.000	94	8645	4.00	3.79	
88 2-Nitropropane	41	8.367	8.360	0.007	98	9498	4.00	4.04	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	82	3255	4.00	3.42	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	92	7777	4.00	3.52	
125 1,2,3-Trimethylbenzene	105	11.663	11.656	0.007	99	246155	2.00	2.05	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	93	75609	2.00	1.95	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-Supp A_00032	Amount Added:	1.00	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

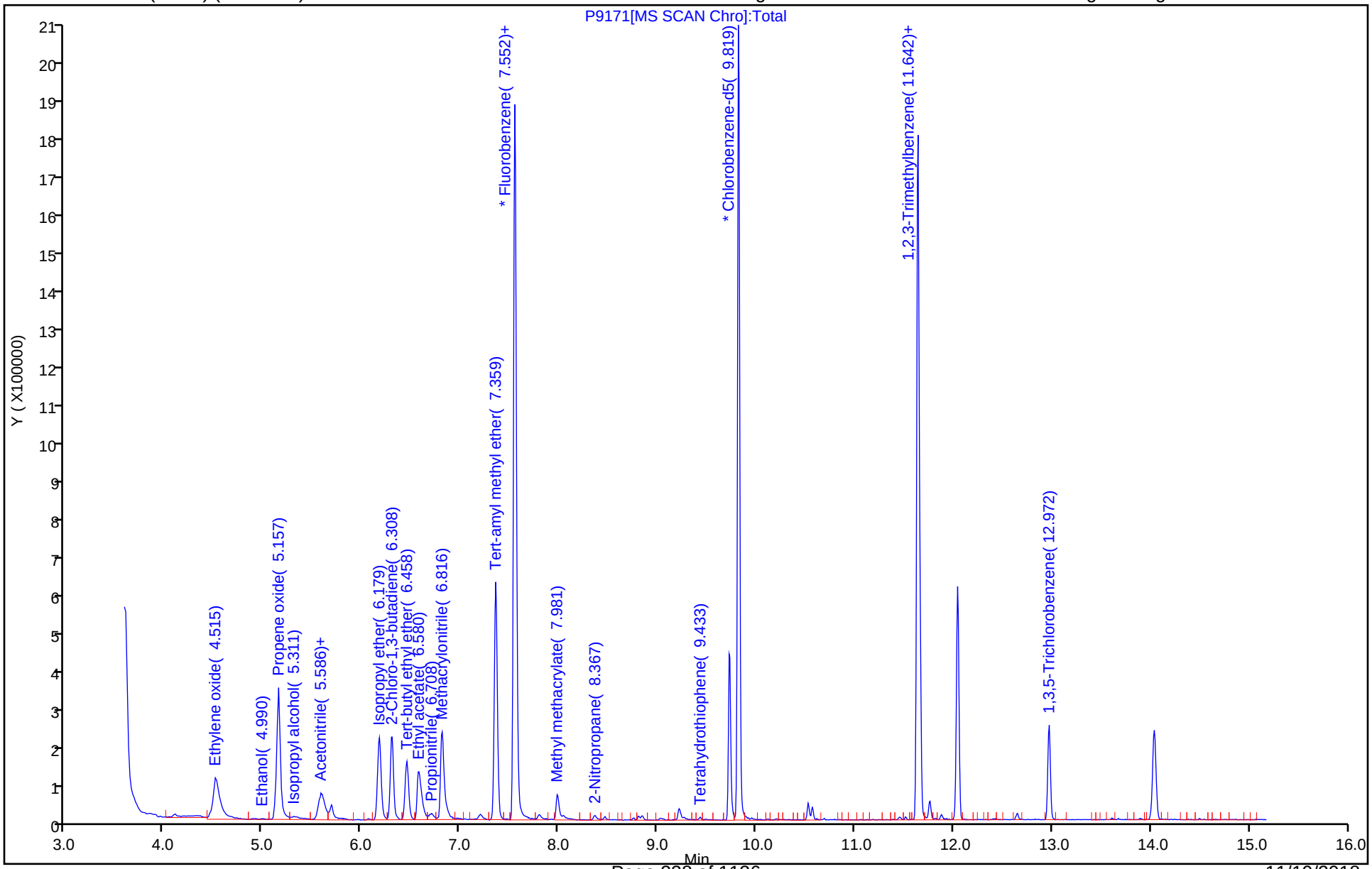
Report Date: 17-Aug-2018 20:41:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9171.D

Injection Date:	17-Aug-2018 01:56:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD020			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

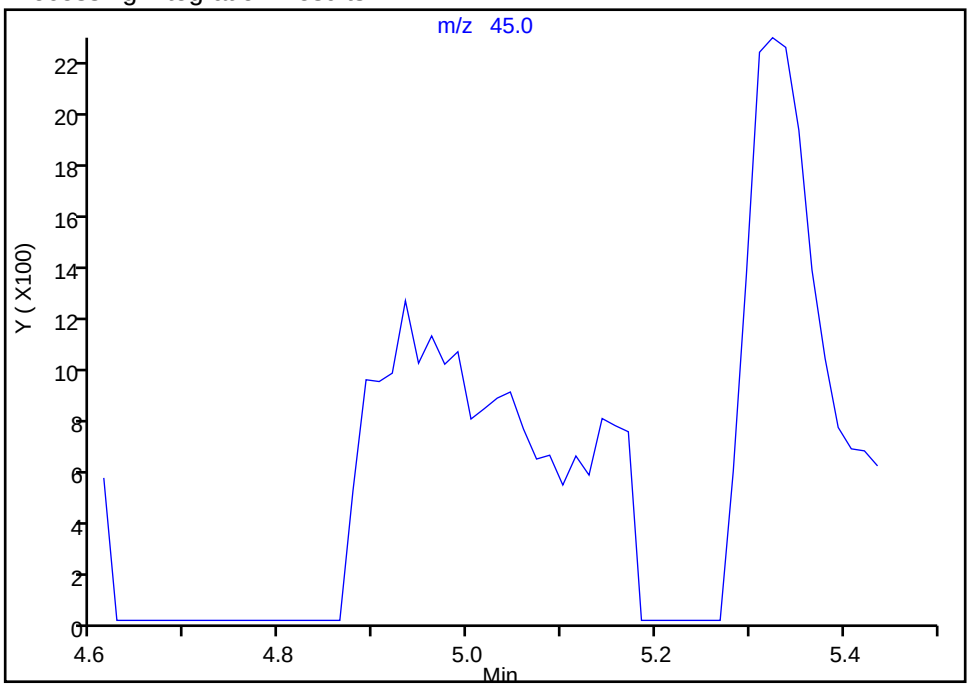
Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9171.D
Injection Date: 17-Aug-2018 01:56:30 Instrument ID: VMS_P
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 29 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

33 Ethanol, CAS: 64-17-5

Signal: 1

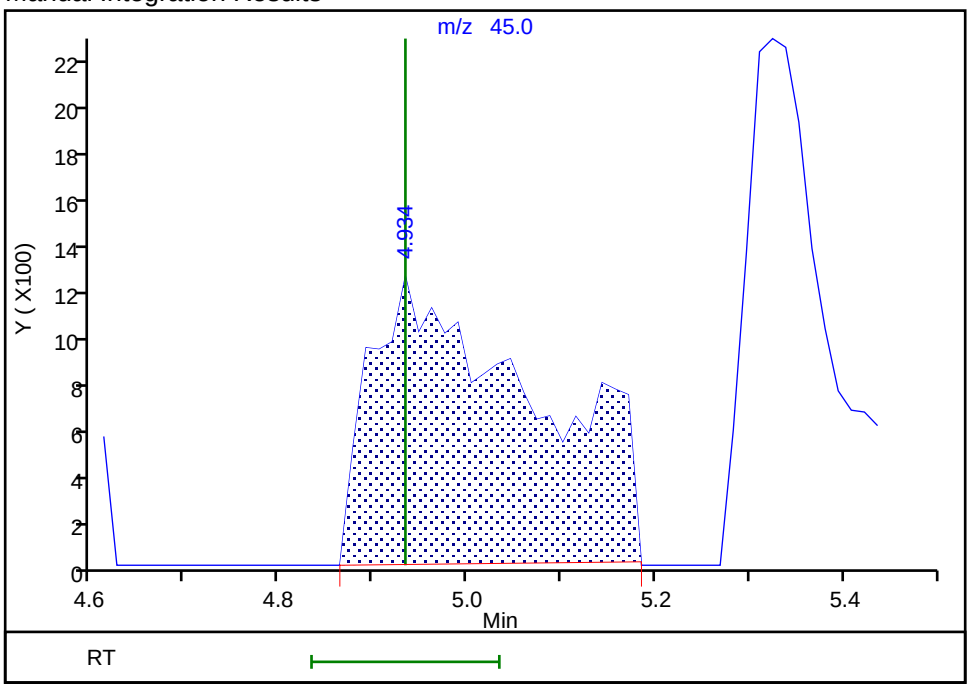
Not Detected
Expected RT: 4.93

Processing Integration Results



Manual Integration Results

RT: 4.93
Area: 15149
Amount: 139.7573
Amount Units: ug/l



Reviewer: seifertj, 17-Aug-2018 20:30:18
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

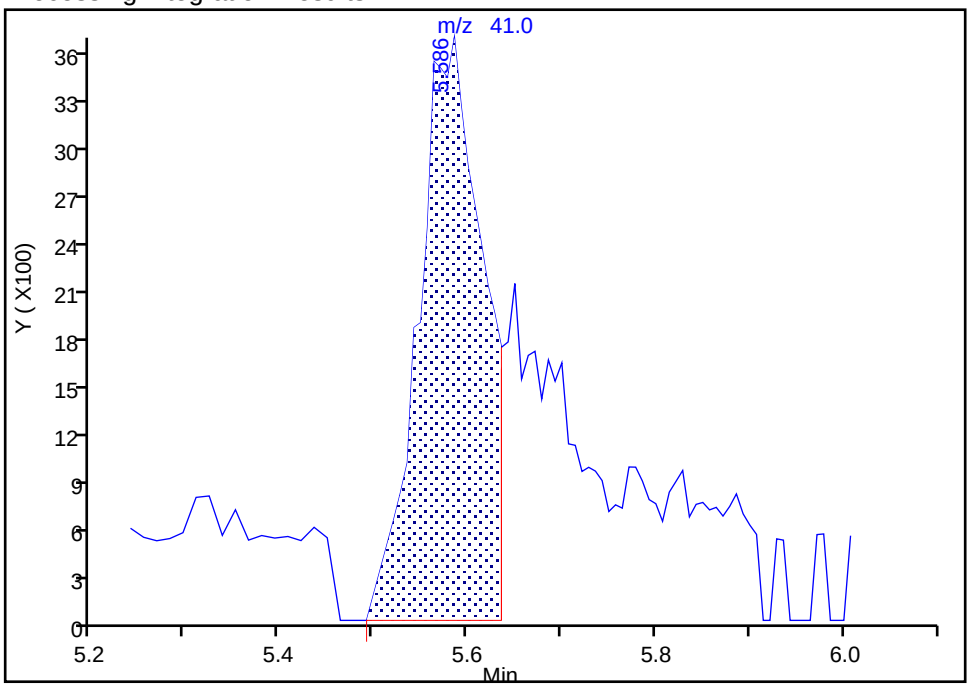
Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9171.D
Injection Date: 17-Aug-2018 01:56:30 Instrument ID: VMS_P
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 29 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

46 Acetonitrile, CAS: 75-05-8

Signal: 1

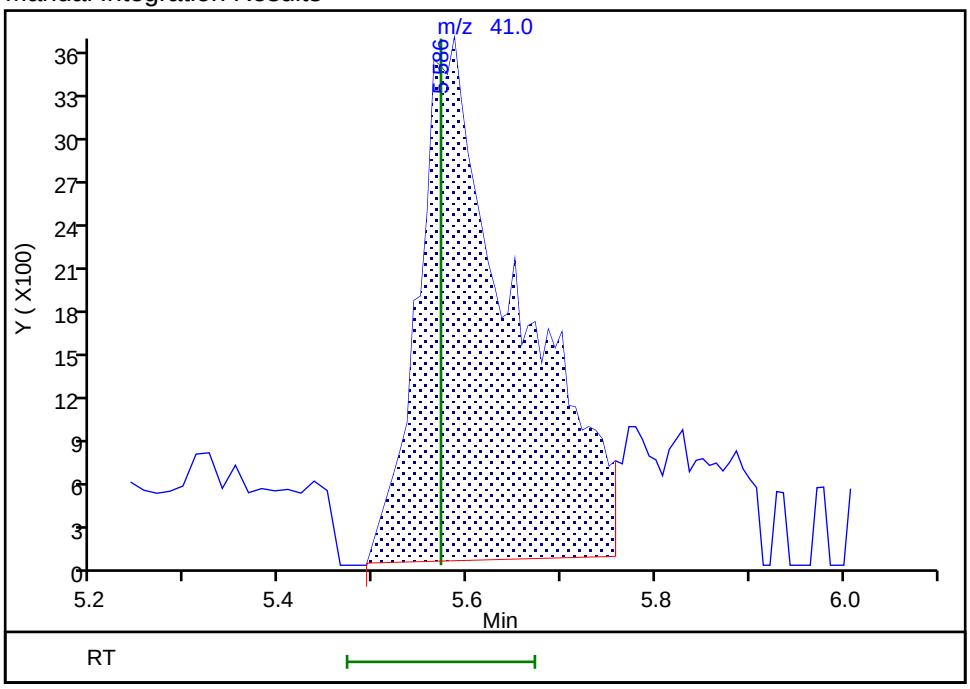
Processing Integration Results

RT: 5.59
Area: 17084
Amount: 18.388716
Amount Units: ug/l



Manual Integration Results

RT: 5.59
Area: 26273
Amount: 23.272369
Amount Units: ug/l



Reviewer: seifertj, 17-Aug-2018 20:30:38
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

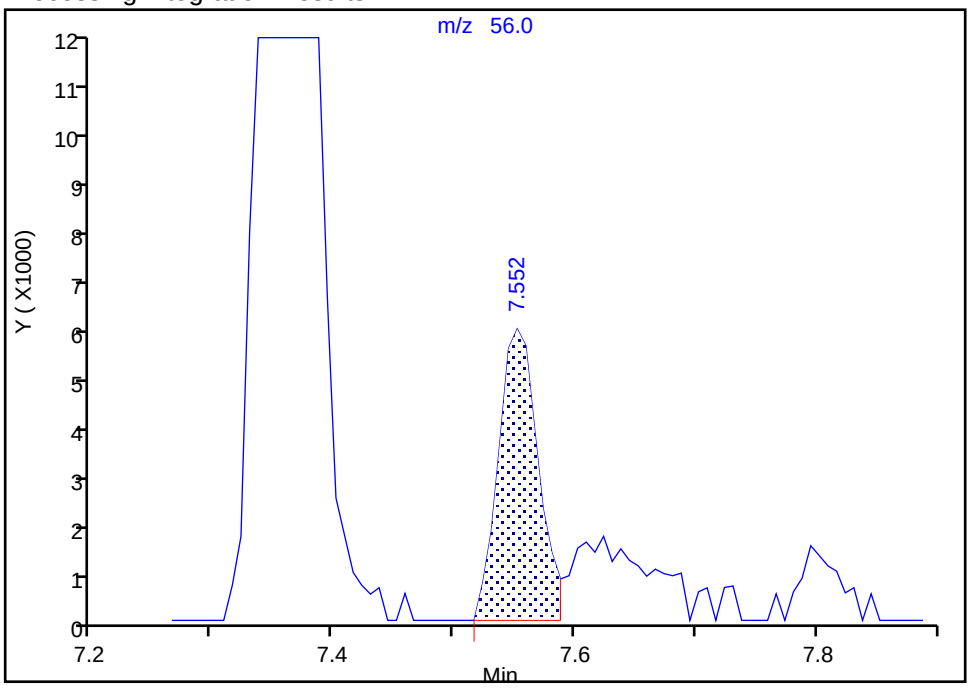
Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9171.D
Injection Date: 17-Aug-2018 01:56:30 Instrument ID: VMS_P
Lims ID: STD020
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 29 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

78 n-Butanol, CAS: 71-36-3

Signal: 1

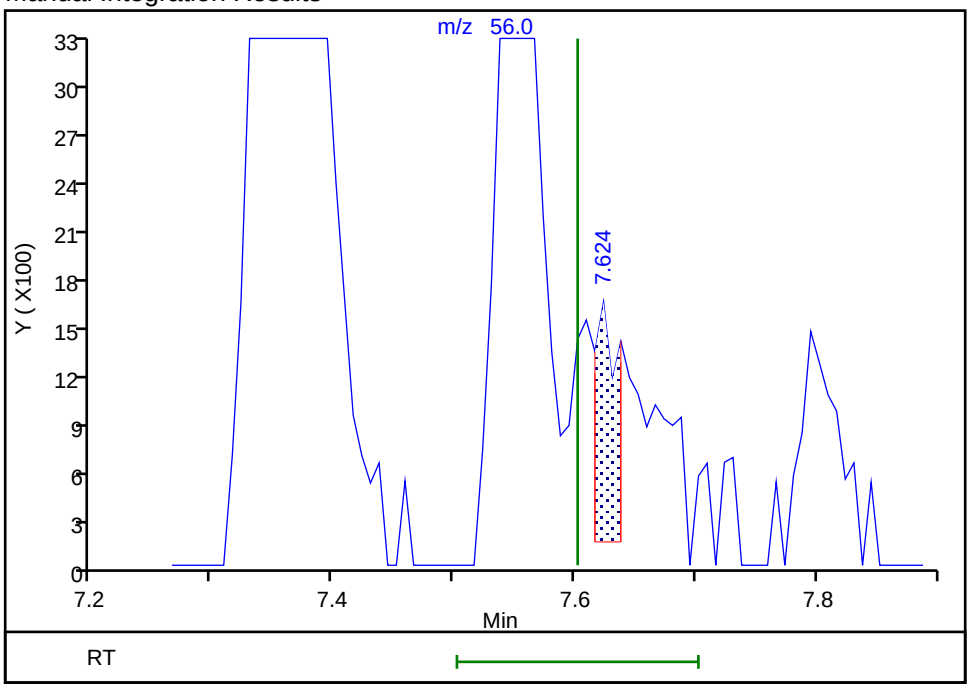
Processing Integration Results

RT: 7.55
Area: 12920
Amount: 100.0112
Amount Units: ug/l



Manual Integration Results

RT: 7.62
Area: 2100
Amount: 50.674112
Amount Units: ug/l



Reviewer: seifertj, 17-Aug-2018 20:32:20
Audit Action: Manually Integrated Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9172.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 17-Aug-2018 02:15:30 ALS Bottle#: 30 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD050
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:42:03 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:32:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.600	-0.006	97	158989	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.552	0.001	97	1699354	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.826	-0.006	91	304857	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.636	11.642	-0.006	97	393533	12.5	12.5	
28 Ethylene oxide	43	4.529	4.515	0.014	99	232947	500.0	515.2	
33 Ethanol	45	4.934	4.934	0.000	96	25677	300.0	254.5	
38 Propene oxide	58	5.158	5.157	0.001	96	945248	500.0	528.9	
42 Isopropyl alcohol	45	5.339	5.325	0.014	98	34202	50.0	55.5	a
46 Acetonitrile	41	5.580	5.572	0.008	96	52434	50.0	42.8	
56 Isopropyl ether	87	6.180	6.179	0.001	95	130384	5.00	5.08	
58 2-Chloro-1,3-butadiene	53	6.302	6.301	0.001	95	432651	5.00	5.17	
59 Tert-butyl ethyl ether	59	6.459	6.458	0.001	98	404497	5.00	5.06	
60 Ethyl acetate	43	6.609	6.601	0.008	100	113520	10.0	10.2	
65 Propionitrile	54	6.709	6.694	0.015	98	65116	50.0	50.6	
66 Methacrylonitrile	41	6.810	6.809	0.001	96	445453	50.0	51.4	
75 Tert-amyl methyl ether	73	7.360	7.359	0.001	53	291617	5.00	5.07	
78 n-Butanol	56	7.603	7.602	0.001	94	18805	125.0	120.8	
81 Methyl methacrylate	100	7.982	7.981	0.001	93	25623	10.0	9.77	
88 2-Nitropropane	41	8.361	8.360	0.001	97	19641	10.0	8.41	
99 Tetrahydrothiophene	60	9.434	9.433	0.001	97	9833	10.0	10.3	
110 cis-1,4-Dichloro-2-butene	53	10.571	10.570	0.001	96	22008	10.0	10.0	
125 1,2,3-Trimethylbenzene	105	11.657	11.656	0.001	99	611126	5.00	5.12	
16 1,3,5-Trichlorobenzene	180	12.973	12.972	0.001	93	191597	5.00	4.98	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-Supp A_00032	Amount Added:	2.50	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

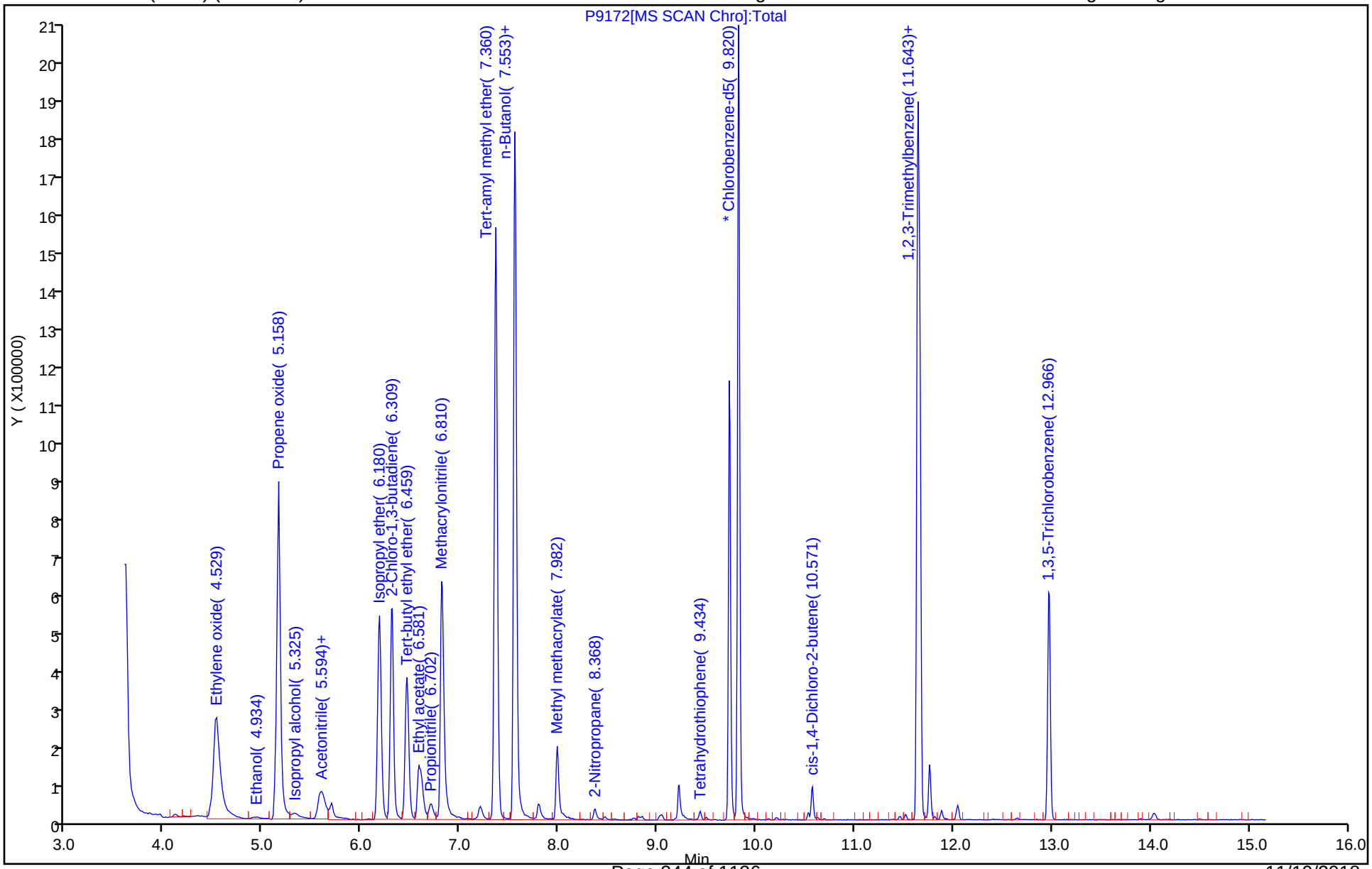
Report Date: 17-Aug-2018 20:42:03 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9172.D

Injection Date:	17-Aug-2018 02:15:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD050			Worklist Smp#:	20
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

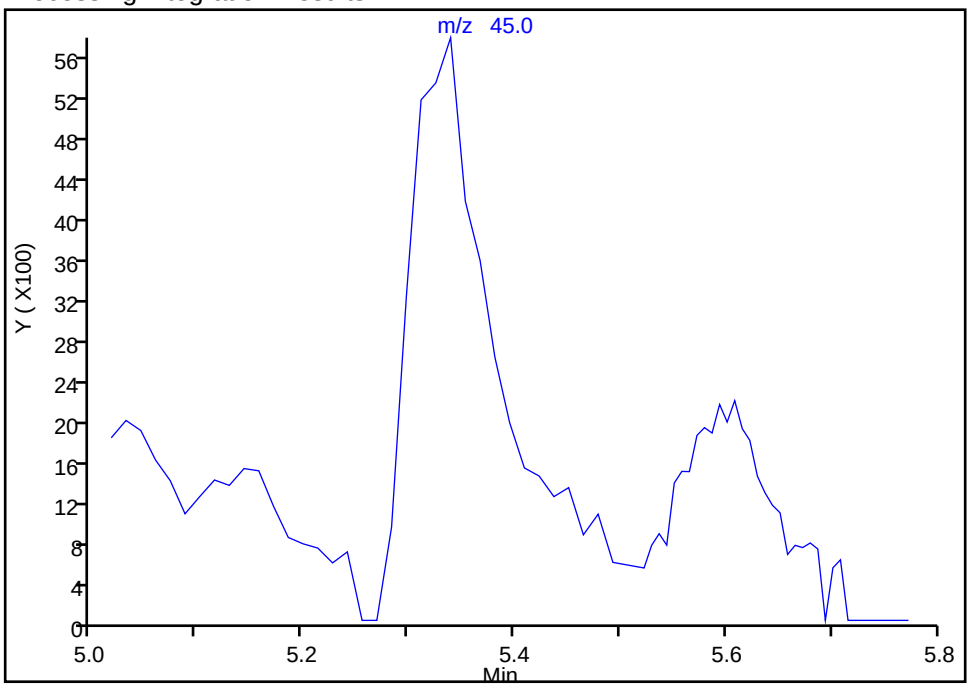
Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9172.D
Injection Date: 17-Aug-2018 02:15:30 Instrument ID: VMS_P
Lims ID: STD050
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 30 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

42 Isopropyl alcohol, CAS: 67-63-0

Signal: 1

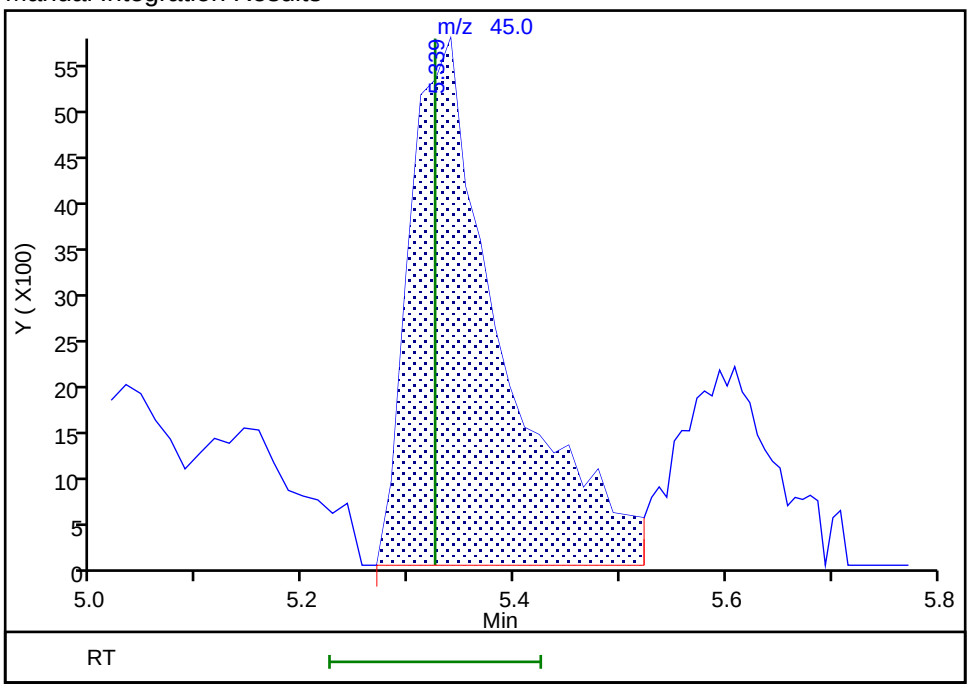
Not Detected
Expected RT: 5.32

Processing Integration Results



Manual Integration Results

RT: 5.34
Area: 34202
Amount: 55.505369
Amount Units: ug/l



Reviewer: seifertj, 17-Aug-2018 20:33:07
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9173.D
Lims ID: STD10
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 17-Aug-2018 02:33:30 ALS Bottle#: 31 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:42:08 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:34:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.593	0.000	98	169248	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1725386	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.819	0.000	91	312219	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	411809	12.5	12.5	
28 Ethylene oxide	43	4.518	4.518	0.000	99	482349	1000.0	1050.7	
33 Ethanol	45	4.937	4.937	0.000	99	57666	600.0	580.0	
38 Propene oxide	58	5.161	5.161	0.000	96	2004178	1000.0	1104.5	
42 Isopropyl alcohol	45	5.328	5.328	0.000	99	59198	100.0	90.2	
46 Acetonitrile	41	5.565	5.565	0.000	99	123762	100.0	94.5	
56 Isopropyl ether	87	6.180	6.180	0.000	95	267129	10.0	10.3	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	95	872480	10.0	10.3	
59 Tert-butyl ethyl ether	59	6.459	6.459	0.000	98	834198	10.0	10.3	
60 Ethyl acetate	43	6.602	6.602	0.000	99	220459	20.0	19.6	
65 Propionitrile	54	6.702	6.702	0.000	98	130772	100.0	96.3	
66 Methacrylonitrile	41	6.809	6.809	0.000	96	928950	100.0	105.6	
75 Tert-amyl methyl ether	73	7.360	7.360	0.000	54	611104	10.0	10.5	
78 n-Butanol	56	7.603	7.603	0.000	95	53320	250.0	252.6	
81 Methyl methacrylate	100	7.982	7.982	0.000	94	55936	20.0	20.1	
88 2-Nitropropane	41	8.361	8.361	0.000	99	44075	20.0	18.6	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	96	19864	20.0	20.3	
110 cis-1,4-Dichloro-2-butene	53	10.563	10.563	0.000	96	48148	20.0	21.0	
125 1,2,3-Trimethylbenzene	105	11.657	11.657	0.000	98	1178435	10.0	9.44	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	93	356055	10.0	8.84	

Reagents:

MV-Supp A_00032 Amount Added: 5.00 Units: uL
MV-568718-D_00010 Amount Added: 1.00 Units: uL

Report Date: 17-Aug-2018 20:42:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9173.D

Injection Date:	17-Aug-2018 02:33:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD10			Worklist Smp#:	21
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9174.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 17-Aug-2018 02:52:30 ALS Bottle#: 32 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD30
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:42:12 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:34:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.593	0.007	99	167674	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1724447	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.819	0.000	91	311966	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	423182	12.5	12.5	
28 Ethylene oxide	43	4.514	4.518	-0.004	99	1337176	3000.0	2914.3	
33 Ethanol	45	4.933	4.937	-0.004	96	172340	1800.0	1828.0	
38 Propene oxide	58	5.157	5.161	-0.004	96	5531103	3000.0	3049.9	
42 Isopropyl alcohol	45	5.324	5.328	-0.004	100	197042	300.0	303.2	a
46 Acetonitrile	41	5.564	5.565	-0.001	100	424452	300.0	314.7	
56 Isopropyl ether	87	6.179	6.180	-0.001	95	803583	30.0	30.9	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	94	2596724	30.0	30.6	
59 Tert-butyl ethyl ether	59	6.458	6.459	-0.001	98	2512161	30.0	31.0	
60 Ethyl acetate	43	6.601	6.602	-0.001	100	664417	60.0	59.1	
65 Propionitrile	54	6.694	6.702	-0.008	99	454511	300.0	325.3	
66 Methacrylonitrile	41	6.808	6.809	-0.001	95	2800228	300.0	318.6	
75 Tert-amyl methyl ether	73	7.359	7.360	-0.001	96	1837612	30.0	31.5	
78 n-Butanol	56	7.588	7.603	-0.015	93	163738	750.0	695.8	
81 Methyl methacrylate	100	7.981	7.982	-0.001	93	176545	60.0	61.8	
88 2-Nitropropane	41	8.360	8.361	-0.001	98	143999	60.0	60.8	
99 Tetrahydrothiophene	60	9.425	9.433	-0.008	96	62741	60.0	64.1	
110 cis-1,4-Dichloro-2-butene	53	10.562	10.563	-0.001	94	156984	60.0	66.5	
125 1,2,3-Trimethylbenzene	105	11.656	11.657	-0.001	99	4011442	30.0	31.3	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	94	1330354	30.0	32.2	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-Supp A_00032	Amount Added:	15.00	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

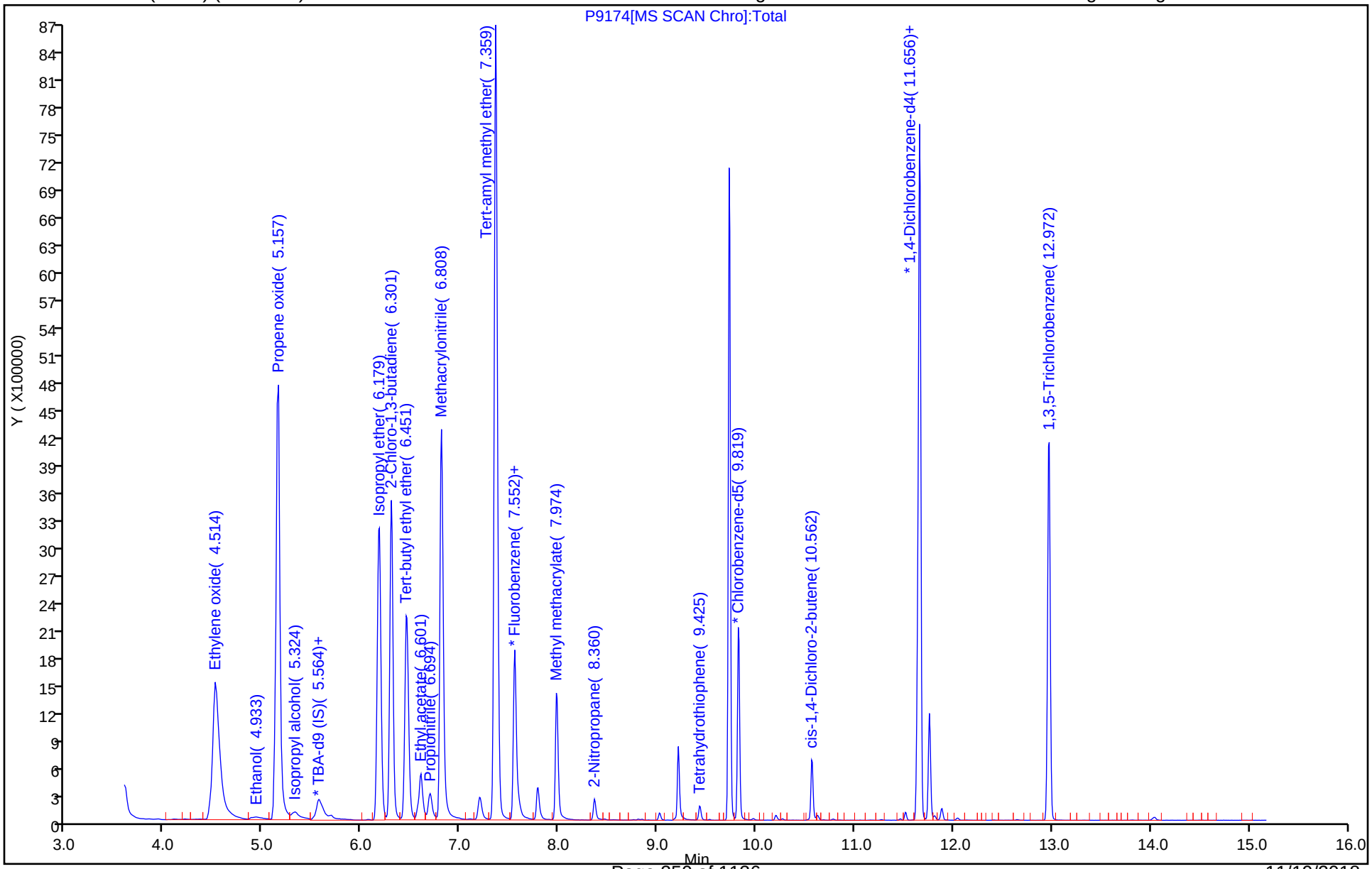
Report Date: 17-Aug-2018 20:42:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9174.D

Injection Date:	17-Aug-2018 02:52:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD30			Worklist Smp#:	22
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

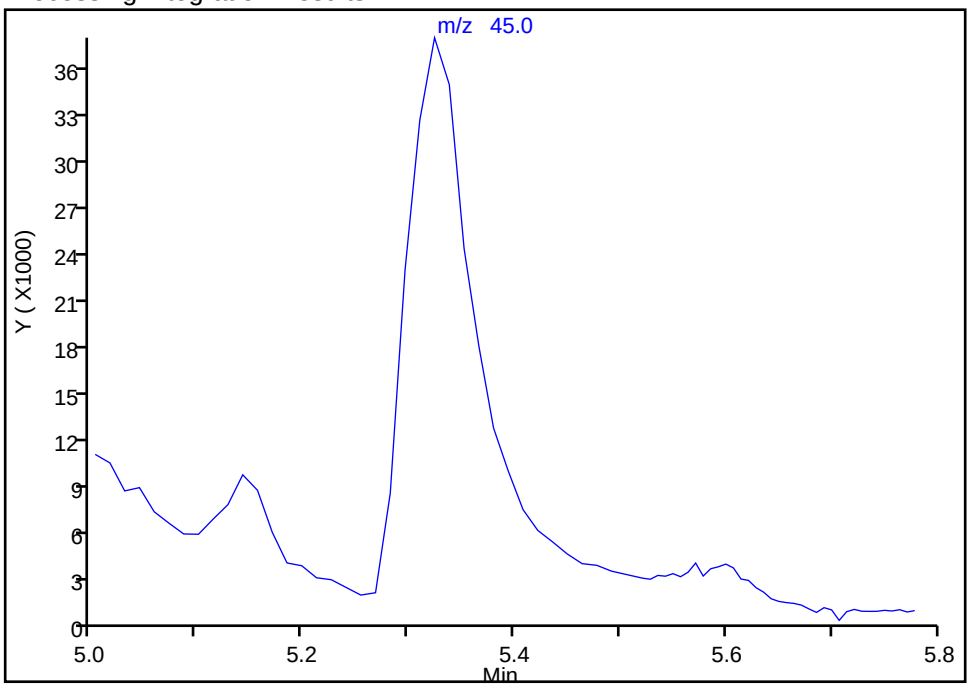
Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9174.D
Injection Date: 17-Aug-2018 02:52:30 Instrument ID: VMS_P
Lims ID: STD30
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 32 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

42 Isopropyl alcohol, CAS: 67-63-0

Signal: 1

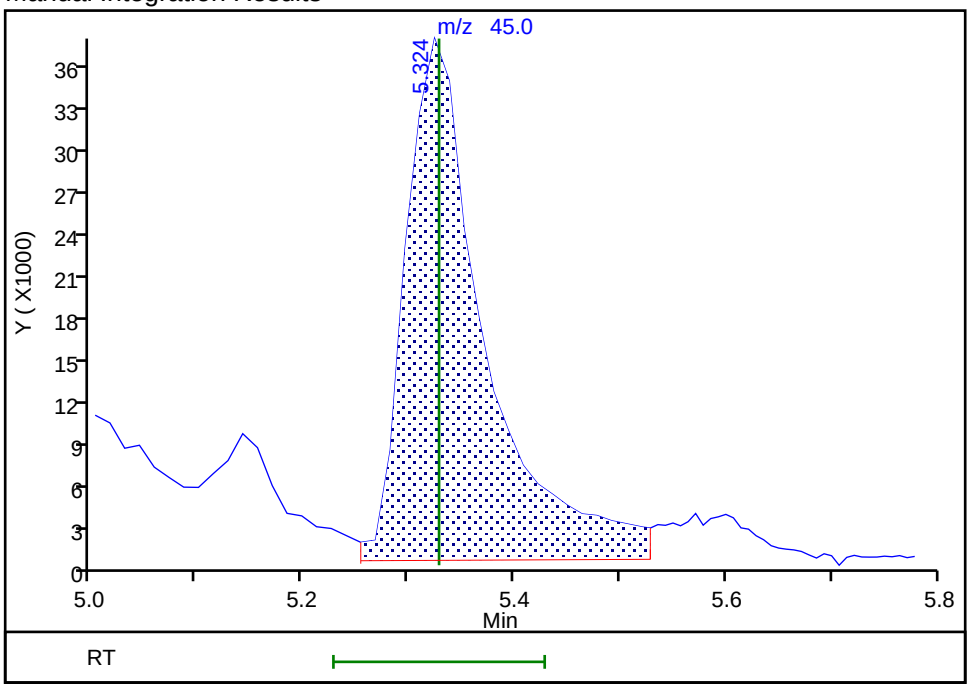
Not Detected
Expected RT: 5.33

Processing Integration Results



Manual Integration Results

RT: 5.32
Area: 197042
Amount: 303.2101
Amount Units: ug/l



Reviewer: seifertj, 17-Aug-2018 20:34:22
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 17-Aug-2018 03:10:30 ALS Bottle#: 33 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub123

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:42:15 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:40:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.593	0.007	97	153352	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1811652	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.819	0.007	91	327735	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	449959	12.5	12.5	
28 Ethylene oxide	43	4.516	4.518	-0.002	100	2432536	6000.0	5046.4	
33 Ethanol	45	4.935	4.937	-0.002	97	308734	3600.0	3617.8	
38 Propene oxide	58	5.158	5.161	-0.003	96	9737668	6000.0	5111.0	
42 Isopropyl alcohol	45	5.326	5.328	-0.002	100	334225	600.0	562.3	
46 Acetonitrile	41	5.571	5.565	0.006	100	847619	600.0	594.8	
56 Isopropyl ether	87	6.179	6.180	-0.001	95	1672553	60.0	61.1	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	94	5330862	60.0	59.7	
59 Tert-butyl ethyl ether	59	6.458	6.459	-0.001	98	5114795	60.0	60.0	
60 Ethyl acetate	43	6.601	6.602	-0.001	100	1308584	120.0	110.7	
65 Propionitrile	54	6.694	6.702	-0.008	99	884182	600.0	599.1	
66 Methacrylonitrile	41	6.808	6.809	-0.001	95	5396887	600.0	584.4	
75 Tert-amyl methyl ether	73	7.359	7.360	-0.001	96	3623880	60.0	59.1	
78 n-Butanol	56	7.588	7.603	-0.015	94	362003	1500.0	1623.1	
81 Methyl methacrylate	100	7.981	7.982	-0.001	93	366520	120.0	121.4	
88 2-Nitropropane	41	8.360	8.361	-0.001	99	294946	120.0	118.5	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	96	127376	120.0	123.9	
110 cis-1,4-Dichloro-2-butene	53	10.562	10.563	-0.001	91	331267	120.0	132.1	
125 1,2,3-Trimethylbenzene	105	11.656	11.657	-0.001	98	8470064	60.0	62.1	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	95	3000345	60.0	68.2	

Reagents:

MV-Supp A_00032 Amount Added: 30.00 Units: uL
MV-568718-D_00010 Amount Added: 1.00 Units: uL

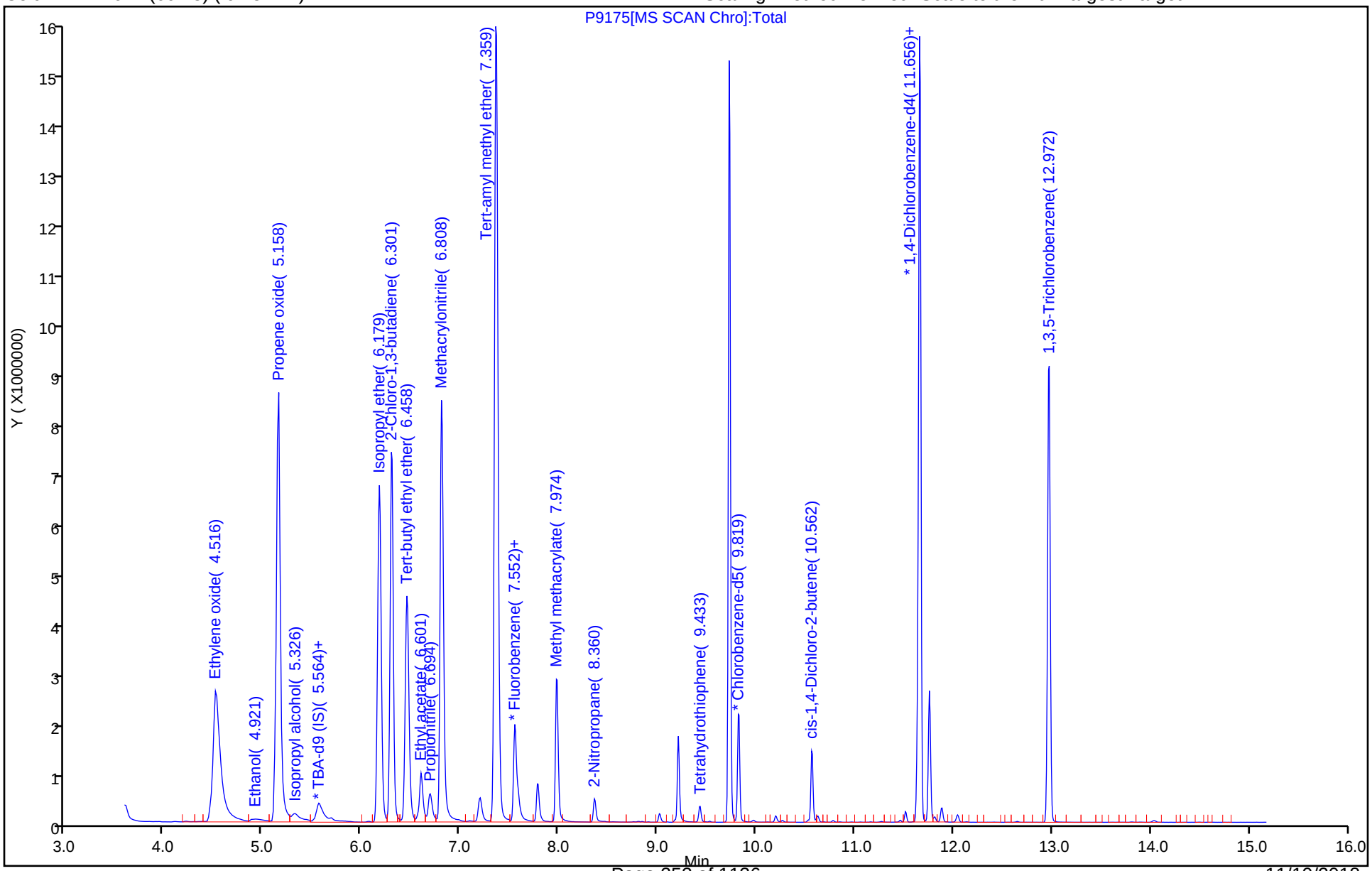
Report Date: 17-Aug-2018 20:42:15 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Injection Date:	17-Aug-2018 03:10:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	STD60			Worklist Smp#:	23
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434433/10	P1532.D
Level 2	STD01 280-434433/11	P1533.D
Level 3	STD02 280-434433/12	P1534.D
Level 4	STD05 280-434433/13	P1535.D
Level 5	ICIS 280-434433/14	P1536.D
Level 6	STD25 280-434433/15	P1537.D
Level 7	STD60 280-434433/16	P1538.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.5593 0.5814	0.5744 0.5541	0.5568	0.4972	0.6191	Ave		0.5632				6.5		15.0			
Chloromethane	0.3959 0.3699	0.3869 0.3418	0.3771	0.3478	0.3759	Ave		0.3707			0.1000	5.3		15.0			
Vinyl chloride	0.3763 0.3836	0.3854 0.3615	0.3845	0.3629	0.3942	Ave		0.3783				3.2		30.0			
Bromomethane	0.3373 0.3252	0.3481 0.2751	0.3306	0.3273	0.3444	Ave		0.3269				7.5		15.0			
Chloroethane	0.3270 0.3072	0.3350 0.2553	0.3166	0.3001	0.3275	Ave		0.3098				8.7		15.0			
Dichlorofluoromethane	0.8116 0.7824	0.7997 0.7443	0.8038	0.7723	0.7957	Ave		0.7871				2.9		15.0			
Trichlorofluoromethane	0.7188 0.7153	0.7215 0.7004	0.7284	0.6899	0.7157	Ave		0.7129				1.9		15.0			
Ethyl ether	0.1524 0.1592	0.1501 0.1551	0.1456	0.1502	0.1604	Ave		0.1533				3.5		15.0			
Acrolein	0.0113 0.0180	0.0133 0.0174	0.0155	0.0159	0.0176	Lin2	-0.033	0.0174							0.9980		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2935 0.3101	0.3003 0.3051	0.2983	0.2963	0.3014	Ave		0.3007				1.8		15.0			
Acetone	0.0344 0.0357	0.0378 0.0354	0.0346	0.0341	0.0367	Ave		0.0355				3.8		15.0			
1,1-Dichloroethene	0.3541 0.3801	0.3651 0.3612	0.3641	0.3565	0.3776	Ave		0.3655				2.7		30.0			
Methyl iodide	0.4923 0.5224	0.4805 0.5166	0.5037	0.5006	0.5357	Ave		0.5074				3.7		15.0			
Methyl acetate	+++++ 0.0746	0.0962 0.0743	0.0846	0.0797	0.0758	Ave		0.0809				10.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.6225 0.6915	0.6251 0.6446	0.6361	0.6529	0.6963	Ave		0.6527				4.6		15.0			
Carbon disulfide	1.4486 1.5315	1.4515 1.4028	1.4922	1.4854	1.5808	Ave		1.4847				3.9		15.0			
t-Butyl alcohol	0.4640 1.2977	0.5374 1.2754	1.2747	1.0684	1.3021	Lin1	-4.778	1.2946							0.9980		0.9900
Methylene Chloride	0.3748 0.2943	0.3389 0.2797	0.3148	0.2980	0.3029	Ave		0.3148				10.3		15.0			
Methyl tert-butyl ether	0.3708 0.4152	0.3866 0.4048	0.3923	0.3937	0.4129	Ave		0.3966				4.0		15.0			
Acrylonitrile	0.0063 0.0343	0.0205 0.0340	0.0210	0.0294	0.0332	Lin2	-0.138	0.0331							0.9920		0.9900
trans-1,2-Dichloroethene	0.3467 0.3655	0.3644 0.3532	0.3606	0.3546	0.3707	Ave		0.3594				2.3		15.0			
Hexane	3.3878 3.3389	3.3784 3.1097	3.3685	3.4745	3.4567	Ave		3.3592				3.6		15.0			
Vinyl acetate	0.1833 0.3061	0.2466 0.2983	0.2467	0.2511	0.3043	Lin2	-0.112	0.2931							0.9950		0.9900
1,1-Dichloroethane	0.6230 0.6410	0.6309 0.6176	0.6299	0.6210	0.6457	Ave		0.6299			0.1000	1.7		15.0			
2-Butanone (MEK)	+++++ 0.0543	0.0453 0.0543	0.0456	0.0497	0.0551	Ave		0.0507				8.9		15.0			
cis-1,2-Dichloroethene	0.3305 0.3523	0.3333 0.3411	0.3406	0.3343	0.3489	Ave		0.3401				2.4		15.0			
sec-Butyl Alcohol	+++++ 1.1391	0.8853 1.1648	0.5555	0.6791	0.8601	Lin	-51.88	1.1916							0.9980		0.9900
2,2-Dichloropropane	0.4908 0.5687	0.5275 0.5655	0.5223	0.5112	0.5535	Ave		0.5342				5.5		15.0			
Bromochloromethane	0.0953 0.1071	0.0973 0.1064	0.1002	0.1001	0.1063	Ave		0.1018				4.7		15.0			
Chloroform	0.5231 0.5756	0.5416 0.5722	0.5495	0.5530	0.5677	Ave		0.5547				3.4		30.0			
Tetrahydrofuran	+++++ 0.0300	+++++ 0.0291	0.0235	0.0255	0.0261	Ave		0.0268				9.9		15.0			
1,1,1-Trichloroethane	0.5211 0.6082	0.5326 0.6109	0.5551	0.5483	0.5924	Ave		0.5669				6.5		15.0			
Isobutyl alcohol	+++++ 0.5848	+++++ 0.5591	0.3218	0.2107	0.3880	Lin	-29.06	0.5838							0.9960		0.9900
Cyclohexane	0.7503 0.7970	0.7857 0.7381	0.7701	0.7854	0.8095	Ave		0.7766				3.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.5076 0.5543	0.5104 0.5437	0.5174	0.5193	0.5566	Ave		0.5299				4.0		15.0			
Carbon tetrachloride	0.4056 0.5310	0.4306 0.5441	0.4524	0.4657	0.5033	Ave		0.4761				10.9		15.0			
1,2-Dichloroethane	0.2786 0.3167	0.2786 0.3220	0.2846	0.2937	0.3088	Ave		0.2976				6.1		15.0			
Benzene	1.2971 1.3624	1.3414 1.2694	1.3350	1.3236	1.3723	Ave		1.3287				2.7		15.0			
Trichloroethene	0.3334 0.3681	0.3249 0.3681	0.3421	0.3409	0.3513	Ave		0.3470				4.8		15.0			
2-Pentanone	+++++ 0.0710	0.0452 0.0715	0.0498	0.0584	0.0667	Lin2	-0.109	0.0689							0.9950		0.9900
Methylcyclohexane	0.5933 0.6596	0.6191 0.6272	0.6287	0.6311	0.6590	Ave		0.6311				3.6		15.0			
1,2-Dichloropropane	0.2784 0.3023	0.2919 0.2832	0.2880	0.2886	0.3025	Ave		0.2907				3.1		30.0			
1,4-Dioxane	+++++ 0.0009	+++++ 0.0009	0.0004	0.0007	0.0008	Lin2	-0.020	0.0009							0.9990		0.9900
Dibromomethane	0.0916 0.1062	0.0977 0.1054	0.0954	0.0993	0.1045	Ave		0.1000				5.6		15.0			
Bromodichloromethane	0.2737 0.3473	0.2969 0.3532	0.2892	0.3084	0.3320	Ave		0.3144				9.7		15.0			
2-Chloroethyl vinyl ether	0.0338 0.0728	0.0410 0.0754	0.0475	0.0559	0.0645	Lin1	-0.033	0.0739							0.9960		0.9900
cis-1,3-Dichloropropene	1.1954 1.7863	1.3352 1.7940	1.4248	1.5344	1.7179	Lin2	-0.291	1.7016							0.9950		0.9900
4-Methyl-2-pentanone (MIBK)	0.0827 0.1114	0.0846 0.1072	0.0934	0.0992	0.1083	Ave		0.0981				11.8		15.0			
Toluene	1.3250 1.4094	1.3493 1.3052	1.3577	1.3410	1.4032	Ave		1.3558				2.8		30.0			
Ethyl methacrylate	0.4238 0.7718	0.4789 0.7886	0.5591	0.6251	0.7356	Lin1	-0.282	0.7814							0.9980		0.9900
trans-1,3-Dichloropropene	0.1540 0.2680	0.1721 0.2722	0.1892	0.2180	0.2485	Lin1	-0.095	0.2695							0.9980		0.9900
1,1,2-Trichloroethane	0.1209 0.1379	0.1327 0.1350	0.1266	0.1251	0.1357	Ave		0.1305				4.9		15.0			
2-Hexanone	0.1786 0.3551	0.2333 0.3501	0.2733	0.3189	0.3421	Lin2	-0.359	0.3425							0.9970		0.9900
1,3-Dichloropropane	1.2052 1.3111	1.1997 1.2826	1.2340	1.2638	1.3072	Ave		1.2577				3.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.1508 1.3748	1.1949 1.4180	1.1966	1.2779	1.3367	Ave		1.2785				8.0		15.0			
Dibromochloromethane	0.4989 0.8136	0.5922 0.8433	0.6151	0.6908	0.7663	Lin2	-0.156	0.7748							0.9930		0.9900
1,2-Dibromoethane	0.4235 0.6042	0.5193 0.6062	0.5395	0.5610	0.5966	Ave		0.5501				11.8		15.0			
1-Chlorohexane	2.0433 2.6174	2.2939 2.5133	2.2687	2.4354	2.5784	Ave		2.3929				8.5		15.0			
Chlorobenzene	3.5852 3.7996	3.6467 3.6680	3.6310	3.6877	3.7567	Ave		3.6822			0.3000	2.0		15.0			
Ethylbenzene	2.1664 2.6094	2.3655 2.4850	2.3308	2.4724	2.5497	Ave		2.4256				6.2		30.0			
1,1,1,2-Tetrachloroethane	0.9447 1.2860	0.9708 1.3319	1.0285	1.1359	1.2076	Ave		1.1293				13.6		15.0			
m,p-Xylene	2.6062 3.0314	2.6900 2.9564	2.6776	2.8982	3.0361	Ave		2.8423				6.4		15.0			
o-Xylene	2.2941 2.8541	2.4911 2.6852	2.5459	2.7072	2.8233	Ave		2.6287				7.5		15.0			
Styrene	2.9292 4.2332	3.1838 3.9265	3.4569	3.8056	4.0872	Ave		3.6603				13.2		15.0			
Bromoform	+++++ 0.3522	0.2397 0.3827	0.2730	0.2784	0.3170	Lin2	-0.119	0.3438			0.1000				0.9900		0.9900
Isopropylbenzene	4.7764 5.5416	5.0032 4.8380	5.0944	5.2145	5.5940	Ave		5.1517				6.2		15.0			
Cyclohexanone	0.0126 0.0224	0.0146 0.0228	0.0159	0.0185	0.0206	Lin2	-0.193	0.0209							0.9900		0.9900
1,1,2,2-Tetrachloroethane	0.3733 0.4794	0.4999 0.4417	0.4573	0.4608	0.4870	Ave		0.4570			0.3000	9.2		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1281	+++++ 0.1236	0.0906	0.1087	0.1122	Ave		0.1127				13.0		15.0			
1,2,3-Trichloropropane	0.0967 0.1309	0.1217 0.1231	0.1198	0.1207	0.1350	Ave		0.1211				10.1		15.0			
N-Propylbenzene	1.2659 1.5750	1.4012 1.4192	1.3857	1.4226	1.5604	Ave		1.4328				7.4		15.0			
Bromobenzene	0.7882 0.9713	0.8558 0.9058	0.8437	0.8635	0.9237	Ave		0.8789				6.8		15.0			
1,3,5-Trimethylbenzene	3.7113 4.6012	3.9853 4.1260	4.1280	4.1984	4.5200	Ave		4.1815				7.3		15.0			
2-Chlorotoluene	1.1260 1.1979	1.1042 1.1114	1.0534	1.1201	1.1843	Ave		1.1282				4.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	0.9773 1.1762	1.0672 1.1186	1.0455	1.1012	1.1399	Ave		1.0894				6.0		15.0			
tert-Butylbenzene	3.5294 4.5504	3.8332 4.1762	3.9327	4.1102	4.4260	Ave		4.0797				8.6		15.0			
1,2,4-Trimethylbenzene	3.7060 4.5296	4.1382 4.0949	4.1268	4.1880	4.5216	Ave		4.1864				6.7		15.0			
sec-Butylbenzene	0.9161 1.2727	1.0584 1.1741	1.1257	1.1579	1.2254	Ave		1.1329				10.4		15.0			
4-Isopropyltoluene	4.2319 5.1859	4.6574 4.5472	4.7093	4.8271	5.0960	Ave		4.7507				6.9		15.0			
1,3-Dichlorobenzene	1.8937 2.0637	1.9282 1.9623	1.9621	1.9155	2.0371	Ave		1.9661				3.2		15.0			
1,4-Dichlorobenzene	1.9588 2.0205	1.9505 1.9122	1.8918	1.9018	2.0286	Ave		1.9520				2.8		15.0			
n-Butylbenzene	4.6104 5.5790	5.1842 4.7544	5.1203	5.3399	5.5906	Ave		5.1684				7.3		15.0			
1,2-Dichlorobenzene	1.5022 1.6584	1.5994 1.5667	1.5383	1.5693	1.6375	Ave		1.5817				3.5		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0595	0.0265 0.0600	0.0376	0.0483	0.0547	Lin2	-0.034	0.0584							0.9960		0.9900
1,2,4-Trichlorobenzene	0.9649 1.1116	1.0055 1.0412	0.9461	1.0388	1.0933	Ave		1.0288				6.0		15.0			
Hexachlorobutadiene	0.7264 0.8420	0.7722 0.8082	0.8134	0.7845	0.8191	Ave		0.7951				4.8		15.0			
Naphthalene	1.2315 1.4745	1.2483 1.3373	1.2386	1.3391	1.4602	Ave		1.3328				7.7		15.0			
1,2,3-Trichlorobenzene	0.7441 0.8147	0.7696 0.7546	0.7234	0.7624	0.8292	Ave		0.7711				4.9		15.0			
Dibromofluoromethane (Surr)	0.2304 0.2609	0.2406 +++++	0.2406	0.2405	0.2452	Ave		0.2430				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2192 0.2427	0.2444 +++++	0.2299	0.2297	0.2340	Ave		0.2333				4.0		15.0			
Toluene-d8 (Surr)	4.8943 5.5371	5.2380 +++++	5.2448	5.4902	5.3298	Ave		5.2890				4.3		15.0			
4-Bromofluorobenzene (Surr)	+++++ 1.1856	1.0712 +++++	1.1205	1.0845	1.1202	Ave		1.1164				4.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434433/10	P1532.D
Level 2	STD01 280-434433/11	P1533.D
Level 3	STD02 280-434433/12	P1534.D
Level 4	STD05 280-434433/13	P1535.D
Level 5	ICIS 280-434433/14	P1536.D
Level 6	STD25 280-434433/15	P1537.D
Level 7	STD60 280-434433/16	P1538.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	32727 1858093	64524 4693289	121060	288075	735470	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	23167 1182249	43460 2894998	81987	201527	446492	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	22017 1225859	43293 3061908	83596	210263	468232	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	19740 1039359	39108 2330479	71874	189648	409171	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	19133 981944	37628 2162819	68837	173908	388990	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	47489 2500432	89832 6305032	174761	447493	945199	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	42062 2286034	81045 5932606	158379	399761	850192	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	8919 508960	16866 1314028	31659	87003	190523	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Lin2	6634 573918	14887 1475122	33729	92160	209052	5.00 250	10.0 600	20.0	50.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	17174 991032	33735 2584242	64853	171677	358066	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	8044 456902	16981 1199807	30134	79019	174333	2.00 100	4.00 240	8.00	20.0	40.0
1,1-Dichloroethene	FB	Ave	20720 1214896	41013 3059955	79158	206552	448527	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl iodide	FB	Ave	28808 1669775	53981 4375661	109524	290041	636348	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	+++++ 477010	21612 1259076	36791	92314	180114	+++++ 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	36428 2210140	70224 5459964	138300	378288	827117	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	84768 4894616	163058 11882759	324432	860685	1877821	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Lin1	1282 227884	2960 620909	14574	32788	80061	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	21933 940718	38072 2369557	68450	172686	359867	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	21695 1326974	43426 3428838	85292	228132	490502	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Lin2	3705 1096397	22989 2883332	45668	170334	394024	5.00 250	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	20289 1168190	40932 2992033	78406	205469	440349	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	38797 2172540	73818 5359904	143622	388299	812580	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Lin2	21450 1956800	55413 5053902	107261	290934	722969	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	36457 2048571	70878 5231410	136963	359804	767035	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 694115	20353 1838987	39668	115296	261640	+++++ 100	4.00 240	8.00	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	19339 1125825	37436 2889476	74044	193695	414480	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd9	Lin	+++++ 600116	14628 1701173	19054	62519	158648	+++++ 750	30.0 1800	60.0	150	300
2,2-Dichloropropane	FB	Ave	28717 1817586	59262 4790387	113569	296230	657503	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	5579 342377	10934 901336	21794	58002	126234	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	30608 1839496	60837 4846835	119482	320415	674374	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 191563	+++++ 492719	10227	29507	62125	+++++ 50.0	+++++ 120	4.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	30490 1943964	59831 5174443	120692	317711	703751	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Lin	+++++ 256725	+++++ 680435	9197	16165	59640	+++++ 625	+++++ 1500	50.0	125	250
Cyclohexane	FB	Ave	43905 2547223	88259 6252132	167435	455095	961671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	29704 1771456	57338 4605301	112494	300901	661228	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	23735 1697208	48372 4608704	98369	269831	597861	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	16304 1012106	31302 2727259	61884	170173	366821	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	75903 4354273	150687 10752710	290252	766954	1630124	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	19510 1176545	36496 3117767	74371	197532	417356	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Lin2	+++++ 908003	20310 2422968	43344	135385	317112	+++++ 100	4.00 240	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	34719 2107985	69542 5312605	136683	365705	782852	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	16290 966306	32789 2398505	62620	167234	359294	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 54445	+++++ 154523	1795	8163	19825	+++++ 500	+++++ 1200	40.0	100	200
Dibromomethane	FB	Ave	5359 339447	10980 892486	20746	57520	124133	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	16015 1110029	33353 2991730	62887	178676	394336	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	1975 232604	4601 638560	10317	32379	76671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Lin2	13690 1162264	29175 3092117	60749	171480	403835	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	19352 1423611	38008 3633639	81186	229983	514547	2.00 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	77531 4504430	151573 11055512	295185	777005	1666906	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin1	4853 502168	10463 1359256	23837	69856	172920	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin1	9014 856567	19335 2305617	41138	126342	295254	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	7072 440600	14903 1143505	27529	72468	161187	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	8179 924099	20394 2413876	46610	142570	321667	2.00 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	13802 853095	26213 2210702	52615	141240	307296	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	13179 894564	26109 2444032	51020	142816	314232	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Lin2	5713 529411	12939 1453495	26226	77205	180138	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	4850 393143	11346 1044908	23001	62700	140256	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	23399 1703083	50122 4331901	96728	272171	606115	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	41057 2472302	79681 6322200	154815	412129	883115	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	24809 1697879	51687 4283066	99377	276301	599364	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	10818 836763	21212 2295577	43853	126939	283865	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m,p-Xylene	CBNZ d5	Ave	29846 1972447	58776 5095712	114163	323887	713702	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	26272 1857075	54430 4628210	108550	302542	663675	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	33545 2754394	69566 6767658	147392	425301	960799	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin2	+++++ 229187	5238 659560	11638	31110	74512	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	79213 5332082	156766 12941106	320176	883990	1943780	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Lin2	5792 582097	12776 1568876	27187	82840	193401	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	6191 461284	15663 1181451	28739	78114	169222	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 123288	+++++ 330653	5696	18430	38987	+++++ 25.0	+++++ 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	1603 125958	3814 329287	7528	20458	46922	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	20993 1515447	43903 3796203	87089	241162	542206	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	13071 934605	26816 2422825	53027	146383	320968	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	61549 4427245	124872 11036786	259442	711741	1570604	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	18674 1152643	34598 2972965	66207	189887	411519	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	16208 1131730	33438 2992125	65710	186687	396075	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	58532 4378350	120107 11170940	247166	696794	1537937	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	61461 4358310	129664 10953609	259364	709970	1571155	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	15192 1224554	33162 3140484	70746	196300	425798	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	70182 4989795	145932 12163407	295972	818323	1770755	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	31405 1985697	60418 5248864	123316	324721	707859	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	32485 1944066	61114 5114875	118897	322407	704882	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	76459 5368086	162438 12717640	321804	905256	1942615	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	24912 1595669	50114 4190892	96678	266034	569001	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 57253	830 160385	2360	8194	19021	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	16002 1069570	31506 2785041	59461	176111	379903	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	12046 810182	24196 2161747	51124	132994	284608	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	20424 1418730	39113 3577030	77845	227007	507371	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	12340 783888	24115 2018581	45464	129241	288132	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	13484 833783	27029 +++++	52307	139375	291273	0.500 25.0	1.00 +++++	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	12829 775548	27451 +++++	49986	133077	277981	0.500 25.0	1.00 +++++	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	56049 3602810	114452 +++++	223621	613563	1252902	0.500 25.0	1.00 +++++	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 1140773	33565 +++++	70424	183848	389233	+++++ 25.0	1.00 +++++	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2018 22:40:30 ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:46 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:14:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.607	-0.007	88	138141	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.559	-0.007	98	1462893	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	286296	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	414602	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	86	13484	0.5000	0.4741	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.316	7.309	0.007	93	12829	0.5000	0.4699	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	56049	0.5000	0.4627	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	83	17319	0.5000	0.4677	
23 Dichlorodifluoromethane	85	3.847	3.845	0.002	99	32727	0.5000	0.4965	
26 Chloromethane	50	4.070	4.083	-0.013	97	23167	0.5000	0.5339	
27 Vinyl chloride	62	4.210	4.222	-0.012	96	22017	0.5000	0.4973	
29 Bromomethane	94	4.573	4.585	-0.012	92	19740	0.5000	0.5160	
30 Chloroethane	64	4.643	4.641	0.002	98	19133	0.5000	0.5277	
31 Dichlorofluoromethane	67	4.783	4.795	-0.012	98	47489	0.5000	0.5155	
32 Trichlorofluoromethane	101	4.894	4.893	0.001	99	42062	0.5000	0.5042	
35 Ethyl ether	59	5.048	5.060	-0.012	93	8919	0.5000	0.4971	
39 Acrolein	56	5.230	5.214	0.016	81	6634	5.00	5.15	
40 1,1,2-Trichloro-1,2,2-trif	151	5.285	5.298	-0.013	93	17174	0.5000	0.4880	
41 Acetone	43	5.327	5.326	0.001	27	8044	2.00	1.93	
43 1,1-Dichloroethene	96	5.327	5.326	0.001	95	20720	0.5000	0.4844	
44 Iodomethane	142	5.522	5.521	0.001	99	28808	0.5000	0.4851	
45 Methyl acetate	43		5.557				ND	ND	U
47 3-Chloro-1-propene	41	5.600	5.600	0.000	66	36428	0.5000	0.4769	
48 Carbon disulfide	76	5.608	5.614	-0.006	98	84768	0.5000	0.4879	
49 2-Methyl-2-propanol	59	5.701	5.664	0.037	29	1282	5.00	5.48	
50 Methylene Chloride	84	5.701	5.700	0.001	98	21933	0.5000	0.5953	
52 Acrylonitrile	53	5.872	5.872	0.000	1	3705	5.00	5.11	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	97	21695	0.5000	0.4674	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	95	20289	0.5000	0.4824	
54 Hexane	57	6.065	6.072	-0.007	94	38797	0.5000	0.5043	
55 Vinyl acetate	43	6.187	6.179	0.008	98	21450	1.00	1.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.243	-0.006	96	36457	0.5000	0.4946	
61 2-Butanone (MEK)	43		6.630				ND	ND	
62 sec-Butyl Alcohol	45	6.594	6.680	-0.086	31	9777	15.0	58.4	
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	86	19339	0.5000	0.4858	
64 2,2-Dichloropropane	77	6.694	6.701	-0.007	82	28717	0.5000	0.4593	
67 Chlorobromomethane	128	6.873	6.880	-0.007	55	5579	0.5000	0.4681	
68 Chloroform	83	6.880	6.887	-0.007	94	30608	0.5000	0.4715	
69 Tetrahydrofuran	42		6.908				ND	ND	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	97	30490	0.5000	0.4595	
70 Isobutyl alcohol	41		7.123				ND	ND	U
72 Cyclohexane	56	7.159	7.166	-0.007	95	43905	0.5000	0.4831	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	95	29704	0.5000	0.4790	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	96	23735	0.5000	0.4260	
76 1,2-Dichloroethane	62	7.367	7.366	0.000	46	16304	0.5000	0.4682	a
77 Benzene	78	7.381	7.380	0.001	98	75903	0.5000	0.4881	
14 n-Heptane	43	7.445	7.445	0.000	95	41491	0.5000	0.4724	
79 Trichloroethene	95	7.846	7.845	0.001	93	19510	0.5000	0.4805	
80 2-Pentanone	43		7.902				ND	ND	
82 Methylcyclohexane	55	8.024	8.031	-0.007	89	34719	0.5000	0.4700	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	59	16290	0.5000	0.4788	
84 1,4-Dioxane	88		8.095				ND	ND	
85 Dibromomethane	93	8.146	8.145	0.001	96	5359	0.5000	0.4579	
86 Dichlorobromomethane	83	8.210	8.217	-0.007	96	16015	0.5000	0.4353	
87 2-Chloroethyl vinyl ether	63	8.368	8.353	0.015	79	1975	0.5000	0.6726	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	88	13690	0.5000	0.5224	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	97	19352	2.00	1.69	
91 Toluene	91	8.804	8.803	0.001	96	77531	0.5000	0.4886	
92 Ethyl methacrylate	69	8.897	8.889	0.008	81	4853	0.5000	0.6319	
93 trans-1,3-Dichloropropene	75	8.918	8.910	0.008	96	9014	0.5000	0.6365	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	86	7072	0.5000	0.4629	
95 2-Hexanone	43	9.183	9.182	0.001	55	8179	2.00	2.09	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	95	13802	0.5000	0.4791	
97 Tetrachloroethene	164	9.211	9.211	0.000	93	13179	0.5000	0.4500	
98 Chlorodibromomethane	129	9.390	9.390	0.000	92	5713	0.5000	0.5238	
100 Ethylene Dibromide	107	9.519	9.518	0.001	97	4850	0.5000	0.3850	
101 1-Chlorohexane	91	9.733	9.733	0.000	91	23399	0.5000	0.4269	
102 Chlorobenzene	112	9.848	9.847	0.001	95	41057	0.5000	0.4868	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	40	10818	0.5000	0.4182	
103 Ethylbenzene	106	9.883	9.883	0.000	98	24809	0.5000	0.4466	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	29846	0.5000	0.4585	
107 o-Xylene	106	10.269	10.269	0.000	97	26272	0.5000	0.4364	
106 Styrene	104	10.277	10.276	0.001	86	33545	0.5000	0.4001	
108 Bromoform	173		10.483				ND	ND	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	79213	0.5000	0.4636	
111 Cyclohexanone	55	10.677	10.677	0.000	47	5792	20.0	21.4	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	89	6191	0.5000	0.4084	
113 trans-1,4-Dichloro-2-buten	53		10.777				ND	ND	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	82	1603	0.5000	0.3990	
115 N-Propylbenzene	120	10.841	10.848	-0.007	99	20993	0.5000	0.4417	
116 Bromobenzene	156	10.856	10.855	0.001	94	13071	0.5000	0.4484	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	93	61549	0.5000	0.4438	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	18674	0.5000	0.4990	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.056	11.048	0.008	99	16208	0.5000	0.4486	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	58532	0.5000	0.4326	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	61461	0.5000	0.4426	
122 sec-Butylbenzene	134	11.428	11.427	0.001	95	15192	0.5000	0.4043	
123 4-Isopropyltoluene	119	11.514	11.520	-0.006	97	70182	0.5000	0.4454	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	94	31405	0.5000	0.4816	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	90	32485	0.5000	0.5017	
127 n-Butylbenzene	91	11.885	11.878	0.007	99	76459	0.5000	0.4460	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	93	24912	0.5000	0.4749	
129 1,2-Dibromo-3-Chloropropan	157		12.772				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	92	16002	0.5000	0.4690	
131 Hexachlorobutadiene	225	13.852	13.844	0.008	90	12046	0.5000	0.4568	
132 Naphthalene	128	14.080	14.080	0.000	96	20424	0.5000	0.4620	
133 1,2,3-Trichlorobenzene	180	14.402	14.395	0.007	91	12340	0.5000	0.4825	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.9682	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.9682	
S 139 Xylenes, Total	106				0		1.00	0.8948	
S 137 1,3-Dichloropropene, Total	1				0		1.00	1.16	
S 134 Trihalomethanes, Total	1				0		2.00	1.43	
S 135 Xylenes, Total (URS)	1				0		1.00	0.8948	
S 136 Total BTEX	1				0			2.32	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.20	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.04	Units: uL

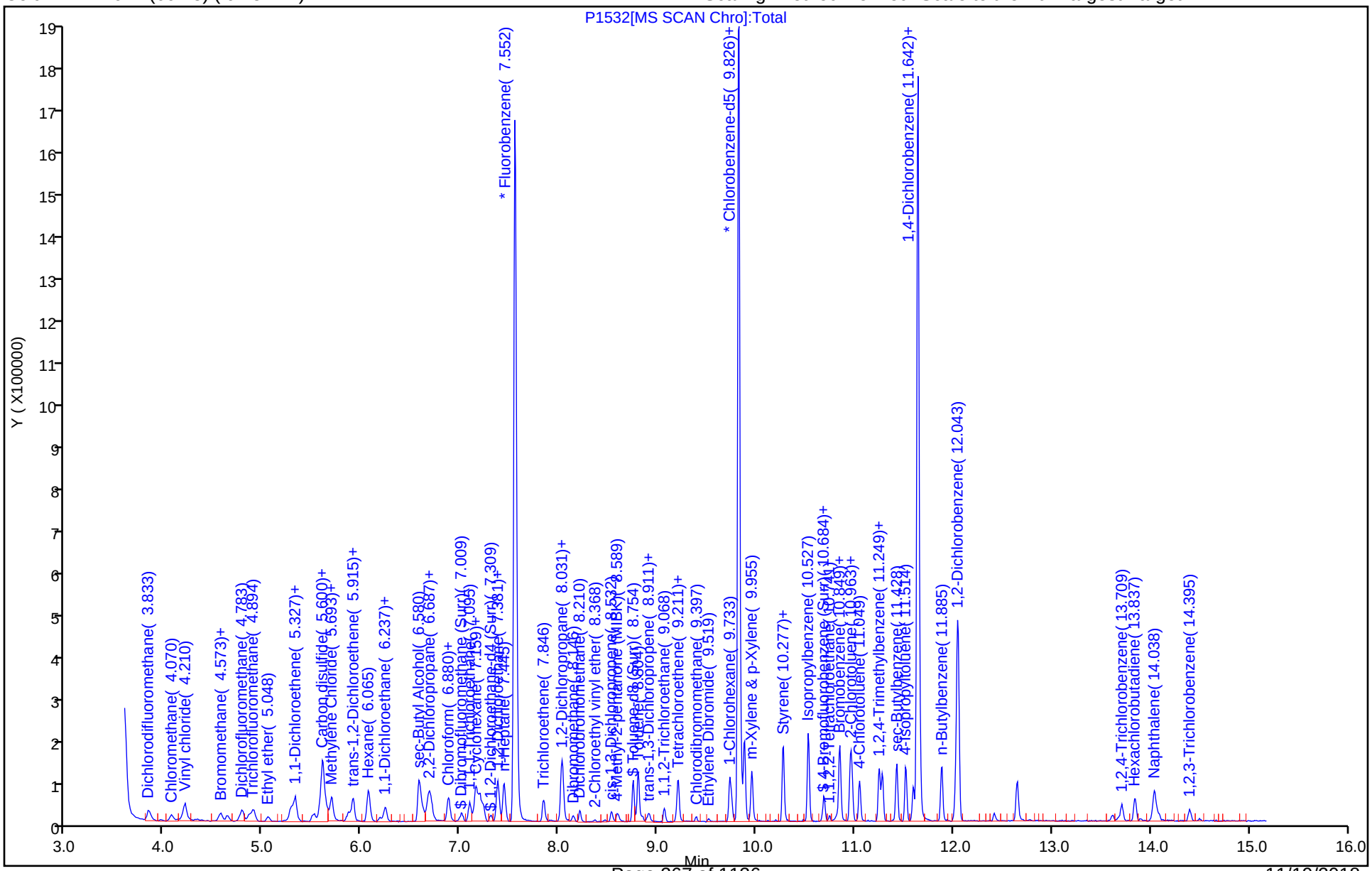
Report Date: 26-Oct-2018 10:27:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D

Injection Date:	22-Oct-2018 22:40:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD005			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

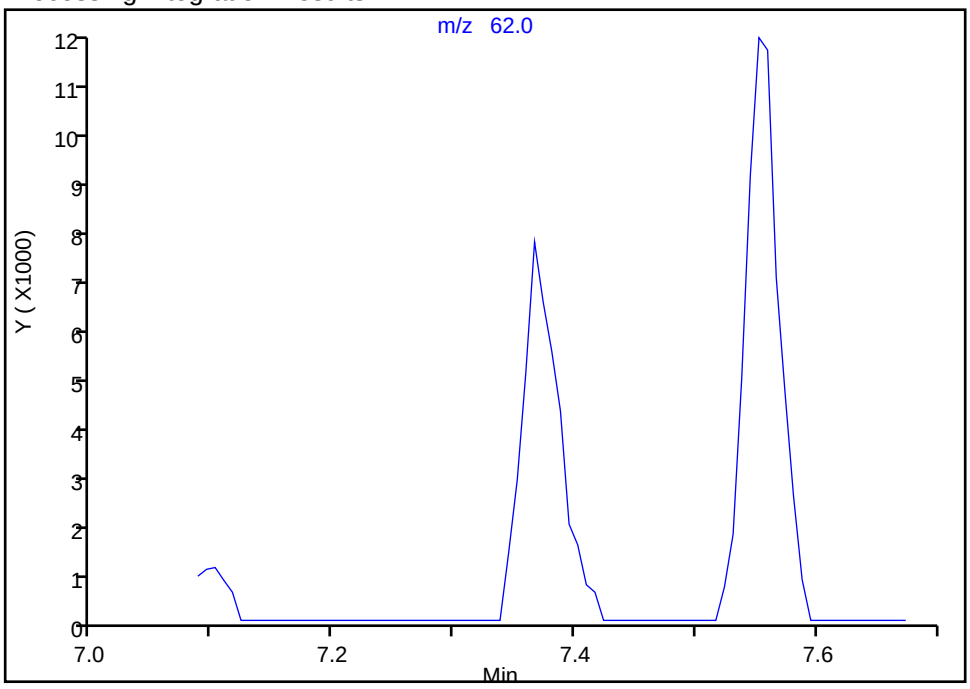
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Injection Date: 22-Oct-2018 22:40:30 Instrument ID: VMS_P
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

76 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

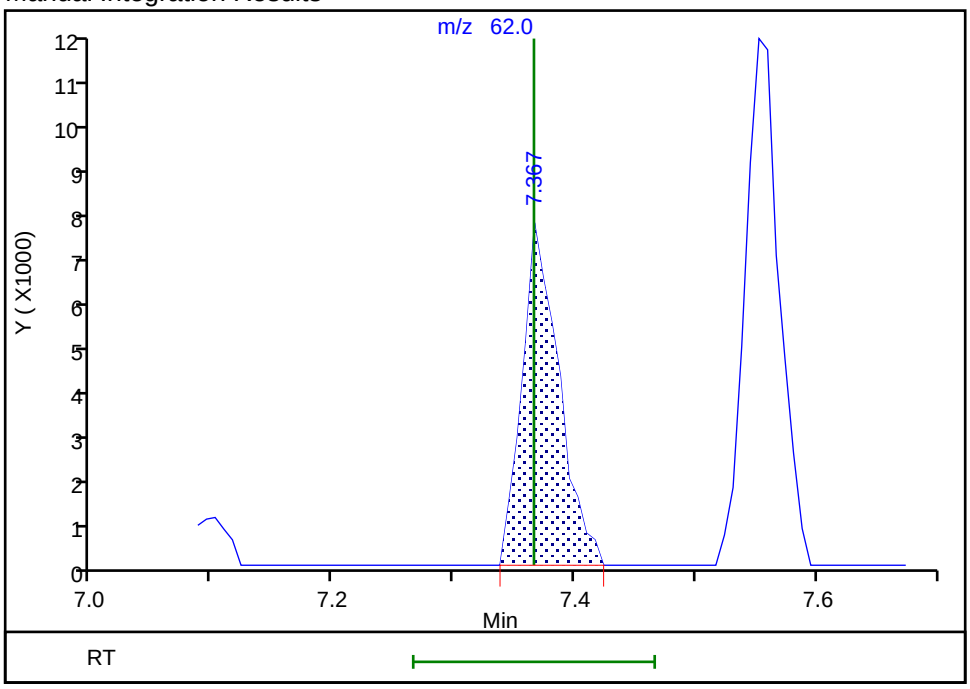
Not Detected
Expected RT: 7.37

Processing Integration Results



Manual Integration Results

RT: 7.37
Area: 16304
Amount: 0.468161
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:13:57
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

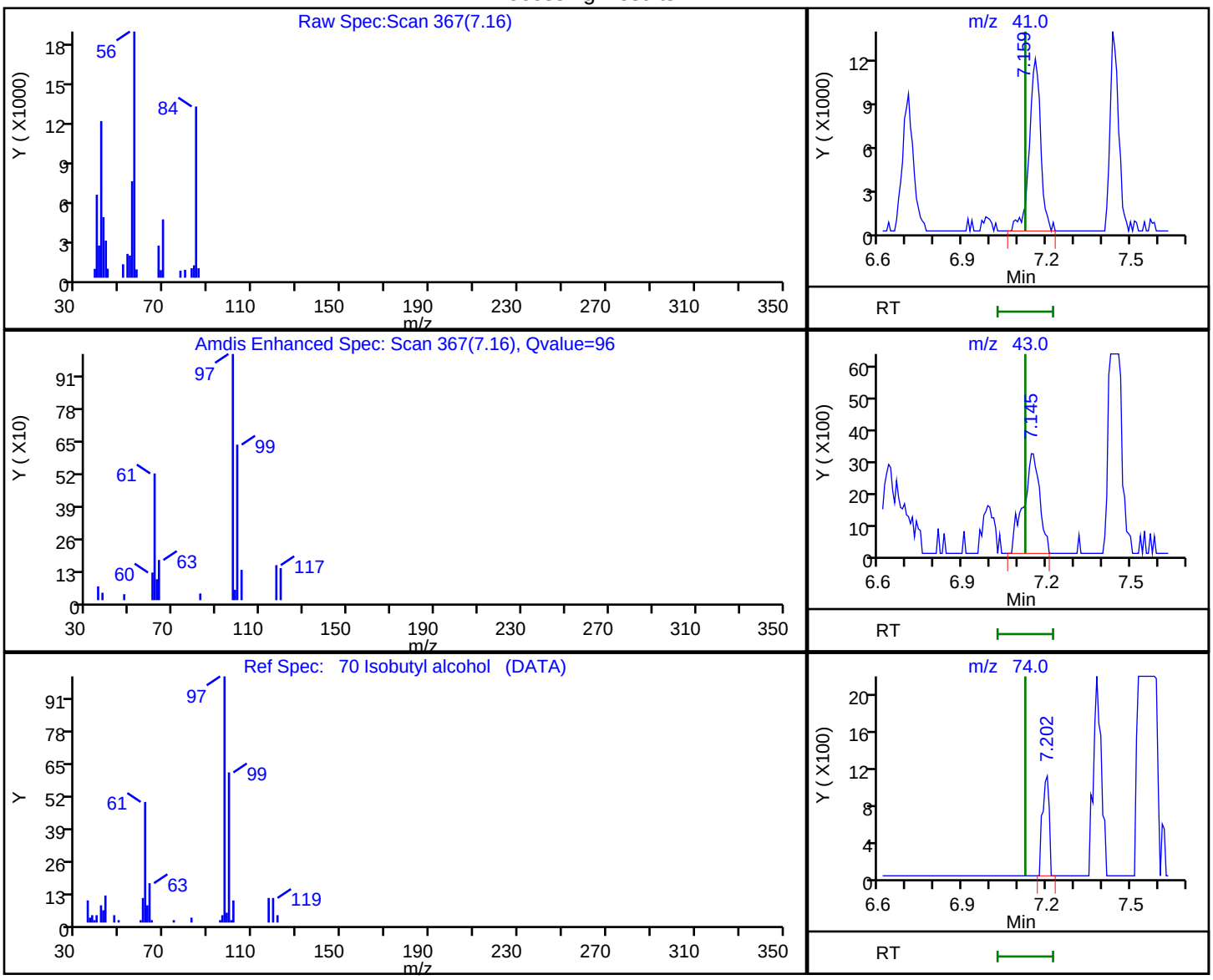
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Injection Date: 22-Oct-2018 22:40:30 Instrument ID: VMS_P
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
7.16	41.00	33154	14.120853
7.14	43.00	12869	
7.20	74.00	1770	

Reviewer: seifertj, 23-Oct-2018 08:13:44
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

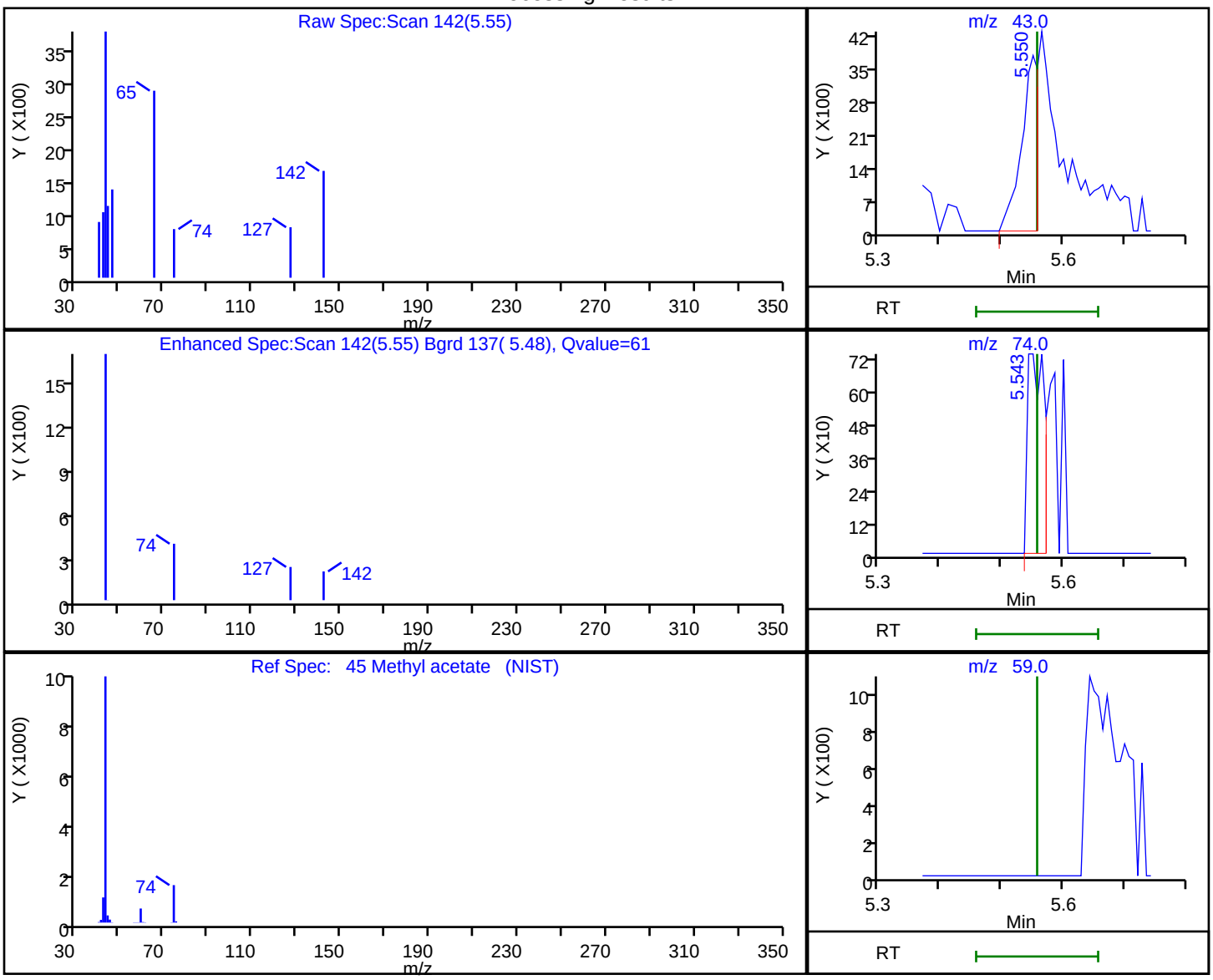
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Injection Date: 22-Oct-2018 22:40:30 Instrument ID: VMS_P
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

45 Methyl acetate, CAS: 79-20-9

Processing Results



RT	Mass	Response	Amount
5.55	43.00	6364	0.617441
5.54	74.00	1408	
5.55	59.00	0	

Reviewer: seifertj, 23-Oct-2018 08:29:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2018 22:59:30 ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:50 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:15:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.607	0.000	74	137700	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1404201	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	273127	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	391666	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	90	27029	1.00	0.9900	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	27451	1.00	1.05	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	96	114452	1.00	0.99	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	33565	1.00	0.9595	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	64524	1.00	1.02	
26 Chloromethane	50	4.082	4.083	-0.001	98	43460	1.00	1.04	
27 Vinyl chloride	62	4.221	4.222	-0.001	96	43293	1.00	1.02	
29 Bromomethane	94	4.570	4.585	-0.015	93	39108	1.00	1.07	
30 Chloroethane	64	4.640	4.641	-0.001	99	37628	1.00	1.08	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	89832	1.00	1.02	
32 Trichlorofluoromethane	101	4.892	4.893	-0.001	99	81045	1.00	1.01	
35 Ethyl ether	59	5.059	5.060	-0.001	94	16866	1.00	0.9794	
39 Acrolein	56	5.213	5.214	-0.001	92	14887	10.0	9.52	
40 1,1,2-Trichloro-1,2,2-trif	151	5.283	5.298	-0.015	94	33735	1.00	1.00	
41 Acetone	43	5.325	5.326	-0.001	29	16981	4.00	4.25	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	94	41013	1.00	1.00	
44 Iodomethane	142	5.522	5.521	0.001	99	53981	1.00	0.9470	
45 Methyl acetate	43	5.557	5.557	0.000	96	21612	2.00	2.38	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	76	70224	1.00	0.9577	
48 Carbon disulfide	76	5.615	5.614	0.001	100	163058	1.00	0.9777	
49 2-Methyl-2-propanol	59	5.679	5.664	0.015	51	2960	10.0	7.84	
50 Methylene Chloride	84	5.700	5.700	0.000	98	38072	1.00	1.08	
52 Acrylonitrile	53	5.879	5.872	0.007	54	22989	10.0	10.3	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	96	43426	1.00	0.9747	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	96	40932	1.00	1.01	
54 Hexane	57	6.072	6.072	0.000	94	73818	1.00	1.01	
55 Vinyl acetate	43	6.187	6.179	0.008	97	55413	2.00	2.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.244	6.243	0.001	96	70878	1.00	1.00	
61 2-Butanone (MEK)	43	6.637	6.630	0.007	83	20353	4.00	3.57	M
62 sec-Butyl Alcohol	45	6.680	6.680	0.000	38	14628	30.0	65.8	M
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	86	37436	1.00	0.9798	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	85	59262	1.00	0.9875	
67 Chlorobromomethane	128	6.873	6.880	-0.007	54	10934	1.00	0.9558	
68 Chloroform	83	6.880	6.887	-0.007	93	60837	1.00	0.9764	
69 Tetrahydrofuran	42		6.908				ND	ND	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	96	59831	1.00	0.9394	
70 Isobutyl alcohol	41	7.123	7.123	0.000	95	6297	25.0	69.3	M
72 Cyclohexane	56	7.159	7.166	-0.007	95	88259	1.00	1.01	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	96	57338	1.00	0.9632	
74 Carbon tetrachloride	117	7.238	7.237	0.001	97	48372	1.00	0.9044	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	49	31302	1.00	0.9364	
77 Benzene	78	7.381	7.380	0.001	98	150687	1.00	1.01	
14 n-Heptane	43	7.445	7.445	0.000	93	83917	1.00	1.00	
79 Trichloroethene	95	7.845	7.845	0.000	96	36496	1.00	0.9363	
80 2-Pentanone	43	7.910	7.902	0.008	95	20310	4.00	4.20	
82 Methylcyclohexane	55	8.031	8.031	0.000	96	69542	1.00	0.9809	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	91	32789	1.00	1.00	
84 1,4-Dioxane	88		8.095				ND	ND	
85 Dibromomethane	93	8.146	8.145	0.001	87	10980	1.00	0.9773	
86 Dichlorobromomethane	83	8.210	8.217	-0.007	97	33353	1.00	0.9444	
87 2-Chloroethyl vinyl ether	63	8.360	8.353	0.007	91	4601	1.00	1.00	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	90	29175	1.00	0.9558	
90 4-Methyl-2-pentanone (MIBK	43	8.596	8.589	0.007	98	38008	4.00	3.45	
91 Toluene	91	8.804	8.803	0.001	97	151573	1.00	1.00	
92 Ethyl methacrylate	69	8.896	8.889	0.007	88	10463	1.00	0.9735	
93 trans-1,3-Dichloropropene	75	8.911	8.910	0.001	96	19335	1.00	0.9893	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	14903	1.00	1.02	
95 2-Hexanone	43	9.183	9.182	0.000	71	20394	4.00	3.77	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	26213	1.00	0.9539	
97 Tetrachloroethene	164	9.211	9.211	0.000	90	26109	1.00	0.9346	
98 Chlorodibromomethane	129	9.390	9.390	0.000	88	12939	1.00	0.9662	
100 Ethylene Dibromide	107	9.519	9.518	0.001	95	11346	1.00	0.9440	
101 1-Chlorohexane	91	9.733	9.733	0.000	87	50122	1.00	0.9586	
102 Chlorobenzene	112	9.847	9.847	0.000	95	79681	1.00	0.99	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	41	21212	1.00	0.8596	
103 Ethylbenzene	106	9.883	9.883	0.000	98	51687	1.00	0.9752	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	58776	1.00	0.9464	
107 o-Xylene	106	10.269	10.269	0.000	91	54430	1.00	0.9476	
106 Styrene	104	10.276	10.276	0.000	80	69566	1.00	0.8698	
108 Bromoform	173	10.484	10.483	0.001	90	5238	1.00	1.04	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	156766	1.00	0.9712	
111 Cyclohexanone	55	10.677	10.677	0.000	95	12776	40.0	37.3	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	94	15663	1.00	1.09	
113 trans-1,4-Dichloro-2-buten	53		10.777				ND	ND	
114 1,2,3-Trichloropropane	110	10.813	10.820	-0.007	81	3814	1.00	1.00	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	43903	1.00	0.9779	
116 Bromobenzene	156	10.856	10.855	0.001	95	26816	1.00	0.9738	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	95	124872	1.00	0.9531	
118 2-Chlorotoluene	126	10.970	10.970	0.000	93	34598	1.00	0.9787	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.048	0.001	99	33438	1.00	0.9796	
120 tert-Butylbenzene	119	11.249	11.249	0.000	92	120107	1.00	0.9396	
121 1,2,4-Trimethylbenzene	105	11.277	11.277	0.000	96	129664	1.00	0.9885	
122 sec-Butylbenzene	134	11.428	11.427	0.001	96	33162	1.00	0.9342	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	97	145932	1.00	0.9804	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	96	60418	1.00	0.9807	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	92	61114	1.00	1.00	
127 n-Butylbenzene	91	11.885	11.878	0.007	99	162438	1.00	1.00	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	94	50114	1.00	1.01	
129 1,2-Dibromo-3-Chloropropan	157	12.779	12.772	0.007	66	830	1.00	1.04	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	90	31506	1.00	0.9774	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	91	24196	1.00	0.9712	
132 Naphthalene	128	14.080	14.080	0.000	96	39113	1.00	0.9366	
133 1,2,3-Trichlorobenzene	180	14.402	14.395	0.007	92	24115	1.00	1.00	
S 140 1,2-Dichloroethene, Total	96				0		2.00	1.99	
S 138 1,2-Dichloroethene, Total	1				0		2.00	1.99	
S 139 Xylenes, Total	106				0		2.00	1.89	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.95	
S 134 Trihalomethanes, Total	1				0		4.00	3.93	
S 135 Xylenes, Total (URS)	1				0		2.00	1.89	
S 136 Total BTEX	1				0			4.87	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.40	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.08	Units: uL

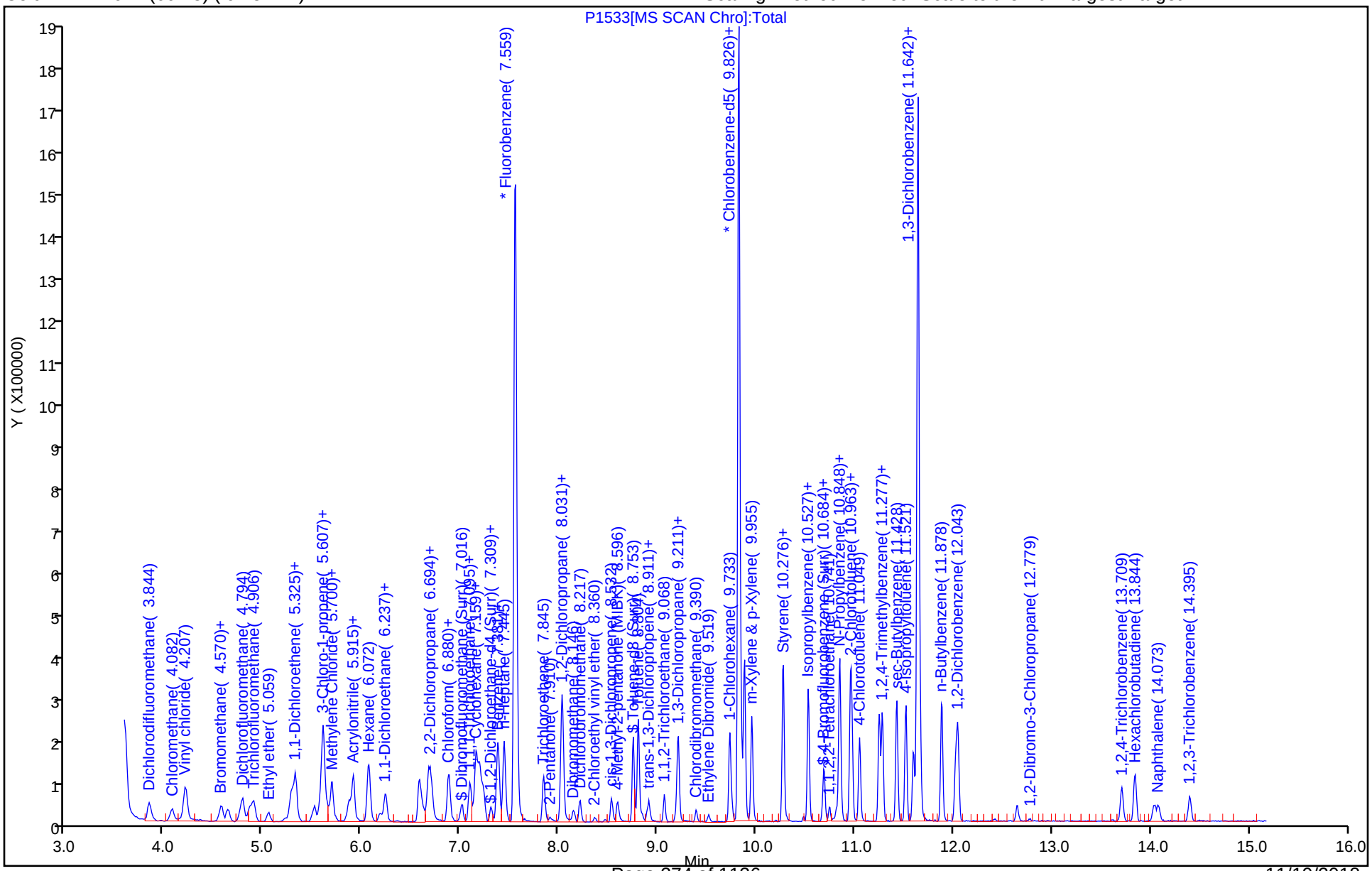
Report Date: 26-Oct-2018 10:27:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D

Injection Date:	22-Oct-2018 22:59:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

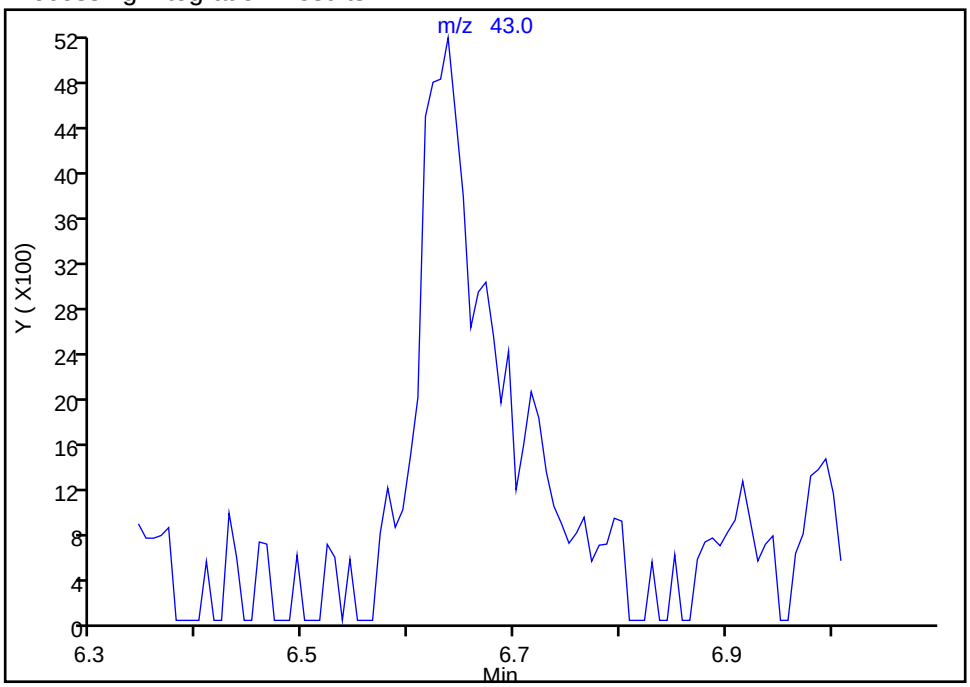
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Injection Date: 22-Oct-2018 22:59:30 Instrument ID: VMS_P
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

61 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

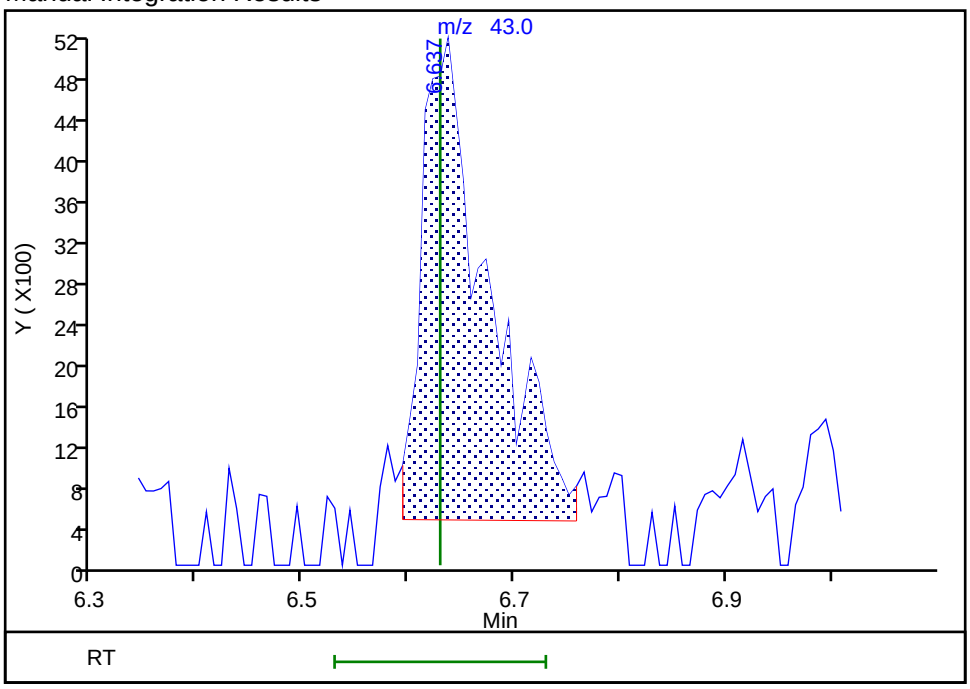
Not Detected
Expected RT: 6.63

Processing Integration Results



Manual Integration Results

RT: 6.64
Area: 20353
Amount: 3.572557
Amount Units: ug/l



Reviewer: newcomer, 26-Oct-2018 10:26:16
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

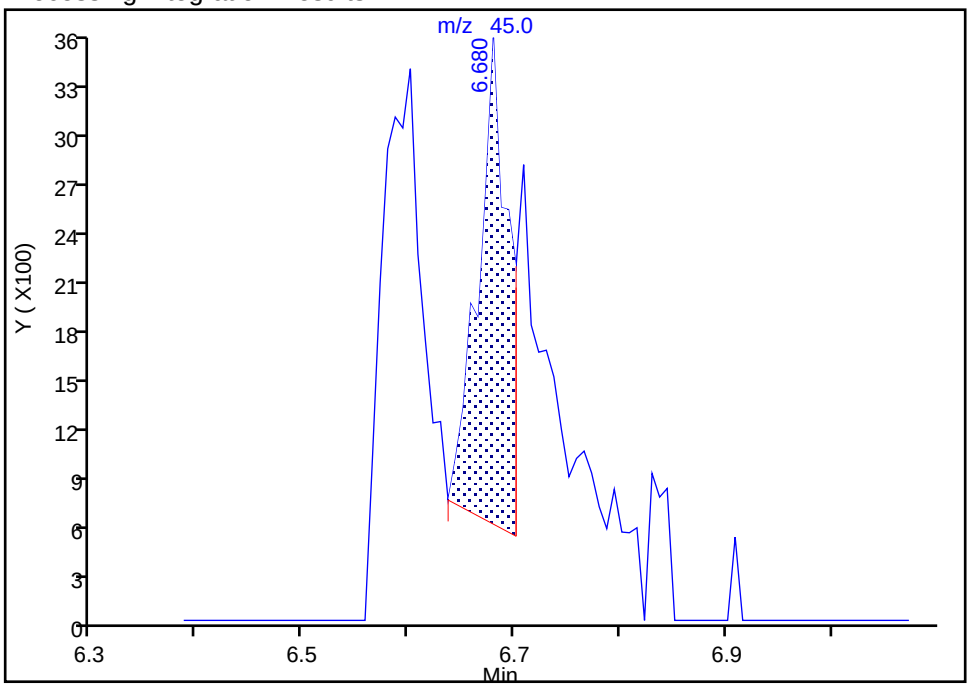
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Injection Date: 22-Oct-2018 22:59:30 Instrument ID: VMS_P
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

62 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

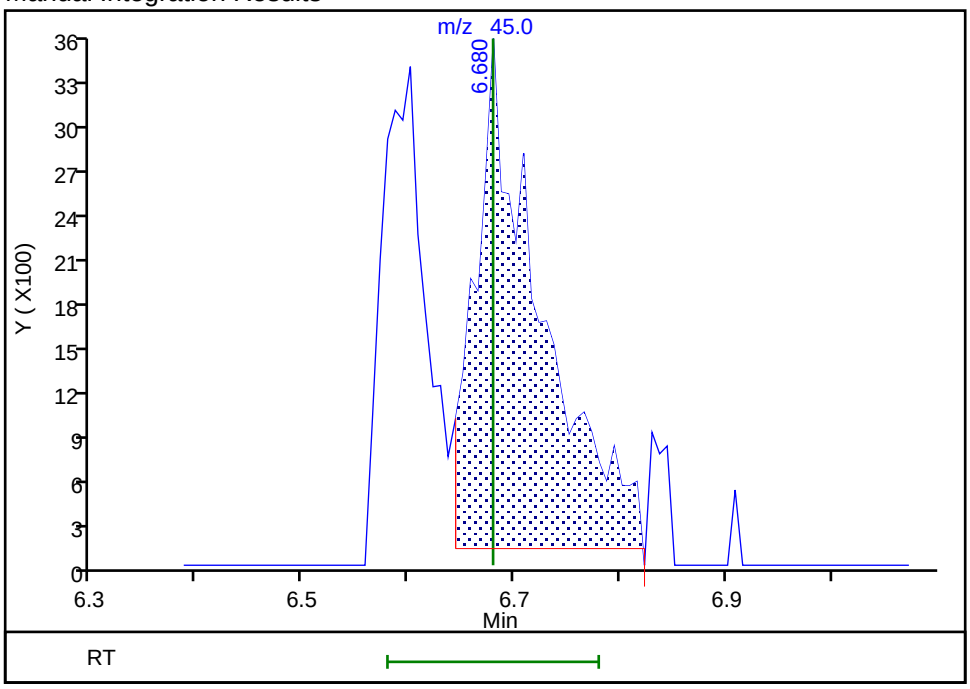
Processing Integration Results

RT: 6.68
Area: 5906
Amount: 46.191725
Amount Units: ug/l



Manual Integration Results

RT: 6.68
Area: 14628
Amount: 65.828306
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 12:15:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

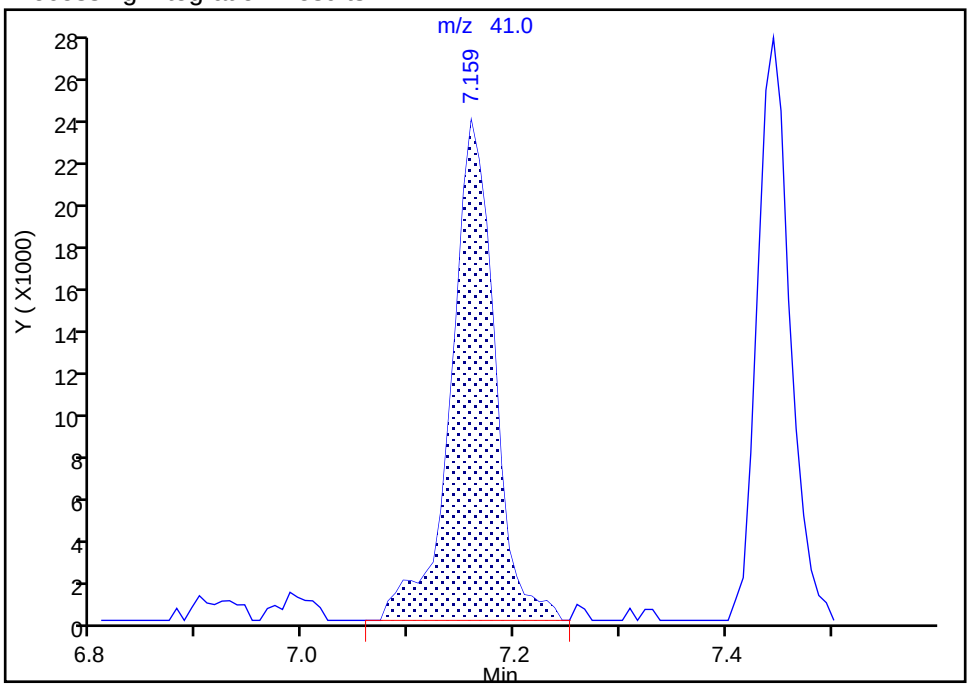
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Injection Date: 22-Oct-2018 22:59:30 Instrument ID: VMS_P
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

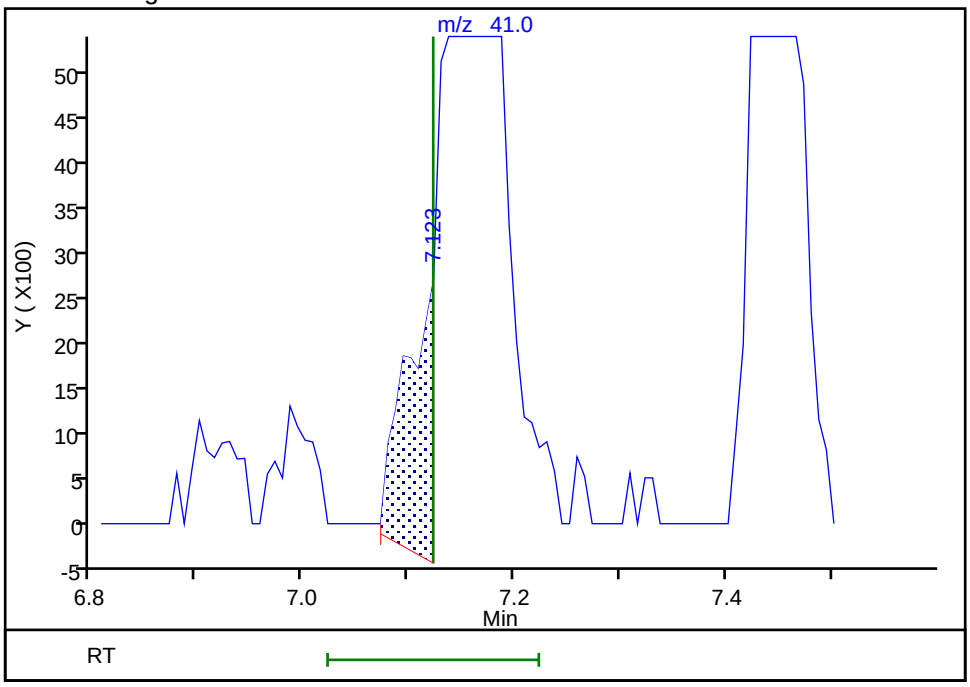
Processing Integration Results

RT: 7.16
Area: 66254
Amount: 104.9658
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 6297
Amount: 69.347337
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:27:53
Audit Action: Manually Integrated Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2018 23:17:30 ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:53 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:26:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.607	-0.014	56	142917	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.559	-0.007	98	1358893	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	266480	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	392806	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	52307	2.00	1.98	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	49986	2.00	1.97	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	96	223621	2.00	1.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	82	70424	2.00	2.01	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	121060	2.00	1.98	
26 Chloromethane	50	4.068	4.083	-0.015	99	81987	2.00	2.03	
27 Vinyl chloride	62	4.208	4.222	-0.014	92	83596	2.00	2.03	
29 Bromomethane	94	4.571	4.585	-0.014	92	71874	2.00	2.02	
30 Chloroethane	64	4.641	4.641	0.000	97	68837	2.00	2.04	
31 Dichlorofluoromethane	67	4.780	4.795	-0.015	98	174761	2.00	2.04	
32 Trichlorofluoromethane	101	4.892	4.893	-0.001	99	158379	2.00	2.04	
35 Ethyl ether	59	5.046	5.060	-0.014	93	31659	2.00	1.90	
39 Acrolein	56	5.213	5.214	-0.001	96	33729	20.0	19.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.283	5.298	-0.015	95	64853	2.00	1.98	
41 Acetone	43	5.325	5.326	-0.001	28	30134	8.00	7.80	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	95	79158	2.00	1.99	
44 Iodomethane	142	5.522	5.521	0.001	99	109524	2.00	1.99	
45 Methyl acetate	43	5.550	5.557	-0.007	97	36791	4.00	4.18	
47 3-Chloro-1-propene	41	5.593	5.600	-0.007	79	138300	2.00	1.95	
48 Carbon disulfide	76	5.608	5.614	-0.006	100	324432	2.00	2.01	
49 2-Methyl-2-propanol	59	5.665	5.664	0.001	91	14574	20.0	23.4	
50 Methylene Chloride	84	5.693	5.700	-0.007	98	68450	2.00	2.00	
52 Acrylonitrile	53	5.872	5.872	0.000	59	45668	20.0	16.8	
51 Methyl tert-butyl ether	73	5.858	5.872	-0.014	96	85292	2.00	1.98	
53 trans-1,2-Dichloroethene	96	5.908	5.915	-0.007	94	78406	2.00	2.01	
54 Hexane	57	6.065	6.072	-0.007	95	143622	2.00	2.01	
55 Vinyl acetate	43	6.180	6.179	0.001	97	107261	4.00	3.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.243	-0.006	96	136963	2.00	2.00	
61 2-Butanone (MEK)	43	6.630	6.630	0.000	98	39668	8.00	7.20	M
62 sec-Butyl Alcohol	45	6.673	6.680	-0.007	36	19054	60.0	71.5	
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	88	74044	2.00	2.00	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	113569	2.00	1.96	
67 Chlorobromomethane	128	6.880	6.880	0.000	54	21794	2.00	1.97	
68 Chloroform	83	6.880	6.887	-0.007	96	119482	2.00	1.98	
69 Tetrahydrofuran	42	6.909	6.908	0.001	89	10227	4.00	3.51	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	98	120692	2.00	1.96	
70 Isobutyl alcohol	41	7.123	7.123	0.000	97	9197	50.0	77.3	M
72 Cyclohexane	56	7.159	7.166	-0.007	96	167435	2.00	1.98	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	96	112494	2.00	1.95	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	95	98369	2.00	1.90	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	97	61884	2.00	1.91	
77 Benzene	78	7.381	7.380	0.001	98	290252	2.00	2.01	
14 n-Heptane	43	7.445	7.445	0.000	95	159827	2.00	1.96	
79 Trichloroethene	95	7.846	7.845	0.001	92	74371	2.00	1.97	
80 2-Pentanone	43	7.910	7.902	0.008	97	43344	8.00	7.37	
82 Methylcyclohexane	55	8.024	8.031	-0.007	95	136683	2.00	1.99	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	90	62620	2.00	1.98	
84 1,4-Dioxane	88	8.103	8.095	0.008	8	1795	40.0	40.1	a
85 Dibromomethane	93	8.146	8.145	0.001	90	20746	2.00	1.91	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	62887	2.00	1.84	
87 2-Chloroethyl vinyl ether	63	8.360	8.353	0.007	91	10317	2.00	1.73	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	90	60749	2.00	1.85	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	81186	8.00	7.61	
91 Toluene	91	8.804	8.803	0.001	96	295185	2.00	2.00	
92 Ethyl methacrylate	69	8.889	8.889	0.000	89	23837	2.00	1.79	
93 trans-1,3-Dichloropropene	75	8.911	8.910	0.001	97	41138	2.00	1.75	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	27529	2.00	1.94	
95 2-Hexanone	43	9.183	9.182	0.001	98	46610	8.00	7.43	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	52615	2.00	1.96	
97 Tetrachloroethene	164	9.211	9.211	0.000	92	51020	2.00	1.87	
98 Chlorodibromomethane	129	9.390	9.390	0.000	90	26226	2.00	1.79	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	23001	2.00	1.96	
101 1-Chlorohexane	91	9.733	9.733	0.000	88	96728	2.00	1.90	
102 Chlorobenzene	112	9.848	9.847	0.001	95	154815	2.00	1.97	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	40	43853	2.00	1.82	
103 Ethylbenzene	106	9.883	9.883	0.000	98	99377	2.00	1.92	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	114163	2.00	1.88	
107 o-Xylene	106	10.277	10.269	0.008	89	108550	2.00	1.94	
106 Styrene	104	10.277	10.276	0.001	83	147392	2.00	1.89	
108 Bromoform	173	10.484	10.483	0.001	93	11638	2.00	1.93	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	320176	2.00	1.98	
111 Cyclohexanone	55	10.677	10.677	0.000	94	27187	80.0	70.4	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.741	0.007	96	28739	2.00	2.00	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.777	0.000	61	5696	2.00	1.61	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	85	7528	2.00	1.98	
115 N-Propylbenzene	120	10.849	10.848	0.001	99	87089	2.00	1.93	
116 Bromobenzene	156	10.856	10.855	0.001	98	53027	2.00	1.92	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	94	259442	2.00	1.97	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	66207	2.00	1.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.048	0.001	99	65710	2.00	1.92	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	247166	2.00	1.93	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	259364	2.00	1.97	
122 sec-Butylbenzene	134	11.428	11.427	0.001	95	70746	2.00	1.99	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	97	295972	2.00	1.98	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	96	123316	2.00	2.00	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	95	118897	2.00	1.94	
127 n-Butylbenzene	91	11.878	11.878	0.000	99	321804	2.00	1.98	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	94	96678	2.00	1.95	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.772	0.000	63	2360	2.00	1.87	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	94	59461	2.00	1.84	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	93	51124	2.00	2.05	
132 Naphthalene	128	14.080	14.080	0.000	97	77845	2.00	1.86	
133 1,2,3-Trichlorobenzene	180	14.395	14.395	0.000	92	45464	2.00	1.88	
S 140 1,2-Dichloroethene, Total	96				0		4.00	4.01	
S 138 1,2-Dichloroethene, Total	1				0		4.00	4.01	
S 139 Xylenes, Total	106				0		4.00	3.82	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.60	
S 134 Trihalomethanes, Total	1				0		8.00	7.54	
S 135 Xylenes, Total (URS)	1				0		4.00	3.82	
S 136 Total BTEX	1				0			9.76	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.80	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.16	Units: uL

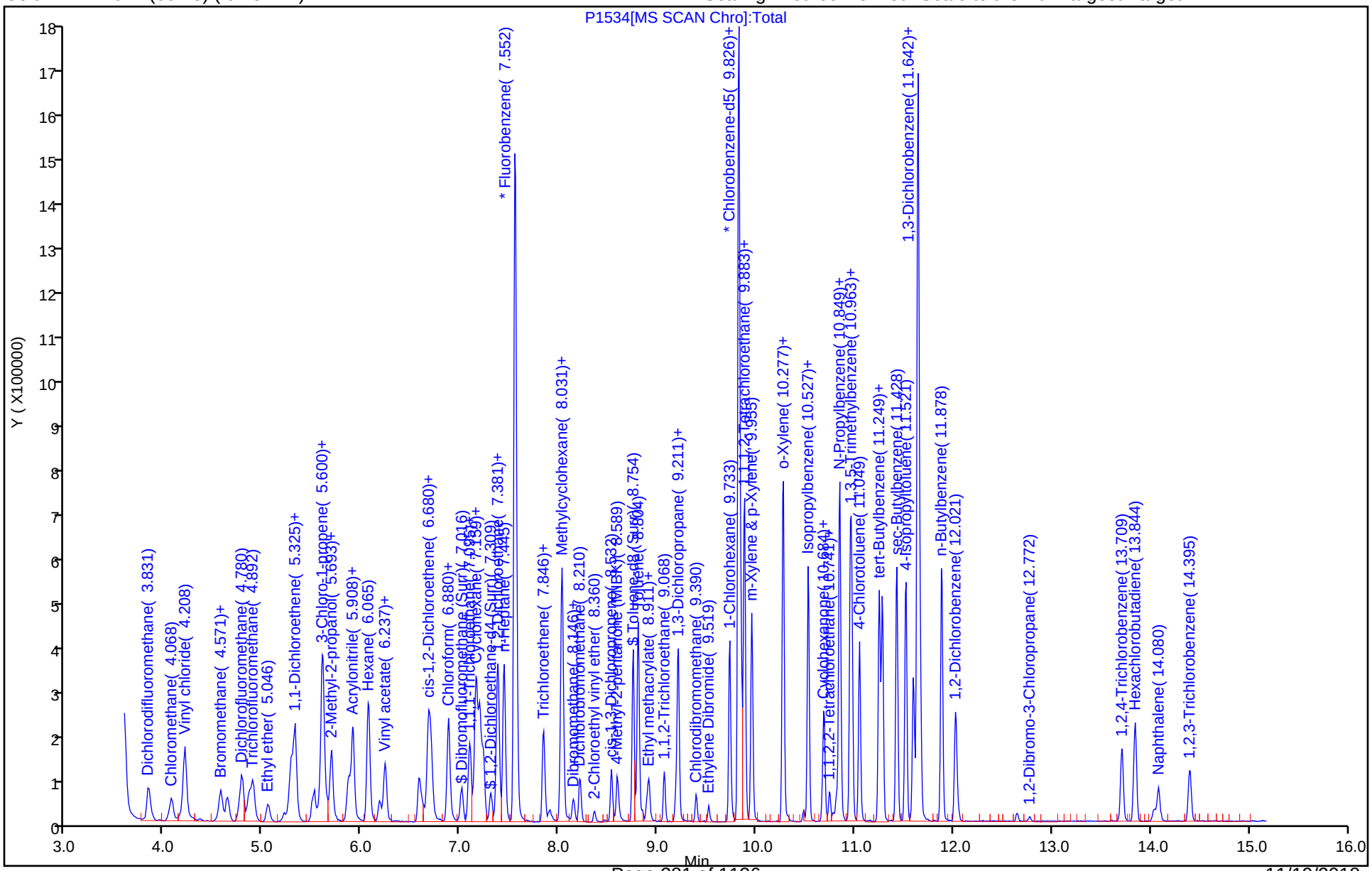
Report Date: 26-Oct-2018 10:27:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D

Injection Date:	22-Oct-2018 23:17:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

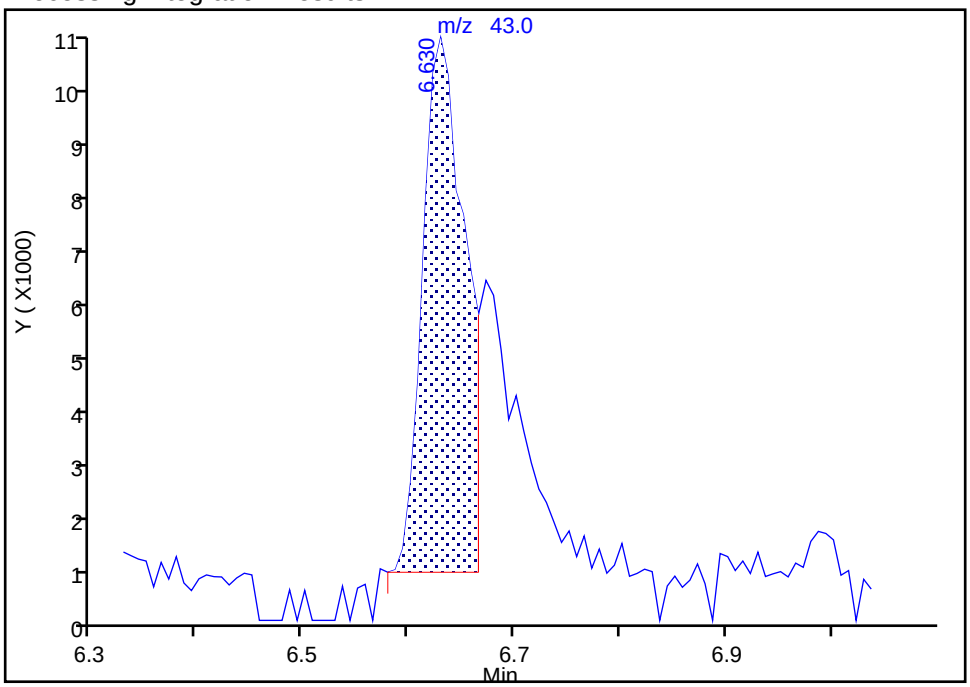
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Injection Date: 22-Oct-2018 23:17:30 Instrument ID: VMS_P
Lims ID: STD02
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

61 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

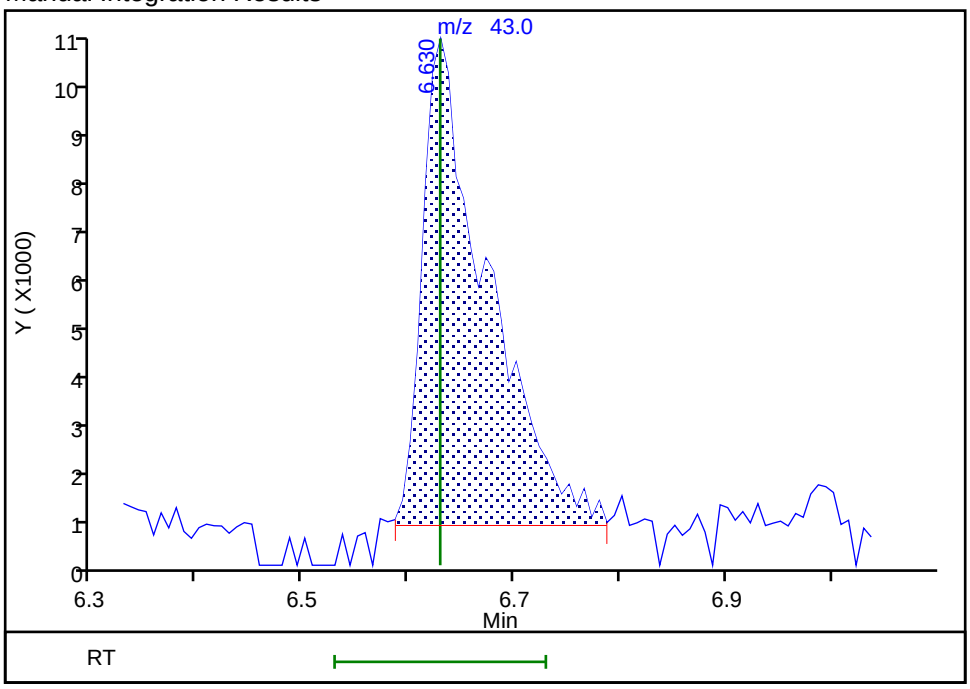
Processing Integration Results

RT: 6.63
Area: 26009
Amount: 7.808834
Amount Units: ug/l



Manual Integration Results

RT: 6.63
Area: 39668
Amount: 7.195071
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:24:34
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

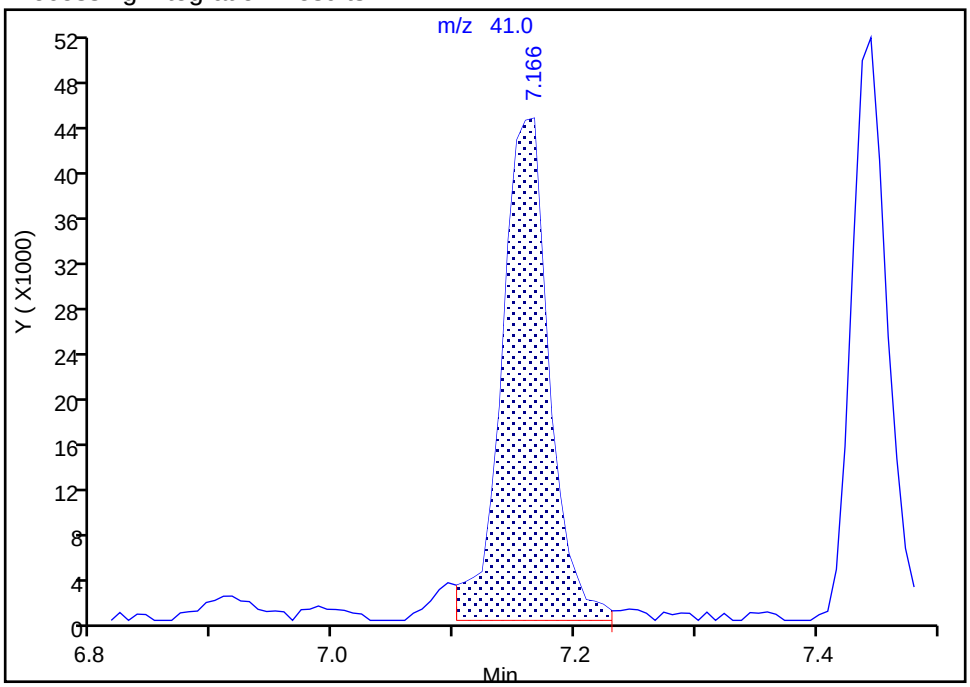
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Injection Date:	22-Oct-2018 23:17:30	Instrument ID:	VMS_P		
Lims ID:	STD02				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	13	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

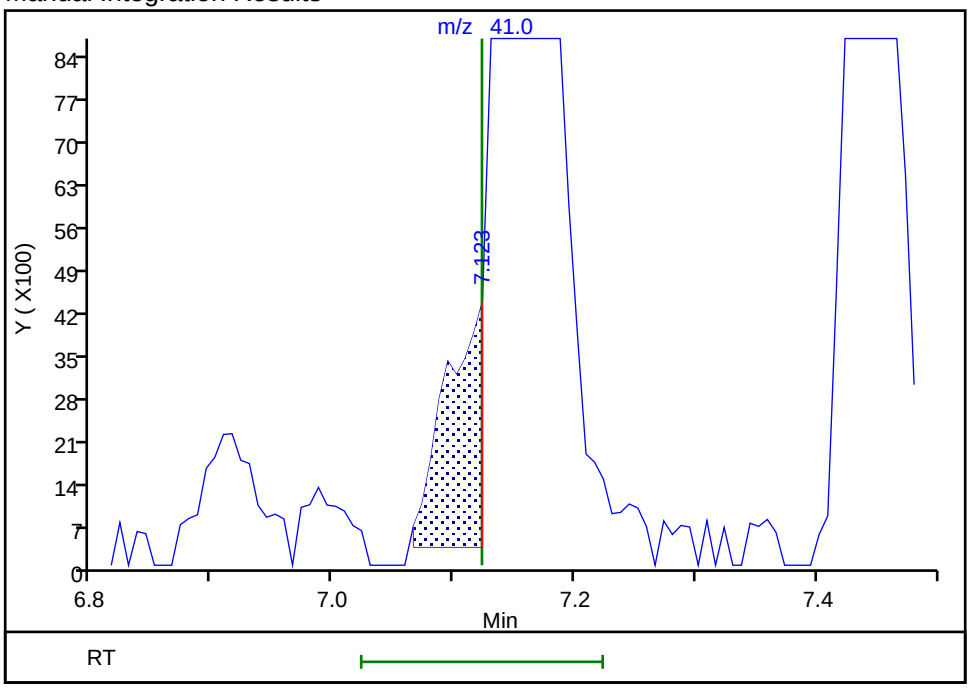
Processing Integration Results

RT: 7.17
Area: 122731
Amount: 118.7463
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 9197
Amount: 77.321401
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:25:09
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

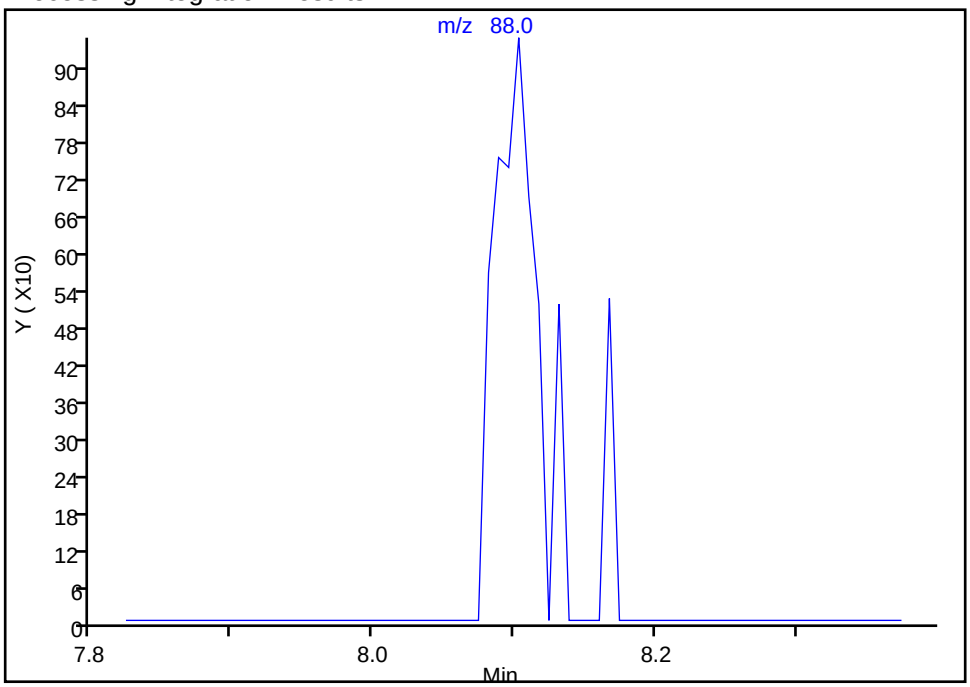
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Injection Date: 22-Oct-2018 23:17:30 Instrument ID: VMS_P
Lims ID: STD02
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

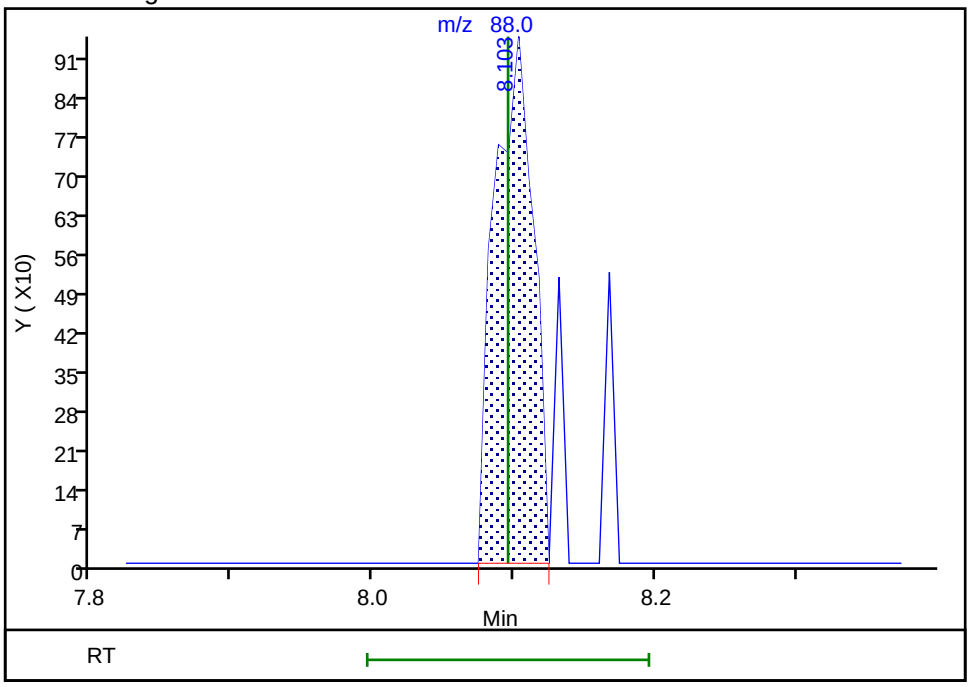
Not Detected
Expected RT: 8.10

Processing Integration Results



Manual Integration Results

RT: 8.10
Area: 1795
Amount: 40.066615
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:25:30
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2018 23:36:30 ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:57 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:23:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	37	153438	250.0	250.0	
* 1 Fluorobenzene	96	7.561	7.559	0.002	98	1448567	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	90	279391	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	97	423817	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	91	139375	5.00	4.95	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	133077	5.00	4.92	
$ 7 Toluene-d8 (Surr)	98	8.755	8.753	0.002	95	613563	5.00	5.19	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	83	183848	5.00	4.86	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	288075	5.00	4.41	
26 Chloromethane	50	4.083	4.083	0.000	98	201527	5.00	4.69	
27 Vinyl chloride	62	4.208	4.222	-0.014	84	210263	5.00	4.80	
29 Bromomethane	94	4.572	4.585	-0.013	92	189648	5.00	5.01	
30 Chloroethane	64	4.641	4.641	0.000	98	173908	5.00	4.84	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	447493	5.00	4.91	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	99	399761	5.00	4.84	
35 Ethyl ether	59	5.046	5.060	-0.014	94	87003	5.00	4.90	
39 Acrolein	56	5.214	5.214	0.000	98	92160	50.0	47.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.284	5.298	-0.014	95	171677	5.00	4.93	
41 Acetone	43	5.326	5.326	0.000	47	79019	20.0	19.2	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	206552	5.00	4.88	
44 Iodomethane	142	5.523	5.521	0.002	99	290041	5.00	4.93	
45 Methyl acetate	43	5.551	5.557	-0.006	99	92314	10.0	9.85	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	79	378288	5.00	5.00	
48 Carbon disulfide	76	5.609	5.614	-0.005	99	860685	5.00	5.00	
49 2-Methyl-2-propanol	59	5.659	5.664	-0.005	97	32788	50.0	45.0	
50 Methylene Chloride	84	5.694	5.700	-0.006	98	172686	5.00	4.73	
52 Acrylonitrile	53	5.873	5.872	0.001	73	170334	50.0	48.6	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	98	228132	5.00	4.96	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	96	205469	5.00	4.93	
54 Hexane	57	6.066	6.072	-0.006	95	388299	5.00	5.17	
55 Vinyl acetate	43	6.181	6.179	0.002	97	290934	10.0	8.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.238	6.243	-0.005	98	359804	5.00	4.93	
61 2-Butanone (MEK)	43	6.638	6.630	0.008	99	115296	20.0	19.6	
62 sec-Butyl Alcohol	45	6.681	6.680	0.001	38	62519	150.0	129.0	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	88	193695	5.00	4.91	
64 2,2-Dichloropropane	77	6.703	6.701	0.002	89	296230	5.00	4.78	
67 Chlorobromomethane	128	6.874	6.880	-0.006	94	58002	5.00	4.92	
68 Chloroform	83	6.881	6.887	-0.006	95	320415	5.00	4.98	
69 Tetrahydrofuran	42	6.910	6.908	0.002	53	29507	10.0	9.49	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	97	317711	5.00	4.84	
70 Isobutyl alcohol	41	7.096	7.123	-0.027	97	16165	125.0	94.9	M
72 Cyclohexane	56	7.160	7.166	-0.006	96	455095	5.00	5.06	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	300901	5.00	4.90	
74 Carbon tetrachloride	117	7.232	7.237	-0.005	97	269831	5.00	4.89	
76 1,2-Dichloroethane	62	7.368	7.366	0.002	96	170173	5.00	4.93	
77 Benzene	78	7.382	7.380	0.002	98	766954	5.00	4.98	
14 n-Heptane	43	7.446	7.445	0.001	96	441331	5.00	5.07	
79 Trichloroethene	95	7.847	7.845	0.002	95	197532	5.00	4.91	
80 2-Pentanone	43	7.897	7.902	-0.005	98	135385	20.0	18.5	
82 Methylcyclohexane	55	8.025	8.031	-0.006	95	365705	5.00	5.00	
83 1,2-Dichloropropane	63	8.040	8.038	0.002	91	167234	5.00	4.96	
84 1,4-Dioxane	88	8.104	8.095	0.009	27	8163	100.0	98.9	M
85 Dibromomethane	93	8.147	8.145	0.002	91	57520	5.00	4.96	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	98	178676	5.00	4.90	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	32379	5.00	4.22	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	90	171480	5.00	4.68	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	229983	20.0	20.2	
91 Toluene	91	8.805	8.803	0.002	96	777005	5.00	4.95	
92 Ethyl methacrylate	69	8.891	8.889	0.001	93	69856	5.00	4.36	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	99	126342	5.00	4.40	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	72468	5.00	4.79	
95 2-Hexanone	43	9.184	9.182	0.002	96	142570	20.0	19.7	
96 1,3-Dichloropropane	76	9.198	9.204	-0.006	96	141240	5.00	5.02	
97 Tetrachloroethene	164	9.212	9.211	0.001	93	142816	5.00	5.00	
98 Chlorodibromomethane	129	9.391	9.390	0.001	89	77205	5.00	4.66	
100 Ethylene Dibromide	107	9.520	9.518	0.002	95	62700	5.00	5.10	
101 1-Chlorohexane	91	9.734	9.733	0.001	89	272171	5.00	5.09	
102 Chlorobenzene	112	9.849	9.847	0.002	96	412129	5.00	5.01	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	93	126939	5.00	5.03	
103 Ethylbenzene	106	9.877	9.883	-0.006	97	276301	5.00	5.10	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	323887	5.00	5.10	
107 o-Xylene	106	10.270	10.269	0.001	97	302542	5.00	5.15	
106 Styrene	104	10.278	10.276	0.002	88	425301	5.00	5.20	
108 Bromoform	173	10.485	10.483	0.002	91	31110	5.00	4.39	
109 Isopropylbenzene	105	10.528	10.526	0.002	97	883990	5.00	5.06	
111 Cyclohexanone	55	10.678	10.677	0.001	96	82840	200.0	186.9	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	94	78114	5.00	5.04	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	77	18430	5.00	4.82	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	85	20458	5.00	4.98	
115 N-Propylbenzene	120	10.842	10.848	-0.006	99	241162	5.00	4.96	
116 Bromobenzene	156	10.857	10.855	0.002	98	146383	5.00	4.91	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	711741	5.00	5.02	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	189887	5.00	4.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	186687	5.00	5.05	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	696794	5.00	5.04	
121 1,2,4-Trimethylbenzene	105	11.279	11.277	0.002	96	709970	5.00	5.00	
122 sec-Butylbenzene	134	11.429	11.427	0.002	95	196300	5.00	5.11	
123 4-Isopropyltoluene	119	11.522	11.520	0.002	97	818323	5.00	5.08	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	95	324721	5.00	4.87	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	93	322407	5.00	4.87	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	905256	5.00	5.17	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	95	266034	5.00	4.96	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	68	8194	5.00	4.73	
130 1,2,4-Trichlorobenzene	180	13.710	13.708	0.002	92	176111	5.00	5.05	
131 Hexachlorobutadiene	225	13.846	13.844	0.002	93	132994	5.00	4.93	
132 Naphthalene	128	14.081	14.080	0.001	98	227007	5.00	5.02	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	93	129241	5.00	4.94	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.85	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.85	
S 139 Xylenes, Total	106				0		10.0	10.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.08	
S 134 Trihalomethanes, Total	1				0		20.0	18.9	
S 135 Xylenes, Total (URS)	1				0		10.0	10.2	
S 136 Total BTEX	1				0			25.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	2.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.40	Units: uL

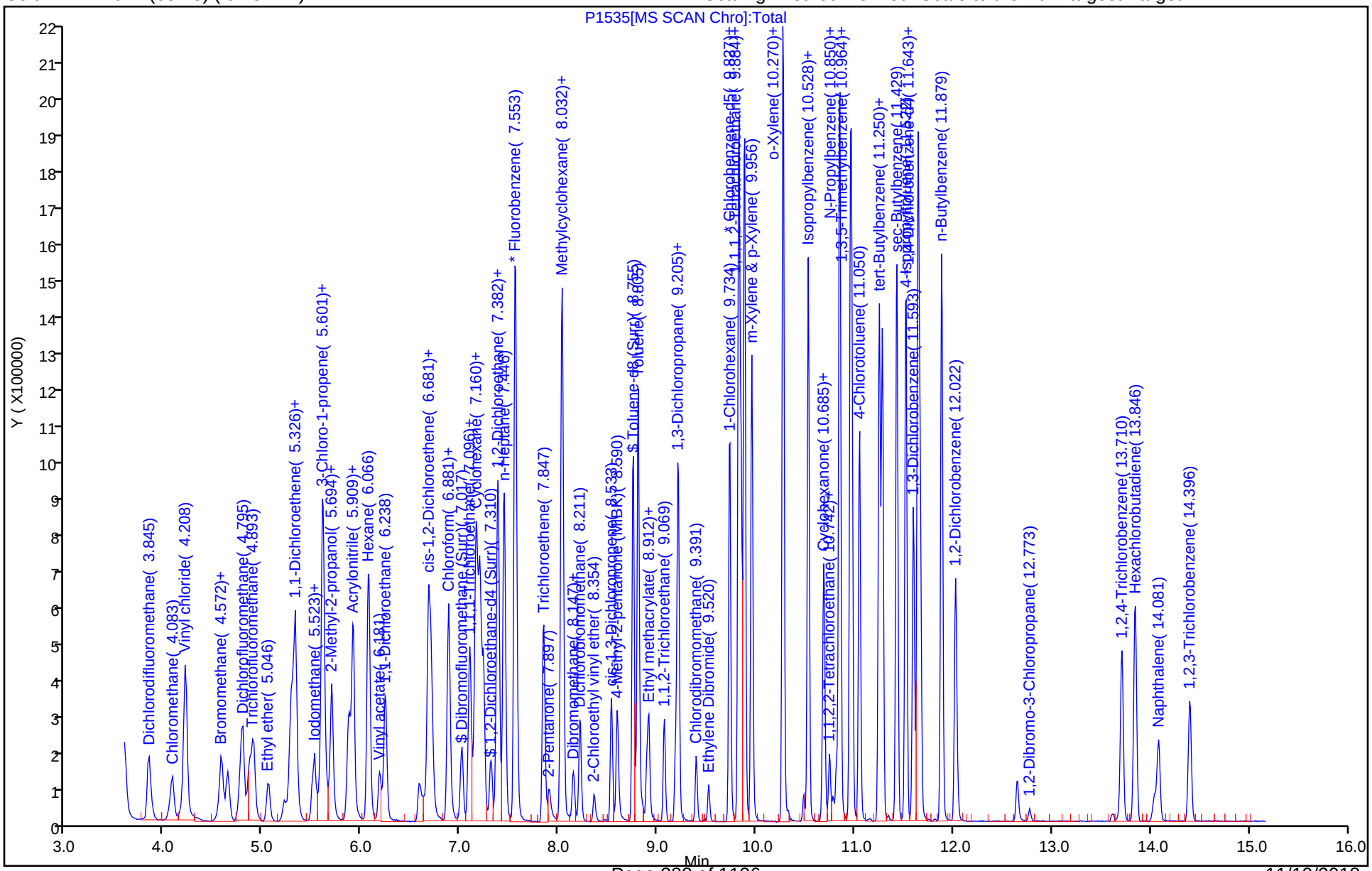
Report Date: 26-Oct-2018 10:27:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D

Injection Date:	22-Oct-2018 23:36:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

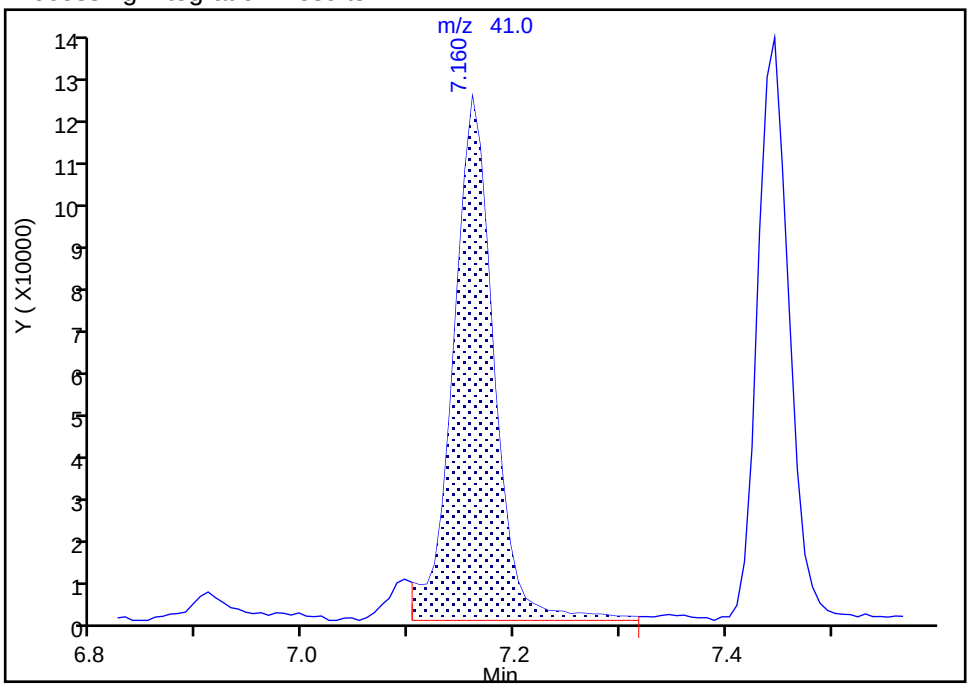
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Injection Date: 22-Oct-2018 23:36:30 Instrument ID: VMS_P
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

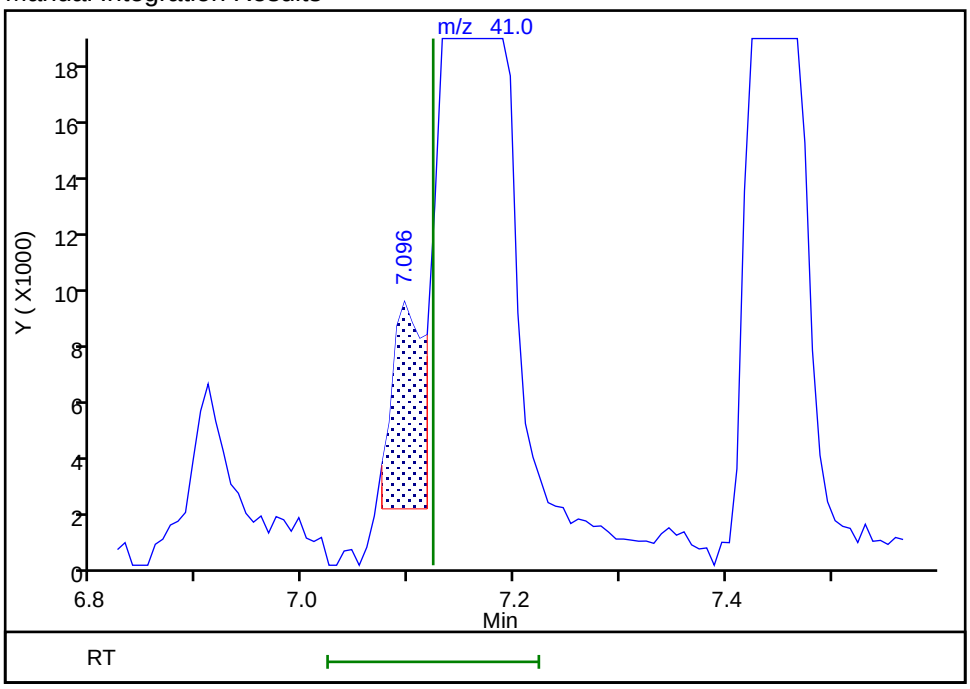
Processing Integration Results

RT: 7.16
Area: 321488
Amount: 211.9598
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 16165
Amount: 94.877681
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:53
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

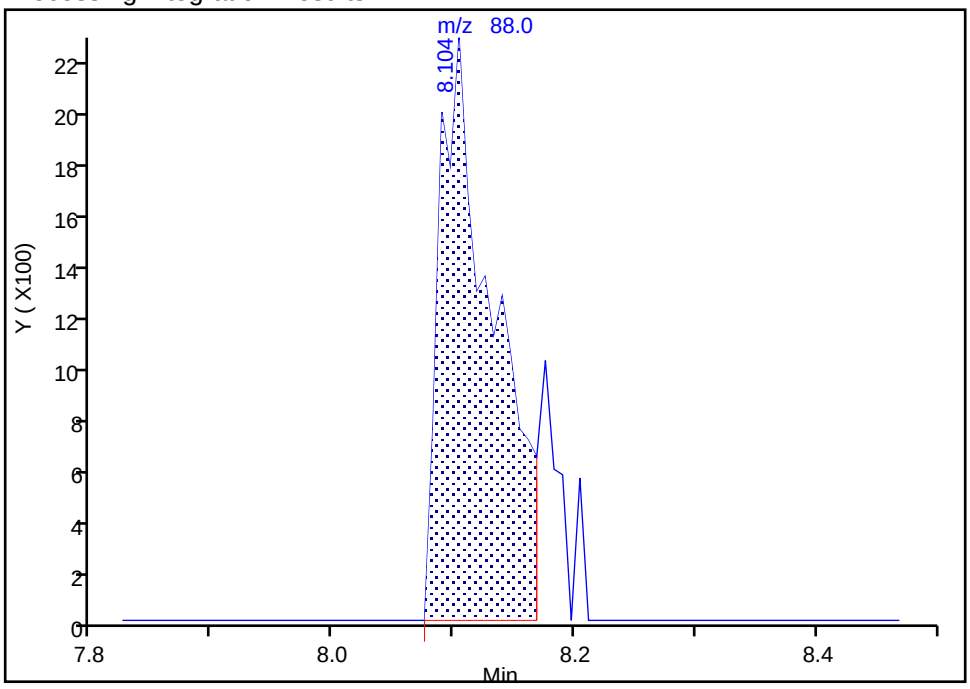
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D
Injection Date: 22-Oct-2018 23:36:30 Instrument ID: VMS_P
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

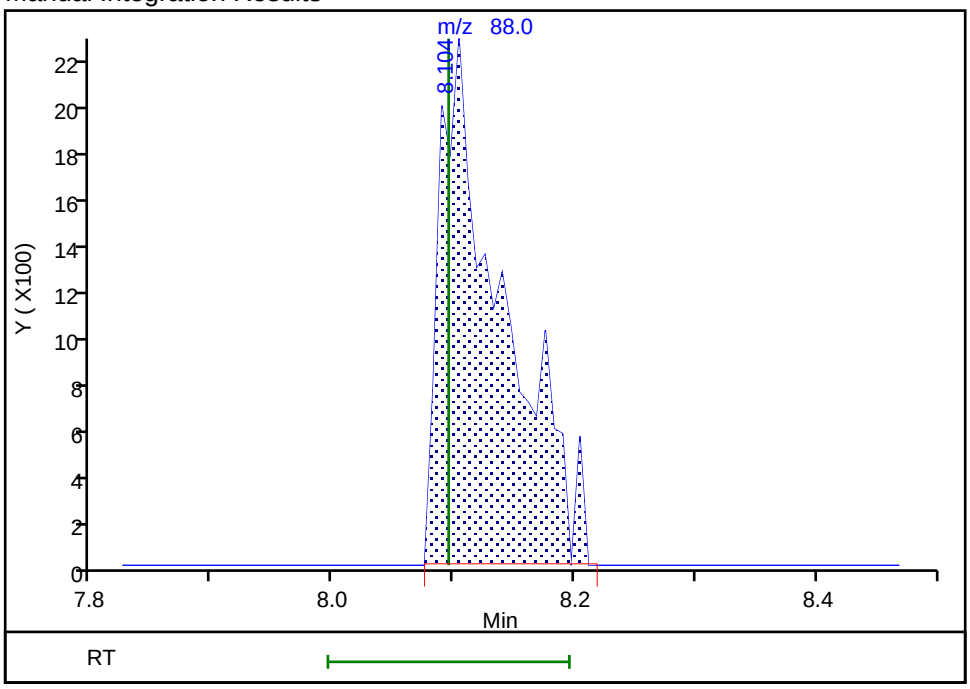
Processing Integration Results

RT: 8.10
Area: 7055
Amount: 97.969860
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 8163
Amount: 98.935101
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:22:56
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 22-Oct-2018 23:54:30 ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:17:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.607	0.000	45	153710	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1484900	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	293843	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	434345	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	291273	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	99	277981	10.0	10.0	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1252902	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	83	389233	10.0	10.0	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	735470	10.0	11.0	
26 Chloromethane	50	4.083	4.083	0.000	98	446492	10.0	10.1	
27 Vinyl chloride	62	4.222	4.222	0.000	81	468232	10.0	10.4	
29 Bromomethane	94	4.585	4.585	0.000	92	409171	10.0	10.5	
30 Chloroethane	64	4.641	4.641	0.000	99	388990	10.0	10.6	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	945199	10.0	10.1	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	100	850192	10.0	10.0	
35 Ethyl ether	59	5.060	5.060	0.000	95	190523	10.0	10.5	
39 Acrolein	56	5.214	5.214	0.000	99	209052	100.0	103.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.298	0.000	96	358066	10.0	10.0	
41 Acetone	43	5.326	5.326	0.000	31	174333	40.0	41.3	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	448527	10.0	10.3	
44 Iodomethane	142	5.521	5.521	0.000	99	636348	10.0	10.6	
45 Methyl acetate	43	5.557	5.557	0.000	97	180114	20.0	18.7	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	80	827117	10.0	10.7	
48 Carbon disulfide	76	5.614	5.614	0.000	99	1877821	10.0	10.6	
49 2-Methyl-2-propanol	59	5.664	5.664	0.000	93	80061	100.0	104.3	
50 Methylene Chloride	84	5.700	5.700	0.000	98	359867	10.0	9.62	
52 Acrylonitrile	53	5.872	5.872	0.000	97	394024	100.0	104.3	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	98	490502	10.0	10.4	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	96	440349	10.0	10.3	
54 Hexane	57	6.072	6.072	0.000	96	812580	10.0	10.3	
55 Vinyl acetate	43	6.179	6.179	0.000	97	722969	20.0	21.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.243	6.243	0.000	97	767035	10.0	10.3	
61 2-Butanone (MEK)	43	6.630	6.630	0.000	99	261640	40.0	43.4	
62 sec-Butyl Alcohol	45	6.680	6.680	0.000	48	158648	300.0	260.1	
63 cis-1,2-Dichloroethene	96	6.680	6.680	0.000	86	414480	10.0	10.3	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	89	657503	10.0	10.4	
67 Chlorobromomethane	128	6.880	6.880	0.000	92	126234	10.0	10.4	
68 Chloroform	83	6.887	6.887	0.000	95	674374	10.0	10.2	
69 Tetrahydrofuran	42	6.908	6.908	0.000	90	62125	20.0	19.5	
71 1,1,1-Trichloroethane	97	7.101	7.101	0.000	98	703751	10.0	10.4	
70 Isobutyl alcohol	41	7.123	7.123	0.000	98	59640	250.0	215.9	M
72 Cyclohexane	56	7.166	7.166	0.000	95	961671	10.0	10.4	
73 1,1-Dichloropropene	75	7.194	7.194	0.000	96	661228	10.0	10.5	
74 Carbon tetrachloride	117	7.237	7.237	0.000	97	597861	10.0	10.6	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	98	366821	10.0	10.4	
77 Benzene	78	7.380	7.380	0.000	98	1630124	10.0	10.3	
14 n-Heptane	43	7.445	7.445	0.000	96	940078	10.0	10.5	
79 Trichloroethene	95	7.845	7.845	0.000	95	417356	10.0	10.1	
80 2-Pentanone	43	7.902	7.902	0.000	98	317112	40.0	40.3	
82 Methylcyclohexane	55	8.031	8.031	0.000	95	782852	10.0	10.4	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	91	359294	10.0	10.4	
84 1,4-Dioxane	88	8.095	8.095	0.000	96	19825	200.0	204.2	M
85 Dibromomethane	93	8.145	8.145	0.000	91	124133	10.0	10.4	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	394336	10.0	10.6	
87 2-Chloroethyl vinyl ether	63	8.353	8.353	0.000	94	76671	10.0	9.18	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	91	403835	10.0	10.3	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	514547	40.0	44.2	
91 Toluene	91	8.803	8.803	0.000	97	1666906	10.0	10.3	
92 Ethyl methacrylate	69	8.889	8.889	0.000	94	172920	10.0	9.77	
93 trans-1,3-Dichloropropene	75	8.910	8.910	0.000	99	295254	10.0	9.57	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	161187	10.0	10.4	
95 2-Hexanone	43	9.182	9.182	0.000	99	321667	40.0	41.0	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	307296	10.0	10.4	
97 Tetrachloroethene	164	9.211	9.211	0.000	92	314232	10.0	10.5	
98 Chlorodibromomethane	129	9.390	9.390	0.000	90	180138	10.0	10.1	
100 Ethylene Dibromide	107	9.518	9.518	0.000	97	140256	10.0	10.8	
101 1-Chlorohexane	91	9.733	9.733	0.000	90	606115	10.0	10.8	
102 Chlorobenzene	112	9.847	9.847	0.000	93	883115	10.0	10.2	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	91	283865	10.0	10.7	
103 Ethylbenzene	106	9.883	9.883	0.000	97	599364	10.0	10.5	
105 m-Xylene & p-Xylene	106	9.954	9.954	0.000	99	713702	10.0	10.7	
107 o-Xylene	106	10.269	10.269	0.000	89	663675	10.0	10.7	
106 Styrene	104	10.276	10.276	0.000	85	960799	10.0	11.2	
108 Bromoform	173	10.483	10.483	0.000	94	74512	10.0	9.56	
109 Isopropylbenzene	105	10.526	10.526	0.000	97	1943780	10.0	10.9	
111 Cyclohexanone	55	10.677	10.677	0.000	97	193401	400.0	403.7	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	96	169222	10.0	10.7	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.777	0.000	83	38987	10.0	9.96	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	89	46922	10.0	11.1	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	542206	10.0	10.9	
116 Bromobenzene	156	10.855	10.855	0.000	98	320968	10.0	10.5	
117 1,3,5-Trimethylbenzene	105	10.955	10.955	0.000	94	1570604	10.0	10.8	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	411519	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.048	11.048	0.000	99	396075	10.0	10.5	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	1537937	10.0	10.8	
121 1,2,4-Trimethylbenzene	105	11.277	11.277	0.000	96	1571155	10.0	10.8	
122 sec-Butylbenzene	134	11.427	11.427	0.000	95	425798	10.0	10.8	
123 4-Isopropyltoluene	119	11.520	11.520	0.000	97	1770755	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	95	707859	10.0	10.4	
126 1,4-Dichlorobenzene	146	11.663	11.663	0.000	91	704882	10.0	10.4	
127 n-Butylbenzene	91	11.878	11.878	0.000	99	1942615	10.0	10.8	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	95	569001	10.0	10.4	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.772	0.000	70	19021	10.0	9.97	
130 1,2,4-Trichlorobenzene	180	13.708	13.708	0.000	93	379903	10.0	10.6	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	93	284608	10.0	10.3	
132 Naphthalene	128	14.080	14.080	0.000	98	507371	10.0	11.0	
133 1,2,3-Trichlorobenzene	180	14.395	14.395	0.000	93	288132	10.0	10.8	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.6	
S 139 Xylenes, Total	106				0		20.0	21.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 134 Trihalomethanes, Total	1				0		40.0	40.4	
S 135 Xylenes, Total (URS)	1				0		20.0	21.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL

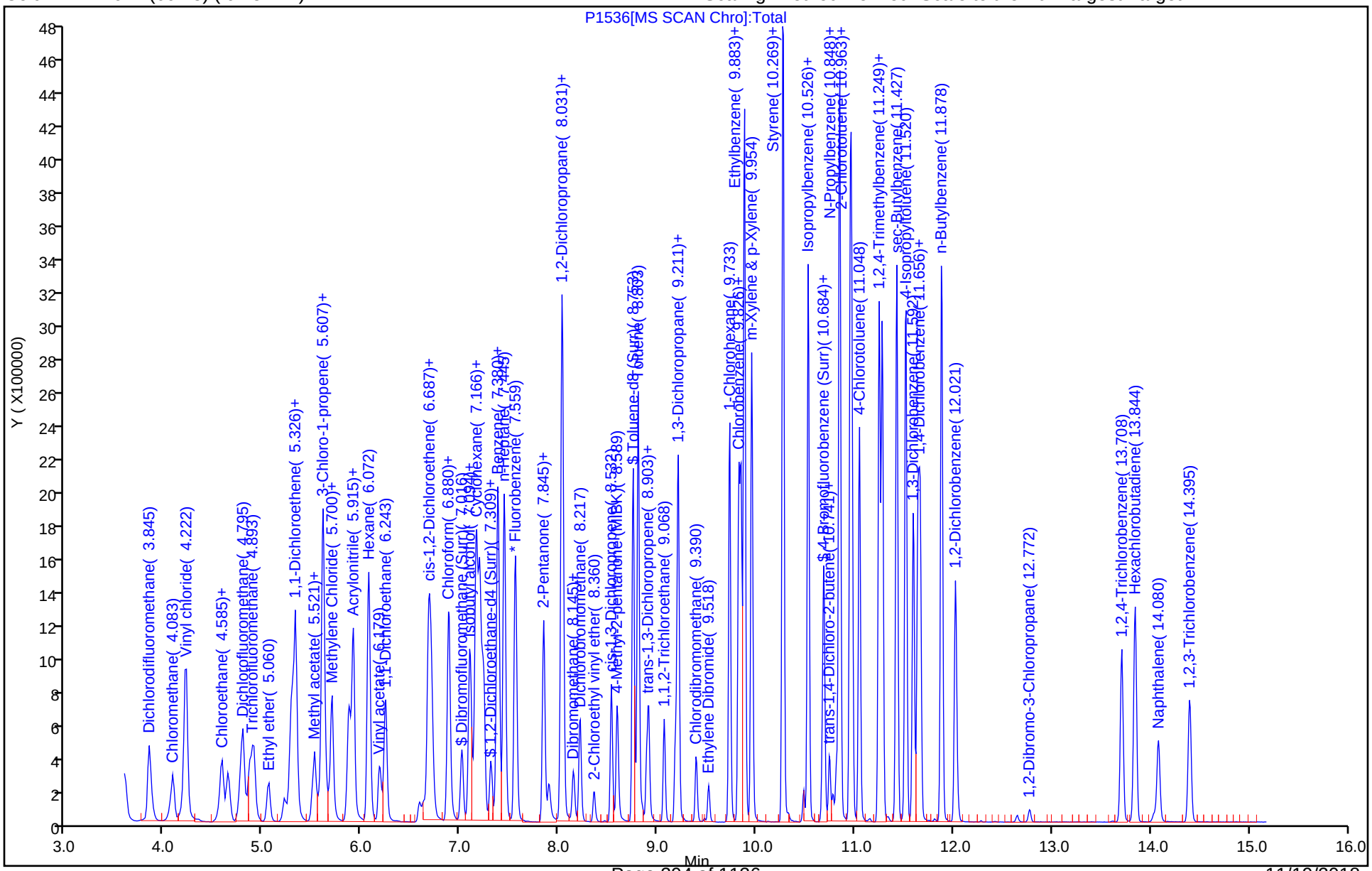
Report Date: 26-Oct-2018 10:28:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D

Injection Date:	22-Oct-2018 23:54:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

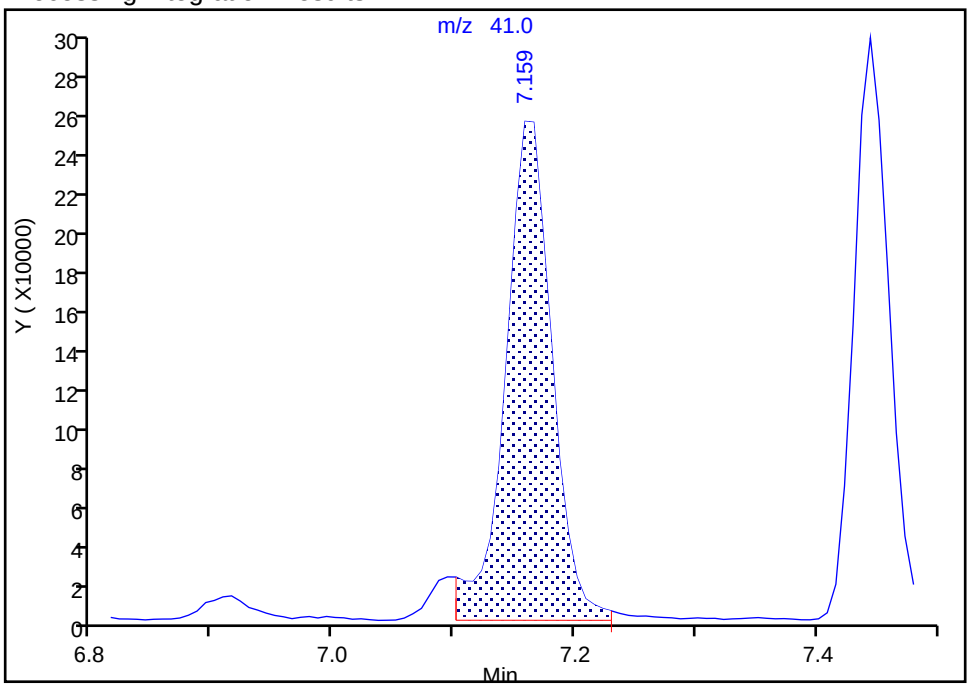
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Injection Date: 22-Oct-2018 23:54:30 Instrument ID: VMS_P
Lims ID: ICIS
Client ID:
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

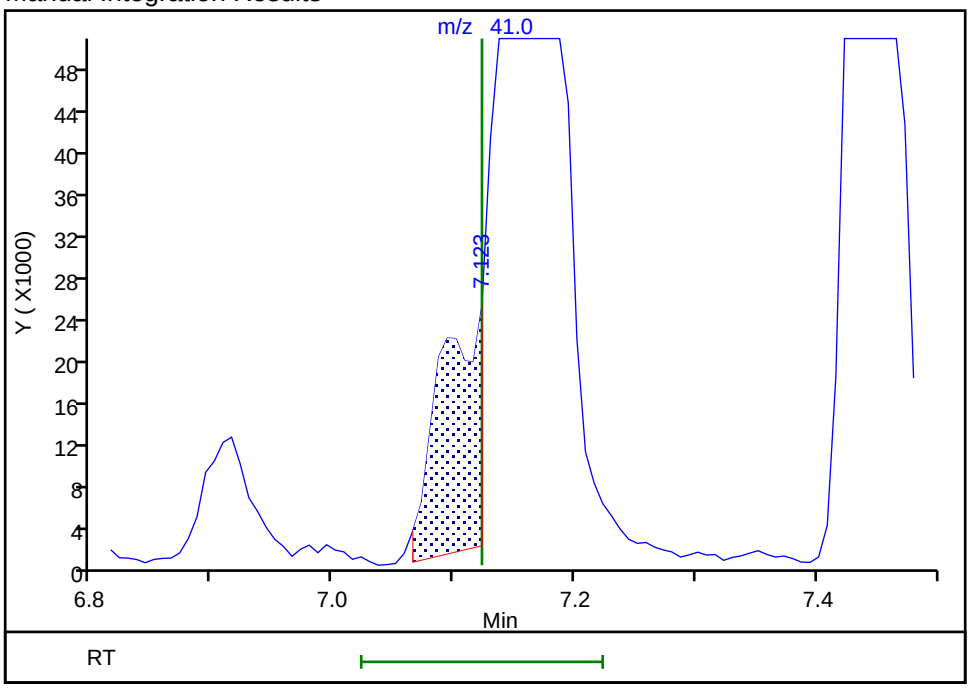
Processing Integration Results

RT: 7.16
Area: 666750
Amount: 260.8538
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 59640
Amount: 215.9097
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:16:46
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

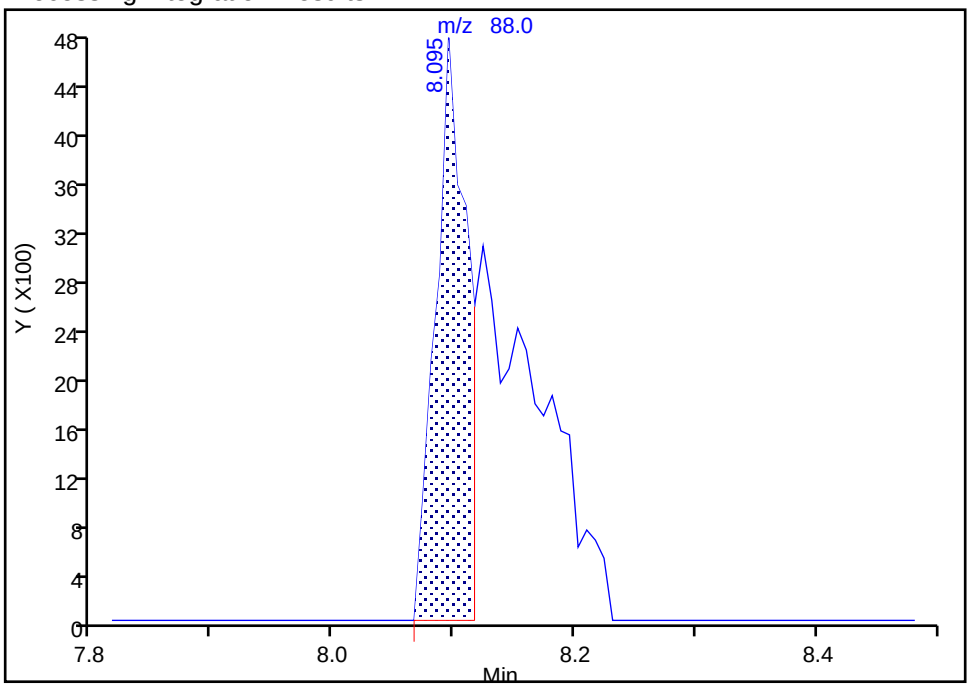
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Injection Date: 22-Oct-2018 23:54:30 Instrument ID: VMS_P
Lims ID: ICIS
Client ID:
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

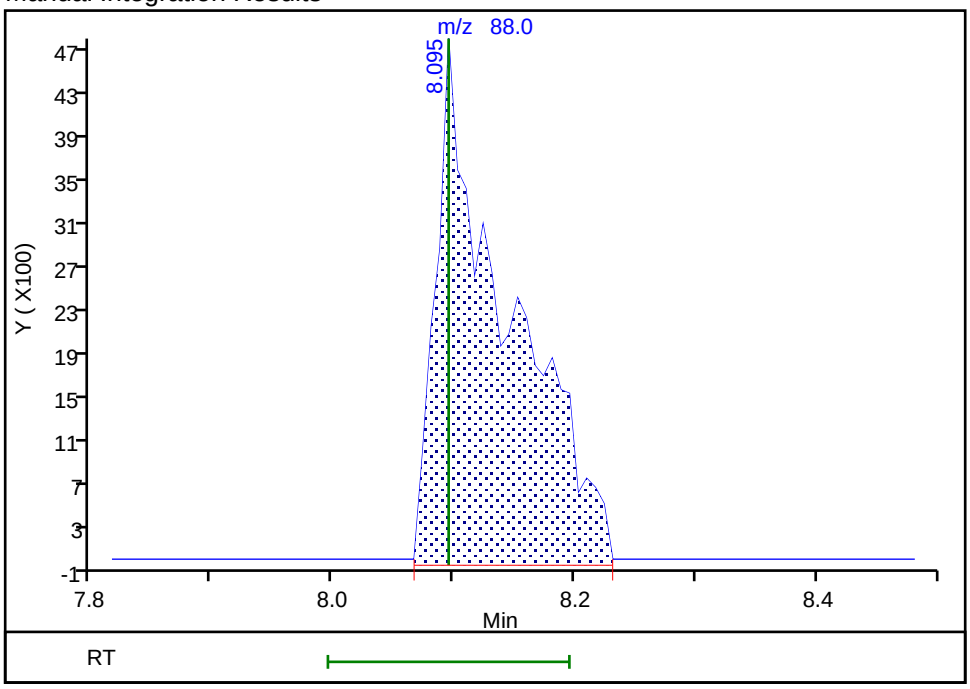
Processing Integration Results

RT: 8.10
Area: 8592
Amount: 149.5101
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 19825
Amount: 204.2176
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:36
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1537.D
Lims ID: STD25
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Oct-2018 00:13:30 ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD25
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:04 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:19:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	29	175609	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1598025	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	88	325333	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	97	481097	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	833783	25.0	26.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	775548	25.0	26.0	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	3602810	25.0	26.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	85	1140773	25.0	26.5	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	1858093	25.0	25.8	
26 Chloromethane	50	4.082	4.083	-0.001	98	1182249	25.0	24.9	
27 Vinyl chloride	62	4.221	4.222	-0.001	98	1225859	25.0	25.3	
29 Bromomethane	94	4.584	4.585	-0.001	92	1039359	25.0	24.9	
30 Chloroethane	64	4.640	4.641	-0.001	99	981944	25.0	24.8	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	2500432	25.0	24.8	
32 Trichlorofluoromethane	101	4.906	4.893	0.013	100	2286034	25.0	25.1	
35 Ethyl ether	59	5.059	5.060	-0.001	95	508960	25.0	26.0	
39 Acrolein	56	5.213	5.214	-0.001	100	573918	250.0	260.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.298	-0.001	96	991032	25.0	25.8	
41 Acetone	43	5.325	5.326	-0.001	98	456902	100.0	100.6	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	96	1214896	25.0	26.0	
44 Iodomethane	142	5.522	5.521	0.001	99	1669775	25.0	25.7	
45 Methyl acetate	43	5.558	5.557	0.001	99	477010	50.0	46.1	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	79	2210140	25.0	26.5	
48 Carbon disulfide	76	5.615	5.614	0.001	99	4894616	25.0	25.8	
49 2-Methyl-2-propanol	59	5.665	5.664	0.001	95	227884	250.0	254.3	
50 Methylene Chloride	84	5.694	5.700	-0.006	97	940718	25.0	23.4	
52 Acrylonitrile	53	5.866	5.872	-0.006	88	1096397	250.0	263.2	
51 Methyl tert-butyl ether	73	5.873	5.872	0.001	97	1326974	25.0	26.2	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	95	1168190	25.0	25.4	
54 Hexane	57	6.073	6.072	0.001	95	2172540	25.0	24.8	
55 Vinyl acetate	43	6.180	6.179	0.001	97	1956800	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.245	6.243	0.002	97	2048571	25.0	25.4	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	99	694115	100.0	107.1	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	45	600116	750.0	760.5	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	87	1125825	25.0	25.9	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	91	1817586	25.0	26.6	
67 Chlorobromomethane	128	6.874	6.880	-0.006	93	342377	25.0	26.3	
68 Chloroform	83	6.888	6.887	0.001	96	1839496	25.0	25.9	
69 Tetrahydrofuran	42	6.910	6.908	0.002	89	191563	50.0	55.8	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	98	1943964	25.0	26.8	
70 Isobutyl alcohol	41	7.095	7.123	-0.028	99	256725	625.0	675.8	M
72 Cyclohexane	56	7.160	7.166	-0.006	93	2547223	25.0	25.7	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	1771456	25.0	26.1	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	97	1697208	25.0	27.9	
76 1,2-Dichloroethane	62	7.374	7.366	0.008	97	1012106	25.0	26.6	
77 Benzene	78	7.382	7.380	0.002	99	4354273	25.0	25.6	
14 n-Heptane	43	7.446	7.445	0.001	95	2503147	25.0	26.1	
79 Trichloroethene	95	7.846	7.845	0.001	95	1176545	25.0	26.5	
80 2-Pentanone	43	7.896	7.902	-0.006	98	908003	100.0	104.7	
82 Methylcyclohexane	55	8.032	8.031	0.001	95	2107985	25.0	26.1	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	91	966306	25.0	26.0	
84 1,4-Dioxane	88	8.097	8.095	0.002	98	54445	500.0	486.9	
85 Dibromomethane	93	8.147	8.145	0.002	91	339447	25.0	26.5	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	98	1110029	25.0	27.6	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	232604	25.0	25.1	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	91	1162264	25.0	26.4	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	1423611	100.0	113.5	
91 Toluene	91	8.804	8.803	0.001	97	4504430	25.0	26.0	
92 Ethyl methacrylate	69	8.890	8.889	0.001	92	502168	25.0	25.1	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	97	856567	25.0	25.2	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	440600	25.0	26.4	
95 2-Hexanone	43	9.176	9.182	-0.006	98	924099	100.0	104.7	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	98	853095	25.0	26.1	
97 Tetrachloroethene	164	9.212	9.211	0.001	94	894564	25.0	26.9	
98 Chlorodibromomethane	129	9.391	9.390	0.001	90	529411	25.0	26.5	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	393143	25.0	27.5	
101 1-Chlorohexane	91	9.734	9.733	0.001	91	1703083	25.0	27.3	
102 Chlorobenzene	112	9.848	9.847	0.001	92	2472302	25.0	25.8	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	94	836763	25.0	28.5	
103 Ethylbenzene	106	9.884	9.883	0.001	98	1697879	25.0	26.9	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	1972447	25.0	26.7	
107 o-Xylene	106	10.270	10.269	0.001	88	1857075	25.0	27.1	
106 Styrene	104	10.277	10.276	0.001	85	2754394	25.0	28.9	
108 Bromoform	173	10.485	10.483	0.002	93	229187	25.0	26.0	
109 Isopropylbenzene	105	10.528	10.526	0.002	98	5332082	25.0	26.9	
111 Cyclohexanone	55	10.678	10.677	0.001	96	582097	1000.0	1081.7	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	461284	25.0	26.2	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	92	123288	25.0	28.4	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	88	125958	25.0	27.0	
115 N-Propylbenzene	120	10.849	10.848	0.001	99	1515447	25.0	27.5	
116 Bromobenzene	156	10.849	10.855	-0.006	98	934605	25.0	27.6	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	4427245	25.0	27.5	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	1152643	25.0	26.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	1131730	25.0	27.0	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	4378350	25.0	27.9	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	4358310	25.0	27.0	
122 sec-Butylbenzene	134	11.428	11.427	0.001	96	1224554	25.0	28.1	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	96	4989795	25.0	27.3	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	96	1985697	25.0	26.2	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	92	1944066	25.0	25.9	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	5368086	25.0	27.0	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	94	1595669	25.0	26.2	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	71	57253	25.0	26.1	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	93	1069570	25.0	27.0	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	93	810182	25.0	26.5	
132 Naphthalene	128	14.081	14.080	0.001	98	1418730	25.0	27.7	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	783888	25.0	26.4	
S 140 1,2-Dichloroethene, Total	96				0		50.0	51.3	
S 138 1,2-Dichloroethene, Total	1				0		50.0	51.3	
S 139 Xylenes, Total	106				0		50.0	53.8	
S 137 1,3-Dichloropropene, Total	1				0		50.0	51.6	
S 134 Trihalomethanes, Total	1				0		100.0	106.0	
S 135 Xylenes, Total (URS)	1				0		50.0	53.8	
S 136 Total BTEX	1				0			132.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	10.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	2.00	Units: uL

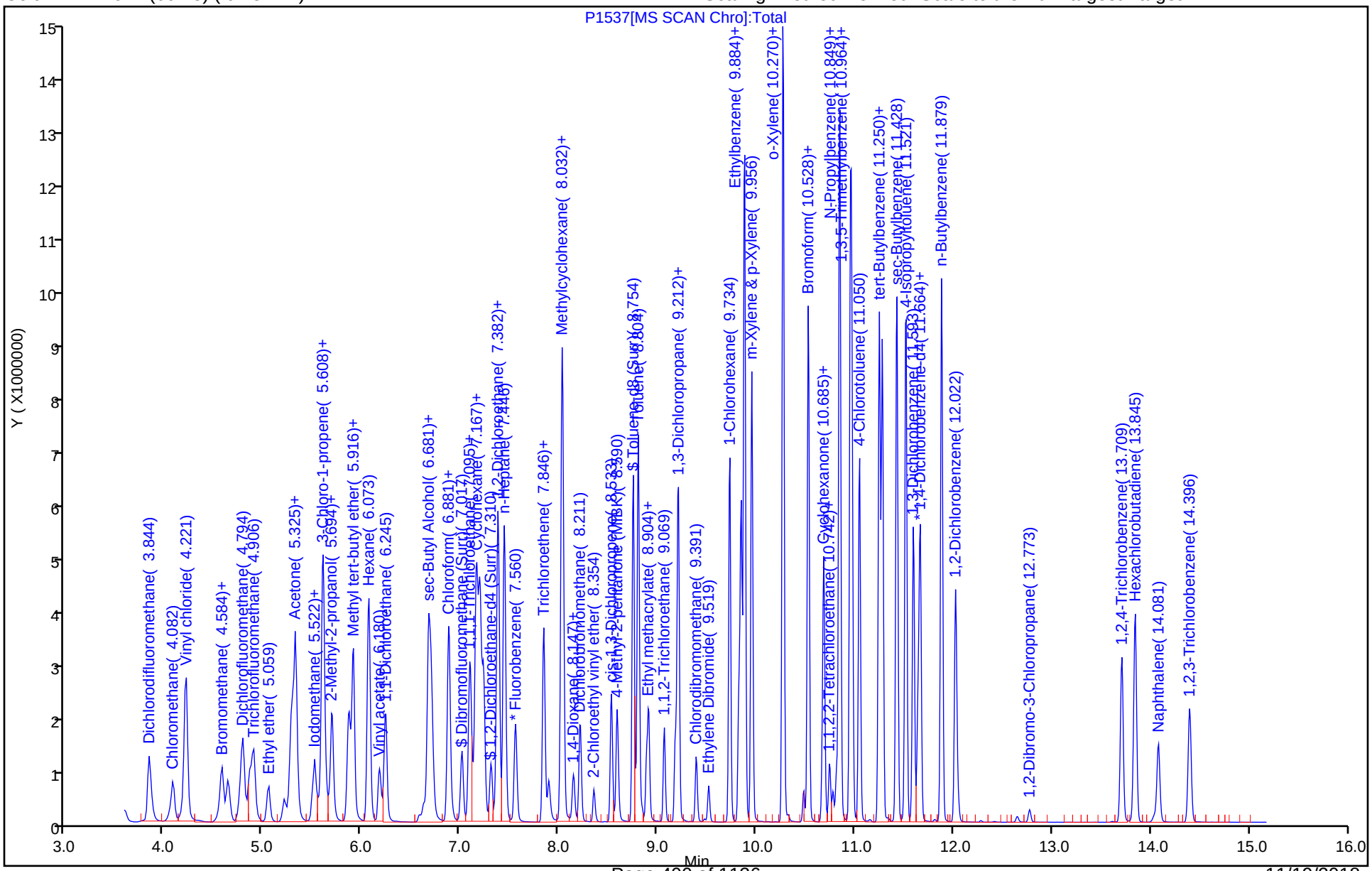
Report Date: 26-Oct-2018 10:28:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1537.D

Injection Date:	23-Oct-2018 00:13:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD25			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

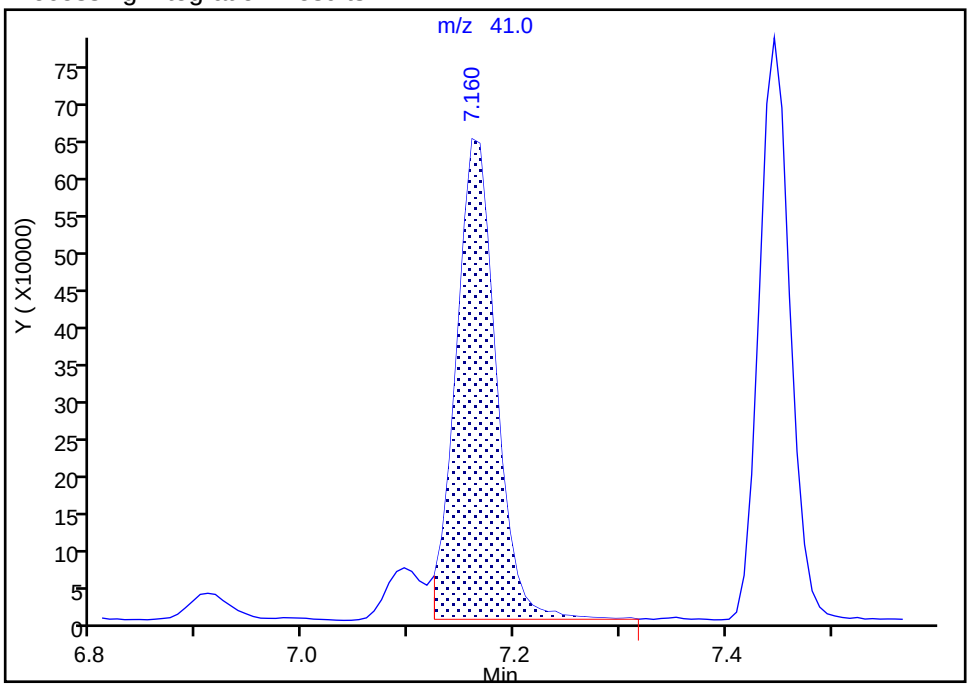
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Injection Date: 23-Oct-2018 00:13:30 Instrument ID: VMS_P
Lims ID: STD25
Client ID:
Operator ID: newcomer ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

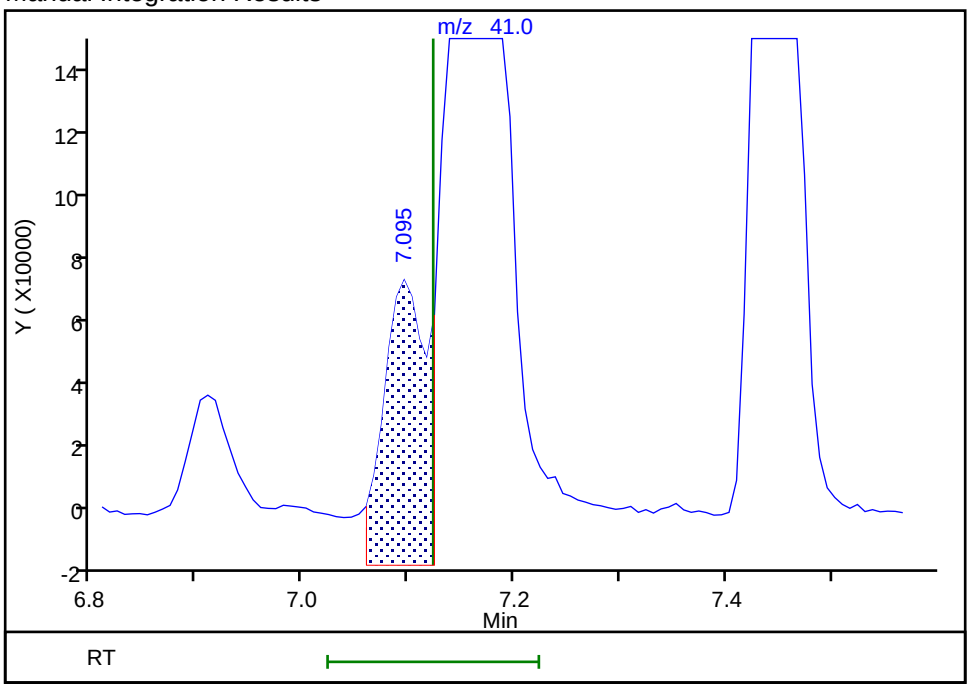
Processing Integration Results

RT: 7.16
Area: 1693011
Amount: 688.8365
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 256725
Amount: 675.7601
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:18:31
Audit Action: Manually Integrated Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Oct-2018 00:32:30 ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:08 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:21:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.608	5.607	0.001	32	202848	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1764698	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	87	359083	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	98	557273	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	2188809	50.0	63.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	2014622	50.0	61.2	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	8943247	50.0	58.9	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	88	3013369	50.0	60.5	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	4693289	60.0	59.0	
26 Chloromethane	50	4.082	4.083	-0.001	98	2894998	60.0	55.3	
27 Vinyl chloride	62	4.208	4.222	-0.014	98	3061908	60.0	57.3	
29 Bromomethane	94	4.571	4.585	-0.014	94	2330479	60.0	50.5	
30 Chloroethane	64	4.641	4.641	0.000	98	2162819	60.0	49.4	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	6305032	60.0	56.7	
32 Trichlorofluoromethane	101	4.893	4.893	-0.001	100	5932606	60.0	59.0	
35 Ethyl ether	59	5.046	5.060	-0.014	95	1314028	60.0	60.7	
39 Acrolein	56	5.214	5.214	0.000	99	1475122	600.1	603.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.298	0.000	95	2584242	60.0	60.9	
41 Acetone	43	5.311	5.326	-0.015	98	1199807	240.0	239.2	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	95	3059955	60.0	59.3	
44 Iodomethane	142	5.523	5.521	0.002	99	4375661	60.0	61.1	
45 Methyl acetate	43	5.551	5.557	-0.006	98	1259076	120.0	110.3	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	84	5459964	60.0	59.3	
48 Carbon disulfide	76	5.608	5.614	-0.006	100	11882759	60.0	56.7	
49 2-Methyl-2-propanol	59	5.666	5.664	0.002	94	620909	600.0	594.8	
50 Methylene Chloride	84	5.694	5.700	-0.006	97	2369557	60.0	53.3	
52 Acrylonitrile	53	5.866	5.872	-0.006	97	2883332	600.0	621.0	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	99	3428838	60.0	61.2	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	95	2992033	60.0	59.0	
54 Hexane	57	6.066	6.072	-0.006	95	5359904	60.0	55.5	
55 Vinyl acetate	43	6.180	6.179	0.001	97	5053902	120.0	122.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.238	6.243	-0.005	97	5231410	60.0	58.8	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	99	1838987	240.0	256.9	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	95	1701173	1800.0	1803.0	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	87	2889476	60.0	60.2	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	4790387	60.0	63.5	
67 Chlorobromomethane	128	6.874	6.880	-0.006	95	901336	60.0	62.7	
68 Chloroform	83	6.881	6.887	-0.006	97	4846835	60.0	61.9	
69 Tetrahydrofuran	42	6.910	6.908	0.002	90	492719	120.0	130.1	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	98	5174443	60.0	64.6	
70 Isobutyl alcohol	41	7.088	7.123	-0.035	98	680435	1500.0	1486.1	M
72 Cyclohexane	56	7.160	7.166	-0.006	96	6252132	60.0	57.0	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	95	4605301	60.0	61.6	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	98	4608704	60.0	68.6	
76 1,2-Dichloroethane	62	7.367	7.366	0.001	97	2727259	60.0	64.9	
77 Benzene	78	7.382	7.380	0.002	99	10752710	60.0	57.3	
14 n-Heptane	43	7.446	7.445	0.001	94	6152650	60.0	58.1	
79 Trichloroethene	95	7.846	7.845	0.001	96	3117767	60.0	63.6	
80 2-Pentanone	43	7.896	7.902	-0.006	98	2422968	240.0	250.9	
82 Methylcyclohexane	55	8.032	8.031	0.001	96	5312605	60.0	59.6	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	89	2398505	60.0	58.4	
84 1,4-Dioxane	88	8.097	8.095	0.002	94	154523	1200.0	1216.8	M
85 Dibromomethane	93	8.147	8.145	0.002	93	892486	60.0	63.2	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	99	2991730	60.0	67.4	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	93	638560	60.0	61.6	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	91	3092117	60.0	63.4	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	3633639	240.0	262.4	
91 Toluene	91	8.804	8.803	0.001	97	11055512	60.0	57.8	
92 Ethyl methacrylate	69	8.890	8.889	0.001	92	1359256	60.0	60.9	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	98	2305617	60.0	60.9	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	1143505	60.0	62.1	
95 2-Hexanone	43	9.176	9.182	-0.006	98	2413876	240.0	246.4	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	98	2210702	60.0	61.2	
97 Tetrachloroethene	164	9.212	9.211	0.001	93	2444032	60.0	66.5	
98 Chlorodibromomethane	129	9.391	9.390	0.001	91	1453495	60.0	65.5	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	1044908	60.0	66.1	
101 1-Chlorohexane	91	9.734	9.733	0.001	92	4331901	60.0	63.0	
102 Chlorobenzene	112	9.848	9.847	0.001	91	6322200	60.0	59.8	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	93	2295577	60.0	70.8	
103 Ethylbenzene	106	9.884	9.883	0.001	97	4283066	60.0	61.5	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	98	5095712	60.0	62.4	
107 o-Xylene	106	10.270	10.269	0.001	85	4628210	60.0	61.3	
106 Styrene	104	10.277	10.276	0.001	83	6767658	60.0	64.4	
108 Bromoform	173	10.485	10.483	0.002	94	659560	60.0	67.1	
109 Isopropylbenzene	105	10.528	10.526	0.002	98	12941106	60.0	56.3	
111 Cyclohexanone	55	10.678	10.677	0.001	96	1568876	2400.0	2628.0	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	1181451	60.0	58.0	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	89	330653	60.0	65.8	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	89	329287	60.0	61.0	
115 N-Propylbenzene	120	10.842	10.848	-0.006	97	3796203	60.0	59.4	e
116 Bromobenzene	156	10.857	10.855	0.002	97	2422825	60.0	61.8	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	11036786	60.0	59.2	
118 2-Chlorotoluene	126	10.971	10.970	0.001	93	2972965	60.0	59.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	2992125	60.0	61.6	
120 tert-Butylbenzene	119	11.250	11.249	0.001	91	11170940	60.0	61.4	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	10953609	60.0	58.7	
122 sec-Butylbenzene	134	11.429	11.427	0.002	97	3140484	60.0	62.2	e
123 4-Isopropyltoluene	119	11.522	11.520	0.002	95	12163407	60.0	57.4	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	96	5248864	60.0	59.9	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	92	5114875	60.0	58.8	
127 n-Butylbenzene	91	11.879	11.878	0.001	97	12717640	60.0	55.2	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	94	4190892	60.0	59.4	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	75	160385	60.0	62.2	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	93	2785041	60.0	60.7	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	95	2161747	60.0	61.0	
132 Naphthalene	128	14.081	14.080	0.001	98	3577030	60.0	60.2	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	2018581	60.0	58.7	
S 140 1,2-Dichloroethene, Total	96				0		120.0	119.1	
S 138 1,2-Dichloroethene, Total	1				0		120.0	119.1	
S 139 Xylenes, Total	106				0		120.0	123.7	
S 137 1,3-Dichloropropene, Total	1				0		120.0	124.4	
S 134 Trihalomethanes, Total	1				0		240.0	261.9	
S 135 Xylenes, Total (URS)	1				0		120.0	123.7	
S 136 Total BTEX	1				0			300.2	

QC Flag Legend

Processing Flags
e - Potential Peak Saturated
Review Flags
M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	24.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	4.00	Units: uL

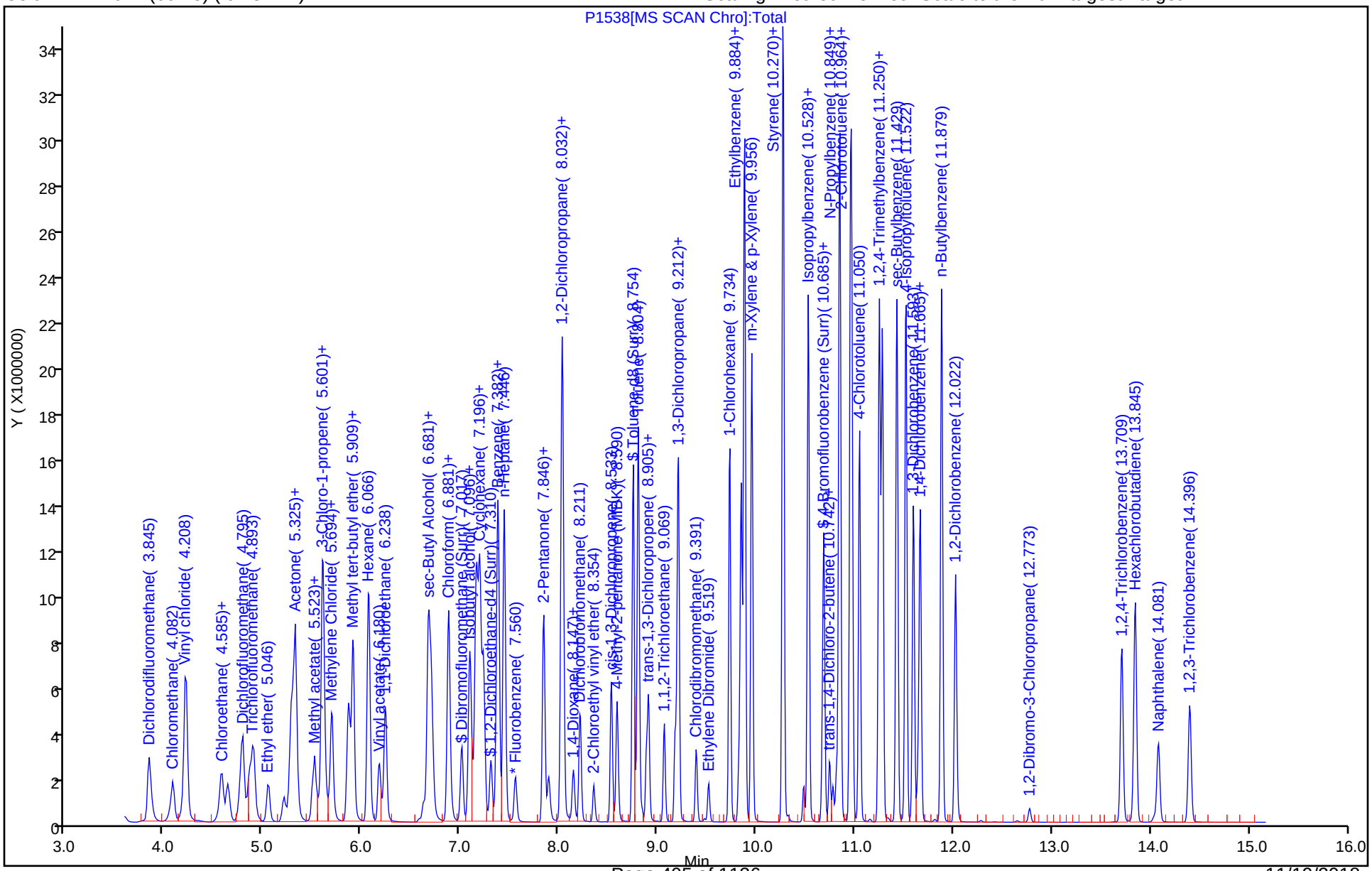
Report Date: 26-Oct-2018 10:28:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Injection Date:	23-Oct-2018 00:32:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

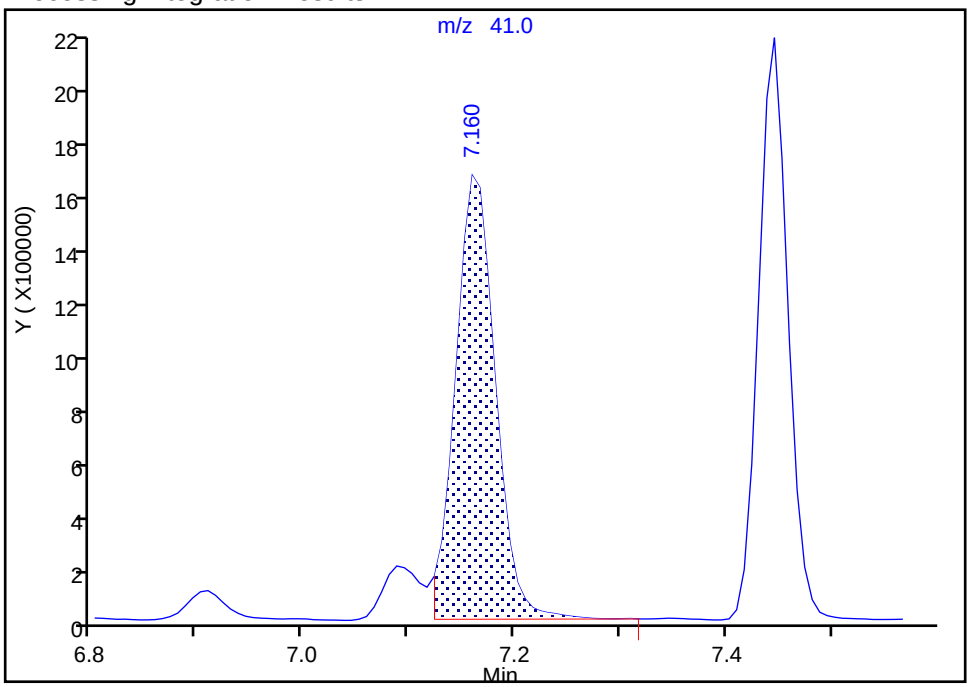
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Injection Date: 23-Oct-2018 00:32:30 Instrument ID: VMS_P
Lims ID: STD60
Client ID:
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

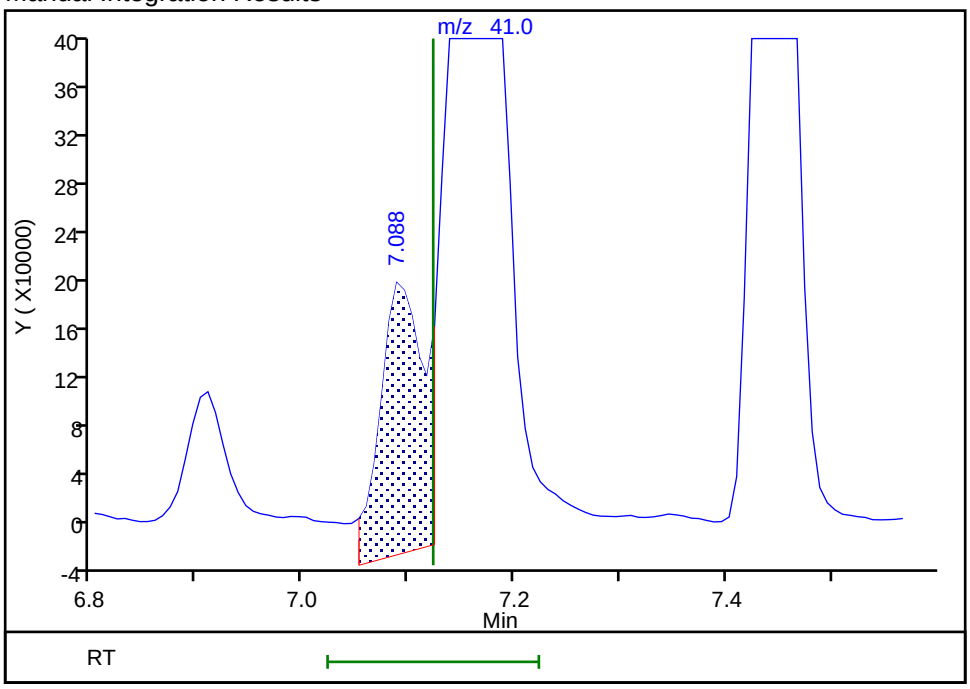
Processing Integration Results

RT: 7.16
Area: 4203350
Amount: 1753.8839
Amount Units: ug/l



Manual Integration Results

RT: 7.09
Area: 680435
Amount: 1486.1312
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:20:45
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

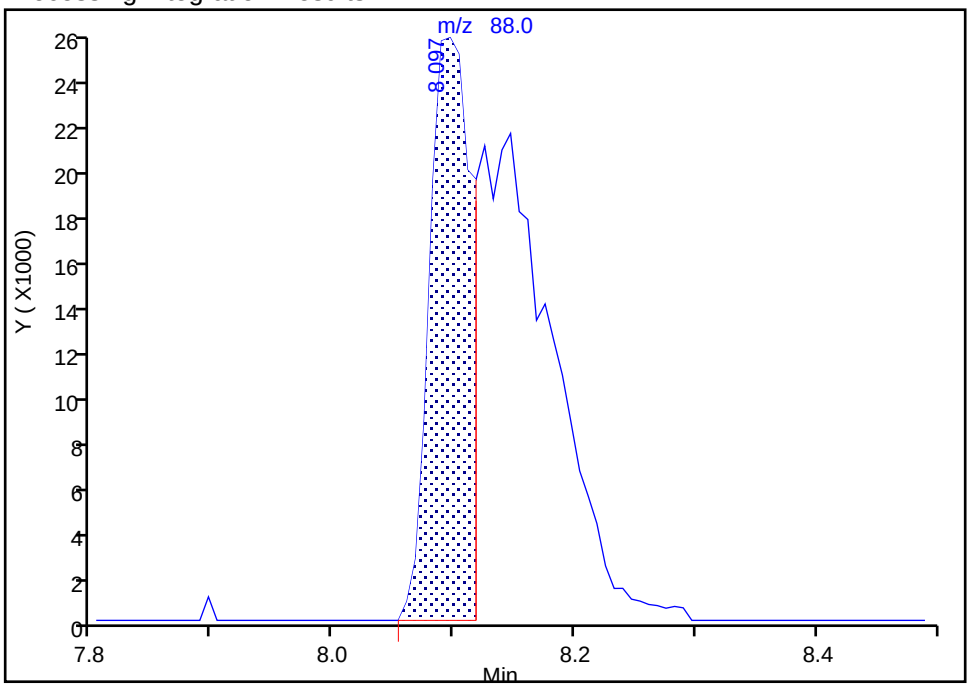
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Injection Date: 23-Oct-2018 00:32:30 Instrument ID: VMS_P
Lims ID: STD60
Client ID:
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

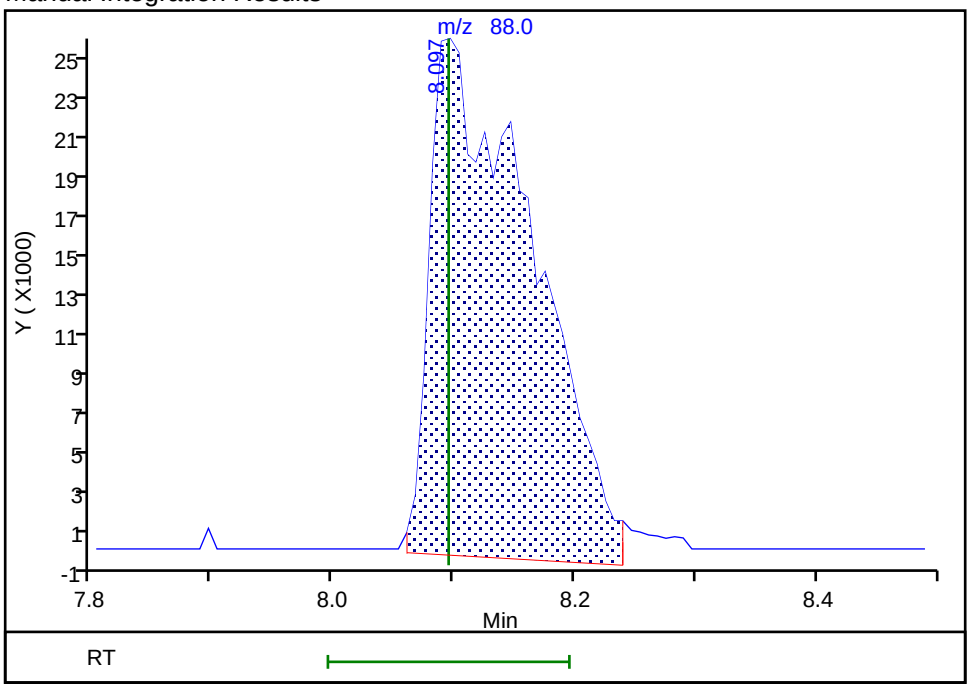
Processing Integration Results

RT: 8.10
Area: 63503
Amount: 818.9501
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 154523
Amount: 1216.8438
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:15
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434257

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2018 13:58 Calibration End Date: 10/20/2018 15:41 Calibration ID: 34105

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-434257/13	Q74593.D
Level 2	STD020 280-434257/14	Q74594.D
Level 3	STD050 280-434257/15	Q74595.D
Level 4	ICIS 280-434257/16	Q74596.D
Level 5	STD30 280-434257/17	Q74597.D
Level 6	STD60 280-434257/18	Q74598.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethylene oxide	0.0007 +++++	0.0007	0.0007	0.0006	0.0005	Ave		0.0007				14.6		15.0			
Isopropyl alcohol	0.7915 +++++	0.7822	0.8177	0.8688	0.8872	Ave		0.8295				5.6		15.0			
Acetonitrile	0.0013 +++++	0.0011	0.0044	0.0066	0.0065	Lin	-0.082	0.0069							0.9970		0.9900
Diisopropyl ether	0.1579 +++++	0.1670	0.1575	0.1607	0.1634	Ave		0.1613				2.5		15.0			
2-Chloro-1,3-butadiene	0.4991 +++++	0.4965	0.4859	0.5062	0.4942	Ave		0.4964				1.5		15.0			
Tert-butyl ethyl ether	0.4770 +++++	0.5167	0.4956	0.5010	0.4801	Ave		0.4941				3.3		15.0			
Ethyl acetate	0.0789 +++++	0.0743	0.0655	0.0654	0.0631	Lin2	0.0333	0.0633							0.9990		0.9900
Propionitrile	0.0007 +++++	0.0013	0.0055	0.0067	0.0081	Lin1	-0.101	0.0082							0.9910		0.9900
Methacrylonitrile	0.0437 +++++	0.0510	0.0519	0.0521	0.0482	Ave		0.0494				7.2		15.0			
Tert-amyl methyl ether	0.3484 +++++	0.3843	0.3704	0.3757	0.3718	Ave		0.3701				3.6		15.0			
Methyl methacrylate	0.0136 +++++	0.0180	0.0183	0.0193	0.0208	Ave		0.0180				14.9		15.0			
2-Nitropropane	0.0124 +++++	0.0144	0.0118	0.0132	0.0152	Ave		0.0134				10.5		15.0			
cis-1,4-Dichloro-2-butene	0.0454 +++++	0.0425	0.0433	0.0453	0.0526	Ave		0.0458				8.7		15.0			
1,2,3-Trimethylbenzene	3.1609 +++++	3.1163	3.0813	3.1164	3.1906	Ave		3.1331				1.4		15.0			
Dibromofluoromethane (Surr)	0.2515 +++++	0.2616	0.2582	0.2528	0.2665	Lin2	-0.008	0.2611							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434257

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2018 13:58 Calibration End Date: 10/20/2018 15:41 Calibration ID: 34105

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloroethane-d4 (Surr)	0.2182 +++++	0.2243	0.2211	0.2151	0.2168	Ave		0.2191				1.7		15.0			
Toluene-d8 (Surr)	5.5484 +++++	5.2344	5.2998	5.0979	5.1918	Ave		5.2745				3.2		15.0			
4-Bromofluorobenzene (Surr)	1.2402 +++++	1.1301	1.0912	1.0634	1.1494	Ave		1.1349				6.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434257

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2018 13:58 Calibration End Date: 10/20/2018 15:41 Calibration ID: 34105

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-434257/13	Q74593.D
Level 2	STD020 280-434257/14	Q74594.D
Level 3	STD050 280-434257/15	Q74595.D
Level 4	ICIS 280-434257/16	Q74596.D
Level 5	STD30 280-434257/17	Q74597.D
Level 6	STD60 280-434257/18	Q74598.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene oxide	FB	Ave	14806 +++++	28141	65655	116887	291559	100 +++++	200	500	1000	3000
Isopropyl alcohol	TBAd 9	Ave	7290 +++++	15932	38885	78457	236333	10.0 +++++	20.0	50.0	100	300
Acetonitrile	FB	Lin	2668 +++++	4032	42102	122580	374528	10.0 +++++	20.0	50.0	100	300
Diisopropyl ether	FB	Ave	31299 +++++	64133	149935	297187	935416	1.00 +++++	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	98952 +++++	190653	462679	936009	2828814	1.00 +++++	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	94567 +++++	198400	471945	926330	2747773	1.00 +++++	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Lin2	31266 +++++	57065	124697	241754	722136	2.00 +++++	4.00	10.0	20.0	60.0
Propionitrile	FB	Lin1	1456 +++++	4971	52012	123828	464161	10.0 +++++	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	86586 +++++	196011	494226	963077	2757067	10.0 +++++	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	69066 +++++	147578	352650	694722	2128133	1.00 +++++	2.00	5.00	10.0	30.0
Methyl methacrylate	FB	Ave	5404 +++++	13829	34930	71554	237633	2.00 +++++	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	4907 +++++	11071	22547	48780	174556	2.00 +++++	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Ave	4773 +++++	9211	22375	46882	166503	2.00 +++++	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	166288 +++++	337927	796717	1613283	5050793	1.00 +++++	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Lin2	49866 +++++	100449	245820	467523	1525414	1.00 +++++	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	43250 +++++	86130	210567	397681	1241110	1.00 +++++	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434257

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2018 13:58 Calibration End Date: 10/20/2018 15:41 Calibration ID: 34105

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toluene-d8 (Surr)	CBNZ d5	Ave	213911 +++++	410973	981733	1859300	6212014	1.00 +++++	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	65243 +++++	122551	282148	550507	1819463	1.00 +++++	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74593.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 20-Oct-2018 13:58:30 ALS Bottle#: 10 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:21 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: meierg Date: 22-Oct-2018 12:03:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.881	5.872	0.009	0	230263	250.0	250.0	
* 1 Fluorobenzene	96	7.804	7.802	0.002	100	2478119	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.035	10.033	0.002	99	481922	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.873	11.871	0.002	99	657601	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.261	7.252	0.009	91	49866	1.00	0.99	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.554	7.545	0.009	0	43250	1.00	1.00	
$ 7 Toluene-d8 (Surr)	98	8.962	8.961	0.001	100	213911	1.00	1.05	
$ 8 4-Bromofluorobenzene (Surr	95	10.900	10.898	0.002	83	65243	1.00	1.09	
28 Ethylene oxide	43	4.837	4.835	0.002	0	14806	100.0	112.8	
33 Ethanol	45		5.228				ND	ND	
38 Propene oxide	58	5.459	5.450	0.009	0	179848	100.0	90.7	
42 Isopropyl alcohol	45	5.630	5.622	0.008	86	7290	10.0	9.54	
46 Acetonitrile	41	5.895	5.879	0.016	0	2668	10.0	13.9	
56 Isopropyl ether	87	6.467	6.458	0.009	0	31299	1.00	0.9788	
58 2-Chloro-1,3-butadiene	53	6.574	6.573	0.001	0	98952	1.00	1.01	
59 Tert-butyl ethyl ether	59	6.739	6.737	0.002	0	94567	1.00	0.9655	
60 Ethyl acetate	43	6.867	6.866	0.001	0	31266	2.00	1.96	
65 Propionitrile	54	6.975	6.944	0.031	0	1456	10.0	13.3	
66 Methacrylonitrile	41	7.068	7.052	0.016	0	86586	10.0	8.85	
75 Tert-amyl methyl ether	73	7.618	7.617	0.001	0	69066	1.00	0.9413	
78 n-Butanol	56	7.797	7.795	0.002	100	16437	25.0	0	
81 Methyl methacrylate	100	8.212	8.210	0.002	0	5404	2.00	1.51	
88 2-Nitropropane	41	8.562	8.560	0.002	0	4907	2.00	1.85	
99 Tetrahydrothiophene	60		9.640				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.771	10.770	0.001	0	4773	2.00	1.98	
125 1,2,3-Trimethylbenzene	105	11.894	11.892	0.002	0	166288	1.00	1.01	
16 1,3,5-Trichlorobenzene	180	13.238	13.237	0.001	0	52503	1.00	0.9278	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.08	Units: uL
MV-Supp A_00031	Amount Added:	0.50	Units: uL

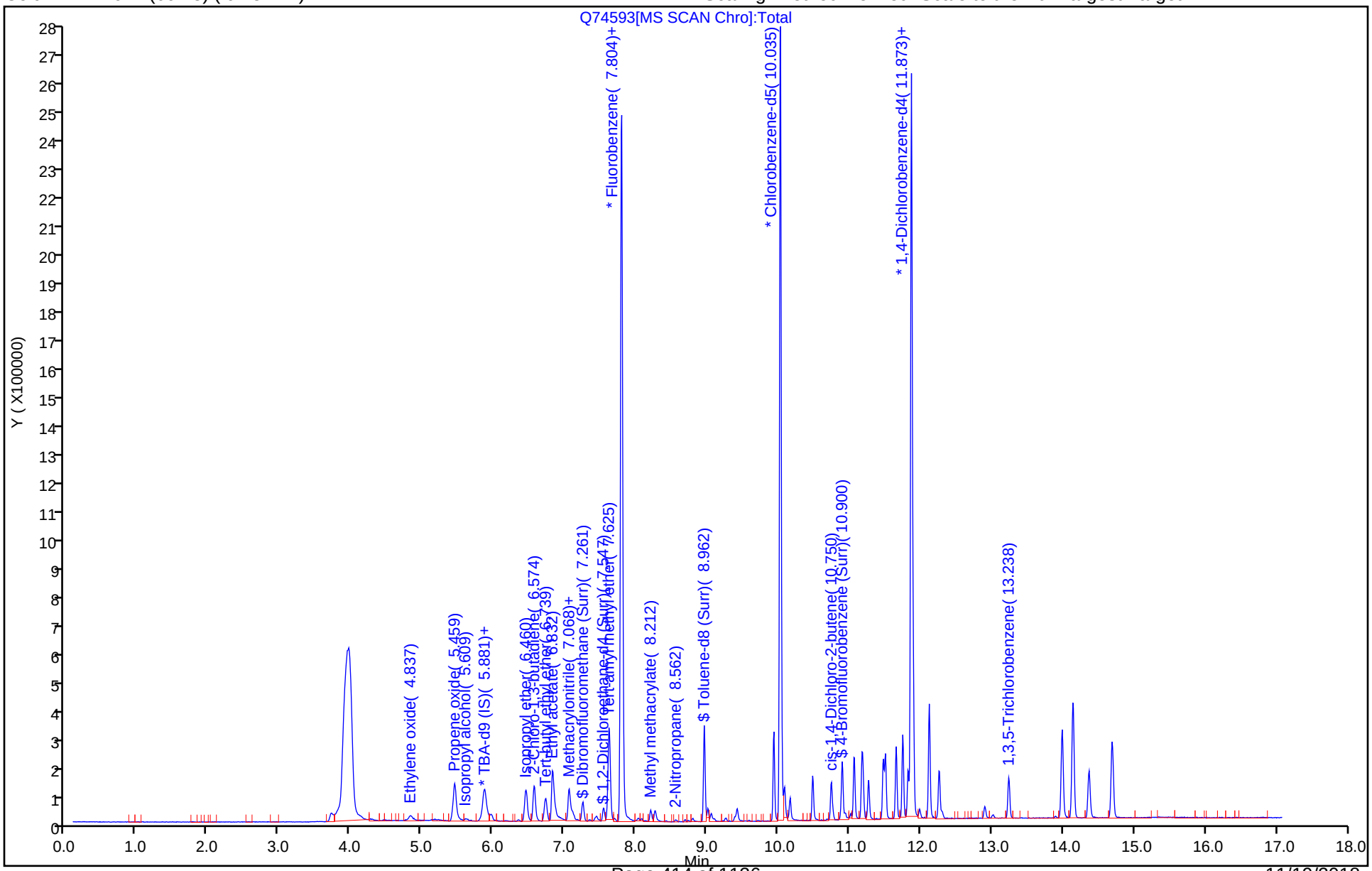
Report Date: 22-Oct-2018 12:09:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74593.D

Injection Date:	20-Oct-2018 13:58:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74594.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 20-Oct-2018 14:19:30 ALS Bottle#: 11 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:28 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: meierg Date: 22-Oct-2018 12:05:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.872	-0.001	0	254615	250.0	250.0	
* 1 Fluorobenzene	96	7.801	7.802	-0.001	100	2399823	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.032	10.033	-0.001	99	490714	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.871	-0.001	99	677744	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.258	7.252	0.006	91	100449	2.00	2.03	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	86130	2.00	2.05	
$ 7 Toluene-d8 (Surr)	98	8.960	8.961	-0.001	100	410973	2.00	1.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.897	10.898	-0.001	83	122551	2.00	1.99	
28 Ethylene oxide	43	4.841	4.835	0.006	0	28141	200.0	221.4	
33 Ethanol	45	5.227	5.228	-0.001	0	18035	120.0	0	
38 Propene oxide	58	5.456	5.450	0.006	0	416214	200.0	216.8	
42 Isopropyl alcohol	45	5.642	5.622	0.020	82	15932	20.0	18.9	
46 Acetonitrile	41	5.899	5.879	0.020	0	4032	20.0	15.0	
56 Isopropyl ether	87	6.457	6.458	-0.001	0	64133	2.00	2.07	
58 2-Chloro-1,3-butadiene	53	6.571	6.573	-0.002	0	190653	2.00	2.00	
59 Tert-butyl ethyl ether	59	6.736	6.737	-0.001	0	198400	2.00	2.09	
60 Ethyl acetate	43	6.865	6.866	-0.001	0	57065	4.00	4.17	
65 Propionitrile	54	6.957	6.944	0.013	0	4971	20.0	15.5	
66 Methacrylonitrile	41	7.058	7.052	0.006	0	196011	20.0	20.7	
75 Tert-amyl methyl ether	73	7.615	7.617	-0.002	0	147578	2.00	2.08	
78 n-Butanol	56	7.801	7.795	0.006	100	15577	50.0	0	
81 Methyl methacrylate	100	8.209	8.210	-0.001	0	13829	4.00	4.00	
88 2-Nitropropane	41	8.566	8.560	0.006	0	11071	4.00	4.30	
99 Tetrahydrothiophene	60		9.640				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.769	10.770	-0.002	0	9211	4.00	3.71	
125 1,2,3-Trimethylbenzene	105	11.898	11.892	0.006	0	337927	2.00	1.99	
16 1,3,5-Trichlorobenzene	180	13.235	13.237	-0.002	0	116748	2.00	2.00	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.16	Units: uL
MV-Supp A_00031	Amount Added:	1.00	Units: uL

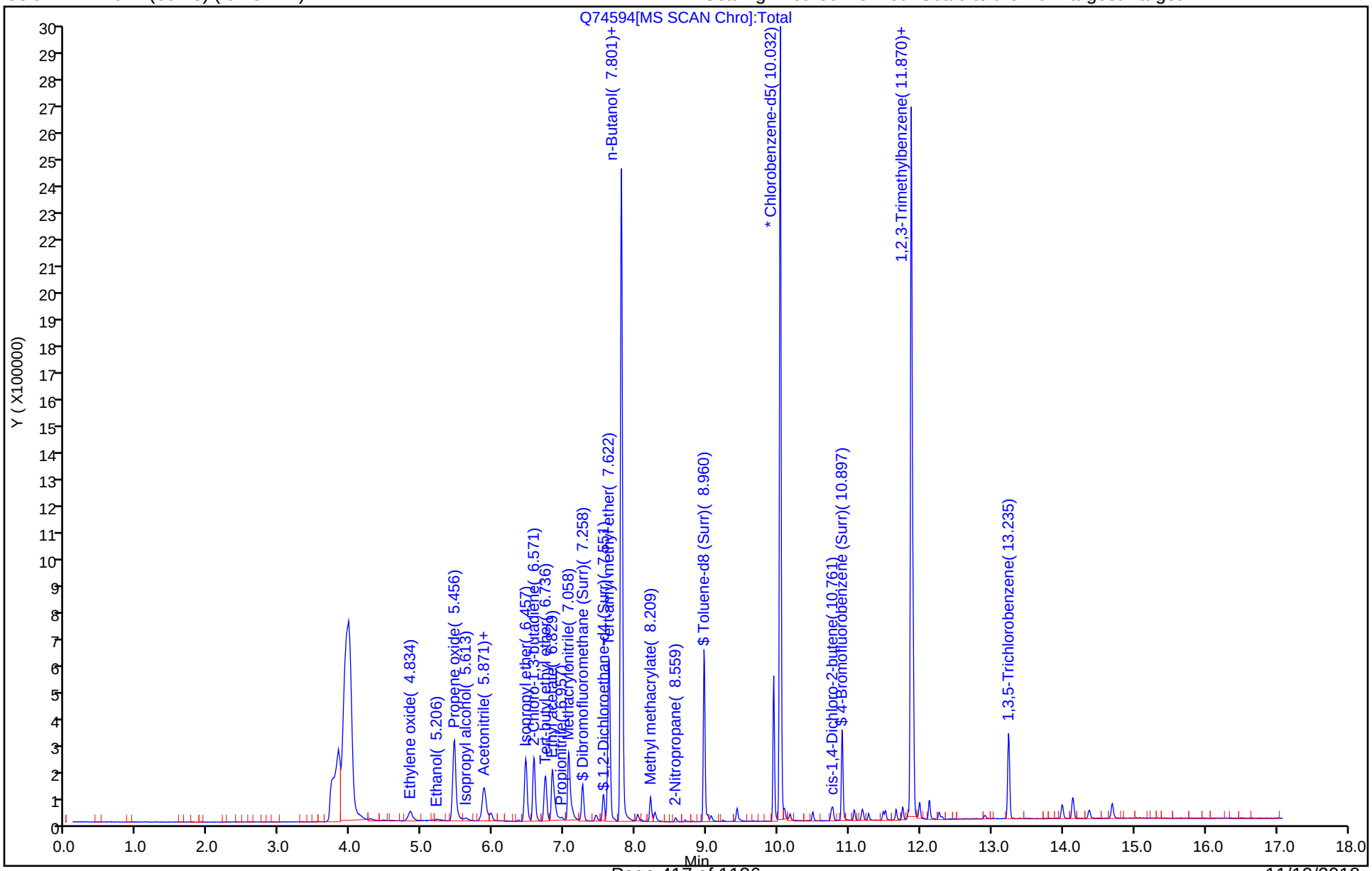
Report Date: 22-Oct-2018 12:09:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74594.D

Injection Date:	20-Oct-2018 14:19:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74595.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 20-Oct-2018 14:39:30 ALS Bottle#: 12 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:34 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.872	0.003	0	237781	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.802	-0.004	100	2380482	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	98	463100	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.874	11.871	0.003	99	646417	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.252	0.003	92	245820	5.00	4.97	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.548	7.545	0.003	0	210567	5.00	5.05	
$ 7 Toluene-d8 (Surr)	98	8.964	8.961	0.003	100	981733	5.00	5.02	
$ 8 4-Bromofluorobenzene (Surr	95	10.901	10.898	0.003	82	282148	5.00	4.81	
28 Ethylene oxide	43	4.838	4.835	0.003	0	65655	500.0	520.7	
33 Ethanol	45	5.210	5.228	-0.018	0	45548	300.0	0	
38 Propene oxide	58	5.460	5.450	0.010	0	986088	500.0	517.9	
42 Isopropyl alcohol	45	5.617	5.622	-0.005	98	38885	50.0	49.3	
46 Acetonitrile	41	5.896	5.879	0.017	0	42102	50.0	44.2	
56 Isopropyl ether	87	6.461	6.458	0.003	0	149935	5.00	4.88	
58 2-Chloro-1,3-butadiene	53	6.575	6.573	0.002	0	462679	5.00	4.89	
59 Tert-butyl ethyl ether	59	6.733	6.737	-0.004	0	471945	5.00	5.02	
60 Ethyl acetate	43	6.869	6.866	0.003	0	124697	10.0	9.82	
65 Propionitrile	54	6.954	6.944	0.010	0	52012	50.0	45.9	
66 Methacrylonitrile	41	7.054	7.052	0.002	0	494226	50.0	52.6	
75 Tert-amyl methyl ether	73	7.619	7.617	0.002	0	352650	5.00	5.00	
78 n-Butanol	56	7.798	7.795	0.003	100	16595	125.0	0	
81 Methyl methacrylate	100	8.213	8.210	0.003	0	34930	10.0	10.2	
88 2-Nitropropane	41	8.563	8.560	0.003	0	22547	10.0	8.83	
99 Tetrahydrothiophene	60	9.650	9.640	0.010	0	6925	10.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.773	10.770	0.003	0	22375	10.0	9.45	
125 1,2,3-Trimethylbenzene	105	11.895	11.892	0.003	0	796717	5.00	4.92	
16 1,3,5-Trichlorobenzene	180	13.239	13.237	0.002	0	269761	5.00	4.85	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.40	Units: uL
MV-Supp A_00031	Amount Added:	2.50	Units: uL

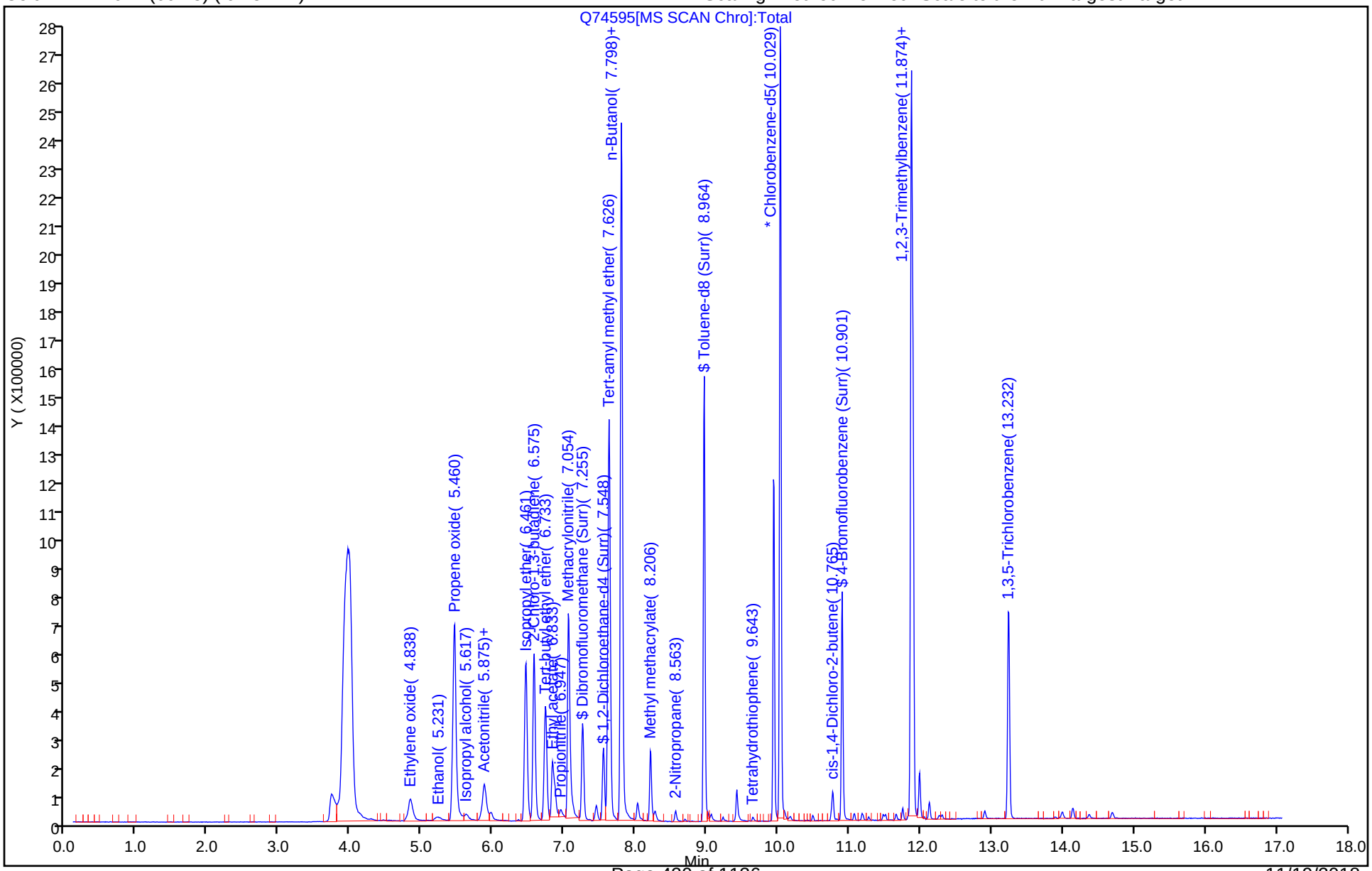
Report Date: 22-Oct-2018 12:09:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74595.D

Injection Date:	20-Oct-2018 14:39:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74596.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 20-Oct-2018 15:00:30 ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:41 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: meierg Date: 22-Oct-2018 11:56:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	225766	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2311371	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	455897	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	98	647102	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	62	467523	10.0	9.71	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	397681	10.0	9.82	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	100	1859300	10.0	9.67	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.898	0.000	80	550507	10.0	9.37	
28 Ethylene oxide	43	4.835	4.835	0.000	0	116887	1000.0	954.7	
33 Ethanol	45	5.228	5.228	0.000	0	77646	600.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	1920021	1000.0	1038.5	
42 Isopropyl alcohol	45	5.622	5.622	0.000	59	78457	100.0	104.7	
46 Acetonitrile	41	5.879	5.879	0.000	0	122580	100.0	108.6	
56 Isopropyl ether	87	6.458	6.458	0.000	0	297187	10.0	9.96	
58 2-Chloro-1,3-butadiene	53	6.573	6.573	0.000	0	936009	10.0	10.2	
59 Tert-butyl ethyl ether	59	6.737	6.737	0.000	0	926330	10.0	10.1	
60 Ethyl acetate	43	6.866	6.866	0.000	0	241754	20.0	20.1	
65 Propionitrile	54	6.944	6.944	0.000	0	123828	100.0	94.5	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	963077	100.0	105.5	
75 Tert-amyl methyl ether	73	7.617	7.617	0.000	0	694722	10.0	10.2	
78 n-Butanol	56	7.795	7.795	0.000	100	11733	250.0	0	
81 Methyl methacrylate	100	8.210	8.210	0.000	0	71554	20.0	21.5	
88 2-Nitropropane	41	8.560	8.560	0.000	0	48780	20.0	19.7	
99 Tetrahydrothiophene	60	9.640	9.640	0.000	0	16048	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.770	10.770	0.000	0	46882	20.0	19.8	
125 1,2,3-Trimethylbenzene	105	11.892	11.892	0.000	0	1613283	10.0	9.95	
16 1,3,5-Trichlorobenzene	180	13.237	13.237	0.000	0	550062	10.0	9.88	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.80	Units: uL
MV-Supp A_00031	Amount Added:	5.00	Units: uL

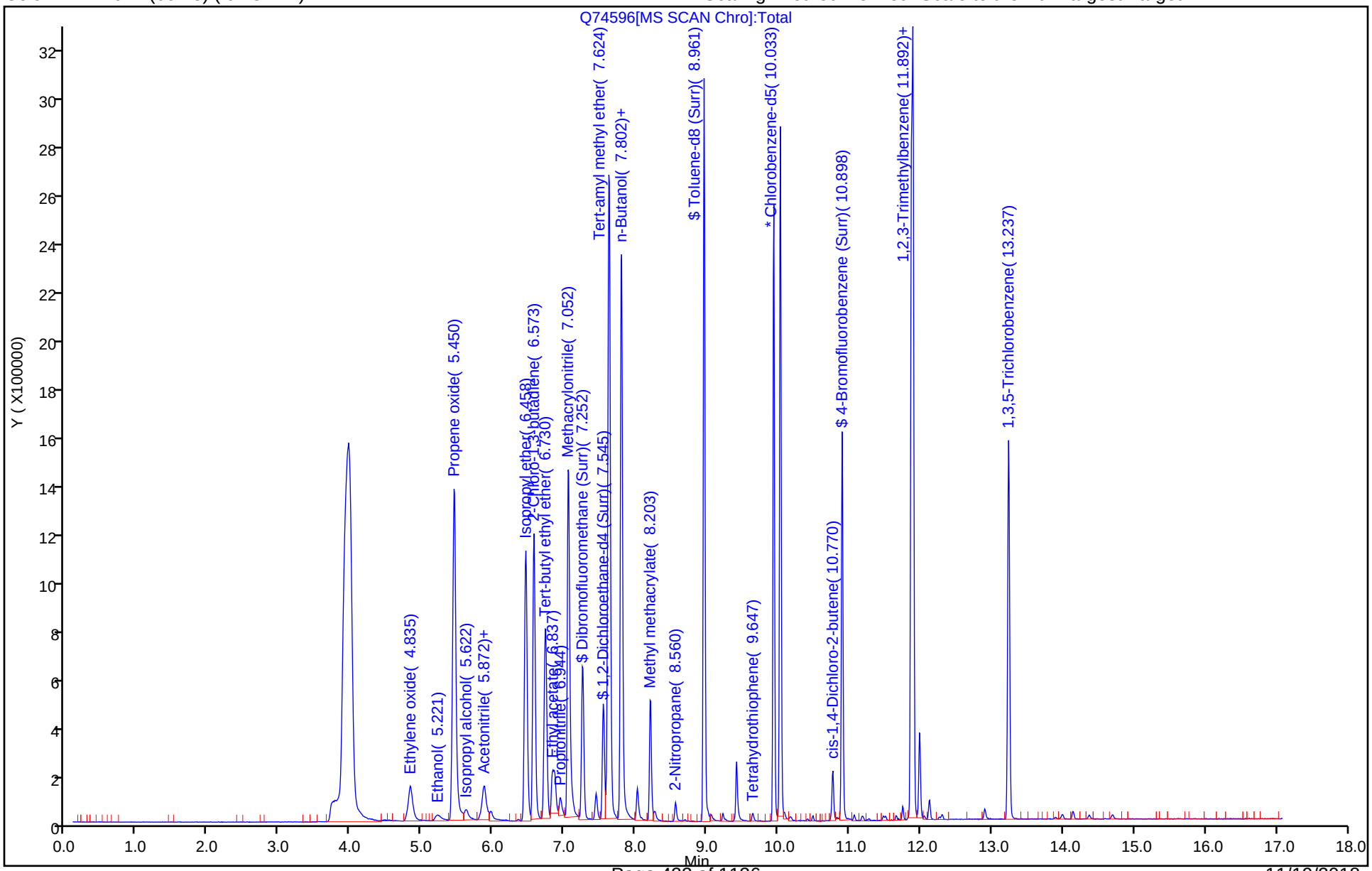
Report Date: 22-Oct-2018 12:09:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74596.D

Injection Date:	20-Oct-2018 15:00:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74597.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 20-Oct-2018 15:20:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:48 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.865	5.865	0.000	0	221996	250.0	250.0	
* 1 Fluorobenzene	96	7.796	7.796	0.000	100	2384839	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.034	10.034	0.000	99	498543	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	659583	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	92	1525414	30.0	30.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	1241110	30.0	29.7	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	100	6212014	30.0	29.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	84	1819463	30.0	30.4	
28 Ethylene oxide	43	4.835	4.835	0.000	0	291559	3000.0	2307.9	
33 Ethanol	45	5.222	5.222	0.000	0	239705	1800.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	5347621	3000.0	2803.3	
42 Isopropyl alcohol	45	5.615	5.615	0.000	98	236333	300.0	320.9	
46 Acetonitrile	41	5.836	5.836	0.000	0	374528	300.0	298.3	
56 Isopropyl ether	87	6.458	6.458	0.000	0	935416	30.0	30.4	
58 2-Chloro-1,3-butadiene	53	6.566	6.566	0.000	0	2828814	30.0	29.9	
59 Tert-butyl ethyl ether	59	6.730	6.730	0.000	0	2747773	30.0	29.1	
60 Ethyl acetate	43	6.859	6.859	0.000	0	722136	60.0	59.3	
65 Propionitrile	54	6.930	6.930	0.000	0	464161	300.0	310.8	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	2757067	300.0	292.7	
75 Tert-amyl methyl ether	73	7.617	7.617	0.000	0	2128133	30.0	30.1	
78 n-Butanol	56	7.824	7.824	0.000	100	213049	750.0	0	
81 Methyl methacrylate	100	8.203	8.203	0.000	0	237633	60.0	69.1	
88 2-Nitropropane	41	8.561	8.561	0.000	0	174556	60.0	68.2	
99 Tetrahydrothiophene	60	9.640	9.640	0.000	0	65184	60.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.763	0.000	0	166503	60.0	68.9	
125 1,2,3-Trimethylbenzene	105	11.893	11.893	0.000	0	5050793	30.0	30.6	
16 1,3,5-Trichlorobenzene	180	13.237	13.237	0.000	0	1895887	30.0	33.4	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	2.40	Units: uL
MV-Supp A_00031	Amount Added:	15.00	Units: uL

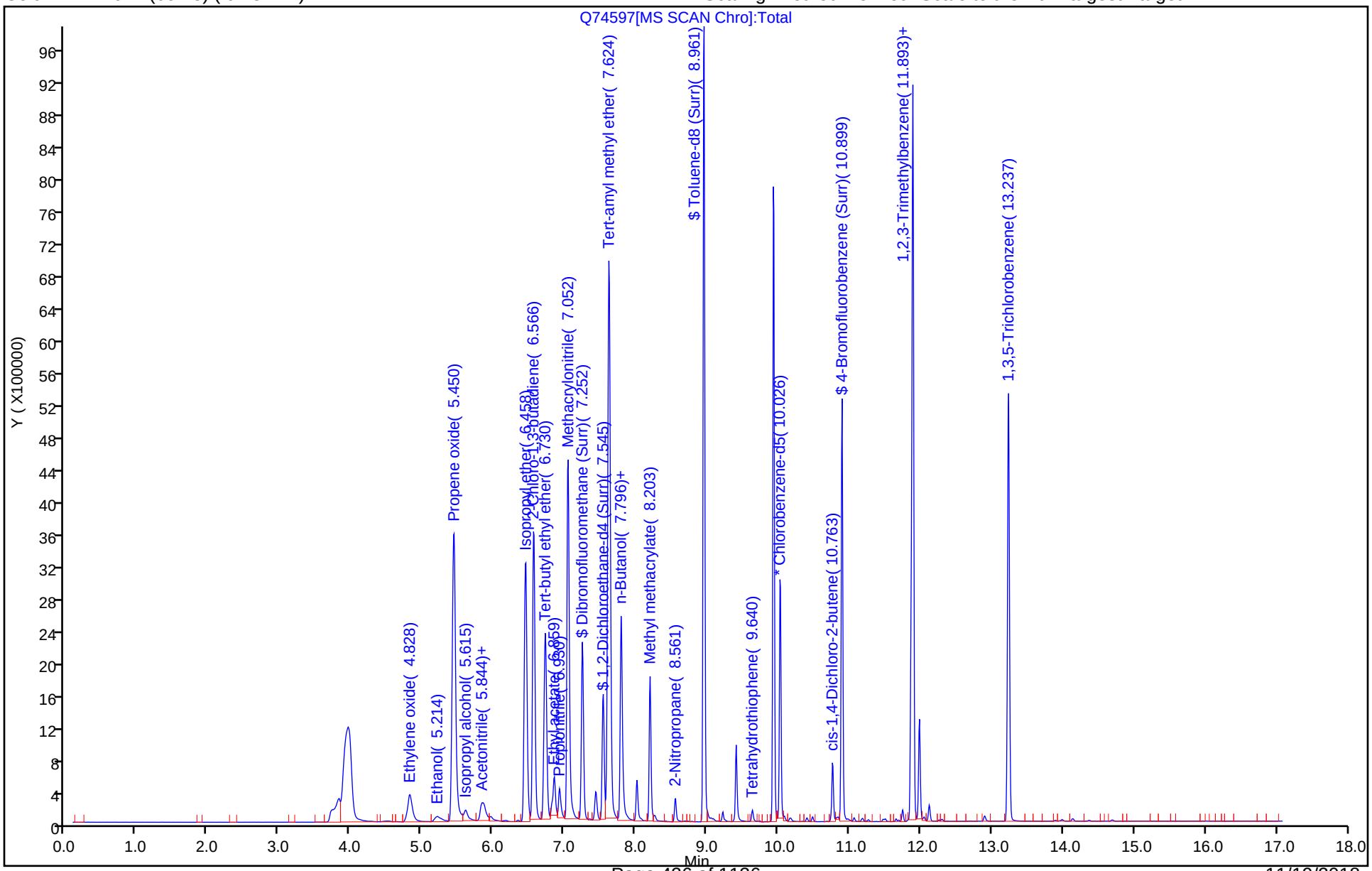
Report Date: 22-Oct-2018 12:09:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74597.D

Injection Date:	20-Oct-2018 15:20:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD30			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 20-Oct-2018 15:41:30 ALS Bottle#: 15 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:09:56 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.865	0.006	0	64528	250.0	250.0	
* 1 Fluorobenzene	96	7.801	7.796	0.005	100	1179100	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.032	10.034	-0.002	98	213368	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.871	-0.001	99	249871	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.252	-0.001	92	1573034	60.0	63.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	1052232	60.0	50.9	
$ 7 Toluene-d8 (Surr)	98	8.959	8.961	-0.002	100	7598496	60.0	84.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.897	10.899	-0.002	84	1890789	60.0	83.3	
28 Ethylene oxide	43	4.820	4.835	-0.015	0	242603	6000.0	3884.2	
33 Ethanol	45	5.213	5.222	-0.009	0	185917	3600.0	0	
38 Propene oxide	58	5.449	5.450	-0.001	0	4085171	6000.0	4331.3	
42 Isopropyl alcohol	45	5.606	5.615	-0.009	99	165320	600.0	772.2	
46 Acetonitrile	41	5.842	5.836	0.006	0	265423	600.0	422.4	
56 Isopropyl ether	87	6.457	6.458	-0.001	0	928850	60.0	61.0	
58 2-Chloro-1,3-butadiene	53	6.564	6.566	-0.002	0	4522641	60.0	96.6	
59 Tert-butyl ethyl ether	59	6.729	6.730	-0.001	0	2598756	60.0	55.8	
60 Ethyl acetate	43	6.864	6.859	0.005	0	531335	120.0	88.4	
65 Propionitrile	54	6.936	6.930	0.006	0	321062	600.0	430.0	
66 Methacrylonitrile	41	7.050	7.052	-0.002	0	2083401	600.0	447.3	
75 Tert-amyl methyl ether	73	7.615	7.617	-0.002	0	1836582	60.0	52.6	
78 n-Butanol	56	7.830	7.824	0.006	42	144236	1500.0	0	
81 Methyl methacrylate	100	8.202	8.203	-0.001	0	178437	120.0	105.0	
88 2-Nitropropane	41	8.559	8.561	-0.002	0	119043	120.0	94.1	
99 Tetrahydrothiophene	60	9.639	9.640	-0.001	0	35495	120.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.768	10.763	0.005	0	115957	120.0	126.7	
125 1,2,3-Trimethylbenzene	105	11.891	11.893	-0.002	0	5152882	60.0	82.3	
16 1,3,5-Trichlorobenzene	180	13.235	13.237	-0.002	0	1720467	60.0	80.0	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	4.80	Units: uL
MV-Supp A_00031	Amount Added:	30.00	Units: uL

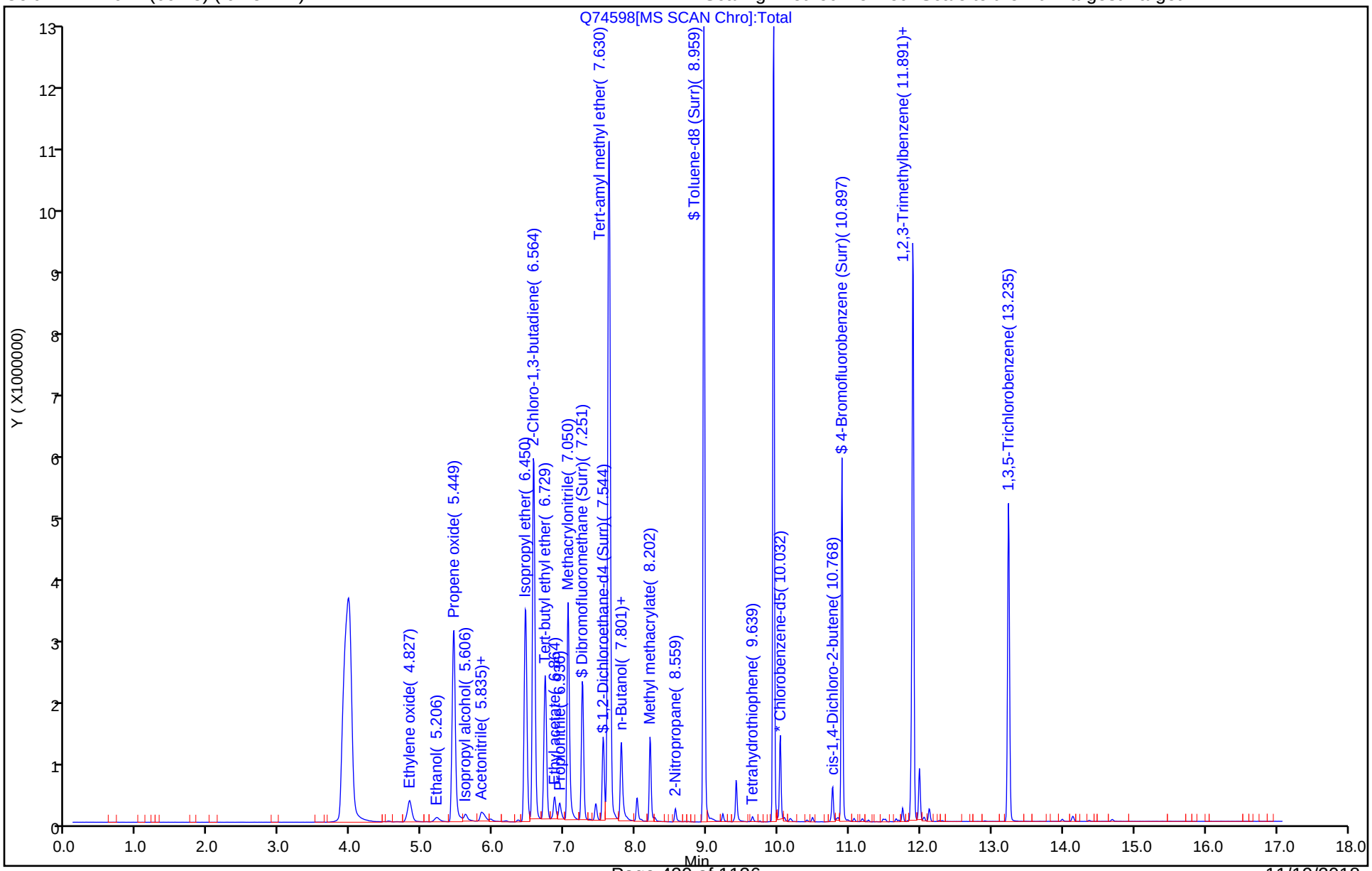
Report Date: 22-Oct-2018 12:09:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Injection Date:	20-Oct-2018 15:41:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD60			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434393/12	Q74586.D
Level 2	STD010 280-434393/13	Q74587.D
Level 3	STD020 280-434393/14	Q74588.D
Level 4	STD050 280-434393/15	Q74589.D
Level 5	ICIS 280-434393/16	Q74590.D
Level 6	STD30 280-434393/17	Q74591.D
Level 7	STD60 280-434393/18	Q74592.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.4729	0.4096 0.4528	0.3560	0.4530	0.5097	Ave		0.4424				12.1		15.0			
Chloromethane	+++++ 0.2286	0.1742 0.2067	0.1888	0.2205	0.2483	Ave		0.2112			0.1000	12.8		15.0			
Vinyl chloride	+++++ 0.2402	0.2421 0.2123	0.2103	0.2389	0.2637	Ave		0.2346				8.6		30.0			
Bromomethane	0.1905 0.2001	0.2129 0.1810	0.1943	0.1979	0.2189	Ave		0.1994				6.5		15.0			
Chloroethane	0.0957 0.1142	0.1178 0.1003	0.1054	0.1139	0.1242	Ave		0.1102				9.2		15.0			
Dichlorofluoromethane	0.3636 0.4620	0.4713 0.3597	0.4321	0.4546	0.4830	Ave		0.4323				11.7		15.0			
Trichlorofluoromethane	0.5401 0.6162	0.6247 0.5979	0.5880	0.6013	0.6588	Ave		0.6039				6.0		15.0			
Ethyl ether	0.1113 0.1338	0.1339 0.1227	0.1308	0.1301	0.1454	Ave		0.1297				8.1		15.0			
Acrolein	0.0089 0.0131	0.0123 0.0123	0.0124	0.0122	0.0142	Ave		0.0122				13.2		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.2316	0.2147 0.2401	0.2028	0.2102	0.2339	Ave		0.2222				6.7		15.0			
Acetone	+++++ 0.0197	+++++ 0.0169	0.0224	0.0221	0.0238	Ave		0.0210				12.9		15.0			
1,1-Dichloroethene	0.2597 0.3003	0.3142 0.3078	0.2852	0.2864	0.3248	Ave		0.2969				7.3		30.0			
Iodomethane	0.3850 0.4267	0.4251 0.4513	0.3949	0.3958	0.4415	Ave		0.4172				6.1		15.0			
Methyl acetate	+++++ 0.0530	0.0668 0.0460	0.0571	0.0543	0.0591	Ave		0.0561				12.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.4856 0.5129	0.6022 0.4340	0.5795	0.5663	0.6115	Ave		0.5417				12.2		15.0			
Carbon disulfide	+++++ 1.2698	1.3579 1.1778	1.2307	1.2703	1.4002	Ave		1.2845				6.4		15.0			
t-Butyl alcohol	1.0519 1.2952	1.2475 1.3516	1.3251	1.2501	1.2565	Ave		1.2540				7.8		15.0			
Methylene Chloride	0.2971 0.2436	0.3152 0.2454	0.2623	0.2450	0.2654	Ave		0.2677				10.5		15.0			
Acrylonitrile	0.0114 0.0263	0.0193 0.0255	0.0225	0.0238	0.0276	Lin2	-0.075	0.0265							0.9980		0.9900
Methyl tert-butyl ether	+++++ 0.3180	0.3283 0.3007	0.3080	0.3091	0.3387	Ave		0.3171				4.5		15.0			
trans-1,2-Dichloroethene	0.2871 0.3285	0.3500 0.3360	0.3285	0.3222	0.3585	Ave		0.3301				7.0		15.0			
Hexane	2.9139 2.7954	3.3823 2.3835	3.1693	2.9406	3.2646	Ave		2.9785				11.3		15.0			
Vinyl acetate	0.2021 0.2580	0.2185 0.2238	0.2574	0.2606	0.2593	Ave		0.2400				10.2		15.0			
1,1-Dichloroethane	0.5506 0.6112	0.6670 0.5719	0.6300	0.6252	0.6772	Ave		0.6190			0.1000	7.5		15.0			
2-Butanone (MEK)	0.0384 0.0396	0.0472 0.0353	0.0388	0.0388	0.0411	Ave		0.0399				9.2		15.0			
sec-Butyl Alcohol	+++++ 1.1141	1.0798 1.0730	1.0663	1.0828	1.1036	Ave		1.0866				1.7		15.0			
cis-1,2-Dichloroethene	0.2794 0.3313	0.3300 0.3292	0.3208	0.3117	0.3556	Ave		0.3226				7.2		15.0			
2,2-Dichloropropane	0.3924 0.4659	0.4956 0.4538	0.4473	0.4456	0.4943	Ave		0.4564				7.7		15.0			
Bromochloromethane	+++++ 0.0981	0.0910 0.1008	0.0886	0.0882	0.0994	Ave		0.0944				6.1		15.0			
Chloroform	0.4644 0.5627	0.5571 0.5309	0.5563	0.5442	0.5961	Ave		0.5445				7.5		30.0			
Tetrahydrofuran	+++++ 0.0218	0.0244 0.0199	0.0207	0.0192	0.0233	Ave		0.0216				9.4		15.0			
Isobutyl alcohol	0.3056 0.3798	0.3170 0.3982	0.3389	0.3395	0.3544	Ave		0.3476				9.5		15.0			
1,1,1-Trichloroethane	0.4159 0.5218	0.5120 0.5229	0.4830	0.4960	0.5435	Ave		0.4993				8.3		15.0			
Cyclohexane	0.5666 0.6184	0.6803 0.4909	0.6351	0.6455	0.6886	Ave		0.6179				11.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4742 0.5689	0.5507 0.4894	0.5596	0.5477	0.5973	Ave		0.5411				8.1		15.0			
Carbon tetrachloride	0.3803 0.4863	0.4416 0.4980	0.4361	0.4444	0.4932	Ave		0.4543				9.2		15.0			
1,2-Dichloroethane	0.2443 0.2687	0.2798 0.2515	0.2721	0.2673	0.2777	Ave		0.2659				5.0		15.0			
Benzene	1.1698 1.3085	1.3246 1.0975	1.3207	1.2764	1.3872	Ave		1.2692				7.9		15.0			
Trichloroethene	0.3219 0.3863	0.3491 0.3677	0.3501	0.3527	0.3776	Ave		0.3579				6.0		15.0			
2-Pentanone	+++++ 0.0585	0.0498 0.0495	0.0523	0.0541	0.0568	Ave		0.0535				6.8		15.0			
1,2-Dichloropropane	0.2536 0.2937	0.2982 0.2229	0.2969	0.2937	0.3052	Ave		0.2806				10.9		30.0			
Methylcyclohexane	0.4717 0.5165	0.5696 0.3991	0.5467	0.5383	0.5894	Ave		0.5187				12.5		15.0			
1,4-Dioxane	+++++ 0.0008	0.0005 0.0007	0.0006	0.0007	0.0008	Lin2	-0.006	0.0008							0.9990		0.9900
Dibromomethane	0.0772 0.1034	0.0951 0.1012	0.0947	0.0954	0.1019	Ave		0.0956				9.3		15.0			
Bromodichloromethane	0.2590 0.3507	0.3129 0.3379	0.3182	0.3246	0.3442	Ave		0.3211				9.5		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0729	0.0412 0.0671	0.0510	0.0581	0.0637	Lin2	-0.029	0.0678							0.9960		0.9900
cis-1,3-Dichloropropene	1.3618 1.7540	1.5751 1.5810	1.6201	1.5923	1.7169	Ave		1.6002				7.9		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.0847	0.0773 0.0722	0.0786	0.0840	0.0871	Ave		0.0807				6.9		15.0			
Toluene	1.1813 1.3027	1.3220 1.0249	1.3073	1.3185	1.3304	Ave		1.2553				9.1		30.0			
Ethyl methacrylate	0.4556 0.7143	0.5559 0.6332	0.5879	0.6293	0.6976	Ave		0.6105				14.5		15.0			
trans-1,3-Dichloropropene	0.1757 0.2855	0.2143 0.2525	0.2206	0.2391	0.2610	Lin2	-0.045	0.2603							0.9960		0.9900
1,1,2-Trichloroethane	0.1052 0.1344	0.1157 0.1269	0.1181	0.1219	0.1245	Ave		0.1209				7.6		15.0			
2-Hexanone	0.1824 0.2521	0.2300 0.2234	0.2309	0.2380	0.2643	Ave		0.2316				11.2		15.0			
1,3-Dichloropropane	0.9701 1.1634	1.1627 1.0534	1.1482	1.1265	1.1815	Ave		1.1151				6.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.0339 1.3080	1.1767 1.2957	1.1419	1.1318	1.2221	Ave		1.1872				8.2		15.0			
Dibromochloromethane	+++++ 0.7714	0.6465 0.7891	0.6549	0.6758	0.7331	Ave		0.7118				8.6		15.0			
1,2-Dibromoethane (EDB)	0.4159 0.5495	0.5068 0.5439	0.5096	0.4998	0.5343	Ave		0.5085				8.9		15.0			
1-Chlorohexane	2.0135 2.5620	2.3320 2.2382	2.3358	2.4136	2.5338	Ave		2.3470				8.0		15.0			
Chlorobenzene	2.9507 3.5600	3.4118 3.2181	3.3489	3.3344	3.5149	Ave		3.3341			0.3000	6.1		15.0			
1,1,1,2-Tetrachloroethane	+++++ 1.1368	0.9601 1.0130	0.9511	0.9583	1.1309	Ave		1.0250				8.5		15.0			
Ethylbenzene	1.7950 2.3053	2.0851 1.8735	2.0347	2.0485	2.2635	Ave		2.0579				9.0		30.0			
m-Xylene & p-Xylene	2.2301 2.7206	2.5828 2.3989	2.5004	2.4968	2.6545	Ave		2.5120				6.5		15.0			
Styrene	+++++ 3.4712	3.0526 2.7373	3.1268	3.2681	3.5864	Ave		3.2071				9.5		15.0			
o-Xylene	+++++ 2.3193	2.1904 1.8436	2.1939	2.2409	2.4297	Ave		2.2030				9.0		15.0			
Bromoform	+++++ 0.3120	0.2380 0.3344	0.2435	0.2597	0.3013	Lin2	-0.086	0.3082			0.1000				0.9920		0.9900
Isopropylbenzene	4.1814 5.1320	4.6600 3.8872	4.7070	4.9338	4.8034	Ave		4.6150				9.4		15.0			
Cyclohexanone	0.0127 0.0147	0.0154 0.0137	0.0152	0.0141	0.0165	Ave		0.0146				8.5		15.0			
1,1,2,2-Tetrachloroethane	0.3547 0.4395	0.4160 0.4073	0.4057	0.4254	0.4123	Ave		0.4087			0.3000	6.5		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.0925	0.0565 0.0896	0.0673	0.0790	0.0808	Lin2	-0.034	0.0882							0.9970		0.9900
1,2,3-Trichloropropane	+++++ 0.1034	0.0918 0.0987	0.0906	0.0941	0.0941	Ave		0.0954				5.0		15.0			
N-Propylbenzene	1.1152 1.5301	1.2557 1.2725	1.2530	1.3476	1.3546	Ave		1.3041				9.8		15.0			
Bromobenzene	+++++ 0.9044	0.7480 0.8288	0.7486	0.7786	0.7997	Ave		0.8013				7.4		15.0			
1,3,5-Trimethylbenzene	3.2851 4.1701	3.7546 3.1300	3.7284	3.9122	3.9041	Ave		3.6978				9.9		15.0			
2-Chlorotoluene	0.8850 1.1635	1.0042 0.9729	0.9910	1.0261	1.0455	Ave		1.0126				8.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	0.8757 1.1273	0.9621 1.0462	0.9544	0.9933	1.0164	Ave		0.9965				7.9		15.0			
tert-Butylbenzene	+++++ 4.3827	3.8811 3.5013	3.8869	4.0761	4.0677	Ave		3.9660				7.4		15.0			
1,2,4-Trimethylbenzene	3.1633 3.9677	3.7072 3.2159	3.6204	3.7312	3.8233	Ave		3.6041				8.4		15.0			
sec-Butylbenzene	0.8554 1.1603	0.9534 1.0487	0.9789	1.0108	1.0676	Ave		1.0107				9.5		15.0			
4-Isopropyltoluene	3.6533 4.6270	4.2921 3.6941	4.2444	4.3012	4.5521	Ave		4.1949				9.1		15.0			
1,3-Dichlorobenzene	1.4307 1.7952	1.6636 1.7041	1.6488	1.6179	1.7097	Ave		1.6529				6.8		15.0			
1,4-Dichlorobenzene	1.4464 1.7678	1.6998 1.6668	1.6183	1.6381	1.6947	Ave		1.6474				6.1		15.0			
n-Butylbenzene	+++++ 4.7175	4.8009 3.6631	4.7933	4.7042	4.9146	Ave		4.5989				10.1		15.0			
1,2-Dichlorobenzene	1.1333 1.3958	1.3051 1.3578	1.2932	1.2752	1.3432	Ave		1.3005				6.5		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0533	0.0298 0.0501	0.0394	0.0449	0.0482	Lin2	-0.022	0.0511							0.9980		0.9900
1,2,4-Trichlorobenzene	0.7085 0.8948	0.7738 0.8226	0.7694	0.8031	0.8365	Ave		0.8013				7.4		15.0			
Hexachlorobutadiene	0.6349 0.8263	0.7273 0.7821	0.7044	0.7319	0.7586	Ave		0.7379				8.2		15.0			
Naphthalene	+++++ 1.0391	0.8803 0.9349	0.8934	0.9460	0.9841	Ave		0.9463				6.2		15.0			
1,2,3-Trichlorobenzene	0.4749 0.6230	0.5576 0.5633	0.5583	0.5849	0.5993	Ave		0.5659				8.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434393/12	Q74586.D
Level 2	STD010 280-434393/13	Q74587.D
Level 3	STD020 280-434393/14	Q74588.D
Level 4	STD050 280-434393/15	Q74589.D
Level 5	ICIS 280-434393/16	Q74590.D
Level 6	STD30 280-434393/17	Q74591.D
Level 7	STD60 280-434393/18	Q74592.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	+++++ 2658045	79993 6465811	147174	479105	1049381	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	+++++ 1284727	34024 2950769	78066	233166	511272	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	+++++ 1350060	47285 3031060	86958	252668	542930	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	20893 1124568	41576 2583848	80336	209328	450603	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	10492 641618	23009 1432185	43556	120488	255714	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	39867 2596512	92029 5136118	178645	480735	994310	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	59223 3463270	121991 8536804	243096	635914	1356282	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	12201 752240	26140 1752177	54075	137547	299246	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	9798 736139	24078 1761594	51296	129250	292075	5.00 250	10.0 600	20.0	50.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 1301505	41920 3428924	83843	222268	481536	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	+++++ 443531	+++++ 966123	37086	93536	195819	+++++ 100	+++++ 240	8.00	20.0	40.0
1,1-Dichloroethene	FB	Ave	28477 1688076	61353 4394898	117907	302881	668763	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	42212 2398430	83009 6444142	163251	418539	909010	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	+++++ 596192	26095 1314326	47188	114839	243324	+++++ 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	53244 2882578	117591 6196930	239560	598884	1258914	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	+++++ 7136895	265166 16817986	508778	1343448	2882745	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	5087 356010	12146 848685	26901	67140	134846	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	32572 1369466	61559 3504399	108455	259122	546363	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Lin2	12459 1476038	37596 3634913	92992	251752	568440	5.00 250	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	+++++ 1787510	64112 4294165	127324	326867	697247	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	31475 1846129	68351 4797088	135799	340789	738097	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	63522 3502455	130400 7543406	261756	672582	1412338	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	44320 2900257	85345 6390619	212807	551173	1067867	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	60373 3435350	130247 8165582	260439	661188	1394152	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	16831 890408	36875 2016158	64108	164320	338719	2.00 100	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd9	Ave	+++++ 918650	31540 2021252	64941	174458	355321	+++++ 750	30.0 1800	60.0	150	300
cis-1,2-Dichloroethene	FB	Ave	30632 1861937	64451 4699914	132640	329605	732118	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	43023 2618488	96787 6479447	184931	471273	1017555	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	+++++ 551638	17773 1439503	36635	93284	204694	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	50916 3162857	108781 7580925	229998	575476	1227239	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 245586	9540 569105	17120	40527	96060	+++++ 50.0	2.00 120	4.00	10.0	20.0
Isobutyl alcohol	TBAd9	Ave	3695 261004	7716 625107	17200	45579	95091	12.5 625	25.0 1500	50.0	125	250
1,1,1-Trichloroethane	FB	Ave	45607 2933091	99975 7466364	199695	524594	1119013	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	62126 3475891	132843 7009077	262560	682670	1417706	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	51994 3197361	107539 6988203	231322	579229	1229795	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	41704 2733138	86244 7110333	180303	469974	1015342	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	26783 1510322	54643 3591147	112472	282729	571706	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	128264 7354844	258657 15670487	545975	1349847	2855923	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	35299 2171214	68175 5250218	144737	373041	777337	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	+++++ 1314175	38919 2828858	86547	228964	467782	+++++ 100	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	27802 1650994	58241 3182434	122730	310646	628351	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	51717 2902911	111229 5698114	226002	569300	1213377	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 86809	1845 211062	5180	14348	31275	+++++ 500	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	8465 581299	18564 1445633	39131	100869	209836	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	28401 1971454	61109 4824961	131563	343332	708673	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin2	+++++ 409507	8041 957455	21075	61464	131060	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	29686 2197671	60727 5003745	133805	364203	742737	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1903980	60396 4122796	129927	355445	717680	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	129525 7322118	258162 14633660	540435	1394361	2739027	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	9932 894966	21431 2003930	48553	143936	301784	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin2	19260 1604604	41855 3606027	91209	252909	537299	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	11537 755286	22587 1811401	48803	128953	256397	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	15902 1263567	35467 2828451	76280	217771	457347	2.00 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	21148 1457634	44826 3333854	94832	257664	511153	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	22538 1638874	45368 4100840	94308	258868	528688	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	+++++ 966519	24924 2497306	54085	154581	317167	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	9067 688434	19538 1721293	42086	114311	231141	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	43894 3209983	89908 7083624	192913	552049	1096173	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	64324 4460455	131540 10184982	276586	762639	1520584	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ 1424272	37015 3206029	78555	219189	489226	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	39130 2888384	80389 5929427	168046	468539	979213	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	48616 3408686	99579 7592173	206507	571066	1148388	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	+++++ 4349196	117692 8663286	258246	747478	1551524	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	+++++ 2905885	84450 5834650	181191	512546	1051121	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin2	+++++ 390901	9177 1058431	20111	59394	130365	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	118585 8080532	249812 16313923	533795	1427038	3003461	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	11065 739065	23709 1737412	50196	128597	285427	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	10059 692082	22301 1709249	46014	123051	257802	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin2	+++++ 145699	3030 375906	7630	22857	50546	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ 162733	4921 414407	10272	27220	58847	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	31628 2409198	67315 5340465	142099	389779	847003	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	+++++ 1424056	40096 3478266	84891	225204	500057	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	93165 6566055	201274 13135969	422816	1131561	2441159	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	25098 1832048	53835 4083299	112381	296781	653730	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	24836 1774926	51575 4390796	108237	287288	635504	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	+++++ 6900752	208059 14694223	440796	1178973	2543479	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	89711 6247324	198735 13496526	410573	1079213	2390618	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	24258 1826966	51110 4401378	111008	292356	667535	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434393

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 11:44 Calibration End Date: 10/22/2018 13:48 Calibration ID: 34110

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	103607 7285405	230089 15503362	481340	1244072	2846349	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	40573 2826642	89184 7151801	186988	467967	1069026	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	41019 2783480	91124 6995311	183529	473803	1059632	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	+++++ 7427835	257368 15373382	543588	1360629	3072980	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	32140 2197765	69964 5698639	146658	368829	839872	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 83971	1595 210353	4465	12994	30153	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	20094 1408945	41482 3452254	87258	232289	523062	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	18006 1301056	38988 3282275	79884	211707	474356	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	+++++ 1636040	47191 3923546	101311	273619	615365	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	13468 980946	29893 2363989	63320	169177	374740	0.500 25.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74586.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2018 11:44:30 ALS Bottle#: 1 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:32:49 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.879	5.872	0.007	0	241808	250.0	250.0	
* 1 Fluorobenzene	96	7.803	7.802	0.001	100	2741225	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	99	544996	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	708995	12.5	12.5	
23 Dichlorodifluoromethane	85	4.185	4.199	-0.014	99	40092	0.5000	0.4133	
26 Chloromethane	50	4.442	4.456	-0.014	36	3219	0.5000	0.0695	
27 Vinyl chloride	62	4.578	4.585	-0.007	95	13462	0.5000	0.2617	
29 Bromomethane	94	4.921	4.914	0.007	89	20893	0.5000	0.4779	
30 Chloroethane	64	4.957	4.964	-0.007	94	10492	0.5000	0.4341	
31 Dichlorofluoromethane	67	5.107	5.107	0.000	97	39867	0.5000	0.4205	
32 Trichlorofluoromethane	101	5.186	5.178	0.008	97	59223	0.5000	0.4472	
35 Ethyl ether	59	5.357	5.357	0.000	95	12201	0.5000	0.4290	
39 Acrolein	56	5.515	5.507	0.008	95	9798	5.00	3.66	
41 Acetone	43	5.601	5.607	-0.007	49	11116	2.00	2.41	
40 1,1,2-Trichloro-1,2,2-trif	151	5.608	5.607	0.001	96	19381	0.5000	0.3977	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	95	28477	0.5000	0.4373	
44 Iodomethane	142	5.808	5.808	0.000	98	42212	0.5000	0.4614	
45 Methyl acetate	43		5.829				ND	ND	
47 3-Chloro-1-propene	41	5.887	5.886	0.000	82	53244	0.5000	0.4482	
48 Carbon disulfide	76	5.915	5.908	0.007	99	124009	0.5000	0.4402	
49 2-Methyl-2-propanol	59	5.937	5.936	0.001	91	5087	5.00	4.19	
50 Methylene Chloride	84	5.972	5.972	0.000	98	32572	0.5000	0.5548	
52 Acrylonitrile	53	6.173	6.129	0.044	35	12459	5.00	4.99	
51 Methyl tert-butyl ether	73	6.158	6.158	0.000	98	27306	0.5000	0.3926	
53 trans-1,2-Dichloroethene	96	6.194	6.194	0.000	94	31475	0.5000	0.4348	
54 Hexane	57	6.358	6.358	0.000	94	63522	0.5000	0.4891	
55 Vinyl acetate	43	6.444	6.444	0.000	97	44320	1.00	0.8422	
57 1,1-Dichloroethane	63	6.509	6.508	0.001	96	60373	0.5000	0.4447	
61 2-Butanone (MEK)	43	6.888	6.880	0.008	97	16831	2.00	1.92	
62 sec-Butyl Alcohol	45	6.845	6.923	-0.078	27	23463	15.0	22.3	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	85	30632	0.5000	0.4330	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	89	43023	0.5000	0.4298	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.123	7.123	0.000	83	7541	0.5000	0.3644	
68 Chloroform	83	7.131	7.130	0.001	92	50916	0.5000	0.4264	
69 Tetrahydrofuran	42	7.174	7.166	0.008	96	10596	1.00	2.24	
70 Isobutyl alcohol	41	7.359	7.331	0.028	30	3695	12.5	11.0	
71 1,1,1-Trichloroethane	97	7.352	7.359	-0.007	97	45607	0.5000	0.4165	
72 Cyclohexane	56	7.431	7.431	0.000	93	62126	0.5000	0.4585	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	95	51994	0.5000	0.4382	
74 Carbon tetrachloride	117	7.495	7.495	0.000	92	41704	0.5000	0.4186	
76 1,2-Dichloroethane	62	7.610	7.609	0.001	95	26783	0.5000	0.4593	
77 Benzene	78	7.631	7.631	0.000	96	128264	0.5000	0.4608	
14 n-Heptane	43	7.703	7.702	0.001	93	66022	0.5000	0.4788	
79 Trichloroethene	95	8.082	8.081	0.001	92	35299	0.5000	0.4497	
80 2-Pentanone	43	8.132	8.117	0.015	97	16614	2.00	1.42	
83 1,2-Dichloropropane	63	8.268	8.260	0.008	92	27802	0.5000	0.4518	
82 Methylcyclohexane	55	8.275	8.274	0.001	95	51717	0.5000	0.4546	
84 1,4-Dioxane	88		8.317				ND	ND	
85 Dibromomethane	93	8.360	8.360	0.000	89	8465	0.5000	0.4040	
86 Dichlorobromomethane	83	8.425	8.424	0.001	98	28401	0.5000	0.4033	
87 2-Chloroethyl vinyl ether	63	8.568	8.560	0.008	83	4230	0.5000	0.7062	
89 cis-1,3-Dichloropropene	75	8.739	8.739	0.000	93	29686	0.5000	0.4255	
90 4-Methyl-2-pentanone (MIBK	43	8.797	8.789	0.008	0	26250	2.00	1.48	
91 Toluene	91	9.011	9.011	0.000	97	129525	0.5000	0.4705	
92 Ethyl methacrylate	69	9.097	9.089	0.008	47	9932	0.5000	0.3731	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	97	19260	0.5000	0.5101	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	89	11537	0.5000	0.4350	
95 2-Hexanone	43	9.390	9.375	0.015	42	15902	2.00	1.57	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	96	21148	0.5000	0.4350	
97 Tetrachloroethene	164	9.426	9.426	0.000	87	22538	0.5000	0.4354	
98 Chlorodibromomethane	129	9.590	9.590	0.000	90	10983	0.5000	0.3539	
100 Ethylene Dibromide	107	9.719	9.719	0.000	97	9067	0.5000	0.4089	
101 1-Chlorohexane	91	9.941	9.940	0.001	94	43894	0.5000	0.4290	
102 Chlorobenzene	112	10.055	10.055	0.000	96	64324	0.5000	0.4425	
104 1,1,1,2-Tetrachloroethane	131	10.091	10.090	0.001	70	16819	0.5000	0.3763	
103 Ethylbenzene	106	10.091	10.090	0.001	98	39130	0.5000	0.4361	
105 m-Xylene & p-Xylene	106	10.169	10.169	0.000	0	48616	0.5000	0.4439	
106 Styrene	104	10.484	10.484	0.000	81	55951	0.5000	0.4001	
107 o-Xylene	106	10.484	10.484	0.000	90	40724	0.5000	0.4240	
108 Bromoform	173	10.684	10.691	-0.007	85	4060	0.5000	0.5820	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	118585	0.5000	0.4530	
111 Cyclohexanone	55	10.892	10.877	0.015	97	11065	20.0	17.4	
112 1,1,2,2-Tetrachloroethane	83	10.942	10.948	-0.006	87	10059	0.5000	0.4339	
113 trans-1,4-Dichloro-2-buten	53	10.985	10.977	0.008	58	1670	0.5000	0.7216	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	85	1772	0.5000	0.3273	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	31628	0.5000	0.4276	
116 Bromobenzene	156	11.070	11.070	0.000	93	18521	0.5000	0.4075	
117 1,3,5-Trimethylbenzene	105	11.178	11.177	0.001	93	93165	0.5000	0.4442	
118 2-Chlorotoluene	126	11.192	11.192	0.000	93	25098	0.5000	0.4370	
119 4-Chlorotoluene	126	11.271	11.270	0.001	99	24836	0.5000	0.4394	
120 tert-Butylbenzene	119	11.478	11.478	0.000	92	94521	0.5000	0.4202	
121 1,2,4-Trimethylbenzene	105	11.507	11.506	0.001	96	89711	0.5000	0.4388	
122 sec-Butylbenzene	134	11.664	11.656	0.008	96	24258	0.5000	0.4231	
123 4-Isopropyltoluene	119	11.750	11.749	0.001	97	103607	0.5000	0.4354	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	96	40573	0.5000	0.4328	
126 1,4-Dichlorobenzene	146	11.893	11.892	0.001	91	41019	0.5000	0.4390	
127 n-Butylbenzene	91	12.121	12.121	0.000	99	114773	0.5000	0.4400	
128 1,2-Dichlorobenzene	146	12.264	12.264	0.000	94	32140	0.5000	0.4357	
129 1,2-Dibromo-3-Chloropropan	157		13.015				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.995	13.987	0.008	90	20094	0.5000	0.4421	
131 Hexachlorobutadiene	225	14.145	14.145	0.000	94	18006	0.5000	0.4302	
132 Naphthalene	128	14.367	14.366	0.001	96	21644	0.5000	0.4033	
133 1,2,3-Trichlorobenzene	180	14.695	14.688	0.007	91	13468	0.5000	0.4196	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.8678	
S 139 Xylenes, Total	106				0		1.00	0.8679	
S 136 Total BTEX	1				0			2.24	
S 134 Trihalomethanes, Total	1				0		2.00	1.77	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.8678	
S 137 1,3-Dichloropropene, Total	1				0		1.00	0.9356	
S 135 Xylenes, Total (URS)	1				0		1.00	0.8679	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.20	Units: uL

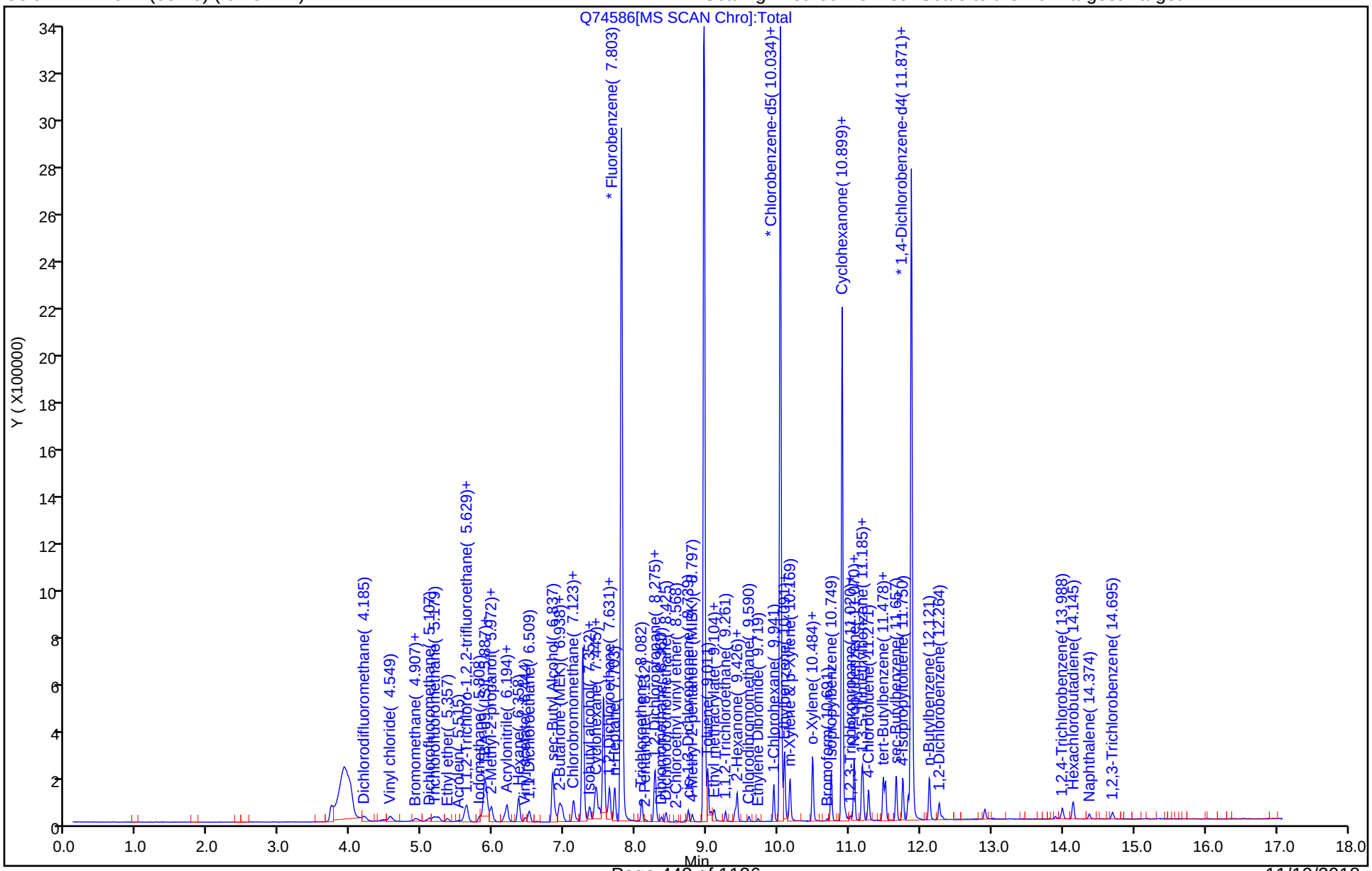
Report Date: 23-Oct-2018 09:32:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74586.D

Injection Date:	22-Oct-2018 11:44:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74587.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2018 12:05:30 ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:33:04 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	243400	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2440973	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	98	481927	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	670097	12.5	12.5	
23 Dichlorodifluoromethane	85	4.184	4.199	-0.015	100	79993	1.00	0.9260	
26 Chloromethane	50	4.456	4.456	0.000	98	34024	1.00	0.8250	
27 Vinyl chloride	62	4.585	4.585	0.000	97	47285	1.00	1.03	
29 Bromomethane	94	4.899	4.914	-0.015	91	41576	1.00	1.07	
30 Chloroethane	64	4.957	4.964	-0.008	97	23009	1.00	1.07	
31 Dichlorofluoromethane	67	5.107	5.107	0.000	97	92029	1.00	1.09	
32 Trichlorofluoromethane	101	5.214	5.178	0.036	98	121991	1.00	1.03	
35 Ethyl ether	59	5.357	5.357	0.000	95	26140	1.00	1.03	
39 Acrolein	56	5.507	5.507	0.000	98	24078	10.0	10.1	
41 Acetone	43	5.614	5.607	0.007	41	19964	4.00	4.87	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.607	-0.007	96	41920	1.00	0.9661	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	94	61353	1.00	1.06	
44 Iodomethane	142	5.800	5.808	-0.008	98	83009	1.00	1.02	
45 Methyl acetate	43	5.829	5.829	0.000	95	26095	2.00	2.38	
47 3-Chloro-1-propene	41	5.879	5.886	-0.007	83	117591	1.00	1.11	
48 Carbon disulfide	76	5.907	5.908	-0.001	99	265166	1.00	1.06	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	53	12146	10.0	9.95	
50 Methylene Chloride	84	5.972	5.972	0.000	98	61559	1.00	1.18	
52 Acrylonitrile	53	6.158	6.129	0.029	47	37596	10.0	10.1	
51 Methyl tert-butyl ether	73	6.151	6.158	-0.007	97	64112	1.00	1.04	
53 trans-1,2-Dichloroethene	96	6.186	6.194	-0.008	94	68351	1.00	1.06	
54 Hexane	57	6.351	6.358	-0.007	94	130400	1.00	1.14	
55 Vinyl acetate	43	6.444	6.444	0.000	97	85345	2.00	1.82	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	130247	1.00	1.08	
61 2-Butanone (MEK)	43	6.880	6.880	0.000	100	36875	4.00	4.73	
62 sec-Butyl Alcohol	45	6.930	6.923	0.007	95	31540	30.0	29.8	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	86	64451	1.00	1.02	
64 2,2-Dichloropropane	77	6.959	6.966	-0.007	89	96787	1.00	1.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.130	7.123	0.007	89	17773	1.00	0.9644	
68 Chloroform	83	7.130	7.130	0.000	93	108781	1.00	1.02	
69 Tetrahydrofuran	42	7.166	7.166	0.000	96	9540	2.00	2.27	
70 Isobutyl alcohol	41	7.338	7.331	0.007	30	7716	25.0	22.8	
71 1,1,1-Trichloroethane	97	7.352	7.359	-0.007	98	99975	1.00	1.03	
72 Cyclohexane	56	7.430	7.431	-0.001	94	132843	1.00	1.10	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	96	107539	1.00	1.02	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	86244	1.00	0.9722	
76 1,2-Dichloroethane	62	7.609	7.609	0.000	96	54643	1.00	1.05	
77 Benzene	78	7.631	7.631	0.000	97	258657	1.00	1.04	
14 n-Heptane	43	7.702	7.702	0.000	95	136673	1.00	1.11	
79 Trichloroethene	95	8.081	8.081	0.000	94	68175	1.00	0.9754	
80 2-Pentanone	43	8.131	8.117	0.014	99	38919	4.00	3.72	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	96	58241	1.00	1.06	
82 Methylcyclohexane	55	8.274	8.274	0.000	95	111229	1.00	1.10	
84 1,4-Dioxane	88	8.317	8.317	0.000	78	1845	20.0	20.0	
85 Dibromomethane	93	8.360	8.360	0.000	88	18564	1.00	0.99	
86 Dichlorobromomethane	83	8.424	8.424	0.000	98	61109	1.00	0.9746	
87 2-Chloroethyl vinyl ether	63	8.567	8.560	0.007	89	8041	1.00	1.03	
89 cis-1,3-Dichloropropene	75	8.739	8.739	0.000	94	60727	1.00	0.9843	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	60396	4.00	3.83	
91 Toluene	91	9.011	9.011	0.000	98	258162	1.00	1.05	
92 Ethyl methacrylate	69	9.089	9.089	0.000	89	21431	1.00	0.9105	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	99	41855	1.00	1.00	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	92	22587	1.00	0.9563	
95 2-Hexanone	43	9.382	9.375	0.007	98	35467	4.00	3.97	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	94	44826	1.00	1.04	
97 Tetrachloroethene	164	9.425	9.426	-0.001	90	45368	1.00	0.99	
98 Chlorodibromomethane	129	9.590	9.590	0.000	90	24924	1.00	0.9082	
100 Ethylene Dibromide	107	9.719	9.719	-0.001	98	19538	1.00	1.00	
101 1-Chlorohexane	91	9.940	9.940	0.000	94	89908	1.00	0.99	
102 Chlorobenzene	112	10.055	10.055	0.000	96	131540	1.00	1.02	
104 1,1,1,2-Tetrachloroethane	131	10.090	10.090	0.000	73	37015	1.00	0.9366	
103 Ethylbenzene	106	10.090	10.090	0.000	99	80389	1.00	1.01	
105 m-Xylene & p-Xylene	106	10.169	10.169	0.000	0	99579	1.00	1.03	
106 Styrene	104	10.484	10.484	0.000	81	117692	1.00	0.9518	
107 o-Xylene	106	10.484	10.484	0.000	90	84450	1.00	0.99	
108 Bromoform	173	10.691	10.691	0.000	88	9177	1.00	1.05	
109 Isopropylbenzene	105	10.748	10.741	0.007	97	249812	1.00	1.01	
111 Cyclohexanone	55	10.891	10.877	0.014	97	23709	40.0	42.1	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.948	-0.007	90	22301	1.00	1.02	
113 trans-1,4-Dichloro-2-buten	53	10.984	10.977	0.007	67	3030	1.00	1.03	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	87	4921	1.00	0.9617	
115 N-Propylbenzene	120	11.070	11.063	0.007	98	67315	1.00	0.9629	
116 Bromobenzene	156	11.077	11.070	0.007	94	40096	1.00	0.9334	
117 1,3,5-Trimethylbenzene	105	11.177	11.177	0.000	94	201274	1.00	1.02	
118 2-Chlorotoluene	126	11.191	11.192	-0.001	94	53835	1.00	0.99	
119 4-Chlorotoluene	126	11.270	11.270	0.000	99	51575	1.00	0.9655	
120 tert-Butylbenzene	119	11.477	11.478	-0.001	93	208059	1.00	0.9786	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	96	198735	1.00	1.03	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	51110	1.00	0.9433	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	97	230089	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	95	89184	1.00	1.01	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	91	91124	1.00	1.03	
127 n-Butylbenzene	91	12.121	12.121	0.000	99	257368	1.00	1.04	
128 1,2-Dichlorobenzene	146	12.264	12.264	0.000	94	69964	1.00	1.00	
129 1,2-Dibromo-3-Chloropropan	157	13.022	13.015	0.007	83	1595	1.00	1.01	
130 1,2,4-Trichlorobenzene	180	13.994	13.987	0.007	93	41482	1.00	0.9657	
131 Hexachlorobutadiene	225	14.144	14.145	-0.001	93	38988	1.00	0.9856	
132 Naphthalene	128	14.366	14.366	0.000	97	47191	1.00	0.9303	
133 1,2,3-Trichlorobenzene	180	14.695	14.688	0.007	92	29893	1.00	0.9854	
S 140 1,2-Dichloroethene, Total	96				0		2.00	2.08	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.98	
S 139 Xylenes, Total	106				0		2.00	2.02	
S 136 Total BTEX	1				0			5.13	
S 138 1,2-Dichloroethene, Total	1				0		2.00	2.08	
S 135 Xylenes, Total (URS)	1				0		2.00	2.02	
S 134 Trihalomethanes, Total	1				0		4.00	3.96	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.40	Units: uL

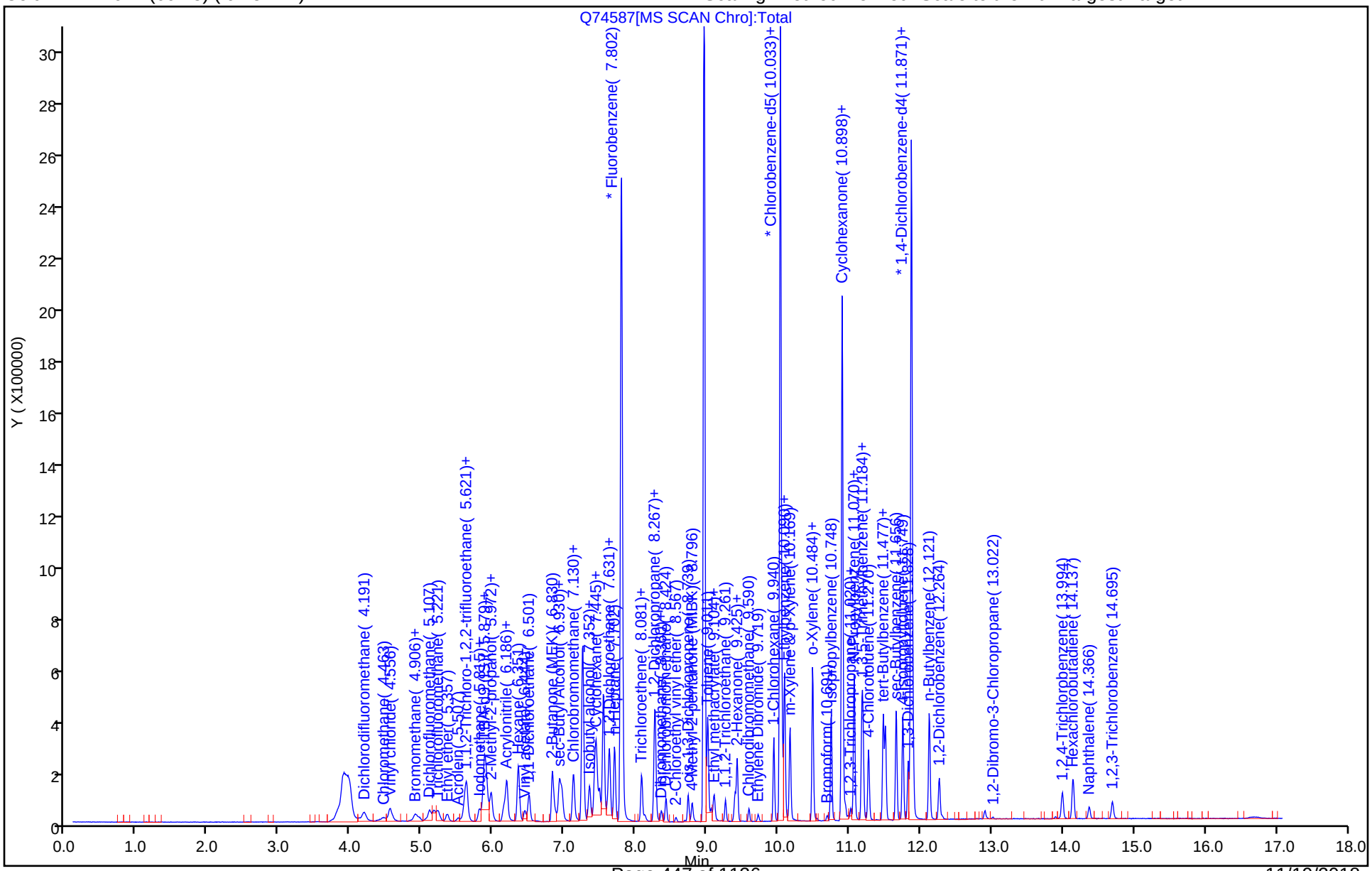
Report Date: 23-Oct-2018 09:33:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74587.D

Injection Date:	22-Oct-2018 12:05:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74588.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2018 12:26:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:33:18 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.880	5.872	0.008	0	253772	250.0	250.0	
* 1 Fluorobenzene	96	7.803	7.802	0.001	100	2583791	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	98	516189	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	708785	12.5	12.5	
23 Dichlorodifluoromethane	85	4.199	4.199	0.000	99	147174	2.00	1.61	
26 Chloromethane	50	4.457	4.456	0.001	97	78066	2.00	1.79	
27 Vinyl chloride	62	4.585	4.585	0.000	98	86958	2.00	1.79	
29 Bromomethane	94	4.914	4.914	0.000	92	80336	2.00	1.95	
30 Chloroethane	64	4.964	4.964	0.000	99	43556	2.00	1.91	
31 Dichlorofluoromethane	67	5.115	5.107	0.008	97	178645	2.00	2.00	
32 Trichlorofluoromethane	101	5.179	5.178	0.001	97	243096	2.00	1.95	
35 Ethyl ether	59	5.358	5.357	0.001	95	54075	2.00	2.02	
39 Acrolein	56	5.515	5.507	0.008	99	51296	20.0	20.3	
41 Acetone	43	5.615	5.607	0.008	41	37086	8.00	8.55	
40 1,1,2-Trichloro-1,2,2-trif	151	5.601	5.607	-0.006	97	83843	2.00	1.83	
43 1,1-Dichloroethene	96	5.636	5.629	0.007	94	117907	2.00	1.92	
44 Iodomethane	142	5.815	5.808	0.007	98	163251	2.00	1.89	
45 Methyl acetate	43	5.837	5.829	0.008	97	47188	4.00	4.07	
47 3-Chloro-1-propene	41	5.887	5.886	0.001	84	239560	2.00	2.14	
48 Carbon disulfide	76	5.908	5.908	0.000	99	508778	2.00	1.92	
49 2-Methyl-2-propanol	59	5.937	5.936	0.001	93	26901	20.0	21.1	
50 Methylene Chloride	84	5.980	5.972	0.008	98	108455	2.00	1.96	
52 Acrylonitrile	53	6.151	6.129	0.022	98	92992	20.0	19.8	
51 Methyl tert-butyl ether	73	6.158	6.158	0.000	97	127324	2.00	1.94	
53 trans-1,2-Dichloroethene	96	6.194	6.194	0.000	94	135799	2.00	1.99	
54 Hexane	57	6.359	6.358	0.001	94	261756	2.00	2.13	
55 Vinyl acetate	43	6.444	6.444	0.000	97	212807	4.00	4.29	
57 1,1-Dichloroethane	63	6.509	6.508	0.001	96	260439	2.00	2.04	
61 2-Butanone (MEK)	43	6.881	6.880	0.001	99	64108	8.00	7.77	
62 sec-Butyl Alcohol	45	6.931	6.923	0.008	96	64941	60.0	58.9	
63 cis-1,2-Dichloroethene	96	6.931	6.930	0.001	85	132640	2.00	1.99	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	91	184931	2.00	1.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.124	7.123	0.001	90	36635	2.00	1.88	
68 Chloroform	83	7.131	7.130	0.001	94	229998	2.00	2.04	
69 Tetrahydrofuran	42	7.174	7.166	0.008	93	17120	4.00	3.84	
70 Isobutyl alcohol	41	7.338	7.331	0.007	92	17200	50.0	48.7	
71 1,1,1-Trichloroethane	97	7.360	7.359	0.001	98	199695	2.00	1.93	
72 Cyclohexane	56	7.431	7.431	0.000	93	262560	2.00	2.06	
73 1,1-Dichloropropene	75	7.453	7.452	0.001	94	231322	2.00	2.07	
74 Carbon tetrachloride	117	7.496	7.495	0.001	94	180303	2.00	1.92	
76 1,2-Dichloroethane	62	7.610	7.609	0.001	97	112472	2.00	2.05	
77 Benzene	78	7.631	7.631	0.000	96	545975	2.00	2.08	
14 n-Heptane	43	7.703	7.702	0.001	95	283895	2.00	2.18	
79 Trichloroethene	95	8.082	8.081	0.001	94	144737	2.00	1.96	
80 2-Pentanone	43	8.125	8.117	0.008	98	86547	8.00	7.82	
83 1,2-Dichloropropane	63	8.261	8.260	0.001	96	122730	2.00	2.12	
82 Methylcyclohexane	55	8.275	8.274	0.001	96	226002	2.00	2.11	
84 1,4-Dioxane	88	8.325	8.317	0.008	78	5180	40.0	40.4	
85 Dibromomethane	93	8.361	8.360	0.001	88	39131	2.00	1.98	
86 Dichlorobromomethane	83	8.425	8.424	0.001	98	131563	2.00	1.98	
87 2-Chloroethyl vinyl ether	63	8.568	8.560	0.008	91	21075	2.00	1.92	
89 cis-1,3-Dichloropropene	75	8.740	8.739	0.001	94	133805	2.00	2.02	
90 4-Methyl-2-pentanone (MIBK	43	8.790	8.789	0.001	0	129927	8.00	7.79	
91 Toluene	91	9.011	9.011	0.000	97	540435	2.00	2.08	
92 Ethyl methacrylate	69	9.090	9.089	0.001	90	48553	2.00	1.93	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	99	91209	2.00	1.87	
94 1,1,2-Trichloroethane	97	9.262	9.261	0.001	92	48803	2.00	1.95	
95 2-Hexanone	43	9.383	9.375	0.008	98	76280	8.00	7.98	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	94	94832	2.00	2.06	
97 Tetrachloroethene	164	9.426	9.426	0.000	90	94308	2.00	1.92	
98 Chlorodibromomethane	129	9.591	9.590	0.000	90	54085	2.00	1.84	
100 Ethylene Dibromide	107	9.719	9.719	0.000	97	42086	2.00	2.00	
101 1-Chlorohexane	91	9.941	9.940	0.001	94	192913	2.00	1.99	
102 Chlorobenzene	112	10.055	10.055	0.000	94	276586	2.00	2.01	
104 1,1,1,2-Tetrachloroethane	131	10.091	10.090	0.001	90	78555	2.00	1.86	
103 Ethylbenzene	106	10.091	10.090	0.001	99	168046	2.00	1.98	
105 m-Xylene & p-Xylene	106	10.170	10.169	0.001	0	206507	2.00	1.99	
106 Styrene	104	10.484	10.484	0.000	82	258246	2.00	1.95	
107 o-Xylene	106	10.484	10.484	0.000	90	181191	2.00	1.99	
108 Bromoform	173	10.692	10.691	0.001	92	20111	2.00	1.86	
109 Isopropylbenzene	105	10.749	10.741	0.008	97	533795	2.00	2.04	
111 Cyclohexanone	55	10.885	10.877	0.008	97	50196	80.0	83.2	
112 1,1,2,2-Tetrachloroethane	83	10.949	10.948	0.001	92	46014	2.00	1.99	
113 trans-1,4-Dichloro-2-buten	53	10.985	10.977	0.008	65	7630	2.00	1.91	
114 1,2,3-Trichloropropane	110	11.021	11.020	0.001	85	10272	2.00	1.90	
115 N-Propylbenzene	120	11.071	11.063	0.008	99	142099	2.00	1.92	
116 Bromobenzene	156	11.071	11.070	0.001	92	84891	2.00	1.87	
117 1,3,5-Trimethylbenzene	105	11.178	11.177	0.001	94	422816	2.00	2.02	
118 2-Chlorotoluene	126	11.192	11.192	0.000	94	112381	2.00	1.96	
119 4-Chlorotoluene	126	11.271	11.270	0.001	99	108237	2.00	1.92	
120 tert-Butylbenzene	119	11.478	11.478	0.000	93	440796	2.00	1.96	
121 1,2,4-Trimethylbenzene	105	11.507	11.506	0.001	99	410573	2.00	2.01	
122 sec-Butylbenzene	134	11.657	11.656	0.001	96	111008	2.00	1.94	
123 4-Isopropyltoluene	119	11.750	11.749	0.001	96	481340	2.00	2.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	95	186988	2.00	2.00	
126 1,4-Dichlorobenzene	146	11.893	11.892	0.001	95	183529	2.00	1.96	
127 n-Butylbenzene	91	12.122	12.121	0.001	99	543588	2.00	2.08	
128 1,2-Dichlorobenzene	146	12.265	12.264	0.001	95	146658	2.00	1.99	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	72	4465	2.00	1.97	
130 1,2,4-Trichlorobenzene	180	13.995	13.987	0.008	93	87258	2.00	1.92	
131 Hexachlorobutadiene	225	14.145	14.145	0.000	91	79884	2.00	1.91	
132 Naphthalene	128	14.367	14.366	0.001	98	101311	2.00	1.89	
133 1,2,3-Trichlorobenzene	180	14.696	14.688	0.008	93	63320	2.00	1.97	
S 140 1,2-Dichloroethene, Total	96				0		4.00	3.98	
S 135 Xylenes, Total (URS)	1				0		4.00	3.98	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.89	
S 139 Xylenes, Total	106				0		4.00	3.98	
S 138 1,2-Dichloroethene, Total	1				0		4.00	3.98	
S 134 Trihalomethanes, Total	1				0		8.00	7.73	
S 136 Total BTEX	1				0			10.1	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.80	Units: uL

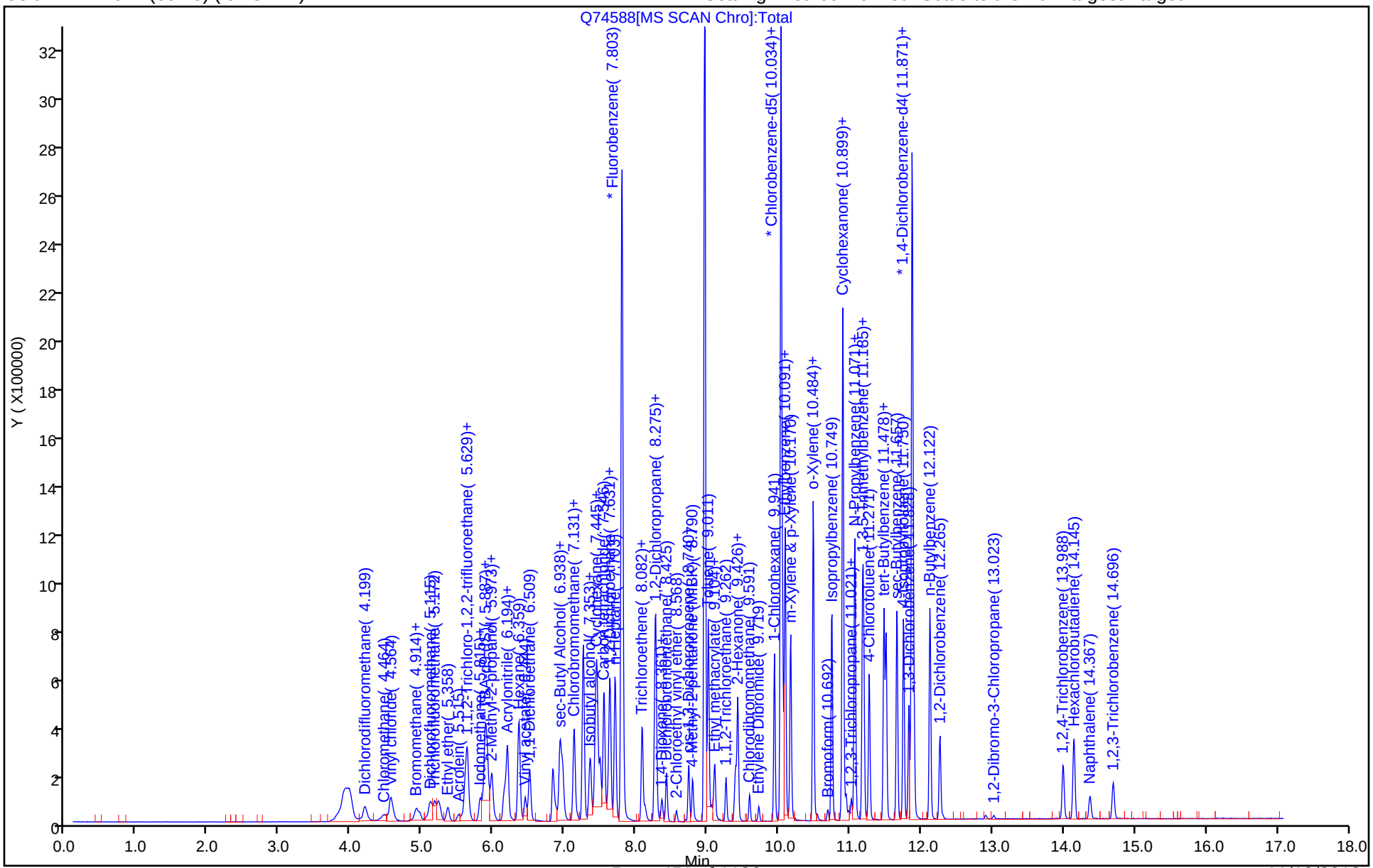
Report Date: 23-Oct-2018 09:33:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74588.D

Injection Date:	22-Oct-2018 12:26:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74589.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2018 12:46:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:33:31 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.872	0.002	0	268532	250.0	250.0	
* 1 Fluorobenzene	96	7.805	7.802	0.003	100	2643883	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.036	10.033	0.003	97	571803	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.873	11.871	0.002	96	723100	12.5	12.5	
23 Dichlorodifluoromethane	85	4.194	4.199	-0.005	69	479105	5.00	5.12	
26 Chloromethane	50	4.466	4.456	0.010	80	233166	5.00	5.22	
27 Vinyl chloride	62	4.587	4.585	0.002	82	252668	5.00	5.09	
29 Bromomethane	94	4.923	4.914	0.009	88	209328	5.00	4.96	
30 Chloroethane	64	4.966	4.964	0.002	82	120488	5.00	5.17	
31 Dichlorofluoromethane	67	5.116	5.107	0.009	73	480735	5.00	5.26	
32 Trichlorofluoromethane	101	5.224	5.178	0.046	86	635914	5.00	4.98	
35 Ethyl ether	59	5.359	5.357	0.002	92	137547	5.00	5.01	
39 Acrolein	56	5.510	5.507	0.003	91	129250	50.0	50.0	
41 Acetone	43	5.610	5.607	0.003	40	93536	20.0	21.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.610	5.607	0.003	89	222268	5.00	4.73	
43 1,1-Dichloroethene	96	5.638	5.629	0.009	87	302881	5.00	4.82	
44 Iodomethane	142	5.810	5.808	0.002	98	418539	5.00	4.74	
45 Methyl acetate	43	5.839	5.829	0.010	54	114839	10.0	9.69	
47 3-Chloro-1-propene	41	5.889	5.886	0.003	79	598884	5.00	5.23	
48 Carbon disulfide	76	5.910	5.908	0.002	99	1343448	5.00	4.95	
49 2-Methyl-2-propanol	59	5.946	5.936	0.010	1	67140	50.0	49.8	
50 Methylene Chloride	84	5.974	5.972	0.002	84	259122	5.00	4.58	
52 Acrylonitrile	53	6.139	6.129	0.010	98	251752	50.0	47.8	
51 Methyl tert-butyl ether	73	6.160	6.158	0.002	89	326867	5.00	4.87	
53 trans-1,2-Dichloroethene	96	6.196	6.194	0.002	91	340789	5.00	4.88	
54 Hexane	57	6.353	6.358	-0.005	93	672582	5.00	4.94	
55 Vinyl acetate	43	6.446	6.444	0.002	90	551173	10.0	10.9	
57 1,1-Dichloroethane	63	6.511	6.508	0.003	85	661188	5.00	5.05	
61 2-Butanone (MEK)	43	6.882	6.880	0.002	98	164320	20.0	19.5	
62 sec-Butyl Alcohol	45	6.925	6.923	0.002	94	174458	150.0	149.5	
63 cis-1,2-Dichloroethene	96	6.933	6.930	0.002	71	329605	5.00	4.83	
64 2,2-Dichloropropane	77	6.968	6.966	0.002	84	471273	5.00	4.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.126	7.123	0.003	55	93284	5.00	4.67	
68 Chloroform	83	7.133	7.130	0.003	81	575476	5.00	5.00	
69 Tetrahydrofuran	42	7.168	7.166	0.002	93	40527	10.0	8.88	
70 Isobutyl alcohol	41	7.333	7.331	0.002	59	45579	125.0	122.1	
71 1,1,1-Trichloroethane	97	7.354	7.359	-0.005	58	524594	5.00	4.97	
72 Cyclohexane	56	7.433	7.431	0.002	92	682670	5.00	5.22	
73 1,1-Dichloropropene	75	7.454	7.452	0.002	88	579229	5.00	5.06	
74 Carbon tetrachloride	117	7.497	7.495	0.002	60	469974	5.00	4.89	
76 1,2-Dichloroethane	62	7.612	7.609	0.003	77	282729	5.00	5.03	
77 Benzene	78	7.633	7.631	0.002	96	1349847	5.00	5.03	
14 n-Heptane	43	7.705	7.702	0.003	83	692481	5.00	5.21	
79 Trichloroethene	95	8.084	8.081	0.003	90	373041	5.00	4.93	
80 2-Pentanone	43	8.119	8.117	0.002	86	228964	20.0	20.2	
83 1,2-Dichloropropane	63	8.262	8.260	0.002	82	310646	5.00	5.23	
82 Methylcyclohexane	55	8.277	8.274	0.003	95	569300	5.00	5.19	
84 1,4-Dioxane	88	8.320	8.317	0.003	27	14348	100.0	96.3	
85 Dibromomethane	93	8.363	8.360	0.003	79	100869	5.00	4.99	
86 Dichlorobromomethane	83	8.427	8.424	0.003	89	343332	5.00	5.06	
87 2-Chloroethyl vinyl ether	63	8.563	8.560	0.003	91	61464	5.00	4.71	
89 cis-1,3-Dichloropropene	75	8.734	8.739	-0.005	87	364203	5.00	4.98	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.789	0.003	0	355445	20.0	20.8	
91 Toluene	91	9.013	9.011	0.002	91	1394361	5.00	5.25	
92 Ethyl methacrylate	69	9.092	9.089	0.003	80	143936	5.00	5.15	
93 trans-1,3-Dichloropropene	75	9.106	9.104	0.002	96	252909	5.00	4.77	
94 1,1,2-Trichloroethane	97	9.263	9.261	0.002	87	128953	5.00	5.04	
95 2-Hexanone	43	9.378	9.375	0.003	94	217771	20.0	20.6	
96 1,3-Dichloropropane	76	9.399	9.397	0.002	94	257664	5.00	5.05	
97 Tetrachloroethene	164	9.428	9.426	0.002	85	258868	5.00	4.77	
98 Chlorodibromomethane	129	9.592	9.590	0.002	86	154581	5.00	4.75	
100 Ethylene Dibromide	107	9.721	9.719	0.002	97	114311	5.00	4.91	
101 1-Chlorohexane	91	9.943	9.940	0.003	94	552049	5.00	5.14	
102 Chlorobenzene	112	10.057	10.055	0.002	90	762639	5.00	5.00	
104 1,1,1,2-Tetrachloroethane	131	10.093	10.090	0.003	23	219189	5.00	4.67	
103 Ethylbenzene	106	10.093	10.090	0.003	86	468539	5.00	4.98	
105 m-Xylene & p-Xylene	106	10.172	10.169	0.003	0	571066	5.00	4.97	
106 Styrene	104	10.486	10.484	0.002	84	747478	5.00	5.10	
107 o-Xylene	106	10.486	10.484	0.002	89	512546	5.00	5.09	
108 Bromoform	173	10.693	10.691	0.002	73	59394	5.00	4.49	
109 Isopropylbenzene	105	10.744	10.741	0.003	97	1427038	5.00	5.35	
111 Cyclohexanone	55	10.879	10.877	0.002	63	128597	200.0	192.4	
112 1,1,2,2-Tetrachloroethane	83	10.951	10.948	0.003	19	123051	5.00	5.20	
113 trans-1,4-Dichloro-2-buten	53	10.987	10.977	0.010	45	22857	5.00	4.87	
114 1,2,3-Trichloropropane	110	11.022	11.020	0.002	14	27220	5.00	4.93	
115 N-Propylbenzene	120	11.065	11.063	0.002	96	389779	5.00	5.17	
116 Bromobenzene	156	11.072	11.070	0.002	52	225204	5.00	4.86	
117 1,3,5-Trimethylbenzene	105	11.180	11.177	0.003	90	1131561	5.00	5.29	
118 2-Chlorotoluene	126	11.194	11.192	0.002	94	296781	5.00	5.07	
119 4-Chlorotoluene	126	11.273	11.270	0.003	99	287288	5.00	4.98	
120 tert-Butylbenzene	119	11.480	11.478	0.002	91	1178973	5.00	5.14	
121 1,2,4-Trimethylbenzene	105	11.509	11.506	0.003	99	1079213	5.00	5.18	
122 sec-Butylbenzene	134	11.659	11.656	0.003	96	292356	5.00	5.00	
123 4-Isopropyltoluene	119	11.752	11.749	0.003	88	1244072	5.00	5.13	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.830	11.828	0.002	78	467967	5.00	4.89	
126 1,4-Dichlorobenzene	146	11.895	11.892	0.003	88	473803	5.00	4.97	
127 n-Butylbenzene	91	12.124	12.121	0.003	98	1360629	5.00	5.11	
128 1,2-Dichlorobenzene	146	12.267	12.264	0.002	93	368829	5.00	4.90	
129 1,2-Dibromo-3-Chloropropan	157	13.017	13.015	0.002	46	12994	5.00	4.83	
130 1,2,4-Trichlorobenzene	180	13.990	13.987	0.003	91	232289	5.00	5.01	
131 Hexachlorobutadiene	225	14.147	14.145	0.002	93	211707	5.00	4.96	
132 Naphthalene	128	14.369	14.366	0.003	97	273619	5.00	5.00	
133 1,2,3-Trichlorobenzene	180	14.698	14.688	0.010	90	169177	5.00	5.17	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.71	
S 134 Trihalomethanes, Total	1				0		20.0	19.3	
S 135 Xylenes, Total (URS)	1				0		10.0	10.1	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.74	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.71	
S 136 Total BTEX	1				0			25.3	
S 139 Xylenes, Total	106				0		10.0	10.1	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00002 Amount Added: 2.00 Units: uL

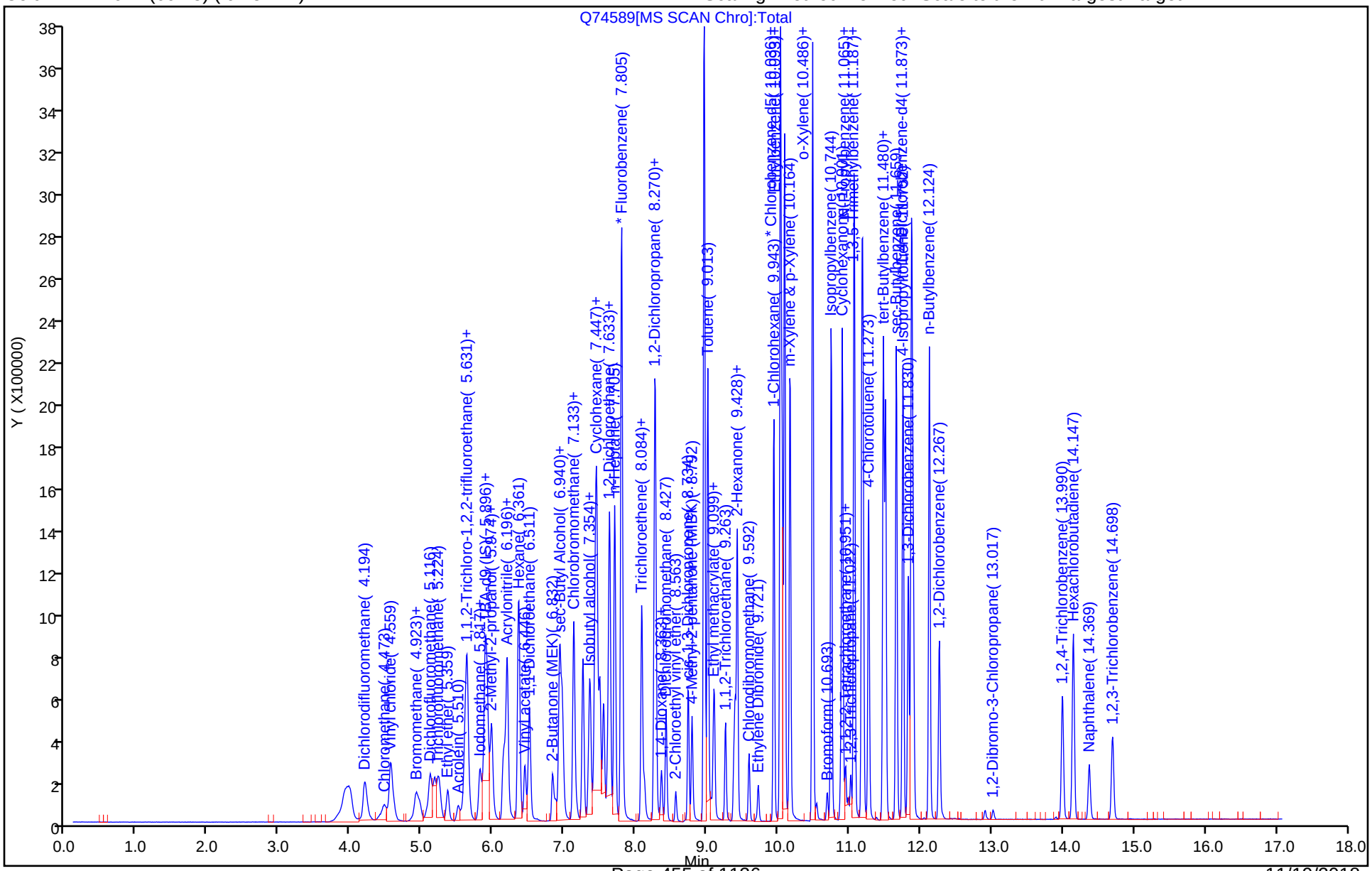
Report Date: 23-Oct-2018 09:33:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74589.D

Injection Date:	22-Oct-2018 12:46:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74590.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 22-Oct-2018 13:07:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:33:46 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	268297	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2573447	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	98	540770	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	98	781600	12.5	12.5	
23 Dichlorodifluoromethane	85	4.199	4.199	0.000	99	1049381	10.0	11.5	
26 Chloromethane	50	4.456	4.456	0.000	98	511272	10.0	11.8	
27 Vinyl chloride	62	4.585	4.585	0.000	98	542930	10.0	11.2	
29 Bromomethane	94	4.914	4.914	0.000	91	450603	10.0	11.0	
30 Chloroethane	64	4.964	4.964	0.000	99	255714	10.0	11.3	
31 Dichlorofluoromethane	67	5.107	5.107	0.000	97	994310	10.0	11.2	
32 Trichlorofluoromethane	101	5.178	5.178	0.000	99	1356282	10.0	10.9	
35 Ethyl ether	59	5.357	5.357	0.000	95	299246	10.0	11.2	
39 Acrolein	56	5.507	5.507	0.000	100	292075	100.0	116.1	
41 Acetone	43	5.607	5.607	0.000	43	195819	40.0	45.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	97	481536	10.0	10.5	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	95	668763	10.0	10.9	
44 Iodomethane	142	5.808	5.808	0.000	98	909010	10.0	10.6	
45 Methyl acetate	43	5.829	5.829	0.000	97	243324	20.0	21.1	
47 3-Chloro-1-propene	41	5.886	5.886	0.000	84	1258914	10.0	11.3	
48 Carbon disulfide	76	5.908	5.908	0.000	99	2882745	10.0	10.9	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	92	134846	100.0	100.2	
50 Methylene Chloride	84	5.972	5.972	0.000	97	546363	10.0	9.91	
52 Acrylonitrile	53	6.129	6.129	0.000	98	568440	100.0	107.2	
51 Methyl tert-butyl ether	73	6.158	6.158	0.000	96	697247	10.0	10.7	
53 trans-1,2-Dichloroethene	96	6.194	6.194	0.000	95	738097	10.0	10.9	
54 Hexane	57	6.358	6.358	0.000	93	1412338	10.0	11.0	
55 Vinyl acetate	43	6.444	6.444	0.000	97	1067867	20.0	21.6	
57 1,1-Dichloroethane	63	6.508	6.508	0.000	96	1394152	10.0	10.9	
61 2-Butanone (MEK)	43	6.880	6.880	0.000	100	338719	40.0	41.2	
62 sec-Butyl Alcohol	45	6.923	6.923	0.000	97	355321	300.0	304.7	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	84	732118	10.0	11.0	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	90	1017555	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.123	7.123	0.000	93	204694	10.0	10.5	
68 Chloroform	83	7.130	7.130	0.000	93	1227239	10.0	10.9	
69 Tetrahydrofuran	42	7.166	7.166	0.000	94	96060	20.0	21.6	
70 Isobutyl alcohol	41	7.331	7.331	0.000	94	95091	250.0	254.9	
71 1,1,1-Trichloroethane	97	7.359	7.359	0.000	99	1119013	10.0	10.9	
72 Cyclohexane	56	7.431	7.431	0.000	92	1417706	10.0	11.1	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	96	1229795	10.0	11.0	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	1015342	10.0	10.9	
76 1,2-Dichloroethane	62	7.609	7.609	0.000	97	571706	10.0	10.4	
77 Benzene	78	7.631	7.631	0.000	97	2855923	10.0	10.9	
14 n-Heptane	43	7.702	7.702	0.000	93	1417751	10.0	11.0	
79 Trichloroethene	95	8.081	8.081	0.000	95	777337	10.0	10.5	
80 2-Pentanone	43	8.117	8.117	0.000	98	467782	40.0	42.5	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	97	628351	10.0	10.9	
82 Methylcyclohexane	55	8.274	8.274	0.000	94	1213377	10.0	11.4	
84 1,4-Dioxane	88	8.317	8.317	0.000	95	31275	200.0	206.2	
85 Dibromomethane	93	8.360	8.360	0.000	88	209836	10.0	10.7	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	708673	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	131060	10.0	9.81	
89 cis-1,3-Dichloropropene	75	8.739	8.739	0.000	94	742737	10.0	10.7	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	717680	40.0	43.2	
91 Toluene	91	9.011	9.011	0.000	98	2739027	10.0	10.6	
92 Ethyl methacrylate	69	9.089	9.089	0.000	89	301784	10.0	11.4	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	99	537299	10.0	10.2	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	92	256397	10.0	10.3	
95 2-Hexanone	43	9.375	9.375	0.000	96	457347	40.0	45.6	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	92	511153	10.0	10.6	
97 Tetrachloroethene	164	9.426	9.426	0.000	91	528688	10.0	10.3	
98 Chlorodibromomethane	129	9.590	9.590	0.000	91	317167	10.0	10.3	
100 Ethylene Dibromide	107	9.719	9.719	0.000	98	231141	10.0	10.5	
101 1-Chlorohexane	91	9.940	9.940	0.000	97	1096173	10.0	10.8	
102 Chlorobenzene	112	10.055	10.055	0.000	94	1520584	10.0	10.5	
104 1,1,1,2-Tetrachloroethane	131	10.090	10.090	0.000	91	489226	10.0	11.0	
103 Ethylbenzene	106	10.090	10.090	0.000	99	979213	10.0	11.0	
105 m-Xylene & p-Xylene	106	10.169	10.169	0.000	0	1148388	10.0	10.6	
106 Styrene	104	10.484	10.484	0.000	85	1551524	10.0	11.2	
107 o-Xylene	106	10.484	10.484	0.000	88	1051121	10.0	11.0	
108 Bromoform	173	10.691	10.691	0.000	93	130365	10.0	10.1	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	3003461	10.0	10.4	
111 Cyclohexanone	55	10.877	10.877	0.000	97	285427	400.0	451.5	
112 1,1,2,2-Tetrachloroethane	83	10.948	10.948	0.000	92	257802	10.0	10.1	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	91	50546	10.0	9.55	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	87	58847	10.0	9.86	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	847003	10.0	10.4	
116 Bromobenzene	156	11.070	11.070	0.000	94	500057	10.0	9.98	
117 1,3,5-Trimethylbenzene	105	11.177	11.177	0.000	95	2441159	10.0	10.6	
118 2-Chlorotoluene	126	11.192	11.192	0.000	95	653730	10.0	10.3	
119 4-Chlorotoluene	126	11.270	11.270	0.000	99	635504	10.0	10.2	
120 tert-Butylbenzene	119	11.478	11.478	0.000	92	2543479	10.0	10.3	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	2390618	10.0	10.6	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	667535	10.0	10.6	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	96	2846349	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	96	1069026	10.0	10.3	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	92	1059632	10.0	10.3	
127 n-Butylbenzene	91	12.121	12.121	0.000	99	3072980	10.0	10.7	
128 1,2-Dichlorobenzene	146	12.264	12.264	0.000	95	839872	10.0	10.3	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	75	30153	10.0	9.87	
130 1,2,4-Trichlorobenzene	180	13.987	13.987	0.000	93	523062	10.0	10.4	
131 Hexachlorobutadiene	225	14.145	14.145	0.000	96	474356	10.0	10.3	
132 Naphthalene	128	14.366	14.366	0.000	98	615365	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.688	14.688	0.000	94	374740	10.0	10.6	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 134 Trihalomethanes, Total	1				0		40.0	42.0	
S 135 Xylenes, Total (URS)	1				0		20.0	21.6	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.9	
S 139 Xylenes, Total	106				0		20.0	21.6	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.9	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00002 Amount Added: 4.00 Units: uL

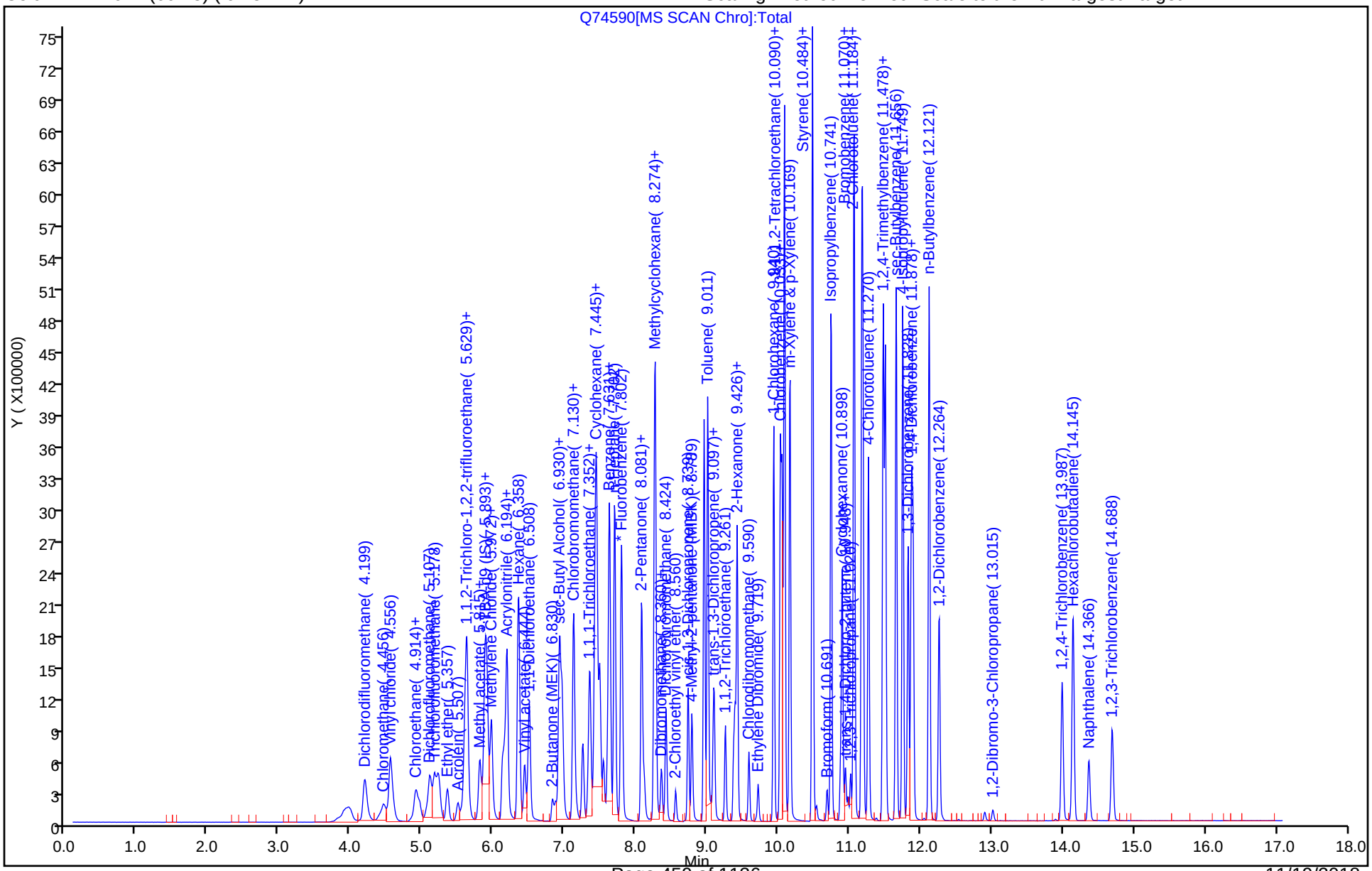
Report Date: 23-Oct-2018 09:33:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74590.D

Injection Date:	22-Oct-2018 13:07:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74591.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Oct-2018 13:27:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:34:02 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	274865	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2810342	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	626465	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.871	-0.001	99	787269	12.5	12.5	
23 Dichlorodifluoromethane	85	4.198	4.199	-0.001	100	2658045	25.0	26.7	
26 Chloromethane	50	4.456	4.456	0.000	98	1284727	25.0	27.1	
27 Vinyl chloride	62	4.577	4.585	-0.008	98	1350060	25.0	25.6	
29 Bromomethane	94	4.913	4.914	-0.001	91	1124568	25.0	25.1	
30 Chloroethane	64	4.963	4.964	-0.001	99	641618	25.0	25.9	
31 Dichlorofluoromethane	67	5.106	5.107	-0.001	96	2596512	25.0	26.7	
32 Trichlorofluoromethane	101	5.221	5.178	0.043	99	3463270	25.0	25.5	
35 Ethyl ether	59	5.357	5.357	0.000	94	752240	25.0	25.8	
39 Acrolein	56	5.500	5.507	-0.007	100	736139	250.0	268.1	
41 Acetone	43	5.600	5.607	-0.007	100	443531	100.0	94.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	97	1301505	25.0	26.1	
43 1,1-Dichloroethene	96	5.628	5.629	-0.001	96	1688076	25.0	25.3	
44 Iodomethane	142	5.807	5.808	-0.001	99	2398430	25.0	25.6	
45 Methyl acetate	43	5.829	5.829	0.000	96	596192	50.0	47.3	
47 3-Chloro-1-propene	41	5.886	5.886	0.000	85	2882578	25.0	23.7	
48 Carbon disulfide	76	5.907	5.908	-0.001	99	7136895	25.0	24.7	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	93	356010	250.0	258.2	
50 Methylene Chloride	84	5.972	5.972	0.000	95	1369466	25.0	22.8	
52 Acrylonitrile	53	6.122	6.129	-0.007	99	1476038	250.0	251.0	
51 Methyl tert-butyl ether	73	6.158	6.158	0.000	96	1787510	25.0	25.1	
53 trans-1,2-Dichloroethene	96	6.193	6.194	-0.001	96	1846129	25.0	24.9	
54 Hexane	57	6.358	6.358	0.000	92	3502455	25.0	23.5	
55 Vinyl acetate	43	6.436	6.444	-0.008	97	2900257	50.0	53.8	
57 1,1-Dichloroethane	63	6.508	6.508	0.000	96	3435350	25.0	24.7	
61 2-Butanone (MEK)	43	6.873	6.880	-0.007	100	890408	100.0	99.3	
62 sec-Butyl Alcohol	45	6.915	6.923	-0.008	99	918650	750.0	769.0	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	81	1861937	25.0	25.7	
64 2,2-Dichloropropane	77	6.965	6.966	-0.001	89	2618488	25.0	25.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.123	7.123	0.000	96	551638	25.0	26.0	
68 Chloroform	83	7.130	7.130	0.000	93	3162857	25.0	25.8	
69 Tetrahydrofuran	42	7.166	7.166	0.000	94	245586	50.0	50.6	
70 Isobutyl alcohol	41	7.323	7.331	-0.008	96	261004	625.0	682.9	
71 1,1,1-Trichloroethane	97	7.359	7.359	0.000	98	2933091	25.0	26.1	
72 Cyclohexane	56	7.430	7.431	-0.001	90	3475891	25.0	25.0	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	97	3197361	25.0	26.3	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	2733138	25.0	26.8	
76 1,2-Dichloroethane	62	7.602	7.609	-0.007	98	1510322	25.0	25.3	
77 Benzene	78	7.630	7.631	-0.001	97	7354844	25.0	25.8	
14 n-Heptane	43	7.702	7.702	0.000	90	3498727	25.0	24.7	
79 Trichloroethene	95	8.081	8.081	0.000	97	2171214	25.0	27.0	
80 2-Pentanone	43	8.117	8.117	0.000	99	1314175	100.0	109.2	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	97	1650994	25.0	26.2	
82 Methylcyclohexane	55	8.274	8.274	0.000	93	2902911	25.0	24.9	
84 1,4-Dioxane	88	8.310	8.317	-0.007	94	86809	500.0	512.4	
85 Dibromomethane	93	8.360	8.360	0.000	89	581299	25.0	27.1	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	1971454	25.0	27.3	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	409507	25.0	27.3	
89 cis-1,3-Dichloropropene	75	8.732	8.739	-0.007	96	2197671	25.0	27.4	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	1903980	100.0	105.0	
91 Toluene	91	9.010	9.011	-0.001	99	7322118	25.0	25.9	
92 Ethyl methacrylate	69	9.082	9.089	-0.007	88	894966	25.0	29.2	
93 trans-1,3-Dichloropropene	75	9.103	9.104	-0.001	97	1604604	25.0	27.6	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	91	755286	25.0	27.8	
95 2-Hexanone	43	9.368	9.375	-0.007	96	1263567	100.0	108.9	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	91	1457634	25.0	26.1	
97 Tetrachloroethene	164	9.425	9.426	-0.001	92	1638874	25.0	27.5	
98 Chlorodibromomethane	129	9.590	9.590	0.000	90	966519	25.0	27.1	
100 Ethylene Dibromide	107	9.718	9.719	-0.001	99	688434	25.0	27.0	
101 1-Chlorohexane	91	9.940	9.940	0.000	97	3209983	25.0	27.3	
102 Chlorobenzene	112	10.054	10.055	-0.001	94	4460455	25.0	26.7	
104 1,1,1,2-Tetrachloroethane	131	10.090	10.090	0.000	95	1424272	25.0	27.7	
103 Ethylbenzene	106	10.090	10.090	0.000	98	2888384	25.0	28.0	
105 m-Xylene & p-Xylene	106	10.162	10.169	-0.007	0	3408686	25.0	27.1	
106 Styrene	104	10.483	10.484	-0.001	85	4349196	25.0	27.1	
107 o-Xylene	106	10.483	10.484	-0.001	88	2905885	25.0	26.3	
108 Bromoform	173	10.684	10.691	-0.007	93	390901	25.0	25.6	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	8080532	25.0	27.8	
111 Cyclohexanone	55	10.877	10.877	0.000	97	739065	1000.0	1009.3	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.948	-0.007	93	692082	25.0	26.9	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	93	145699	25.0	26.6	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	85	162733	25.0	27.1	
115 N-Propylbenzene	120	11.063	11.063	-0.001	97	2409198	25.0	29.3	
116 Bromobenzene	156	11.070	11.070	0.000	95	1424056	25.0	28.2	
117 1,3,5-Trimethylbenzene	105	11.177	11.177	0.000	96	6566055	25.0	28.2	
118 2-Chlorotoluene	126	11.191	11.192	-0.001	97	1832048	25.0	28.7	
119 4-Chlorotoluene	126	11.270	11.270	0.000	98	1774926	25.0	28.3	
120 tert-Butylbenzene	119	11.477	11.478	-0.001	91	6900752	25.0	27.6	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	6247324	25.0	27.5	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	1826966	25.0	28.7	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	95	7285405	25.0	27.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	96	2826642	25.0	27.2	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	92	2783480	25.0	26.8	
127 n-Butylbenzene	91	12.121	12.121	0.000	97	7427835	25.0	25.6	
128 1,2-Dichlorobenzene	146	12.264	12.264	0.000	95	2197765	25.0	26.8	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.015	-0.001	79	83971	25.0	26.5	
130 1,2,4-Trichlorobenzene	180	13.987	13.987	0.000	93	1408945	25.0	27.9	
131 Hexachlorobutadiene	225	14.144	14.145	-0.001	97	1301056	25.0	28.0	
132 Naphthalene	128	14.366	14.366	0.000	98	1636040	25.0	27.5	
133 1,2,3-Trichlorobenzene	180	14.695	14.688	0.007	94	980946	25.0	27.5	
S 140 1,2-Dichloroethene, Total	96				0		50.0	50.5	
S 139 Xylenes, Total	106				0		50.0	53.4	
S 136 Total BTEX	1				0			133.1	
S 134 Trihalomethanes, Total	1				0		100.0	105.8	
S 138 1,2-Dichloroethene, Total	1				0		50.0	50.5	
S 137 1,3-Dichloropropene, Total	1				0		50.0	55.0	
S 135 Xylenes, Total (URS)	1				0		50.0	53.4	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00002 Amount Added: 10.00 Units: uL

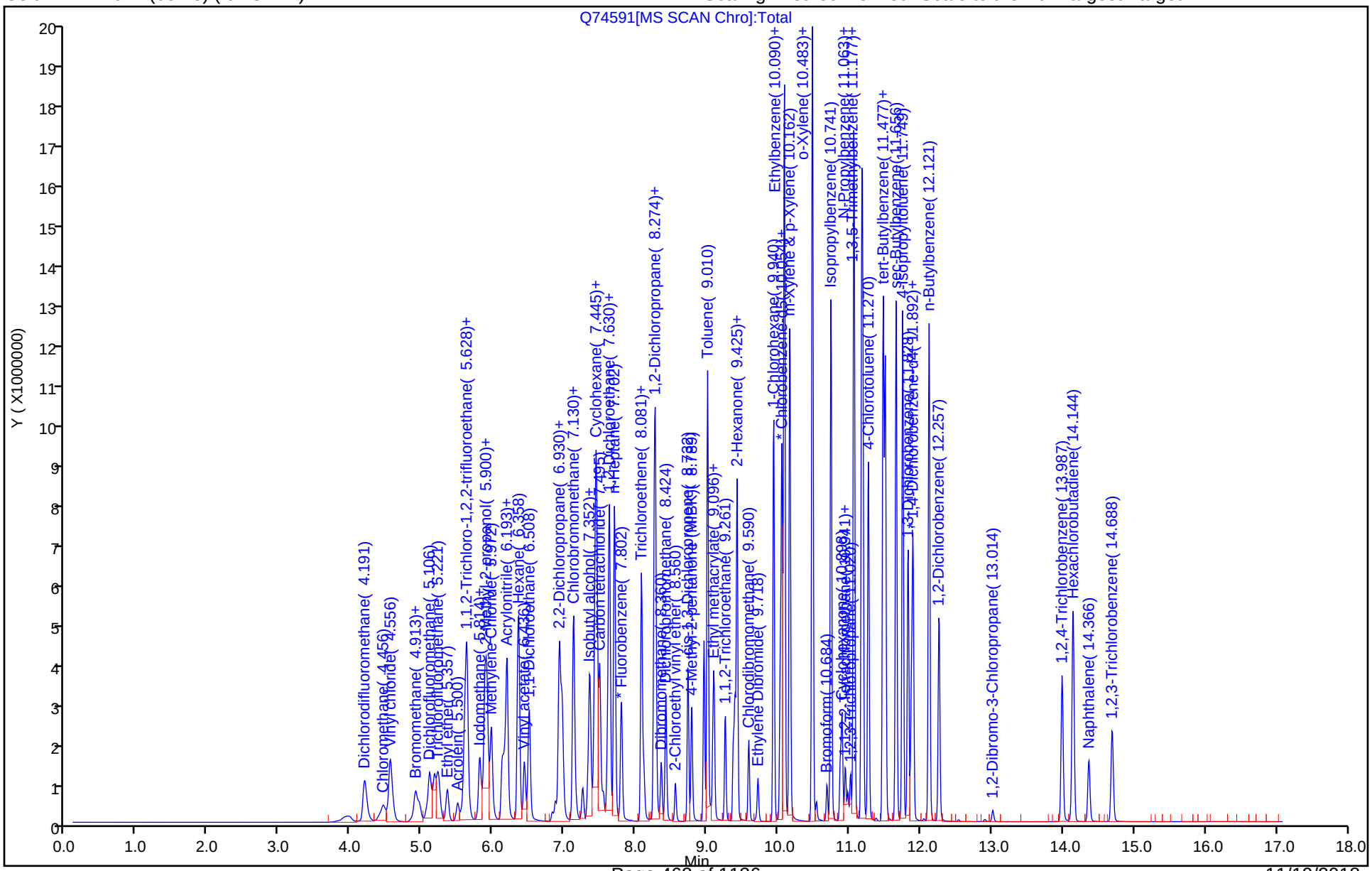
Report Date: 23-Oct-2018 09:34:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74591.D

Injection Date:	22-Oct-2018 13:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD30			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Oct-2018 13:48:30 ALS Bottle#: 7 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:34:16 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.872	0.002	0	261629	250.0	250.0	
* 1 Fluorobenzene	96	7.797	7.802	-0.005	100	2974734	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.033	-0.005	98	659349	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.872	11.871	0.001	100	874341	12.5	12.5	
23 Dichlorodifluoromethane	85	4.186	4.199	-0.013	99	6465811	60.0	61.4	
26 Chloromethane	50	4.443	4.456	-0.013	98	2950769	60.0	58.7	
27 Vinyl chloride	62	4.572	4.585	-0.013	98	3031060	60.0	54.3	
29 Bromomethane	94	4.908	4.914	-0.006	91	2583848	60.0	54.5	
30 Chloroethane	64	4.958	4.964	-0.006	99	1432185	60.0	54.6	
31 Dichlorofluoromethane	67	5.094	5.107	-0.013	97	5136118	60.0	49.9	
32 Trichlorofluoromethane	101	5.216	5.178	0.038	99	8536804	60.0	59.4	
35 Ethyl ether	59	5.352	5.357	-0.005	92	1752177	60.0	56.8	
39 Acrolein	56	5.495	5.507	-0.012	100	1761594	600.1	606.0	
41 Acetone	43	5.595	5.607	-0.012	100	966123	240.0	193.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.602	5.607	-0.005	95	3428924	60.0	64.8	
43 1,1-Dichloroethene	96	5.623	5.629	-0.006	99	4394898	60.0	62.2	
44 Iodomethane	142	5.802	5.808	-0.006	99	6444142	60.0	64.9	
45 Methyl acetate	43	5.823	5.829	-0.006	97	1314326	120.0	98.5	
47 3-Chloro-1-propene	41	5.874	5.886	-0.012	84	6196930	60.0	48.1	
48 Carbon disulfide	76	5.902	5.908	-0.006	99	16817986	60.0	55.0	
49 2-Methyl-2-propanol	59	5.931	5.936	-0.005	94	848685	600.0	646.7	
50 Methylene Chloride	84	5.966	5.972	-0.006	94	3504399	60.0	55.0	
52 Acrylonitrile	53	6.117	6.129	-0.012	98	3634913	600.0	580.1	
51 Methyl tert-butyl ether	73	6.152	6.158	-0.006	95	4294165	60.0	56.9	
53 trans-1,2-Dichloroethene	96	6.188	6.194	-0.006	99	4797088	60.0	61.1	
54 Hexane	57	6.353	6.358	-0.005	90	7543406	60.0	48.0	
55 Vinyl acetate	43	6.431	6.444	-0.013	97	6390619	120.0	111.9	
57 1,1-Dichloroethane	63	6.503	6.508	-0.005	96	8165582	60.0	55.4	
61 2-Butanone (MEK)	43	6.867	6.880	-0.013	100	2016158	240.0	212.4	
62 sec-Butyl Alcohol	45	6.910	6.923	-0.013	98	2021252	1800.0	1777.5	
63 cis-1,2-Dichloroethene	96	6.925	6.930	-0.005	78	4699914	60.0	61.2	
64 2,2-Dichloropropane	77	6.960	6.966	-0.006	88	6479447	60.0	59.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.118	7.123	-0.005	96	1439503	60.0	64.1	
68 Chloroform	83	7.125	7.130	-0.005	92	7580925	60.0	58.5	
69 Tetrahydrofuran	42	7.161	7.166	-0.005	94	569105	120.0	110.9	
70 Isobutyl alcohol	41	7.318	7.331	-0.013	95	625107	1500.0	1718.2	
71 1,1,1-Trichloroethane	97	7.354	7.359	-0.005	98	7466364	60.0	62.8	
72 Cyclohexane	56	7.425	7.431	-0.006	87	7009077	60.0	47.7	
73 1,1-Dichloropropene	75	7.447	7.452	-0.005	97	6988203	60.0	54.3	
74 Carbon tetrachloride	117	7.497	7.495	0.002	97	7110333	60.0	65.8	
76 1,2-Dichloroethane	62	7.604	7.609	-0.005	98	3591147	60.0	56.7	
77 Benzene	78	7.632	7.631	0.001	98	15670487	60.0	51.9	
14 n-Heptane	43	7.704	7.702	0.002	83	6386168	60.0	42.7	
79 Trichloroethene	95	8.083	8.081	0.002	99	5250218	60.0	61.6	
80 2-Pentanone	43	8.112	8.117	-0.006	99	2828858	240.0	222.1	
83 1,2-Dichloropropane	63	8.255	8.260	-0.006	96	3182434	60.0	47.7	
82 Methylcyclohexane	55	8.276	8.274	0.002	90	5698114	60.0	46.2	
84 1,4-Dioxane	88	8.312	8.317	-0.005	95	211062	1200.0	1167.0	
85 Dibromomethane	93	8.355	8.360	-0.005	91	1445633	60.0	63.6	
86 Dichlorobromomethane	83	8.419	8.424	-0.005	99	4824961	60.0	63.1	
87 2-Chloroethyl vinyl ether	63	8.555	8.560	-0.005	91	957455	60.0	59.7	
89 cis-1,3-Dichloropropene	75	8.734	8.739	-0.005	97	5003745	60.0	59.3	
90 4-Methyl-2-pentanone (MIBK	43	8.784	8.789	-0.005	0	4122796	240.0	214.8	
91 Toluene	91	9.005	9.011	-0.006	98	14633660	60.0	49.0	
92 Ethyl methacrylate	69	9.084	9.089	-0.005	92	2003930	60.0	62.2	
93 trans-1,3-Dichloropropene	75	9.098	9.104	-0.006	98	3606027	60.0	58.4	
94 1,1,2-Trichloroethane	97	9.256	9.261	-0.005	91	1811401	60.0	62.9	
95 2-Hexanone	43	9.370	9.375	-0.005	95	2828451	240.0	231.5	
96 1,3-Dichloropropane	76	9.391	9.397	-0.006	90	3333854	60.0	56.7	
97 Tetrachloroethene	164	9.420	9.426	-0.006	92	4100840	60.0	65.5	
98 Chlorodibromomethane	129	9.584	9.590	-0.006	90	2497306	60.0	66.5	
100 Ethylene Dibromide	107	9.713	9.719	-0.006	98	1721293	60.0	64.2	
101 1-Chlorohexane	91	9.935	9.940	-0.005	92	7083624	60.0	57.2	
102 Chlorobenzene	112	10.056	10.055	0.001	94	10184982	60.0	57.9	
104 1,1,1,2-Tetrachloroethane	131	10.085	10.090	-0.005	94	3206029	60.0	59.3	
103 Ethylbenzene	106	10.085	10.090	-0.005	97	5929427	60.0	54.6	
105 m-Xylene & p-Xylene	106	10.164	10.169	-0.005	0	7592173	60.0	57.3	
106 Styrene	104	10.478	10.484	-0.006	85	8663286	60.0	51.2	
107 o-Xylene	106	10.485	10.484	0.001	86	5834650	60.0	50.2	
108 Bromoform	173	10.686	10.691	-0.005	94	1058431	60.0	65.4	
109 Isopropylbenzene	105	10.743	10.741	0.002	97	16313923	60.0	50.5	e
111 Cyclohexanone	55	10.871	10.877	-0.006	98	1737412	2400.0	2254.3	
112 1,1,2,2-Tetrachloroethane	83	10.943	10.948	-0.005	92	1709249	60.0	59.8	
113 trans-1,4-Dichloro-2-buten	53	10.979	10.977	0.002	94	375906	60.0	61.3	
114 1,2,3-Trichloropropane	110	11.014	11.020	-0.006	86	414407	60.0	62.1	
115 N-Propylbenzene	120	11.057	11.063	-0.006	98	5340465	60.0	58.5	e
116 Bromobenzene	156	11.072	11.070	0.002	90	3478266	60.0	62.1	
117 1,3,5-Trimethylbenzene	105	11.172	11.177	-0.005	96	13135969	60.0	50.8	
118 2-Chlorotoluene	126	11.193	11.192	0.001	97	4083299	60.0	57.6	
119 4-Chlorotoluene	126	11.265	11.270	-0.005	97	4390796	60.0	63.0	
120 tert-Butylbenzene	119	11.479	11.478	0.001	90	14694223	60.0	53.0	
121 1,2,4-Trimethylbenzene	105	11.508	11.506	0.002	96	13496526	60.0	53.5	
122 sec-Butylbenzene	134	11.658	11.656	0.002	95	4401378	60.0	62.3	
123 4-Isopropyltoluene	119	11.751	11.749	0.002	93	15503362	60.0	52.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.822	11.828	-0.006	96	7151801	60.0	61.9	
126 1,4-Dichlorobenzene	146	11.894	11.892	0.002	92	6995311	60.0	60.7	
127 n-Butylbenzene	91	12.123	12.121	0.002	94	15373382	60.0	47.8	
128 1,2-Dichlorobenzene	146	12.259	12.264	-0.005	96	5698639	60.0	62.6	
129 1,2-Dibromo-3-Chloropropan	157	13.016	13.015	0.001	79	210353	60.0	59.3	
130 1,2,4-Trichlorobenzene	180	13.989	13.987	0.002	94	3452254	60.0	61.6	
131 Hexachlorobutadiene	225	14.139	14.145	-0.006	98	3282275	60.0	63.6	
132 Naphthalene	128	14.361	14.366	-0.005	98	3923546	60.0	59.3	
133 1,2,3-Trichlorobenzene	180	14.690	14.688	0.002	95	2363989	60.0	59.7	
S 140 1,2-Dichloroethene, Total	96				0		120.0	122.3	
S 137 1,3-Dichloropropene, Total	1				0		120.0	117.7	
S 139 Xylenes, Total	106				0		120.0	107.5	
S 136 Total BTEX	1				0			263.0	
S 138 1,2-Dichloroethene, Total	1				0		120.0	122.3	
S 135 Xylenes, Total (URS)	1				0		120.0	107.5	
S 134 Trihalomethanes, Total	1				0		240.0	253.5	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	24.00	Units: uL

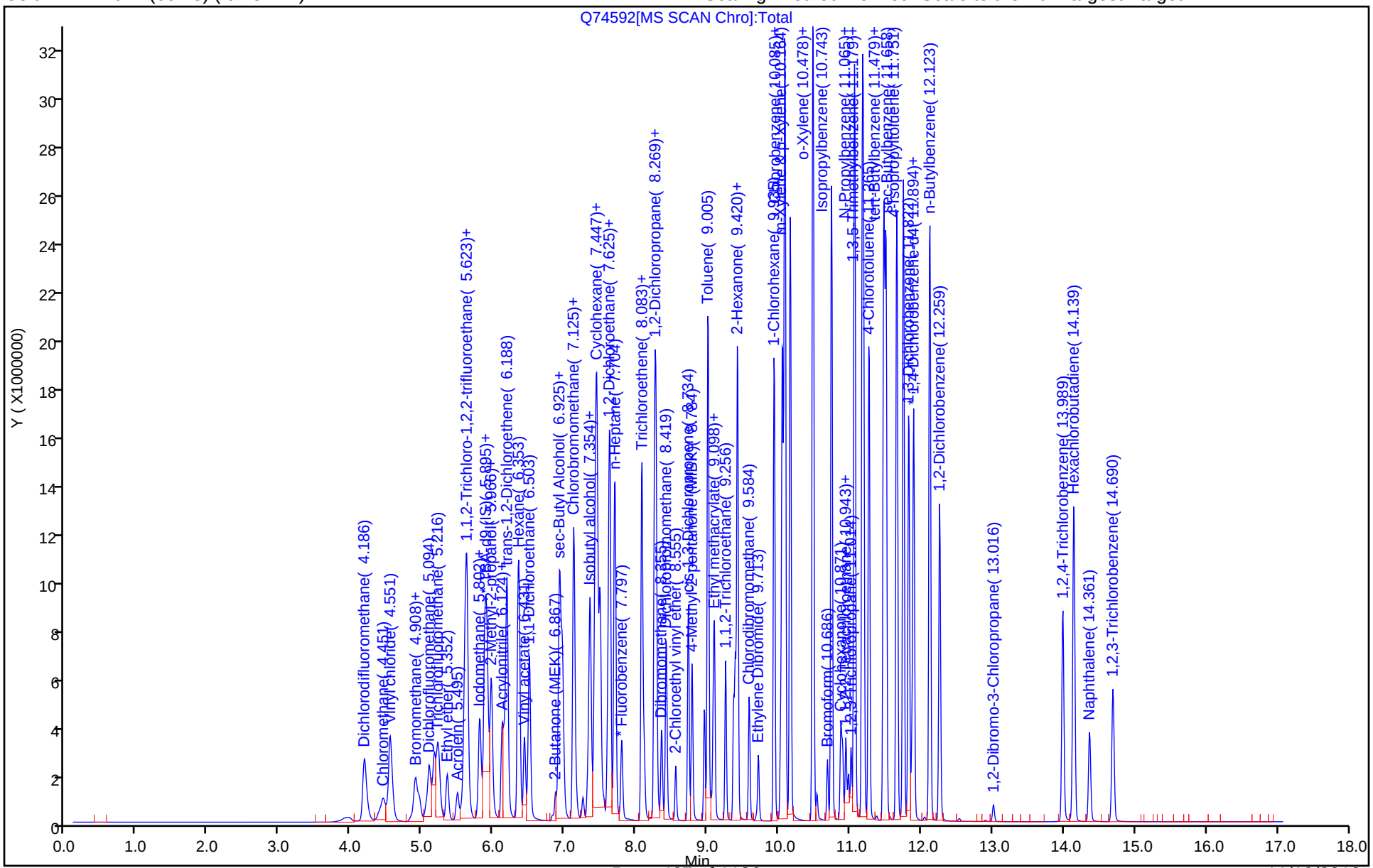
Report Date: 23-Oct-2018 09:34:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Injection Date:	22-Oct-2018 13:48:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD60			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434575/12	Q74634.D
Level 2	STD010 280-434575/13	Q74635.D
Level 3	STD020 280-434575/14	Q74636.D
Level 4	STD050 280-434575/15	Q74637.D
Level 5	ICIS 280-434575/16	Q74638.D
Level 6	STD30 280-434575/17	Q74639.D
Level 7	STD60 280-434575/18	Q74640.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.5134	0.4316 0.5045	0.4345	0.5091	0.5518	Ave		0.4908				9.7		15.0			
Chloromethane	+++++ 0.2373	0.2362 0.2310	0.2320	0.2527	0.2712	Ave		0.2434			0.1000	6.4		15.0			
Vinyl chloride	+++++ 0.2534	0.2579 0.2309	0.2608	0.2715	0.2956	Ave		0.2617				8.2		30.0			
Bromomethane	+++++ 0.2120	0.2130 0.1993	0.2203	0.2139	0.2353	Ave		0.2156				5.5		15.0			
Chloroethane	+++++ 0.1204	0.1230 0.1069	0.1235	0.1269	0.1371	Ave		0.1230				8.0		15.0			
Dichlorofluoromethane	+++++ 0.4140	0.4256 0.3907	0.4319	0.4138	0.4558	Ave		0.4220				5.1		15.0			
Trichlorofluoromethane	+++++ 0.6991	0.6653 0.6861	0.6717	0.6687	0.7437	Ave		0.6891				4.3		15.0			
Ethyl ether	0.1169 0.1336	0.1379 0.1294	0.1373	0.1299	0.1459	Ave		0.1330				6.8		15.0			
Acrolein	+++++ 0.0132	0.0127 0.0132	0.0124	0.0126	0.0151	Ave		0.0132				7.3		15.0			
Acetone	0.0249 0.0212	0.0269 0.0185	0.0254	0.0219	0.0243	Ave		0.0233				12.4		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2182 0.2703	0.2437 0.2768	0.2517	0.2430	0.2752	Ave		0.2541				8.4		15.0			
1,1-Dichloroethene	0.3107 0.3489	0.3608 0.3519	0.3565	0.3436	0.3951	Ave		0.3525				7.1		30.0			
Methyl iodide	0.4296 0.4860	0.4934 0.5183	0.4762	0.4553	0.5252	Ave		0.4834				7.0		15.0			
Methyl acetate	+++++ 0.0549	0.1206 0.0483	0.0808	0.0626	0.0605	Lin2	0.1382	0.0499							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.5501 0.5655	0.6469 0.4763	0.6284	0.6266	0.6867	Ave		0.5972				11.9		15.0			
Carbon disulfide	1.2570 1.4202	1.5076 1.3085	1.5006	1.4428	1.6222	Ave		1.4370				8.6		15.0			
t-Butyl alcohol	1.1736 1.5481	1.5813 1.5761	1.4521	1.4087	1.5167	Ave		1.4652				9.8		15.0			
Methylene Chloride	+++++ 0.2654	0.3589 0.2752	0.3166	0.2767	0.3056	Ave		0.2997				11.7		15.0			
Acrylonitrile	+++++ 0.0268	0.0213 0.0267	0.0228	0.0241	0.0285	Ave		0.0250				11.0		15.0			
Methyl tert-butyl ether	+++++ 0.3166	0.3298 0.3117	0.3299	0.3142	0.3491	Ave		0.3252				4.3		15.0			
trans-1,2-Dichloroethene	0.3447 0.3848	0.4149 0.3904	0.3962	0.3705	0.4246	Ave		0.3895				6.9		15.0			
Hexane	3.5825 3.3435	4.2095 2.7333	3.8165	3.5363	3.7045	Ave		3.5609				12.8		15.0			
Vinyl acetate	0.2008 0.2358	0.2397 0.2208	0.2418	0.2540	0.2615	Ave		0.2363				8.6		15.0			
1,1-Dichloroethane	0.6264 0.6922	0.7416 0.6410	0.7319	0.7002	0.7709	Ave		0.7006			0.1000	7.5		15.0			
2-Butanone (MEK)	+++++ 0.0382	0.0466 0.0360	0.0398	0.0372	0.0410	Ave		0.0398				9.5		15.0			
sec-Butyl Alcohol	1.0459 1.2817	0.7863 1.2019	1.1123	1.1129	1.2147	Ave		1.1080				14.6		15.0			
cis-1,2-Dichloroethene	0.3233 0.3705	0.3852 0.3722	0.3670	0.3537	0.4040	Ave		0.3680				6.9		15.0			
2,2-Dichloropropane	0.4895 0.5374	0.5700 0.5317	0.5413	0.5179	0.5793	Ave		0.5381				5.6		15.0			
Bromochloromethane	0.0843 0.1053	0.1002 0.1113	0.1012	0.0976	0.1106	Ave		0.1015				9.1		15.0			
Chloroform	0.5135 0.6316	0.6373 0.6057	0.6318	0.6078	0.6725	Ave		0.6143				8.1		30.0			
Tetrahydrofuran	+++++ 0.0210	0.0210 0.0202	0.0198	0.0189	0.0201	Ave		0.0202				4.0		15.0			
Isobutyl alcohol	0.3228 0.4354	0.3562 0.4721	0.3711	0.3650	0.4199	Ave		0.3918				13.3		15.0			
1,1,1-Trichloroethane	0.4823 0.6064	0.5788 0.6057	0.5989	0.5713	0.6383	Ave		0.5831				8.5		15.0			
Cyclohexane	0.6480 0.6822	0.7656 0.5265	0.7659	0.7180	0.7836	Ave		0.6985				12.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.5026 0.6416	0.6283 0.5325	0.6207	0.6070	0.6796	Ave		0.6018				10.4		15.0			
Carbon tetrachloride	0.4177 0.5660	0.5050 0.5826	0.5299	0.5145	0.5910	Ave		0.5295				11.2		15.0			
1,2-Dichloroethane	0.2382 0.2862	0.2881 0.2740	0.2835	0.2744	0.3038	Ave		0.2783				7.3		15.0			
Benzene	1.2495 1.4341	1.5139 1.2397	1.4629	1.4341	1.5672	Ave		1.4145				8.9		15.0			
Trichloroethene	0.3284 0.4422	0.3946 0.4203	0.3960	0.3871	0.4273	Ave		0.3994				9.3		15.0			
2-Pentanone	0.0384 0.0567	0.0466 0.0512	0.0482	0.0505	0.0566	Ave		0.0498				12.7		15.0			
1,2-Dichloropropane	0.2654 0.3099	0.3271 0.2368	0.3198	0.3133	0.3365	Ave		0.3012				12.1		30.0			
Methylcyclohexane	0.5348 0.5761	0.6460 0.4323	0.6503	0.6057	0.6720	Ave		0.5882				14.2		15.0			
1,4-Dioxane	+++++ 0.0007	0.0004 0.0008	0.0005	0.0006	0.0008	Lin2	-0.008	0.0008							0.9960		0.9900
Dibromomethane	0.0782 0.1069	0.1004 0.1086	0.1008	0.0998	0.1100	Ave		0.1007				10.7		15.0			
Bromodichloromethane	0.2697 0.3775	0.3363 0.3707	0.3454	0.3441	0.3820	Ave		0.3465				11.1		15.0			
2-Chloroethyl vinyl ether	0.0284 0.0632	0.0426 0.0646	0.0434	0.0534	0.0591	Lin2	-0.017	0.0600							0.9920		0.9900
cis-1,3-Dichloropropene	1.4035 1.9395	1.7734 1.8391	1.7732	1.8229	1.9609	Ave		1.7875				10.3		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.0825	0.0758 0.0752	0.0765	0.0795	0.0877	Ave		0.0795				6.1		15.0			
Toluene	1.3179 1.4538	1.5232 1.1555	1.4540	1.4659	1.5852	Ave		1.4222				10.1		30.0			
Ethyl methacrylate	0.4398 0.7398	0.5614 0.6806	0.6039	0.6280	0.7232	Lin2	-0.135	0.6998							0.9970		0.9900
trans-1,3-Dichloropropene	0.1813 0.2880	0.2275 0.2736	0.2383	0.2509	0.2845	Lin2	-0.049	0.2764							0.9980		0.9900
1,1,2-Trichloroethane	0.1101 0.1382	0.1268 0.1366	0.1250	0.1293	0.1389	Ave		0.1293				7.9		15.0			
2-Hexanone	0.1536 0.2556	0.2401 0.2347	0.2482	0.2216	0.2686	Lin2	-0.173	0.2556							0.9910		0.9900
1,3-Dichloropropane	1.0448 1.2627	1.2825 1.1495	1.2456	1.2370	1.3168	Ave		1.2199				7.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.1952 1.5586	1.3912 1.5354	1.3736	1.3614	1.5150	Ave		1.4186				9.0		15.0			
Dibromochloromethane	+++++ 0.8264	0.7020 0.8589	0.6863	0.7408	0.8258	Ave		0.7734				9.4		15.0			
1,2-Dibromoethane	0.4446 0.5912	0.5346 0.5937	0.5354	0.5478	0.5994	Ave		0.5495				9.9		15.0			
1-Chlorohexane	+++++ 3.0756	2.7260 2.5585	2.7492	2.8107	3.1126	Ave		2.8388				7.6		15.0			
Chlorobenzene	3.4062 4.0733	3.9638 3.6391	3.8753	3.7941	4.1379	Ave		3.8414			0.3000	6.6		15.0			
1,1,1,2-Tetrachloroethane	+++++ 1.2664	1.1026 1.1509	1.1222	1.1179	1.2780	Ave		1.1730				6.7		15.0			
Ethylbenzene	+++++ 2.6624	2.4040 2.1150	2.4210	2.4449	2.7264	Ave		2.4623				8.8		30.0			
m,p-Xylene	+++++ 3.2019	2.8336 2.7306	2.9412	2.8962	3.2151	Ave		2.9698				6.7		15.0			
o-Xylene	+++++ 2.6562	2.5443 2.0793	2.5998	2.5824	2.8800	Ave		2.5570				10.3		15.0			
Styrene	+++++ 3.8752	3.5124 2.9962	3.6324	3.6393	4.1510	Ave		3.6344				10.6		15.0			
Bromoform	+++++ 0.3290	0.2435 0.3572	0.2741	0.2738	0.3177	Ave		0.2992			0.1000	14.2		15.0			
Isopropylbenzene	+++++ 6.0520	5.4527 4.6220	5.4943	5.7585	6.2885	Ave		5.6113				10.4		15.0			
Cyclohexanone	+++++ 0.0168	0.0146 0.0154	0.0165	0.0146	0.0174	Ave		0.0159				7.5		15.0			
1,1,2,2-Tetrachloroethane	0.3636 0.4568	0.4204 0.4345	0.4309	0.4347	0.4621	Ave		0.4290			0.3000	7.5		15.0			
trans-1,4-Dichloro-2-butene	0.0425 0.0923	0.0620 0.0957	0.0656	0.0696	0.0855	Lin1	-0.038	0.0940							0.9970		0.9900
1,2,3-Trichloropropane	+++++ 0.1104	0.0961 0.1081	0.0908	0.1010	0.1095	Ave		0.1026				7.8		15.0			
N-Propylbenzene	+++++ 1.7662	1.4867 1.4579	1.4816	1.5055	1.7268	Ave		1.5708				8.8		15.0			
Bromobenzene	0.7410 1.0058	0.8572 0.9129	0.8384	0.8764	0.9673	Ave		0.8856				9.9		15.0			
1,3,5-Trimethylbenzene	+++++ 4.8747	4.3581 3.6782	4.3471	4.3352	5.0018	Ave		4.4325				10.6		15.0			
2-Chlorotoluene	1.0138 1.3413	1.1848 1.1110	1.1658	1.1531	1.3220	Ave		1.1846				9.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	1.0015 1.2672	1.1296 1.2222	1.1327	1.1454	1.2756	Ave		1.1677				8.2		15.0			
tert-Butylbenzene	+++++ 5.1237	4.5853 4.2233	4.4896	4.6909	5.2782	Ave		4.7318				8.4		15.0			
1,2,4-Trimethylbenzene	3.7957 4.6025	4.2837 3.7743	4.3114	4.2326	4.7071	Ave		4.2439				8.4		15.0			
sec-Butylbenzene	1.0178 1.3697	1.1414 1.2488	1.1751	1.1801	1.3688	Ave		1.2145				10.4		15.0			
4-Isopropyltoluene	4.4730 5.5029	5.0571 4.4337	5.0620	4.9967	5.7422	Ave		5.0382				9.6		15.0			
1,3-Dichlorobenzene	1.7618 2.0590	1.9343 1.9971	1.9051	1.8367	2.0541	Ave		1.9355				5.7		15.0			
1,4-Dichlorobenzene	1.7806 1.9935	1.9806 1.9588	1.9012	1.8436	2.0261	Ave		1.9263				4.6		15.0			
n-Butylbenzene	+++++ 5.5753	5.7487 4.3156	5.6243	5.5383	6.0982	Ave		5.4834				11.1		15.0			
1,2-Dichlorobenzene	1.3189 1.5834	1.4977 1.5716	1.4379	1.4249	1.5865	Ave		1.4887				6.8		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0532	0.0307 0.0544	0.0362	0.0446	0.0511	Lin2	-0.024	0.0526							0.9950		0.9900
1,2,4-Trichlorobenzene	0.8440 0.9462	0.8934 0.9394	0.8657	0.8862	0.9442	Ave		0.9027				4.6		15.0			
Hexachlorobutadiene	0.8232 0.9557	0.8640 0.9364	0.8314	0.8617	0.9383	Ave		0.8872				6.2		15.0			
Naphthalene	0.9284 1.0643	1.0388 1.0218	0.9414	0.9922	1.0823	Ave		1.0099				5.8		15.0			
1,2,3-Trichlorobenzene	0.6193 0.6566	0.6661 0.6285	0.6097	0.6234	0.6665	Ave		0.6386				3.7		15.0			
Dibromofluoromethane (Surr)	+++++ 0.3013	+++++ 0.3079	0.3263	0.3067	0.3129	Ave		0.3110				3.0		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2485	+++++ 0.2316	0.2862	0.2714	0.2542	Lin2	0.0977	0.2418							0.9980		0.9900
Toluene-d8 (Surr)	+++++ 5.9878	10.336 4.9393	7.1550	6.7948	6.5533	Qua	1.2603	6.9011	-0.032987						1.0000		0.9900
4-Bromofluorobenzene (Surr)	+++++ 1.3494	+++++ 1.2423	1.4316	1.3558	1.3393	Ave		1.3437				5.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434575/12	Q74634.D
Level 2	STD010 280-434575/13	Q74635.D
Level 3	STD020 280-434575/14	Q74636.D
Level 4	STD050 280-434575/15	Q74637.D
Level 5	ICIS 280-434575/16	Q74638.D
Level 6	STD30 280-434575/17	Q74639.D
Level 7	STD60 280-434575/18	Q74640.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	+++++ 2473759	74916 6211150	148200	447858	976465	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	+++++ 1143334	41002 2843886	79140	222281	479862	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	+++++ 1220751	44773 2843053	88950	238824	523128	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	+++++ 1021337	36981 2454010	75137	188188	416369	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	+++++ 580191	21356 1315782	42123	111599	242560	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	+++++ 1994545	73881 4810880	147289	364079	806508	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	+++++ 3368351	115491 8446775	229072	588277	1316075	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	11384 643651	23939 1592685	46822	114271	258173	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	+++++ 633967	22119 1626086	42389	111248	267102	+++++ 250	10.0 600	20.0	50.0	100
Acetone	FB	Ave	9707 408262	18655 910649	34706	77059	171963	2.00 100	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	21255 1302483	42307 3408099	85841	213771	486994	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethene	FB	Ave	30269 1680834	62634 4332734	121577	302244	699128	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl iodide	FB	Ave	41842 2341464	85644 6381474	162407	400593	929457	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Lin2	+++++ 528830	41882 1188619	55089	110132	214256	+++++ 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	53583 2724336	112307 5864296	214329	551263	1215158	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	122438 6842255	261709 16110470	511809	1269285	2870545	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	4724 293486	11323 725760	21933	52706	115387	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	+++++ 1278562	62297 3388635	107995	243432	540711	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Ave	+++++ 1288889	36991 3282483	77591	212249	504954	+++++ 250	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	+++++ 1525367	57246 3837164	112499	276415	617773	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	33579 1854064	72030 4806501	135143	325990	751369	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	66270 3399109	139176 7208342	253616	634628	1367030	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	39117 2272343	83224 5436551	164931	446936	925422	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	61018 3334781	128746 7891454	249623	616044	1364091	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 735847	32344 1772362	54356	130817	290457	+++++ 100	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd9	Ave	12630 728951	16891 1660375	50401	124916	277239	15.0 750	30.0 1800	60.0	150	300
cis-1,2-Dichloroethene	FB	Ave	31487 1785239	66877 4582620	125174	311163	714935	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	47676 2589317	98948 6546210	184606	455594	1025068	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	8210 507544	17396 1370746	34526	85845	195714	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	50022 3043191	110629 7457055	215486	534688	1190109	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 202474	7292 497471	13494	33192	71000	+++++ 50.0	2.00 120	4.00	10.0	20.0
Isobutyl alcohol	TBAd9	Ave	3248 206371	6377 543516	14012	34140	79867	12.5 625	25.0 1500	50.0	125	250
1,1,1-Trichloroethane	FB	Ave	46981 2921523	100485 7457182	204276	502614	1129530	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	63123 3286693	132899 6481679	261222	631647	1386683	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	48960 3091435	109078 6556551	211694	533971	1202671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	40686 2727126	87659 7173215	180728	452653	1045784	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	23205 1378971	50015 3373967	96693	241429	537559	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	121712 6909617	262798 15263336	498935	1261642	2773312	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	31990 2130461	68501 5175285	135056	340547	756068	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	14970 1092999	32383 2520133	65794	177844	400954	2.00 100	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	25847 1493242	56780 2915195	109056	275656	595416	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	52091 2775868	112151 5323034	221802	532883	1189203	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 72263	1317 187848	3620	10882	27182	+++++ 500	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	7615 515110	17421 1336640	34367	87838	194571	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	26267 1818552	58377 4563607	117786	302722	676007	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin2	2770 304569	7387 794833	14788	46946	104527	0.500 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	25963 1971779	58632 4850203	117834	327137	723623	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1589785	52650 3702764	104305	279592	620890	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	128374 7004304	264418 14226518	495894	1289609	2805095	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	8135 752144	18562 1794847	40134	112708	266875	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin2	17657 1387687	39492 3368037	81286	220722	503483	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	10728 665886	22008 1682067	42619	113789	245837	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	11364 1039355	31758 2475621	65987	159058	396455	2.00 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	19327 1283653	42402 3031618	82777	222004	485930	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	22109 1584461	45995 4049189	91277	244325	559064	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	+++++ 840110	23210 2265193	45609	132950	304752	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	8225 600993	17676 1565664	35578	98312	221195	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	+++++ 3126698	90129 6747470	182693	504409	1148606	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	63010 4141029	131053 9597229	257528	680891	1526955	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ 1287478	36453 3035257	74572	200616	471596	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	+++++ 2706685	79482 5577935	160881	438775	1006078	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
m,p-Xylene	CBNZ d5	Ave	+++++ 3255129	93685 7201336	195454	519766	1186425	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	+++++ 2700324	84119 5483606	172763	463437	1062776	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	+++++ 3939639	116127 7901706	241385	653110	1531784	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	+++++ 334505	8051 941975	18213	49139	117237	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	+++++ 7867973	253039 15802653	523325	1337353	3066259	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	+++++ 681681	19337 1624685	43864	104500	257548	+++++ 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9291 593923	19509 1485540	41043	100954	225335	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	1085 119940	2877 327163	6244	16160	41669	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ 143518	4458 369641	8647	23450	53388	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	+++++ 2296179	68992 4984639	141115	349637	841985	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	18933 1307660	39778 3121153	79854	203546	471666	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	+++++ 6337493	202246 12575799	414050	1006812	2438854	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	25903 1743811	54983 3798571	111044	267790	644609	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	25589 1647441	52420 4178706	107884	266015	621969	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	+++++ 6661233	212786 14439554	427623	1089408	2573661	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	96979 5983549	198791 12904265	410653	982976	2295157	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	26005 1780691	52967 4269751	111927	274056	667431	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 434575

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:27 Calibration End Date: 10/23/2018 15:30 Calibration ID: 34122

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	114283 7154202	234682 15158807	482141	1160442	2799869	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	45014 2676887	89766 6828089	181461	426564	1001564	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	45493 2591666	91911 6697270	181084	428165	987929	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	+++++ 7248288	266777 14755035	535704	1286221	2973488	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	33698 2058526	69501 5373346	136960	330931	773581	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 69205	1426 186006	3447	10347	24917	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	21564 1230170	41461 3211692	82455	205804	460377	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	21032 1242520	40096 3201445	79187	200132	457506	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	23721 1383637	48205 3493535	89669	230432	527751	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	15822 853612	30911 2148823	58068	144769	325002	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 1742258	+++++ 3791109	111274	269842	553707	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Lin2	+++++ 1436853	+++++ 2851433	97624	238787	449888	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Qua	+++++ 7304811	341719 13026355	475473	1219417	2418275	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 2105104	+++++ 4247367	136358	314882	653049	+++++ 30.0	+++++ 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74634.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Oct-2018 13:27:30 ALS Bottle#: 2 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:35:18 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.873	0.002	0	201259	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.796	0.002	100	2435177	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.027	0.002	99	462462	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.865	0.001	99	638745	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.253	0.002	92	198825	0.5000	3.28	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.548	7.546	0.002	0	167722	0.5000	3.16	
$ 7 Toluene-d8 (Surr)	98	8.964	8.955	0.009	100	869590	0.5000	3.27	
$ 8 4-Bromofluorobenzene (Surr	95	10.901	10.892	0.009	82	235007	0.5000	3.42	
23 Dichlorodifluoromethane	85	4.194	4.193	0.001	99	38957	0.5000	0.4074	
26 Chloromethane	50	4.437	4.443	-0.006	92	15129	0.5000	0.3191	
27 Vinyl chloride	62	4.552	4.565	-0.013	93	21770	0.5000	0.4270	
29 Bromomethane	94	4.909	4.901	0.008	90	19490	0.5000	0.4639	
30 Chloroethane	64	4.952	4.958	-0.006	97	10345	0.5000	0.4319	
31 Dichlorofluoromethane	67	5.102	5.094	0.008	95	47264	0.5000	0.5750	
32 Trichlorofluoromethane	101	5.174	5.172	0.002	96	56427	0.5000	0.4203	
35 Ethyl ether	59	5.346	5.351	-0.005	94	11384	0.5000	0.4395	
39 Acrolein	56	5.496	5.501	-0.005	42	3337	5.00	1.30	
41 Acetone	43	5.610	5.594	0.016	37	9707	2.00	2.14	
40 1,1,2-Trichloro-1,2,2-trif	151	5.603	5.601	0.002	95	21255	0.5000	0.4293	
43 1,1-Dichloroethene	96	5.624	5.623	0.001	95	30269	0.5000	0.4408	
44 Iodomethane	142	5.810	5.802	0.008	98	41842	0.5000	0.4443	
45 Methyl acetate	43	5.832	5.823	0.009	97	26490	1.00	-0.0436	
47 3-Chloro-1-propene	41	5.875	5.873	0.002	83	53583	0.5000	0.4605	
48 Carbon disulfide	76	5.903	5.902	0.001	99	122438	0.5000	0.4374	
49 2-Methyl-2-propanol	59	5.939	5.937	0.002	29	4724	5.00	4.00	
50 Methylene Chloride	84	5.968	5.966	0.002	97	35361	0.5000	0.6056	
52 Acrylonitrile	53	6.168	6.123	0.045	28	4641	5.00	0.9521	
51 Methyl tert-butyl ether	73	6.161	6.152	0.009	98	27249	0.5000	0.4301	
53 trans-1,2-Dichloroethene	96	6.189	6.188	0.001	94	33579	0.5000	0.4426	
54 Hexane	57	6.354	6.352	0.002	93	66270	0.5000	0.5030	
55 Vinyl acetate	43	6.447	6.438	0.009	97	39117	1.00	0.8496	
57 1,1-Dichloroethane	63	6.504	6.502	0.002	96	61018	0.5000	0.4471	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.876	6.874	0.002	95	12854	2.00	1.66	
62 sec-Butyl Alcohol	45	6.833	6.917	-0.084	26	12630	15.0	14.2	
63 cis-1,2-Dichloroethene	96	6.926	6.924	0.002	85	31487	0.5000	0.4392	
64 2,2-Dichloropropane	77	6.961	6.960	0.001	88	47676	0.5000	0.4548	
67 Chlorobromomethane	128	7.119	7.117	0.002	63	8210	0.5000	0.4152	
68 Chloroform	83	7.126	7.124	0.002	93	50022	0.5000	0.4180	
69 Tetrahydrofuran	42		7.160				ND	ND	
70 Isobutyl alcohol	41	7.355	7.325	0.030	29	3248	12.5	10.3	
71 1,1,1-Trichloroethane	97	7.355	7.353	0.002	98	46981	0.5000	0.4136	
72 Cyclohexane	56	7.426	7.425	0.001	93	63123	0.5000	0.4639	
73 1,1-Dichloropropene	75	7.448	7.446	0.002	96	48960	0.5000	0.4176	
74 Carbon tetrachloride	117	7.491	7.489	0.002	96	40686	0.5000	0.3944	
76 1,2-Dichloroethane	62	7.605	7.603	0.002	96	23205	0.5000	0.4280	
77 Benzene	78	7.634	7.625	0.009	96	121712	0.5000	0.4417	
14 n-Heptane	43	7.705	7.696	0.009	93	61628	0.5000	0.4322	
79 Trichloroethene	95	8.084	8.075	0.009	96	31990	0.5000	0.4111	
80 2-Pentanone	43	8.134	8.118	0.016	96	14970	2.00	1.54	
83 1,2-Dichloropropane	63	8.263	8.254	0.009	94	25847	0.5000	0.4404	
82 Methylcyclohexane	55	8.270	8.268	0.002	95	52091	0.5000	0.4546	
84 1,4-Dioxane	88		8.311				ND	ND	
85 Dibromomethane	93	8.356	8.354	0.002	85	7615	0.5000	0.3883	
86 Dichlorobromomethane	83	8.420	8.419	0.001	98	26267	0.5000	0.3891	
87 2-Chloroethyl vinyl ether	63	8.570	8.554	0.016	78	2770	0.5000	0.5203	
89 cis-1,3-Dichloropropene	75	8.735	8.733	0.002	94	25963	0.5000	0.3926	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.783	0.009	0	22813	2.00	1.47	
91 Toluene	91	9.014	9.005	0.009	98	128374	0.5000	0.4633	
92 Ethyl methacrylate	69	9.092	9.083	0.009	40	8135	0.5000	0.5075	
93 trans-1,3-Dichloropropene	75	9.107	9.098	0.009	96	17657	0.5000	0.5067	
94 1,1,2-Trichloroethane	97	9.257	9.255	0.002	91	10728	0.5000	0.4260	
95 2-Hexanone	43	9.393	9.369	0.024	45	11364	2.00	1.88	
96 1,3-Dichloropropane	76	9.400	9.391	0.009	94	19327	0.5000	0.4282	
97 Tetrachloroethene	164	9.428	9.420	0.008	90	22109	0.5000	0.4213	
98 Chlorodibromomethane	129	9.593	9.584	0.009	86	10382	0.5000	0.3628	
100 Ethylene Dibromide	107	9.721	9.713	0.008	95	8225	0.5000	0.4046	
101 1-Chlorohexane	91	9.936	9.934	0.002	92	40851	0.5000	0.3890	
102 Chlorobenzene	112	10.050	10.049	0.001	96	63010	0.5000	0.4434	
103 Ethylbenzene	106	10.093	10.085	0.009	99	38671	0.5000	0.4245	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.085	0.002	81	16707	0.5000	0.3850	
105 m-Xylene & p-Xylene	106	10.165	10.163	0.002	0	45885	0.5000	0.4176	
107 o-Xylene	106	10.486	10.478	0.008	91	40827	0.5000	0.4316	
106 Styrene	104	10.486	10.478	0.008	79	51620	0.5000	0.3839	
108 Bromoform	173	10.687	10.685	0.002	91	3637	0.5000	0.3285	
109 Isopropylbenzene	105	10.744	10.742	0.002	97	121940	0.5000	0.4253	
111 Cyclohexanone	55	10.887	10.871	0.016	97	8726	20.0	14.9	
112 1,1,2,2-Tetrachloroethane	83	10.944	10.943	0.001	87	9291	0.5000	0.4238	
113 trans-1,4-Dichloro-2-buten	53	10.973	10.978	-0.005	1	1085	0.5000	0.6257	
114 1,2,3-Trichloropropane	110	11.023	11.014	0.009	84	1785	0.5000	0.3403	
115 N-Propylbenzene	120	11.066	11.064	0.002	99	33376	0.5000	0.4158	
116 Bromobenzene	156	11.073	11.064	0.009	92	18933	0.5000	0.4184	
117 1,3,5-Trimethylbenzene	105	11.173	11.171	0.002	94	94944	0.5000	0.4192	
118 2-Chlorotoluene	126	11.194	11.186	0.008	94	25903	0.5000	0.4279	
119 4-Chlorotoluene	126	11.266	11.264	0.002	99	25589	0.5000	0.4288	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.473	11.472	0.001	91	99217	0.5000	0.4103	
121 1,2,4-Trimethylbenzene	105	11.502	11.500	0.002	96	96979	0.5000	0.4472	
122 sec-Butylbenzene	134	11.652	11.650	0.002	95	26005	0.5000	0.4190	
123 4-Isopropyltoluene	119	11.752	11.743	0.009	97	114283	0.5000	0.4439	
124 1,3-Dichlorobenzene	146	11.824	11.822	0.002	96	45014	0.5000	0.4551	
126 1,4-Dichlorobenzene	146	11.895	11.893	0.002	93	45493	0.5000	0.4622	
127 n-Butylbenzene	91	12.117	12.115	0.002	99	124863	0.5000	0.4456	
128 1,2-Dichlorobenzene	146	12.260	12.258	0.002	94	33698	0.5000	0.4430	
129 1,2-Dibromo-3-Chloropropan	157		13.009				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.997	13.981	0.016	91	21564	0.5000	0.4675	
131 Hexachlorobutadiene	225	14.140	14.139	0.001	94	21032	0.5000	0.4639	
132 Naphthalene	128	14.362	14.360	0.002	97	23721	0.5000	0.4597	
133 1,2,3-Trichlorobenzene	180	14.691	14.682	0.009	92	15822	0.5000	0.4849	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.8818	
S 139 Xylenes, Total	106				0		1.00	0.8492	
S 134 Trihalomethanes, Total	1				0		2.00	1.50	
S 135 Xylenes, Total (URS)	1				0		1.00	0.8492	
S 137 1,3-Dichloropropene, Total	1				0		1.00	0.8993	
S 136 Total BTEX	1				0			2.18	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.8818	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.20	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.04	Units: uL

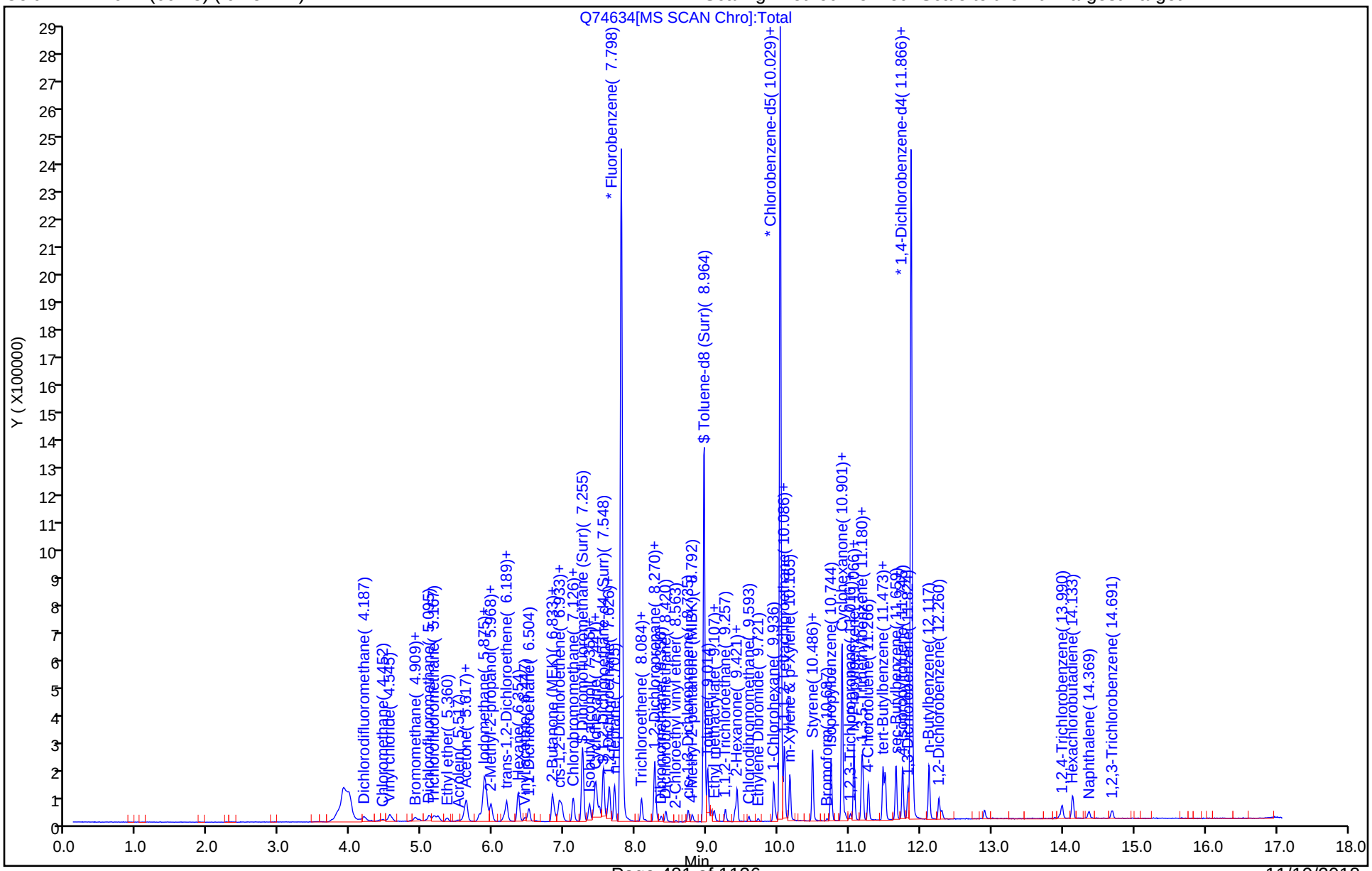
Report Date: 24-Oct-2018 10:35:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74634.D

Injection Date:	23-Oct-2018 13:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74635.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Oct-2018 13:48:30 ALS Bottle#: 3 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:35:30 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.873	0.001	0	179015	250.0	250.0	
* 1 Fluorobenzene	96	7.797	7.796	0.001	100	2169943	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.027	0.001	99	413278	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.865	0.001	99	580080	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.254	7.253	0.001	92	79909	1.00	1.48	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.546	0.001	0	68097	1.00	1.22	
$ 7 Toluene-d8 (Surr)	98	8.963	8.955	0.008	100	341719	1.00	1.32	
$ 8 4-Bromofluorobenzene (Surr	95	10.900	10.892	0.008	82	92504	1.00	1.48	
23 Dichlorodifluoromethane	85	4.187	4.193	-0.007	99	74916	1.00	0.8793	
26 Chloromethane	50	4.437	4.443	-0.006	99	41002	1.00	0.9704	
27 Vinyl chloride	62	4.573	4.565	0.008	98	44773	1.00	0.9856	
29 Bromomethane	94	4.894	4.901	-0.007	92	36981	1.00	0.9879	
30 Chloroethane	64	4.959	4.958	0.001	97	21356	1.00	1.00	
31 Dichlorofluoromethane	67	5.095	5.094	0.001	96	73881	1.00	1.01	
32 Trichlorofluoromethane	101	5.216	5.172	0.044	98	115491	1.00	0.9655	
35 Ethyl ether	59	5.359	5.351	0.008	93	23939	1.00	1.04	
39 Acrolein	56	5.509	5.501	0.008	97	22119	10.0	9.64	
41 Acetone	43	5.602	5.594	0.008	39	18655	4.00	4.61	
40 1,1,2-Trichloro-1,2,2-trif	151	5.602	5.601	0.001	97	42307	1.00	0.9590	
43 1,1-Dichloroethene	96	5.624	5.623	0.001	95	62634	1.00	1.02	
44 Iodomethane	142	5.802	5.802	0.000	99	85644	1.00	1.02	
45 Methyl acetate	43	5.831	5.823	0.008	96	41882	2.00	2.07	
47 3-Chloro-1-propene	41	5.881	5.873	0.008	84	112307	1.00	1.08	
48 Carbon disulfide	76	5.903	5.902	0.001	99	261709	1.00	1.05	
49 2-Methyl-2-propanol	59	5.938	5.937	0.001	91	11323	10.0	10.8	
50 Methylene Chloride	84	5.967	5.966	0.001	97	62297	1.00	1.20	
52 Acrylonitrile	53	6.153	6.123	0.030	47	36991	10.0	8.52	
51 Methyl tert-butyl ether	73	6.153	6.152	0.001	97	57246	1.00	1.01	
53 trans-1,2-Dichloroethene	96	6.189	6.188	0.001	95	72030	1.00	1.07	
54 Hexane	57	6.353	6.352	0.001	94	139176	1.00	1.18	
55 Vinyl acetate	43	6.439	6.438	0.001	97	83224	2.00	2.03	
57 1,1-Dichloroethane	63	6.496	6.502	-0.006	96	128746	1.00	1.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.882	6.874	0.008	99	32344	4.00	4.68	
62 sec-Butyl Alcohol	45	6.839	6.917	-0.078	26	16891	30.0	21.3	
63 cis-1,2-Dichloroethene	96	6.925	6.924	0.001	86	66877	1.00	1.05	
64 2,2-Dichloropropane	77	6.961	6.960	0.001	88	98948	1.00	1.06	
67 Chlorobromomethane	128	7.118	7.117	0.001	85	17396	1.00	0.9872	
68 Chloroform	83	7.125	7.124	0.001	93	110629	1.00	1.04	
69 Tetrahydrofuran	42	7.168	7.160	0.008	94	7292	2.00	2.08	
70 Isobutyl alcohol	41	7.354	7.325	0.029	30	6377	25.0	22.7	
71 1,1,1-Trichloroethane	97	7.354	7.353	0.001	98	100485	1.00	0.99	
72 Cyclohexane	56	7.433	7.425	0.008	93	132899	1.00	1.10	
73 1,1-Dichloropropene	75	7.447	7.446	0.001	96	109078	1.00	1.04	
74 Carbon tetrachloride	117	7.490	7.489	0.001	94	87659	1.00	0.9536	
76 1,2-Dichloroethane	62	7.604	7.603	0.001	97	50015	1.00	1.04	
77 Benzene	78	7.633	7.625	0.008	96	262798	1.00	1.07	
14 n-Heptane	43	7.704	7.696	0.008	94	135878	1.00	1.07	
79 Trichloroethene	95	8.083	8.075	0.008	94	68501	1.00	0.9880	
80 2-Pentanone	43	8.126	8.118	0.008	98	32383	4.00	3.75	
83 1,2-Dichloropropane	63	8.262	8.254	0.008	95	56780	1.00	1.09	
82 Methylcyclohexane	55	8.269	8.268	0.001	95	112151	1.00	1.10	
84 1,4-Dioxane	88	8.326	8.311	0.015	78	1317	20.0	20.5	
85 Dibromomethane	93	8.362	8.354	0.008	90	17421	1.00	1.00	
86 Dichlorobromomethane	83	8.419	8.419	0.000	98	58377	1.00	0.9705	
87 2-Chloroethyl vinyl ether	63	8.562	8.554	0.008	86	7387	1.00	0.99	
89 cis-1,3-Dichloropropene	75	8.734	8.733	0.001	93	58632	1.00	0.99	
90 4-Methyl-2-pentanone (MIBK	43	8.791	8.783	0.008	0	52650	4.00	3.81	
91 Toluene	91	9.013	9.005	0.008	97	264418	1.00	1.07	
92 Ethyl methacrylate	69	9.092	9.083	0.009	90	18562	1.00	1.00	
93 trans-1,3-Dichloropropene	75	9.106	9.098	0.008	98	39492	1.00	1.00	
94 1,1,2-Trichloroethane	97	9.263	9.255	0.008	93	22008	1.00	0.9806	
95 2-Hexanone	43	9.385	9.369	0.016	97	31758	4.00	4.43	
96 1,3-Dichloropropane	76	9.399	9.391	0.008	95	42402	1.00	1.05	
97 Tetrachloroethene	164	9.428	9.420	0.008	91	45995	1.00	0.9807	
98 Chlorodibromomethane	129	9.592	9.584	0.008	89	23210	1.00	0.9077	
100 Ethylene Dibromide	107	9.721	9.713	0.008	96	17676	1.00	0.9729	
101 1-Chlorohexane	91	9.935	9.934	0.001	94	90129	1.00	0.9603	
102 Chlorobenzene	112	10.057	10.049	0.008	96	131053	1.00	1.03	
103 Ethylbenzene	106	10.093	10.085	0.009	99	79482	1.00	0.9763	
104 1,1,1,2-Tetrachloroethane	131	10.085	10.085	0.001	87	36453	1.00	0.9400	
105 m-Xylene & p-Xylene	106	10.164	10.163	0.001	0	93685	1.00	0.9541	
107 o-Xylene	106	10.486	10.478	0.008	90	84119	1.00	1.00	
106 Styrene	104	10.486	10.478	0.008	83	116127	1.00	0.9664	
108 Bromoform	173	10.686	10.685	0.001	91	8051	1.00	0.8138	
109 Isopropylbenzene	105	10.743	10.742	0.001	97	253039	1.00	0.9717	
111 Cyclohexanone	55	10.886	10.871	0.015	97	19337	40.0	36.8	
112 1,1,2,2-Tetrachloroethane	83	10.943	10.943	0.000	93	19509	1.00	0.9799	
113 trans-1,4-Dichloro-2-buten	53	10.986	10.978	0.008	61	2877	1.00	1.06	
114 1,2,3-Trichloropropane	110	11.022	11.014	0.008	84	4458	1.00	0.9360	
115 N-Propylbenzene	120	11.065	11.064	0.001	99	68992	1.00	0.9465	
116 Bromobenzene	156	11.072	11.064	0.008	94	39778	1.00	0.9679	
117 1,3,5-Trimethylbenzene	105	11.172	11.171	0.001	94	202246	1.00	0.9832	
118 2-Chlorotoluene	126	11.194	11.186	0.008	96	54983	1.00	1.00	
119 4-Chlorotoluene	126	11.272	11.264	0.008	99	52420	1.00	0.9673	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.473	11.472	0.000	92	212786	1.00	0.9690	
121 1,2,4-Trimethylbenzene	105	11.508	11.500	0.008	97	198791	1.00	1.01	
122 sec-Butylbenzene	134	11.658	11.650	0.008	96	52967	1.00	0.9398	
123 4-Isopropyltoluene	119	11.751	11.743	0.008	97	234682	1.00	1.00	
124 1,3-Dichlorobenzene	146	11.823	11.822	0.001	95	89766	1.00	1.00	
126 1,4-Dichlorobenzene	146	11.894	11.893	0.001	92	91911	1.00	1.03	
127 n-Butylbenzene	91	12.116	12.115	0.001	98	266777	1.00	1.05	
128 1,2-Dichlorobenzene	146	12.259	12.258	0.001	93	69501	1.00	1.01	
129 1,2-Dibromo-3-Chloropropan	157	13.024	13.009	0.015	71	1426	1.00	1.05	
130 1,2,4-Trichlorobenzene	180	13.989	13.981	0.008	93	41461	1.00	0.9897	
131 Hexachlorobutadiene	225	14.132	14.139	-0.007	95	40096	1.00	0.9738	
132 Naphthalene	128	14.361	14.360	0.001	65	48205	1.00	1.03	
133 1,2,3-Trichlorobenzene	180	14.690	14.682	0.008	94	30911	1.00	1.04	
S 140 1,2-Dichloroethene, Total	96				0		2.00	2.11	
S 136 Total BTEX	1				0			5.07	
S 139 Xylenes, Total	106				0		2.00	1.95	
S 134 Trihalomethanes, Total	1				0		4.00	3.73	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.99	
S 138 1,2-Dichloroethene, Total	1				0		2.00	2.11	
S 135 Xylenes, Total (URS)	1				0		2.00	1.95	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.40	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.08	Units: uL

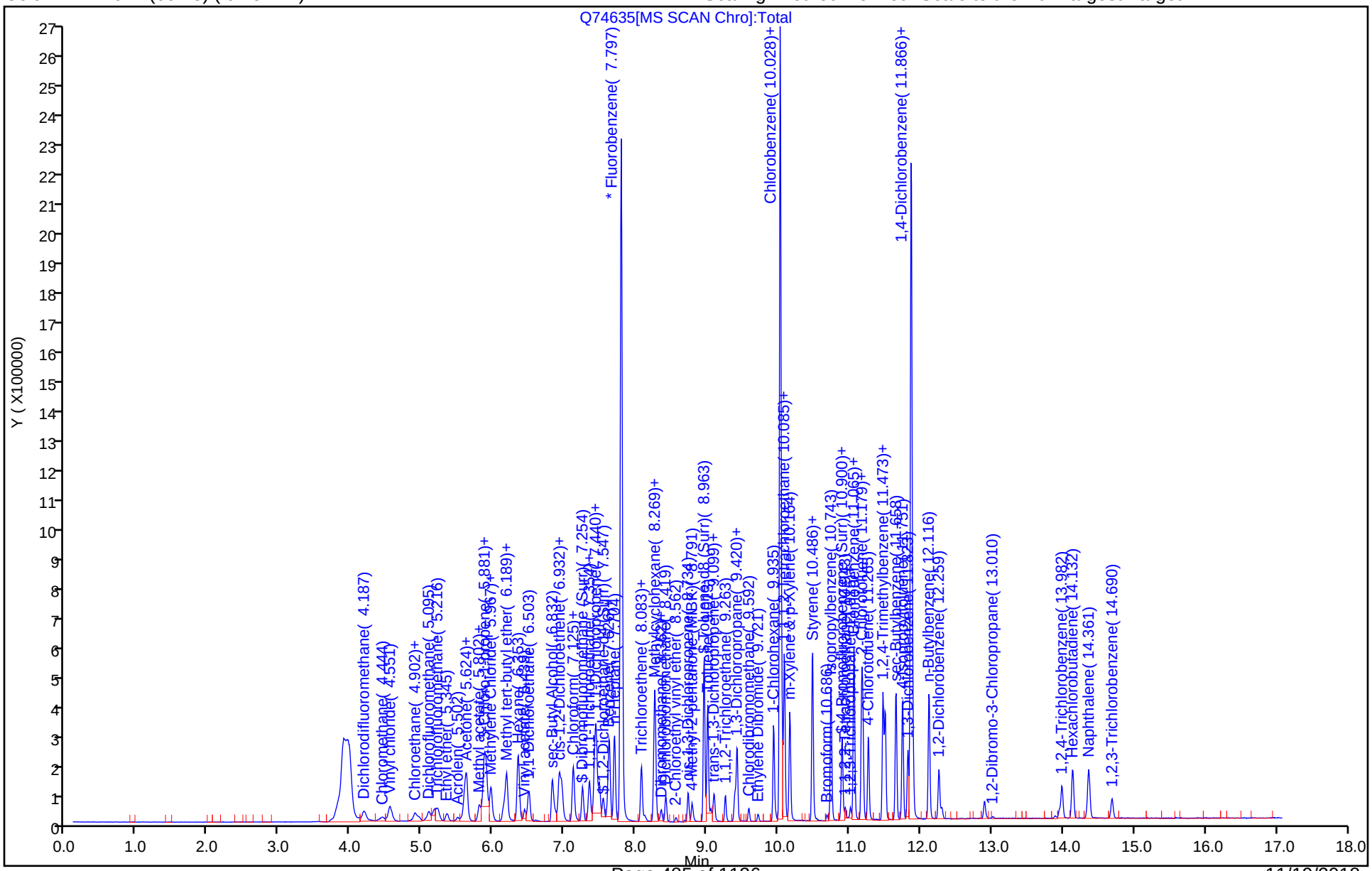
Report Date: 24-Oct-2018 10:35:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74635.D

Injection Date:	23-Oct-2018 13:48:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74636.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Oct-2018 14:08:30 ALS Bottle#: 4 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:35:43 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.873	0.001	0	188808	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.796	0.002	100	2131614	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.027	0.001	99	415332	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.865	0.001	98	595300	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.254	7.253	0.001	92	111274	2.00	2.10	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.546	0.001	0	97624	2.00	1.96	
$ 7 Toluene-d8 (Surr)	98	8.963	8.955	0.008	100	475473	2.00	1.91	
$ 8 4-Bromofluorobenzene (Surr	95	10.901	10.892	0.009	81	136358	2.00	2.13	
23 Dichlorodifluoromethane	85	4.194	4.193	0.001	99	148200	2.00	1.77	
26 Chloromethane	50	4.451	4.443	0.008	98	79140	2.00	1.91	
27 Vinyl chloride	62	4.573	4.565	0.008	98	88950	2.00	1.99	
29 Bromomethane	94	4.909	4.901	0.008	92	75137	2.00	2.04	
30 Chloroethane	64	4.966	4.958	0.008	99	42123	2.00	2.01	
31 Dichlorofluoromethane	67	5.102	5.094	0.008	96	147289	2.00	2.05	
32 Trichlorofluoromethane	101	5.209	5.172	0.037	98	229072	2.00	1.95	
35 Ethyl ether	59	5.359	5.351	0.008	94	46822	2.00	2.06	
39 Acrolein	56	5.502	5.501	0.001	97	42389	20.0	18.8	
41 Acetone	43	5.610	5.594	0.016	39	34706	8.00	8.74	
40 1,1,2-Trichloro-1,2,2-trif	151	5.602	5.601	0.001	97	85841	2.00	1.98	
43 1,1-Dichloroethene	96	5.631	5.623	0.008	95	121577	2.00	2.02	
44 Iodomethane	142	5.810	5.802	0.008	98	162407	2.00	1.97	
45 Methyl acetate	43	5.831	5.823	0.008	97	55089	4.00	3.71	
47 3-Chloro-1-propene	41	5.881	5.873	0.008	83	214329	2.00	2.10	
48 Carbon disulfide	76	5.910	5.902	0.008	99	511809	2.00	2.09	
49 2-Methyl-2-propanol	59	5.931	5.937	-0.006	92	21933	20.0	19.8	
50 Methylene Chloride	84	5.974	5.966	0.008	98	107995	2.00	2.11	
52 Acrylonitrile	53	6.139	6.123	0.016	69	77591	20.0	18.2	
51 Methyl tert-butyl ether	73	6.160	6.152	0.008	97	112499	2.00	2.03	
53 trans-1,2-Dichloroethene	96	6.189	6.188	0.001	95	135143	2.00	2.03	
54 Hexane	57	6.353	6.352	0.001	93	253616	2.00	2.14	
55 Vinyl acetate	43	6.439	6.438	0.001	97	164931	4.00	4.09	
57 1,1-Dichloroethane	63	6.503	6.502	0.001	96	249623	2.00	2.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.882	6.874	0.008	100	54356	8.00	8.01	
62 sec-Butyl Alcohol	45	6.925	6.917	0.008	96	50401	60.0	60.2	
63 cis-1,2-Dichloroethene	96	6.925	6.924	0.001	85	125174	2.00	1.99	
64 2,2-Dichloropropane	77	6.961	6.960	0.001	91	184606	2.00	2.01	
67 Chlorobromomethane	128	7.125	7.117	0.008	88	34526	2.00	1.99	
68 Chloroform	83	7.133	7.124	0.009	93	215486	2.00	2.06	
69 Tetrahydrofuran	42	7.175	7.160	0.015	97	13494	4.00	3.93	
70 Isobutyl alcohol	41	7.340	7.325	0.015	93	14012	50.0	47.4	
71 1,1,1-Trichloroethane	97	7.354	7.353	0.001	98	204276	2.00	2.05	
72 Cyclohexane	56	7.426	7.425	0.001	93	261222	2.00	2.19	
73 1,1-Dichloropropene	75	7.454	7.446	0.008	96	211694	2.00	2.06	
74 Carbon tetrachloride	117	7.490	7.489	0.001	97	180728	2.00	2.00	
76 1,2-Dichloroethane	62	7.604	7.603	0.001	97	96693	2.00	2.04	
77 Benzene	78	7.633	7.625	0.008	96	498935	2.00	2.07	
14 n-Heptane	43	7.705	7.696	0.009	94	264024	2.00	2.12	
79 Trichloroethene	95	8.084	8.075	0.009	94	135056	2.00	1.98	
80 2-Pentanone	43	8.126	8.118	0.008	98	65794	8.00	7.75	
83 1,2-Dichloropropane	63	8.262	8.254	0.008	96	109056	2.00	2.12	
82 Methylcyclohexane	55	8.269	8.268	0.001	95	221802	2.00	2.21	
84 1,4-Dioxane	88	8.320	8.311	0.009	85	3620	40.0	38.5	
85 Dibromomethane	93	8.362	8.354	0.008	88	34367	2.00	2.00	
86 Dichlorobromomethane	83	8.427	8.419	0.008	99	117786	2.00	1.99	
87 2-Chloroethyl vinyl ether	63	8.563	8.554	0.009	91	14788	2.00	1.73	
89 cis-1,3-Dichloropropene	75	8.741	8.733	0.008	94	117834	2.00	1.98	
90 4-Methyl-2-pentanone (MIBK	43	8.791	8.783	0.008	0	104305	8.00	7.69	
91 Toluene	91	9.013	9.005	0.008	97	495894	2.00	2.04	
92 Ethyl methacrylate	69	9.092	9.083	0.009	89	40134	2.00	1.92	
93 trans-1,3-Dichloropropene	75	9.106	9.098	0.008	98	81286	2.00	1.90	
94 1,1,2-Trichloroethane	97	9.263	9.255	0.008	92	42619	2.00	1.93	
95 2-Hexanone	43	9.385	9.369	0.016	99	65987	8.00	8.45	
96 1,3-Dichloropropane	76	9.399	9.391	0.008	94	82777	2.00	2.04	
97 Tetrachloroethene	164	9.428	9.420	0.008	90	91277	2.00	1.94	
98 Chlorodibromomethane	129	9.592	9.584	0.008	90	45609	2.00	1.77	
100 Ethylene Dibromide	107	9.721	9.713	0.008	99	35578	2.00	1.95	
101 1-Chlorohexane	91	9.935	9.934	0.001	96	182693	2.00	1.94	
102 Chlorobenzene	112	10.057	10.049	0.008	96	257528	2.00	2.02	
103 Ethylbenzene	106	10.093	10.085	0.009	99	160881	2.00	1.97	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.085	0.002	94	74572	2.00	1.91	
105 m-Xylene & p-Xylene	106	10.164	10.163	0.001	0	195454	2.00	1.98	
107 o-Xylene	106	10.486	10.478	0.008	90	172763	2.00	2.03	
106 Styrene	104	10.486	10.478	0.008	82	241385	2.00	2.00	
108 Bromoform	173	10.686	10.685	0.001	93	18213	2.00	1.83	
109 Isopropylbenzene	105	10.743	10.742	0.001	97	523325	2.00	1.96	
111 Cyclohexanone	55	10.879	10.871	0.008	96	43864	80.0	83.1	
112 1,1,2,2-Tetrachloroethane	83	10.944	10.943	0.001	93	41043	2.00	2.01	
113 trans-1,4-Dichloro-2-buten	53	10.979	10.978	0.001	80	6244	2.00	1.79	
114 1,2,3-Trichloropropane	110	11.022	11.014	0.008	85	8647	2.00	1.77	
115 N-Propylbenzene	120	11.065	11.064	0.001	99	141115	2.00	1.89	
116 Bromobenzene	156	11.072	11.064	0.008	95	79854	2.00	1.89	
117 1,3,5-Trimethylbenzene	105	11.172	11.171	0.001	94	414050	2.00	1.96	
118 2-Chlorotoluene	126	11.187	11.186	0.001	95	111044	2.00	1.97	
119 4-Chlorotoluene	126	11.265	11.264	0.001	99	107884	2.00	1.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.473	11.472	0.001	92	427623	2.00	1.90	
121 1,2,4-Trimethylbenzene	105	11.501	11.500	0.001	98	410653	2.00	2.03	
122 sec-Butylbenzene	134	11.659	11.650	0.009	96	111927	2.00	1.94	
123 4-Isopropyltoluene	119	11.752	11.743	0.009	97	482141	2.00	2.01	
124 1,3-Dichlorobenzene	146	11.823	11.822	0.001	96	181461	2.00	1.97	
126 1,4-Dichlorobenzene	146	11.895	11.893	0.002	95	181084	2.00	1.97	
127 n-Butylbenzene	91	12.116	12.115	0.001	99	535704	2.00	2.05	
128 1,2-Dichlorobenzene	146	12.259	12.258	0.001	94	136960	2.00	1.93	
129 1,2-Dibromo-3-Chloropropan	157	13.017	13.009	0.008	72	3447	2.00	1.84	
130 1,2,4-Trichlorobenzene	180	13.990	13.981	0.009	90	82455	2.00	1.92	
131 Hexachlorobutadiene	225	14.140	14.139	0.001	95	79187	2.00	1.87	
132 Naphthalene	128	14.361	14.360	0.001	98	89669	2.00	1.86	
133 1,2,3-Trichlorobenzene	180	14.683	14.682	0.001	92	58068	2.00	1.91	
S 140 1,2-Dichloroethene, Total	96				0		4.00	4.03	
S 136 Total BTEX	1				0			10.1	
S 139 Xylenes, Total	106				0		4.00	4.01	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.89	
S 135 Xylenes, Total (URS)	1				0		4.00	4.01	
S 138 1,2-Dichloroethene, Total	1				0		4.00	4.03	
S 134 Trihalomethanes, Total	1				0		8.00	7.66	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.80	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.16	Units: uL

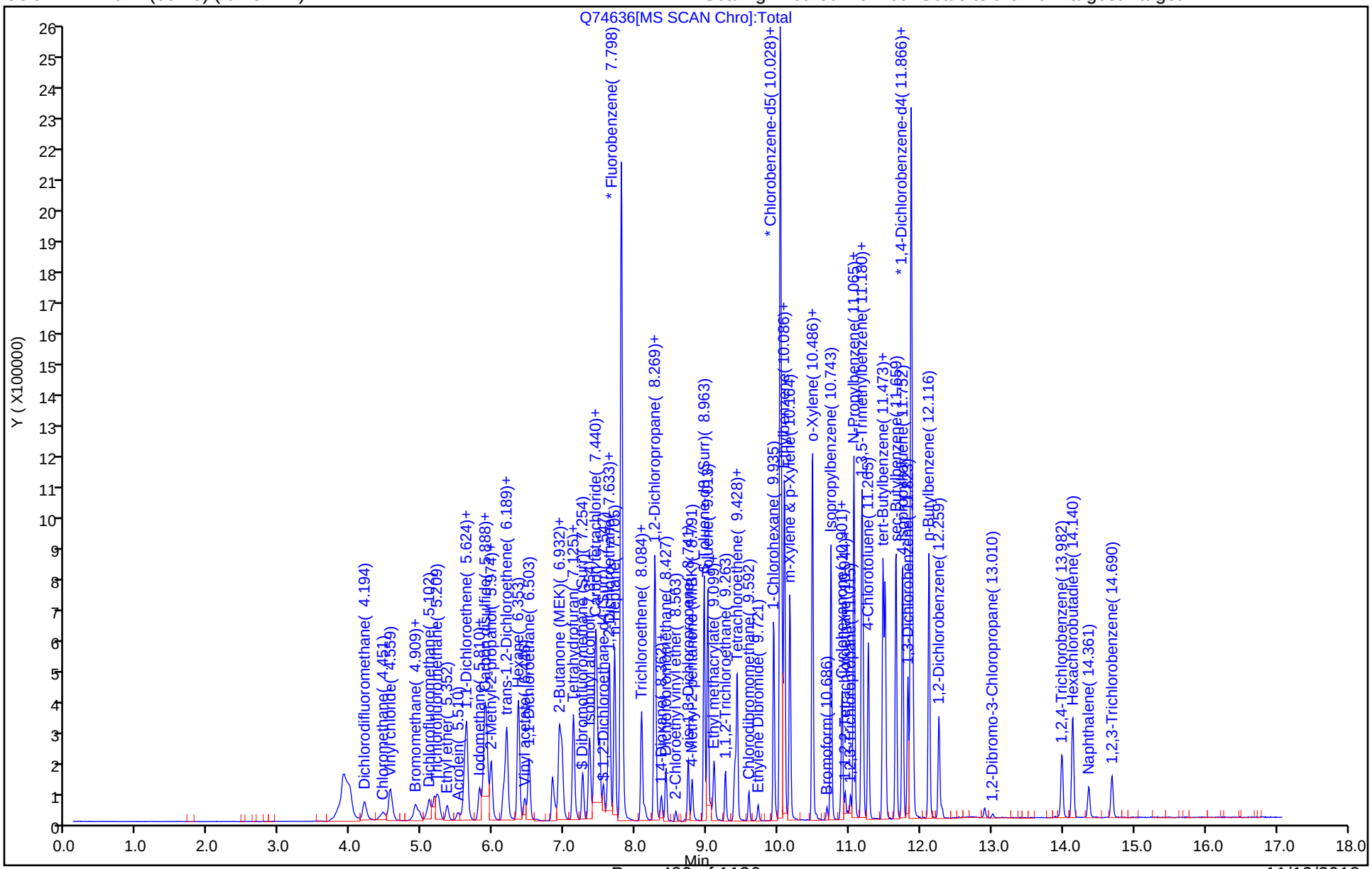
Report Date: 24-Oct-2018 10:35:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74636.D

Injection Date:	23-Oct-2018 14:08:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74637.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Oct-2018 14:29:30 ALS Bottle#: 5 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:35:54 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.873	0.001	0	187072	250.0	250.0	
* 1 Fluorobenzene	96	7.797	7.796	0.001	100	2199397	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.027	0.001	99	448657	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.865	0.001	98	580602	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.254	7.253	0.001	92	269842	5.00	4.93	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.546	0.001	0	238787	5.00	5.21	
$ 7 Toluene-d8 (Surr)	98	8.956	8.955	0.001	100	1219417	5.00	4.85	
$ 8 4-Bromofluorobenzene (Surr	95	10.893	10.892	0.001	83	314882	5.00	5.05	
23 Dichlorodifluoromethane	85	4.186	4.193	-0.007	100	447858	5.00	5.19	
26 Chloromethane	50	4.444	4.443	0.001	98	222281	5.00	5.19	
27 Vinyl chloride	62	4.565	4.565	0.000	97	238824	5.00	5.19	
29 Bromomethane	94	4.901	4.901	0.000	91	188188	5.00	4.96	
30 Chloroethane	64	4.959	4.958	0.001	99	111599	5.00	5.16	
31 Dichlorofluoromethane	67	5.094	5.094	0.000	97	364079	5.00	4.90	
32 Trichlorofluoromethane	101	5.173	5.172	0.001	98	588277	5.00	4.85	
35 Ethyl ether	59	5.352	5.351	0.001	95	114271	5.00	4.88	
39 Acrolein	56	5.502	5.501	0.001	99	111248	50.0	47.9	
41 Acetone	43	5.602	5.594	0.008	38	77059	20.0	18.8	
40 1,1,2-Trichloro-1,2,2-trif	151	5.602	5.601	0.001	97	213771	5.00	4.78	
43 1,1-Dichloroethene	96	5.624	5.623	0.001	95	302244	5.00	4.87	
44 Iodomethane	142	5.802	5.802	0.000	98	400593	5.00	4.71	
45 Methyl acetate	43	5.831	5.823	0.008	97	110132	10.0	9.77	
47 3-Chloro-1-propene	41	5.881	5.873	0.008	83	551263	5.00	5.25	
48 Carbon disulfide	76	5.910	5.902	0.008	99	1269285	5.00	5.02	
49 2-Methyl-2-propanol	59	5.938	5.937	0.001	92	52706	50.0	48.1	
50 Methylene Chloride	84	5.974	5.966	0.008	97	243432	5.00	4.62	
52 Acrylonitrile	53	6.131	6.123	0.008	100	212249	50.0	48.2	
51 Methyl tert-butyl ether	73	6.153	6.152	0.001	96	276415	5.00	4.83	
53 trans-1,2-Dichloroethene	96	6.188	6.188	0.000	95	325990	5.00	4.76	
54 Hexane	57	6.353	6.352	0.001	93	634628	5.00	4.97	
55 Vinyl acetate	43	6.439	6.438	0.001	97	446936	10.0	10.7	
57 1,1-Dichloroethane	63	6.503	6.502	0.001	96	616044	5.00	5.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.875	6.874	0.001	99	130817	20.0	18.7	
62 sec-Butyl Alcohol	45	6.925	6.917	0.008	96	124916	150.0	150.7	
63 cis-1,2-Dichloroethene	96	6.925	6.924	0.001	85	311163	5.00	4.81	
64 2,2-Dichloropropane	77	6.961	6.960	0.001	90	455594	5.00	4.81	
67 Chlorobromomethane	128	7.118	7.117	0.001	92	85845	5.00	4.81	
68 Chloroform	83	7.125	7.124	0.001	93	534688	5.00	4.95	
69 Tetrahydrofuran	42	7.168	7.160	0.008	96	33192	10.0	9.36	
70 Isobutyl alcohol	41	7.332	7.325	0.007	92	34140	125.0	116.4	
71 1,1,1-Trichloroethane	97	7.354	7.353	0.001	98	502614	5.00	4.90	
72 Cyclohexane	56	7.425	7.425	0.000	93	631647	5.00	5.14	
73 1,1-Dichloropropene	75	7.447	7.446	0.001	96	533971	5.00	5.04	
74 Carbon tetrachloride	117	7.490	7.489	0.001	97	452653	5.00	4.86	
76 1,2-Dichloroethane	62	7.604	7.603	0.001	97	241429	5.00	4.93	
77 Benzene	78	7.626	7.625	0.001	96	1261642	5.00	5.07	
14 n-Heptane	43	7.697	7.696	0.001	93	637048	5.00	4.95	
79 Trichloroethene	95	8.076	8.075	0.001	94	340547	5.00	4.85	
80 2-Pentanone	43	8.119	8.118	0.001	98	177844	20.0	20.3	
83 1,2-Dichloropropane	63	8.255	8.254	0.001	97	275656	5.00	5.20	
82 Methylcyclohexane	55	8.269	8.268	0.001	94	532883	5.00	5.15	
84 1,4-Dioxane	88	8.319	8.311	0.008	85	10882	100.0	92.1	
85 Dibromomethane	93	8.355	8.354	0.001	88	87838	5.00	4.96	
86 Dichlorobromomethane	83	8.419	8.419	0.000	99	302722	5.00	4.97	
87 2-Chloroethyl vinyl ether	63	8.562	8.554	0.008	91	46946	5.00	4.73	
89 cis-1,3-Dichloropropene	75	8.734	8.733	0.001	94	327137	5.00	5.10	
90 4-Methyl-2-pentanone (MIBK	43	8.791	8.783	0.008	0	279592	20.0	20.0	
91 Toluene	91	9.006	9.005	0.001	98	1289609	5.00	5.15	
92 Ethyl methacrylate	69	9.084	9.083	0.001	89	112708	5.00	4.68	
93 trans-1,3-Dichloropropene	75	9.099	9.098	0.000	98	220722	5.00	4.72	
94 1,1,2-Trichloroethane	97	9.256	9.255	0.001	92	113789	5.00	5.00	
95 2-Hexanone	43	9.370	9.369	0.001	98	159058	20.0	18.0	
96 1,3-Dichloropropane	76	9.392	9.391	0.001	94	222004	5.00	5.07	
97 Tetrachloroethene	164	9.420	9.420	0.000	91	244325	5.00	4.80	
98 Chlorodibromomethane	129	9.585	9.584	0.001	90	132950	5.00	4.79	
100 Ethylene Dibromide	107	9.713	9.713	0.000	98	98312	5.00	4.98	
101 1-Chlorohexane	91	9.935	9.934	0.001	97	504409	5.00	4.95	
102 Chlorobenzene	112	10.049	10.049	0.000	93	680891	5.00	4.94	
103 Ethylbenzene	106	10.085	10.085	0.001	99	438775	5.00	4.96	
104 1,1,1,2-Tetrachloroethane	131	10.085	10.085	0.001	89	200616	5.00	4.77	
105 m-Xylene & p-Xylene	106	10.164	10.163	0.001	0	519766	5.00	4.88	
107 o-Xylene	106	10.478	10.478	0.000	90	463437	5.00	5.05	
106 Styrene	104	10.478	10.478	0.000	83	653110	5.00	5.01	
108 Bromoform	173	10.686	10.685	0.001	93	49139	5.00	4.58	
109 Isopropylbenzene	105	10.743	10.742	0.001	97	1337353	5.00	5.13	
111 Cyclohexanone	55	10.879	10.871	0.008	97	104500	200.0	183.3	
112 1,1,2,2-Tetrachloroethane	83	10.943	10.943	0.000	92	100954	5.00	5.07	
113 trans-1,4-Dichloro-2-buten	53	10.979	10.978	0.001	85	16160	5.00	4.10	
114 1,2,3-Trichloropropane	110	11.015	11.014	0.001	85	23450	5.00	4.92	
115 N-Propylbenzene	120	11.065	11.064	0.001	99	349637	5.00	4.79	
116 Bromobenzene	156	11.065	11.064	0.001	93	203546	5.00	4.95	
117 1,3,5-Trimethylbenzene	105	11.172	11.171	0.001	94	1006812	5.00	4.89	
118 2-Chlorotoluene	126	11.186	11.186	0.000	96	267790	5.00	4.87	
119 4-Chlorotoluene	126	11.265	11.264	0.001	99	266015	5.00	4.90	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.472	11.472	0.000	92	1089408	5.00	4.96	
121 1,2,4-Trimethylbenzene	105	11.501	11.500	0.001	98	982976	5.00	4.99	
122 sec-Butylbenzene	134	11.651	11.650	0.001	96	274056	5.00	4.86	
123 4-Isopropyltoluene	119	11.744	11.743	0.001	96	1160442	5.00	4.96	
124 1,3-Dichlorobenzene	146	11.823	11.822	0.001	96	426564	5.00	4.74	
126 1,4-Dichlorobenzene	146	11.887	11.893	-0.006	93	428165	5.00	4.79	
127 n-Butylbenzene	91	12.116	12.115	0.001	99	1286221	5.00	5.05	
128 1,2-Dichlorobenzene	146	12.259	12.258	0.001	95	330931	5.00	4.79	
129 1,2-Dibromo-3-Chloropropan	157	13.010	13.009	0.001	76	10347	5.00	4.70	
130 1,2,4-Trichlorobenzene	180	13.982	13.981	0.001	93	205804	5.00	4.91	
131 Hexachlorobutadiene	225	14.139	14.139	0.000	95	200132	5.00	4.86	
132 Naphthalene	128	14.361	14.360	0.001	98	230432	5.00	4.91	
133 1,2,3-Trichlorobenzene	180	14.690	14.682	0.008	94	144769	5.00	4.88	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.56	
S 135 Xylenes, Total (URS)	1				0		10.0	9.93	
S 136 Total BTEX	1				0			25.1	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.82	
S 134 Trihalomethanes, Total	1				0		20.0	19.3	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.56	
S 139 Xylenes, Total	106				0		10.0	9.93	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	2.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.40	Units: uL

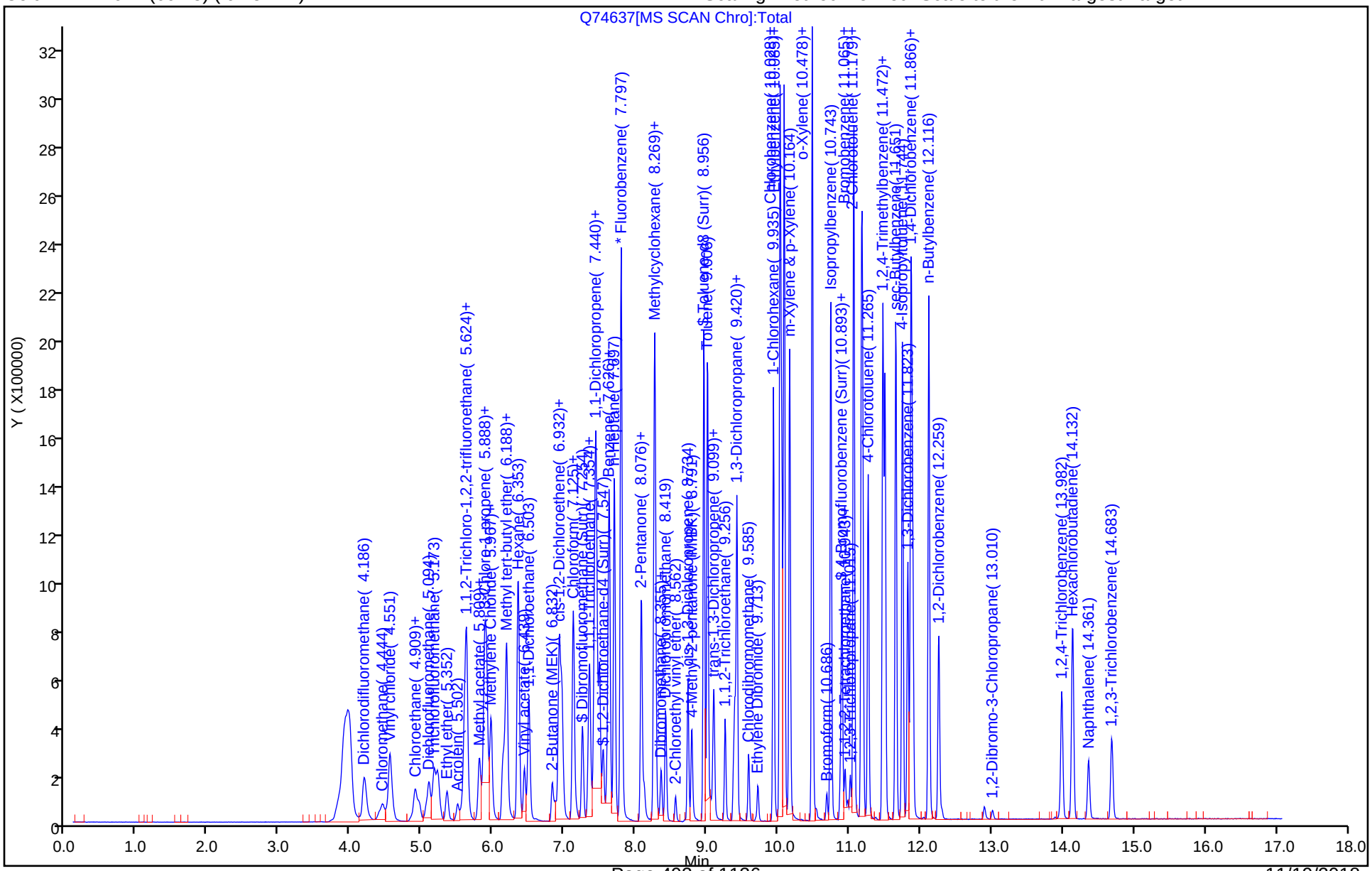
Report Date: 24-Oct-2018 10:35:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74637.D

Injection Date:	23-Oct-2018 14:29:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74638.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 23-Oct-2018 14:49:30 ALS Bottle#: 6 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:36:03 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.873	5.873	0.000	0	190191	250.0	250.0	
* 1 Fluorobenzene	96	7.796	7.796	0.000	100	2211987	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.027	10.027	0.000	98	461271	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.865	11.865	0.000	98	609497	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.253	7.253	0.000	92	553707	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.546	7.546	0.000	0	449888	10.0	10.1	
$ 7 Toluene-d8 (Surr)	98	8.955	8.955	0.000	100	2418275	10.0	9.77	
$ 8 4-Bromofluorobenzene (Surr	95	10.892	10.892	0.000	84	653049	10.0	9.97	
23 Dichlorodifluoromethane	85	4.193	4.193	0.000	99	976465	10.0	11.2	
26 Chloromethane	50	4.443	4.443	0.000	99	479862	10.0	11.1	
27 Vinyl chloride	62	4.565	4.565	0.000	98	523128	10.0	11.3	
29 Bromomethane	94	4.901	4.901	0.000	92	416369	10.0	10.9	
30 Chloroethane	64	4.958	4.958	0.000	99	242560	10.0	11.1	
31 Dichlorofluoromethane	67	5.094	5.094	0.000	96	806508	10.0	10.8	
32 Trichlorofluoromethane	101	5.172	5.172	0.000	99	1316075	10.0	10.8	
35 Ethyl ether	59	5.351	5.351	0.000	95	258173	10.0	11.0	
39 Acrolein	56	5.501	5.501	0.000	99	267102	100.0	114.3	
41 Acetone	43	5.594	5.594	0.000	41	171963	40.0	41.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.601	5.601	0.000	97	486994	10.0	10.8	
43 1,1-Dichloroethene	96	5.623	5.623	0.000	95	699128	10.0	11.2	
44 Iodomethane	142	5.802	5.802	0.000	99	929457	10.0	10.9	
45 Methyl acetate	43	5.823	5.823	0.000	98	214256	20.0	21.5	
47 3-Chloro-1-propene	41	5.873	5.873	0.000	83	1215158	10.0	11.5	
48 Carbon disulfide	76	5.902	5.902	0.000	99	2870545	10.0	11.3	
49 2-Methyl-2-propanol	59	5.937	5.937	0.000	82	115387	100.0	103.5	
50 Methylene Chloride	84	5.966	5.966	0.000	96	540711	10.0	10.2	
52 Acrylonitrile	53	6.123	6.123	0.000	99	504954	100.0	114.0	
51 Methyl tert-butyl ether	73	6.152	6.152	0.000	96	617773	10.0	10.7	
53 trans-1,2-Dichloroethene	96	6.188	6.188	0.000	95	751369	10.0	10.9	
54 Hexane	57	6.352	6.352	0.000	93	1367030	10.0	10.4	
55 Vinyl acetate	43	6.438	6.438	0.000	97	925422	20.0	22.1	
57 1,1-Dichloroethane	63	6.502	6.502	0.000	96	1364091	10.0	11.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.874	6.874	0.000	100	290457	40.0	41.2	
62 sec-Butyl Alcohol	45	6.917	6.917	0.000	98	277239	300.0	328.9	
63 cis-1,2-Dichloroethene	96	6.924	6.924	0.000	82	714935	10.0	11.0	
64 2,2-Dichloropropane	77	6.960	6.960	0.000	89	1025068	10.0	10.8	
67 Chlorobromomethane	128	7.117	7.117	0.000	93	195714	10.0	10.9	
68 Chloroform	83	7.124	7.124	0.000	93	1190109	10.0	10.9	
69 Tetrahydrofuran	42	7.160	7.160	0.000	92	71000	20.0	19.9	
70 Isobutyl alcohol	41	7.325	7.325	0.000	94	79867	250.0	268.0	
71 1,1,1-Trichloroethane	97	7.353	7.353	0.000	99	1129530	10.0	10.9	
72 Cyclohexane	56	7.425	7.425	0.000	92	1386683	10.0	11.2	
73 1,1-Dichloropropene	75	7.446	7.446	0.000	96	1202671	10.0	11.3	
74 Carbon tetrachloride	117	7.489	7.489	0.000	97	1045784	10.0	11.2	
76 1,2-Dichloroethane	62	7.603	7.603	0.000	98	537559	10.0	10.9	
77 Benzene	78	7.625	7.625	0.000	97	2773312	10.0	11.1	
14 n-Heptane	43	7.696	7.696	0.000	92	1385646	10.0	10.7	
79 Trichloroethene	95	8.075	8.075	0.000	95	756068	10.0	10.7	
80 2-Pentanone	43	8.118	8.118	0.000	98	400954	40.0	45.5	
83 1,2-Dichloropropane	63	8.254	8.254	0.000	97	595416	10.0	11.2	
82 Methylcyclohexane	55	8.268	8.268	0.000	94	1189203	10.0	11.4	
84 1,4-Dioxane	88	8.311	8.311	0.000	92	27182	200.0	213.0	
85 Dibromomethane	93	8.354	8.354	0.000	87	194571	10.0	10.9	
86 Dichlorobromomethane	83	8.419	8.419	0.000	99	676007	10.0	11.0	
87 2-Chloroethyl vinyl ether	63	8.554	8.554	0.000	91	104527	10.0	10.1	
89 cis-1,3-Dichloropropene	75	8.733	8.733	0.000	95	723623	10.0	11.0	
90 4-Methyl-2-pentanone (MIBK	43	8.783	8.783	0.000	0	620890	40.0	44.1	
91 Toluene	91	9.005	9.005	0.000	98	2805095	10.0	11.1	
92 Ethyl methacrylate	69	9.083	9.083	0.000	89	266875	10.0	10.5	
93 trans-1,3-Dichloropropene	75	9.098	9.098	0.000	98	503483	10.0	10.5	
94 1,1,2-Trichloroethane	97	9.255	9.255	0.000	92	245837	10.0	10.7	
95 2-Hexanone	43	9.369	9.369	0.000	95	396455	40.0	42.7	
96 1,3-Dichloropropane	76	9.391	9.391	0.000	93	485930	10.0	10.8	
97 Tetrachloroethene	164	9.420	9.420	0.000	91	559064	10.0	10.7	
98 Chlorodibromomethane	129	9.584	9.584	0.000	90	304752	10.0	10.7	
100 Ethylene Dibromide	107	9.713	9.713	0.000	98	221195	10.0	10.9	
101 1-Chlorohexane	91	9.934	9.934	0.000	98	1148606	10.0	11.0	
102 Chlorobenzene	112	10.049	10.049	0.000	94	1526955	10.0	10.8	
103 Ethylbenzene	106	10.085	10.085	0.000	99	1006078	10.0	11.1	
104 1,1,1,2-Tetrachloroethane	131	10.085	10.085	0.000	92	471596	10.0	10.9	
105 m-Xylene & p-Xylene	106	10.163	10.163	0.000	0	1186425	10.0	10.8	
107 o-Xylene	106	10.478	10.478	0.000	89	1062776	10.0	11.3	
106 Styrene	104	10.478	10.478	0.000	84	1531784	10.0	11.4	
108 Bromoform	173	10.685	10.685	0.000	94	117237	10.0	10.6	
109 Isopropylbenzene	105	10.742	10.742	0.000	97	3066259	10.0	11.2	
111 Cyclohexanone	55	10.871	10.871	0.000	98	257548	400.0	439.4	
112 1,1,2,2-Tetrachloroethane	83	10.943	10.943	0.000	92	225335	10.0	10.8	
113 trans-1,4-Dichloro-2-buten	53	10.978	10.978	0.000	89	41669	10.0	9.49	
114 1,2,3-Trichloropropane	110	11.014	11.014	0.000	85	53388	10.0	10.7	
115 N-Propylbenzene	120	11.064	11.064	0.000	99	841985	10.0	11.0	
116 Bromobenzene	156	11.064	11.064	0.000	93	471666	10.0	10.9	
117 1,3,5-Trimethylbenzene	105	11.171	11.171	0.000	95	2438854	10.0	11.3	
118 2-Chlorotoluene	126	11.186	11.186	0.000	95	644609	10.0	11.2	
119 4-Chlorotoluene	126	11.264	11.264	0.000	99	621969	10.0	10.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.472	11.472	0.000	92	2573661	10.0	11.2	
121 1,2,4-Trimethylbenzene	105	11.500	11.500	0.000	98	2295157	10.0	11.1	
122 sec-Butylbenzene	134	11.650	11.650	0.000	95	667431	10.0	11.3	
123 4-Isopropyltoluene	119	11.743	11.743	0.000	96	2799869	10.0	11.4	
124 1,3-Dichlorobenzene	146	11.822	11.822	0.000	96	1001564	10.0	10.6	
126 1,4-Dichlorobenzene	146	11.893	11.893	0.000	94	987929	10.0	10.5	
127 n-Butylbenzene	91	12.115	12.115	0.000	99	2973488	10.0	11.1	
128 1,2-Dichlorobenzene	146	12.258	12.258	0.000	95	773581	10.0	10.7	
129 1,2-Dibromo-3-Chloropropan	157	13.009	13.009	0.000	77	24917	10.0	10.2	
130 1,2,4-Trichlorobenzene	180	13.981	13.981	0.000	94	460377	10.0	10.5	
131 Hexachlorobutadiene	225	14.139	14.139	0.000	96	457506	10.0	10.6	
132 Naphthalene	128	14.360	14.360	0.000	98	527751	10.0	10.7	
133 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	93	325002	10.0	10.4	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 134 Trihalomethanes, Total	1				0		40.0	43.3	
S 135 Xylenes, Total (URS)	1				0		20.0	22.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	21.4	
S 139 Xylenes, Total	106				0		20.0	22.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.9	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.80	Units: uL

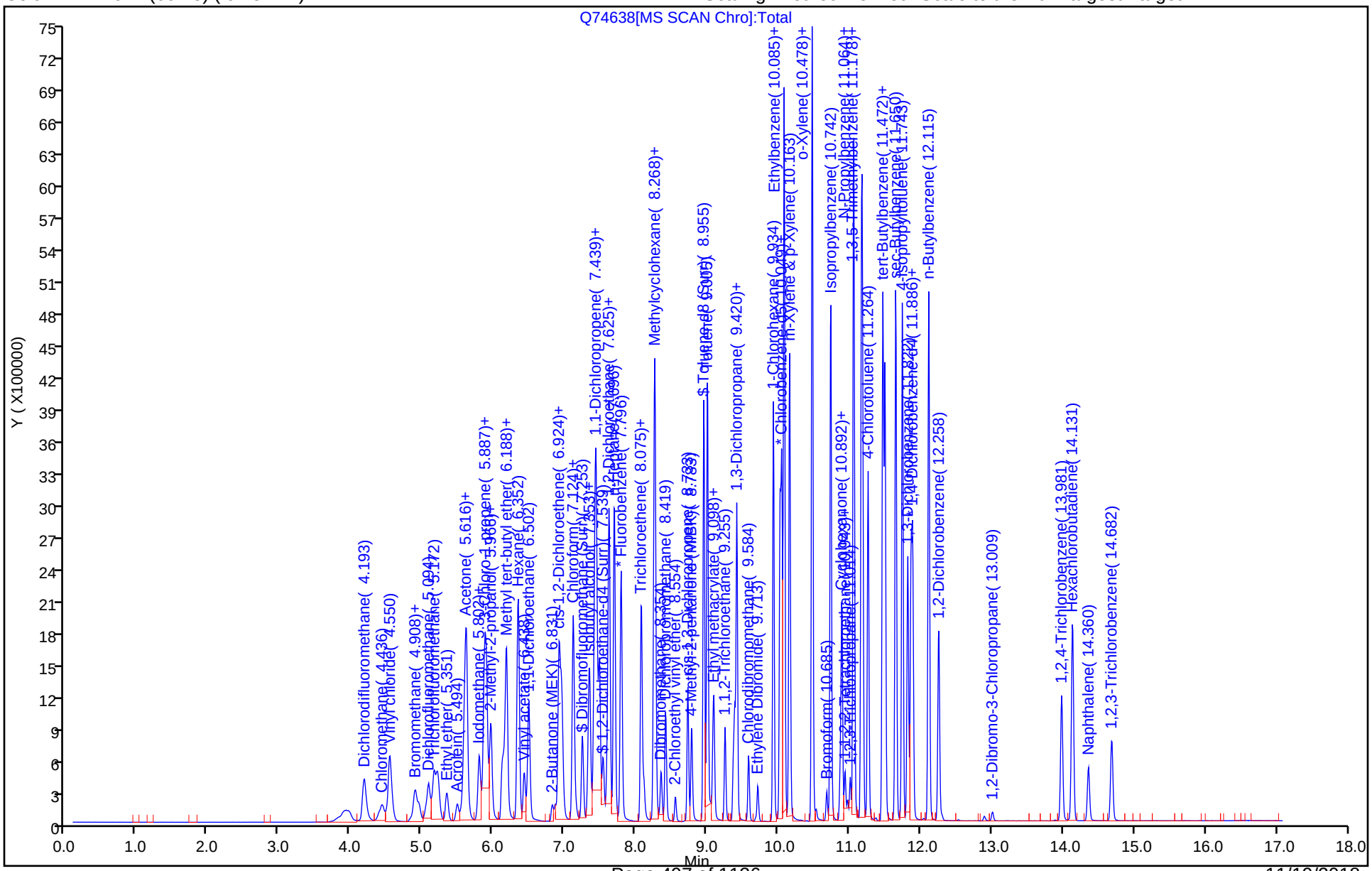
Report Date: 24-Oct-2018 10:36:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74638.D

Injection Date:	23-Oct-2018 14:49:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74639.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Oct-2018 15:10:30 ALS Bottle#: 7 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:36:12 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.873	0.002	0	189576	250.0	250.0	
* 1 Fluorobenzene	96	7.799	7.796	0.003	100	2408989	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.030	10.027	0.003	98	508311	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.867	11.865	0.002	99	650035	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.253	0.002	92	1742258	30.0	29.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.541	7.546	-0.005	0	1436853	30.0	30.4	
$ 7 Toluene-d8 (Surr)	98	8.957	8.955	0.002	100	7304811	30.0	30.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.895	10.892	0.003	85	2105104	30.0	30.1	
23 Dichlorodifluoromethane	85	4.195	4.193	0.002	99	2473759	25.0	26.2	
26 Chloromethane	50	4.445	4.443	0.002	99	1143334	25.0	24.4	
27 Vinyl chloride	62	4.574	4.565	0.009	98	1220751	25.0	24.2	
29 Bromomethane	94	4.910	4.901	0.009	92	1021337	25.0	24.6	
30 Chloroethane	64	4.960	4.958	0.002	99	580191	25.0	24.5	
31 Dichlorofluoromethane	67	5.096	5.094	0.002	97	1994545	25.0	24.5	
32 Trichlorofluoromethane	101	5.218	5.172	0.046	98	3368351	25.0	25.4	
35 Ethyl ether	59	5.354	5.351	0.003	93	643651	25.0	25.1	
39 Acrolein	56	5.497	5.501	-0.005	100	633967	250.0	249.0	
41 Acetone	43	5.597	5.594	0.003	73	408262	100.0	90.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.604	5.601	0.003	96	1302483	25.0	26.6	
43 1,1-Dichloroethene	96	5.632	5.623	0.009	99	1680834	25.0	24.7	
44 Iodomethane	142	5.804	5.802	0.002	98	2341464	25.0	25.1	
45 Methyl acetate	43	5.825	5.823	0.002	98	528830	50.0	52.2	
47 3-Chloro-1-propene	41	5.883	5.873	0.010	84	2724336	25.0	23.7	
48 Carbon disulfide	76	5.904	5.902	0.002	99	6842255	25.0	24.7	
49 2-Methyl-2-propanol	59	5.940	5.937	0.003	93	293486	250.0	264.1	
50 Methylene Chloride	84	5.968	5.966	0.002	95	1278562	25.0	22.1	
52 Acrylonitrile	53	6.126	6.123	0.003	99	1288889	250.0	267.3	
51 Methyl tert-butyl ether	73	6.154	6.152	0.002	96	1525367	25.0	24.3	
53 trans-1,2-Dichloroethene	96	6.190	6.188	0.002	97	1854064	25.0	24.7	
54 Hexane	57	6.355	6.352	0.003	92	3399109	25.0	23.5	
55 Vinyl acetate	43	6.433	6.438	-0.005	97	2272343	50.0	49.9	
57 1,1-Dichloroethane	63	6.505	6.502	0.003	96	3334781	25.0	24.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.869	6.874	-0.005	100	735847	100.0	95.9	
62 sec-Butyl Alcohol	45	6.912	6.917	-0.005	99	728951	750.0	867.6	
63 cis-1,2-Dichloroethene	96	6.927	6.924	0.003	81	1785239	25.0	25.2	
64 2,2-Dichloropropane	77	6.962	6.960	0.002	86	2589317	25.0	25.0	
67 Chlorobromomethane	128	7.120	7.117	0.003	97	507544	25.0	25.9	
68 Chloroform	83	7.127	7.124	0.003	93	3043191	25.0	25.7	
69 Tetrahydrofuran	42	7.162	7.160	0.002	94	202474	50.0	52.1	
70 Isobutyl alcohol	41	7.320	7.325	-0.005	93	206371	625.0	694.6	
71 1,1,1-Trichloroethane	97	7.356	7.353	0.003	98	2921523	25.0	26.0	
72 Cyclohexane	56	7.427	7.425	0.002	90	3286693	25.0	24.4	
73 1,1-Dichloropropene	75	7.448	7.446	0.002	97	3091435	25.0	26.7	
74 Carbon tetrachloride	117	7.491	7.489	0.002	97	2727126	25.0	26.7	
76 1,2-Dichloroethane	62	7.599	7.603	-0.004	98	1378971	25.0	25.7	
77 Benzene	78	7.627	7.625	0.002	97	6909617	25.0	25.3	
14 n-Heptane	43	7.699	7.696	0.003	89	3347608	25.0	23.7	
79 Trichloroethene	95	8.078	8.075	0.003	96	2130461	25.0	27.7	
80 2-Pentanone	43	8.113	8.118	-0.005	99	1092999	100.0	114.0	
83 1,2-Dichloropropane	63	8.256	8.254	0.002	97	1493242	25.0	25.7	
82 Methylcyclohexane	55	8.271	8.268	0.003	92	2775868	25.0	24.5	
84 1,4-Dioxane	88	8.314	8.311	0.003	92	72263	500.0	504.8	
85 Dibromomethane	93	8.357	8.354	0.003	90	515110	25.0	26.6	
86 Dichlorobromomethane	83	8.421	8.419	0.002	99	1818552	25.0	27.2	
87 2-Chloroethyl vinyl ether	63	8.557	8.554	0.003	91	304569	25.0	26.6	
89 cis-1,3-Dichloropropene	75	8.728	8.733	-0.005	96	1971779	25.0	27.1	
90 4-Methyl-2-pentanone (MIBK	43	8.786	8.783	0.003	0	1589785	100.0	103.7	
91 Toluene	91	9.007	9.005	0.002	99	7004304	25.0	25.6	
92 Ethyl methacrylate	69	9.079	9.083	-0.004	91	752144	25.0	26.6	
93 trans-1,3-Dichloropropene	75	9.100	9.098	0.002	97	1387687	25.0	26.2	
94 1,1,2-Trichloroethane	97	9.257	9.255	0.002	91	665886	25.0	26.7	
95 2-Hexanone	43	9.365	9.369	-0.004	96	1039355	100.0	100.7	
96 1,3-Dichloropropane	76	9.393	9.391	0.002	91	1283653	25.0	25.9	
97 Tetrachloroethene	164	9.422	9.420	0.002	92	1584461	25.0	27.5	
98 Chlorodibromomethane	129	9.586	9.584	0.002	90	840110	25.0	26.7	
100 Ethylene Dibromide	107	9.715	9.713	0.002	98	600993	25.0	26.9	
101 1-Chlorohexane	91	9.937	9.934	0.003	96	3126698	25.0	27.1	
102 Chlorobenzene	112	10.051	10.049	0.002	94	4141029	25.0	26.5	
103 Ethylbenzene	106	10.087	10.085	0.003	98	2706685	25.0	27.0	
104 1,1,1,2-Tetrachloroethane	131	10.080	10.085	-0.004	94	1287478	25.0	27.0	
105 m-Xylene & p-Xylene	106	10.158	10.163	-0.005	0	3255129	25.0	27.0	
107 o-Xylene	106	10.480	10.478	0.002	88	2700324	25.0	26.0	
106 Styrene	104	10.480	10.478	0.002	85	3939639	25.0	26.7	
108 Bromoform	173	10.680	10.685	-0.005	94	334505	25.0	27.5	
109 Isopropylbenzene	105	10.738	10.742	-0.004	97	7867973	25.0	27.0	
111 Cyclohexanone	55	10.873	10.871	0.002	99	681681	1000.0	1055.5	
112 1,1,2,2-Tetrachloroethane	83	10.938	10.943	-0.005	92	593923	25.0	26.6	
113 trans-1,4-Dichloro-2-buten	53	10.974	10.978	-0.004	91	119940	25.0	24.9	
114 1,2,3-Trichloropropane	110	11.016	11.014	0.002	86	143518	25.0	26.9	
115 N-Propylbenzene	120	11.059	11.064	-0.005	97	2296179	25.0	28.1	
116 Bromobenzene	156	11.066	11.064	0.002	95	1307660	25.0	28.4	
117 1,3,5-Trimethylbenzene	105	11.174	11.171	0.003	95	6337493	25.0	27.5	
118 2-Chlorotoluene	126	11.188	11.186	0.002	96	1743811	25.0	28.3	
119 4-Chlorotoluene	126	11.267	11.264	0.003	98	1647441	25.0	27.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.474	11.472	0.002	93	6661233	25.0	27.1	
121 1,2,4-Trimethylbenzene	105	11.503	11.500	0.003	98	5983549	25.0	27.1	
122 sec-Butylbenzene	134	11.653	11.650	0.003	96	1780691	25.0	28.2	
123 4-Isopropyltoluene	119	11.746	11.743	0.003	95	7154202	25.0	27.3	
124 1,3-Dichlorobenzene	146	11.824	11.822	0.002	96	2676887	25.0	26.6	
126 1,4-Dichlorobenzene	146	11.889	11.893	-0.004	92	2591666	25.0	25.9	
127 n-Butylbenzene	91	12.118	12.115	0.003	97	7248288	25.0	25.4	
128 1,2-Dichlorobenzene	146	12.253	12.258	-0.005	95	2058526	25.0	26.6	
129 1,2-Dibromo-3-Chloropropan	157	13.011	13.009	0.002	78	69205	25.0	25.8	
130 1,2,4-Trichlorobenzene	180	13.984	13.981	0.003	94	1230170	25.0	26.2	
131 Hexachlorobutadiene	225	14.134	14.139	-0.005	97	1242520	25.0	26.9	
132 Naphthalene	128	14.356	14.360	-0.004	98	1383637	25.0	26.3	
133 1,2,3-Trichlorobenzene	180	14.684	14.682	0.002	94	853612	25.0	25.7	
S 140 1,2-Dichloroethene, Total	96				0		50.0	49.9	
S 139 Xylenes, Total	106				0		50.0	52.9	
S 134 Trihalomethanes, Total	1				0		100.0	107.1	
S 135 Xylenes, Total (URS)	1				0		50.0	52.9	
S 137 1,3-Dichloropropene, Total	1				0		50.0	53.4	
S 136 Total BTEX	1				0			130.9	
S 138 1,2-Dichloroethene, Total	1				0		50.0	49.9	

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-MegaMainA_00002	Amount Added: 10.00	Units: uL
MV-ARCH SS A_00101	Amount Added: 2.40	Units: uL

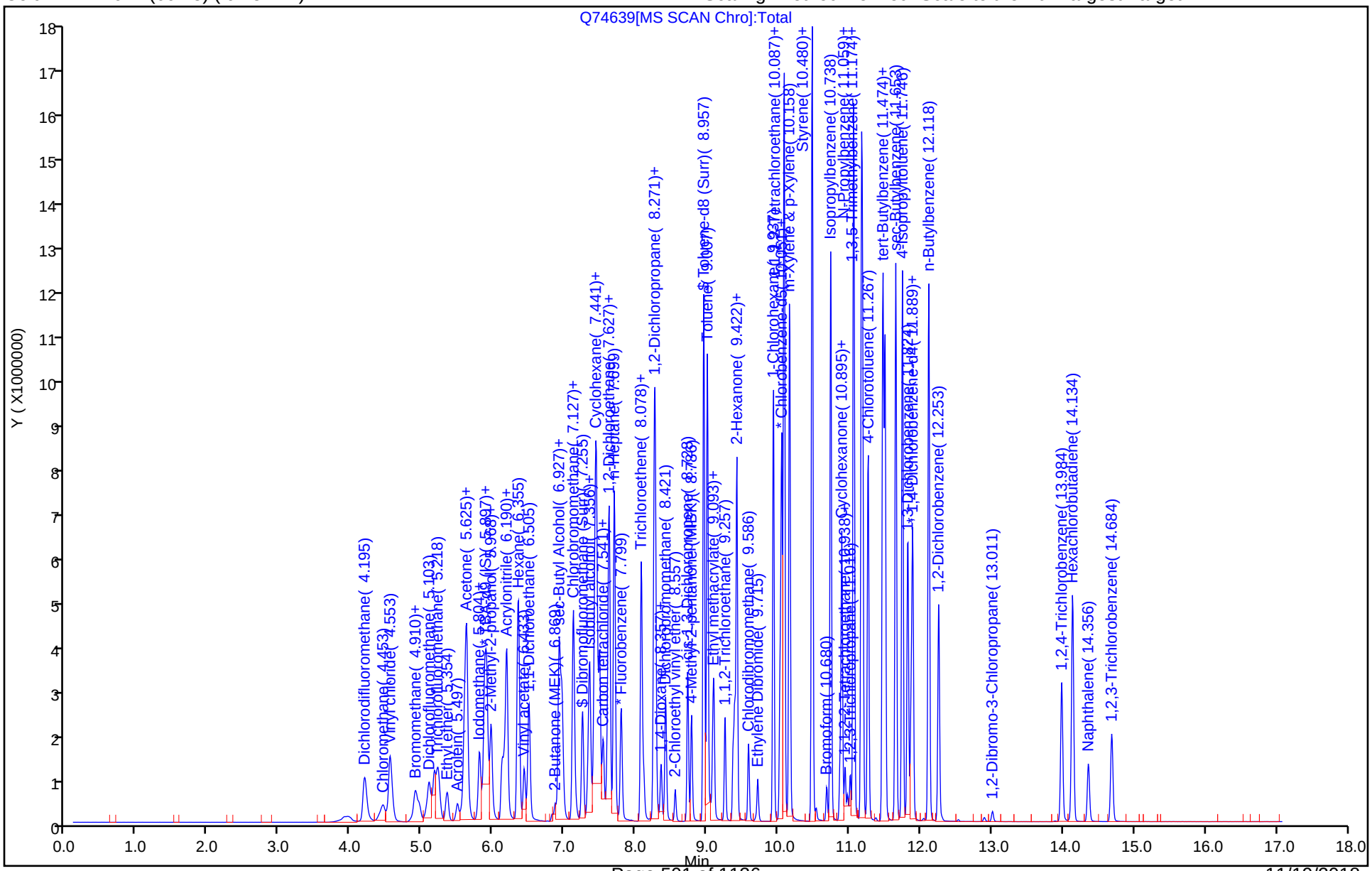
Report Date: 24-Oct-2018 10:36:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74639.D

Injection Date:	23-Oct-2018 15:10:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD30			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Oct-2018 15:30:30 ALS Bottle#: 8 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:36:21 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.858	5.873	-0.015	0	191869	250.0	250.0	
* 1 Fluorobenzene	96	7.796	7.796	0.000	100	2564991	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.027	10.027	0.000	98	549431	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.865	0.006	99	712291	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.253	-0.001	92	3791109	60.0	59.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.538	7.546	-0.008	0	2851433	60.0	57.1	
$ 7 Toluene-d8 (Surr)	98	8.954	8.955	-0.001	99	13026355	60.0	59.9	
$ 8 4-Bromofluorobenzene (Surr	95	10.892	10.892	0.000	89	4247367	60.0	55.5	
23 Dichlorodifluoromethane	85	4.185	4.193	-0.008	99	6211150	60.0	61.7	
26 Chloromethane	50	4.435	4.443	-0.008	98	2843886	60.0	56.9	
27 Vinyl chloride	62	4.564	4.565	-0.001	98	2843053	60.0	52.9	
29 Bromomethane	94	4.893	4.901	-0.008	92	2454010	60.0	55.5	
30 Chloroethane	64	4.950	4.958	-0.008	99	1315782	60.0	52.1	
31 Dichlorofluoromethane	67	5.086	5.094	-0.008	97	4810880	60.0	55.6	
32 Trichlorofluoromethane	101	5.215	5.172	0.043	99	8446775	60.0	59.7	
35 Ethyl ether	59	5.343	5.351	-0.008	92	1592685	60.0	58.4	
39 Acrolein	56	5.486	5.501	-0.015	100	1626086	600.1	599.8	
41 Acetone	43	5.586	5.594	-0.008	99	910649	240.0	190.5	
40 1,1,2-Trichloro-1,2,2-trif	151	5.594	5.601	-0.007	94	3408099	60.0	65.4	
43 1,1-Dichloroethene	96	5.622	5.623	-0.001	99	4332734	60.0	59.9	
44 Iodomethane	142	5.794	5.802	-0.008	98	6381474	60.0	64.3	
45 Methyl acetate	43	5.822	5.823	-0.001	96	1188619	120.0	113.3	
47 3-Chloro-1-propene	41	5.872	5.873	-0.001	81	5864296	60.0	47.9	
48 Carbon disulfide	76	5.901	5.902	-0.001	99	16110470	60.0	54.6	
49 2-Methyl-2-propanol	59	5.930	5.937	-0.007	94	725760	600.0	645.4	
50 Methylene Chloride	84	5.965	5.966	-0.001	91	3388635	60.0	55.1	
52 Acrylonitrile	53	6.116	6.123	-0.007	98	3282483	600.0	639.3	
51 Methyl tert-butyl ether	73	6.151	6.152	-0.001	95	3837164	60.0	57.5	
53 trans-1,2-Dichloroethene	96	6.187	6.188	-0.001	99	4806501	60.0	60.1	
54 Hexane	57	6.344	6.352	-0.008	90	7208342	60.0	46.1	
55 Vinyl acetate	43	6.430	6.438	-0.008	97	5436551	120.0	112.1	
57 1,1-Dichloroethane	63	6.502	6.502	0.000	96	7891454	60.0	54.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.866	6.874	-0.008	100	1772362	240.0	217.0	
62 sec-Butyl Alcohol	45	6.902	6.917	-0.015	97	1660375	1800.0	1952.6	
63 cis-1,2-Dichloroethene	96	6.924	6.924	0.000	78	4582620	60.0	60.7	
64 2,2-Dichloropropane	77	6.959	6.960	-0.001	87	6546210	60.0	59.3	
67 Chlorobromomethane	128	7.117	7.117	0.000	95	1370746	60.0	65.8	
68 Chloroform	83	7.124	7.124	0.000	92	7457055	60.0	59.2	
69 Tetrahydrofuran	42	7.160	7.160	0.000	93	497471	120.0	120.3	
70 Isobutyl alcohol	41	7.317	7.325	-0.008	94	543516	1500.0	1807.6	
71 1,1,1-Trichloroethane	97	7.353	7.353	0.000	98	7457182	60.0	62.3	
72 Cyclohexane	56	7.424	7.425	-0.001	87	6481679	60.0	45.2	
73 1,1-Dichloropropene	75	7.446	7.446	0.000	96	6556551	60.0	53.1	
74 Carbon tetrachloride	117	7.488	7.489	-0.001	97	7173215	60.0	66.0	
76 1,2-Dichloroethane	62	7.596	7.603	-0.007	98	3373967	60.0	59.1	
77 Benzene	78	7.624	7.625	-0.001	98	15263336	60.0	52.6	
14 n-Heptane	43	7.696	7.696	0.000	82	6042647	60.0	40.2	
79 Trichloroethene	95	8.075	8.075	0.000	98	5175285	60.0	63.1	
80 2-Pentanone	43	8.110	8.118	-0.008	99	2520133	240.0	246.8	
83 1,2-Dichloropropane	63	8.253	8.254	-0.001	95	2915195	60.0	47.2	
82 Methylcyclohexane	55	8.275	8.268	0.007	90	5323034	60.0	44.1	
84 1,4-Dioxane	88	8.304	8.311	-0.007	96	187848	1200.0	1217.2	
85 Dibromomethane	93	8.354	8.354	0.000	92	1336640	60.0	64.7	
86 Dichlorobromomethane	83	8.418	8.419	-0.001	99	4563607	60.0	64.2	
87 2-Chloroethyl vinyl ether	63	8.554	8.554	0.000	91	794833	60.0	64.8	
89 cis-1,3-Dichloropropene	75	8.733	8.733	0.000	97	4850203	60.0	61.7	
90 4-Methyl-2-pentanone (MIBK	43	8.783	8.783	0.000	0	3702764	240.0	226.9	
91 Toluene	91	9.004	9.005	-0.001	97	14226518	60.0	48.7	
92 Ethyl methacrylate	69	9.083	9.083	0.000	87	1794847	60.0	58.5	
93 trans-1,3-Dichloropropene	75	9.097	9.098	-0.001	95	3368037	60.0	59.6	
94 1,1,2-Trichloroethane	97	9.254	9.255	-0.001	91	1682067	60.0	63.4	
95 2-Hexanone	43	9.362	9.369	-0.007	95	2475621	240.0	221.1	
96 1,3-Dichloropropane	76	9.390	9.391	-0.001	90	3031618	60.0	56.5	
97 Tetrachloroethene	164	9.419	9.420	-0.001	93	4049189	60.0	64.9	
98 Chlorodibromomethane	129	9.583	9.584	-0.001	90	2265193	60.0	66.6	
100 Ethylene Dibromide	107	9.712	9.713	-0.001	98	1565664	60.0	64.8	
101 1-Chlorohexane	91	9.934	9.934	0.000	92	6747470	60.0	54.1	
102 Chlorobenzene	112	10.048	10.049	-0.001	94	9597229	60.0	56.8	
103 Ethylbenzene	106	10.084	10.085	0.000	97	5577935	60.0	51.5	
104 1,1,1,2-Tetrachloroethane	131	10.084	10.085	0.000	93	3035257	60.0	58.9	
105 m-Xylene & p-Xylene	106	10.163	10.163	0.000	0	7201336	60.0	55.2	
107 o-Xylene	106	10.477	10.478	-0.001	86	5483606	60.0	48.8	
106 Styrene	104	10.477	10.478	-0.001	85	7901706	60.0	49.5	
108 Bromoform	173	10.685	10.685	0.000	95	941975	60.0	71.6	
109 Isopropylbenzene	105	10.742	10.742	0.000	97	15802653	60.0	49.4	e
111 Cyclohexanone	55	10.870	10.871	-0.001	99	1624685	2400.0	2327.3	
112 1,1,2,2-Tetrachloroethane	83	10.942	10.943	-0.001	92	1485540	60.0	60.8	
113 trans-1,4-Dichloro-2-buten	53	10.978	10.978	0.000	95	327163	60.0	61.5	
114 1,2,3-Trichloropropane	110	11.013	11.014	-0.001	85	369641	60.0	63.2	
115 N-Propylbenzene	120	11.063	11.064	-0.001	96	4984639	60.0	55.7	
116 Bromobenzene	156	11.063	11.064	-0.001	88	3121153	60.0	61.8	
117 1,3,5-Trimethylbenzene	105	11.171	11.171	0.000	96	12575799	60.0	49.8	
118 2-Chlorotoluene	126	11.192	11.186	0.006	97	3798571	60.0	56.3	
119 4-Chlorotoluene	126	11.264	11.264	0.000	97	4178706	60.0	62.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.471	11.472	-0.001	89	14439554	60.0	53.6	
121 1,2,4-Trimethylbenzene	105	11.500	11.500	0.000	96	12904265	60.0	53.4	
122 sec-Butylbenzene	134	11.657	11.650	0.007	95	4269751	60.0	61.7	
123 4-Isopropyltoluene	119	11.743	11.743	0.000	93	15158807	60.0	52.8	
124 1,3-Dichlorobenzene	146	11.821	11.822	-0.001	96	6828089	60.0	61.9	
126 1,4-Dichlorobenzene	146	11.893	11.893	0.000	93	6697270	60.0	61.0	
127 n-Butylbenzene	91	12.115	12.115	0.000	94	14755035	60.0	47.2	
128 1,2-Dichlorobenzene	146	12.258	12.258	0.000	96	5373346	60.0	63.3	
129 1,2-Dibromo-3-Chloropropan	157	13.008	13.009	-0.001	80	186006	60.0	62.5	
130 1,2,4-Trichlorobenzene	180	13.981	13.981	0.000	94	3211692	60.0	62.4	
131 Hexachlorobutadiene	225	14.138	14.139	-0.001	98	3201445	60.0	63.3	
132 Naphthalene	128	14.360	14.360	0.000	98	3493535	60.0	60.7	
133 1,2,3-Trichlorobenzene	180	14.681	14.682	-0.001	95	2148823	60.0	59.1	
S 140 1,2-Dichloroethene, Total	96				0		120.0	120.8	
S 136 Total BTEX	1				0			256.8	
S 139 Xylenes, Total	106				0		120.0	104.0	
S 134 Trihalomethanes, Total	1				0		240.0	261.6	
S 137 1,3-Dichloropropene, Total	1				0		120.0	121.3	
S 138 1,2-Dichloroethene, Total	1				0		120.0	120.8	
S 135 Xylenes, Total (URS)	1				0		120.0	104.0	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	24.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	4.80	Units: uL

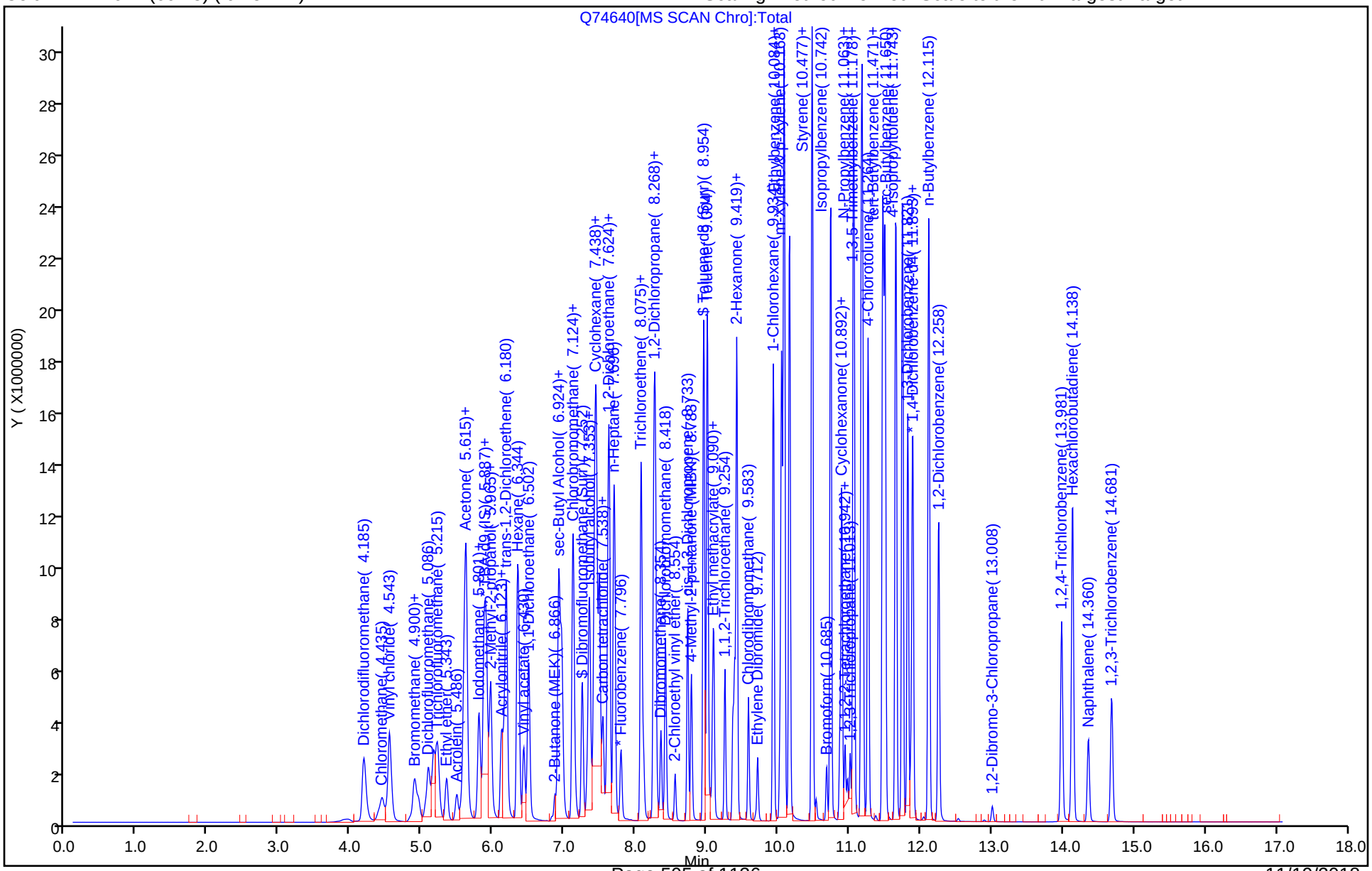
Report Date: 24-Oct-2018 10:36:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Injection Date:	23-Oct-2018 15:30:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD60			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-426490/24 Calibration Date: 08/17/2018 03:28

Instrument ID: VMS_P Calib Start Date: 08/17/2018 01:38

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/17/2018 03:10

Lab File ID: P9176.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0033	0.0030		912	1000	-8.8	20.0
Ethanol	Lin1		0.1444		591	600	-1.6	20.0
Isopropyl alcohol	Ave	0.9689	0.8319		85.9	100	-14.1	20.0
Acetonitrile	Lin1		0.0087		92.2	100	-7.8	20.0
Diisopropyl ether	Ave	0.1887	0.1749		9.27	10.0	-7.3	20.0
2-Chloro-1,3-butadiene	Ave	0.6158	0.5851		9.50	10.0	-5.0	20.0
Tert-butyl ethyl ether	Ave	0.5878	0.5366		9.13	10.0	-8.7	20.0
Ethyl acetate	Ave	0.0815	0.0692		17.0	20.0	-15.2	20.0
Propionitrile	Lin2		0.0089		90.3	100	-9.7	20.0
Methacrylonitrile	Ave	0.0637	0.0601		94.3	100	-5.7	20.0
Tert-amyl methyl ether	Ave	0.4231	0.3823		9.04	10.0	-9.6	20.0
n-Butanol	Lin2		0.2674		221	250	-11.7	20.0
Methyl methacrylate	Lin2		0.0178		17.7	20.0	-11.3	20.0
2-Nitropropane	Ave	0.0172	0.0154		17.9	20.0	-10.5	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0697	0.0674		19.3	20.0	-3.3	20.0
1,2,3-Trimethylbenzene	Ave	3.790	3.736		9.86	10.0	-1.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9176.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 17-Aug-2018 03:28:30 ALS Bottle#: 34 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 17-Aug-2018 20:42:17 Calib Date: 17-Aug-2018 03:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: seifertj Date: 17-Aug-2018 20:40:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.593	0.000	99	147898	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.552	0.000	97	1687178	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.819	0.000	91	299611	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	390657	12.5	12.5	
28 Ethylene oxide	43	4.515	4.515	0.000	99	409234	1000.0	911.6	
33 Ethanol	45	4.934	4.934	0.000	99	51251	600.0	590.5	
38 Propene oxide	58	5.157	5.157	0.000	96	1688207	1000.0	951.5	
42 Isopropyl alcohol	45	5.325	5.325	0.000	97	49213	100.0	85.9	
46 Acetonitrile	41	5.572	5.572	0.000	99	118028	100.0	92.2	
56 Isopropyl ether	87	6.179	6.179	0.000	95	236076	10.0	9.27	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	95	789677	10.0	9.50	
59 Tert-butyl ethyl ether	59	6.458	6.458	0.000	98	724205	10.0	9.13	
60 Ethyl acetate	43	6.601	6.601	0.000	99	186700	20.0	17.0	
65 Propionitrile	54	6.694	6.694	0.000	98	119673	100.0	90.3	
66 Methacrylonitrile	41	6.809	6.809	0.000	95	810895	100.0	94.3	
75 Tert-amyl methyl ether	73	7.359	7.359	0.000	53	516037	10.0	9.04	
78 n-Butanol	56	7.602	7.602	0.000	92	39546	250.0	220.7	
81 Methyl methacrylate	100	7.981	7.981	0.000	93	48010	20.0	17.7	
88 2-Nitropropane	41	8.360	8.360	0.000	99	41485	20.0	17.9	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	94	18526	20.0	19.7	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	95	42124	20.0	19.3	
125 1,2,3-Trimethylbenzene	105	11.656	11.656	0.000	99	1167517	10.0	9.86	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	93	371185	10.0	9.72	

Reagents:

MV-Supp B_00021 Amount Added: 5.00 Units: uL
MV-568718-D_00010 Amount Added: 1.00 Units: uL

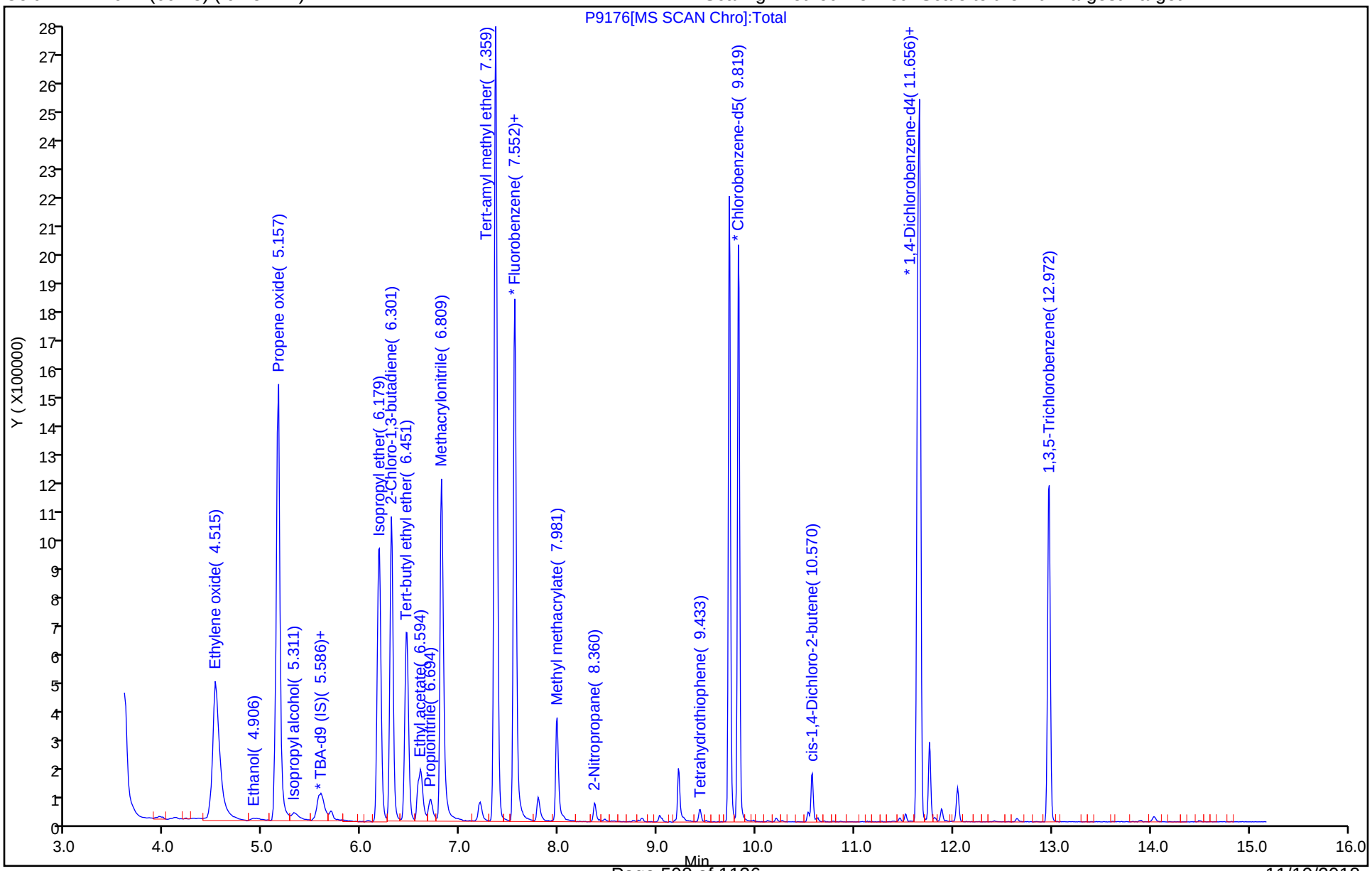
Report Date: 17-Aug-2018 20:42:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9176.D

Injection Date:	17-Aug-2018 03:28:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	ICV			Worklist Smp#:	24
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.6322		11.2	10.0	12.3	20.0
Chloromethane	Ave	0.3707	0.3878	0.1000	10.5	10.0	4.6	20.0
Vinyl chloride	Ave	0.3783	0.3958		10.5	10.0	4.6	20.0
Bromomethane	Ave	0.3269	0.3447		10.5	10.0	5.5	20.0
Chloroethane	Ave	0.3098	0.3302		10.7	10.0	6.6	20.0
Dichlorofluoromethane	Ave	0.7871	0.8669		11.0	10.0	10.1	20.0
Trichlorofluoromethane	Ave	0.7129	0.7361		10.3	10.0	3.3	20.0
Ethyl ether	Ave	0.1533	0.1722		11.2	10.0	12.4	20.0
Acrolein	Lin2		0.0179		105	100	5.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3231		10.7	10.0	7.5	20.0
1,1-Dichloroethene	Ave	0.3655	0.3964		10.8	10.0	8.4	20.0
Acetone	Ave	0.0355	0.0321		36.2	40.0	-9.6	20.0
Methyl iodide	Ave	0.5074	0.5652		11.1	10.0	11.4	20.0
Methyl acetate	Ave	0.0809	0.0802		19.8	20.0	-0.8	20.0
3-Chloro-1-propene	Ave	0.6527	0.7196		11.0	10.0	10.2	20.0
Carbon disulfide	Ave	1.485	1.620		10.9	10.0	9.1	20.0
t-Butyl alcohol	Lin1		1.345		108	100	7.6	20.0
Methylene Chloride	Ave	0.3148	0.3042		9.66	10.0	-3.4	20.0
Methyl tert-butyl ether	Ave	0.3966	0.4224		10.7	10.0	6.5	20.0
Acrylonitrile	Lin2		0.0328		103	100	3.1	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3904		10.9	10.0	8.6	20.0
Hexane	Ave	3.359	3.479		10.4	10.0	3.6	20.0
Vinyl acetate	Lin2		0.2606		18.2	20.0	-9.2	20.0
1,1-Dichloroethane	Ave	0.6299	0.6602	0.1000	10.5	10.0	4.8	20.0
2-Butanone (MEK)	Ave	0.0507	0.0503		39.7	40.0	-0.9	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3562		10.5	10.0	4.7	20.0
sec-Butyl Alcohol	Lin		0.9597		237	240	-1.3	20.0
2,2-Dichloropropane	Ave	0.5342	0.5609		10.5	10.0	5.0	20.0
Bromochloromethane	Ave	0.1018	0.1083		10.6	10.0	6.3	20.0
Chloroform	Ave	0.5547	0.5811		10.5	10.0	4.8	20.0
Tetrahydrofuran	Ave	0.0268	0.0304		22.7	20.0	13.3	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.6143		10.8	10.0	8.4	20.0
Isobutyl alcohol	Lin		0.4072		224	250	-10.3	20.0
Cyclohexane	Ave	0.7766	0.8233		10.6	10.0	6.0	20.0
1,1-Dichloropropene	Ave	0.5299	0.5587		10.5	10.0	5.4	20.0
Carbon tetrachloride	Ave	0.4761	0.5165		10.8	10.0	8.5	20.0
1,2-Dichloroethane	Ave	0.2976	0.3061		10.3	10.0	2.9	20.0
Benzene	Ave	1.329	1.383		10.4	10.0	4.1	20.0
Trichloroethene	Ave	0.3470	0.3705		10.7	10.0	6.8	20.0
2-Pentanone	Lin2		0.0644		31.5	32.0	-1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6311	0.6502		10.3	10.0	3.0	20.0
1,2-Dichloropropane	Ave	0.2907	0.3141		10.8	10.0	8.0	20.0
1,4-Dioxane	Lin2		0.0009		213	200	6.3	20.0
Dibromomethane	Ave	0.1000	0.1043		10.4	10.0	4.2	20.0
Bromodichloromethane	Ave	0.3144	0.3370		10.7	10.0	7.2	20.0
2-Chloroethyl vinyl ether	Lin1		0.0646		9.19	10.0	-8.1	20.0
cis-1,3-Dichloropropene	Lin2		1.836		11.0	10.0	9.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1070		43.6	40.0	9.0	20.0
Toluene	Ave	1.356	1.433		10.6	10.0	5.7	20.0
Ethyl methacrylate	Lin1		0.7426		9.86	10.0	-1.4	20.0
trans-1,3-Dichloropropene	Lin1		0.2527		9.73	10.0	-2.7	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1397		10.7	10.0	7.0	20.0
2-Hexanone	Lin2		0.3342		40.1	40.0	0.2	20.0
1,3-Dichloropropane	Ave	1.258	1.302		10.4	10.0	3.5	20.0
Tetrachloroethene	Ave	1.279	1.351		10.6	10.0	5.6	20.0
Dibromochloromethane	Lin2		0.8060		10.6	10.0	6.0	20.0
1,2-Dibromoethane	Ave	0.5501	0.5980		10.9	10.0	8.7	20.0
1-Chlorohexane	Ave	2.393	2.578		8.62	8.00	7.7	20.0
Chlorobenzene	Ave	3.682	3.799	0.3000	10.3	10.0	3.2	20.0
Ethylbenzene	Ave	2.426	2.536		10.5	10.0	4.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.226		10.9	10.0	8.6	20.0
m,p-Xylene	Ave	2.842	3.005		10.6	10.0	5.7	20.0
o-Xylene	Ave	2.629	2.818		10.7	10.0	7.2	20.0
Styrene	Ave	3.660	4.017		11.0	10.0	9.7	20.0
Bromoform	Lin2		0.3277	0.1000	9.88	10.0	-1.2	20.0
Isopropylbenzene	Ave	5.152	5.553		10.8	10.0	7.8	20.0
Cyclohexanone	Lin2		0.0196		385	400	-3.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4779	0.3000	10.5	10.0	4.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1218		10.8	10.0	8.1	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1326		11.0	10.0	9.5	20.0
N-Propylbenzene	Ave	1.433	1.559		10.9	10.0	8.8	20.0
Bromobenzene	Ave	0.8789	0.9356		10.6	10.0	6.5	20.0
1,3,5-Trimethylbenzene	Ave	4.181	4.493		10.7	10.0	7.5	20.0
2-Chlorotoluene	Ave	1.128	1.191		10.6	10.0	5.6	20.0
4-Chlorotoluene	Ave	1.089	1.163		10.7	10.0	6.8	20.0
tert-Butylbenzene	Ave	4.080	4.418		10.8	10.0	8.3	20.0
1,2,4-Trimethylbenzene	Ave	4.186	4.389		10.5	10.0	4.8	20.0
sec-Butylbenzene	Ave	1.133	1.249		11.0	10.0	10.2	20.0
4-Isopropyltoluene	Ave	4.751	5.089		10.7	10.0	7.1	20.0
1,3-Dichlorobenzene	Ave	1.966	2.004		10.2	10.0	1.9	20.0
1,4-Dichlorobenzene	Ave	1.952	2.018		10.3	10.0	3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.168	5.423		10.5	10.0	4.9	20.0
1,2-Dichlorobenzene	Ave	1.582	1.642		10.4	10.0	3.8	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0553		10.1	10.0	0.6	20.0
1,2,4-Trichlorobenzene	Ave	1.029	1.085		10.5	10.0	5.5	20.0
Hexachlorobutadiene	Ave	0.7951	0.8382		10.5	10.0	5.4	20.0
Naphthalene	Ave	1.333	1.454		10.9	10.0	9.1	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.8282		10.7	10.0	7.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2479		10.2	10.0	2.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2420		10.4	10.0	3.7	20.0
Toluene-d8 (Surr)	Ave	5.289	5.318		10.1	10.0	0.5	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.120		10.0	10.0	0.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 01:12:30 ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_P
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:08 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 07:23:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	31	194486	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1789372	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	88	359716	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	98	529963	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	354866	10.0	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	346469	10.0	10.4	
$ 7 Toluene-d8 (Surr)	98	8.755	8.753	0.002	95	1530342	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	85	474859	10.0	10.0	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	905006	10.0	11.2	
26 Chloromethane	50	4.082	4.083	-0.001	99	555060	10.0	10.5	
27 Vinyl chloride	62	4.222	4.222	0.000	85	566593	10.0	10.5	
29 Bromomethane	94	4.585	4.585	0.000	92	493446	10.0	10.5	
30 Chloroethane	64	4.641	4.641	0.000	99	472660	10.0	10.7	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	1241000	10.0	11.0	
32 Trichlorofluoromethane	101	4.906	4.893	0.013	100	1053658	10.0	10.3	
35 Ethyl ether	59	5.060	5.060	0.000	95	246561	10.0	11.2	
39 Acrolein	56	5.214	5.214	0.000	99	256558	100.0	105.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.298	-0.001	97	462540	10.0	10.7	
41 Acetone	43	5.325	5.326	-0.001	99	183928	40.0	36.2	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	96	567436	10.0	10.8	
44 Iodomethane	142	5.523	5.521	0.002	99	809031	10.0	11.1	
45 Methyl acetate	43	5.558	5.557	0.001	99	229632	20.0	19.8	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	81	1030094	10.0	11.0	
48 Carbon disulfide	76	5.616	5.614	0.002	99	2319182	10.0	10.9	
49 2-Methyl-2-propanol	59	5.666	5.664	0.002	92	104658	100.0	107.6	
50 Methylene Chloride	84	5.701	5.700	0.001	97	435461	10.0	9.66	
52 Acrylonitrile	53	5.873	5.872	0.001	94	469139	100.0	103.1	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	98	604664	10.0	10.7	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	96	558890	10.0	10.9	
54 Hexane	57	6.073	6.072	0.001	96	1001257	10.0	10.4	
55 Vinyl acetate	43	6.181	6.179	0.001	97	746215	20.0	18.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.245	6.243	0.002	97	945102	10.0	10.5	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	100	287907	40.0	39.7	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	38	179173	240.0	236.8	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	89	509848	10.0	10.5	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	802944	10.0	10.5	
67 Chlorobromomethane	128	6.881	6.880	0.001	93	154975	10.0	10.6	
68 Chloroform	83	6.888	6.887	0.001	97	831903	10.0	10.5	
69 Tetrahydrofuran	42	6.910	6.908	0.002	93	87015	20.0	22.7	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	98	879432	10.0	10.8	
70 Isobutyl alcohol	41	7.124	7.123	0.001	97	79194	250.0	224.1	M
72 Cyclohexane	56	7.160	7.166	-0.006	95	1178583	10.0	10.6	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	799774	10.0	10.5	
74 Carbon tetrachloride	117	7.232	7.237	-0.005	97	739330	10.0	10.8	
76 1,2-Dichloroethane	62	7.367	7.366	0.001	98	438224	10.0	10.3	
77 Benzene	78	7.382	7.380	0.002	98	1979818	10.0	10.4	
14 n-Heptane	43	7.446	7.445	0.001	95	1126342	10.0	10.5	
79 Trichloroethene	95	7.846	7.845	0.001	95	530380	10.0	10.7	
80 2-Pentanone	43	7.904	7.902	0.002	97	294907	32.0	31.5	
82 Methylcyclohexane	55	8.032	8.031	0.001	95	930800	10.0	10.3	
83 1,2-Dichloropropane	63	8.040	8.038	0.002	93	449574	10.0	10.8	
84 1,4-Dioxane	88	8.097	8.095	0.002	95	24977	200.0	212.5	M
85 Dibromomethane	93	8.147	8.145	0.002	92	149234	10.0	10.4	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	99	482471	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	92510	10.0	9.19	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	92	528246	10.0	11.0	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	612542	40.0	43.6	
91 Toluene	91	8.805	8.803	0.002	97	2051435	10.0	10.6	
92 Ethyl methacrylate	69	8.890	8.889	0.001	93	213690	10.0	9.86	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	98	361777	10.0	9.73	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	200018	10.0	10.7	
95 2-Hexanone	43	9.176	9.182	-0.006	98	384734	40.0	40.1	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	97	374701	10.0	10.4	
97 Tetrachloroethene	164	9.212	9.211	0.001	95	388679	10.0	10.6	
98 Chlorodibromomethane	129	9.391	9.390	0.001	90	231939	10.0	10.6	
100 Ethylene Dibromide	107	9.520	9.518	0.002	98	172084	10.0	10.9	
101 1-Chlorohexane	91	9.734	9.733	0.001	92	593547	8.00	8.62	
102 Chlorobenzene	112	9.849	9.847	0.002	93	1093171	10.0	10.3	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	95	352811	10.0	10.9	
103 Ethylbenzene	106	9.877	9.883	-0.006	98	729830	10.0	10.5	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	864897	10.0	10.6	
107 o-Xylene	106	10.270	10.269	0.001	88	811057	10.0	10.7	
106 Styrene	104	10.278	10.276	0.002	86	1155883	10.0	11.0	
108 Bromoform	173	10.485	10.483	0.002	93	94310	10.0	9.88	
109 Isopropylbenzene	105	10.528	10.526	0.002	97	2354223	10.0	10.8	
111 Cyclohexanone	55	10.678	10.677	0.001	96	225308	400.0	384.6	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	202621	10.0	10.5	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	85	51636	10.0	10.8	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	86	56235	10.0	11.0	
115 N-Propylbenzene	120	10.842	10.848	-0.006	99	661055	10.0	10.9	
116 Bromobenzene	156	10.850	10.855	-0.005	96	396649	10.0	10.6	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	95	1904933	10.0	10.7	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	505029	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	493274	10.0	10.7	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	1872960	10.0	10.8	
121 1,2,4-Trimethylbenzene	105	11.279	11.277	0.002	96	1860915	10.0	10.5	
122 sec-Butylbenzene	134	11.429	11.427	0.002	95	529384	10.0	11.0	
123 4-Isopropyltoluene	119	11.522	11.520	0.002	96	2157686	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	95	849713	10.0	10.2	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	92	855646	10.0	10.3	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	2299310	10.0	10.5	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	95	696292	10.0	10.4	
129 1,2-Dibromo-3-Chloropropan	157	12.780	12.772	0.008	71	23435	10.0	10.1	
130 1,2,4-Trichlorobenzene	180	13.710	13.708	0.002	93	460078	10.0	10.5	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	93	355376	10.0	10.5	
132 Naphthalene	128	14.081	14.080	0.001	98	616390	10.0	10.9	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	351113	10.0	10.7	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.3	
S 139 Xylenes, Total	106				0		20.0	21.3	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.7	
S 134 Trihalomethanes, Total	1				0		40.0	41.7	
S 135 Xylenes, Total (URS)	1				0		20.0	21.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMain B_00002	Amount Added:	4.00	Units: uL
MV-MainBaddon_00001	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL

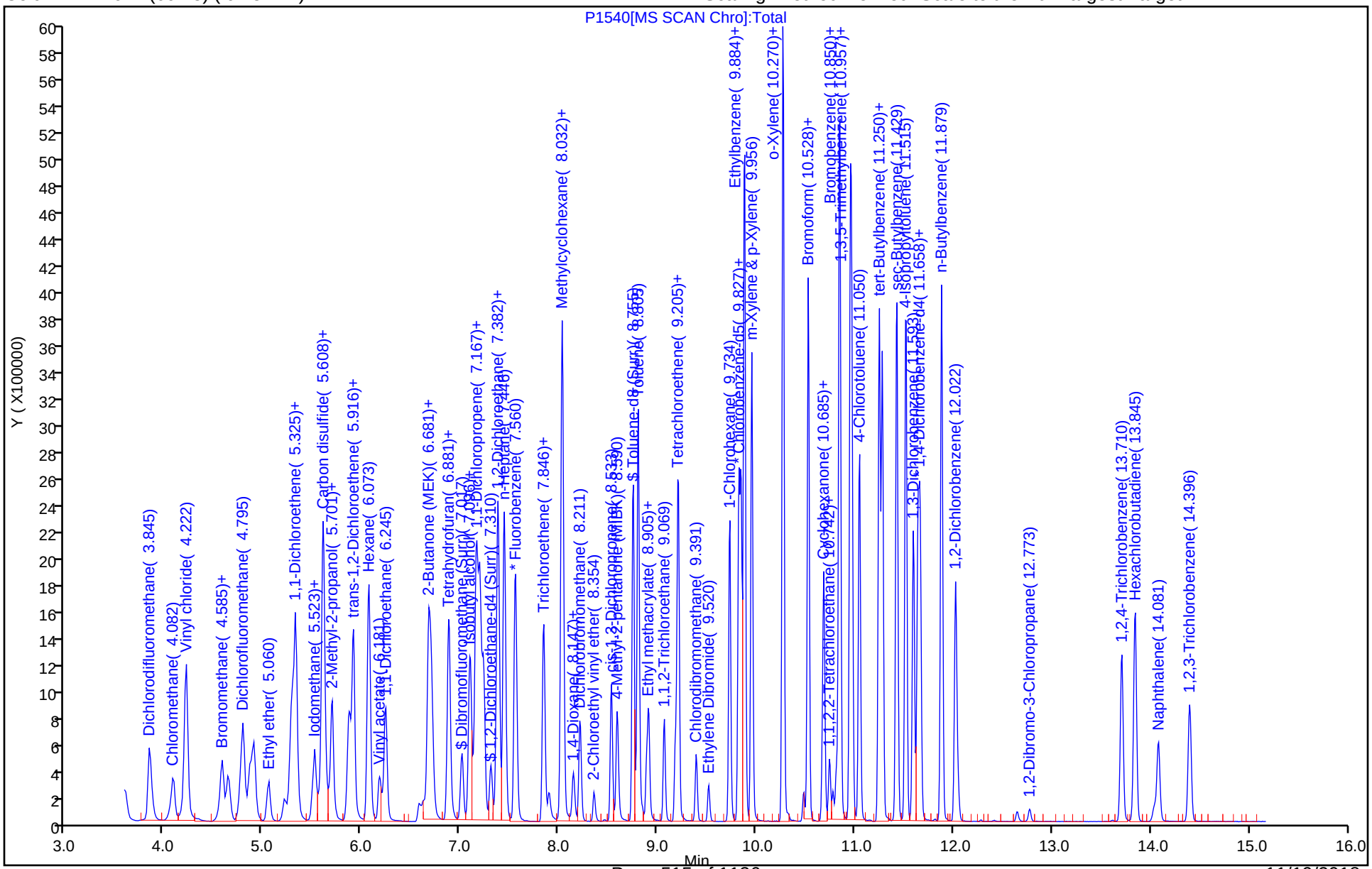
Report Date: 26-Oct-2018 10:28:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D

Injection Date:	23-Oct-2018 01:12:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

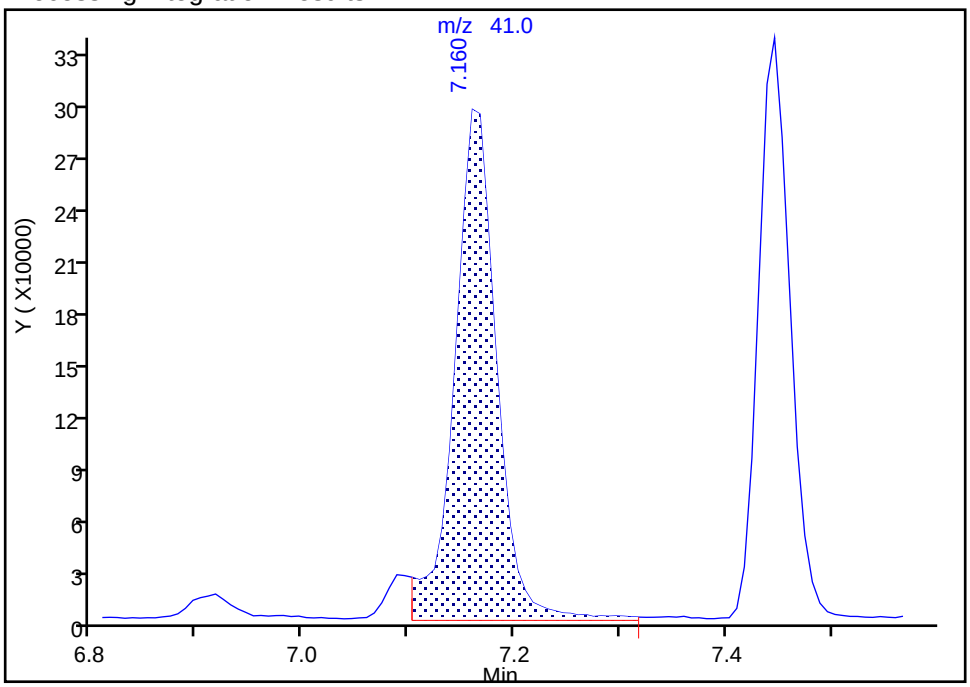
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Injection Date:	23-Oct-2018 01:12:30	Instrument ID:	VMS_P		
Lims ID:	ICV				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	19	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

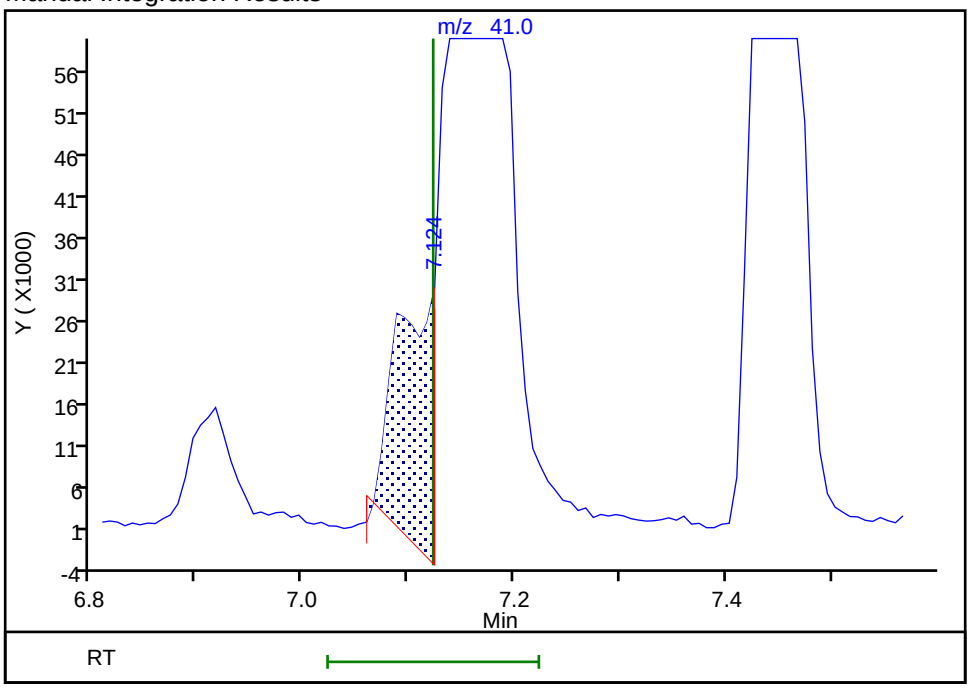
Processing Integration Results

RT: 7.16
Area: 825188
Amount: 1875.2328
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 79194
Amount: 224.1282
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:31:16
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

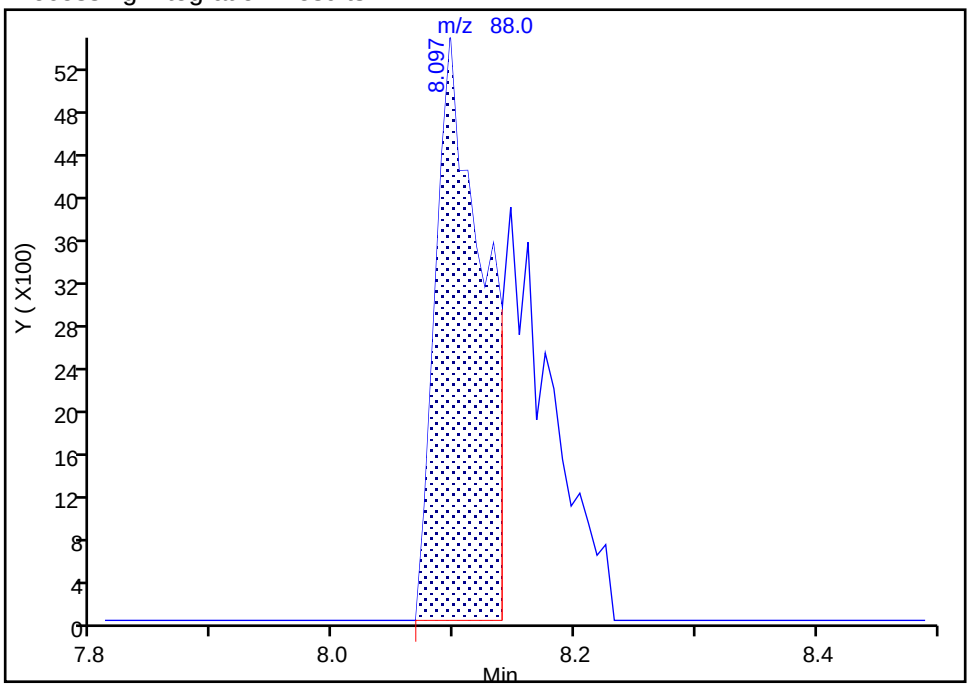
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D				
Injection Date:	23-Oct-2018 01:12:30	Instrument ID:	VMS_P		
Lims ID:	ICV				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	19	Worklist Smp#:	17
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

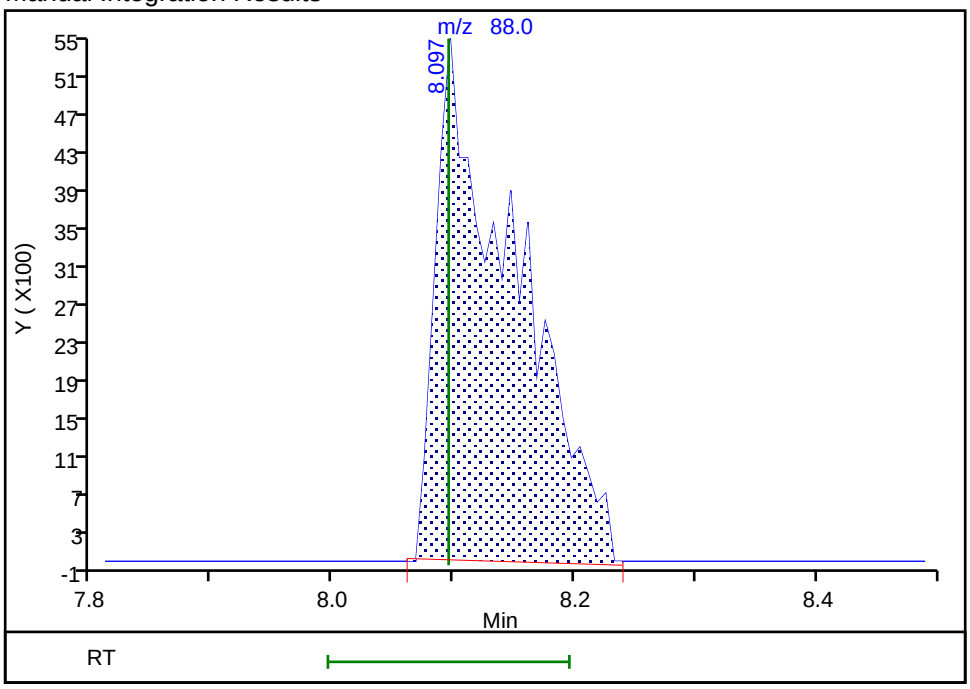
Processing Integration Results

RT: 8.10
Area: 15129
Amount: 137.4098
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 24977
Amount: 212.5064
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:31:35

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436199/2 Calibration Date: 11/03/2018 12:47

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2134.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.6103		10.8	10.0	8.4	20.0
Chloromethane	Ave	0.3707	0.3792	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.3783	0.4102		10.8	10.0	8.4	20.0
Bromomethane	Ave	0.3269	0.3792		11.6	10.0	16.0	20.0
Chloroethane	Ave	0.3098	0.3555		11.5	10.0	14.7	20.0
Dichlorofluoromethane	Ave	0.7871	0.8638		11.0	10.0	9.7	20.0
Trichlorofluoromethane	Ave	0.7129	0.7393		10.4	10.0	3.7	20.0
Ethyl ether	Ave	0.1533	0.1689		11.0	10.0	10.2	20.0
Acrolein	Lin2		0.0181		106	100	6.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3230		10.7	10.0	7.4	20.0
Acetone	Ave	0.0355	0.0361		40.6	40.0	1.5	20.0
1,1-Dichloroethene	Ave	0.3655	0.4078		11.2	10.0	11.6	20.0
Methyl iodide	Ave	0.5074	0.5284		10.4	10.0	4.1	20.0
Methyl acetate	Ave	0.0809	0.0762		18.8	20.0	-5.8	20.0
3-Chloro-1-propene	Ave	0.6527	0.7176		11.0	10.0	9.9	20.0
Carbon disulfide	Ave	1.485	1.648		11.1	10.0	11.0	20.0
t-Butyl alcohol	Lin1		1.195		96.0	100	-4.0	20.0
Methylene Chloride	Ave	0.3148	0.3181		10.1	10.0	1.1	20.0
Acrylonitrile	Lin2		0.0341		107	100	7.3	20.0
Methyl tert-butyl ether	Ave	0.3966	0.4003		10.1	10.0	0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3907		10.9	10.0	8.7	20.0
Hexane	Ave	3.359	3.290		9.79	10.0	-2.1	20.0
Vinyl acetate	Lin2		0.3153		21.9	20.0	9.5	20.0
1,1-Dichloroethane	Ave	0.6299	0.6875	0.1000	10.9	10.0	9.1	20.0
2-Butanone (MEK)	Ave	0.0507	0.0542		42.8	40.0	6.9	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3654		10.7	10.0	7.4	20.0
2,2-Dichloropropane	Ave	0.5342	0.5762		10.8	10.0	7.9	20.0
Bromochloromethane	Ave	0.1018	0.1132		11.1	10.0	11.2	20.0
Chloroform	Ave	0.5547	0.5905		10.6	10.0	6.5	20.0
Tetrahydrofuran	Ave	0.0268	0.0269		20.0	20.0	0.2	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.6153		10.9	10.0	8.5	20.0
Isobutyl alcohol	Lin		0.3585		203	250	-18.7	20.0
Cyclohexane	Ave	0.7766	0.8462		10.9	10.0	9.0	20.0
1,1-Dichloropropene	Ave	0.5299	0.5647		10.7	10.0	6.6	20.0
Carbon tetrachloride	Ave	0.4761	0.5052		10.6	10.0	6.1	20.0
1,2-Dichloroethane	Ave	0.2976	0.3073		10.3	10.0	3.3	20.0
Benzene	Ave	1.329	1.451		10.9	10.0	9.2	20.0
Trichloroethene	Ave	0.3470	0.3697		10.7	10.0	6.5	20.0
Methylcyclohexane	Ave	0.6311	0.6893		10.9	10.0	9.2	20.0
1,2-Dichloropropane	Ave	0.2907	0.3145		10.8	10.0	8.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436199/2 Calibration Date: 11/03/2018 12:47

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2134.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0008		202	200	1.2	20.0
Dibromomethane	Ave	0.1000	0.1062		10.6	10.0	6.1	20.0
Bromodichloromethane	Ave	0.3144	0.3408		10.8	10.0	8.4	20.0
2-Chloroethyl vinyl ether	Lin1		0.0643		9.14	10.0	-8.6	20.0
cis-1,3-Dichloropropene	Lin2		1.595		9.54	10.0	-4.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1098		44.8	40.0	11.9	20.0
Toluene	Ave	1.356	1.499		11.1	10.0	10.5	20.0
Ethyl methacrylate	Lin1		0.6698		8.93	10.0	-10.7	20.0
trans-1,3-Dichloropropene	Lin1		0.2497		9.61	10.0	-3.9	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1441		11.0	10.0	10.4	20.0
2-Hexanone	Lin2		0.3110		37.4	40.0	-6.6	20.0
1,3-Dichloropropane	Ave	1.258	1.263		10.0	10.0	0.4	20.0
Tetrachloroethene	Ave	1.279	1.284		10.0	10.0	0.4	20.0
Dibromochloromethane	Lin2		0.6781		8.95	10.0	-10.5	20.0
1,2-Dibromoethane	Ave	0.5501	0.5555		10.1	10.0	1.0	20.0
Chlorobenzene	Ave	3.682	3.680	0.3000	9.99	10.0	-0.0	20.0
Ethylbenzene	Ave	2.426	2.456		10.1	10.0	1.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.155		10.2	10.0	2.3	20.0
m,p-Xylene	Ave	2.842	2.955		10.4	10.0	4.0	20.0
o-Xylene	Ave	2.629	2.732		10.4	10.0	3.9	20.0
Styrene	Ave	3.660	3.957		10.8	10.0	8.1	20.0
Bromoform	Lin2		0.2921	0.1000	8.84	10.0	-11.6	20.0
Isopropylbenzene	Ave	5.152	5.120		9.94	10.0	-0.6	20.0
Cyclohexanone	Lin2		0.0256		501	400	25.2*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4516	0.3000	9.88	10.0	-1.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.0979		8.69	10.0	-13.1	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1138		9.40	10.0	-6.0	20.0
N-Propylbenzene	Ave	1.433	1.446		10.1	10.0	0.9	20.0
Bromobenzene	Ave	0.8789	0.8634		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	4.181	4.123		9.86	10.0	-1.4	20.0
2-Chlorotoluene	Ave	1.128	1.117		9.91	10.0	-0.9	20.0
4-Chlorotoluene	Ave	1.089	1.079		9.90	10.0	-1.0	20.0
tert-Butylbenzene	Ave	4.080	4.085		10.0	10.0	0.1	20.0
1,2,4-Trimethylbenzene	Ave	4.186	4.178		9.98	10.0	-0.2	20.0
sec-Butylbenzene	Ave	1.133	1.160		10.2	10.0	2.4	20.0
4-Isopropyltoluene	Ave	4.751	4.763		10.0	10.0	0.2	20.0
1,3-Dichlorobenzene	Ave	1.966	1.910		9.72	10.0	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.952	1.866		9.56	10.0	-4.4	20.0
n-Butylbenzene	Ave	5.168	5.294		10.2	10.0	2.4	20.0
1,2-Dichlorobenzene	Ave	1.582	1.559		9.86	10.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0472		8.67	10.0	-13.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436199/2 Calibration Date: 11/03/2018 12:47

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2134.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.029	1.022		9.94	10.0	-0.6	20.0
Hexachlorobutadiene	Ave	0.7951	0.7590		9.55	10.0	-4.5	20.0
Naphthalene	Ave	1.333	1.338		10.0	10.0	0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7613		9.87	10.0	-1.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2134.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 12:47:30 ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub146

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 22:01:49 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: newcomer Date: 12-Nov-2018 21:58:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	30	140634	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1298511	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	89	285567	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	97	450091	12.5	12.5	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	634009	10.0	10.8	
26 Chloromethane	50	4.082	4.082	0.000	98	393864	10.0	10.2	
27 Vinyl chloride	62	4.208	4.208	0.000	98	426095	10.0	10.8	
29 Bromomethane	94	4.571	4.571	0.000	92	393913	10.0	11.6	
30 Chloroethane	64	4.641	4.641	0.000	98	369270	10.0	11.5	
31 Dichlorofluoromethane	67	4.781	4.781	0.000	98	897286	10.0	11.0	
32 Trichlorofluoromethane	101	4.892	4.892	0.000	100	767984	10.0	10.4	
35 Ethyl ether	59	5.046	5.046	0.000	95	175495	10.0	11.0	
39 Acrolein	56	5.214	5.214	0.000	99	187811	100.0	106.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.283	5.283	0.000	96	335525	10.0	10.7	
41 Acetone	43	5.311	5.311	0.000	29	149905	40.0	40.6	
43 1,1-Dichloroethene	96	5.325	5.325	0.000	96	423627	10.0	11.2	
44 Iodomethane	142	5.522	5.522	0.000	99	548900	10.0	10.4	
45 Methyl acetate	43	5.551	5.551	0.000	97	158229	20.0	18.8	
47 3-Chloro-1-propene	41	5.594	5.594	0.000	80	745425	10.0	11.0	
48 Carbon disulfide	76	5.608	5.608	0.000	100	1711678	10.0	11.1	
49 2-Methyl-2-propanol	59	5.658	5.658	0.000	94	67200	100.0	96.0	
50 Methylene Chloride	84	5.694	5.694	0.000	97	330466	10.0	10.1	
51 Methyl tert-butyl ether	73	5.866	5.866	0.000	97	415806	10.0	10.1	
52 Acrylonitrile	53	5.866	5.866	0.000	81	354622	100.0	107.3	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	96	405870	10.0	10.9	
54 Hexane	57	6.066	6.066	0.000	96	751529	10.0	9.79	
55 Vinyl acetate	43	6.173	6.173	0.000	97	655011	20.0	21.9	
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	714126	10.0	10.9	
61 2-Butanone (MEK)	43	6.624	6.624	0.000	99	225345	40.0	42.8	
63 cis-1,2-Dichloroethene	96	6.674	6.674	0.000	88	379556	10.0	10.7	
64 2,2-Dichloropropane	77	6.695	6.695	0.000	89	598590	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	6.874	6.874	0.000	93	117637	10.0	11.1	
68 Chloroform	83	6.881	6.881	0.000	98	613401	10.0	10.6	
69 Tetrahydrofuran	42	6.910	6.910	0.000	88	55864	20.0	20.0	
70 Isobutyl alcohol	41	7.095	7.095	0.000	99	50420	250.0	203.3	M
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	98	639206	10.0	10.9	
72 Cyclohexane	56	7.160	7.160	0.000	97	879030	10.0	10.9	
73 1,1-Dichloropropene	75	7.196	7.196	0.000	95	586598	10.0	10.7	
74 Carbon tetrachloride	117	7.231	7.231	0.000	97	524773	10.0	10.6	
76 1,2-Dichloroethane	62	7.367	7.367	0.000	97	319232	10.0	10.3	
77 Benzene	78	7.381	7.381	0.000	98	1507274	10.0	10.9	
14 n-Heptane	43	7.439	7.439	0.000	95	844727	10.0	10.8	
79 Trichloroethene	95	7.839	7.839	0.000	96	384018	10.0	10.7	
82 Methylcyclohexane	55	8.025	8.025	0.000	96	716092	10.0	10.9	
83 1,2-Dichloropropane	63	8.032	8.032	0.000	92	326692	10.0	10.8	
84 1,4-Dioxane	88	8.096	8.096	0.000	88	17166	200.0	202.4	M
85 Dibromomethane	93	8.147	8.147	0.000	91	110268	10.0	10.6	
86 Dichlorobromomethane	83	8.211	8.211	0.000	98	354045	10.0	10.8	
87 2-Chloroethyl vinyl ether	63	8.354	8.354	0.000	93	66767	10.0	9.14	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	91	364330	10.0	9.54	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	99	456298	40.0	44.8	
91 Toluene	91	8.804	8.804	0.000	97	1556946	10.0	11.1	
92 Ethyl methacrylate	69	8.890	8.890	0.000	91	153021	10.0	8.93	
93 trans-1,3-Dichloropropene	75	8.904	8.904	0.000	99	259377	10.0	9.61	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	94	149692	10.0	11.0	
95 2-Hexanone	43	9.176	9.176	0.000	98	284157	40.0	37.4	
96 1,3-Dichloropropane	76	9.198	9.198	0.000	98	288595	10.0	10.0	
97 Tetrachloroethene	164	9.212	9.212	0.000	94	293230	10.0	10.0	
98 Chlorodibromomethane	129	9.391	9.391	0.000	91	154920	10.0	8.95	
100 Ethylene Dibromide	107	9.519	9.519	0.000	98	126915	10.0	10.1	
102 Chlorobenzene	112	9.848	9.848	0.000	93	840767	10.0	10.0	
103 Ethylbenzene	106	9.877	9.877	0.000	98	561147	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.884	0.000	95	263869	10.0	10.2	
105 m-Xylene & p-Xylene	106	9.956	9.956	0.000	99	675137	10.0	10.4	
107 o-Xylene	106	10.270	10.270	0.000	88	624104	10.0	10.4	
106 Styrene	104	10.270	10.270	0.000	84	904080	10.0	10.8	
108 Bromoform	173	10.477	10.477	0.000	92	66730	10.0	8.84	
109 Isopropylbenzene	105	10.528	10.528	0.000	97	1843592	10.0	9.94	
111 Cyclohexanone	55	10.671	10.671	0.000	95	234130	400.0	500.6	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.742	0.000	95	162592	10.0	9.88	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.778	0.000	81	35250	10.0	8.69	
114 1,2,3-Trichloropropane	110	10.814	10.814	0.000	83	40988	10.0	9.40	
115 N-Propylbenzene	120	10.842	10.842	0.000	99	520729	10.0	10.1	
116 Bromobenzene	156	10.849	10.849	0.000	95	310887	10.0	9.82	
117 1,3,5-Trimethylbenzene	105	10.957	10.957	0.000	94	1484666	10.0	9.86	
118 2-Chlorotoluene	126	10.971	10.971	0.000	96	402379	10.0	9.91	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	388448	10.0	9.90	
120 tert-Butylbenzene	119	11.250	11.250	0.000	92	1470955	10.0	10.0	
121 1,2,4-Trimethylbenzene	105	11.278	11.278	0.000	96	1504301	10.0	9.98	
122 sec-Butylbenzene	134	11.428	11.428	0.000	95	417622	10.0	10.2	
123 4-Isopropyltoluene	119	11.514	11.514	0.000	97	1714860	10.0	10.0	
124 1,3-Dichlorobenzene	146	11.593	11.593	0.000	96	687794	10.0	9.72	
126 1,4-Dichlorobenzene	146	11.664	11.664	0.000	93	672036	10.0	9.56	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
127 n-Butylbenzene	91	11.879	11.879	0.000	99	1906240	10.0	10.2	
128 1,2-Dichlorobenzene	146	12.022	12.022	0.000	95	561463	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.773	0.000	69	16991	10.0	8.67	
130 1,2,4-Trichlorobenzene	180	13.709	13.709	0.000	93	368166	10.0	9.94	
131 Hexachlorobutadiene	225	13.845	13.845	0.000	94	273294	10.0	9.55	
132 Naphthalene	128	14.081	14.081	0.000	98	481780	10.0	10.0	
133 1,2,3-Trichlorobenzene	180	14.396	14.396	0.000	93	274133	10.0	9.87	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.6	
S 134 Trihalomethanes, Total	1				0		40.0	39.3	
S 135 Xylenes, Total (URS)	1				0		20.0	20.8	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.2	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.6	
S 139 Xylenes, Total	106				0		20.0	20.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	
MV-MegaMainA_00005	Amount Added:	4.00	Units: uL	

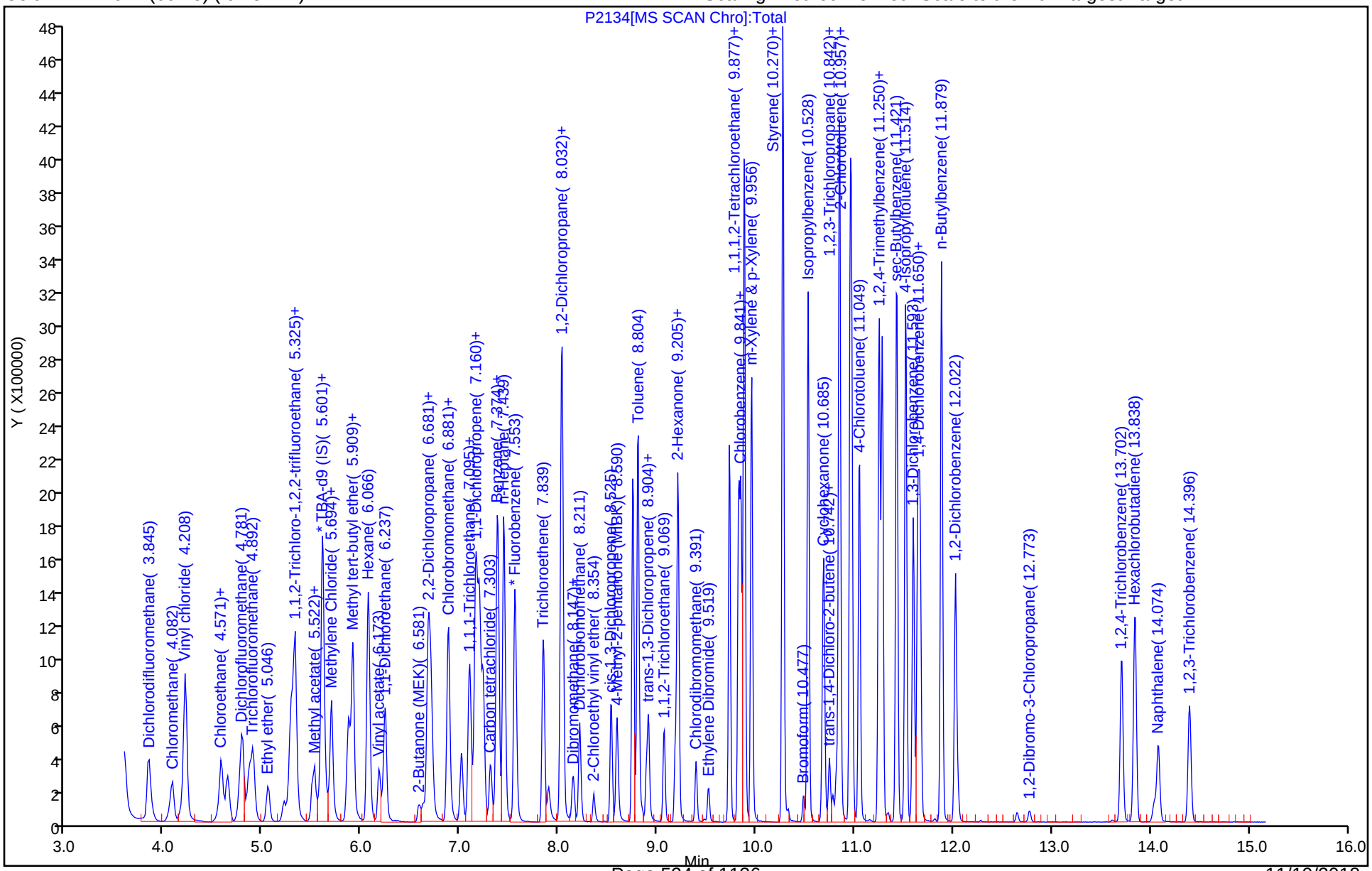
Report Date: 12-Nov-2018 22:01:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2134.D

Injection Date:	03-Nov-2018 12:47:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

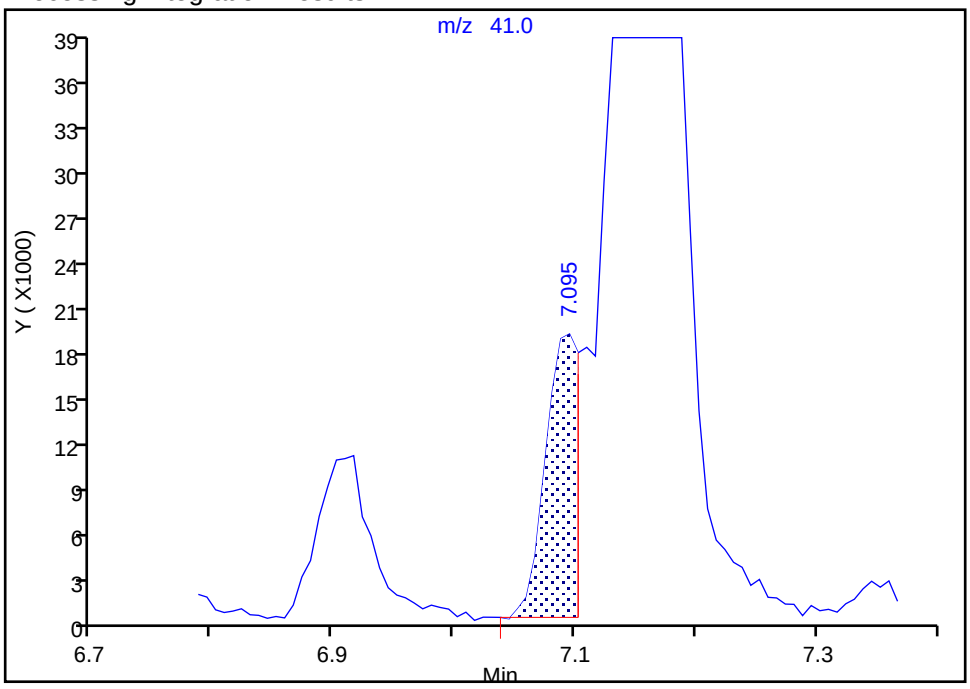
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Injection Date: 03-Nov-2018 12:47:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

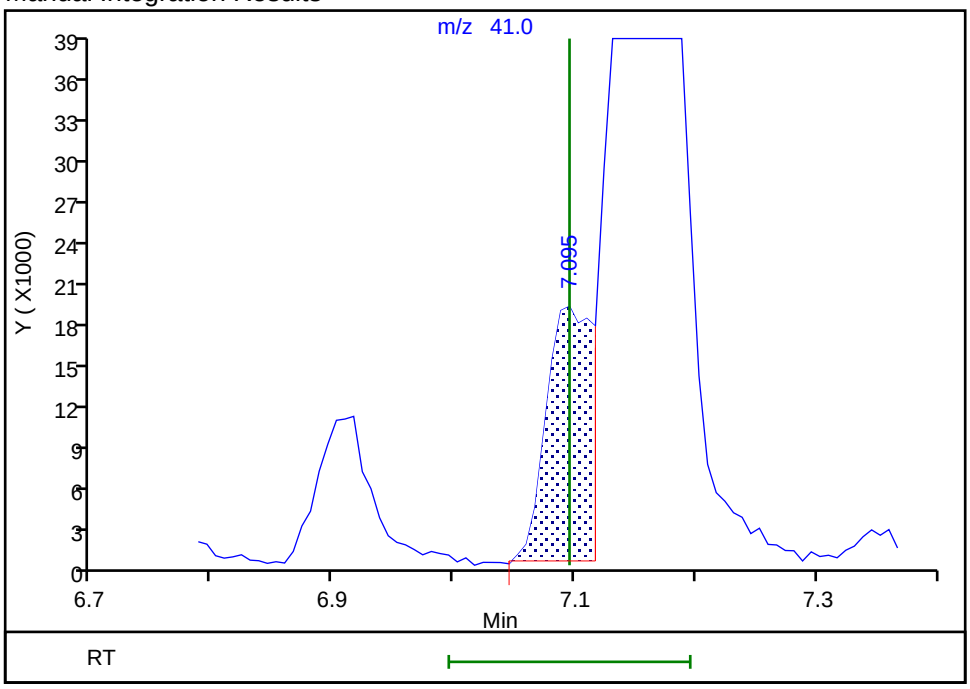
Processing Integration Results

RT: 7.10
Area: 36057
Amount: 159.5520
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 50420
Amount: 203.2845
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 17:52:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

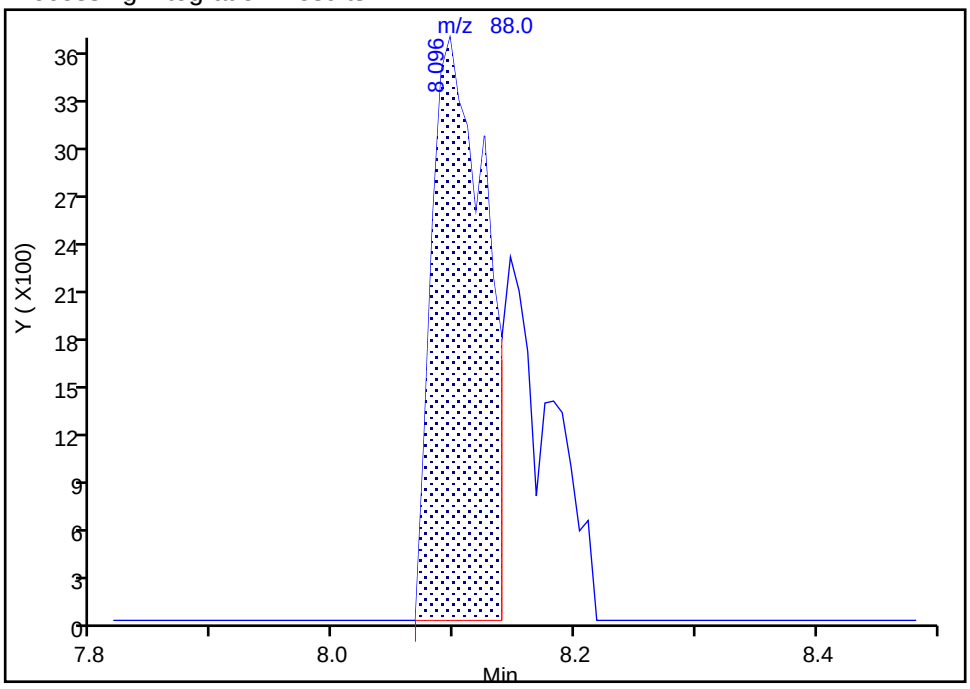
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Injection Date: 03-Nov-2018 12:47:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

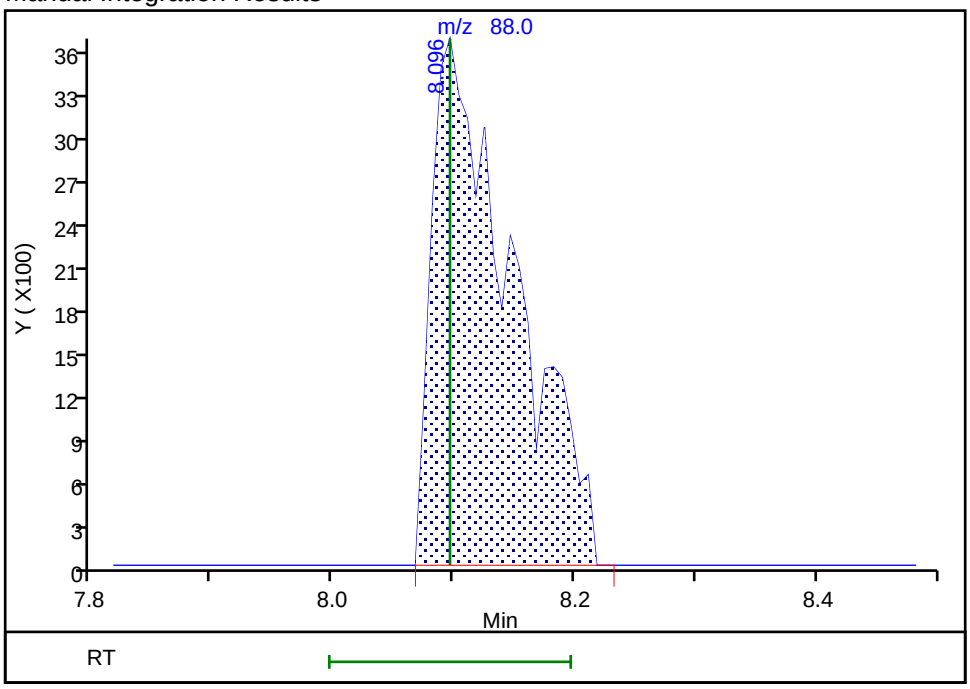
Processing Integration Results

RT: 8.10
Area: 11532
Amount: 143.2228
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 17166
Amount: 202.4259
Amount Units: ug/l



Reviewer: newcomer, 12-Nov-2018 21:58:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436199/3 Calibration Date: 11/03/2018 13:05

Instrument ID: VMS_P Calib Start Date: 08/17/2018 01:38

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/17/2018 03:10

Lab File ID: P2135.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0033	0.0024		719	1000	-28.1*	20.0
Ethanol	Lin1		0.0931		367	600	-38.8*	20.0
Isopropyl alcohol	Ave	0.9689	1.027		106	100	5.9	20.0
Acetonitrile	Lin1		0.0085		90.1	100	-9.9	20.0
Diisopropyl ether	Ave	0.1887	0.1905		10.1	10.0	0.9	20.0
2-Chloro-1,3-butadiene	Ave	0.6158	0.6074		9.86	10.0	-1.4	20.0
Tert-butyl ethyl ether	Ave	0.5878	0.5653		9.62	10.0	-3.8	20.0
Ethyl acetate	Ave	0.0815	0.0706		17.3	20.0	-13.4	20.0
Propionitrile	Lin2		0.0071		73.2	100	-26.8*	20.0
Methacrylonitrile	Ave	0.0637	0.0650		102	100	2.0	20.0
Tert-amyl methyl ether	Ave	0.4231	0.4252		10.0	10.0	0.5	20.0
n-Butanol	Lin2		0.0871		99.9	250	-60.0*	20.0
Methyl methacrylate	Lin2		0.0192		19.1	20.0	-4.3	20.0
2-Nitropropane	Ave	0.0172	0.0136		15.8	20.0	-20.8*	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0697	0.0569		16.3	20.0	-18.4	20.0
1,2,3-Trimethylbenzene	Ave	3.790	3.363		8.87	10.0	-11.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2135.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 13:05:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 13:32:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.594	0.000	97	154765	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1424109	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.819	0.000	90	309123	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	444050	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.009	7.009	0.000	92	301370	10.0	10.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	99	285730	10.0	10.7	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1300113	10.0	9.94	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	379446	10.0	9.57	
28 Ethylene oxide	43	4.515	4.515	0.000	100	272283	1000.0	718.6	
33 Ethanol	45	4.990	4.990	0.000	91	34582	600.0	367.0	
38 Propene oxide	58	5.157	5.157	0.000	96	1607565	1000.0	1073.4	
42 Isopropyl alcohol	45	5.325	5.325	0.000	95	63548	100.0	105.9	
46 Acetonitrile	41	5.601	5.601	0.000	51	97214	100.0	90.1	
56 Isopropyl ether	87	6.180	6.180	0.000	95	217012	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	96	691968	10.0	9.86	
59 Tert-butyl ethyl ether	59	6.459	6.459	0.000	98	644006	10.0	9.62	
60 Ethyl acetate	43	6.609	6.609	0.000	99	160863	20.0	17.3	
65 Propionitrile	54	6.709	6.709	0.000	98	81055	100.0	73.2	
66 Methacrylonitrile	41	6.816	6.816	0.000	95	740741	100.0	102.0	
75 Tert-amyl methyl ether	73	7.360	7.360	0.000	54	484378	10.0	10.0	
78 n-Butanol	56	7.603	7.603	0.000	88	13483	250.0	99.9	
81 Methyl methacrylate	100	7.982	7.982	0.000	93	43846	20.0	19.1	
88 2-Nitropropane	41	8.361	8.361	0.000	96	30990	20.0	15.8	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	90	12325	20.0	12.7	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	97	40398	20.0	16.3	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	99	1194792	10.0	8.87	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	95	460322	10.0	10.6	

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

Report Date: 10-Nov-2018 00:02:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2135.D

Injection Date:	03-Nov-2018 13:05:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436199/3 Calibration Date: 11/03/2018 13:05

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2135.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2430	0.2645		10.9	10.0	8.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2508		10.7	10.0	7.5	20.0
Toluene-d8 (Surr)	Ave	5.289	5.257		9.94	10.0	-0.6	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.068		9.57	10.0	-4.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2135.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 13:05:30 ALS Bottle#: 12 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 13:32:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.594	0.000	97	154765	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1424109	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.819	0.000	90	309123	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	444050	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.009	7.009	0.000	92	301370	10.0	10.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	99	285730	10.0	10.7	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1300113	10.0	9.94	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	379446	10.0	9.57	
28 Ethylene oxide	43	4.515	4.515	0.000	100	272283	1000.0	718.6	
33 Ethanol	45	4.990	4.990	0.000	91	34582	600.0	367.0	
38 Propene oxide	58	5.157	5.157	0.000	96	1607565	1000.0	1073.4	
42 Isopropyl alcohol	45	5.325	5.325	0.000	95	63548	100.0	105.9	
46 Acetonitrile	41	5.601	5.601	0.000	51	97214	100.0	90.1	
56 Isopropyl ether	87	6.180	6.180	0.000	95	217012	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.301	6.301	0.000	96	691968	10.0	9.86	
59 Tert-butyl ethyl ether	59	6.459	6.459	0.000	98	644006	10.0	9.62	
60 Ethyl acetate	43	6.609	6.609	0.000	99	160863	20.0	17.3	
65 Propionitrile	54	6.709	6.709	0.000	98	81055	100.0	73.2	
66 Methacrylonitrile	41	6.816	6.816	0.000	95	740741	100.0	102.0	
75 Tert-amyl methyl ether	73	7.360	7.360	0.000	54	484378	10.0	10.0	
78 n-Butanol	56	7.603	7.603	0.000	88	13483	250.0	99.9	
81 Methyl methacrylate	100	7.982	7.982	0.000	93	43846	20.0	19.1	
88 2-Nitropropane	41	8.361	8.361	0.000	96	30990	20.0	15.8	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	90	12325	20.0	12.7	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	97	40398	20.0	16.3	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	99	1194792	10.0	8.87	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	95	460322	10.0	10.6	

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

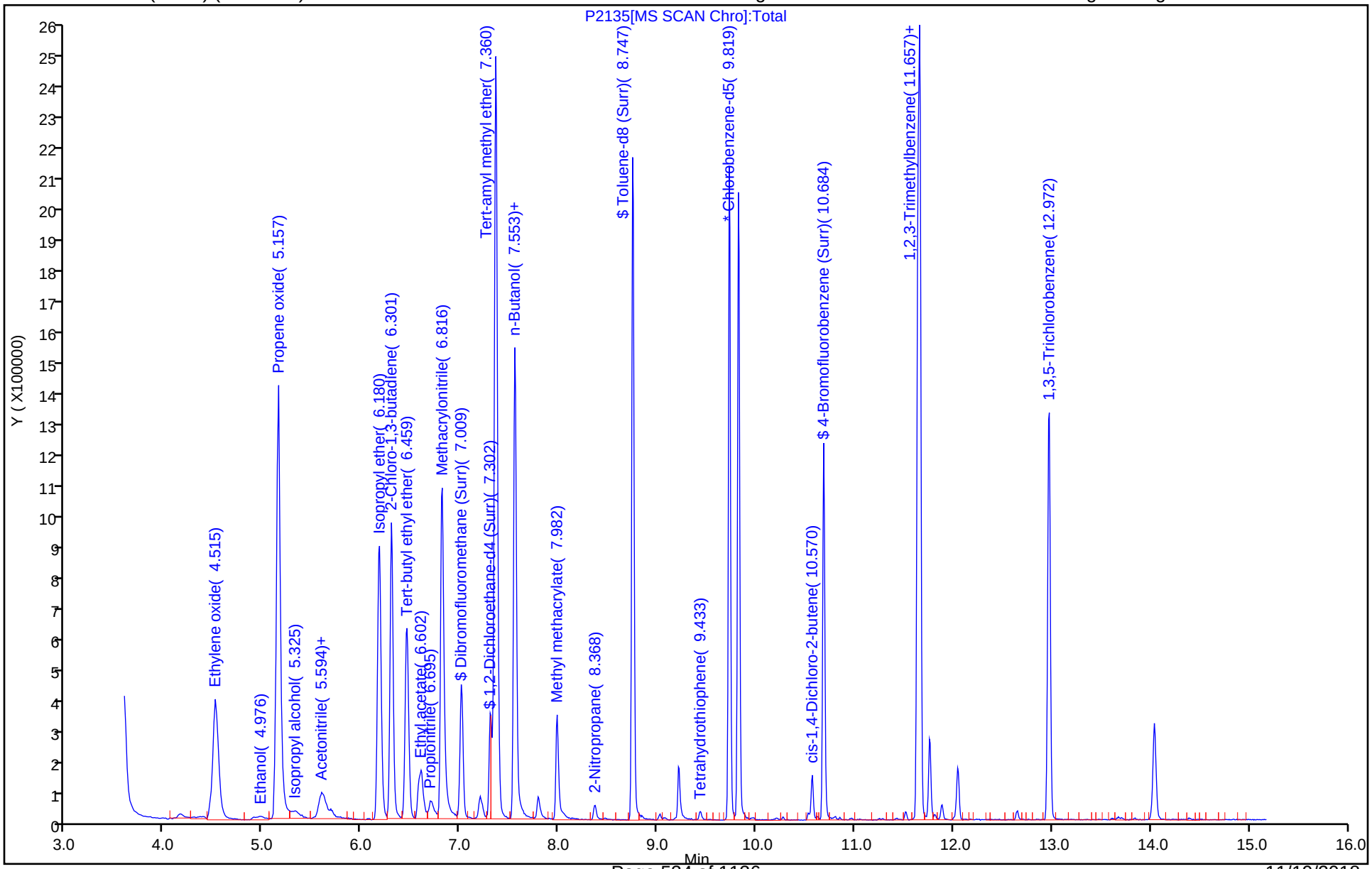
Report Date: 10-Nov-2018 00:02:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2135.D

Injection Date:	03-Nov-2018 13:05:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436199/37 Calibration Date: 11/03/2018 22:27

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2165.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.6160		10.9	10.0	9.4	50.0
Chloromethane	Ave	0.3707	0.3732	0.1000	10.1	10.0	0.7	50.0
Vinyl chloride	Ave	0.3783	0.4090		10.8	10.0	8.1	50.0
Bromomethane	Ave	0.3269	0.3683		11.3	10.0	12.7	50.0
Chloroethane	Ave	0.3098	0.3561		11.5	10.0	15.0	50.0
Dichlorofluoromethane	Ave	0.7871	0.8862		11.3	10.0	12.6	50.0
Trichlorofluoromethane	Ave	0.7129	0.7537		10.6	10.0	5.7	50.0
Ethyl ether	Ave	0.1533	0.1709		11.2	10.0	11.5	50.0
Acrolein	Lin2		0.0176		103	100	2.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3195		10.6	10.0	6.2	50.0
Acetone	Ave	0.0355	0.0364		41.0	40.0	2.4	50.0
1,1-Dichloroethene	Ave	0.3655	0.4047		11.1	10.0	10.7	50.0
Methyl iodide	Ave	0.5074	0.5427		10.7	10.0	7.0	50.0
Methyl acetate	Ave	0.0809	0.0820		20.3	20.0	1.4	50.0
3-Chloro-1-propene	Ave	0.6527	0.7095		10.9	10.0	8.7	50.0
Carbon disulfide	Ave	1.485	1.639		11.0	10.0	10.4	50.0
t-Butyl alcohol	Lin1		1.130		91.0	100	-9.0	50.0
Methylene Chloride	Ave	0.3148	0.3258		10.3	10.0	3.5	50.0
Acrylonitrile	Lin2		0.0356		112	100	11.5	50.0
Methyl tert-butyl ether	Ave	0.3966	0.4152		10.5	10.0	4.7	50.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3921		10.9	10.0	9.1	50.0
Hexane	Ave	3.359	3.151		9.38	10.0	-6.2	50.0
Vinyl acetate	Lin2		0.2731		19.0	20.0	-4.9	50.0
1,1-Dichloroethane	Ave	0.6299	0.7024	0.1000	11.2	10.0	11.5	50.0
2-Butanone (MEK)	Ave	0.0507	0.0564		44.5	40.0	11.2	50.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3725		11.0	10.0	9.5	50.0
2,2-Dichloropropane	Ave	0.5342	0.5137		9.62	10.0	-3.8	50.0
Bromochloromethane	Ave	0.1018	0.1128		11.1	10.0	10.8	50.0
Chloroform	Ave	0.5547	0.6179		11.1	10.0	11.4	50.0
Tetrahydrofuran	Ave	0.0268	0.0256		19.0	20.0	-4.8	50.0
1,1,1-Trichloroethane	Ave	0.5669	0.6252		11.0	10.0	10.3	50.0
Isobutyl alcohol	Lin		0.3830		214	250	-14.5	50.0
Cyclohexane	Ave	0.7766	0.8369		10.8	10.0	7.8	50.0
1,1-Dichloropropene	Ave	0.5299	0.5650		10.7	10.0	6.6	50.0
Carbon tetrachloride	Ave	0.4761	0.5113		10.7	10.0	7.4	50.0
1,2-Dichloroethane	Ave	0.2976	0.3258		10.9	10.0	9.5	50.0
Benzene	Ave	1.329	1.452		10.9	10.0	9.3	50.0
Trichloroethene	Ave	0.3470	0.3635		10.5	10.0	4.8	50.0
Methylcyclohexane	Ave	0.6311	0.6757		10.7	10.0	7.1	50.0
1,2-Dichloropropane	Ave	0.2907	0.3254		11.2	10.0	11.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436199/37 Calibration Date: 11/03/2018 22:27

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2165.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0008		193	200	-3.3	50.0
Dibromomethane	Ave	0.1000	0.1116		11.2	10.0	11.6	50.0
Bromodichloromethane	Ave	0.3144	0.3518		11.2	10.0	11.9	50.0
2-Chloroethyl vinyl ether	Lin1		0.0644		9.15	10.0	-8.5	50.0
cis-1,3-Dichloropropene	Lin2		1.554		9.30	10.0	-7.0	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1140		46.5	40.0	16.2	50.0
Toluene	Ave	1.356	1.446		10.7	10.0	6.6	50.0
Ethyl methacrylate	Lin1		0.6889		9.18	10.0	-8.2	50.0
trans-1,3-Dichloropropene	Lin1		0.2531		9.74	10.0	-2.6	50.0
1,1,2-Trichloroethane	Ave	0.1305	0.1438		11.0	10.0	10.1	50.0
2-Hexanone	Lin2		0.3179		38.2	40.0	-4.6	50.0
1,3-Dichloropropane	Ave	1.258	1.287		10.2	10.0	2.3	50.0
Tetrachloroethene	Ave	1.279	1.176		9.20	10.0	-8.0	50.0
Dibromochloromethane	Lin2		0.7013		9.25	10.0	-7.5	50.0
1,2-Dibromoethane	Ave	0.5501	0.5768		10.5	10.0	4.9	50.0
Chlorobenzene	Ave	3.682	3.509	0.3000	9.53	10.0	-4.7	50.0
Ethylbenzene	Ave	2.426	2.306		9.51	10.0	-4.9	50.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.132		10.0	10.0	0.3	50.0
m,p-Xylene	Ave	2.842	2.657		9.35	10.0	-6.5	50.0
o-Xylene	Ave	2.629	2.531		9.63	10.0	-3.7	50.0
Styrene	Ave	3.660	3.734		10.2	10.0	2.0	50.0
Bromoform	Lin2		0.2957	0.1000	8.94	10.0	-10.6	50.0
Isopropylbenzene	Ave	5.152	4.599		8.93	10.0	-10.7	50.0
Cyclohexanone	Lin2		0.0273		533	400	33.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4465	0.3000	9.77	10.0	-2.3	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.0915		8.13	10.0	-18.7	50.0
1,2,3-Trichloropropane	Ave	0.1211	0.1175		9.70	10.0	-3.0	50.0
N-Propylbenzene	Ave	1.433	1.227		8.56	10.0	-14.4	50.0
Bromobenzene	Ave	0.8789	0.8286		9.43	10.0	-5.7	50.0
1,3,5-Trimethylbenzene	Ave	4.181	3.669		8.77	10.0	-12.3	50.0
2-Chlorotoluene	Ave	1.128	1.009		8.94	10.0	-10.6	50.0
4-Chlorotoluene	Ave	1.089	0.9605		8.82	10.0	-11.8	50.0
tert-Butylbenzene	Ave	4.080	3.614		8.86	10.0	-11.4	50.0
1,2,4-Trimethylbenzene	Ave	4.186	3.643		8.70	10.0	-13.0	50.0
sec-Butylbenzene	Ave	1.133	0.9838		8.68	10.0	-13.2	50.0
4-Isopropyltoluene	Ave	4.751	4.009		8.44	10.0	-15.6	50.0
1,3-Dichlorobenzene	Ave	1.966	1.744		8.87	10.0	-11.3	50.0
1,4-Dichlorobenzene	Ave	1.952	1.702		8.72	10.0	-12.8	50.0
n-Butylbenzene	Ave	5.168	4.338		8.39	10.0	-16.1	50.0
1,2-Dichlorobenzene	Ave	1.582	1.444		9.13	10.0	-8.7	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0546		9.94	10.0	-0.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436199/37 Calibration Date: 11/03/2018 22:27

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2165.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.029	0.8930		8.68	10.0	-13.2	50.0
Hexachlorobutadiene	Ave	0.7951	0.5996		7.54	10.0	-24.6	50.0
Naphthalene	Ave	1.333	1.219		9.14	10.0	-8.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.6990		9.06	10.0	-9.4	50.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2668		11.0	10.0	9.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2697		11.6	10.0	15.6	50.0
Toluene-d8 (Surr)	Ave	5.289	5.029		9.51	10.0	-4.9	50.0
4-Bromofluorobenzene (Surr)	Ave	1.116	0.9709		8.70	10.0	-13.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2165.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 03-Nov-2018 22:27:30 ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub145

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 22:11:35 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0318

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	31	127036	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1092750	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	89	242321	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	97	383397	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.010	7.009	0.001	92	233204	10.0	11.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	99	235743	10.0	11.6	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	974818	10.0	9.51	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	83	297781	10.0	8.70	
23 Dichlorodifluoromethane	85	3.847	3.845	0.002	100	538523	10.0	10.9	
26 Chloromethane	50	4.085	4.082	0.003	97	326220	10.0	10.1	
27 Vinyl chloride	62	4.210	4.208	0.002	95	357546	10.0	10.8	
29 Bromomethane	94	4.573	4.571	0.002	92	321924	10.0	11.3	
30 Chloroethane	64	4.643	4.641	0.002	98	311330	10.0	11.5	
31 Dichlorofluoromethane	67	4.797	4.781	0.016	98	774680	10.0	11.3	
32 Trichlorofluoromethane	101	4.895	4.892	0.003	99	658859	10.0	10.6	
35 Ethyl ether	59	5.048	5.046	0.002	95	149435	10.0	11.2	
39 Acrolein	56	5.216	5.214	0.002	99	153464	100.0	102.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.286	5.283	0.003	96	279300	10.0	10.6	
41 Acetone	43	5.314	5.311	0.003	30	127245	40.0	41.0	
43 1,1-Dichloroethene	96	5.328	5.325	0.003	95	353819	10.0	11.1	
44 Iodomethane	142	5.522	5.522	0.000	99	474405	10.0	10.7	
45 Methyl acetate	43	5.551	5.551	0.000	97	143407	20.0	20.3	
47 3-Chloro-1-propene	41	5.601	5.594	0.007	78	620238	10.0	10.9	
48 Carbon disulfide	76	5.608	5.608	0.000	99	1433181	10.0	11.0	
49 2-Methyl-2-propanol	59	5.673	5.658	0.015	93	57411	100.0	91.0	
50 Methylene Chloride	84	5.694	5.694	0.000	98	284822	10.0	10.3	
51 Methyl tert-butyl ether	73	5.866	5.866	0.000	97	362991	10.0	10.5	
52 Acrylonitrile	53	5.866	5.866	0.000	99	310771	100.0	111.5	
53 trans-1,2-Dichloroethene	96	5.909	5.916	-0.008	96	342769	10.0	10.9	
54 Hexane	57	6.066	6.066	0.000	96	610750	10.0	9.38	
55 Vinyl acetate	43	6.173	6.173	0.000	97	477513	20.0	19.0	
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	614027	10.0	11.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.624	6.624	0.000	99	197257	40.0	44.5	
63 cis-1,2-Dichloroethene	96	6.674	6.674	0.000	87	325628	10.0	11.0	
64 2,2-Dichloropropane	77	6.702	6.695	0.007	90	449067	10.0	9.62	
67 Chlorobromomethane	128	6.874	6.874	0.000	92	98606	10.0	11.1	
68 Chloroform	83	6.881	6.881	0.000	97	540172	10.0	11.1	
69 Tetrahydrofuran	42	6.902	6.910	-0.008	47	44668	20.0	19.0	
70 Isobutyl alcohol	41	7.095	7.095	0.000	98	48652	250.0	213.8	M
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	97	546509	10.0	11.0	
72 Cyclohexane	56	7.160	7.160	0.000	96	731638	10.0	10.8	
73 1,1-Dichloropropene	75	7.196	7.196	0.000	97	493960	10.0	10.7	
74 Carbon tetrachloride	117	7.231	7.231	0.000	97	446986	10.0	10.7	
76 1,2-Dichloroethane	62	7.367	7.367	0.000	97	284842	10.0	10.9	
77 Benzene	78	7.381	7.381	0.000	98	1269070	10.0	10.9	
14 n-Heptane	43	7.439	7.439	0.000	95	685241	10.0	10.4	
79 Trichloroethene	95	7.839	7.839	0.000	94	317759	10.0	10.5	
82 Methylcyclohexane	55	8.025	8.025	0.000	96	590690	10.0	10.7	
83 1,2-Dichloropropane	63	8.039	8.032	0.007	93	284432	10.0	11.2	
84 1,4-Dioxane	88	8.104	8.096	0.008	92	13716	200.0	193.3	M
85 Dibromomethane	93	8.139	8.147	-0.008	91	97589	10.0	11.2	
86 Dichlorobromomethane	83	8.211	8.211	0.000	98	307511	10.0	11.2	
87 2-Chloroethyl vinyl ether	63	8.354	8.354	0.000	91	56262	10.0	9.15	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	91	301254	10.0	9.30	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	99	398581	40.0	46.5	
91 Toluene	91	8.804	8.804	0.000	97	1263749	10.0	10.7	
92 Ethyl methacrylate	69	8.890	8.890	0.000	91	133542	10.0	9.18	
93 trans-1,3-Dichloropropene	75	8.912	8.904	0.008	98	221213	10.0	9.74	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	94	125670	10.0	11.0	
95 2-Hexanone	43	9.176	9.176	0.000	97	246473	40.0	38.2	
96 1,3-Dichloropropane	76	9.198	9.198	0.000	98	249414	10.0	10.2	
97 Tetrachloroethene	164	9.212	9.212	0.000	94	227925	10.0	9.20	
98 Chlorodibromomethane	129	9.391	9.391	0.000	90	135956	10.0	9.25	
100 Ethylene Dibromide	107	9.519	9.519	0.000	98	111821	10.0	10.5	
102 Chlorobenzene	112	9.848	9.848	0.000	92	680246	10.0	9.53	
103 Ethylbenzene	106	9.877	9.877	0.000	98	447100	10.0	9.51	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.884	0.000	94	219492	10.0	10.0	
105 m-Xylene & p-Xylene	106	9.955	9.956	-0.001	99	515011	10.0	9.35	
107 o-Xylene	106	10.270	10.270	0.000	88	490642	10.0	9.63	
106 Styrene	104	10.270	10.270	0.000	83	723856	10.0	10.2	
108 Bromoform	173	10.485	10.477	0.008	92	57314	10.0	8.94	
109 Isopropylbenzene	105	10.527	10.528	-0.001	97	1410602	10.0	8.93	
111 Cyclohexanone	55	10.678	10.671	0.007	95	211596	400.0	532.6	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.742	0.000	95	136960	10.0	9.77	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.778	0.000	71	28078	10.0	8.13	
114 1,2,3-Trichloropropane	110	10.813	10.814	-0.001	90	36037	10.0	9.70	
115 N-Propylbenzene	120	10.842	10.842	0.000	99	376310	10.0	8.56	
116 Bromobenzene	156	10.849	10.849	0.000	97	254155	10.0	9.43	
117 1,3,5-Trimethylbenzene	105	10.957	10.957	-0.001	95	1125352	10.0	8.77	
118 2-Chlorotoluene	126	10.971	10.971	0.000	94	309476	10.0	8.94	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	294608	10.0	8.82	
120 tert-Butylbenzene	119	11.250	11.250	0.000	93	1108428	10.0	8.86	
121 1,2,4-Trimethylbenzene	105	11.278	11.278	0.000	99	1117256	10.0	8.70	
122 sec-Butylbenzene	134	11.428	11.428	0.000	96	301758	10.0	8.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.514	11.514	0.000	97	1229633	10.0	8.44	
124 1,3-Dichlorobenzene	146	11.593	11.593	0.000	96	534763	10.0	8.87	
126 1,4-Dichlorobenzene	146	11.664	11.664	0.000	92	522019	10.0	8.72	
127 n-Butylbenzene	91	11.879	11.879	0.000	99	1330540	10.0	8.39	
128 1,2-Dichlorobenzene	146	12.022	12.022	0.000	95	442978	10.0	9.13	
129 1,2-Dibromo-3-Chloropropan	157	12.765	12.773	-0.008	74	16746	10.0	9.94	
130 1,2,4-Trichlorobenzene	180	13.709	13.709	0.000	93	273886	10.0	8.68	
131 Hexachlorobutadiene	225	13.845	13.845	0.000	93	183910	10.0	7.54	
132 Naphthalene	128	14.081	14.081	0.000	98	373815	10.0	9.14	
133 1,2,3-Trichlorobenzene	180	14.396	14.396	0.000	95	214403	10.0	9.06	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 134 Trihalomethanes, Total	1				0		40.0	40.5	
S 135 Xylenes, Total (URS)	1				0		20.0	19.0	
S 136 Total BTEX	1				0			50.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.0	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.9	
S 139 Xylenes, Total	106				0		20.0	19.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00005	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

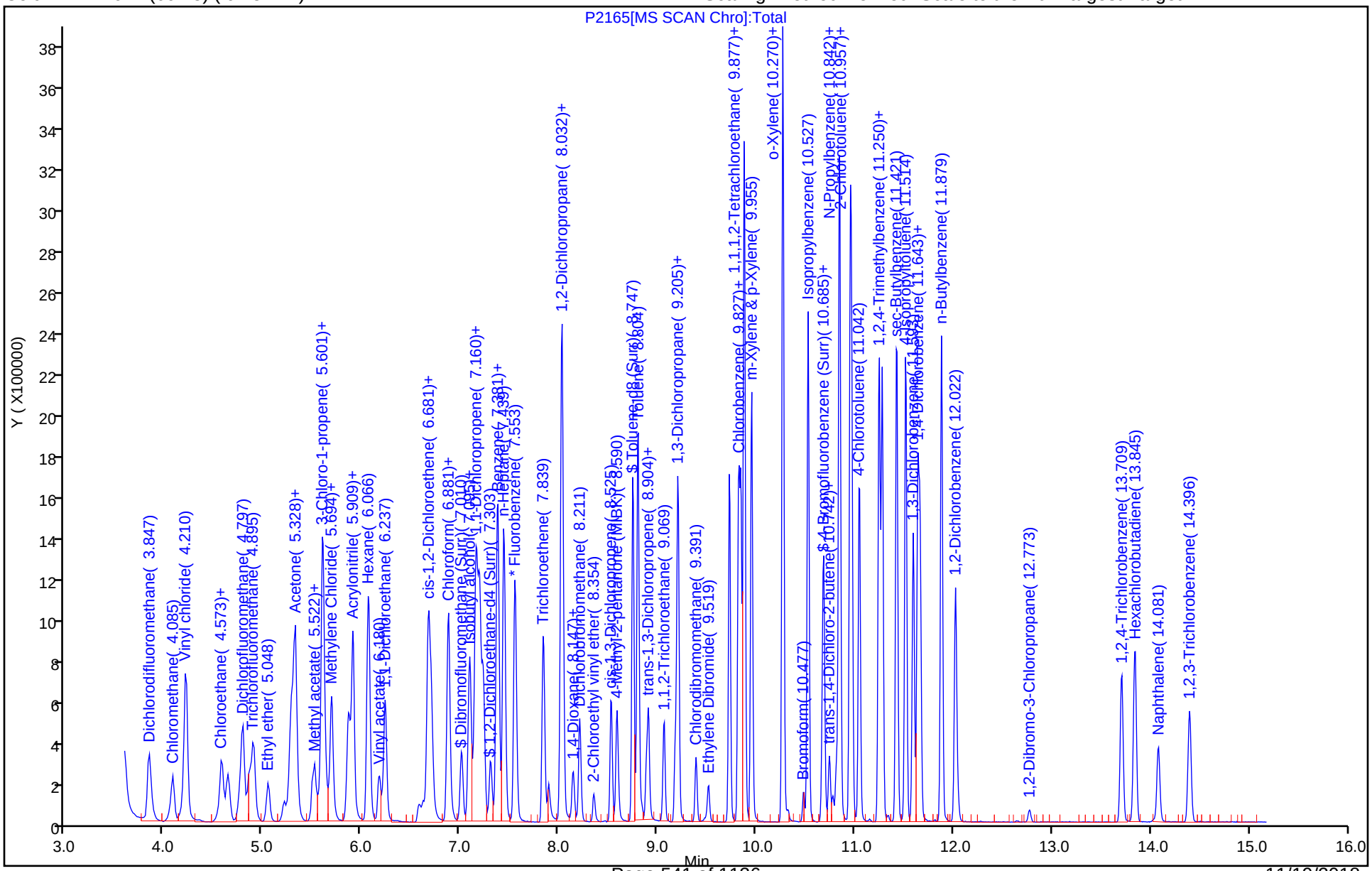
Report Date: 12-Nov-2018 22:11:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2165.D

Injection Date:	03-Nov-2018 22:27:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

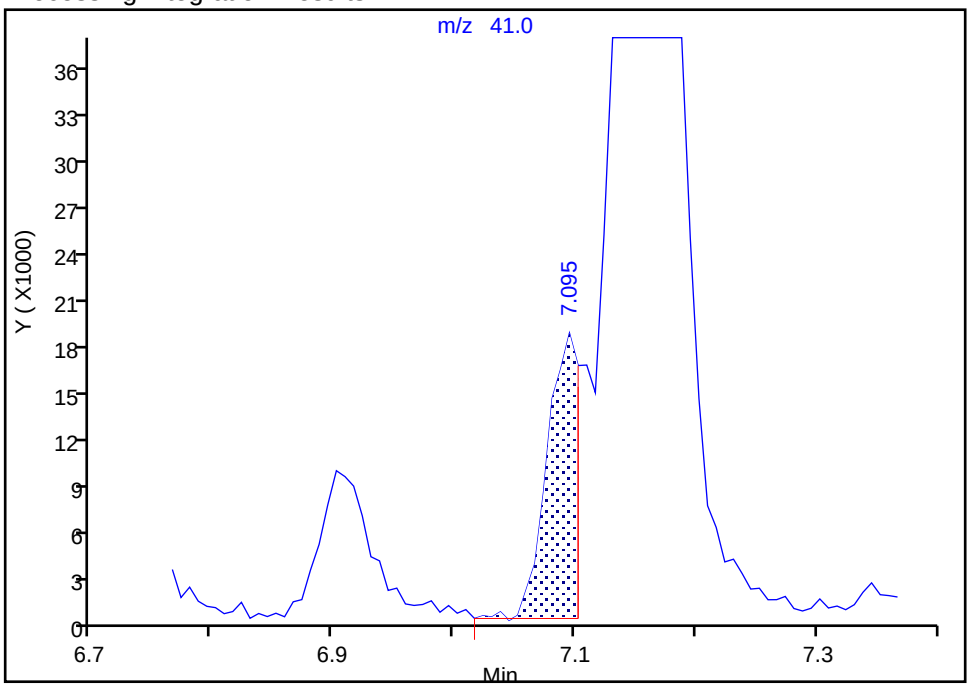
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2165.D
Injection Date: 03-Nov-2018 22:27:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

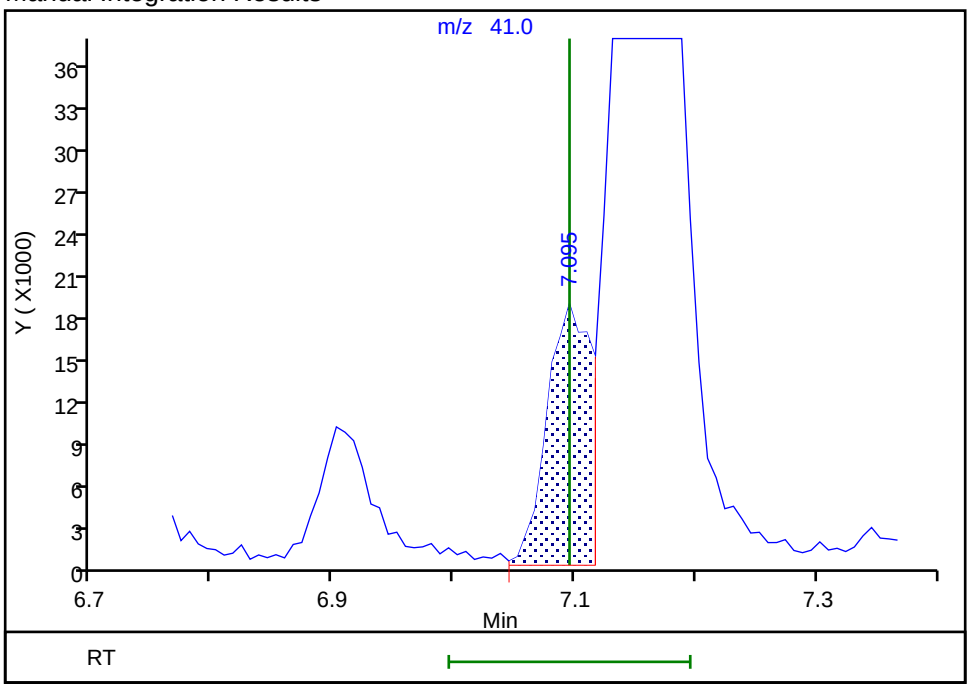
Processing Integration Results

RT: 7.10
Area: 33826
Amount: 163.7836
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 48652
Amount: 213.7578
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 18:52:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

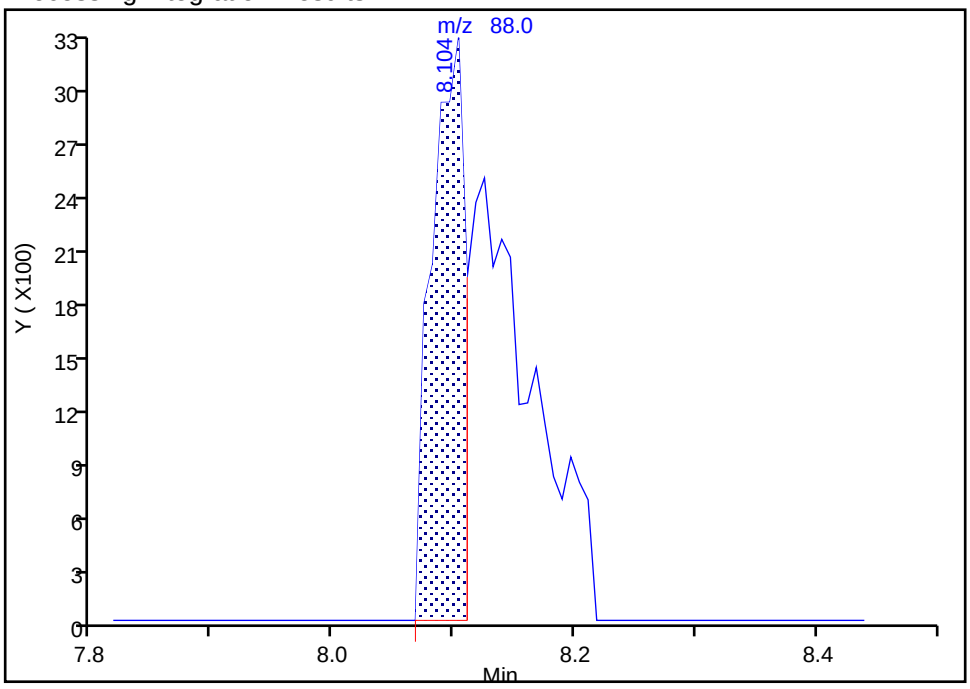
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2165.D
Injection Date: 03-Nov-2018 22:27:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 42 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

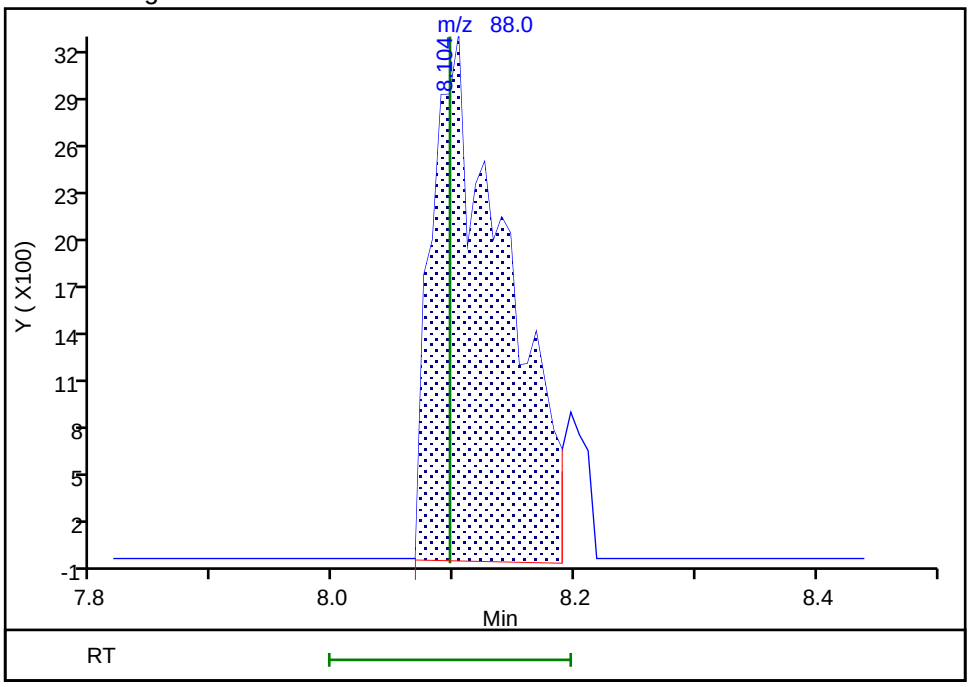
Processing Integration Results

RT: 8.10
Area: 6228
Amount: 99.810535
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 13716
Amount: 193.3119
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 18:52:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436199/38 Calibration Date: 11/03/2018 22:46

Instrument ID: VMS_P Calib Start Date: 08/17/2018 01:38

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/17/2018 03:10

Lab File ID: P2166.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0033	0.0027		823	1000	-17.7	50.0
Ethanol	Lin1		0.1683		695	600	15.8	50.0
Isopropyl alcohol	Ave	0.9689	0.9148		94.4	100	-5.6	50.0
Acetonitrile	Lin1		0.0105		110	100	10.3	50.0
Diisopropyl ether	Ave	0.1887	0.2016		10.7	10.0	6.8	50.0
2-Chloro-1,3-butadiene	Ave	0.6158	0.6435		10.5	10.0	4.5	50.0
Tert-butyl ethyl ether	Ave	0.5878	0.6037		10.3	10.0	2.7	50.0
Ethyl acetate	Ave	0.0815	0.0820		20.1	20.0	0.6	50.0
Propionitrile	Lin2		0.0090		91.2	100	-8.8	50.0
Methacrylonitrile	Ave	0.0637	0.0717		113	100	12.6	50.0
Tert-amyl methyl ether	Ave	0.4231	0.4555		10.8	10.0	7.7	50.0
n-Butanol	Lin2		0.1429		137	250	-45.1	50.0
Methyl methacrylate	Lin2		0.0205		20.3	20.0	1.6	50.0
2-Nitropropane	Ave	0.0172	0.0156		18.2	20.0	-9.2	50.0
cis-1,4-Dichloro-2-butene	Ave	0.0697	0.0476		13.7	20.0	-31.7	50.0
1,2,3-Trimethylbenzene	Ave	3.790	3.262		8.61	10.0	-13.9	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 03-Nov-2018 22:46:30 ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:08:42 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: seifertj Date: 05-Nov-2018 07:41:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.601	-0.008	96	142261	250.0	250.0	M
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1199091	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.820	-0.001	90	268291	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.643	-0.001	97	376141	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.009	0.007	92	258086	10.0	11.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	99	253828	10.0	11.3	
$ 7 Toluene-d8 (Surr)	98	8.746	8.747	-0.001	95	1080160	10.0	9.52	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	301241	10.0	8.97	
28 Ethylene oxide	43	4.529	4.515	0.014	100	262548	1000.0	822.9	
33 Ethanol	45	4.989	4.990	-0.001	96	57447	600.0	694.6	M
38 Propene oxide	58	5.157	5.157	0.000	96	1412231	1000.0	1119.9	
42 Isopropyl alcohol	45	5.339	5.325	0.014	96	52056	100.0	94.4	
46 Acetonitrile	41	5.593	5.601	-0.008	54	101057	100.0	110.3	M
56 Isopropyl ether	87	6.180	6.180	0.000	94	193353	10.0	10.7	
58 2-Chloro-1,3-butadiene	53	6.308	6.301	0.007	95	617329	10.0	10.5	
59 Tert-butyl ethyl ether	59	6.458	6.459	-0.001	97	579142	10.0	10.3	
60 Ethyl acetate	43	6.609	6.609	0.000	99	157402	20.0	20.1	
65 Propionitrile	54	6.716	6.709	0.007	97	85927	100.0	91.2	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	688141	100.0	112.6	
75 Tert-amyl methyl ether	73	7.359	7.360	-0.001	90	436944	10.0	10.8	
78 n-Butanol	56	7.602	7.603	-0.001	88	20323	250.0	137.3	
81 Methyl methacrylate	100	7.981	7.982	-0.001	92	39302	20.0	20.3	
88 2-Nitropropane	41	8.368	8.361	0.007	98	29919	20.0	18.2	
99 Tetrahydrothiophene	60	9.440	9.433	0.007	90	11048	20.0	13.1	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	93	28628	20.0	13.7	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	98	981566	10.0	8.61	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	94	355438	10.0	9.67	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

Report Date: 10-Nov-2018 00:08:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D

Injection Date:	03-Nov-2018 22:46:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

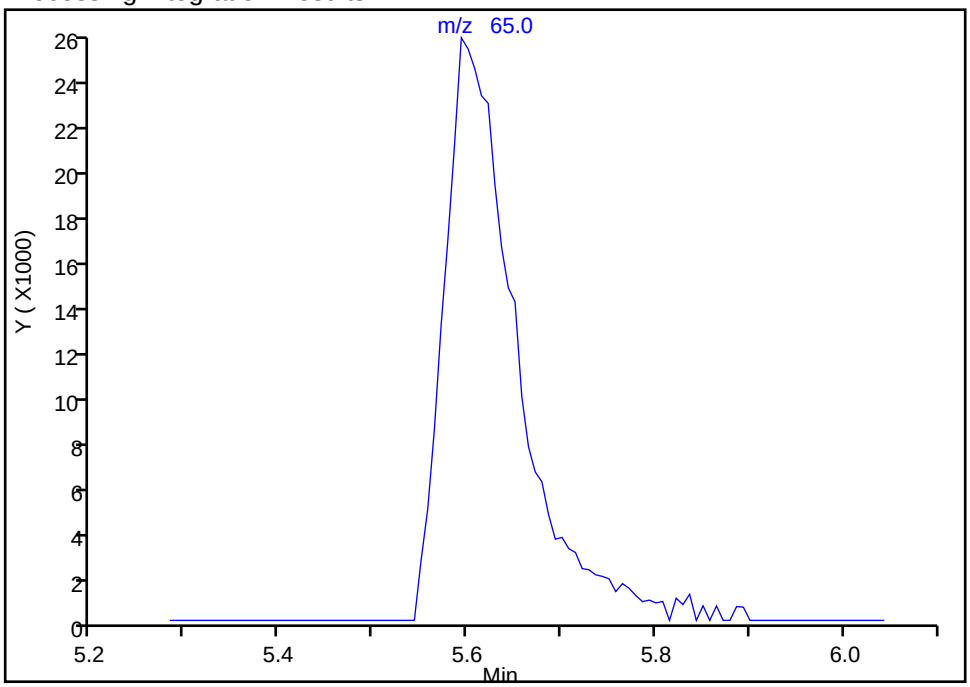
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Injection Date: 03-Nov-2018 22:46:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

* 150 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

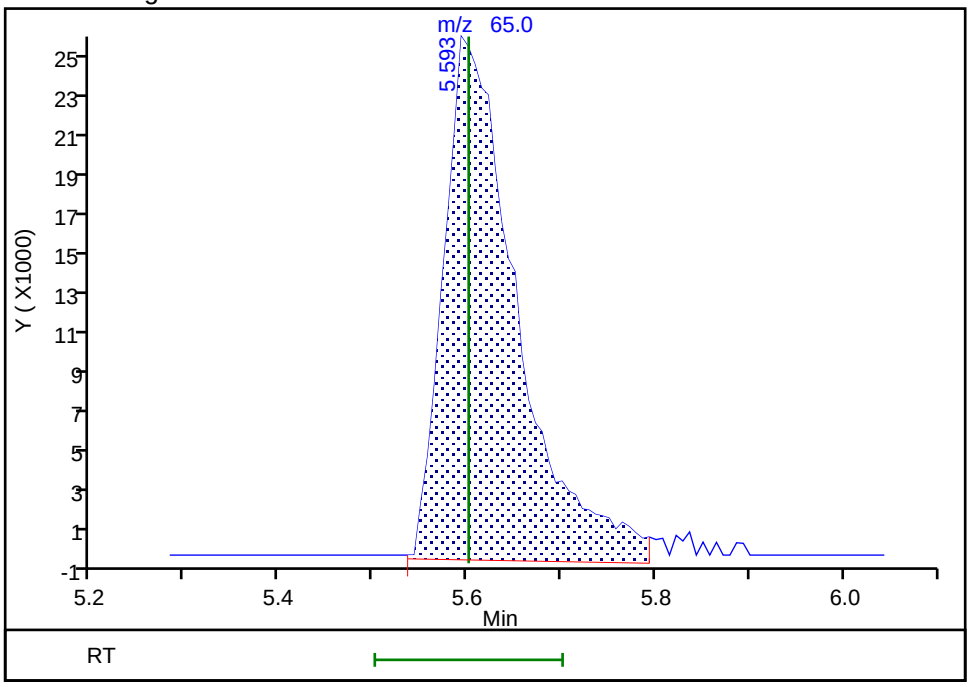
Processing Integration Results

Not Detected
Expected RT: 5.60



Manual Integration Results

RT: 5.59
Area: 142261
Amount: 250.0000
Amount Units: ug/l



Reviewer: seifertj, 05-Nov-2018 07:41:21
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

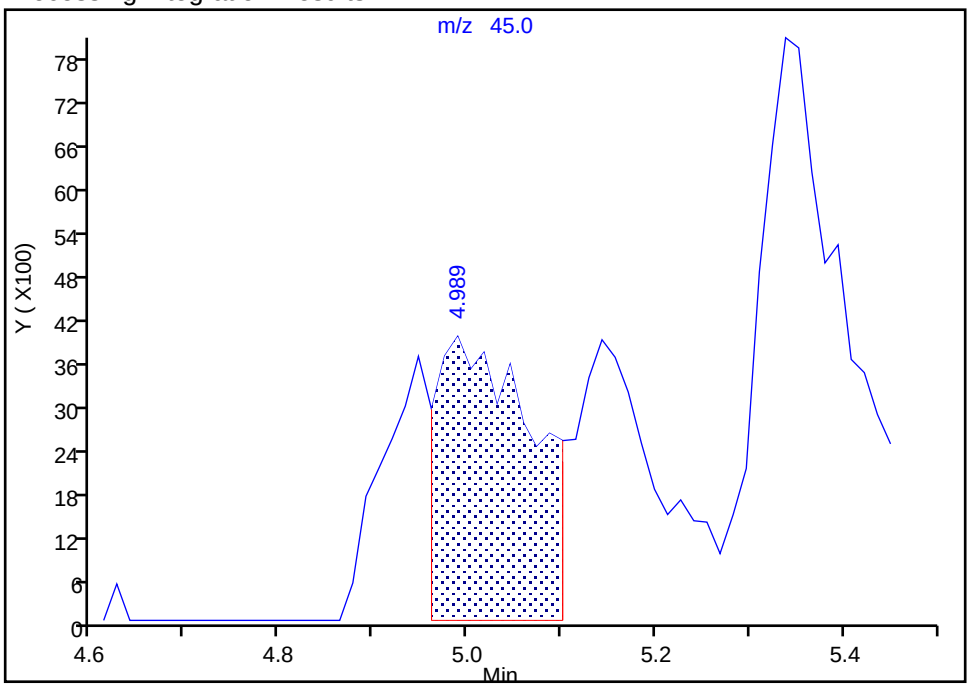
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Injection Date: 03-Nov-2018 22:46:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

33 Ethanol, CAS: 64-17-5

Signal: 1

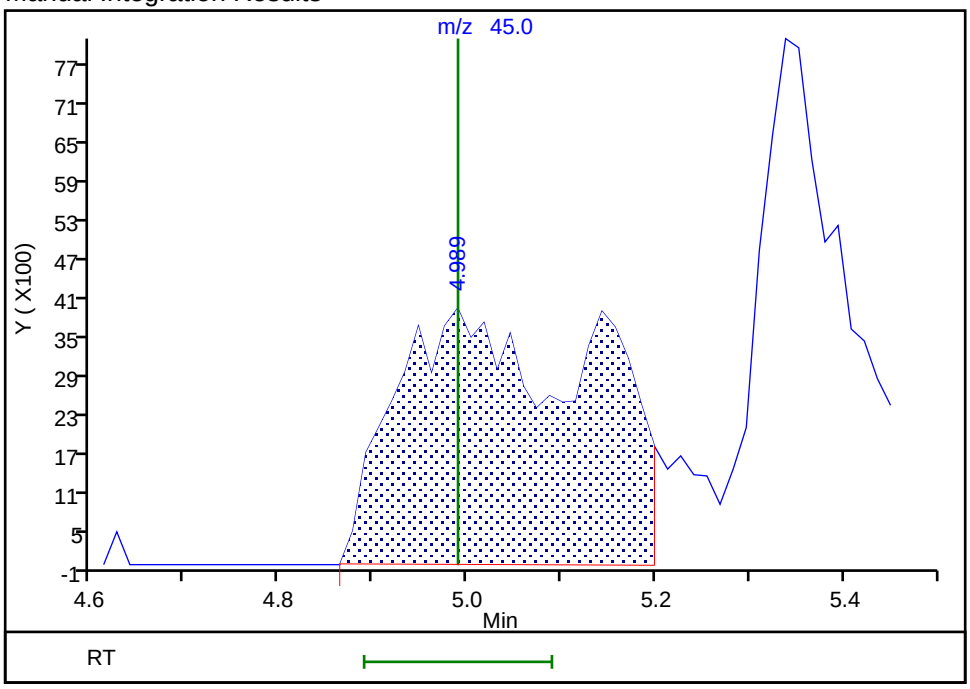
Processing Integration Results

RT: 4.99
Area: 28793
Amount: 328.7433
Amount Units: ug/l



Manual Integration Results

RT: 4.99
Area: 57447
Amount: 694.5830
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 18:54:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

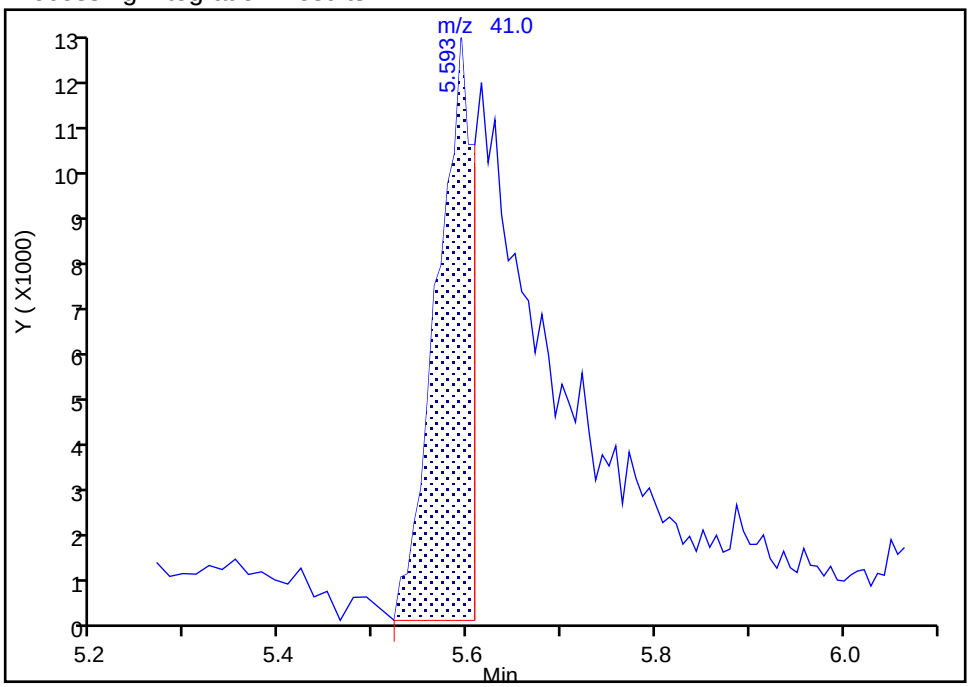
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D				
Injection Date:	03-Nov-2018 22:46:30	Instrument ID:	VMS_P		
Lims ID:	CCVC				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	43	Worklist Smp#:	38
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

46 Acetonitrile, CAS: 75-05-8

Signal: 1

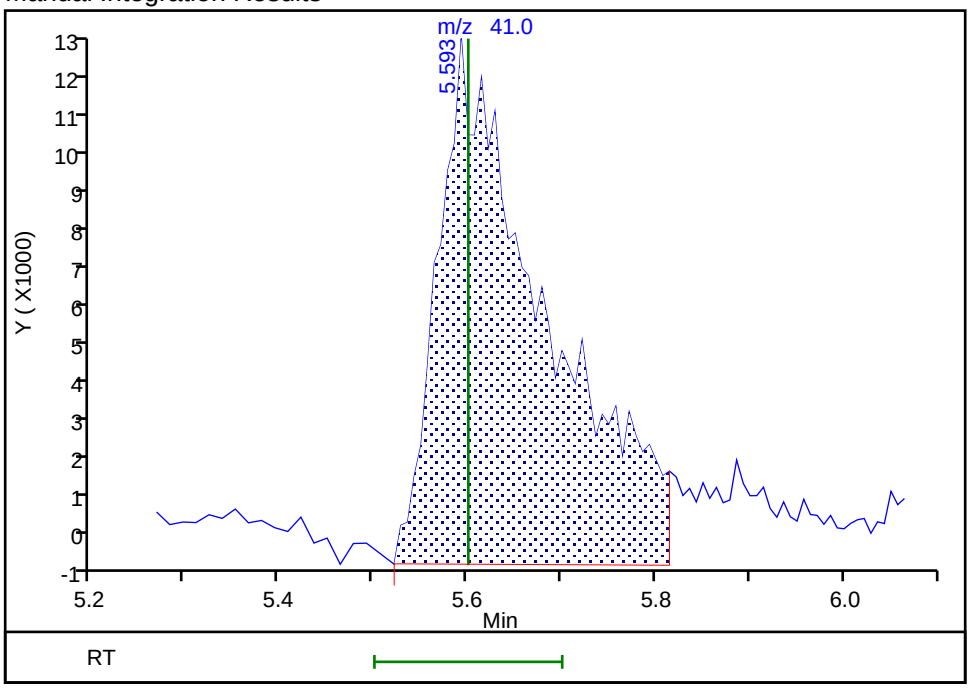
Processing Integration Results

RT: 5.59
Area: 34577
Amount: 40.292597
Amount Units: ug/l



Manual Integration Results

RT: 5.59
Area: 101057
Amount: 110.3105
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 18:54:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436199/38 Calibration Date: 11/03/2018 22:46

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2166.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2430	0.2690		11.1	10.0	10.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2646		11.3	10.0	13.4	50.0
Toluene-d8 (Surr)	Ave	5.289	5.033		9.52	10.0	-4.8	50.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.001		8.97	10.0	-10.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 03-Nov-2018 22:46:30 ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:08:42 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: seifertj Date: 05-Nov-2018 07:41:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.601	-0.008	96	142261	250.0	250.0	M
* 1 Fluorobenzene	96	7.552	7.553	-0.001	98	1199091	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.819	9.820	-0.001	90	268291	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.643	-0.001	97	376141	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.009	0.007	92	258086	10.0	11.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	99	253828	10.0	11.3	
$ 7 Toluene-d8 (Surr)	98	8.746	8.747	-0.001	95	1080160	10.0	9.52	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	301241	10.0	8.97	
28 Ethylene oxide	43	4.529	4.515	0.014	100	262548	1000.0	822.9	
33 Ethanol	45	4.989	4.990	-0.001	96	57447	600.0	694.6	M
38 Propene oxide	58	5.157	5.157	0.000	96	1412231	1000.0	1119.9	
42 Isopropyl alcohol	45	5.339	5.325	0.014	96	52056	100.0	94.4	
46 Acetonitrile	41	5.593	5.601	-0.008	54	101057	100.0	110.3	M
56 Isopropyl ether	87	6.180	6.180	0.000	94	193353	10.0	10.7	
58 2-Chloro-1,3-butadiene	53	6.308	6.301	0.007	95	617329	10.0	10.5	
59 Tert-butyl ethyl ether	59	6.458	6.459	-0.001	97	579142	10.0	10.3	
60 Ethyl acetate	43	6.609	6.609	0.000	99	157402	20.0	20.1	
65 Propionitrile	54	6.716	6.709	0.007	97	85927	100.0	91.2	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	688141	100.0	112.6	
75 Tert-amyl methyl ether	73	7.359	7.360	-0.001	90	436944	10.0	10.8	
78 n-Butanol	56	7.602	7.603	-0.001	88	20323	250.0	137.3	
81 Methyl methacrylate	100	7.981	7.982	-0.001	92	39302	20.0	20.3	
88 2-Nitropropane	41	8.368	8.361	0.007	98	29919	20.0	18.2	
99 Tetrahydrothiophene	60	9.440	9.433	0.007	90	11048	20.0	13.1	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	93	28628	20.0	13.7	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	98	981566	10.0	8.61	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	94	355438	10.0	9.67	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

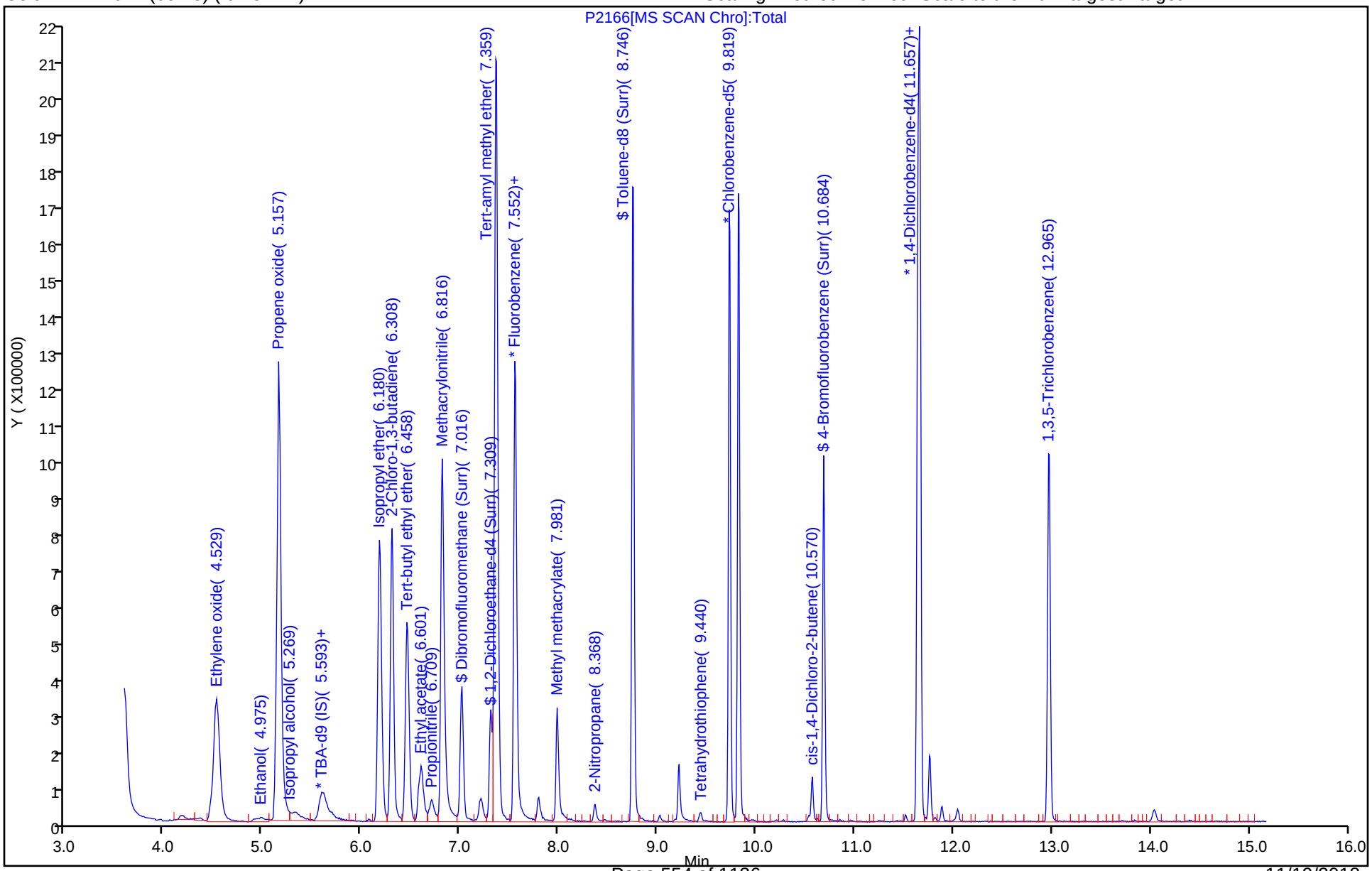
Report Date: 10-Nov-2018 00:08:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D

Injection Date:	03-Nov-2018 22:46:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

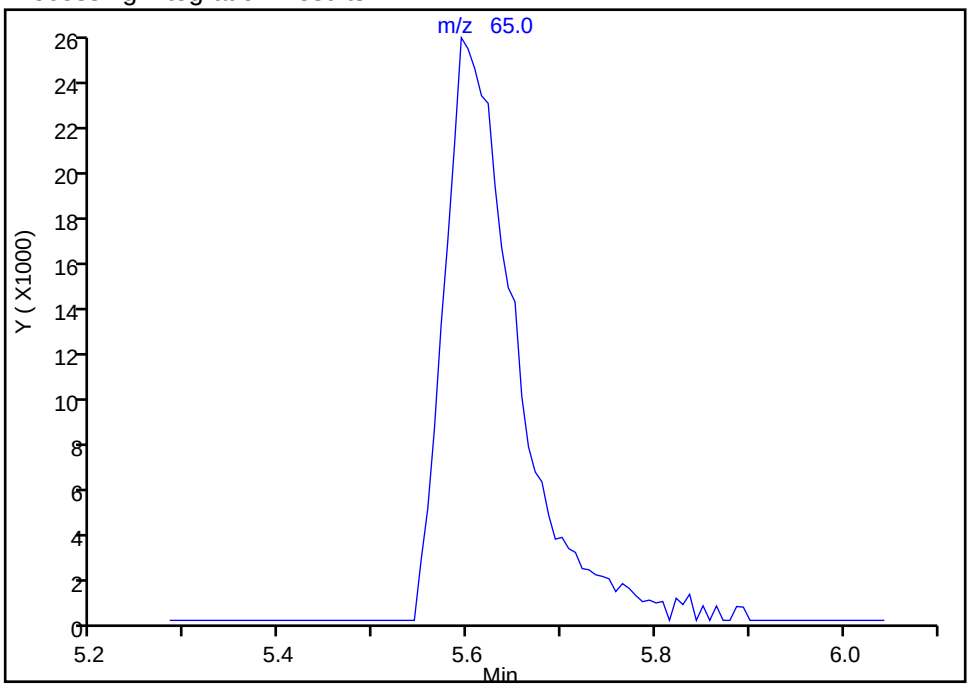
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2166.D
Injection Date: 03-Nov-2018 22:46:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 43 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

* 150 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

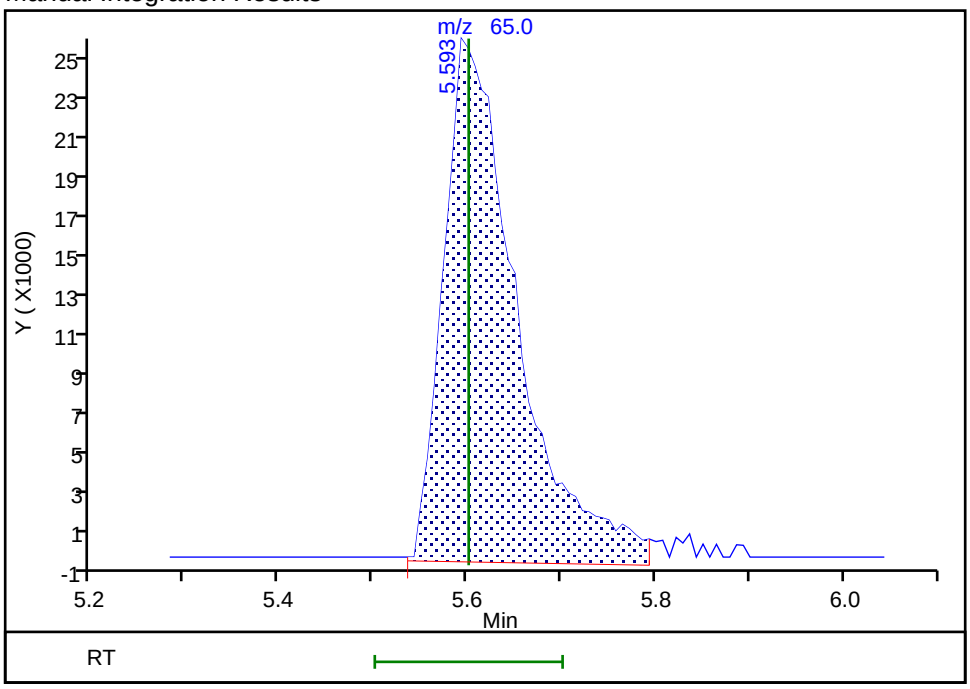
Not Detected
Expected RT: 5.60

Processing Integration Results



Manual Integration Results

RT: 5.59
Area: 142261
Amount: 250.0000
Amount Units: ug/l



Reviewer: seifertj, 05-Nov-2018 07:41:21
Audit Action: Manually Integrated Audit Reason: Assign Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436409/2 Calibration Date: 11/05/2018 19:53

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2202.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.6038		10.7	10.0	7.2	20.0
Chloromethane	Ave	0.3707	0.4050	0.1000	10.9	10.0	9.2	20.0
Vinyl chloride	Ave	0.3783	0.4172		11.0	10.0	10.3	20.0
Bromomethane	Ave	0.3269	0.3872		11.8	10.0	18.5	20.0
Chloroethane	Ave	0.3098	0.3618		11.7	10.0	16.8	20.0
Dichlorofluoromethane	Ave	0.7871	0.8535		10.8	10.0	8.4	20.0
Trichlorofluoromethane	Ave	0.7129	0.7324		10.3	10.0	2.7	20.0
Ethyl ether	Ave	0.1533	0.1782		11.6	10.0	16.3	20.0
Acrolein	Lin2		0.0189		111	100	10.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3301		11.0	10.0	9.8	20.0
Acetone	Ave	0.0355	0.0405		45.6	40.0	13.9	20.0
1,1-Dichloroethene	Ave	0.3655	0.3953		10.8	10.0	8.2	20.0
Methyl iodide	Ave	0.5074	0.5610		11.1	10.0	10.6	20.0
Methyl acetate	Ave	0.0809	0.0842		20.8	20.0	4.1	20.0
3-Chloro-1-propene	Ave	0.6527	0.7197		11.0	10.0	10.3	20.0
Carbon disulfide	Ave	1.485	1.629		11.0	10.0	9.7	20.0
t-Butyl alcohol	Lin1		1.224		98.2	100	-1.8	20.0
Methylene Chloride	Ave	0.3148	0.3289		10.4	10.0	4.5	20.0
Acrylonitrile	Lin2		0.0349		109	100	9.5	20.0
Methyl tert-butyl ether	Ave	0.3966	0.4248		10.7	10.0	7.1	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3928		10.9	10.0	9.3	20.0
Hexane	Ave	3.359	3.208		9.55	10.0	-4.5	20.0
Vinyl acetate	Lin2		0.3367		23.4	20.0	16.8	20.0
1,1-Dichloroethane	Ave	0.6299	0.6840	0.1000	10.9	10.0	8.6	20.0
2-Butanone (MEK)	Ave	0.0507	0.0573		45.2	40.0	12.9	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3698		10.9	10.0	8.7	20.0
2,2-Dichloropropane	Ave	0.5342	0.5513		10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1018	0.1146		11.3	10.0	12.6	20.0
Chloroform	Ave	0.5547	0.5810		10.5	10.0	4.7	20.0
Tetrahydrofuran	Ave	0.0268	0.0302		22.5	20.0	12.4	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.5773		10.2	10.0	1.8	20.0
Isobutyl alcohol	Lin		0.4018		222	250	-11.3	20.0
Cyclohexane	Ave	0.7766	0.8462		10.9	10.0	9.0	20.0
1,1-Dichloropropene	Ave	0.5299	0.5633		10.6	10.0	6.3	20.0
Carbon tetrachloride	Ave	0.4761	0.4952		10.4	10.0	4.0	20.0
1,2-Dichloroethane	Ave	0.2976	0.3116		10.5	10.0	4.7	20.0
Benzene	Ave	1.329	1.444		10.9	10.0	8.7	20.0
Trichloroethene	Ave	0.3470	0.3585		10.3	10.0	3.3	20.0
Methylcyclohexane	Ave	0.6311	0.6738		10.7	10.0	6.8	20.0
1,2-Dichloropropane	Ave	0.2907	0.3186		11.0	10.0	9.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436409/2 Calibration Date: 11/05/2018 19:53

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2202.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0007		182	200	-9.2	20.0
Dibromomethane	Ave	0.1000	0.1098		11.0	10.0	9.8	20.0
Bromodichloromethane	Ave	0.3144	0.3364		10.7	10.0	7.0	20.0
2-Chloroethyl vinyl ether	Lin1		0.0700		9.91	10.0	-0.9	20.0
cis-1,3-Dichloropropene	Lin2		1.594		9.54	10.0	-4.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1156		47.1	40.0	17.8	20.0
Toluene	Ave	1.356	1.469		10.8	10.0	8.3	20.0
Ethyl methacrylate	Lin1		0.6684		8.91	10.0	-10.9	20.0
trans-1,3-Dichloropropene	Lin1		0.2580		9.92	10.0	-0.8	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1434		11.0	10.0	9.9	20.0
2-Hexanone	Lin2		0.3263		39.2	40.0	-2.1	20.0
1,3-Dichloropropane	Ave	1.258	1.252		9.95	10.0	-0.5	20.0
Tetrachloroethene	Ave	1.279	1.253		9.80	10.0	-2.0	20.0
Dibromochloromethane	Lin2		0.6946		9.17	10.0	-8.3	20.0
1,2-Dibromoethane	Ave	0.5501	0.5627		10.2	10.0	2.3	20.0
Chlorobenzene	Ave	3.682	3.551	0.3000	9.64	10.0	-3.6	20.0
Ethylbenzene	Ave	2.426	2.343		9.66	10.0	-3.4	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.098		9.72	10.0	-2.8	20.0
m,p-Xylene	Ave	2.842	2.796		9.84	10.0	-1.6	20.0
o-Xylene	Ave	2.629	2.605		9.91	10.0	-0.9	20.0
Styrene	Ave	3.660	3.702		10.1	10.0	1.1	20.0
Bromoform	Lin2		0.2818	0.1000	8.54	10.0	-14.6	20.0
Isopropylbenzene	Ave	5.152	4.691		9.10	10.0	-9.0	20.0
Cyclohexanone	Lin2		0.0291		567	400	41.8*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4449	0.3000	9.73	10.0	-2.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1014		9.00	10.0	-10.0	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1171		9.66	10.0	-3.4	20.0
N-Propylbenzene	Ave	1.433	1.326		9.26	10.0	-7.4	20.0
Bromobenzene	Ave	0.8789	0.8120		9.24	10.0	-7.6	20.0
1,3,5-Trimethylbenzene	Ave	4.181	3.784		9.05	10.0	-9.5	20.0
2-Chlorotoluene	Ave	1.128	1.010		8.96	10.0	-10.4	20.0
4-Chlorotoluene	Ave	1.089	0.996		9.14	10.0	-8.6	20.0
tert-Butylbenzene	Ave	4.080	3.765		9.23	10.0	-7.7	20.0
1,2,4-Trimethylbenzene	Ave	4.186	3.789		9.05	10.0	-9.5	20.0
sec-Butylbenzene	Ave	1.133	1.075		9.49	10.0	-5.1	20.0
4-Isopropyltoluene	Ave	4.751	4.348		9.15	10.0	-8.5	20.0
1,3-Dichlorobenzene	Ave	1.966	1.768		8.99	10.0	-10.1	20.0
1,4-Dichlorobenzene	Ave	1.952	1.758		9.01	10.0	-9.9	20.0
n-Butylbenzene	Ave	5.168	4.750		9.19	10.0	-8.1	20.0
1,2-Dichlorobenzene	Ave	1.582	1.455		9.20	10.0	-8.0	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0462		8.51	10.0	-14.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436409/2 Calibration Date: 11/05/2018 19:53

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2202.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.029	0.9439		9.17	10.0	-8.3	20.0
Hexachlorobutadiene	Ave	0.7951	0.6815		8.57	10.0	-14.3	20.0
Naphthalene	Ave	1.333	1.293		9.70	10.0	-3.0	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7299		9.47	10.0	-5.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2202.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 05-Nov-2018 19:53:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub146

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:04 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 05-Nov-2018 20:14:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.593	0.000	33	186358	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1499771	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	91	337678	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.649	11.649	0.000	97	541032	12.5	12.5	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	724433	10.0	10.7	
26 Chloromethane	50	4.083	4.083	0.000	98	485888	10.0	10.9	
27 Vinyl chloride	62	4.208	4.208	0.000	83	500514	10.0	11.0	
29 Bromomethane	94	4.572	4.572	0.000	92	464574	10.0	11.8	
30 Chloroethane	64	4.641	4.641	0.000	99	434075	10.0	11.7	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	1023982	10.0	10.8	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	99	878747	10.0	10.3	
35 Ethyl ether	59	5.060	5.060	0.000	94	213847	10.0	11.6	
39 Acrolein	56	5.214	5.214	0.000	99	227066	100.0	110.8	
40 1,1,2-Trichloro-1,2,2-trif	151	5.284	5.284	0.000	96	396049	10.0	11.0	
41 Acetone	43	5.312	5.312	0.000	36	194315	40.0	45.6	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	474307	10.0	10.8	
44 Iodomethane	142	5.522	5.522	0.000	99	673060	10.0	11.1	
45 Methyl acetate	43	5.557	5.557	0.000	97	202037	20.0	20.8	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	81	863444	10.0	11.0	
48 Carbon disulfide	76	5.607	5.607	0.000	99	1954910	10.0	11.0	
49 2-Methyl-2-propanol	59	5.672	5.672	0.000	94	91235	100.0	98.2	
50 Methylene Chloride	84	5.693	5.693	0.000	97	394634	10.0	10.4	
52 Acrylonitrile	53	5.865	5.865	0.000	83	418291	100.0	109.5	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	98	509732	10.0	10.7	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	96	471311	10.0	10.9	
54 Hexane	57	6.072	6.072	0.000	96	866599	10.0	9.55	
55 Vinyl acetate	43	6.179	6.179	0.000	97	808043	20.0	23.4	
57 1,1-Dichloroethane	63	6.244	6.244	0.000	97	820636	10.0	10.9	
61 2-Butanone (MEK)	43	6.630	6.630	0.000	99	274762	40.0	45.2	
63 cis-1,2-Dichloroethene	96	6.673	6.673	0.000	87	443695	10.0	10.9	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	91	661510	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	6.880	6.880	0.000	92	137550	10.0	11.3	
68 Chloroform	83	6.887	6.887	0.000	96	697091	10.0	10.5	
69 Tetrahydrofuran	42	6.909	6.909	0.000	90	72386	20.0	22.5	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	97	692649	10.0	10.2	
70 Isobutyl alcohol	41	7.095	7.095	0.000	97	74878	250.0	221.8	
72 Cyclohexane	56	7.159	7.159	0.000	96	1015328	10.0	10.9	
73 1,1-Dichloropropene	75	7.195	7.195	0.000	96	675792	10.0	10.6	
74 Carbon tetrachloride	117	7.230	7.230	0.000	97	594148	10.0	10.4	
76 1,2-Dichloroethane	62	7.373	7.373	0.000	98	373879	10.0	10.5	
77 Benzene	78	7.381	7.381	0.000	98	1732508	10.0	10.9	
14 n-Heptane	43	7.445	7.445	0.000	95	977136	10.0	10.9	
79 Trichloroethene	95	7.845	7.845	0.000	97	430163	10.0	10.3	
82 Methylcyclohexane	55	8.031	8.031	0.000	96	808450	10.0	10.7	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	94	382201	10.0	11.0	
84 1,4-Dioxane	88	8.103	8.103	0.000	95	17541	200.0	181.6	
85 Dibromomethane	93	8.146	8.146	0.000	91	131779	10.0	11.0	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	403596	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.360	8.360	0.000	93	83959	10.0	9.91	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	92	430607	10.0	9.54	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	554534	40.0	47.1	
91 Toluene	91	8.803	8.803	0.000	97	1761986	10.0	10.8	
92 Ethyl methacrylate	69	8.889	8.889	0.000	93	180553	10.0	8.91	
93 trans-1,3-Dichloropropene	75	8.911	8.911	0.000	97	309585	10.0	9.92	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	92	172055	10.0	11.0	
95 2-Hexanone	43	9.182	9.182	0.000	99	352610	40.0	39.2	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	338219	10.0	9.95	
97 Tetrachloroethene	164	9.211	9.211	0.000	94	338429	10.0	9.80	
98 Chlorodibromomethane	129	9.397	9.397	0.000	90	187648	10.0	9.17	
100 Ethylene Dibromide	107	9.518	9.518	0.000	99	152013	10.0	10.2	
102 Chlorobenzene	112	9.847	9.847	0.000	96	959207	10.0	9.64	
103 Ethylbenzene	106	9.883	9.883	0.000	98	632810	10.0	9.66	
104 1,1,1,2-Tetrachloroethane	131	9.890	9.890	0.000	96	296658	10.0	9.72	
105 m-Xylene & p-Xylene	106	9.962	9.962	0.000	99	755402	10.0	9.84	
107 o-Xylene	106	10.276	10.276	0.000	88	703656	10.0	9.91	
106 Styrene	104	10.276	10.276	0.000	84	999932	10.0	10.1	
108 Bromoform	173	10.484	10.484	0.000	95	76131	10.0	8.54	
109 Isopropylbenzene	105	10.534	10.534	0.000	97	2030188	10.0	9.10	
111 Cyclohexanone	55	10.677	10.677	0.000	96	314335	400.0	567.2	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.748	0.000	95	192546	10.0	9.73	
113 trans-1,4-Dichloro-2-buten	53	10.784	10.784	0.000	82	43898	10.0	9.00	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	89	50661	10.0	9.66	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	573978	10.0	9.26	
116 Bromobenzene	156	10.856	10.856	0.000	97	351438	10.0	9.24	
117 1,3,5-Trimethylbenzene	105	10.956	10.956	0.000	95	1637792	10.0	9.05	
118 2-Chlorotoluene	126	10.977	10.977	0.000	95	437337	10.0	8.96	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	431176	10.0	9.14	
120 tert-Butylbenzene	119	11.256	11.256	0.000	92	1629680	10.0	9.23	
121 1,2,4-Trimethylbenzene	105	11.285	11.285	0.000	99	1639812	10.0	9.05	
122 sec-Butylbenzene	134	11.435	11.435	0.000	95	465252	10.0	9.49	
123 4-Isopropyltoluene	119	11.520	11.520	0.000	97	1882025	10.0	9.15	
124 1,3-Dichlorobenzene	146	11.599	11.599	0.000	96	765164	10.0	8.99	
126 1,4-Dichlorobenzene	146	11.671	11.671	0.000	93	760964	10.0	9.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
127 n-Butylbenzene	91	11.885	11.885	0.000	99	2055816	10.0	9.19	
128 1,2-Dichlorobenzene	146	12.028	12.028	0.000	95	629842	10.0	9.20	
129 1,2-Dibromo-3-Chloropropan	157	12.786	12.786	0.000	71	20015	10.0	8.51	
130 1,2,4-Trichlorobenzene	180	13.716	13.716	0.000	93	408535	10.0	9.17	
131 Hexachlorobutadiene	225	13.851	13.851	0.000	94	294953	10.0	8.57	
132 Naphthalene	128	14.087	14.087	0.000	97	559517	10.0	9.70	
133 1,2,3-Trichlorobenzene	180	14.409	14.409	0.000	93	315937	10.0	9.47	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.8	
S 134 Trihalomethanes, Total	1				0		40.0	38.9	
S 135 Xylenes, Total (URS)	1				0		20.0	19.7	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.5	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.8	
S 139 Xylenes, Total	106				0		20.0	19.7	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00005	Amount Added:	4.00	Units: uL

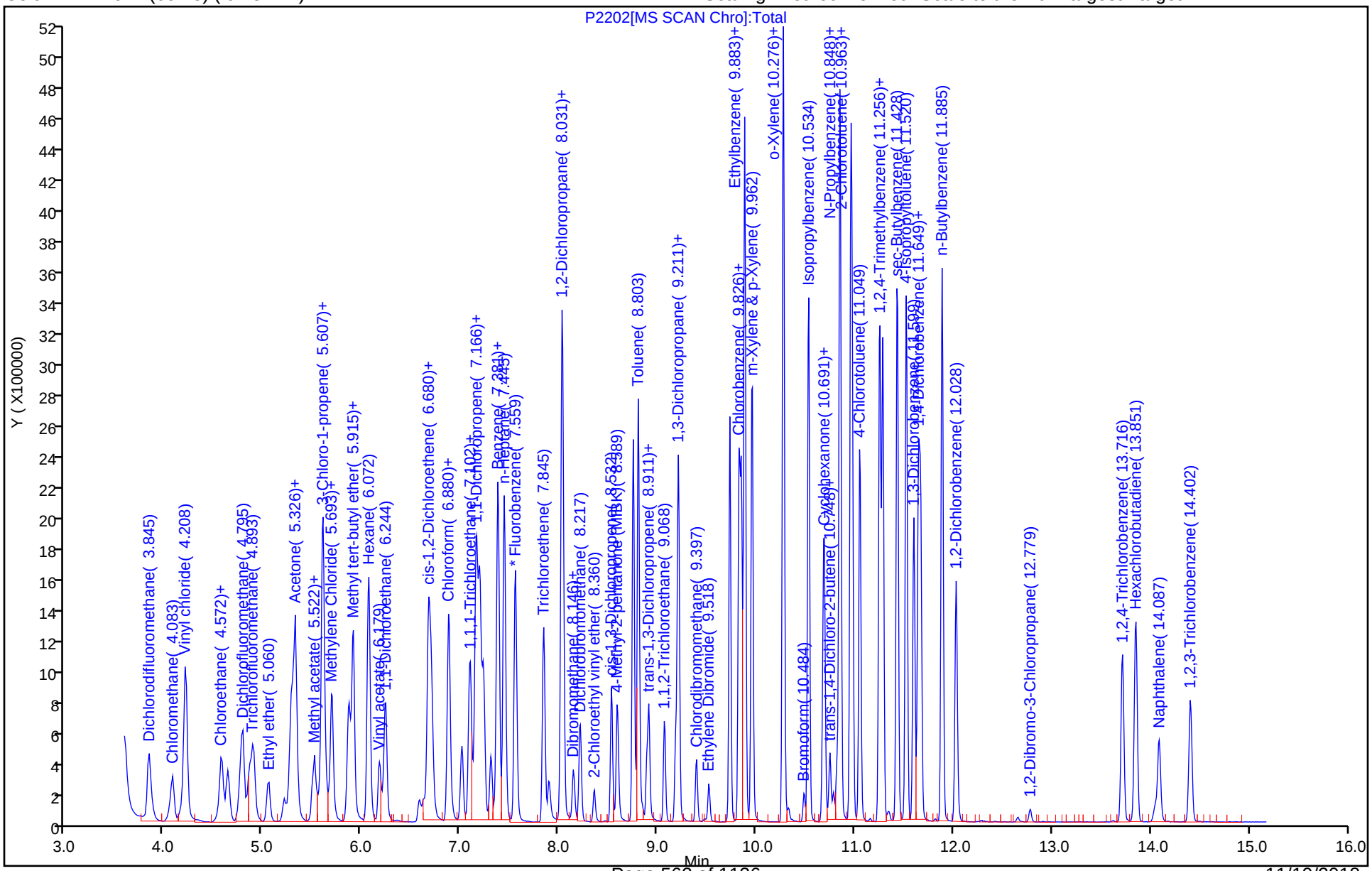
Report Date: 07-Nov-2018 18:50:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2202.D

Injection Date:	05-Nov-2018 19:53:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436409/3 Calibration Date: 11/05/2018 20:12

Instrument ID: VMS_P Calib Start Date: 08/17/2018 01:38

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/17/2018 03:10

Lab File ID: P2203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0033	0.0027		814	1000	-18.6	20.0
Ethanol	Lin1		0.1736		718	600	19.6	20.0
Isopropyl alcohol	Ave	0.9689	0.7384		76.2	100	-23.8*	20.0
Acetonitrile	Lin1		0.0097		102	100	1.8	20.0
Diisopropyl ether	Ave	0.1887	0.2152		11.4	10.0	14.0	20.0
2-Chloro-1,3-butadiene	Ave	0.6158	0.6379		10.4	10.0	3.6	20.0
Tert-butyl ethyl ether	Ave	0.5878	0.6294		10.7	10.0	7.1	20.0
Ethyl acetate	Ave	0.0815	0.0837		20.5	20.0	2.6	20.0
Propionitrile	Lin2		0.0086		88.0	100	-12.0	20.0
Methacrylonitrile	Ave	0.0637	0.0729		114	100	14.4	20.0
Tert-amyl methyl ether	Ave	0.4231	0.4693		11.1	10.0	10.9	20.0
n-Butanol	Lin2		0.1813		163	250	-34.8*	20.0
Methyl methacrylate	Lin2		0.0205		20.3	20.0	1.5	20.0
2-Nitropropane	Ave	0.0172	0.0156		18.2	20.0	-9.1	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0697	0.0593		17.0	20.0	-14.9	20.0
1,2,3-Trimethylbenzene	Ave	3.790	3.471		9.16	10.0	-8.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2203.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 05-Nov-2018 20:12:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 05-Nov-2018 22:19:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.600	0.000	98	177001	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1531885	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	347248	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	508152	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	344895	10.0	11.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	332471	10.0	11.6	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1521873	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	458045	10.0	10.1	
28 Ethylene oxide	43	4.528	4.528	0.000	100	331591	1000.0	813.5	
33 Ethanol	45	5.017	5.017	0.000	90	73746	600.0	717.9	M
38 Propene oxide	58	5.157	5.157	0.000	96	1778287	1000.0	1103.8	
42 Isopropyl alcohol	45	5.338	5.338	0.000	98	52278	100.0	76.2	
46 Acetonitrile	41	5.600	5.600	0.000	69	118791	100.0	101.8	M
56 Isopropyl ether	87	6.179	6.179	0.000	94	263773	10.0	11.4	
58 2-Chloro-1,3-butadiene	53	6.308	6.308	0.000	94	781685	10.0	10.4	
59 Tert-butyl ethyl ether	59	6.458	6.458	0.000	98	771350	10.0	10.7	
60 Ethyl acetate	43	6.608	6.608	0.000	99	205149	20.0	20.5	
65 Propionitrile	54	6.709	6.709	0.000	98	105692	100.0	88.0	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	893157	100.0	114.4	
75 Tert-amyl methyl ether	73	7.359	7.359	0.000	55	575085	10.0	11.1	
78 n-Butanol	56	7.602	7.602	0.000	88	32085	250.0	163.0	
81 Methyl methacrylate	100	7.981	7.981	0.000	93	50169	20.0	20.3	
88 2-Nitropropane	41	8.367	8.367	0.000	95	38278	20.0	18.2	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	94	15221	20.0	14.0	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	93	48233	20.0	17.0	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	99	1411060	10.0	9.16	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	95	545634	10.0	11.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

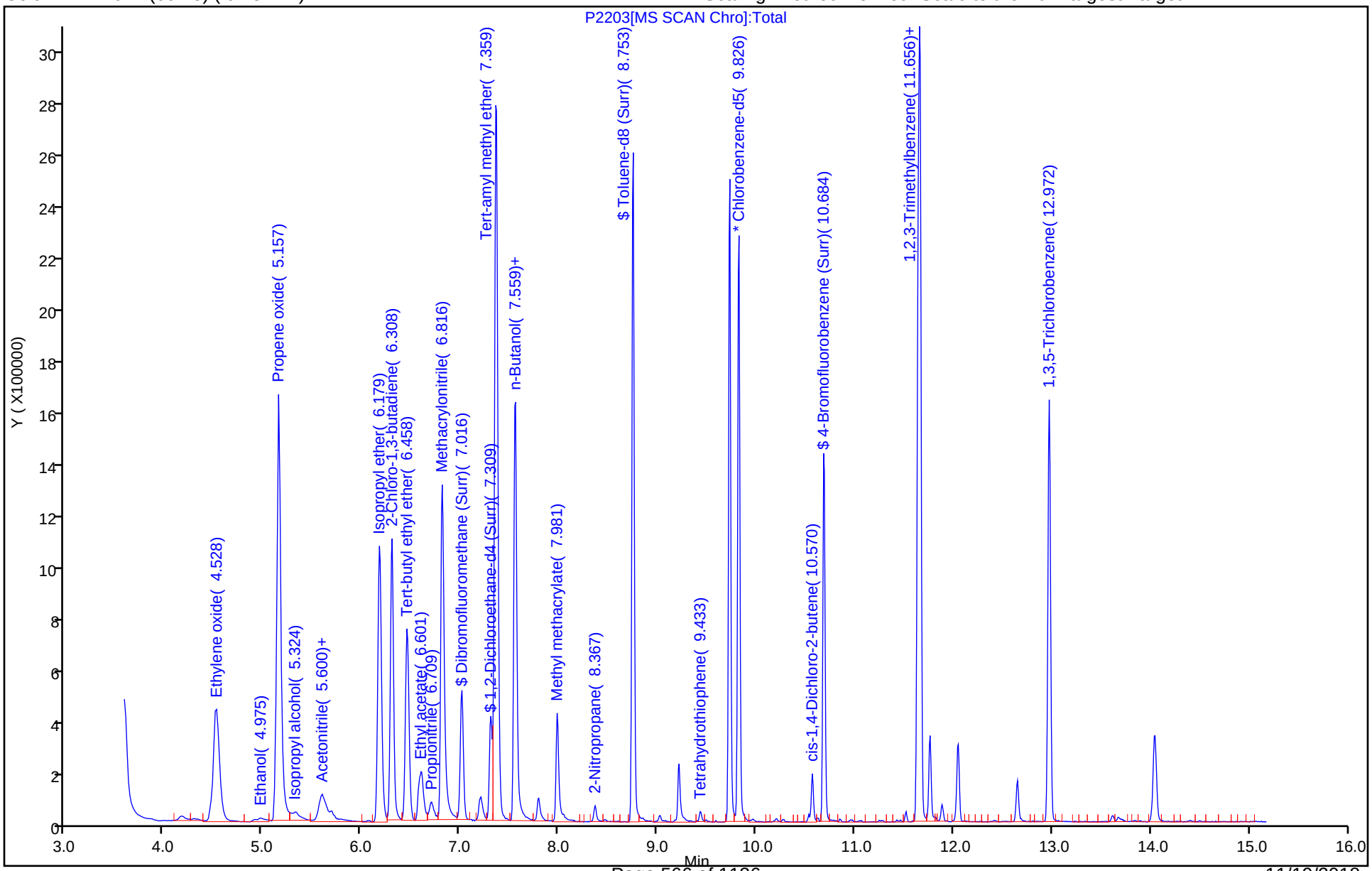
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2203.D

Injection Date:	05-Nov-2018 20:12:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

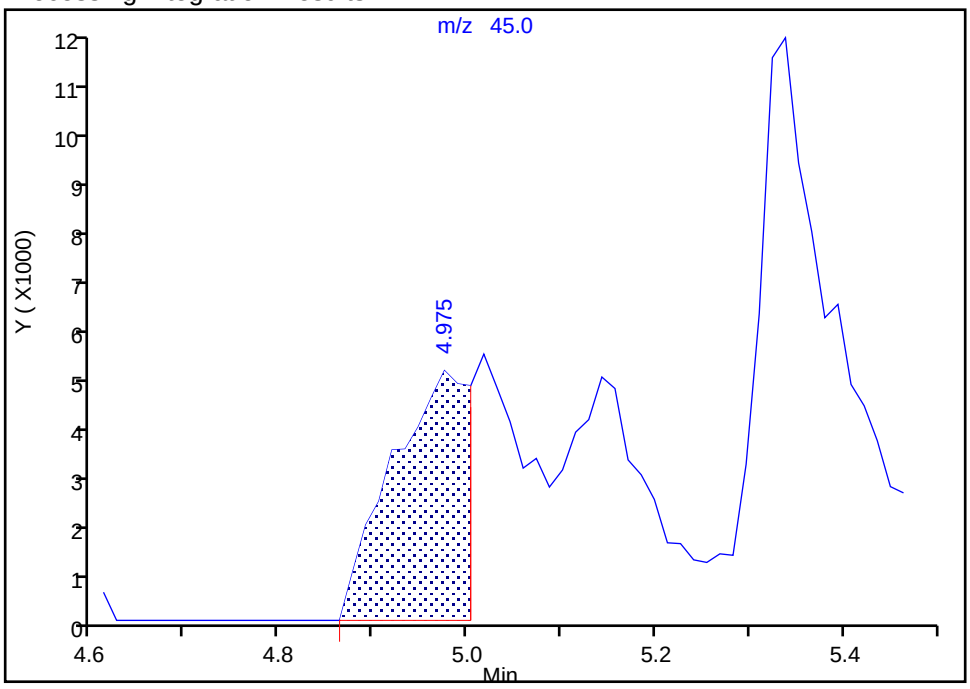
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Injection Date: 05-Nov-2018 20:12:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

33 Ethanol, CAS: 64-17-5

Signal: 1

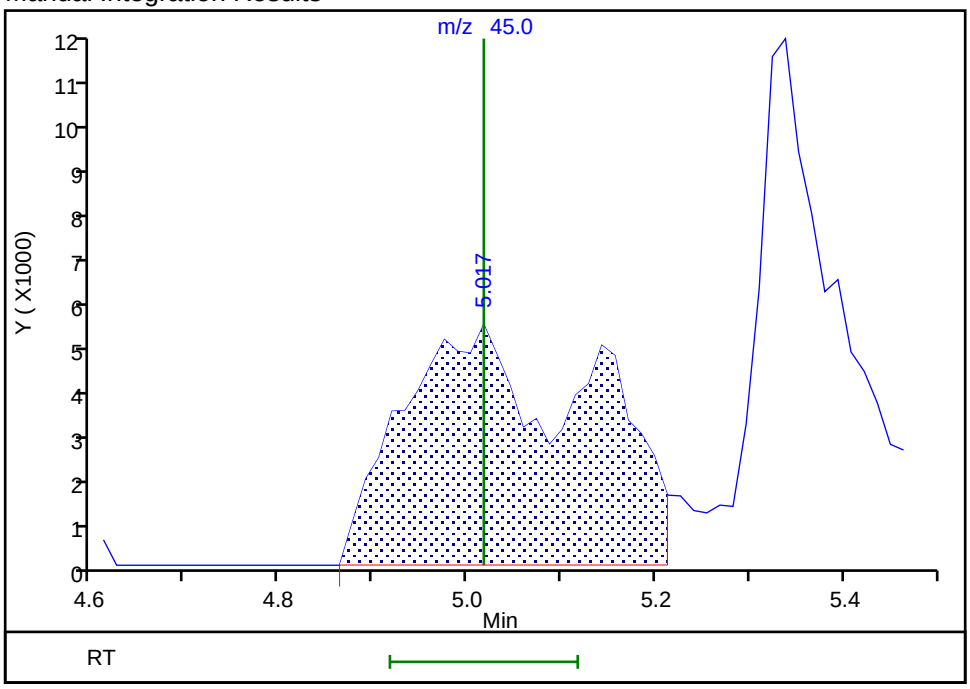
Processing Integration Results

RT: 4.98
Area: 29186
Amount: 260.6244
Amount Units: ug/l



Manual Integration Results

RT: 5.02
Area: 73746
Amount: 717.8820
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 22:18:02
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

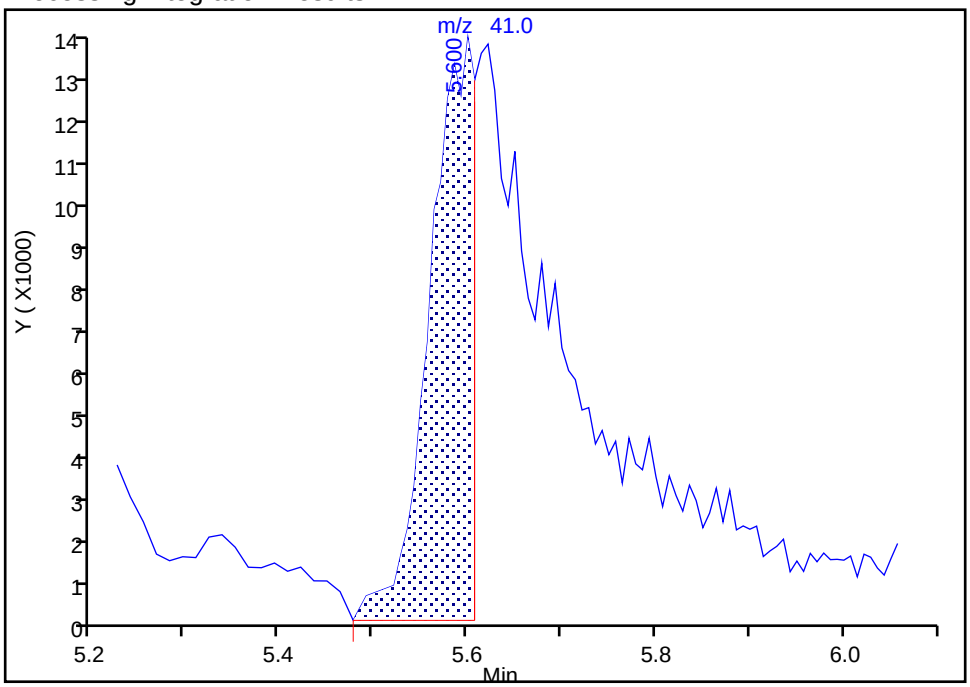
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Injection Date:	05-Nov-2018 20:12:30	Instrument ID:	VMS_P		
Lims ID:	CCV				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	3
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

46 Acetonitrile, CAS: 75-05-8

Signal: 1

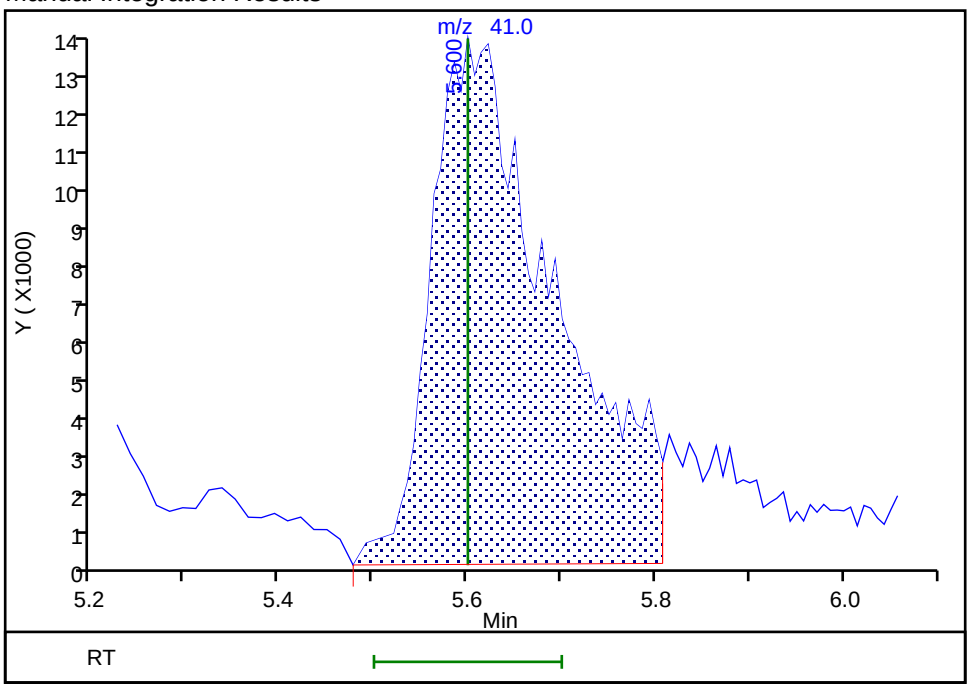
Processing Integration Results

RT: 5.60
Area: 40888
Amount: 37.584032
Amount Units: ug/l



Manual Integration Results

RT: 5.60
Area: 118791
Amount: 101.8082
Amount Units: ug/l



Reviewer: newcomer, 05-Nov-2018 22:18:23

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436409/3 Calibration Date: 11/05/2018 20:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2430	0.2814		11.6	10.0	15.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2713		11.6	10.0	16.3	20.0
Toluene-d8 (Surr)	Ave	5.289	5.478		10.4	10.0	3.6	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.127		10.1	10.0	0.9	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2203.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 05-Nov-2018 20:12:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 05-Nov-2018 22:19:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.600	0.000	98	177001	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1531885	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	347248	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	508152	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	344895	10.0	11.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	332471	10.0	11.6	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1521873	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	458045	10.0	10.1	
28 Ethylene oxide	43	4.528	4.528	0.000	100	331591	1000.0	813.5	
33 Ethanol	45	5.017	5.017	0.000	90	73746	600.0	717.9	M
38 Propene oxide	58	5.157	5.157	0.000	96	1778287	1000.0	1103.8	
42 Isopropyl alcohol	45	5.338	5.338	0.000	98	52278	100.0	76.2	
46 Acetonitrile	41	5.600	5.600	0.000	69	118791	100.0	101.8	M
56 Isopropyl ether	87	6.179	6.179	0.000	94	263773	10.0	11.4	
58 2-Chloro-1,3-butadiene	53	6.308	6.308	0.000	94	781685	10.0	10.4	
59 Tert-butyl ethyl ether	59	6.458	6.458	0.000	98	771350	10.0	10.7	
60 Ethyl acetate	43	6.608	6.608	0.000	99	205149	20.0	20.5	
65 Propionitrile	54	6.709	6.709	0.000	98	105692	100.0	88.0	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	893157	100.0	114.4	
75 Tert-amyl methyl ether	73	7.359	7.359	0.000	55	575085	10.0	11.1	
78 n-Butanol	56	7.602	7.602	0.000	88	32085	250.0	163.0	
81 Methyl methacrylate	100	7.981	7.981	0.000	93	50169	20.0	20.3	
88 2-Nitropropane	41	8.367	8.367	0.000	95	38278	20.0	18.2	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	94	15221	20.0	14.0	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	93	48233	20.0	17.0	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	99	1411060	10.0	9.16	
16 1,3,5-Trichlorobenzene	180	12.972	12.972	0.000	95	545634	10.0	11.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

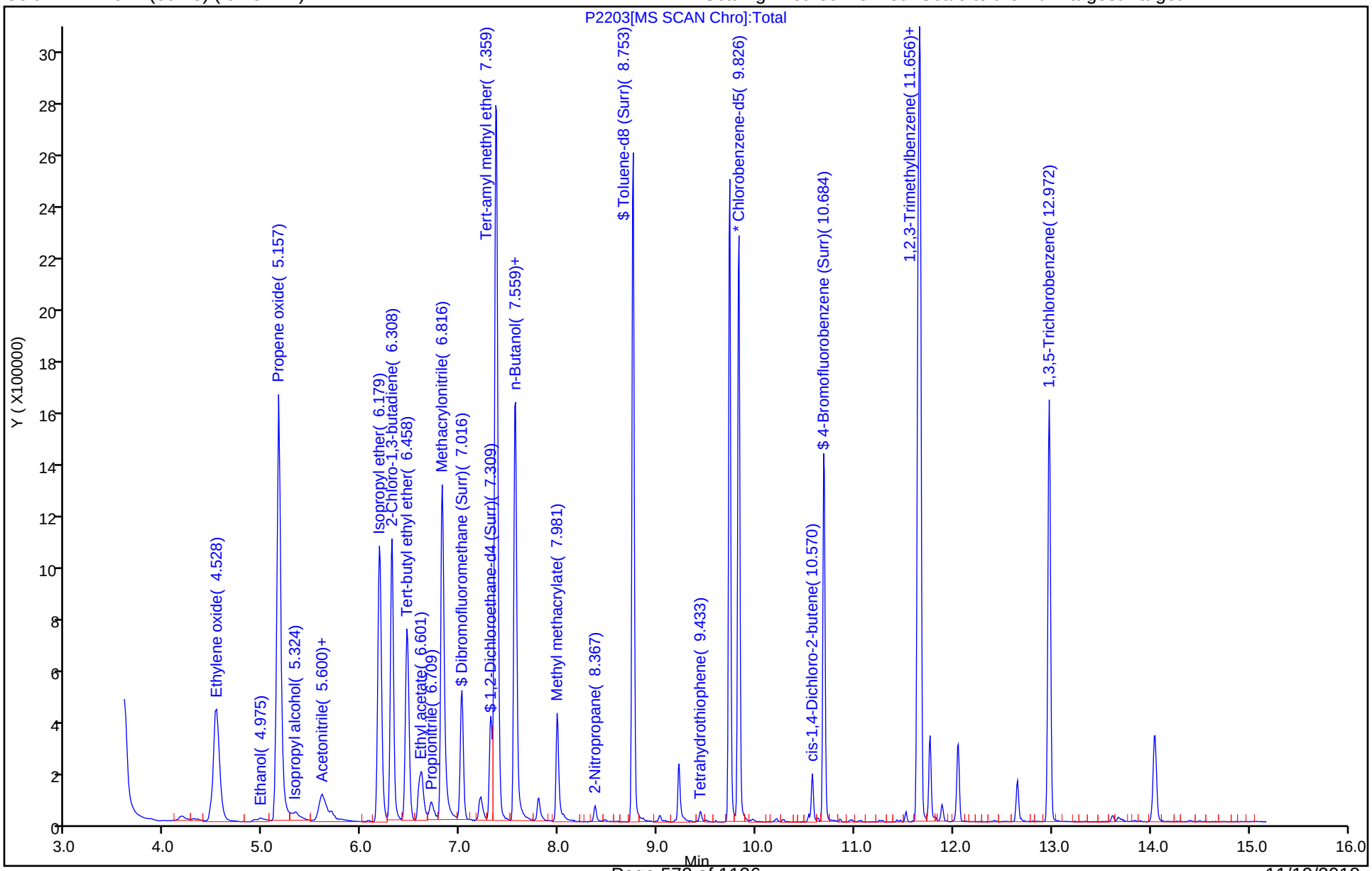
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2203.D

Injection Date:	05-Nov-2018 20:12:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436409/37 Calibration Date: 11/06/2018 06:09

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2235.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.5708		10.1	10.0	1.3	50.0
Chloromethane	Ave	0.3707	0.3712	0.1000	10.0	10.0	0.1	50.0
Vinyl chloride	Ave	0.3783	0.3991		10.5	10.0	5.5	50.0
Bromomethane	Ave	0.3269	0.3643		11.1	10.0	11.5	50.0
Chloroethane	Ave	0.3098	0.3456		11.2	10.0	11.6	50.0
Dichlorofluoromethane	Ave	0.7871	0.8503		10.8	10.0	8.0	50.0
Trichlorofluoromethane	Ave	0.7129	0.7488		10.5	10.0	5.0	50.0
Ethyl ether	Ave	0.1533	0.1801		11.7	10.0	17.5	50.0
Acrolein	Lin2		0.0177		104	100	4.0	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3265		10.9	10.0	8.6	50.0
Acetone	Ave	0.0355	0.0380		42.8	40.0	7.0	50.0
1,1-Dichloroethene	Ave	0.3655	0.3860		10.6	10.0	5.6	50.0
Methyl iodide	Ave	0.5074	0.5393		10.6	10.0	6.3	50.0
Methyl acetate	Ave	0.0809	0.0823		20.4	20.0	1.8	50.0
3-Chloro-1-propene	Ave	0.6527	0.7065		10.8	10.0	8.2	50.0
Carbon disulfide	Ave	1.485	1.576		10.6	10.0	6.2	50.0
t-Butyl alcohol	Lin1		1.122		90.3	100	-9.7	50.0
Methylene Chloride	Ave	0.3148	0.3276		10.4	10.0	4.1	50.0
Methyl tert-butyl ether	Ave	0.3966	0.4454		11.2	10.0	12.3	50.0
Acrylonitrile	Lin2		0.0361		113	100	13.2	50.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3765		10.5	10.0	4.8	50.0
Hexane	Ave	3.359	2.920		8.69	10.0	-13.1	50.0
Vinyl acetate	Lin2		0.2892		20.1	20.0	0.6	50.0
1,1-Dichloroethane	Ave	0.6299	0.6903	0.1000	11.0	10.0	9.6	50.0
2-Butanone (MEK)	Ave	0.0507	0.0584		46.0	40.0	15.1	50.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3699		10.9	10.0	8.8	50.0
2,2-Dichloropropane	Ave	0.5342	0.5014		9.38	10.0	-6.2	50.0
Bromochloromethane	Ave	0.1018	0.1163		11.4	10.0	14.2	50.0
Chloroform	Ave	0.5547	0.6079		11.0	10.0	9.6	50.0
Tetrahydrofuran	Ave	0.0268	0.0318		23.7	20.0	18.4	50.0
1,1,1-Trichloroethane	Ave	0.5669	0.5994		10.6	10.0	5.7	50.0
Isobutyl alcohol	Lin		0.3302		191	250	-23.5	50.0
Cyclohexane	Ave	0.7766	0.8276		10.7	10.0	6.6	50.0
1,1-Dichloropropene	Ave	0.5299	0.5575		10.5	10.0	5.2	50.0
Carbon tetrachloride	Ave	0.4761	0.5037		10.6	10.0	5.8	50.0
1,2-Dichloroethane	Ave	0.2976	0.3305		11.1	10.0	11.1	50.0
Benzene	Ave	1.329	1.460		11.0	10.0	9.8	50.0
Trichloroethene	Ave	0.3470	0.3739		10.8	10.0	7.8	50.0
Methylcyclohexane	Ave	0.6311	0.6663		10.6	10.0	5.6	50.0
1,2-Dichloropropane	Ave	0.2907	0.3304		11.4	10.0	13.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436409/37 Calibration Date: 11/06/2018 06:09

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2235.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0005		129	200	-35.5	50.0
Dibromomethane	Ave	0.1000	0.1146		11.5	10.0	14.5	50.0
Bromodichloromethane	Ave	0.3144	0.3587		11.4	10.0	14.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.0704		9.97	10.0	-0.3	50.0
cis-1,3-Dichloropropene	Lin2		1.569		9.39	10.0	-6.1	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1229		50.1	40.0	25.3	50.0
Toluene	Ave	1.356	1.488		11.0	10.0	9.7	50.0
Ethyl methacrylate	Lin1		0.7032		9.36	10.0	-6.4	50.0
trans-1,3-Dichloropropene	Lin1		0.2727		10.5	10.0	4.7	50.0
1,1,2-Trichloroethane	Ave	0.1305	0.1581		12.1	10.0	21.1	50.0
2-Hexanone	Lin2		0.3257		39.1	40.0	-2.3	50.0
1,3-Dichloropropane	Ave	1.258	1.244		9.89	10.0	-1.1	50.0
Tetrachloroethene	Ave	1.279	1.179		9.22	10.0	-7.8	50.0
Dibromochloromethane	Lin2		0.7136		9.41	10.0	-5.9	50.0
1,2-Dibromoethane	Ave	0.5501	0.5722		10.4	10.0	4.0	50.0
Chlorobenzene	Ave	3.682	3.461	0.3000	9.40	10.0	-6.0	50.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.086		9.62	10.0	-3.8	50.0
Ethylbenzene	Ave	2.426	2.238		9.23	10.0	-7.7	50.0
m,p-Xylene	Ave	2.842	2.647		9.31	10.0	-6.9	50.0
o-Xylene	Ave	2.629	2.548		9.69	10.0	-3.1	50.0
Styrene	Ave	3.660	3.579		9.78	10.0	-2.2	50.0
Bromoform	Lin2		0.2976	0.1000	9.00	10.0	-10.0	50.0
Isopropylbenzene	Ave	5.152	4.612		8.95	10.0	-10.5	50.0
Cyclohexanone	Lin2		0.0277		540	400	35.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4490	0.3000	9.82	10.0	-1.8	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.0944		8.38	10.0	-16.2	50.0
1,2,3-Trichloropropane	Ave	0.1211	0.1219		10.1	10.0	0.6	50.0
N-Propylbenzene	Ave	1.433	1.270		8.87	10.0	-11.3	50.0
Bromobenzene	Ave	0.8789	0.8202		9.33	10.0	-6.7	50.0
1,3,5-Trimethylbenzene	Ave	4.181	3.742		8.95	10.0	-10.5	50.0
2-Chlorotoluene	Ave	1.128	1.006		8.92	10.0	-10.8	50.0
4-Chlorotoluene	Ave	1.089	0.9813		9.01	10.0	-9.9	50.0
tert-Butylbenzene	Ave	4.080	3.682		9.02	10.0	-9.8	50.0
1,2,4-Trimethylbenzene	Ave	4.186	3.777		9.02	10.0	-9.8	50.0
sec-Butylbenzene	Ave	1.133	1.014		8.95	10.0	-10.5	50.0
4-Isopropyltoluene	Ave	4.751	4.164		8.77	10.0	-12.3	50.0
1,3-Dichlorobenzene	Ave	1.966	1.757		8.94	10.0	-10.6	50.0
1,4-Dichlorobenzene	Ave	1.952	1.749		8.96	10.0	-10.4	50.0
n-Butylbenzene	Ave	5.168	4.456		8.62	10.0	-13.8	50.0
1,2-Dichlorobenzene	Ave	1.582	1.460		9.23	10.0	-7.7	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0509		9.31	10.0	-6.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-436409/37 Calibration Date: 11/06/2018 06:09

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2235.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.029	0.9315		9.05	10.0	-9.5	50.0
Hexachlorobutadiene	Ave	0.7951	0.6373		8.02	10.0	-19.8	50.0
Naphthalene	Ave	1.333	1.336		10.0	10.0	0.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7361		9.55	10.0	-4.5	50.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2840		11.7	10.0	16.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2732		11.7	10.0	17.1	50.0
Toluene-d8 (Surr)	Ave	5.289	5.133		9.70	10.0	-3.0	50.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.024		9.17	10.0	-8.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2235.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 06-Nov-2018 06:09:30 ALS Bottle#: 43 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub145

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:51:25 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: seifertj Date: 06-Nov-2018 07:27:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.593	0.001	32	173647	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1278574	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	89	301375	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.649	-0.006	97	468136	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	91	290519	10.0	11.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	279390	10.0	11.7	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	1237518	10.0	9.70	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	83	383429	10.0	9.17	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	583804	10.0	10.1	
26 Chloromethane	50	4.082	4.083	-0.001	98	379666	10.0	10.0	
27 Vinyl chloride	62	4.222	4.208	0.014	88	408218	10.0	10.5	
29 Bromomethane	94	4.585	4.572	0.013	92	372661	10.0	11.1	
30 Chloroethane	64	4.655	4.641	0.014	99	353523	10.0	11.2	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	869773	10.0	10.8	
32 Trichlorofluoromethane	101	4.906	4.893	0.013	100	765923	10.0	10.5	
35 Ethyl ether	59	5.060	5.060	0.000	95	184193	10.0	11.7	
39 Acrolein	56	5.214	5.214	0.000	99	181397	100.0	104.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.284	0.014	97	333915	10.0	10.9	
41 Acetone	43	5.325	5.312	0.013	33	155631	40.0	42.8	
43 1,1-Dichloroethene	96	5.339	5.326	0.013	97	394828	10.0	10.6	
44 Iodomethane	142	5.523	5.522	0.001	99	551673	10.0	10.6	
45 Methyl acetate	43	5.558	5.557	0.001	97	168338	20.0	20.4	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	80	722641	10.0	10.8	
48 Carbon disulfide	76	5.616	5.607	0.009	99	1612182	10.0	10.6	
49 2-Methyl-2-propanol	59	5.666	5.672	-0.006	29	77907	100.0	90.3	
50 Methylene Chloride	84	5.701	5.693	0.008	98	335065	10.0	10.4	
52 Acrylonitrile	53	5.873	5.865	0.008	85	369186	100.0	113.2	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	97	455598	10.0	11.2	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	94	385099	10.0	10.5	
54 Hexane	57	6.073	6.072	0.001	96	703904	10.0	8.69	
55 Vinyl acetate	43	6.180	6.179	0.001	97	591551	20.0	20.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.245	6.244	0.001	97	706068	10.0	11.0	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	99	238722	40.0	46.0	
63 cis-1,2-Dichloroethene	96	6.674	6.673	0.001	88	378387	10.0	10.9	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	91	512819	10.0	9.38	
67 Chlorobromomethane	128	6.874	6.880	-0.006	93	118948	10.0	11.4	
68 Chloroform	83	6.888	6.887	0.001	97	621827	10.0	11.0	
69 Tetrahydrofuran	42	6.910	6.909	0.001	90	64996	20.0	23.7	
71 1,1,1-Trichloroethane	97	7.096	7.095	0.001	98	613129	10.0	10.6	
70 Isobutyl alcohol	41	7.096	7.095	0.001	98	57331	250.0	191.1	M
72 Cyclohexane	56	7.167	7.159	0.008	96	846481	10.0	10.7	
73 1,1-Dichloropropene	75	7.196	7.195	0.001	97	570248	10.0	10.5	
74 Carbon tetrachloride	117	7.231	7.230	0.001	97	515255	10.0	10.6	
76 1,2-Dichloroethane	62	7.367	7.373	-0.006	97	338086	10.0	11.1	
77 Benzene	78	7.382	7.381	0.001	98	1492970	10.0	11.0	
14 n-Heptane	43	7.446	7.445	0.001	96	804236	10.0	10.5	
79 Trichloroethene	95	7.846	7.845	0.001	95	382435	10.0	10.8	
82 Methylcyclohexane	55	8.032	8.031	0.001	96	681566	10.0	10.6	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	92	337900	10.0	11.4	
84 1,4-Dioxane	88	8.089	8.103	-0.014	95	10023	200.0	129.0	
85 Dibromomethane	93	8.147	8.146	0.001	92	117181	10.0	11.5	
86 Dichlorobromomethane	83	8.218	8.217	0.001	98	366906	10.0	11.4	
87 2-Chloroethyl vinyl ether	63	8.354	8.360	-0.006	93	72006	10.0	9.97	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	92	378275	10.0	9.39	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	502896	40.0	50.1	
91 Toluene	91	8.804	8.803	0.001	97	1521949	10.0	11.0	
92 Ethyl methacrylate	69	8.890	8.889	0.001	93	169535	10.0	9.36	
93 trans-1,3-Dichloropropene	75	8.912	8.911	0.001	98	278913	10.0	10.5	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	93	161742	10.0	12.1	
95 2-Hexanone	43	9.183	9.182	0.001	99	314073	40.0	39.1	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	98	299857	10.0	9.89	
97 Tetrachloroethene	164	9.212	9.211	0.001	95	284201	10.0	9.22	
98 Chlorodibromomethane	129	9.391	9.397	-0.006	90	172053	10.0	9.41	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	137951	10.0	10.4	
102 Chlorobenzene	112	9.848	9.847	0.001	93	834461	10.0	9.40	
103 Ethylbenzene	106	9.884	9.883	0.001	98	539664	10.0	9.23	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.890	-0.006	95	261937	10.0	9.62	
105 m-Xylene & p-Xylene	106	9.956	9.962	-0.006	99	638263	10.0	9.31	
107 o-Xylene	106	10.270	10.276	-0.006	89	614291	10.0	9.69	
106 Styrene	104	10.277	10.276	0.001	85	862889	10.0	9.78	
108 Bromoform	173	10.485	10.484	0.001	92	71742	10.0	9.00	
109 Isopropylbenzene	105	10.528	10.534	-0.006	97	1727131	10.0	8.95	
111 Cyclohexanone	55	10.678	10.677	0.001	97	266914	400.0	540.1	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.748	-0.006	94	168141	10.0	9.82	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.784	-0.006	85	35365	10.0	8.38	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	89	45641	10.0	10.1	
115 N-Propylbenzene	120	10.849	10.848	0.001	100	475782	10.0	8.87	
116 Bromobenzene	156	10.857	10.856	0.001	97	307175	10.0	9.33	
117 1,3,5-Trimethylbenzene	105	10.957	10.956	0.001	96	1401432	10.0	8.95	
118 2-Chlorotoluene	126	10.971	10.977	-0.006	94	376868	10.0	8.92	
119 4-Chlorotoluene	126	11.050	11.049	0.001	99	367499	10.0	9.01	
120 tert-Butylbenzene	119	11.250	11.256	-0.006	92	1378763	10.0	9.02	
121 1,2,4-Trimethylbenzene	105	11.278	11.285	-0.006	99	1414446	10.0	9.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
122 sec-Butylbenzene	134	11.429	11.435	-0.006	95	379732	10.0	8.95	
123 4-Isopropyltoluene	119	11.522	11.520	0.002	97	1559515	10.0	8.77	
124 1,3-Dichlorobenzene	146	11.600	11.599	0.001	96	658104	10.0	8.94	
126 1,4-Dichlorobenzene	146	11.665	11.671	-0.006	92	654999	10.0	8.96	
127 n-Butylbenzene	91	11.879	11.885	-0.006	99	1668979	10.0	8.62	
128 1,2-Dichlorobenzene	146	12.022	12.028	-0.006	95	546803	10.0	9.23	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.786	-0.013	74	19060	10.0	9.31	
130 1,2,4-Trichlorobenzene	180	13.709	13.716	-0.007	93	348844	10.0	9.05	
131 Hexachlorobutadiene	225	13.845	13.851	-0.006	93	238684	10.0	8.02	
132 Naphthalene	128	14.081	14.087	-0.006	98	500500	10.0	10.0	
133 1,2,3-Trichlorobenzene	180	14.396	14.409	-0.013	93	275684	10.0	9.55	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.4	
S 134 Trihalomethanes, Total	1				0		40.0	40.8	
S 135 Xylenes, Total (URS)	1				0		20.0	19.0	
S 136 Total BTEX	1				0			50.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.9	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.4	
S 139 Xylenes, Total	106				0		20.0	19.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00005	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

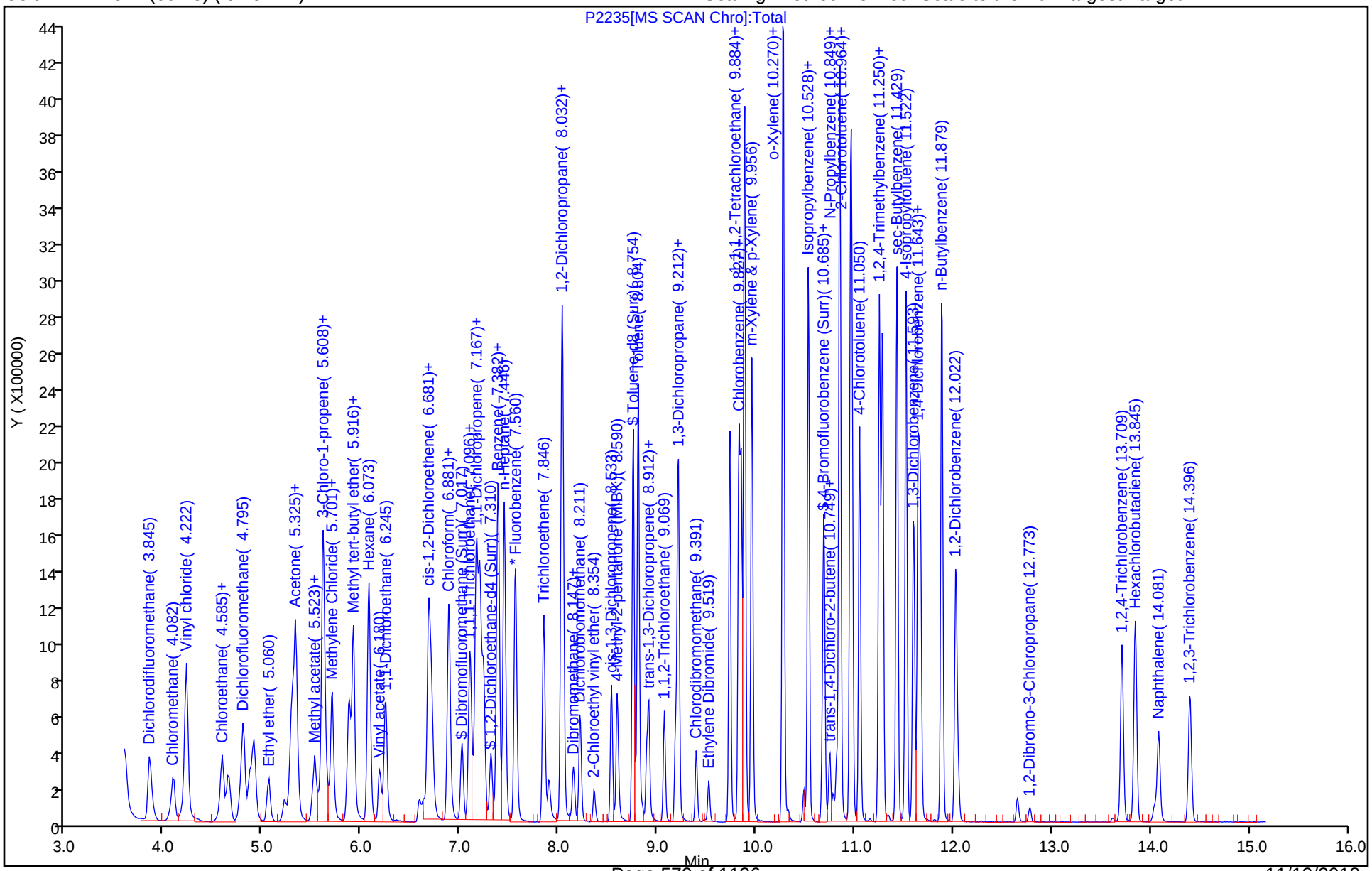
Report Date: 07-Nov-2018 18:51:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2235.D

Injection Date:	06-Nov-2018 06:09:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	CCVC			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

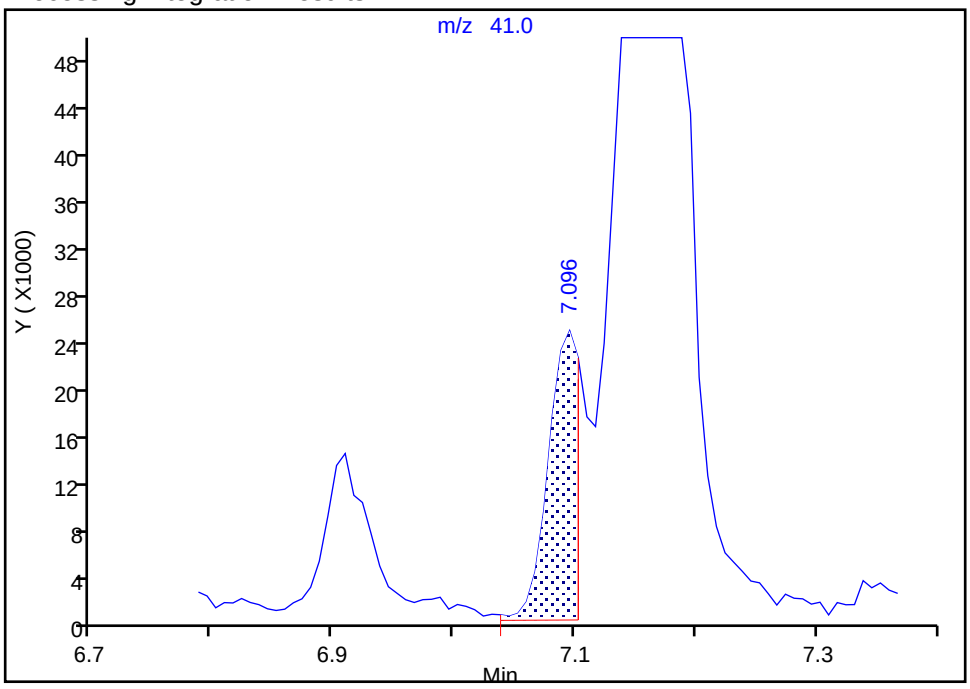
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2235.D
Injection Date: 06-Nov-2018 06:09:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: newcomer ALS Bottle#: 43 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

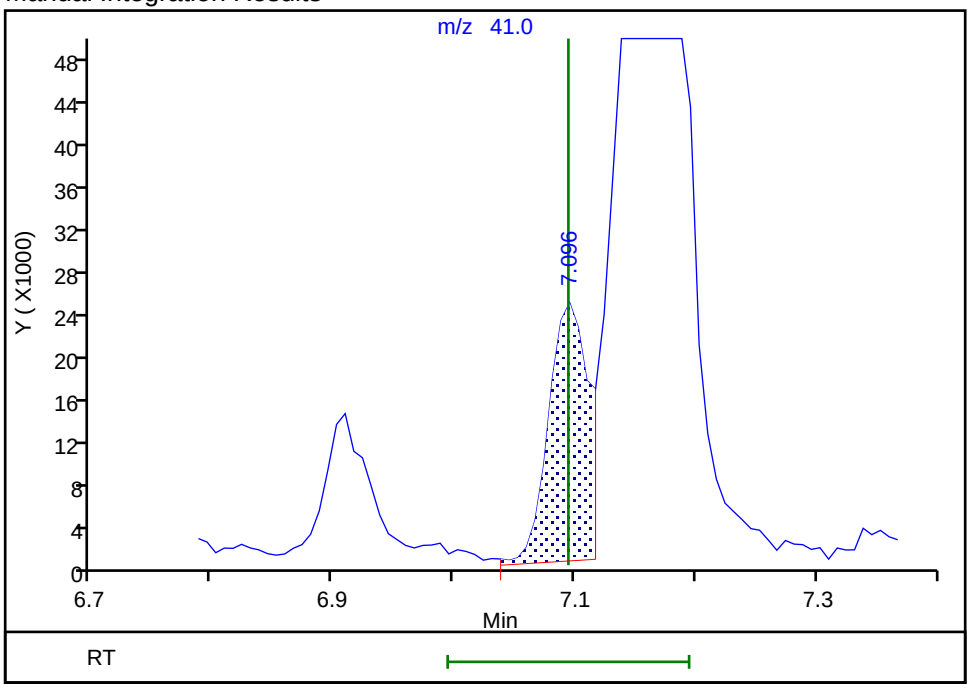
Processing Integration Results

RT: 7.10
Area: 43838
Amount: 157.8674
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 57331
Amount: 191.1403
Amount Units: ug/l



Reviewer: newcomer, 07-Nov-2018 18:42:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434393/19 Calibration Date: 10/22/2018 14:29

Instrument ID: VMS_Q Calib Start Date: 10/20/2018 13:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/20/2018 15:41

Lab File ID: Q74594.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Lin2		0.2412		9.73	10.5	-7.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2191	0.1953		9.36	10.5	-10.9	20.0
Toluene-d8 (Surr)	Ave	5.274	5.021		10.0	10.5	-4.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.135	1.208		11.2	10.5	6.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74594.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Oct-2018 14:29:30 ALS Bottle#: 9 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:34:33 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	264921	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2891340	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	618050	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	814760	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.259	7.255	0.004	92	585866	10.5	9.73	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.548	-0.003	0	474364	10.5	9.36	
$ 7 Toluene-d8 (Surr)	98	8.961	8.957	0.004	100	2606870	10.5	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.901	-0.003	84	826555	10.5	11.2	
23 Dichlorodifluoromethane	85	4.192	4.199	-0.007	99	1004508	10.0	9.82	
26 Chloromethane	50	4.449	4.456	-0.007	98	487300	10.0	9.98	
27 Vinyl chloride	62	4.571	4.585	-0.014	97	541306	10.0	9.98	
29 Bromomethane	94	4.907	4.914	-0.007	91	436654	10.0	9.47	
30 Chloroethane	64	4.964	4.964	0.000	100	255065	10.0	10.0	
31 Dichlorofluoromethane	67	5.100	5.107	-0.007	96	903525	10.0	9.04	
32 Trichlorofluoromethane	101	5.178	5.178	0.000	98	1342029	10.0	9.61	
35 Ethyl ether	59	5.357	5.357	0.000	94	303941	10.0	10.1	
39 Acrolein	56	5.500	5.507	-0.007	99	293460	100.0	103.9	
41 Acetone	43	5.600	5.607	-0.007	39	157047	40.0	32.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.607	-0.007	96	521792	10.0	10.2	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	96	727644	10.0	10.6	
44 Iodomethane	142	5.808	5.808	0.000	99	1011505	10.0	10.5	
45 Methyl acetate	43	5.829	5.829	0.000	96	241351	20.0	18.6	
47 3-Chloro-1-propene	41	5.879	5.886	-0.007	83	1248609	10.0	9.97	
48 Carbon disulfide	76	5.908	5.908	0.000	99	2984772	10.0	10.0	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	93	137033	100.0	103.1	
50 Methylene Chloride	84	5.972	5.972	0.000	95	560894	10.0	9.06	
52 Acrylonitrile	53	6.129	6.129	0.000	100	558233	100.0	94.1	
51 Methyl tert-butyl ether	73	6.151	6.158	-0.007	96	679228	10.0	9.26	
53 trans-1,2-Dichloroethene	96	6.187	6.194	-0.007	96	788357	10.0	10.3	
54 Hexane	57	6.351	6.358	-0.007	92	1430149	10.0	9.71	
55 Vinyl acetate	43	6.437	6.444	-0.007	97	1032419	20.0	18.6	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	1409922	10.0	9.85	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.880	-0.007	100	316662	40.0	34.3	
62 sec-Butyl Alcohol	45	6.923	6.923	0.000	98	338606	300.0	294.1	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	83	751903	10.0	10.1	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	88	1053170	10.0	9.98	
67 Chlorobromomethane	128	7.123	7.123	0.000	96	212680	10.0	9.74	
68 Chloroform	83	7.130	7.130	0.000	93	1229999	10.0	9.77	
69 Tetrahydrofuran	42	7.159	7.166	-0.007	95	88505	20.0	17.7	
70 Isobutyl alcohol	41	7.331	7.331	0.000	96	87037	250.0	236.3	
71 1,1,1-Trichloroethane	97	7.352	7.359	-0.007	98	1157283	10.0	10.0	
72 Cyclohexane	56	7.431	7.431	0.000	91	1436176	10.0	10.0	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	97	1242218	10.0	9.92	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	1058751	10.0	10.1	
76 1,2-Dichloroethane	62	7.602	7.609	-0.007	97	564537	10.0	9.18	
77 Benzene	78	7.631	7.631	0.000	96	2912895	10.0	9.92	
14 n-Heptane	43	7.702	7.702	0.000	92	1421034	10.0	9.77	
79 Trichloroethene	95	8.081	8.081	0.000	96	804126	10.0	9.71	
80 2-Pentanone	43	8.117	8.117	0.000	99	444995	40.0	36.0	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	97	647786	10.0	9.98	
82 Methylcyclohexane	55	8.274	8.274	0.000	95	1174931	10.0	9.79	
84 1,4-Dioxane	88	8.317	8.317	0.000	91	32449	200.0	191.0	
85 Dibromomethane	93	8.360	8.360	0.000	89	210455	10.0	9.52	
86 Dichlorobromomethane	83	8.425	8.424	0.001	99	712295	10.0	9.59	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	130014	10.0	8.71	
89 cis-1,3-Dichloropropene	75	8.732	8.739	-0.007	96	830437	10.0	10.5	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	676114	40.0	36.2	
91 Toluene	91	9.011	9.011	0.000	98	2895236	10.0	9.97	
92 Ethyl methacrylate	69	9.089	9.089	0.000	88	307868	10.0	10.2	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	97	549517	10.0	9.30	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	91	279438	10.0	9.99	
95 2-Hexanone	43	9.375	9.375	0.000	95	432924	40.0	37.8	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	92	524320	10.0	9.51	
97 Tetrachloroethene	164	9.426	9.426	0.000	92	576877	10.0	9.83	
98 Chlorodibromomethane	129	9.590	9.590	0.000	91	339621	10.0	9.65	
100 Ethylene Dibromide	107	9.719	9.719	0.000	98	240737	10.0	9.57	
101 1-Chlorohexane	91	9.940	9.940	0.000	98	1203929	10.0	10.4	
102 Chlorobenzene	112	10.055	10.055	0.000	94	1638364	10.0	9.94	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.090	-0.007	93	502692	10.0	9.92	
103 Ethylbenzene	106	10.091	10.090	0.000	99	1052659	10.0	10.3	
105 m-Xylene & p-Xylene	106	10.162	10.169	-0.007	0	1235127	10.0	9.94	
106 Styrene	104	10.484	10.484	0.000	84	1595369	10.0	10.1	
107 o-Xylene	106	10.484	10.484	0.000	89	1105670	10.0	10.2	
108 Bromoform	173	10.684	10.691	-0.007	93	134057	10.0	9.08	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	3169430	10.0	10.5	
111 Cyclohexanone	55	10.877	10.877	0.000	98	238854	400.0	330.6	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.948	-0.007	92	256629	10.0	9.63	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	90	50638	10.0	9.19	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	85	60198	10.0	9.68	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	893208	10.0	10.5	
116 Bromobenzene	156	11.070	11.070	0.000	94	510975	10.0	9.78	
117 1,3,5-Trimethylbenzene	105	11.177	11.177	0.000	95	2523224	10.0	10.5	
118 2-Chlorotoluene	126	11.192	11.192	0.000	96	680570	10.0	10.3	
119 4-Chlorotoluene	126	11.270	11.270	0.000	99	662473	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.478	11.478	0.000	92	2657065	10.0	10.3	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	2399744	10.0	10.2	
122 sec-Butylbenzene	134	11.656	11.656	0.000	95	695295	10.0	10.6	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	96	2904967	10.0	10.6	
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	96	1068488	10.0	9.92	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	94	1051228	10.0	9.79	
127 n-Butylbenzene	91	12.121	12.121	0.000	98	3024902	10.0	10.1	
128 1,2-Dichlorobenzene	146	12.257	12.264	-0.007	95	835797	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	78	28753	10.0	9.06	
130 1,2,4-Trichlorobenzene	180	13.987	13.987	0.000	94	521021	10.0	9.98	
131 Hexachlorobutadiene	225	14.145	14.145	0.000	96	489873	10.0	10.2	
132 Naphthalene	128	14.366	14.366	0.000	98	613225	10.0	9.94	
133 1,2,3-Trichlorobenzene	180	14.688	14.688	0.000	94	376339	10.0	10.2	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.4	
S 135 Xylenes, Total (URS)	1				0		20.0	20.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 139 Xylenes, Total	106				0		20.0	20.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.4	
S 134 Trihalomethanes, Total	1				0		40.0	38.1	

Reagents:

MV-MegaMain B_00002	Amount Added:	4.00	Units: uL	
MV-MainBaddon_00001	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.84	Units: uL	Run Reagent

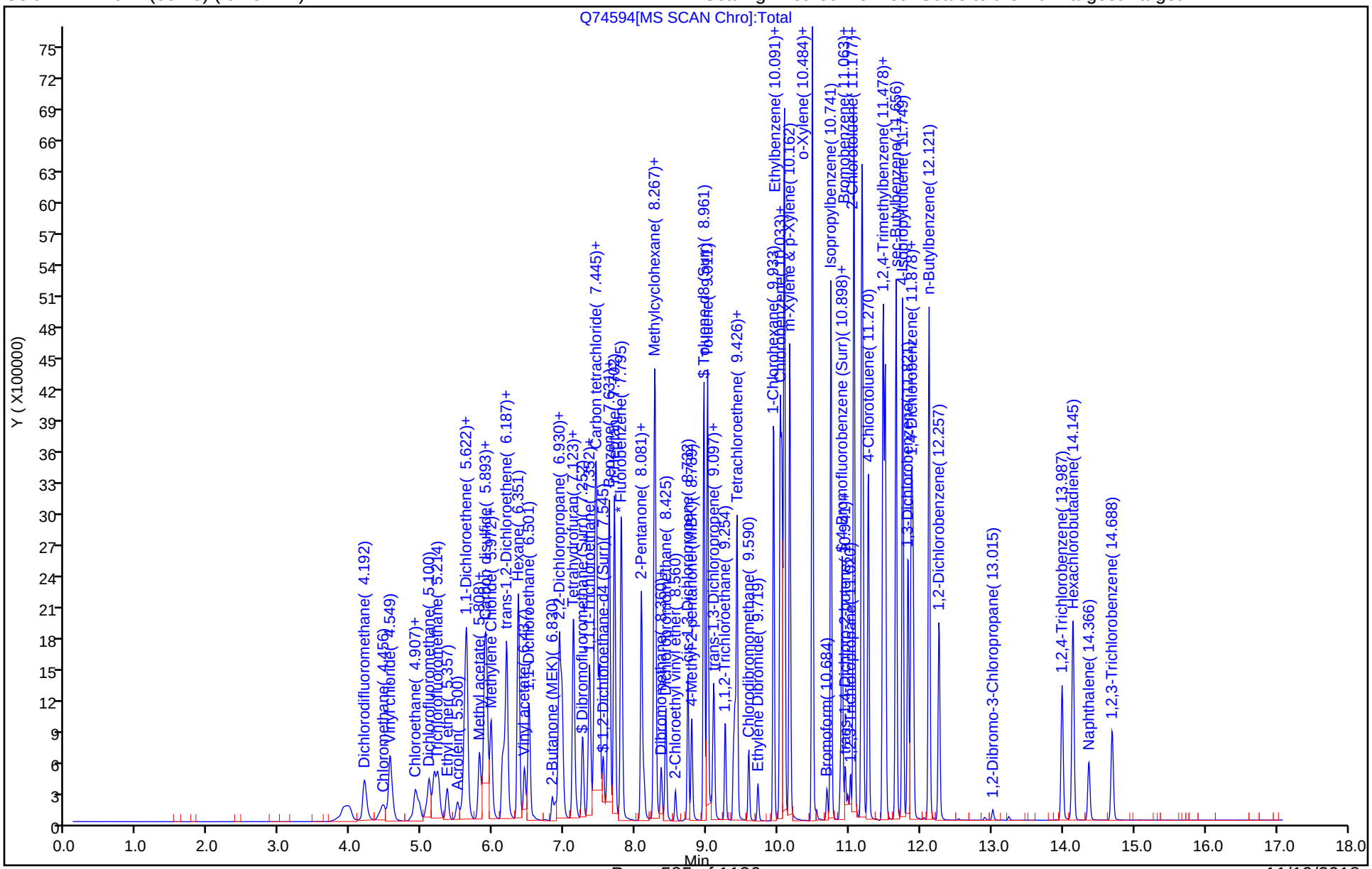
Report Date: 23-Oct-2018 09:34:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74594.D

Injection Date:	22-Oct-2018 14:29:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434393/19 Calibration Date: 10/22/2018 14:29

Instrument ID: VMS_Q Calib Start Date: 10/22/2018 11:44

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2018 13:48

Lab File ID: Q74594.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4424	0.4343		9.82	10.0	-1.8	20.0
Chloromethane	Ave	0.2112	0.2107	0.1000	9.98	10.0	-0.2	20.0
Vinyl chloride	Ave	0.2346	0.2340		9.98	10.0	-0.2	20.0
Bromomethane	Ave	0.1994	0.1888		9.47	10.0	-5.3	20.0
Chloroethane	Ave	0.1102	0.1103		10.0	10.0	0.0	20.0
Dichlorofluoromethane	Ave	0.4323	0.3906		9.04	10.0	-9.6	20.0
Trichlorofluoromethane	Ave	0.6039	0.5802		9.61	10.0	-3.9	20.0
Ethyl ether	Ave	0.1297	0.1314		10.1	10.0	1.3	20.0
Acrolein	Ave	0.0122	0.0127		104	100	3.9	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2222	0.2256		10.2	10.0	1.5	20.0
Acetone	Ave	0.0210	0.0170		32.3	40.0	-19.1	20.0
1,1-Dichloroethene	Ave	0.2969	0.3146		10.6	10.0	5.9	20.0
Iodomethane	Ave	0.4172	0.4373		10.5	10.0	4.8	20.0
Methyl acetate	Ave	0.0561	0.0522		18.6	20.0	-6.9	20.0
3-Chloro-1-propene	Ave	0.5417	0.5398		9.97	10.0	-0.3	20.0
Carbon disulfide	Ave	1.284	1.290		10.0	10.0	0.5	20.0
t-Butyl alcohol	Ave	1.254	1.293		103	100	3.1	20.0
Methylene Chloride	Ave	0.2677	0.2425		9.06	10.0	-9.4	20.0
Acrylonitrile	Lin2		0.0241		94.1	100	-5.9	20.0
Methyl tert-butyl ether	Ave	0.3171	0.2937		9.26	10.0	-7.4	20.0
trans-1,2-Dichloroethene	Ave	0.3301	0.3408		10.3	10.0	3.2	20.0
Hexane	Ave	2.979	2.892		9.71	10.0	-2.9	20.0
Vinyl acetate	Ave	0.2400	0.2232		18.6	20.0	-7.0	20.0
1,1-Dichloroethane	Ave	0.6190	0.6096	0.1000	9.85	10.0	-1.5	20.0
2-Butanone (MEK)	Ave	0.0399	0.0342		34.3	40.0	-14.2	20.0
sec-Butyl Alcohol	Ave	1.087	1.065		294	300	-2.0	20.0
cis-1,2-Dichloroethene	Ave	0.3226	0.3251		10.1	10.0	0.8	20.0
2,2-Dichloropropane	Ave	0.4564	0.4553		9.98	10.0	-0.2	20.0
Bromochloromethane	Ave	0.0944	0.0920		9.74	10.0	-2.6	20.0
Chloroform	Ave	0.5445	0.5318		9.77	10.0	-2.3	20.0
Tetrahydrofuran	Ave	0.0216	0.0191		17.7	20.0	-11.3	20.0
Isobutyl alcohol	Ave	0.3476	0.3285		236	250	-5.5	20.0
1,1,1-Trichloroethane	Ave	0.4993	0.5003		10.0	10.0	0.2	20.0
Cyclohexane	Ave	0.6179	0.6209		10.0	10.0	0.5	20.0
1,1-Dichloropropene	Ave	0.5411	0.5370		9.92	10.0	-0.8	20.0
Carbon tetrachloride	Ave	0.4543	0.4577		10.1	10.0	0.8	20.0
1,2-Dichloroethane	Ave	0.2659	0.2441		9.18	10.0	-8.2	20.0
Benzene	Ave	1.269	1.259		9.92	10.0	-0.8	20.0
Trichloroethene	Ave	0.3579	0.3476		9.71	10.0	-2.9	20.0
2-Pentanone	Ave	0.0535	0.0481		36.0	40.0	-10.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434393/19 Calibration Date: 10/22/2018 14:29

Instrument ID: VMS_Q Calib Start Date: 10/22/2018 11:44

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2018 13:48

Lab File ID: Q74594.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2806	0.2801		9.98	10.0	-0.2	20.0
Methylcyclohexane	Ave	0.5187	0.5080		9.79	10.0	-2.1	20.0
1,4-Dioxane	Lin2		0.0007		191	200	-4.5	20.0
Dibromomethane	Ave	0.0956	0.0910		9.52	10.0	-4.8	20.0
Bromodichloromethane	Ave	0.3211	0.3079		9.59	10.0	-4.1	20.0
2-Chloroethyl vinyl ether	Lin2		0.0562		8.71	10.0	-12.9	20.0
cis-1,3-Dichloropropene	Ave	1.600	1.680		10.5	10.0	5.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0807	0.0731		36.2	40.0	-9.4	20.0
Toluene	Ave	1.255	1.252		9.97	10.0	-0.3	20.0
Ethyl methacrylate	Ave	0.6105	0.6227		10.2	10.0	2.0	20.0
trans-1,3-Dichloropropene	Lin2		0.2376		9.30	10.0	-7.0	20.0
1,1,2-Trichloroethane	Ave	0.1209	0.1208		9.99	10.0	-0.1	20.0
2-Hexanone	Ave	0.2316	0.2189		37.8	40.0	-5.5	20.0
1,3-Dichloropropane	Ave	1.115	1.060		9.51	10.0	-4.9	20.0
Tetrachloroethene	Ave	1.187	1.167		9.83	10.0	-1.7	20.0
Dibromochloromethane	Ave	0.7118	0.6869		9.65	10.0	-3.5	20.0
1,2-Dibromoethane (EDB)	Ave	0.5085	0.4869		9.57	10.0	-4.3	20.0
1-Chlorohexane	Ave	2.347	2.435		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	3.334	3.314	0.3000	9.94	10.0	-0.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.025	1.017		9.92	10.0	-0.8	20.0
Ethylbenzene	Ave	2.058	2.129		10.3	10.0	3.5	20.0
m-Xylene & p-Xylene	Ave	2.512	2.498		9.94	10.0	-0.6	20.0
o-Xylene	Ave	2.203	2.236		10.2	10.0	1.5	20.0
Styrene	Ave	3.207	3.227		10.1	10.0	0.6	20.0
Bromoform	Lin2		0.2711	0.1000	9.08	10.0	-9.2	20.0
Isopropylbenzene	Ave	4.615	4.863		10.5	10.0	5.4	20.0
Cyclohexanone	Ave	0.0146	0.0121		331	400	-17.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4087	0.3937	0.3000	9.63	10.0	-3.7	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.0777		9.19	10.0	-8.1	20.0
1,2,3-Trichloropropane	Ave	0.0954	0.0924		9.68	10.0	-3.2	20.0
N-Propylbenzene	Ave	1.304	1.370		10.5	10.0	5.1	20.0
Bromobenzene	Ave	0.8013	0.7839		9.78	10.0	-2.2	20.0
1,3,5-Trimethylbenzene	Ave	3.698	3.871		10.5	10.0	4.7	20.0
2-Chlorotoluene	Ave	1.013	1.044		10.3	10.0	3.1	20.0
4-Chlorotoluene	Ave	0.996	1.016		10.2	10.0	2.0	20.0
tert-Butylbenzene	Ave	3.966	4.076		10.3	10.0	2.8	20.0
1,2,4-Trimethylbenzene	Ave	3.604	3.682		10.2	10.0	2.2	20.0
sec-Butylbenzene	Ave	1.011	1.067		10.6	10.0	5.5	20.0
4-Isopropyltoluene	Ave	4.195	4.457		10.6	10.0	6.2	20.0
1,3-Dichlorobenzene	Ave	1.653	1.639		9.92	10.0	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.647	1.613		9.79	10.0	-2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434393/19 Calibration Date: 10/22/2018 14:29

Instrument ID: VMS_Q Calib Start Date: 10/22/2018 11:44

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/22/2018 13:48

Lab File ID: Q74594.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	4.599	4.641		10.1	10.0	0.9	20.0
1,2-Dichlorobenzene	Ave	1.301	1.282		9.86	10.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0441		9.06	10.0	-9.4	20.0
1,2,4-Trichlorobenzene	Ave	0.8013	0.7994		9.98	10.0	-0.2	20.0
Hexachlorobutadiene	Ave	0.7379	0.7516		10.2	10.0	1.8	20.0
Naphthalene	Ave	0.9463	0.9408		9.94	10.0	-0.6	20.0
1,2,3-Trichlorobenzene	Ave	0.5659	0.5774		10.2	10.0	2.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74594.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Oct-2018 14:29:30 ALS Bottle#: 9 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 09:34:33 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	264921	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2891340	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	618050	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	814760	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.259	7.255	0.004	92	585866	10.5	9.73	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.548	-0.003	0	474364	10.5	9.36	
$ 7 Toluene-d8 (Surr)	98	8.961	8.957	0.004	100	2606870	10.5	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.901	-0.003	84	826555	10.5	11.2	
23 Dichlorodifluoromethane	85	4.192	4.199	-0.007	99	1004508	10.0	9.82	
26 Chloromethane	50	4.449	4.456	-0.007	98	487300	10.0	9.98	
27 Vinyl chloride	62	4.571	4.585	-0.014	97	541306	10.0	9.98	
29 Bromomethane	94	4.907	4.914	-0.007	91	436654	10.0	9.47	
30 Chloroethane	64	4.964	4.964	0.000	100	255065	10.0	10.0	
31 Dichlorofluoromethane	67	5.100	5.107	-0.007	96	903525	10.0	9.04	
32 Trichlorofluoromethane	101	5.178	5.178	0.000	98	1342029	10.0	9.61	
35 Ethyl ether	59	5.357	5.357	0.000	94	303941	10.0	10.1	
39 Acrolein	56	5.500	5.507	-0.007	99	293460	100.0	103.9	
41 Acetone	43	5.600	5.607	-0.007	39	157047	40.0	32.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.607	-0.007	96	521792	10.0	10.2	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	96	727644	10.0	10.6	
44 Iodomethane	142	5.808	5.808	0.000	99	1011505	10.0	10.5	
45 Methyl acetate	43	5.829	5.829	0.000	96	241351	20.0	18.6	
47 3-Chloro-1-propene	41	5.879	5.886	-0.007	83	1248609	10.0	9.97	
48 Carbon disulfide	76	5.908	5.908	0.000	99	2984772	10.0	10.0	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	93	137033	100.0	103.1	
50 Methylene Chloride	84	5.972	5.972	0.000	95	560894	10.0	9.06	
52 Acrylonitrile	53	6.129	6.129	0.000	100	558233	100.0	94.1	
51 Methyl tert-butyl ether	73	6.151	6.158	-0.007	96	679228	10.0	9.26	
53 trans-1,2-Dichloroethene	96	6.187	6.194	-0.007	96	788357	10.0	10.3	
54 Hexane	57	6.351	6.358	-0.007	92	1430149	10.0	9.71	
55 Vinyl acetate	43	6.437	6.444	-0.007	97	1032419	20.0	18.6	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	1409922	10.0	9.85	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.880	-0.007	100	316662	40.0	34.3	
62 sec-Butyl Alcohol	45	6.923	6.923	0.000	98	338606	300.0	294.1	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	83	751903	10.0	10.1	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	88	1053170	10.0	9.98	
67 Chlorobromomethane	128	7.123	7.123	0.000	96	212680	10.0	9.74	
68 Chloroform	83	7.130	7.130	0.000	93	1229999	10.0	9.77	
69 Tetrahydrofuran	42	7.159	7.166	-0.007	95	88505	20.0	17.7	
70 Isobutyl alcohol	41	7.331	7.331	0.000	96	87037	250.0	236.3	
71 1,1,1-Trichloroethane	97	7.352	7.359	-0.007	98	1157283	10.0	10.0	
72 Cyclohexane	56	7.431	7.431	0.000	91	1436176	10.0	10.0	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	97	1242218	10.0	9.92	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	1058751	10.0	10.1	
76 1,2-Dichloroethane	62	7.602	7.609	-0.007	97	564537	10.0	9.18	
77 Benzene	78	7.631	7.631	0.000	96	2912895	10.0	9.92	
14 n-Heptane	43	7.702	7.702	0.000	92	1421034	10.0	9.77	
79 Trichloroethene	95	8.081	8.081	0.000	96	804126	10.0	9.71	
80 2-Pentanone	43	8.117	8.117	0.000	99	444995	40.0	36.0	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	97	647786	10.0	9.98	
82 Methylcyclohexane	55	8.274	8.274	0.000	95	1174931	10.0	9.79	
84 1,4-Dioxane	88	8.317	8.317	0.000	91	32449	200.0	191.0	
85 Dibromomethane	93	8.360	8.360	0.000	89	210455	10.0	9.52	
86 Dichlorobromomethane	83	8.425	8.424	0.001	99	712295	10.0	9.59	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	130014	10.0	8.71	
89 cis-1,3-Dichloropropene	75	8.732	8.739	-0.007	96	830437	10.0	10.5	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	676114	40.0	36.2	
91 Toluene	91	9.011	9.011	0.000	98	2895236	10.0	9.97	
92 Ethyl methacrylate	69	9.089	9.089	0.000	88	307868	10.0	10.2	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	97	549517	10.0	9.30	
94 1,1,2-Trichloroethane	97	9.261	9.261	0.000	91	279438	10.0	9.99	
95 2-Hexanone	43	9.375	9.375	0.000	95	432924	40.0	37.8	
96 1,3-Dichloropropane	76	9.397	9.397	0.000	92	524320	10.0	9.51	
97 Tetrachloroethene	164	9.426	9.426	0.000	92	576877	10.0	9.83	
98 Chlorodibromomethane	129	9.590	9.590	0.000	91	339621	10.0	9.65	
100 Ethylene Dibromide	107	9.719	9.719	0.000	98	240737	10.0	9.57	
101 1-Chlorohexane	91	9.940	9.940	0.000	98	1203929	10.0	10.4	
102 Chlorobenzene	112	10.055	10.055	0.000	94	1638364	10.0	9.94	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.090	-0.007	93	502692	10.0	9.92	
103 Ethylbenzene	106	10.091	10.090	0.000	99	1052659	10.0	10.3	
105 m-Xylene & p-Xylene	106	10.162	10.169	-0.007	0	1235127	10.0	9.94	
106 Styrene	104	10.484	10.484	0.000	84	1595369	10.0	10.1	
107 o-Xylene	106	10.484	10.484	0.000	89	1105670	10.0	10.2	
108 Bromoform	173	10.684	10.691	-0.007	93	134057	10.0	9.08	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	3169430	10.0	10.5	
111 Cyclohexanone	55	10.877	10.877	0.000	98	238854	400.0	330.6	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.948	-0.007	92	256629	10.0	9.63	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	90	50638	10.0	9.19	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	85	60198	10.0	9.68	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	893208	10.0	10.5	
116 Bromobenzene	156	11.070	11.070	0.000	94	510975	10.0	9.78	
117 1,3,5-Trimethylbenzene	105	11.177	11.177	0.000	95	2523224	10.0	10.5	
118 2-Chlorotoluene	126	11.192	11.192	0.000	96	680570	10.0	10.3	
119 4-Chlorotoluene	126	11.270	11.270	0.000	99	662473	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.478	11.478	0.000	92	2657065	10.0	10.3	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	2399744	10.0	10.2	
122 sec-Butylbenzene	134	11.656	11.656	0.000	95	695295	10.0	10.6	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	96	2904967	10.0	10.6	
124 1,3-Dichlorobenzene	146	11.828	11.828	0.000	96	1068488	10.0	9.92	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	94	1051228	10.0	9.79	
127 n-Butylbenzene	91	12.121	12.121	0.000	98	3024902	10.0	10.1	
128 1,2-Dichlorobenzene	146	12.257	12.264	-0.007	95	835797	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	78	28753	10.0	9.06	
130 1,2,4-Trichlorobenzene	180	13.987	13.987	0.000	94	521021	10.0	9.98	
131 Hexachlorobutadiene	225	14.145	14.145	0.000	96	489873	10.0	10.2	
132 Naphthalene	128	14.366	14.366	0.000	98	613225	10.0	9.94	
133 1,2,3-Trichlorobenzene	180	14.688	14.688	0.000	94	376339	10.0	10.2	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.4	
S 135 Xylenes, Total (URS)	1				0		20.0	20.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 139 Xylenes, Total	106				0		20.0	20.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.4	
S 134 Trihalomethanes, Total	1				0		40.0	38.1	

Reagents:

MV-MegaMain B_00002	Amount Added:	4.00	Units: uL		
MV-MainBaddon_00001	Amount Added:	5.00	Units: uL		
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent	
MV-ARCH SS A_00101	Amount Added:	0.84	Units: uL	Run Reagent	

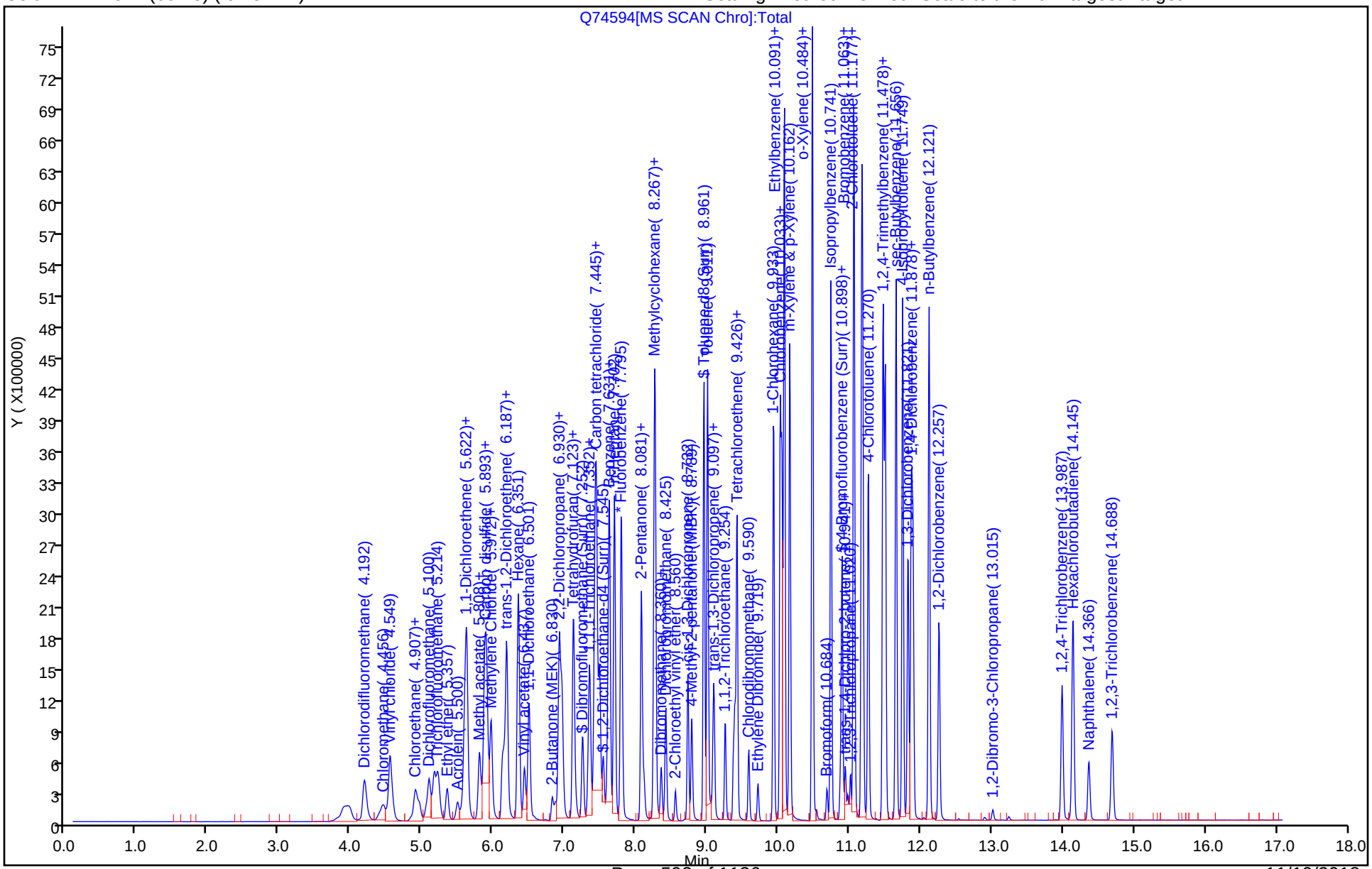
Report Date: 23-Oct-2018 09:34:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74594.D

Injection Date:	22-Oct-2018 14:29:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434575/19 Calibration Date: 10/23/2018 16:40

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q74642.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4908	0.4684		9.54	10.0	-4.6	20.0
Chloromethane	Ave	0.2434	0.2209	0.1000	9.08	10.0	-9.2	20.0
Vinyl chloride	Ave	0.2617	0.2420		9.25	10.0	-7.5	20.0
Bromomethane	Ave	0.2156	0.1998		9.26	10.0	-7.4	20.0
Chloroethane	Ave	0.1230	0.1150		9.35	10.0	-6.5	20.0
Dichlorofluoromethane	Ave	0.4220	0.4117		9.76	10.0	-2.4	20.0
Trichlorofluoromethane	Ave	0.6891	0.6277		9.11	10.0	-8.9	20.0
Ethyl ether	Ave	0.1330	0.1345		10.1	10.0	1.1	20.0
Acrolein	Ave	0.0132	0.0126		95.5	100	-4.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2541	0.2544		10.0	10.0	0.1	20.0
Acetone	Ave	0.0233	0.0188		32.2	40.0	-19.4	20.0
1,1-Dichloroethene	Ave	0.3525	0.3188		9.04	10.0	-9.6	20.0
Methyl iodide	Ave	0.4834	0.4606		9.53	10.0	-4.7	20.0
Methyl acetate	Lin2		0.0610		21.7	20.0	8.3	20.0
3-Chloro-1-propene	Ave	0.5972	0.5485		9.18	10.0	-8.2	20.0
Carbon disulfide	Ave	1.437	1.334		9.29	10.0	-7.1	20.0
t-Butyl alcohol	Ave	1.465	1.361		92.9	100	-7.1	20.0
Methylene Chloride	Ave	0.2997	0.2499		8.34	10.0	-16.6	20.0
Acrylonitrile	Ave	0.0250	0.0242		96.8	100	-3.2	20.0
Methyl tert-butyl ether	Ave	0.3252	0.3140		9.66	10.0	-3.4	20.0
trans-1,2-Dichloroethene	Ave	0.3895	0.3496		8.98	10.0	-10.2	20.0
Hexane	Ave	3.561	3.505		9.84	10.0	-1.6	20.0
Vinyl acetate	Ave	0.2363	0.2380		20.1	20.0	0.7	20.0
1,1-Dichloroethane	Ave	0.7006	0.6269	0.1000	8.95	10.0	-10.5	20.0
2-Butanone (MEK)	Ave	0.0398	0.0346		34.7	40.0	-13.2	20.0
sec-Butyl Alcohol	Ave	1.108	1.116		302	300	0.7	20.0
cis-1,2-Dichloroethene	Ave	0.3680	0.3328		9.04	10.0	-9.6	20.0
2,2-Dichloropropane	Ave	0.5381	0.5110		9.49	10.0	-5.1	20.0
Bromochloromethane	Ave	0.1015	0.0957		9.43	10.0	-5.7	20.0
Chloroform	Ave	0.6143	0.5619		9.15	10.0	-8.5	20.0
Tetrahydrofuran	Ave	0.0202	0.0191		18.9	20.0	-5.4	20.0
Isobutyl alcohol	Ave	0.3918	0.3068		196	250	-21.7*	20.0
1,1,1-Trichloroethane	Ave	0.5831	0.5454		9.35	10.0	-6.5	20.0
Cyclohexane	Ave	0.6985	0.6874		9.84	10.0	-1.6	20.0
1,1-Dichloropropene	Ave	0.6018	0.5616		9.33	10.0	-6.7	20.0
Carbon tetrachloride	Ave	0.5295	0.4865		9.19	10.0	-8.1	20.0
1,2-Dichloroethane	Ave	0.2783	0.2585		9.29	10.0	-7.1	20.0
Benzene	Ave	1.414	1.332		9.42	10.0	-5.8	20.0
Trichloroethene	Ave	0.3994	0.3711		9.29	10.0	-7.1	20.0
2-Pentanone	Ave	0.0498	0.0498		40.1	40.0	0.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434575/19 Calibration Date: 10/23/2018 16:40

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q74642.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3012	0.2930		9.73	10.0	-2.7	20.0
Methylcyclohexane	Ave	0.5882	0.5316		9.04	10.0	-9.6	20.0
1,4-Dioxane	Lin2		0.0006		180	200	-10.0	20.0
Dibromomethane	Ave	0.1007	0.0943		9.37	10.0	-6.3	20.0
Bromodichloromethane	Ave	0.3465	0.3264		9.42	10.0	-5.8	20.0
2-Chloroethyl vinyl ether	Lin2		0.0498		8.58	10.0	-14.2	20.0
cis-1,3-Dichloropropene	Ave	1.788	1.991		11.1	10.0	11.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0795	0.0735		37.0	40.0	-7.6	20.0
Toluene	Ave	1.422	1.338		9.41	10.0	-5.9	20.0
Ethyl methacrylate	Lin2		0.6763		9.86	10.0	-1.4	20.0
trans-1,3-Dichloropropene	Lin2		0.2427		8.96	10.0	-10.4	20.0
1,1,2-Trichloroethane	Ave	0.1293	0.1241		9.60	10.0	-4.0	20.0
2-Hexanone	Lin2		0.2420		38.6	40.0	-3.6	20.0
1,3-Dichloropropane	Ave	1.220	1.244		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	1.419	1.403		9.89	10.0	-1.1	20.0
Dibromochloromethane	Ave	0.7734	0.8000		10.3	10.0	3.4	20.0
1,2-Dibromoethane	Ave	0.5495	0.5767		10.5	10.0	4.9	20.0
1-Chlorohexane	Ave	2.839	2.884		10.2	10.0	1.6	20.0
Chlorobenzene	Ave	3.841	3.885	0.3000	10.1	10.0	1.1	20.0
1,1,1,2-Tetrachloroethane	Ave	1.173	1.248		10.6	10.0	6.4	20.0
Ethylbenzene	Ave	2.462	2.497		10.1	10.0	1.4	20.0
m,p-Xylene	Ave	2.970	2.987		10.1	10.0	0.6	20.0
o-Xylene	Ave	2.557	2.715		10.6	10.0	6.2	20.0
Styrene	Ave	3.634	3.951		10.9	10.0	8.7	20.0
Bromoform	Ave	0.2992	0.3365	0.1000	11.2	10.0	12.4	20.0
Isopropylbenzene	Ave	5.611	5.462		9.73	10.0	-2.7	20.0
Cyclohexanone	Ave	0.0159	0.0159		399	400	-0.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4290	0.4363	0.3000	10.2	10.0	1.7	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0825		9.18	10.0	-8.2	20.0
1,2,3-Trichloropropane	Ave	0.1026	0.1074		10.5	10.0	4.6	20.0
Bromobenzene	Ave	0.8856	0.9050		10.2	10.0	2.2	20.0
N-Propylbenzene	Ave	1.571	1.581		10.1	10.0	0.7	20.0
1,3,5-Trimethylbenzene	Ave	4.433	4.406		9.94	10.0	-0.6	20.0
2-Chlorotoluene	Ave	1.185	1.195		10.1	10.0	0.9	20.0
4-Chlorotoluene	Ave	1.168	1.188		10.2	10.0	1.7	20.0
tert-Butylbenzene	Ave	4.732	4.600		9.72	10.0	-2.8	20.0
1,2,4-Trimethylbenzene	Ave	4.244	4.260		10.0	10.0	0.4	20.0
sec-Butylbenzene	Ave	1.215	1.212		9.98	10.0	-0.2	20.0
4-Isopropyltoluene	Ave	5.038	5.128		10.2	10.0	1.8	20.0
1,3-Dichlorobenzene	Ave	1.935	1.921		9.92	10.0	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.926	1.906		9.89	10.0	-1.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434575/19 Calibration Date: 10/23/2018 16:40

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q74642.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.483	5.341		9.74	10.0	-2.6	20.0
1,2-Dichlorobenzene	Ave	1.489	1.468		9.86	10.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0487		9.72	10.0	-2.8	20.0
1,2,4-Trichlorobenzene	Ave	0.9027	0.9150		10.1	10.0	1.4	20.0
Hexachlorobutadiene	Ave	0.8872	0.8612		9.71	10.0	-2.9	20.0
Naphthalene	Ave	1.010	1.049		10.4	10.0	3.9	20.0
1,2,3-Trichlorobenzene	Ave	0.6386	0.6589		10.3	10.0	3.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74642.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 16:40:30 ALS Bottle#: 10 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:36:32 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.864	5.873	-0.009	0	222178	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.796	-0.001	100	2594879	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.027	-0.001	99	489873	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.865	0.006	98	712929	12.5	12.5	
23 Dichlorodifluoromethane	85	4.184	4.193	-0.009	99	972240	10.0	9.54	
26 Chloromethane	50	4.434	4.443	-0.009	98	458607	10.0	9.08	
27 Vinyl chloride	62	4.556	4.565	-0.009	98	502369	10.0	9.25	
29 Bromomethane	94	4.899	4.901	-0.002	92	414689	10.0	9.26	
30 Chloroethane	64	4.956	4.958	-0.002	99	238773	10.0	9.35	
31 Dichlorofluoromethane	67	5.092	5.094	-0.002	97	854717	10.0	9.76	
32 Trichlorofluoromethane	101	5.207	5.172	0.035	98	1303059	10.0	9.11	
35 Ethyl ether	59	5.342	5.351	-0.009	93	279136	10.0	10.1	
39 Acrolein	56	5.493	5.501	-0.008	100	261823	100.0	95.5	
41 Acetone	43	5.593	5.594	-0.001	37	155957	40.0	32.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.593	5.601	-0.008	97	528172	10.0	10.0	
43 1,1-Dichloroethene	96	5.621	5.623	-0.002	96	661806	10.0	9.04	
44 Iodomethane	142	5.800	5.802	-0.002	99	956137	10.0	9.53	
45 Methyl acetate	43	5.822	5.823	-0.001	96	253155	20.0	21.7	
47 3-Chloro-1-propene	41	5.872	5.873	-0.001	83	1138705	10.0	9.18	
48 Carbon disulfide	76	5.900	5.902	-0.002	99	2770234	10.0	9.29	
49 2-Methyl-2-propanol	59	5.929	5.937	-0.008	92	120983	100.0	92.9	
50 Methylene Chloride	84	5.965	5.966	-0.002	95	518708	10.0	8.34	
52 Acrylonitrile	53	6.122	6.123	-0.001	99	502848	100.0	96.8	
51 Methyl tert-butyl ether	73	6.143	6.152	-0.009	96	651925	10.0	9.66	
53 trans-1,2-Dichloroethene	96	6.186	6.188	-0.002	96	725668	10.0	8.98	
54 Hexane	57	6.343	6.352	-0.009	92	1373556	10.0	9.84	
55 Vinyl acetate	43	6.429	6.438	-0.009	97	988115	20.0	20.1	
57 1,1-Dichloroethane	63	6.494	6.502	-0.008	96	1301374	10.0	8.95	
61 2-Butanone (MEK)	43	6.873	6.874	-0.001	100	287022	40.0	34.7	
62 sec-Butyl Alcohol	45	6.908	6.917	-0.009	98	297450	300.0	302.1	
63 cis-1,2-Dichloroethene	96	6.923	6.924	-0.001	83	690835	10.0	9.04	
64 2,2-Dichloropropane	77	6.958	6.960	-0.002	86	1060693	10.0	9.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.116	7.117	-0.001	94	198750	10.0	9.43	
68 Chloroform	83	7.123	7.124	-0.001	94	1166387	10.0	9.15	
69 Tetrahydrofuran	42	7.159	7.160	-0.001	95	79154	20.0	18.9	
70 Isobutyl alcohol	41	7.323	7.325	-0.002	92	68157	250.0	195.7	
71 1,1,1-Trichloroethane	97	7.344	7.353	-0.009	98	1132203	10.0	9.35	
72 Cyclohexane	56	7.423	7.425	-0.002	91	1426904	10.0	9.84	
73 1,1-Dichloropropene	75	7.445	7.446	-0.001	97	1165806	10.0	9.33	
74 Carbon tetrachloride	117	7.487	7.489	-0.002	97	1009976	10.0	9.19	
76 1,2-Dichloroethane	62	7.595	7.603	-0.008	97	536646	10.0	9.29	
77 Benzene	78	7.623	7.625	-0.002	96	2765816	10.0	9.42	
14 n-Heptane	43	7.695	7.696	-0.001	92	1396704	10.0	9.19	
79 Trichloroethene	95	8.074	8.075	-0.001	96	770436	10.0	9.29	
80 2-Pentanone	43	8.117	8.118	-0.001	99	413769	40.0	40.1	
83 1,2-Dichloropropane	63	8.253	8.254	-0.001	97	608326	10.0	9.73	
82 Methylcyclohexane	55	8.267	8.268	-0.001	94	1103618	10.0	9.04	
84 1,4-Dioxane	88	8.303	8.311	-0.008	81	26686	200.0	180.0	
85 Dibromomethane	93	8.353	8.354	-0.001	90	195795	10.0	9.37	
86 Dichlorobromomethane	83	8.417	8.419	-0.002	99	677616	10.0	9.42	
87 2-Chloroethyl vinyl ether	63	8.553	8.554	-0.001	91	103400	10.0	8.58	
89 cis-1,3-Dichloropropene	75	8.732	8.733	-0.001	95	780138	10.0	11.1	
90 4-Methyl-2-pentanone (MIBK	43	8.782	8.783	-0.001	0	610373	40.0	37.0	
91 Toluene	91	9.010	9.005	0.005	98	2777890	10.0	9.41	
92 Ethyl methacrylate	69	9.082	9.083	-0.001	89	265038	10.0	9.86	
93 trans-1,3-Dichloropropene	75	9.096	9.098	-0.002	97	503842	10.0	8.96	
94 1,1,2-Trichloroethane	97	9.254	9.255	-0.001	91	257705	10.0	9.60	
95 2-Hexanone	43	9.368	9.369	-0.001	96	379388	40.0	38.6	
96 1,3-Dichloropropane	76	9.389	9.391	-0.002	93	487643	10.0	10.2	
97 Tetrachloroethene	164	9.418	9.420	-0.002	91	549828	10.0	9.89	
98 Chlorodibromomethane	129	9.582	9.584	-0.002	90	313505	10.0	10.3	
100 Ethylene Dibromide	107	9.711	9.713	-0.002	98	226011	10.0	10.5	
101 1-Chlorohexane	91	9.933	9.934	-0.001	98	1130395	10.0	10.2	
102 Chlorobenzene	112	10.047	10.049	-0.002	94	1522636	10.0	10.1	
103 Ethylbenzene	106	10.083	10.085	-0.001	99	978632	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.001	91	489101	10.0	10.6	
105 m-Xylene & p-Xylene	106	10.162	10.163	-0.001	0	1170546	10.0	10.1	
107 o-Xylene	106	10.476	10.478	-0.002	89	1063874	10.0	10.6	
106 Styrene	104	10.476	10.478	-0.002	85	1548329	10.0	10.9	
108 Bromoform	173	10.684	10.685	-0.001	94	131855	10.0	11.2	
109 Isopropylbenzene	105	10.741	10.742	-0.001	97	3114960	10.0	9.73	
111 Cyclohexanone	55	10.877	10.871	0.006	98	248500	400.0	399.2	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	92	248866	10.0	10.2	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.978	-0.001	92	47069	10.0	9.18	
114 1,2,3-Trichloropropane	110	11.013	11.014	-0.002	86	61227	10.0	10.5	
115 N-Propylbenzene	120	11.063	11.064	-0.001	99	901780	10.0	10.1	
116 Bromobenzene	156	11.063	11.064	-0.001	95	516168	10.0	10.2	
117 1,3,5-Trimethylbenzene	105	11.170	11.171	-0.001	95	2512718	10.0	9.94	
118 2-Chlorotoluene	126	11.184	11.186	-0.002	96	681740	10.0	10.1	
119 4-Chlorotoluene	126	11.263	11.264	-0.001	99	677596	10.0	10.2	
120 tert-Butylbenzene	119	11.470	11.472	-0.002	92	2623400	10.0	9.72	
121 1,2,4-Trimethylbenzene	105	11.499	11.500	-0.001	98	2429851	10.0	10.0	
122 sec-Butylbenzene	134	11.656	11.650	0.006	95	690968	10.0	9.98	
123 4-Isopropyltoluene	119	11.749	11.743	0.006	96	2924969	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.822	-0.002	96	1095364	10.0	9.92	
126 1,4-Dichlorobenzene	146	11.892	11.893	-0.001	92	1086837	10.0	9.89	
127 n-Butylbenzene	91	12.114	12.115	-0.001	98	3046313	10.0	9.74	
128 1,2-Dichlorobenzene	146	12.257	12.258	-0.001	95	837210	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.009	0.006	77	27767	10.0	9.72	
130 1,2,4-Trichlorobenzene	180	13.987	13.981	0.006	94	521843	10.0	10.1	
131 Hexachlorobutadiene	225	14.137	14.139	-0.002	96	491164	10.0	9.71	
132 Naphthalene	128	14.359	14.360	-0.001	98	598254	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.688	14.682	0.006	94	375812	10.0	10.3	
S 140 1,2-Dichloroethene, Total	96				0		20.0	18.0	
S 139 Xylenes, Total	106				0		20.0	20.7	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.1	
S 135 Xylenes, Total (URS)	1				0		20.0	20.7	
S 138 1,2-Dichloroethene, Total	1				0		20.0	18.0	
S 134 Trihalomethanes, Total	1				0		40.0	40.2	

Reagents:

MV-MegaMain B_00002	Amount Added:	4.00	Units: uL
MV-MainBaddon_00001	Amount Added:	5.00	Units: uL
MV-568718-D_00008	Amount Added:	1.00	Units: uL

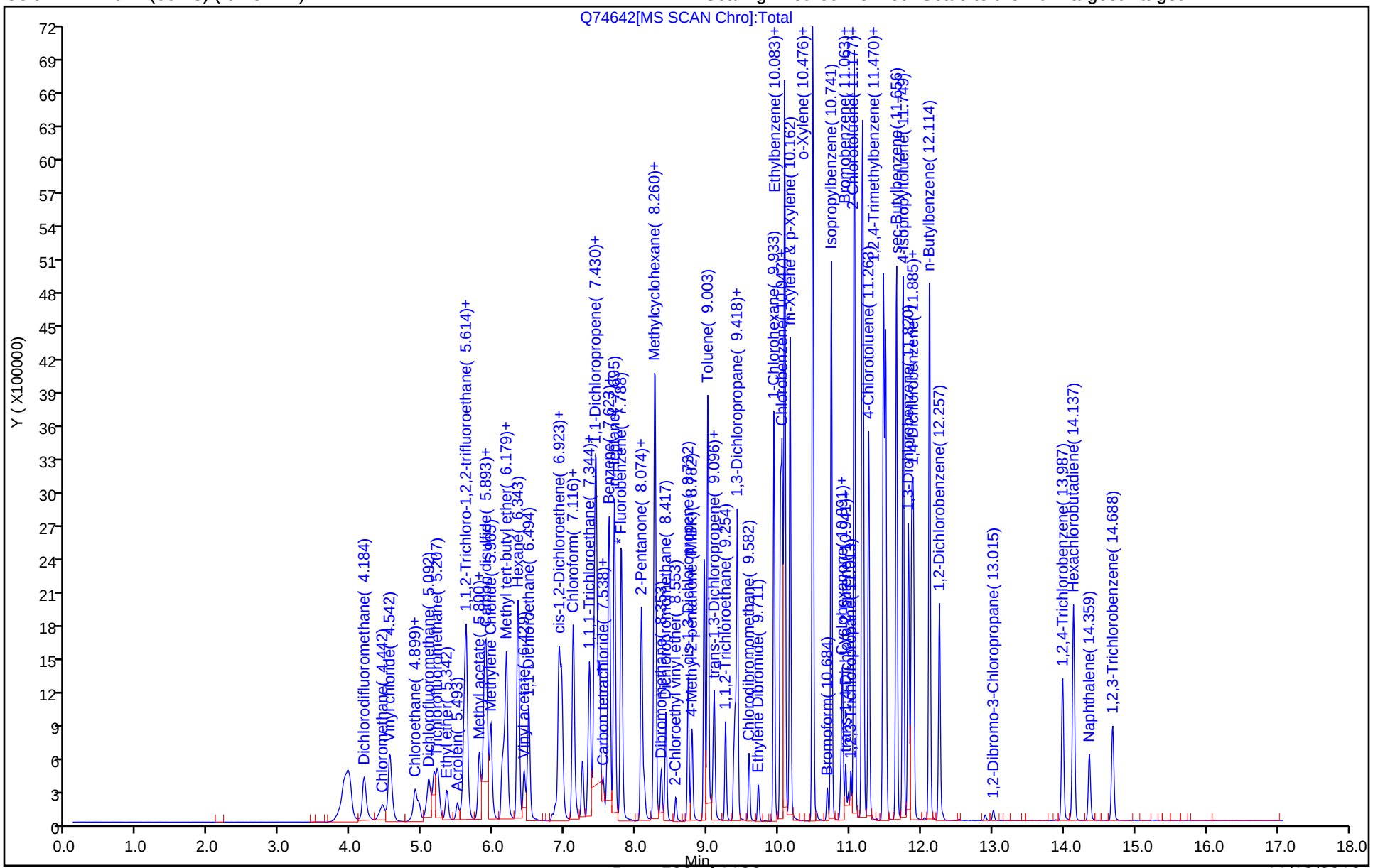
Report Date: 24-Oct-2018 10:36:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74642.D

Injection Date:	23-Oct-2018 16:40:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-434575/45 Calibration Date: 10/23/2018 17:00

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q74643.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3110	0.2836		8.21	9.00	-8.8	20.0
1,2-Dichloroethane-d4 (Surr)	Lin2		0.2304		8.17	9.00	-9.2	20.0
Toluene-d8 (Surr)	Qua		6.794		9.07	9.00	0.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.344	1.432		9.59	9.00	6.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74643.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 17:00:30 ALS Bottle#: 11 Worklist Smp#: 45
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:36:40 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.873	0.002	0	200436	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.796	0.002	100	2705067	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.027	0.002	99	484428	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.867	11.865	0.002	98	612603	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.253	0.002	93	552286	9.00	8.21	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.548	7.546	0.002	0	448660	9.00	8.17	
$ 7 Toluene-d8 (Surr)	98	8.957	8.955	0.002	100	2369764	9.00	9.07	
$ 8 4-Bromofluorobenzene (Surr	95	10.894	10.892	0.002	83	631654	9.00	9.59	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-ARCH SS A_00101 Amount Added: 0.72 Units: uL

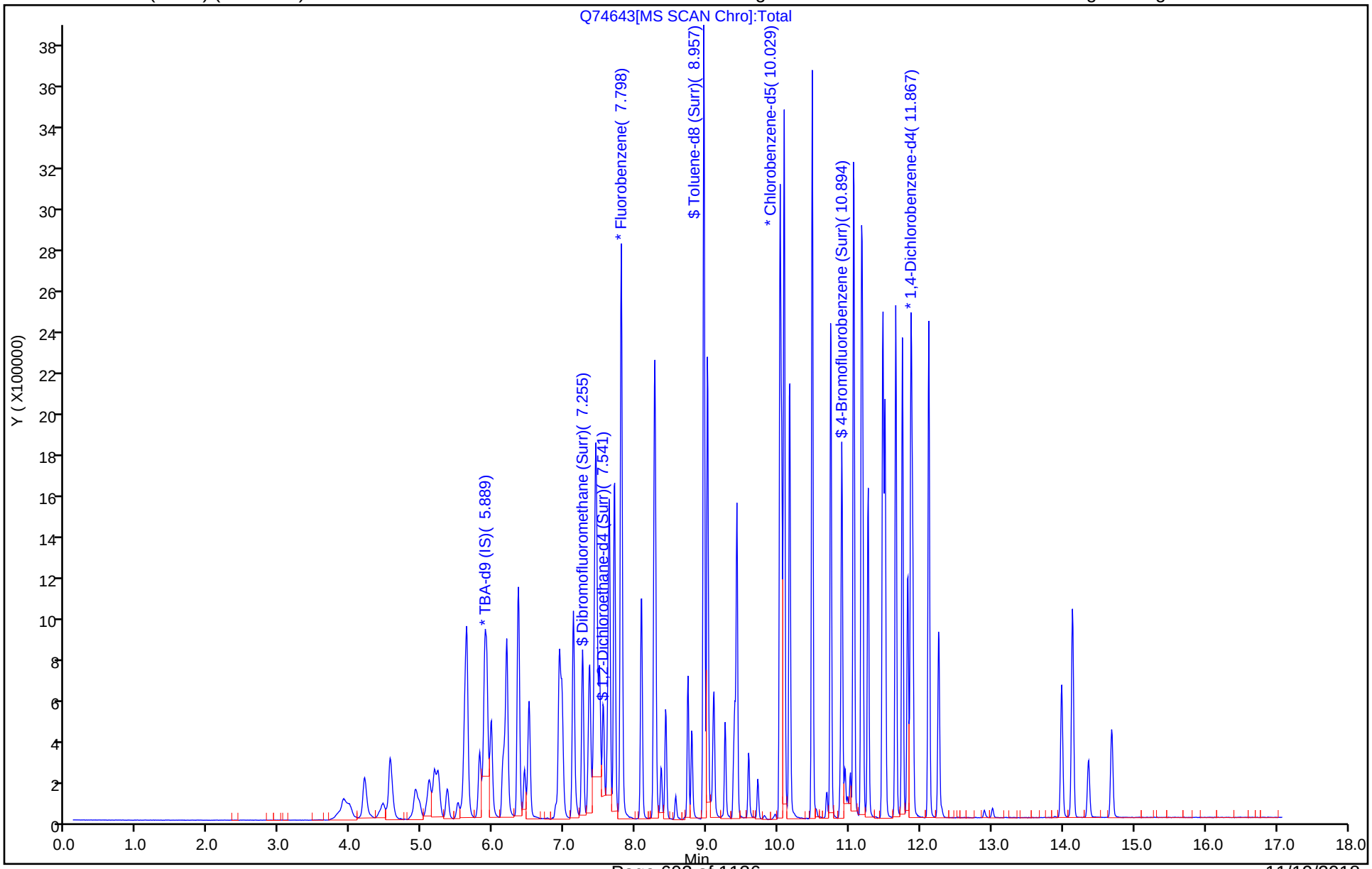
Report Date: 24-Oct-2018 10:36:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74643.D

Injection Date:	23-Oct-2018 17:00:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	45
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/2 Calibration Date: 11/10/2018 10:30

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4908	0.5080		10.3	10.0	3.5	20.0
Chloromethane	Ave	0.2434	0.2138	0.1000	8.78	10.0	-12.2	20.0
Vinyl chloride	Ave	0.2617	0.2617		10.0	10.0	0.0	20.0
Bromomethane	Ave	0.2156	0.2649		12.3	10.0	22.9*	20.0
Chloroethane	Ave	0.1230	0.1166		9.48	10.0	-5.2	20.0
Dichlorofluoromethane	Ave	0.4220	0.5265		12.5	10.0	24.8*	20.0
Trichlorofluoromethane	Ave	0.6891	0.6873		9.97	10.0	-0.3	20.0
Ethyl ether	Ave	0.1330	0.1317		9.90	10.0	-1.0	20.0
Acrolein	Ave	0.0132	0.0124		93.5	100	-6.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2541	0.2548		10.0	10.0	0.3	20.0
Acetone	Ave	0.0233	0.0199		34.2	40.0	-14.5	20.0
1,1-Dichloroethene	Ave	0.3525	0.3306		9.38	10.0	-6.2	20.0
Methyl iodide	Ave	0.4834	0.4620		9.56	10.0	-4.4	20.0
Methyl acetate	Lin2		0.0479		16.4	20.0	-17.8	20.0
3-Chloro-1-propene	Ave	0.5972	0.5107		8.55	10.0	-14.5	20.0
Carbon disulfide	Ave	1.437	1.423		9.90	10.0	-1.0	20.0
t-Butyl alcohol	Ave	1.465	1.442		98.4	100	-1.6	20.0
Methylene Chloride	Ave	0.2997	0.2685		8.96	10.0	-10.4	20.0
Acrylonitrile	Ave	0.0250	0.0241		96.2	100	-3.8	20.0
Methyl tert-butyl ether	Ave	0.3252	0.3012		9.26	10.0	-7.4	20.0
trans-1,2-Dichloroethene	Ave	0.3895	0.3622		9.30	10.0	-7.0	20.0
Hexane	Ave	3.561	3.188		8.95	10.0	-10.5	20.0
Vinyl acetate	Ave	0.2363	0.2460		20.8	20.0	4.1	20.0
1,1-Dichloroethane	Ave	0.7006	0.6474	0.1000	9.24	10.0	-7.6	20.0
2-Butanone (MEK)	Ave	0.0398	0.0349		35.1	40.0	-12.3	20.0
cis-1,2-Dichloroethene	Ave	0.3680	0.3583		9.74	10.0	-2.6	20.0
2,2-Dichloropropane	Ave	0.5381	0.5066		9.41	10.0	-5.9	20.0
Bromochloromethane	Ave	0.1015	0.0993		9.78	10.0	-2.2	20.0
Chloroform	Ave	0.6143	0.5965		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0202	0.0179		17.8	20.0	-11.1	20.0
Isobutyl alcohol	Ave	0.3918	0.3116		199	250	-20.5*	20.0
1,1,1-Trichloroethane	Ave	0.5831	0.5550		9.52	10.0	-4.8	20.0
Cyclohexane	Ave	0.6985	0.6907		9.89	10.0	-1.1	20.0
1,1-Dichloropropene	Ave	0.6018	0.6161		10.2	10.0	2.4	20.0
Carbon tetrachloride	Ave	0.5295	0.5075		9.58	10.0	-4.2	20.0
1,2-Dichloroethane	Ave	0.2783	0.2600		9.34	10.0	-6.6	20.0
Benzene	Ave	1.414	1.461		10.3	10.0	3.3	20.0
Trichloroethene	Ave	0.3994	0.4054		10.2	10.0	1.5	20.0
1,2-Dichloropropane	Ave	0.3012	0.3185		10.6	10.0	5.7	20.0
Methylcyclohexane	Ave	0.5882	0.5603		9.53	10.0	-4.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/2 Calibration Date: 11/10/2018 10:30

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0007		197	200	-1.5	20.0
Dibromomethane	Ave	0.1007	0.1053		10.5	10.0	4.7	20.0
Bromodichloromethane	Ave	0.3465	0.3533		10.2	10.0	1.9	20.0
2-Chloroethyl vinyl ether	Lin2		0.0426		7.38	10.0	-26.2*	20.0
cis-1,3-Dichloropropene	Ave	1.788	1.727		9.66	10.0	-3.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0795	0.0732		36.8	40.0	-8.0	20.0
Toluene	Ave	1.422	1.543		10.9	10.0	8.5	20.0
Ethyl methacrylate	Lin2		0.5913		8.64	10.0	-13.6	20.0
trans-1,3-Dichloropropene	Lin2		0.2623		9.67	10.0	-3.3	20.0
1,1,2-Trichloroethane	Ave	0.1293	0.1338		10.4	10.0	3.5	20.0
2-Hexanone	Lin2		0.2012		32.2	40.0	-19.6	20.0
1,3-Dichloropropane	Ave	1.220	1.151		9.44	10.0	-5.6	20.0
Tetrachloroethene	Ave	1.419	1.357		9.56	10.0	-4.4	20.0
Dibromochloromethane	Ave	0.7734	0.7372		9.53	10.0	-4.7	20.0
1,2-Dibromoethane	Ave	0.5495	0.5327		9.69	10.0	-3.1	20.0
Chlorobenzene	Ave	3.841	3.742	0.3000	9.74	10.0	-2.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.173	1.204		10.3	10.0	2.7	20.0
Ethylbenzene	Ave	2.462	2.523		10.2	10.0	2.5	20.0
m,p-Xylene	Ave	2.970	2.953		9.94	10.0	-0.6	20.0
o-Xylene	Ave	2.557	2.702		10.6	10.0	5.7	20.0
Styrene	Ave	3.634	3.794		10.4	10.0	4.4	20.0
Bromoform	Ave	0.2992	0.3203	0.1000	10.7	10.0	7.0	20.0
Isopropylbenzene	Ave	5.611	5.550		9.89	10.0	-1.1	20.0
Cyclohexanone	Ave	0.0159	0.0243		612	400	53.0*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4290	0.4342	0.3000	10.1	10.0	1.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0590		6.67	10.0	-33.3*	20.0
1,2,3-Trichloropropane	Ave	0.1026	0.1018		9.92	10.0	-0.8	20.0
N-Propylbenzene	Ave	1.571	1.562		9.95	10.0	-0.5	20.0
Bromobenzene	Ave	0.8856	0.9528		10.8	10.0	7.6	20.0
1,3,5-Trimethylbenzene	Ave	4.433	4.535		10.2	10.0	2.3	20.0
2-Chlorotoluene	Ave	1.185	1.225		10.3	10.0	3.4	20.0
4-Chlorotoluene	Ave	1.168	1.155		9.90	10.0	-1.0	20.0
tert-Butylbenzene	Ave	4.732	4.601		9.72	10.0	-2.8	20.0
1,2,4-Trimethylbenzene	Ave	4.244	4.319		10.2	10.0	1.8	20.0
sec-Butylbenzene	Ave	1.215	1.221		10.1	10.0	0.5	20.0
4-Isopropyltoluene	Ave	5.038	4.940		9.81	10.0	-1.9	20.0
1,3-Dichlorobenzene	Ave	1.935	1.934		9.99	10.0	-0.0	20.0
1,4-Dichlorobenzene	Ave	1.926	1.929		10.0	10.0	0.1	20.0
n-Butylbenzene	Ave	5.483	5.427		9.90	10.0	-1.0	20.0
1,2-Dichlorobenzene	Ave	1.489	1.505		10.1	10.0	1.1	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0485		9.68	10.0	-3.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/2 Calibration Date: 11/10/2018 10:30

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	0.9027	0.9552		10.6	10.0	5.8	20.0
Hexachlorobutadiene	Ave	0.8872	0.9218		10.4	10.0	3.9	20.0
Naphthalene	Ave	1.010	1.057		10.5	10.0	4.7	20.0
1,2,3-Trichlorobenzene	Ave	0.6386	0.6673		10.5	10.0	4.5	20.0
1-Chlorohexane	Ave	2.839			0.400	10.0		
2-Pentanone	Ave	0.0498			3.20	40.0		
sec-Butyl Alcohol	Ave	1.108			24.0	300		
Dibromofluoromethane (Surr)	Ave	0.3110	0.2932		8.48	9.00	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Lin2		0.2371		8.42	9.00	-6.4	20.0
Toluene-d8 (Surr)	Qua		6.113		8.10	9.00	-10.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.344	1.339		8.97	9.00	-0.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75271.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 10-Nov-2018 10:30:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:52 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	230349	250.0	250.0	
* 1 Fluorobenzene	96	7.803	7.803	0.000	100	2782642	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	602579	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	98	815750	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.259	7.259	0.000	92	587480	9.00	8.48	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	475084	9.00	8.42	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	99	2652036	9.00	8.10	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	86	786691	9.00	8.97	
23 Dichlorodifluoromethane	85	4.199	4.199	0.000	99	1130798	10.0	10.3	
26 Chloromethane	50	4.449	4.449	0.000	97	475825	10.0	8.78	
27 Vinyl chloride	62	4.578	4.578	0.000	97	582572	10.0	10.0	
29 Bromomethane	94	4.914	4.914	0.000	91	589775	10.0	12.3	
30 Chloroethane	64	4.964	4.964	0.000	99	259559	10.0	9.48	
31 Dichlorofluoromethane	67	5.107	5.107	0.000	95	1172094	10.0	12.5	
32 Trichlorofluoromethane	101	5.186	5.186	0.000	98	1529893	10.0	9.97	
35 Ethyl ether	59	5.357	5.357	0.000	93	293149	10.0	9.90	
39 Acrolein	56	5.500	5.500	0.000	100	275105	100.0	93.5	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.600	0.000	97	567195	10.0	10.0	
41 Acetone	43	5.608	5.608	0.000	36	177459	40.0	34.2	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	97	735836	10.0	9.38	
44 Iodomethane	142	5.808	5.808	0.000	99	1028482	10.0	9.56	
45 Methyl acetate	43	5.836	5.836	0.000	96	213326	20.0	16.4	
47 3-Chloro-1-propene	41	5.886	5.886	0.000	84	1136942	10.0	8.55	
48 Carbon disulfide	76	5.908	5.908	0.000	99	3167856	10.0	9.90	
49 2-Methyl-2-propanol	59	5.944	5.944	0.000	93	132826	100.0	98.4	
50 Methylene Chloride	84	5.972	5.972	0.000	93	597596	10.0	8.96	
52 Acrylonitrile	53	6.129	6.129	0.000	99	536011	100.0	96.2	
51 Methyl tert-butyl ether	73	6.158	6.158	0.000	95	670569	10.0	9.26	
53 trans-1,2-Dichloroethene	96	6.194	6.194	0.000	97	806228	10.0	9.30	
54 Hexane	57	6.358	6.358	0.000	89	1536617	10.0	8.95	
55 Vinyl acetate	43	6.437	6.437	0.000	97	1095160	20.0	20.8	
57 1,1-Dichloroethane	63	6.501	6.501	0.000	96	1441105	10.0	9.24	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.880	6.880	0.000	100	310833	40.0	35.1	
62 sec-Butyl Alcohol	45		6.916				ND	ND	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	82	797636	10.0	9.74	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	88	1127843	10.0	9.41	
67 Chlorobromomethane	128	7.123	7.123	0.000	95	221061	10.0	9.78	
68 Chloroform	83	7.130	7.130	0.000	92	1327793	10.0	9.71	
69 Tetrahydrofuran	42	7.166	7.166	0.000	93	79765	20.0	17.8	
70 Isobutyl alcohol	41	7.331	7.331	0.000	95	71780	250.0	198.8	
71 1,1,1-Trichloroethane	97	7.359	7.359	0.000	98	1235589	10.0	9.52	
72 Cyclohexane	56	7.431	7.431	0.000	87	1537536	10.0	9.89	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	99	1371404	10.0	10.2	
74 Carbon tetrachloride	117	7.495	7.495	0.000	96	1129684	10.0	9.58	
76 1,2-Dichloroethane	62	7.602	7.602	0.000	98	578845	10.0	9.34	
77 Benzene	78	7.631	7.631	0.000	95	3252098	10.0	10.3	
14 n-Heptane	43	7.703	7.703	0.000	89	1446355	10.0	8.88	
79 Trichloroethene	95	8.081	8.081	0.000	96	902478	10.0	10.2	
80 2-Pentanone	43		8.117				ND	ND	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	97	709022	10.0	10.6	
82 Methylcyclohexane	55	8.275	8.275	0.000	95	1247306	10.0	9.53	
84 1,4-Dioxane	88	8.317	8.317	0.000	81	31506	200.0	197.1	
85 Dibromomethane	93	8.360	8.360	0.000	90	234494	10.0	10.5	
86 Dichlorobromomethane	83	8.425	8.425	0.000	100	786372	10.0	10.2	
87 2-Chloroethyl vinyl ether	63	8.561	8.561	0.000	90	94777	10.0	7.38	
89 cis-1,3-Dichloropropene	75	8.732	8.732	0.000	97	832546	10.0	9.66	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	651374	40.0	36.8	
91 Toluene	91	9.011	9.011	0.000	98	3435388	10.0	10.9	
92 Ethyl methacrylate	69	9.082	9.082	0.000	88	285057	10.0	8.64	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	94	583982	10.0	9.67	
94 1,1,2-Trichloroethane	97	9.254	9.254	0.000	91	297908	10.0	10.4	
95 2-Hexanone	43	9.376	9.376	0.000	93	388007	40.0	32.2	
96 1,3-Dichloropropane	76	9.390	9.390	0.000	89	554848	10.0	9.44	
97 Tetrachloroethene	164	9.426	9.426	0.000	93	653947	10.0	9.56	
98 Chlorodibromomethane	129	9.590	9.590	0.000	89	355380	10.0	9.53	
100 Ethylene Dibromide	107	9.719	9.719	0.000	99	256784	10.0	9.69	
101 1-Chlorohexane	91		9.933				ND	ND	
102 Chlorobenzene	112	10.055	10.055	0.000	96	1803993	10.0	9.74	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	94	580620	10.0	10.3	
103 Ethylbenzene	106	10.091	10.091	0.000	99	1216157	10.0	10.2	
105 m-Xylene & p-Xylene	106	10.162	10.162	0.000	0	1423650	10.0	9.94	
107 o-Xylene	106	10.484	10.484	0.000	89	1302535	10.0	10.6	
106 Styrene	104	10.484	10.484	0.000	84	1829054	10.0	10.4	
108 Bromoform	173	10.684	10.684	0.000	95	154390	10.0	10.7	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	3621990	10.0	9.89	
111 Cyclohexanone	55	10.877	10.877	0.000	99	468421	400.0	611.8	
112 1,1,2,2-Tetrachloroethane	83	10.942	10.942	0.000	93	283340	10.0	10.1	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	89	38469	10.0	6.67	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	85	66441	10.0	9.92	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	1019646	10.0	9.95	
116 Bromobenzene	156	11.070	11.070	0.000	94	621775	10.0	10.8	
117 1,3,5-Trimethylbenzene	105	11.170	11.170	0.000	95	2959355	10.0	10.2	
118 2-Chlorotoluene	126	11.192	11.192	0.000	96	799710	10.0	10.3	
119 4-Chlorotoluene	126	11.263	11.263	0.000	98	754068	10.0	9.90	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.471	11.471	0.000	91	3002801	10.0	9.72	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	2818896	10.0	10.2	
122 sec-Butylbenzene	134	11.657	11.657	0.000	95	796695	10.0	10.1	
123 4-Isopropyltoluene	119	11.749	11.749	0.000	96	3223944	10.0	9.81	
124 1,3-Dichlorobenzene	146	11.821	11.821	0.000	96	1262235	10.0	10.0	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	93	1258887	10.0	10.0	
127 n-Butylbenzene	91	12.121	12.121	0.000	98	3541632	10.0	9.90	
128 1,2-Dichlorobenzene	146	12.257	12.257	0.000	96	982470	10.0	10.1	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	80	31627	10.0	9.68	
130 1,2,4-Trichlorobenzene	180	13.987	13.987	0.000	94	623386	10.0	10.6	
131 Hexachlorobutadiene	225	14.138	14.138	0.000	98	601563	10.0	10.4	
132 Naphthalene	128	14.359	14.359	0.000	97	689993	10.0	10.5	
133 1,2,3-Trichlorobenzene	180	14.688	14.688	0.000	95	435491	10.0	10.5	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.0	
S 136 Total BTEX	1				0			51.9	
S 139 Xylenes, Total	106				0		20.0	20.5	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.3	
S 135 Xylenes, Total (URS)	1				0		20.0	20.5	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.0	
S 134 Trihalomethanes, Total	1				0		40.0	40.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-MegaMainA_00006	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

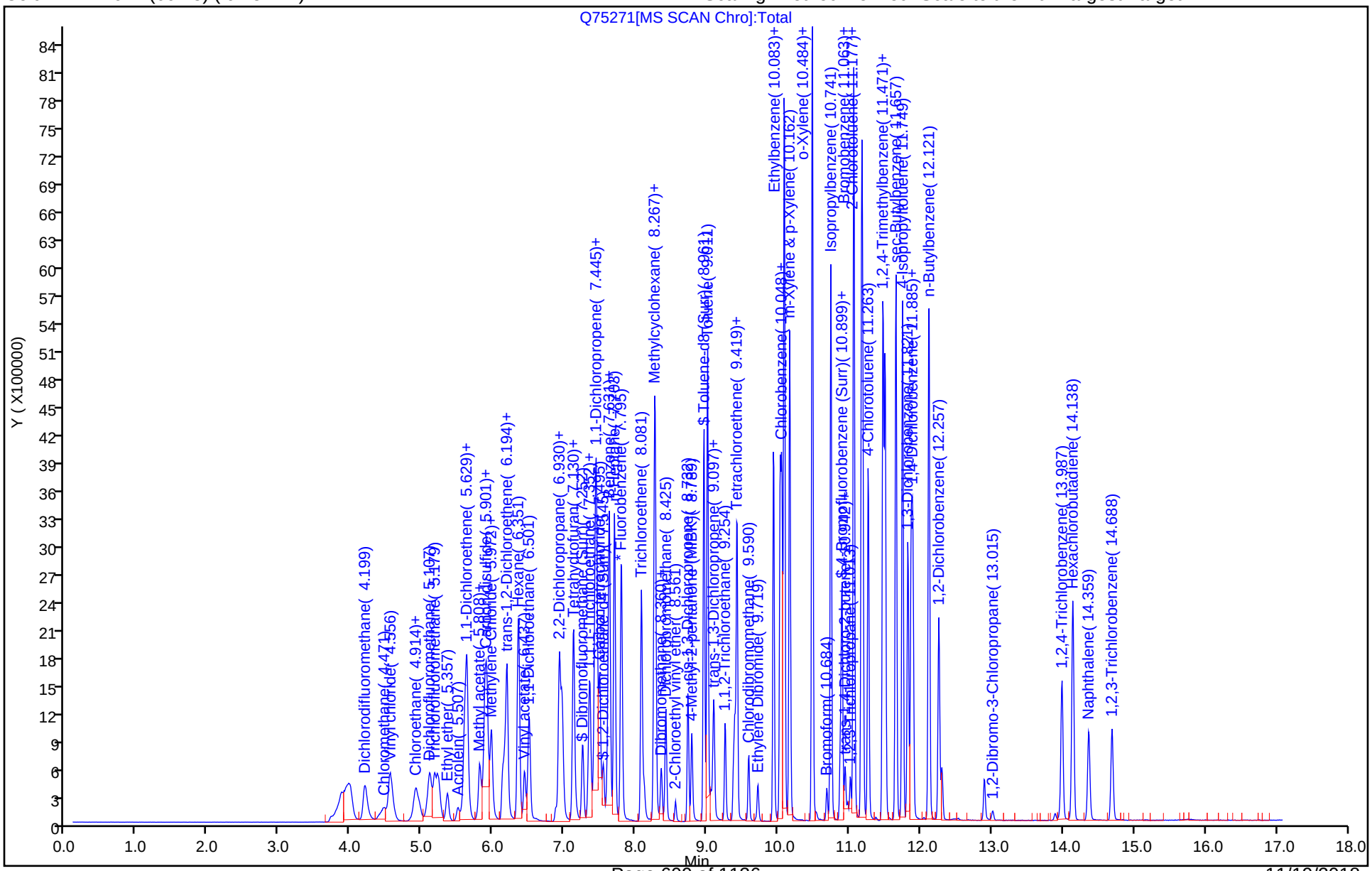
Report Date: 16-Nov-2018 14:52:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75271.D

Injection Date:	10-Nov-2018 10:30:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/3 Calibration Date: 11/10/2018 10:51

Instrument ID: VMS_Q Calib Start Date: 06/22/2017 02:52

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 06/22/2017 04:37

Lab File ID: Q75272.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Ave	0.3936	0.0920		40.0	250	-76.6*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 10-Nov-2018 10:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub170

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	255415	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2928541	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	609945	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	849415	12.5	12.5	
28 Ethylene oxide	43	4.835	4.835	0.000	0	81754	1000.0	527.0	
33 Ethanol	45	5.228	5.228	0.000	0	84409	600.0	0	
38 Propene oxide	58	5.457	5.457	0.000	0	2150264	1000.0	917.9	
42 Isopropyl alcohol	45	5.621	5.621	0.000	98	70712	100.0	83.4	
46 Acetonitrile	41	5.886	5.886	0.000	0	88315	100.0	66.9	
56 Isopropyl ether	87	6.458	6.458	0.000	0	369955	10.0	9.79	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1255522	10.0	10.8	
59 Tert-butyl ethyl ether	59	6.737	6.737	0.000	0	1056539	10.0	9.13	
60 Ethyl acetate	43	6.866	6.866	0.000	0	235907	20.0	15.4	
65 Propionitrile	54	6.944	6.944	0.000	0	126227	100.0	78.5	
66 Methacrylonitrile	41	7.059	7.059	0.000	0	917305	100.0	79.3	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	830822	10.0	9.58	
78 n-Butanol	56	7.802	7.802	0.000	100	23486	250.0	0	
81 Methyl methacrylate	100	8.210	8.210	0.000	0	79761	20.0	18.9	
88 2-Nitropropane	41	8.560	8.560	0.000	0	53066	20.0	16.9	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	13824	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.770	10.770	0.000	0	37666	20.0	12.1	
143 Pentachloroethane	167		11.528				ND	ND	
125 1,2,3-Trimethylbenzene	105	11.892	11.892	0.000	0	2189650	10.0	10.3	
16 1,3,5-Trichlorobenzene	180	13.236	13.236	0.000	0	837112	10.0	11.5	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL
mv-Pentachlor_00011	Amount Added:	5.00	Units: uL

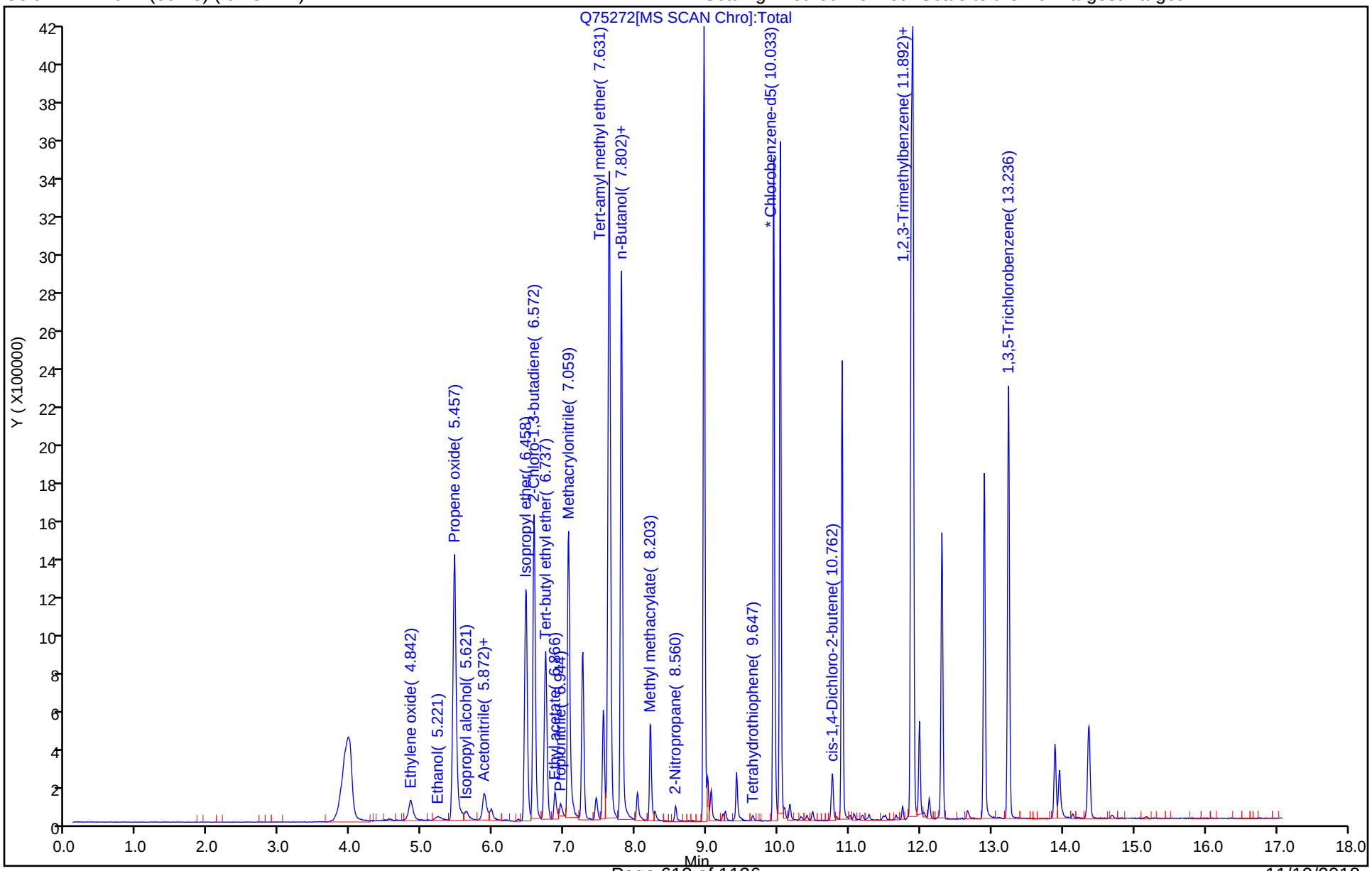
Report Date: 16-Nov-2018 14:52:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D

Injection Date:	10-Nov-2018 10:51:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/3 Calibration Date: 11/10/2018 10:51

Instrument ID: VMS_Q Calib Start Date: 06/25/2018 16:45

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 06/25/2018 18:52

Lab File ID: Q75272.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Pentachloroethane	Qua				50.0	10.0	-100.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 10-Nov-2018 10:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub170

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	255415	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2928541	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	609945	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	849415	12.5	12.5	
28 Ethylene oxide	43	4.835	4.835	0.000	0	81754	1000.0	527.0	
33 Ethanol	45	5.228	5.228	0.000	0	84409	600.0	0	
38 Propene oxide	58	5.457	5.457	0.000	0	2150264	1000.0	917.9	
42 Isopropyl alcohol	45	5.621	5.621	0.000	98	70712	100.0	83.4	
46 Acetonitrile	41	5.886	5.886	0.000	0	88315	100.0	66.9	
56 Isopropyl ether	87	6.458	6.458	0.000	0	369955	10.0	9.79	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1255522	10.0	10.8	
59 Tert-butyl ethyl ether	59	6.737	6.737	0.000	0	1056539	10.0	9.13	
60 Ethyl acetate	43	6.866	6.866	0.000	0	235907	20.0	15.4	
65 Propionitrile	54	6.944	6.944	0.000	0	126227	100.0	78.5	
66 Methacrylonitrile	41	7.059	7.059	0.000	0	917305	100.0	79.3	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	830822	10.0	9.58	
78 n-Butanol	56	7.802	7.802	0.000	100	23486	250.0	0	
81 Methyl methacrylate	100	8.210	8.210	0.000	0	79761	20.0	18.9	
88 2-Nitropropane	41	8.560	8.560	0.000	0	53066	20.0	16.9	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	13824	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.770	10.770	0.000	0	37666	20.0	12.1	
143 Pentachloroethane	167		11.528				ND	ND	
125 1,2,3-Trimethylbenzene	105	11.892	11.892	0.000	0	2189650	10.0	10.3	
16 1,3,5-Trichlorobenzene	180	13.236	13.236	0.000	0	837112	10.0	11.5	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL
mv-Pentachlor_00011	Amount Added:	5.00	Units: uL

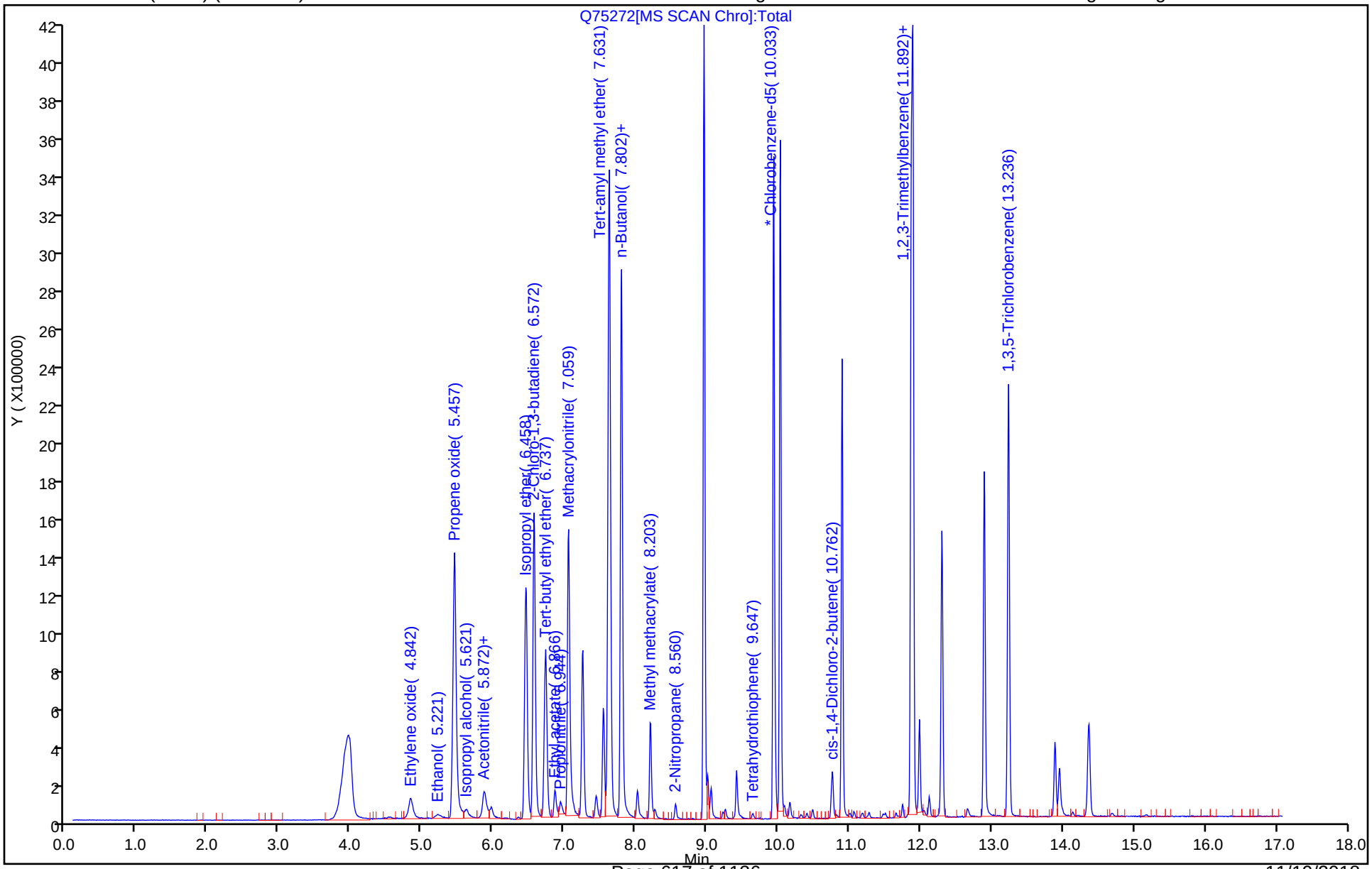
Report Date: 16-Nov-2018 14:52:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D

Injection Date:	10-Nov-2018 10:51:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/3 Calibration Date: 11/10/2018 10:51

Instrument ID: VMS_Q Calib Start Date: 08/29/2018 22:06

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/30/2018 00:00

Lab File ID: Q75272.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.1353	0.1377		250	600	1.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 10-Nov-2018 10:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub170

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	255415	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2928541	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	609945	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	849415	12.5	12.5	
28 Ethylene oxide	43	4.835	4.835	0.000	0	81754	1000.0	527.0	
33 Ethanol	45	5.228	5.228	0.000	0	84409	600.0	0	
38 Propene oxide	58	5.457	5.457	0.000	0	2150264	1000.0	917.9	
42 Isopropyl alcohol	45	5.621	5.621	0.000	98	70712	100.0	83.4	
46 Acetonitrile	41	5.886	5.886	0.000	0	88315	100.0	66.9	
56 Isopropyl ether	87	6.458	6.458	0.000	0	369955	10.0	9.79	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1255522	10.0	10.8	
59 Tert-butyl ethyl ether	59	6.737	6.737	0.000	0	1056539	10.0	9.13	
60 Ethyl acetate	43	6.866	6.866	0.000	0	235907	20.0	15.4	
65 Propionitrile	54	6.944	6.944	0.000	0	126227	100.0	78.5	
66 Methacrylonitrile	41	7.059	7.059	0.000	0	917305	100.0	79.3	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	830822	10.0	9.58	
78 n-Butanol	56	7.802	7.802	0.000	100	23486	250.0	0	
81 Methyl methacrylate	100	8.210	8.210	0.000	0	79761	20.0	18.9	
88 2-Nitropropane	41	8.560	8.560	0.000	0	53066	20.0	16.9	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	13824	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.770	10.770	0.000	0	37666	20.0	12.1	
143 Pentachloroethane	167		11.528				ND	ND	
125 1,2,3-Trimethylbenzene	105	11.892	11.892	0.000	0	2189650	10.0	10.3	
16 1,3,5-Trichlorobenzene	180	13.236	13.236	0.000	0	837112	10.0	11.5	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL
mv-Pentachlor_00011	Amount Added:	5.00	Units: uL

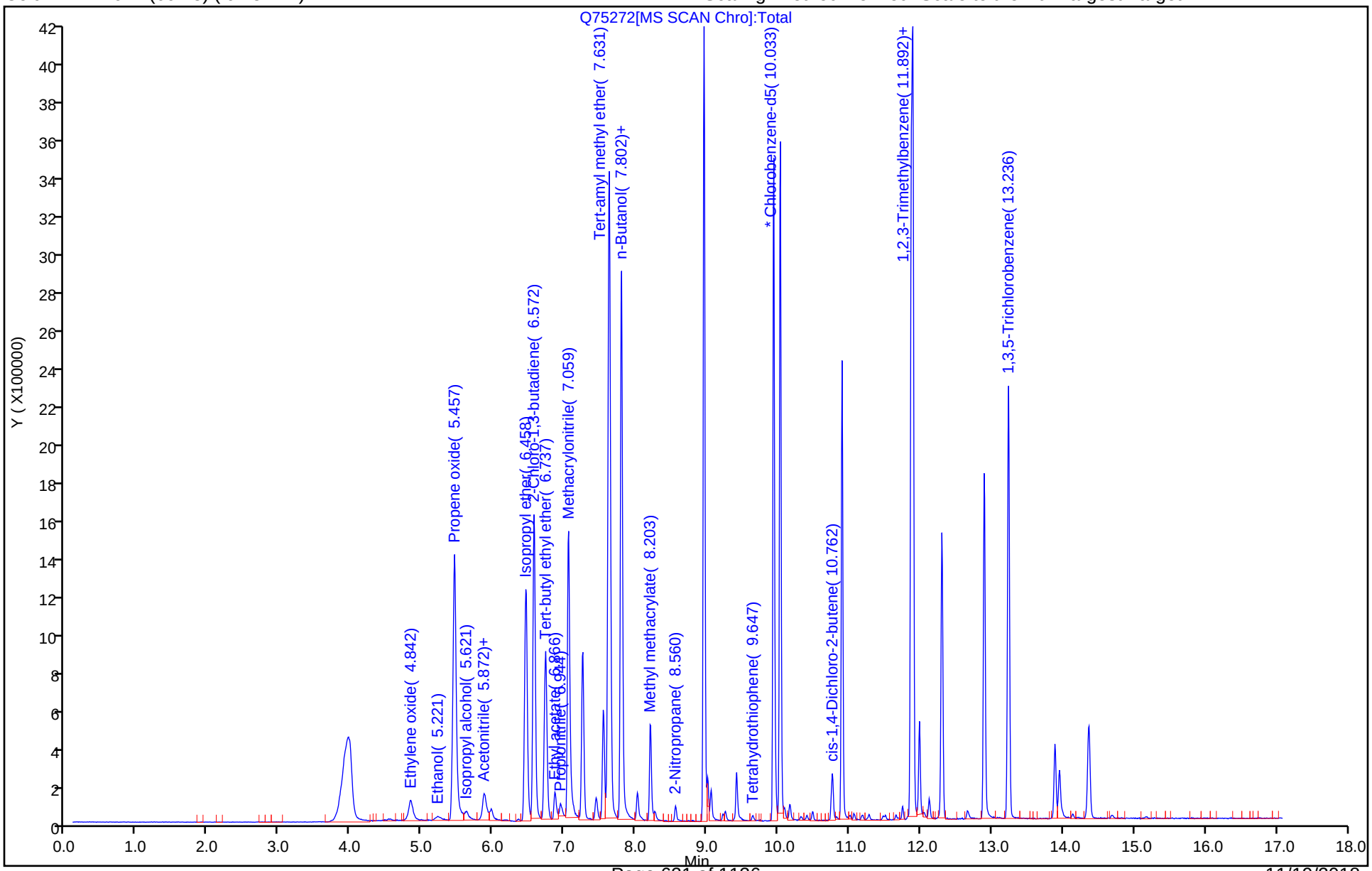
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D

Injection Date:	10-Nov-2018 10:51:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-437146/3 Calibration Date: 11/10/2018 10:51

Instrument ID: VMS_Q Calib Start Date: 10/20/2018 13:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/20/2018 15:41

Lab File ID: Q75272.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0007	0.0004		527	1000	-47.3*	20.0
Isopropyl alcohol	Ave	0.8295	0.6921		83.4	100	-16.6	20.0
Acetonitrile	Lin		0.0038		66.9	100	-33.1*	20.0
Diisopropyl ether	Ave	0.1613	0.1579		9.79	10.0	-2.1	20.0
2-Chloro-1,3-butadiene	Ave	0.4964	0.5359		10.8	10.0	8.0	20.0
Tert-butyl ethyl ether	Ave	0.4941	0.4510		9.13	10.0	-8.7	20.0
Ethyl acetate	Lin2		0.0504		15.4	20.0	-23.1*	20.0
Propionitrile	Lin1		0.0054		78.5	100	-21.5*	20.0
Methacrylonitrile	Ave	0.0494	0.0392		79.3	100	-20.7*	20.0
Tert-amyl methyl ether	Ave	0.3701	0.3546		9.58	10.0	-4.2	20.0
Methyl methacrylate	Ave	0.0180	0.0170		18.9	20.0	-5.5	20.0
2-Nitropropane	Ave	0.0134	0.0113		16.9	20.0	-15.6	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0458	0.0277		12.1	20.0	-39.5*	20.0
1,2,3-Trimethylbenzene	Ave	3.133	3.222		10.3	10.0	2.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 10-Nov-2018 10:51:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub170

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	255415	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	100	2928541	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	99	609945	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	849415	12.5	12.5	
28 Ethylene oxide	43	4.835	4.835	0.000	0	81754	1000.0	527.0	
33 Ethanol	45	5.228	5.228	0.000	0	84409	600.0	0	
38 Propene oxide	58	5.457	5.457	0.000	0	2150264	1000.0	917.9	
42 Isopropyl alcohol	45	5.621	5.621	0.000	98	70712	100.0	83.4	
46 Acetonitrile	41	5.886	5.886	0.000	0	88315	100.0	66.9	
56 Isopropyl ether	87	6.458	6.458	0.000	0	369955	10.0	9.79	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1255522	10.0	10.8	
59 Tert-butyl ethyl ether	59	6.737	6.737	0.000	0	1056539	10.0	9.13	
60 Ethyl acetate	43	6.866	6.866	0.000	0	235907	20.0	15.4	
65 Propionitrile	54	6.944	6.944	0.000	0	126227	100.0	78.5	
66 Methacrylonitrile	41	7.059	7.059	0.000	0	917305	100.0	79.3	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	830822	10.0	9.58	
78 n-Butanol	56	7.802	7.802	0.000	100	23486	250.0	0	
81 Methyl methacrylate	100	8.210	8.210	0.000	0	79761	20.0	18.9	
88 2-Nitropropane	41	8.560	8.560	0.000	0	53066	20.0	16.9	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	13824	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.770	10.770	0.000	0	37666	20.0	12.1	
143 Pentachloroethane	167		11.528				ND	ND	
125 1,2,3-Trimethylbenzene	105	11.892	11.892	0.000	0	2189650	10.0	10.3	
16 1,3,5-Trichlorobenzene	180	13.236	13.236	0.000	0	837112	10.0	11.5	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-Supp A_00032	Amount Added:	5.00	Units: uL
mv-Pentachlor_00011	Amount Added:	5.00	Units: uL

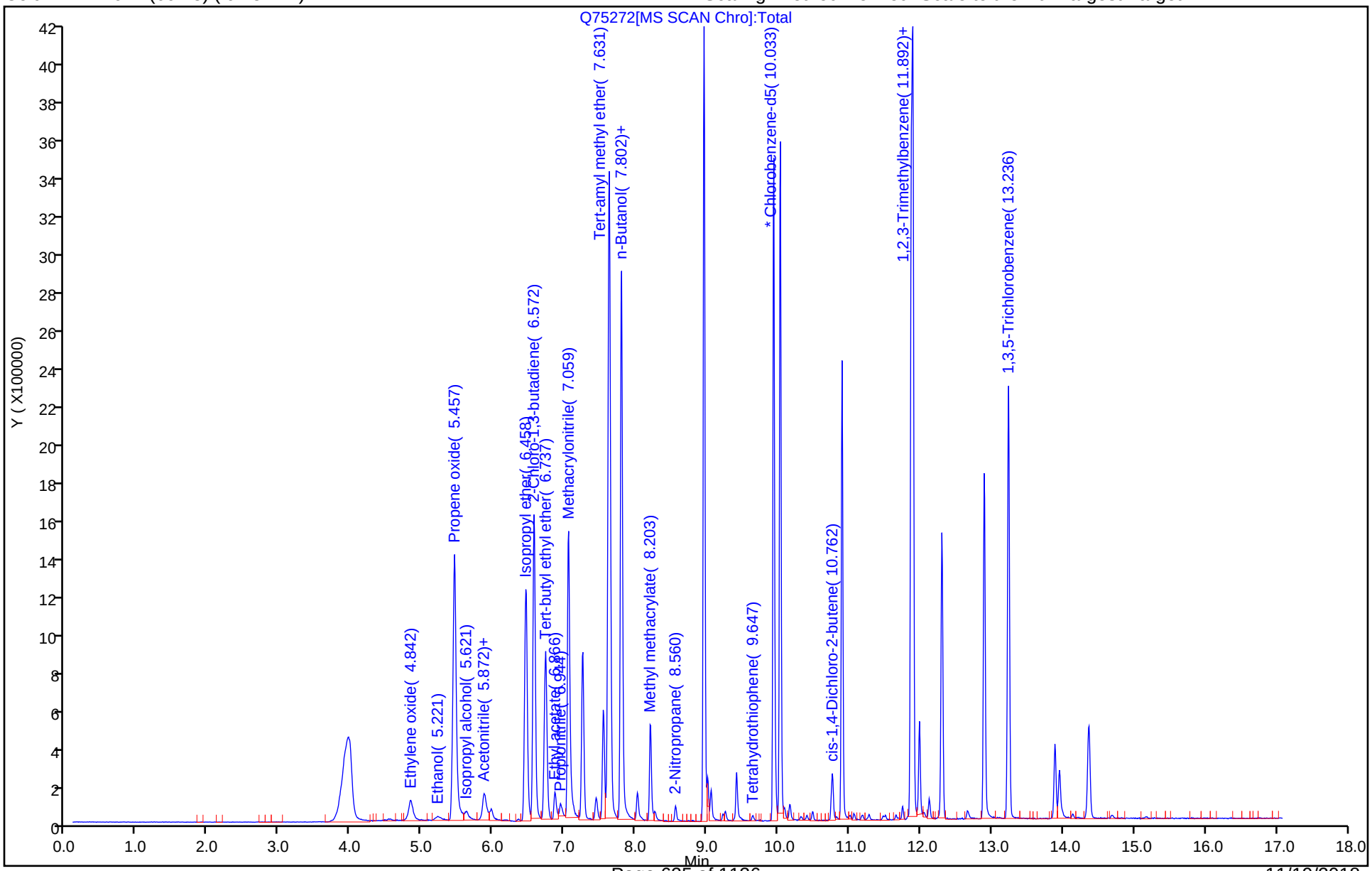
Report Date: 16-Nov-2018 14:52:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75272.D

Injection Date:	10-Nov-2018 10:51:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/38 Calibration Date: 11/10/2018 22:06

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75294.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4908	0.5815		11.8	10.0	18.5	50.0
Chloromethane	Ave	0.2434	0.2629	0.1000	10.8	10.0	8.0	50.0
Vinyl chloride	Ave	0.2617	0.3227		12.3	10.0	23.3	50.0
Bromomethane	Ave	0.2156	0.3198		14.8	10.0	48.3	50.0
Chloroethane	Ave	0.1230	0.1479		12.0	10.0	20.3	50.0
Dichlorofluoromethane	Ave	0.4220	0.5275		12.5	10.0	25.0	50.0
Trichlorofluoromethane	Ave	0.6891	0.8621		12.5	10.0	25.1	50.0
Ethyl ether	Ave	0.1330	0.1558		11.7	10.0	17.2	50.0
Acrolein	Ave	0.0132	0.0132		99.9	100	-0.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2541	0.2980		11.7	10.0	17.3	50.0
Acetone	Ave	0.0233	0.0243		41.8	40.0	4.5	50.0
1,1-Dichloroethene	Ave	0.3525	0.3913		11.1	10.0	11.0	50.0
Methyl iodide	Ave	0.4834	0.5384		11.1	10.0	11.4	50.0
Methyl acetate	Lin2		0.0578		20.4	20.0	2.0	50.0
3-Chloro-1-propene	Ave	0.5972	0.5856		9.80	10.0	-2.0	50.0
Carbon disulfide	Ave	1.437	1.631		11.4	10.0	13.5	50.0
t-Butyl alcohol	Ave	1.465	1.677		114	100	14.5	50.0
Methylene Chloride	Ave	0.2997	0.3166		10.6	10.0	5.6	50.0
Acrylonitrile	Ave	0.0250	0.0297		119	100	18.9	50.0
Methyl tert-butyl ether	Ave	0.3252	0.3600		11.1	10.0	10.7	50.0
trans-1,2-Dichloroethene	Ave	0.3895	0.4222		10.8	10.0	8.4	50.0
Hexane	Ave	3.561	3.622		10.2	10.0	1.7	50.0
Vinyl acetate	Ave	0.2363	0.1963		16.6	20.0	-17.0	50.0
1,1-Dichloroethane	Ave	0.7006	0.7749	0.1000	11.1	10.0	10.6	50.0
2-Butanone (MEK)	Ave	0.0398	0.0380		38.2	40.0	-4.5	50.0
sec-Butyl Alcohol	Ave	1.108	1.173		318	300	5.9	50.0
cis-1,2-Dichloroethene	Ave	0.3680	0.4083		11.1	10.0	11.0	50.0
2,2-Dichloropropane	Ave	0.5381	0.4996		9.28	10.0	-7.2	50.0
Bromochloromethane	Ave	0.1015	0.1155		11.4	10.0	13.7	50.0
Chloroform	Ave	0.6143	0.6892		11.2	10.0	12.2	50.0
Tetrahydrofuran	Ave	0.0202	0.0211		20.9	20.0	4.6	50.0
Isobutyl alcohol	Ave	0.3918	0.3613		231	250	-7.8	50.0
1,1,1-Trichloroethane	Ave	0.5831	0.6481		11.1	10.0	11.1	50.0
Cyclohexane	Ave	0.6985	0.7775		11.1	10.0	11.3	50.0
1,1-Dichloropropene	Ave	0.6018	0.6769		11.2	10.0	12.5	50.0
Carbon tetrachloride	Ave	0.5295	0.5856		11.1	10.0	10.6	50.0
1,2-Dichloroethane	Ave	0.2783	0.2973		10.7	10.0	6.8	50.0
Benzene	Ave	1.414	1.620		11.4	10.0	14.5	50.0
Trichloroethene	Ave	0.3994	0.4494		11.3	10.0	12.5	50.0
2-Pentanone	Ave	0.0498	0.0542		43.6	40.0	8.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/38 Calibration Date: 11/10/2018 22:06

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75294.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3012	0.3504		11.6	10.0	16.3	50.0
Methylcyclohexane	Ave	0.5882	0.6243		10.6	10.0	6.1	50.0
1,4-Dioxane	Lin2		0.0009		236	200	18.2	50.0
Dibromomethane	Ave	0.1007	0.1169		11.6	10.0	16.2	50.0
Bromodichloromethane	Ave	0.3465	0.3935		11.4	10.0	13.6	50.0
2-Chloroethyl vinyl ether	Lin2		0.0429		7.44	10.0	-25.6	50.0
cis-1,3-Dichloropropene	Ave	1.788	1.902		10.6	10.0	6.4	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0795	0.0804		40.5	40.0	1.2	50.0
Toluene	Ave	1.422	1.619		11.4	10.0	13.9	50.0
Ethyl methacrylate	Lin2		0.6649		9.70	10.0	-3.0	50.0
trans-1,3-Dichloropropene	Lin2		0.2817		10.4	10.0	3.7	50.0
1,1,2-Trichloroethane	Ave	0.1293	0.1506		11.7	10.0	16.5	50.0
2-Hexanone	Lin2		0.2258		36.0	40.0	-10.0	50.0
1,3-Dichloropropane	Ave	1.220	1.351		11.1	10.0	10.7	50.0
Tetrachloroethene	Ave	1.419	1.475		10.4	10.0	4.0	50.0
Dibromochloromethane	Ave	0.7734	0.8430		10.9	10.0	9.0	50.0
1,2-Dibromoethane	Ave	0.5495	0.6152		11.2	10.0	11.9	50.0
1-Chlorohexane	Ave	2.839	2.778		9.79	10.0	-2.1	50.0
Chlorobenzene	Ave	3.841	4.138	0.3000	10.8	10.0	7.7	50.0
1,1,1,2-Tetrachloroethane	Ave	1.173	1.393		11.9	10.0	18.8	50.0
Ethylbenzene	Ave	2.462	2.711		11.0	10.0	10.1	50.0
m,p-Xylene	Ave	2.970	3.064		10.3	10.0	3.2	50.0
o-Xylene	Ave	2.557	2.961		11.6	10.0	15.8	50.0
Styrene	Ave	3.634	4.170		11.5	10.0	14.7	50.0
Bromoform	Ave	0.2992	0.3576	0.1000	12.0	10.0	19.5	50.0
Isopropylbenzene	Ave	5.611	5.715		10.2	10.0	1.8	50.0
Cyclohexanone	Ave	0.0159	0.0287		723	400	80.7*	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4290	0.4497	0.3000	10.5	10.0	4.8	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.0598		6.76	10.0	-32.4	50.0
1,2,3-Trichloropropane	Ave	0.1026	0.1139		11.1	10.0	10.9	50.0
Bromobenzene	Ave	0.8856	1.006		11.4	10.0	13.6	50.0
N-Propylbenzene	Ave	1.571	1.537		9.78	10.0	-2.2	50.0
1,3,5-Trimethylbenzene	Ave	4.433	4.539		10.2	10.0	2.4	50.0
2-Chlorotoluene	Ave	1.185	1.266		10.7	10.0	6.9	50.0
4-Chlorotoluene	Ave	1.168	1.173		10.0	10.0	0.4	50.0
tert-Butylbenzene	Ave	4.732	4.645		9.82	10.0	-1.8	50.0
1,2,4-Trimethylbenzene	Ave	4.244	4.321		10.2	10.0	1.8	50.0
sec-Butylbenzene	Ave	1.215	1.181		9.72	10.0	-2.8	50.0
4-Isopropyltoluene	Ave	5.038	4.809		9.54	10.0	-4.6	50.0
1,3-Dichlorobenzene	Ave	1.935	2.007		10.4	10.0	3.7	50.0
1,4-Dichlorobenzene	Ave	1.926	1.968		10.2	10.0	2.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/38 Calibration Date: 11/10/2018 22:06

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75294.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.483	4.940		9.01	10.0	-9.9	50.0
1,2-Dichlorobenzene	Ave	1.489	1.558		10.5	10.0	4.7	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0495		9.87	10.0	-1.3	50.0
1,2,4-Trichlorobenzene	Ave	0.9027	0.8890		9.85	10.0	-1.5	50.0
Hexachlorobutadiene	Ave	0.8872	0.7739		8.72	10.0	-12.8	50.0
Naphthalene	Ave	1.010	1.048		10.4	10.0	3.8	50.0
1,2,3-Trichlorobenzene	Ave	0.6386	0.6486		10.2	10.0	1.6	50.0
Dibromofluoromethane (Surr)	Ave	0.3110	0.3107		8.99	9.00	-0.1	50.0
1,2-Dichloroethane-d4 (Surr)	Lin2		0.2424		8.62	9.00	-4.2	50.0
Toluene-d8 (Surr)	Qua		6.313		8.39	9.00	-6.8	50.0
4-Bromofluorobenzene (Surr)	Ave	1.344	1.315		8.81	9.00	-2.2	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75294.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 10-Nov-2018 22:06:30 ALS Bottle#: 24 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:44 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.868	5.872	-0.004	0	197883	250.0	250.0	
* 1 Fluorobenzene	96	7.791	7.802	-0.011	100	2438190	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.022	10.033	-0.011	99	510350	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.860	11.871	-0.011	98	727002	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.248	7.259	-0.011	91	545432	9.00	8.99	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.541	7.545	-0.004	0	425530	9.00	8.62	
$ 7 Toluene-d8 (Surr)	98	8.957	8.961	-0.004	100	2319580	9.00	8.39	
$ 8 4-Bromofluorobenzene (Surr	95	10.887	10.899	-0.012	86	688113	9.00	8.81	
23 Dichlorodifluoromethane	85	4.188	4.199	-0.011	99	1134276	10.0	11.8	
26 Chloromethane	50	4.438	4.449	-0.011	99	512886	10.0	10.8	
27 Vinyl chloride	62	4.567	4.578	-0.011	98	629478	10.0	12.3	
29 Bromomethane	94	4.903	4.914	-0.011	91	623872	10.0	14.8	
30 Chloroethane	64	4.960	4.964	-0.004	99	288567	10.0	12.0	
31 Dichlorofluoromethane	67	5.096	5.107	-0.011	96	1028912	10.0	12.5	
32 Trichlorofluoromethane	101	5.210	5.186	0.024	99	1681615	10.0	12.5	
35 Ethyl ether	59	5.346	5.357	-0.011	92	303926	10.0	11.7	
39 Acrolein	56	5.496	5.500	-0.004	99	257357	100.0	99.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.596	5.600	-0.004	96	581352	10.0	11.7	
41 Acetone	43	5.596	5.608	-0.012	38	189866	40.0	41.8	
43 1,1-Dichloroethene	96	5.625	5.629	-0.004	97	763224	10.0	11.1	
44 Iodomethane	142	5.796	5.808	-0.012	98	1050231	10.0	11.1	
45 Methyl acetate	43	5.818	5.836	-0.018	96	225458	20.0	20.4	
47 3-Chloro-1-propene	41	5.875	5.886	-0.011	84	1142160	10.0	9.80	
48 Carbon disulfide	76	5.904	5.908	-0.004	99	3181993	10.0	11.4	
49 2-Methyl-2-propanol	59	5.932	5.944	-0.012	93	132739	100.0	114.5	
50 Methylene Chloride	84	5.968	5.972	-0.004	94	617511	10.0	10.6	
52 Acrylonitrile	53	6.125	6.129	-0.004	100	580141	100.0	118.9	
51 Methyl tert-butyl ether	73	6.154	6.158	-0.004	95	702247	10.0	11.1	
53 trans-1,2-Dichloroethene	96	6.182	6.194	-0.012	97	823483	10.0	10.8	
54 Hexane	57	6.347	6.358	-0.011	89	1478960	10.0	10.2	
55 Vinyl acetate	43	6.433	6.437	-0.004	97	765660	20.0	16.6	
57 1,1-Dichloroethane	63	6.497	6.501	-0.004	96	1511457	10.0	11.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.876	6.880	-0.004	100	296567	40.0	38.2	
62 sec-Butyl Alcohol	45	6.919	6.916	0.003	99	278488	300.0	317.6	
63 cis-1,2-Dichloroethene	96	6.926	6.930	-0.004	82	796419	10.0	11.1	
64 2,2-Dichloropropane	77	6.955	6.966	-0.011	87	974558	10.0	9.28	
67 Chlorobromomethane	128	7.119	7.123	-0.004	96	225218	10.0	11.4	
68 Chloroform	83	7.126	7.130	-0.004	92	1344383	10.0	11.2	
69 Tetrahydrofuran	42	7.162	7.166	-0.004	92	82226	20.0	20.9	
70 Isobutyl alcohol	41	7.326	7.331	-0.005	94	71493	250.0	230.5	
71 1,1,1-Trichloroethane	97	7.348	7.359	-0.011	98	1264134	10.0	11.1	
72 Cyclohexane	56	7.427	7.431	-0.004	89	1516544	10.0	11.1	
73 1,1-Dichloropropene	75	7.448	7.452	-0.004	99	1320301	10.0	11.2	
74 Carbon tetrachloride	117	7.491	7.495	-0.004	96	1142136	10.0	11.1	
76 1,2-Dichloroethane	62	7.598	7.602	-0.004	97	579954	10.0	10.7	
77 Benzene	78	7.627	7.631	-0.004	95	3159064	10.0	11.4	
14 n-Heptane	43	7.698	7.703	-0.004	89	1324942	10.0	9.28	
79 Trichloroethene	95	8.077	8.081	-0.004	96	876662	10.0	11.3	
80 2-Pentanone	43	8.113	8.117	-0.004	99	422963	40.0	43.6	
83 1,2-Dichloropropane	63	8.256	8.260	-0.004	96	683447	10.0	11.6	
82 Methylcyclohexane	55	8.270	8.275	-0.005	92	1217638	10.0	10.6	
84 1,4-Dioxane	88	8.313	8.317	-0.004	94	33430	200.0	236.5	
85 Dibromomethane	93	8.356	8.360	-0.004	90	228101	10.0	11.6	
86 Dichlorobromomethane	83	8.420	8.425	-0.005	99	767514	10.0	11.4	
87 2-Chloroethyl vinyl ether	63	8.556	8.561	-0.005	89	83748	10.0	7.44	
89 cis-1,3-Dichloropropene	75	8.728	8.732	-0.004	97	776425	10.0	10.6	
90 4-Methyl-2-pentanone (MIBK	43	8.785	8.789	-0.004	0	627599	40.0	40.5	
91 Toluene	91	9.007	9.011	-0.004	98	3158461	10.0	11.4	
92 Ethyl methacrylate	69	9.085	9.082	0.003	87	271463	10.0	9.70	
93 trans-1,3-Dichloropropene	75	9.093	9.104	-0.011	94	549437	10.0	10.4	
94 1,1,2-Trichloroethane	97	9.250	9.254	-0.004	90	293806	10.0	11.7	
95 2-Hexanone	43	9.371	9.376	-0.005	96	368688	40.0	36.0	
96 1,3-Dichloropropane	76	9.386	9.390	-0.004	89	551467	10.0	11.1	
97 Tetrachloroethene	164	9.421	9.426	-0.005	93	602282	10.0	10.4	
98 Chlorodibromomethane	129	9.586	9.590	-0.004	90	344175	10.0	10.9	
100 Ethylene Dibromide	107	9.707	9.719	-0.012	98	251168	10.0	11.2	
101 1-Chlorohexane	91	9.929	9.933	-0.004	96	1134219	10.0	9.79	
102 Chlorobenzene	112	10.051	10.055	-0.004	94	1689628	10.0	10.8	
104 1,1,1,2-Tetrachloroethane	131	10.079	10.083	-0.004	92	568916	10.0	11.9	
103 Ethylbenzene	106	10.086	10.091	-0.005	98	1106930	10.0	11.0	
105 m-Xylene & p-Xylene	106	10.158	10.162	-0.004	0	1250945	10.0	10.3	
107 o-Xylene	106	10.473	10.484	-0.011	89	1208792	10.0	11.6	
106 Styrene	104	10.473	10.484	-0.011	84	1702550	10.0	11.5	
108 Bromoform	173	10.680	10.684	-0.004	94	146014	10.0	12.0	
109 Isopropylbenzene	105	10.737	10.741	-0.004	96	3323608	10.0	10.2	
111 Cyclohexanone	55	10.873	10.877	-0.004	100	468569	400.0	722.6	
112 1,1,2,2-Tetrachloroethane	83	10.937	10.942	-0.005	93	261538	10.0	10.5	
113 trans-1,4-Dichloro-2-buten	53	10.973	10.977	-0.004	89	34778	10.0	6.76	
114 1,2,3-Trichloropropane	110	11.009	11.020	-0.011	86	66226	10.0	11.1	
115 N-Propylbenzene	120	11.059	11.063	-0.004	97	893724	10.0	9.78	
116 Bromobenzene	156	11.059	11.070	-0.011	50	585335	10.0	11.4	
117 1,3,5-Trimethylbenzene	105	11.166	11.170	-0.004	94	2639868	10.0	10.2	
118 2-Chlorotoluene	126	11.180	11.192	-0.012	96	736539	10.0	10.7	
119 4-Chlorotoluene	126	11.259	11.263	-0.004	98	682209	10.0	10.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.466	11.471	-0.005	91	2701649	10.0	9.82	
121 1,2,4-Trimethylbenzene	105	11.495	11.506	-0.011	98	2512927	10.0	10.2	
122 sec-Butylbenzene	134	11.652	11.657	-0.005	95	686636	10.0	9.72	
123 4-Isopropyltoluene	119	11.738	11.749	-0.011	96	2796835	10.0	9.54	
124 1,3-Dichlorobenzene	146	11.817	11.821	-0.004	97	1167129	10.0	10.4	
126 1,4-Dichlorobenzene	146	11.888	11.892	-0.004	93	1144817	10.0	10.2	
127 n-Butylbenzene	91	12.110	12.121	-0.011	98	2872904	10.0	9.01	
128 1,2-Dichlorobenzene	146	12.253	12.257	-0.004	96	906272	10.0	10.5	
129 1,2-Dibromo-3-Chloropropan	157	13.004	13.015	-0.011	79	28761	10.0	9.87	
130 1,2,4-Trichlorobenzene	180	13.976	13.987	-0.011	94	517052	10.0	9.85	
131 Hexachlorobutadiene	225	14.126	14.138	-0.012	98	450127	10.0	8.72	
132 Naphthalene	128	14.348	14.359	-0.011	97	609723	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.677	14.688	-0.011	95	377197	10.0	10.2	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 136 Total BTEX	1				0			55.7	
S 139 Xylenes, Total	106				0		20.0	21.9	
S 137 1,3-Dichloropropene, Total	1				0		20.0	21.0	
S 135 Xylenes, Total (URS)	1				0		20.0	21.9	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.9	
S 134 Trihalomethanes, Total	1				0		40.0	45.4	

Reagents:

MV-MegaMainA_00006	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

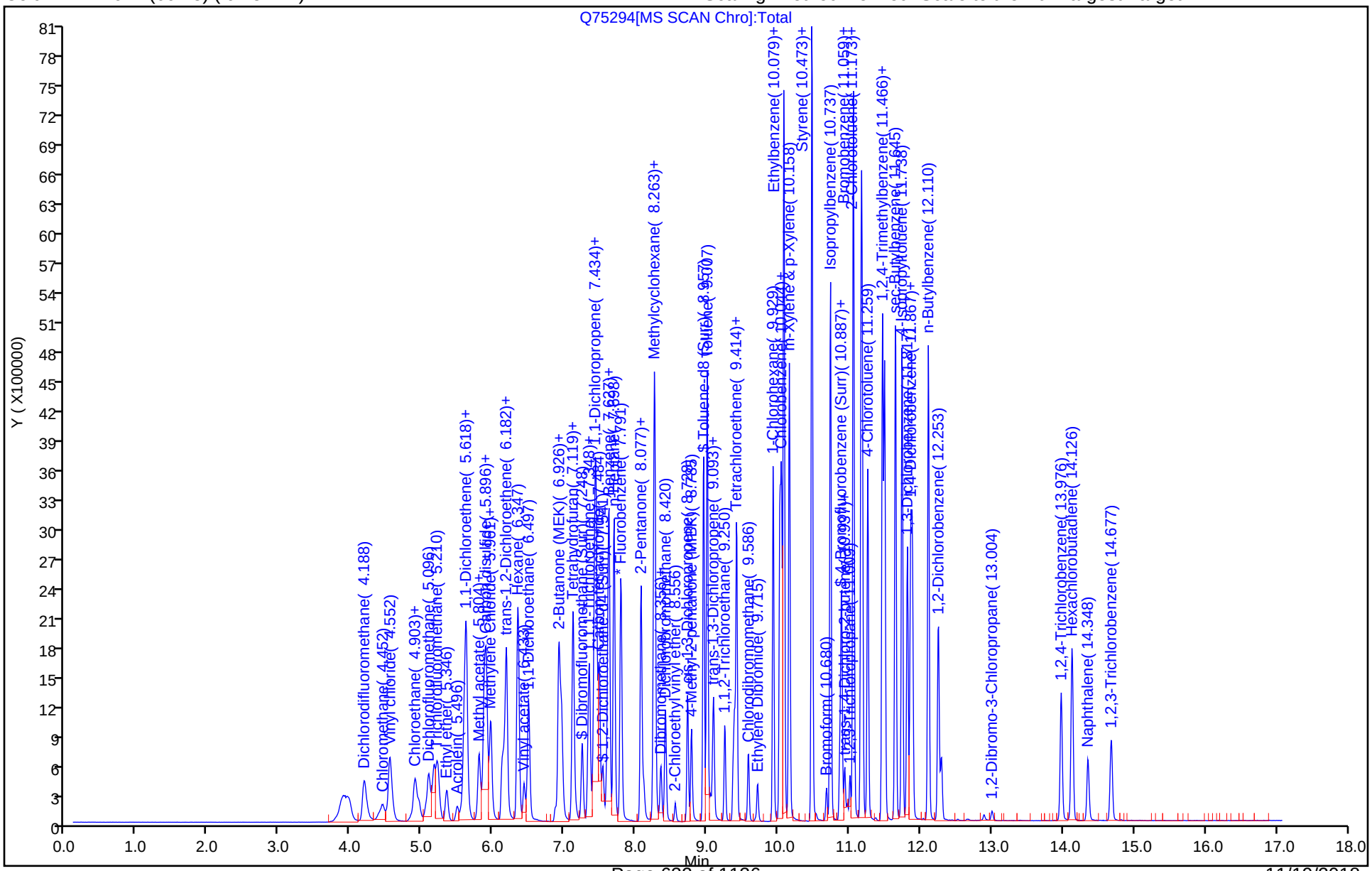
Report Date: 16-Nov-2018 14:52:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75294.D

Injection Date:	10-Nov-2018 22:06:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/39 Calibration Date: 11/10/2018 22:27

Instrument ID: VMS_Q Calib Start Date: 06/22/2017 02:52

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 06/22/2017 04:37

Lab File ID: Q75295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Ave	0.3936	0.0952		40.0	250	-75.8*	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 10-Nov-2018 22:27:30 ALS Bottle#: 25 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:47 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.872	-0.001	0	205875	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2808480	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.033	-0.008	99	577019	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.871	-0.008	100	732714	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.259	-0.008	92	617123	9.00	8.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	439759	9.00	7.69	
$ 7 Toluene-d8 (Surr)	98	8.953	8.961	-0.008	100	2678655	9.00	8.58	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.899	-0.008	87	693735	9.00	8.81	
28 Ethylene oxide	43	4.834	4.835	-0.001	0	76704	1000.0	515.6	
33 Ethanol	45	5.221	5.228	-0.007	0	96222	600.0	0	
38 Propene oxide	58	5.449	5.457	-0.008	0	2058925	1000.0	916.5	
42 Isopropyl alcohol	45	5.621	5.621	0.000	99	70914	100.0	103.8	
46 Acetonitrile	41	5.878	5.886	-0.008	0	110700	100.0	83.8	
56 Isopropyl ether	87	6.450	6.458	-0.008	0	332490	10.0	9.17	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1104884	10.0	9.91	
59 Tert-butyl ethyl ether	59	6.729	6.737	-0.008	0	976685	10.0	8.80	
60 Ethyl acetate	43	6.865	6.866	-0.001	0	221884	20.0	15.1	
65 Propionitrile	54	6.944	6.944	0.000	0	112648	100.0	73.9	
66 Methacrylonitrile	41	7.051	7.059	-0.008	0	884471	100.0	79.7	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	758671	10.0	9.12	
78 n-Butanol	56	7.795	7.802	-0.007	100	19588	250.0	0	
81 Methyl methacrylate	100	8.202	8.210	-0.008	0	75432	20.0	18.6	
88 2-Nitropropane	41	8.553	8.560	-0.007	0	54028	20.0	17.9	
99 Tetrahydrothiophene	60	9.632	9.647	-0.015	0	12136	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.762	10.770	-0.008	0	37196	20.0	13.9	
125 1,2,3-Trimethylbenzene	105	11.884	11.892	-0.008	0	1778510	10.0	9.68	
16 1,3,5-Trichlorobenzene	180	13.229	13.236	-0.007	0	663135	10.0	10.5	

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

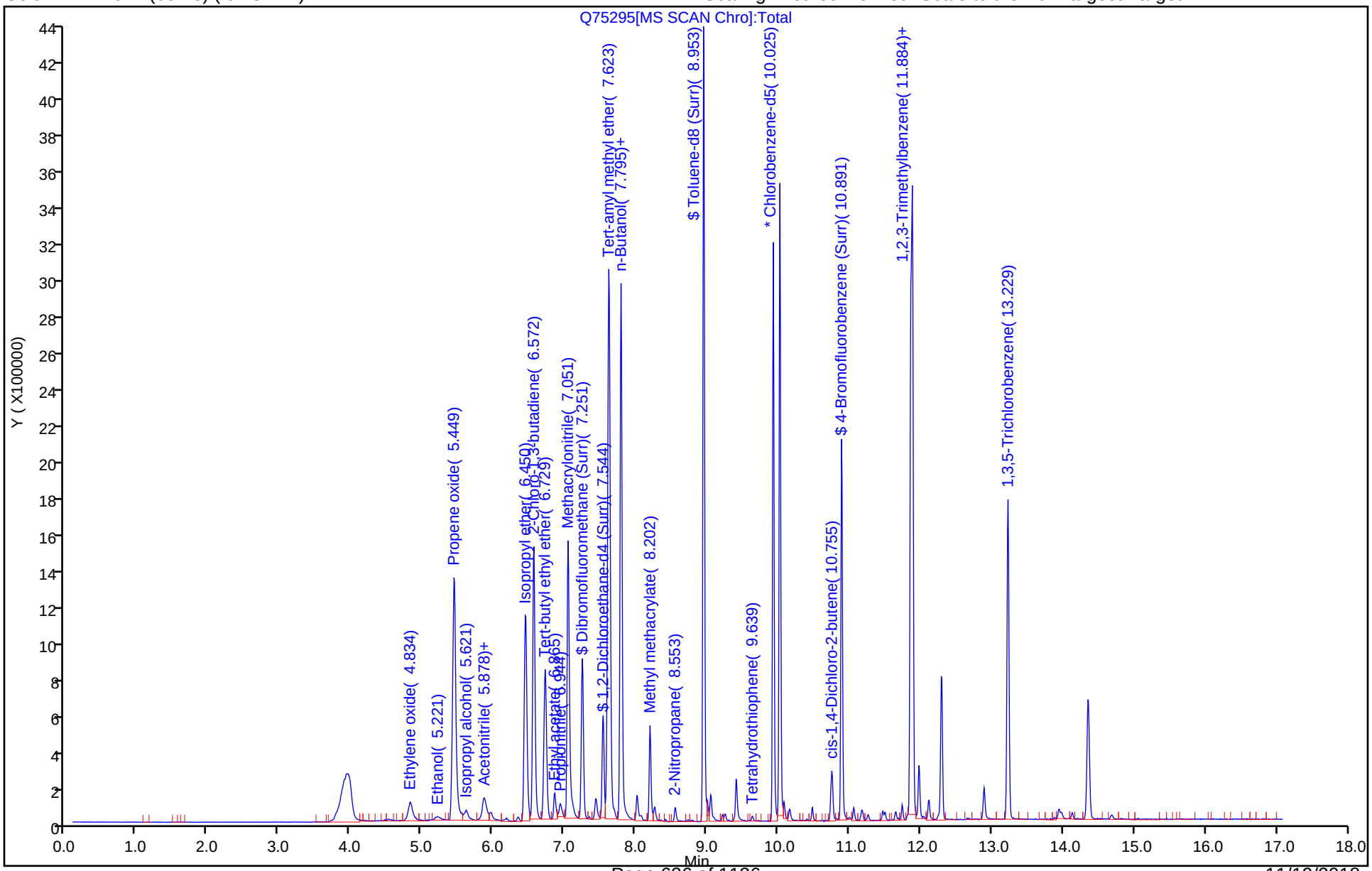
Report Date: 16-Nov-2018 14:52:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D

Injection Date:	10-Nov-2018 22:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	39
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/39 Calibration Date: 11/10/2018 22:27

Instrument ID: VMS_Q Calib Start Date: 08/29/2018 22:06

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/30/2018 00:00

Lab File ID: Q75295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.1353	0.1947		250	600	44.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 10-Nov-2018 22:27:30 ALS Bottle#: 25 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:47 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.872	-0.001	0	205875	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2808480	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.033	-0.008	99	577019	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.871	-0.008	100	732714	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.259	-0.008	92	617123	9.00	8.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	439759	9.00	7.69	
$ 7 Toluene-d8 (Surr)	98	8.953	8.961	-0.008	100	2678655	9.00	8.58	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.899	-0.008	87	693735	9.00	8.81	
28 Ethylene oxide	43	4.834	4.835	-0.001	0	76704	1000.0	515.6	
33 Ethanol	45	5.221	5.228	-0.007	0	96222	600.0	0	
38 Propene oxide	58	5.449	5.457	-0.008	0	2058925	1000.0	916.5	
42 Isopropyl alcohol	45	5.621	5.621	0.000	99	70914	100.0	103.8	
46 Acetonitrile	41	5.878	5.886	-0.008	0	110700	100.0	83.8	
56 Isopropyl ether	87	6.450	6.458	-0.008	0	332490	10.0	9.17	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1104884	10.0	9.91	
59 Tert-butyl ethyl ether	59	6.729	6.737	-0.008	0	976685	10.0	8.80	
60 Ethyl acetate	43	6.865	6.866	-0.001	0	221884	20.0	15.1	
65 Propionitrile	54	6.944	6.944	0.000	0	112648	100.0	73.9	
66 Methacrylonitrile	41	7.051	7.059	-0.008	0	884471	100.0	79.7	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	758671	10.0	9.12	
78 n-Butanol	56	7.795	7.802	-0.007	100	19588	250.0	0	
81 Methyl methacrylate	100	8.202	8.210	-0.008	0	75432	20.0	18.6	
88 2-Nitropropane	41	8.553	8.560	-0.007	0	54028	20.0	17.9	
99 Tetrahydrothiophene	60	9.632	9.647	-0.015	0	12136	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.762	10.770	-0.008	0	37196	20.0	13.9	
125 1,2,3-Trimethylbenzene	105	11.884	11.892	-0.008	0	1778510	10.0	9.68	
16 1,3,5-Trichlorobenzene	180	13.229	13.236	-0.007	0	663135	10.0	10.5	

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

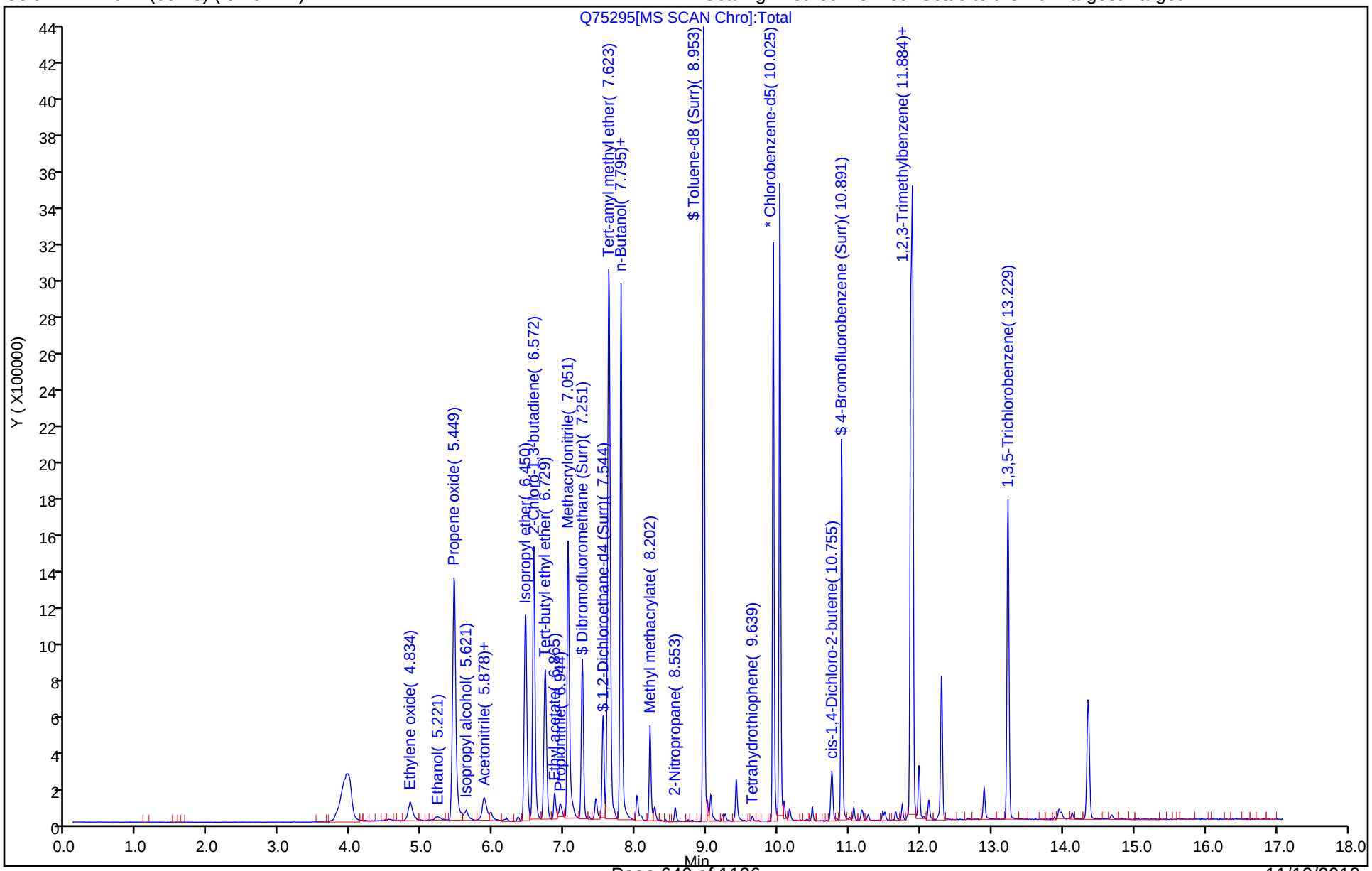
Report Date: 16-Nov-2018 14:52:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D

Injection Date:	10-Nov-2018 22:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	39
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/39 Calibration Date: 11/10/2018 22:27

Instrument ID: VMS_Q Calib Start Date: 10/20/2018 13:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/20/2018 15:41

Lab File ID: Q75295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0007	0.0003		516	1000	-48.4	50.0
Isopropyl alcohol	Ave	0.8295	0.8611		104	100	3.8	50.0
Acetonitrile	Lin		0.0049		83.8	100	-16.2	50.0
Diisopropyl ether	Ave	0.1613	0.1480		9.17	10.0	-8.3	50.0
2-Chloro-1,3-butadiene	Ave	0.4964	0.4918		9.91	10.0	-0.9	50.0
Tert-butyl ethyl ether	Ave	0.4941	0.4347		8.80	10.0	-12.0	50.0
Ethyl acetate	Lin2		0.0494		15.1	20.0	-24.6	50.0
Propionitrile	Lin1		0.0050		73.9	100	-26.1	50.0
Methacrylonitrile	Ave	0.0494	0.0394		79.7	100	-20.3	50.0
Tert-amyl methyl ether	Ave	0.3701	0.3377		9.12	10.0	-8.8	50.0
Methyl methacrylate	Ave	0.0180	0.0168		18.6	20.0	-6.8	50.0
2-Nitropropane	Ave	0.0134	0.0120		17.9	20.0	-10.4	50.0
cis-1,4-Dichloro-2-butene	Ave	0.0458	0.0317		13.9	20.0	-30.7	50.0
1,2,3-Trimethylbenzene	Ave	3.133	3.034		9.68	10.0	-3.2	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 10-Nov-2018 22:27:30 ALS Bottle#: 25 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:47 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.872	-0.001	0	205875	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2808480	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.033	-0.008	99	577019	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.871	-0.008	100	732714	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.259	-0.008	92	617123	9.00	8.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	439759	9.00	7.69	
$ 7 Toluene-d8 (Surr)	98	8.953	8.961	-0.008	100	2678655	9.00	8.58	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.899	-0.008	87	693735	9.00	8.81	
28 Ethylene oxide	43	4.834	4.835	-0.001	0	76704	1000.0	515.6	
33 Ethanol	45	5.221	5.228	-0.007	0	96222	600.0	0	
38 Propene oxide	58	5.449	5.457	-0.008	0	2058925	1000.0	916.5	
42 Isopropyl alcohol	45	5.621	5.621	0.000	99	70914	100.0	103.8	
46 Acetonitrile	41	5.878	5.886	-0.008	0	110700	100.0	83.8	
56 Isopropyl ether	87	6.450	6.458	-0.008	0	332490	10.0	9.17	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1104884	10.0	9.91	
59 Tert-butyl ethyl ether	59	6.729	6.737	-0.008	0	976685	10.0	8.80	
60 Ethyl acetate	43	6.865	6.866	-0.001	0	221884	20.0	15.1	
65 Propionitrile	54	6.944	6.944	0.000	0	112648	100.0	73.9	
66 Methacrylonitrile	41	7.051	7.059	-0.008	0	884471	100.0	79.7	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	758671	10.0	9.12	
78 n-Butanol	56	7.795	7.802	-0.007	100	19588	250.0	0	
81 Methyl methacrylate	100	8.202	8.210	-0.008	0	75432	20.0	18.6	
88 2-Nitropropane	41	8.553	8.560	-0.007	0	54028	20.0	17.9	
99 Tetrahydrothiophene	60	9.632	9.647	-0.015	0	12136	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.762	10.770	-0.008	0	37196	20.0	13.9	
125 1,2,3-Trimethylbenzene	105	11.884	11.892	-0.008	0	1778510	10.0	9.68	
16 1,3,5-Trichlorobenzene	180	13.229	13.236	-0.007	0	663135	10.0	10.5	

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

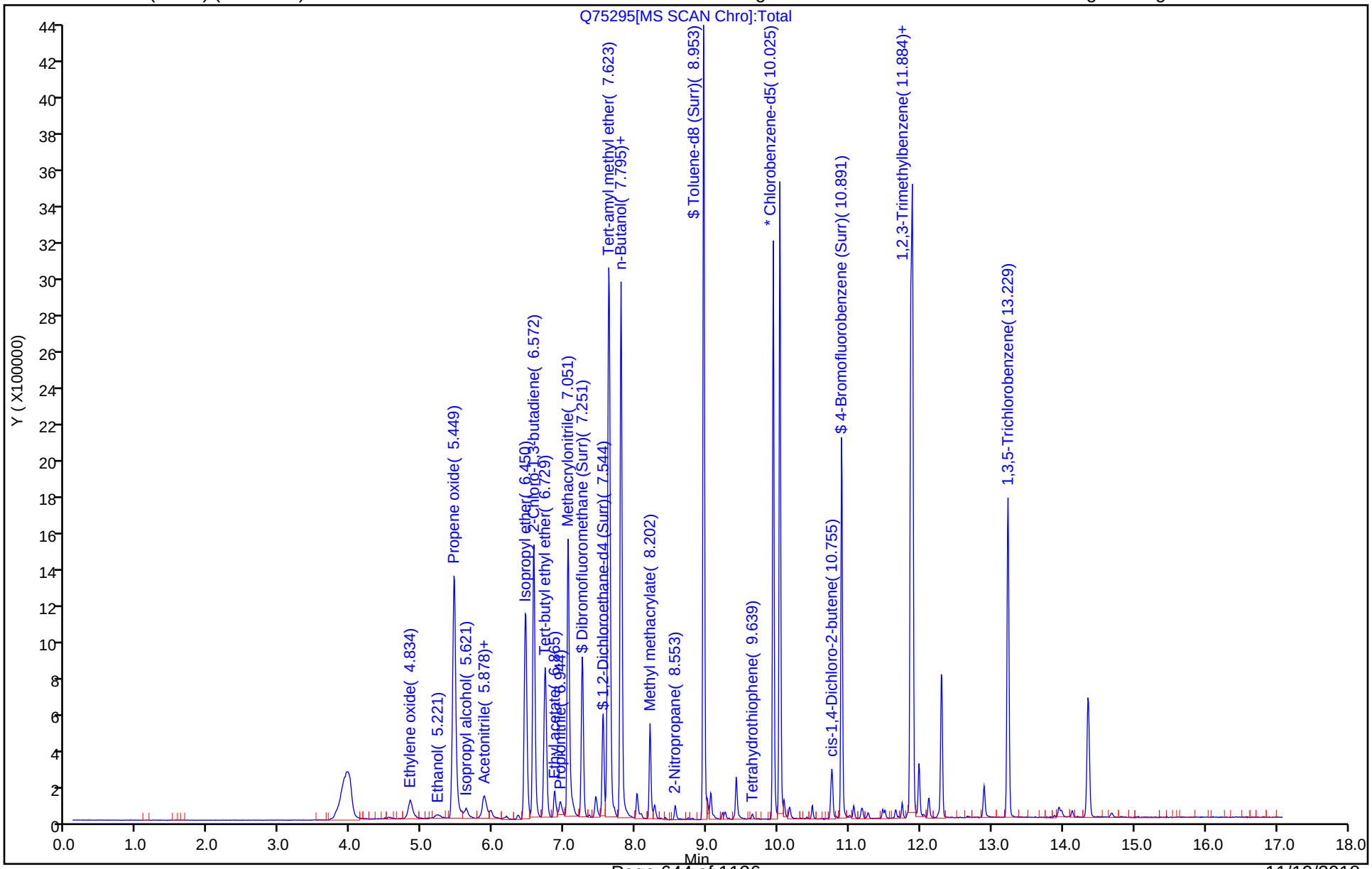
Report Date: 16-Nov-2018 14:52:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D

Injection Date:	10-Nov-2018 22:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	39
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVC 280-437146/39 Calibration Date: 11/10/2018 22:27

Instrument ID: VMS_Q Calib Start Date: 10/23/2018 13:27

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 15:30

Lab File ID: Q75295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3110	0.3052		8.83	9.00	-1.9	50.0
1,2-Dichloroethane-d4 (Surr)	Lin2		0.2175		7.69	9.00	-14.5	50.0
Toluene-d8 (Surr)	Qua		6.448		8.58	9.00	-4.7	50.0
4-Bromofluorobenzene (Surr)	Ave	1.344	1.315		8.81	9.00	-2.1	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 10-Nov-2018 22:27:30 ALS Bottle#: 25 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:47 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.872	-0.001	0	205875	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	2808480	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.033	-0.008	99	577019	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.871	-0.008	100	732714	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.259	-0.008	92	617123	9.00	8.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	439759	9.00	7.69	
$ 7 Toluene-d8 (Surr)	98	8.953	8.961	-0.008	100	2678655	9.00	8.58	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.899	-0.008	87	693735	9.00	8.81	
28 Ethylene oxide	43	4.834	4.835	-0.001	0	76704	1000.0	515.6	
33 Ethanol	45	5.221	5.228	-0.007	0	96222	600.0	0	
38 Propene oxide	58	5.449	5.457	-0.008	0	2058925	1000.0	916.5	
42 Isopropyl alcohol	45	5.621	5.621	0.000	99	70914	100.0	103.8	
46 Acetonitrile	41	5.878	5.886	-0.008	0	110700	100.0	83.8	
56 Isopropyl ether	87	6.450	6.458	-0.008	0	332490	10.0	9.17	
58 2-Chloro-1,3-butadiene	53	6.572	6.572	0.000	0	1104884	10.0	9.91	
59 Tert-butyl ethyl ether	59	6.729	6.737	-0.008	0	976685	10.0	8.80	
60 Ethyl acetate	43	6.865	6.866	-0.001	0	221884	20.0	15.1	
65 Propionitrile	54	6.944	6.944	0.000	0	112648	100.0	73.9	
66 Methacrylonitrile	41	7.051	7.059	-0.008	0	884471	100.0	79.7	
75 Tert-amyl methyl ether	73	7.616	7.616	0.000	0	758671	10.0	9.12	
78 n-Butanol	56	7.795	7.802	-0.007	100	19588	250.0	0	
81 Methyl methacrylate	100	8.202	8.210	-0.008	0	75432	20.0	18.6	
88 2-Nitropropane	41	8.553	8.560	-0.007	0	54028	20.0	17.9	
99 Tetrahydrothiophene	60	9.632	9.647	-0.015	0	12136	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.762	10.770	-0.008	0	37196	20.0	13.9	
125 1,2,3-Trimethylbenzene	105	11.884	11.892	-0.008	0	1778510	10.0	9.68	
16 1,3,5-Trichlorobenzene	180	13.229	13.236	-0.007	0	663135	10.0	10.5	

Reagents:

MV-Supp A_00032	Amount Added:	5.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

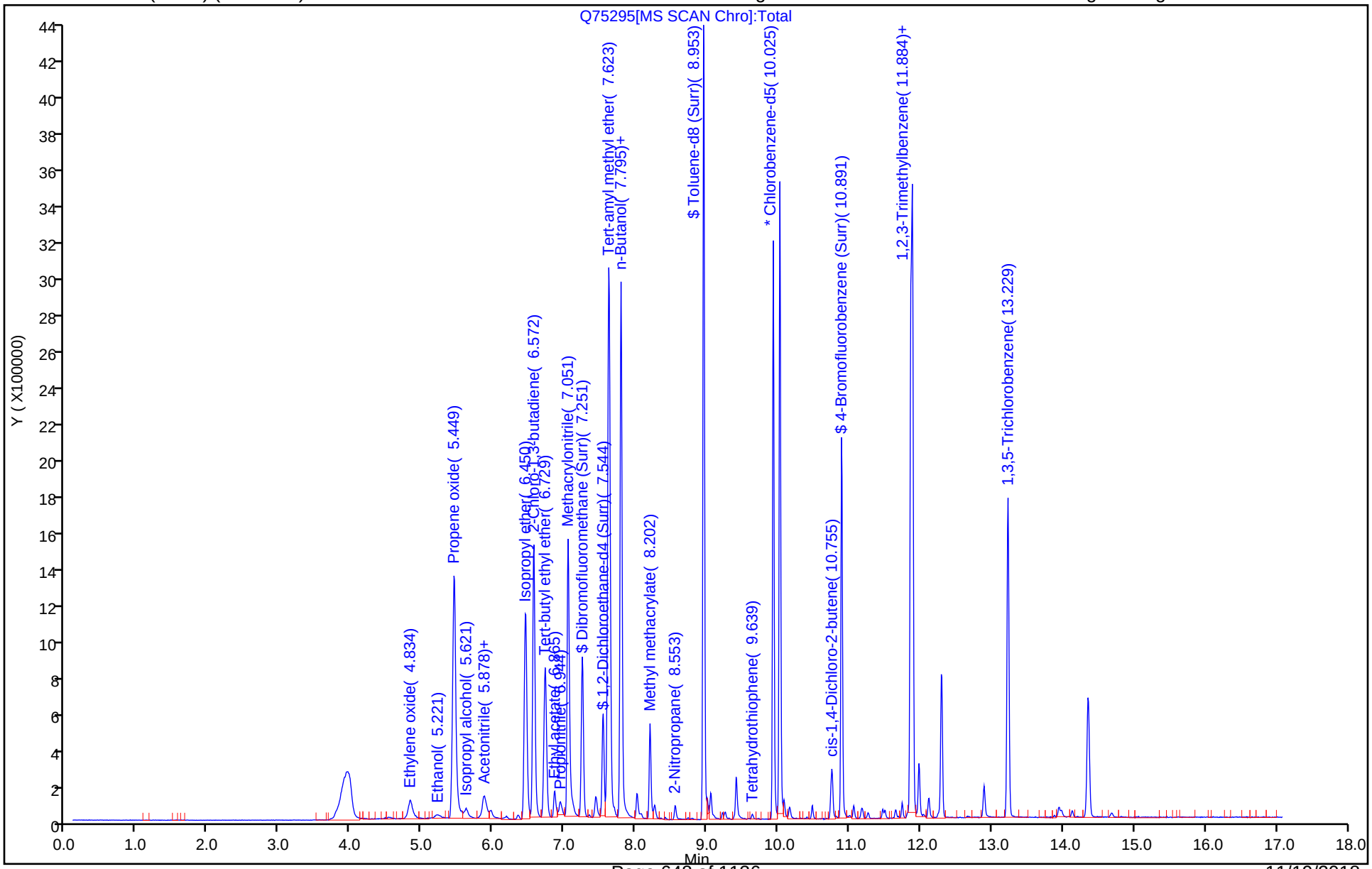
Report Date: 16-Nov-2018 14:52:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75295.D

Injection Date:	10-Nov-2018 22:27:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	39
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Aug-2018 19:34:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	18-Aug-2018 00:46:22	Calib Date:	17-Aug-2018 03:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: seifertj		Date:	18-Aug-2018 00:46:22		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.915	4.915	0.000	0	32953	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

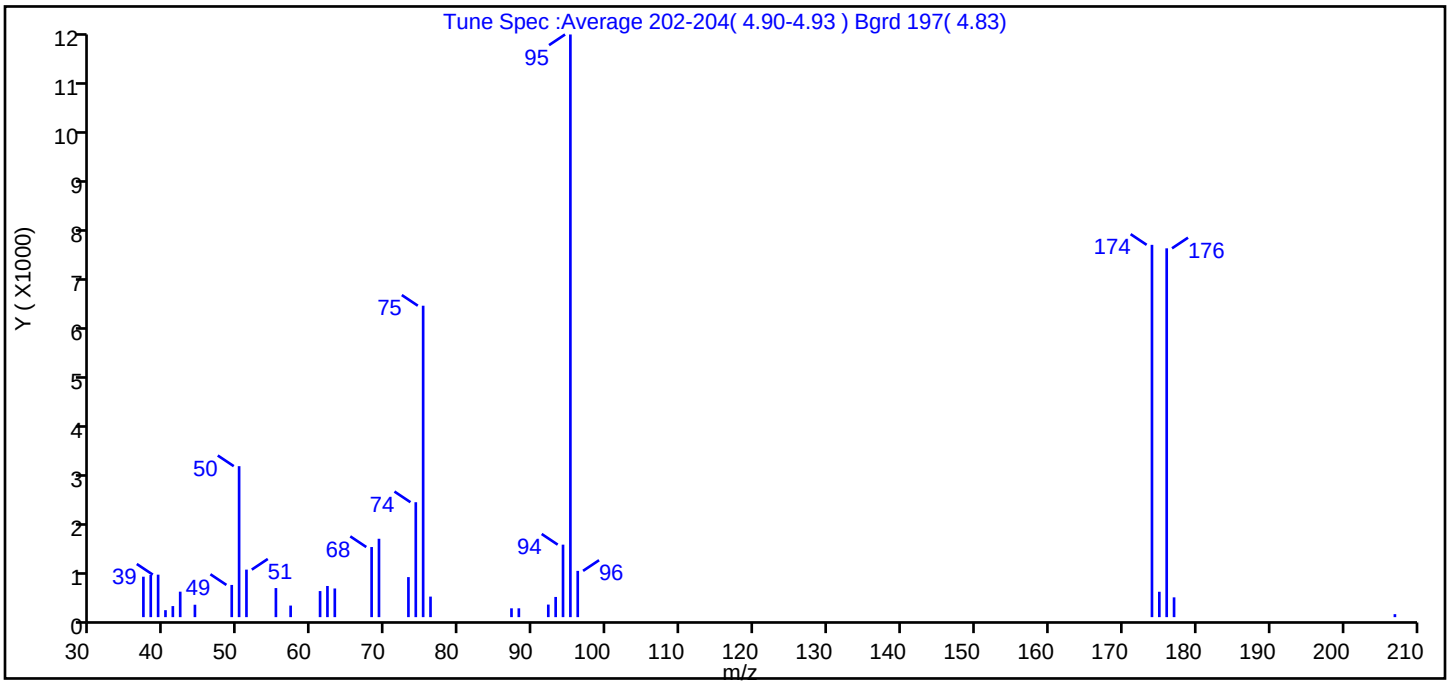
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D
Injection Date: 16-Aug-2018 19:34:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.9
75	30 to 60% of m/z 95	53.4
96	5 to 9% of m/z 95	7.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	63.9
175	5 to 9% of m/z 174	4.4 (6.8)
176	Greater than 95% but less than 101% of m/z 174	63.3 (99.1)
177	5 to 9% of m/z 176	3.4 (5.4)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 16-Aug-2018 19:34:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 33

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	811	51.00	953	74.00	2305	96.00	928
38.00	845	55.00	583	75.00	6246	174.00	7467
39.00	852	57.00	232	76.00	412	175.00	509
40.00	140	61.00	523	87.00	177	176.00	7397
41.00	222	62.00	625	88.00	177	177.00	397
42.00	511	63.00	575	92.00	252	207.00	60
44.00	249	68.00	1406	93.00	405		
49.00	646	69.00	1572	94.00	1454		
50.00	3028	73.00	803	95.00	11686		

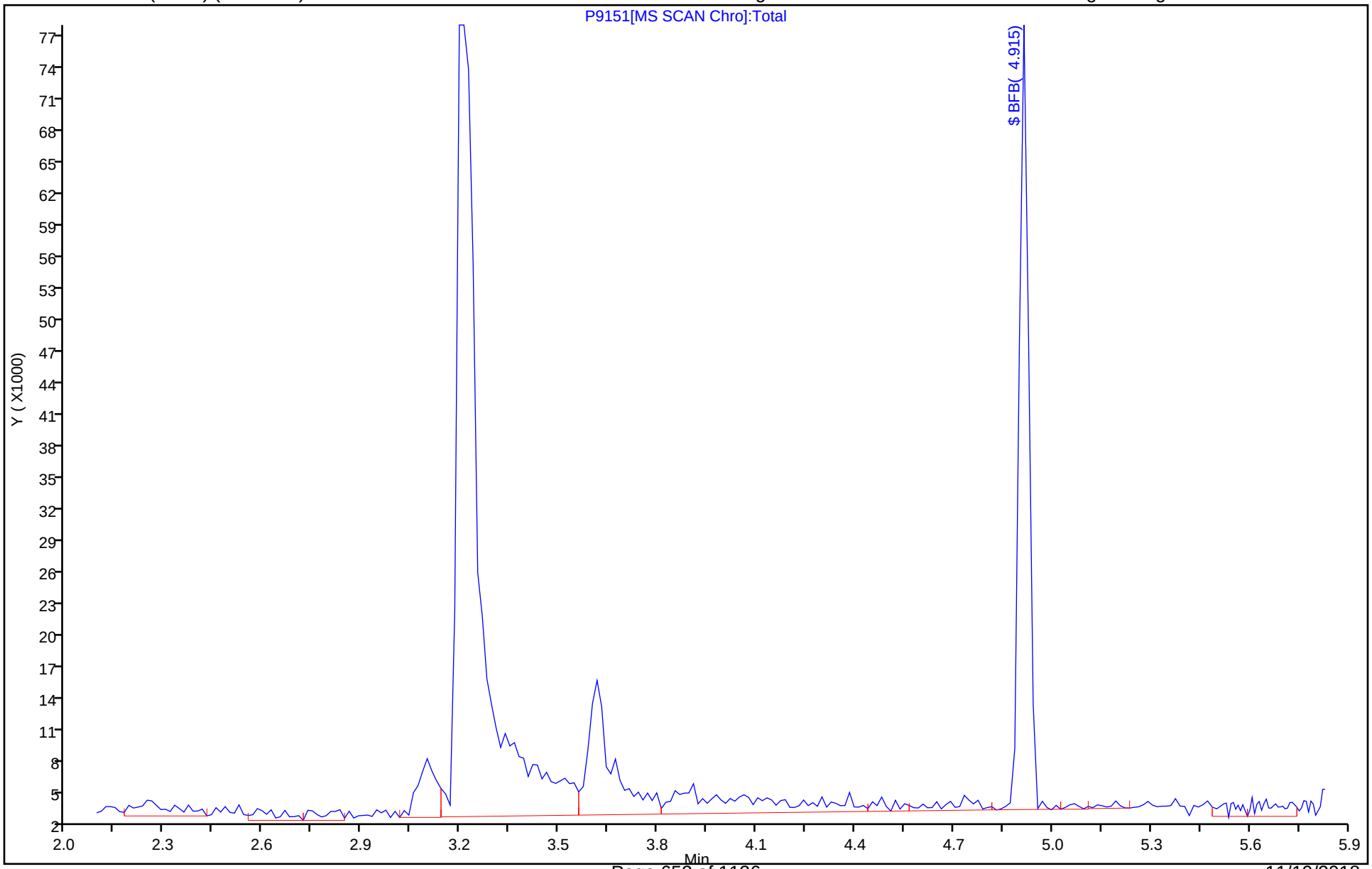
Report Date: 18-Aug-2018 00:46:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D

Injection Date:	16-Aug-2018 19:34:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Oct-2018 21:54:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	23-Oct-2018 12:08:26	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.914	4.914	0.000	0	128126	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

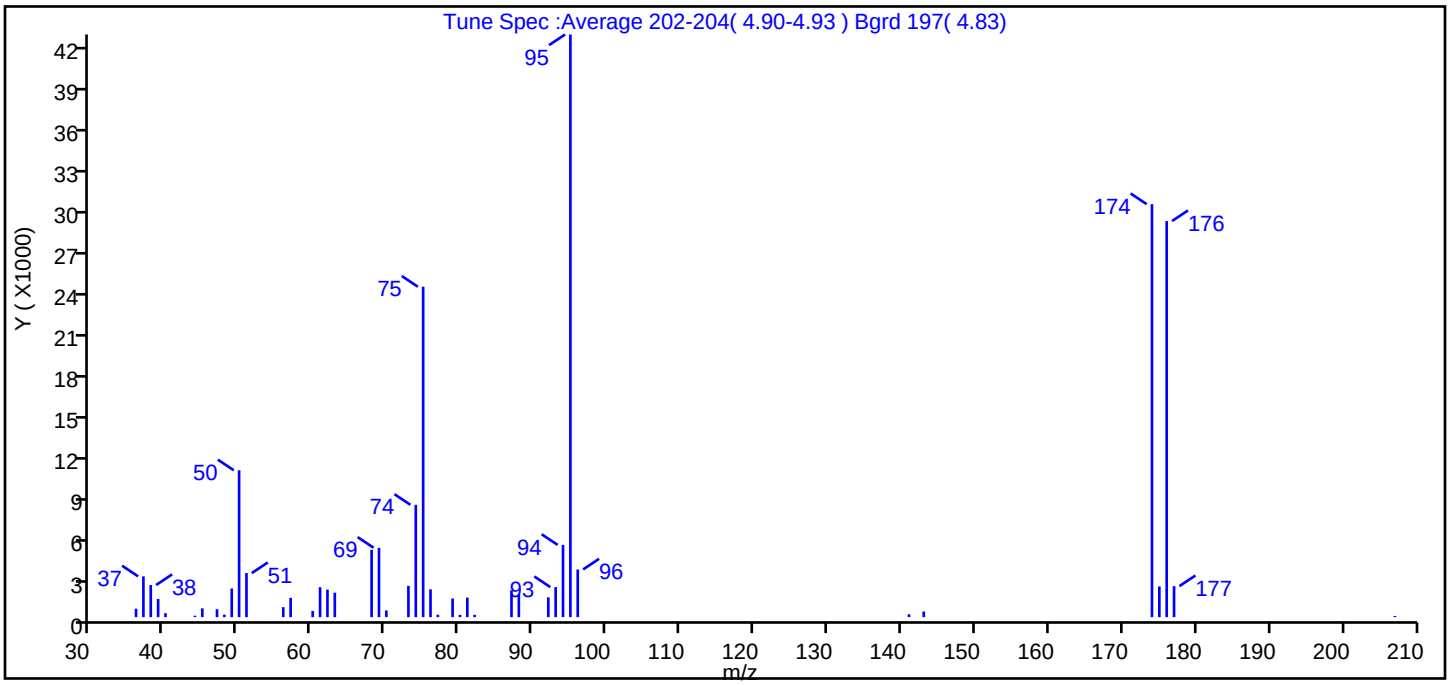
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D
Injection Date: 22-Oct-2018 21:54:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.2
75	30 to 60% of m/z 95	56.7
96	5 to 9% of m/z 95	8.2
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.9
175	5 to 9% of m/z 174	5.3 (7.4)
176	Greater than 95% but less than 101% of m/z 174	68.0 (95.9)
177	5 to 9% of m/z 176	5.3 (7.8)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 22-Oct-2018 21:54:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 44

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	625	51.00	3248	74.00	8281	93.00	2213
37.00	3008	56.00	736	75.00	24368	94.00	5325
38.00	2367	57.00	1420	76.00	2051	95.00	42968
39.00	1343	60.00	458	77.00	177	96.00	3516
40.00	291	61.00	2208	79.00	1374	141.00	212
44.00	106	62.00	2029	80.00	168	143.00	414
45.00	649	63.00	1802	81.00	1443	174.00	30456
47.00	589	68.00	4965	82.00	173	175.00	2266
48.00	183	69.00	5115	87.00	1975	176.00	29208
49.00	2109	70.00	493	88.00	1677	177.00	2286
50.00	10831	73.00	2307	92.00	1464	207.00	88

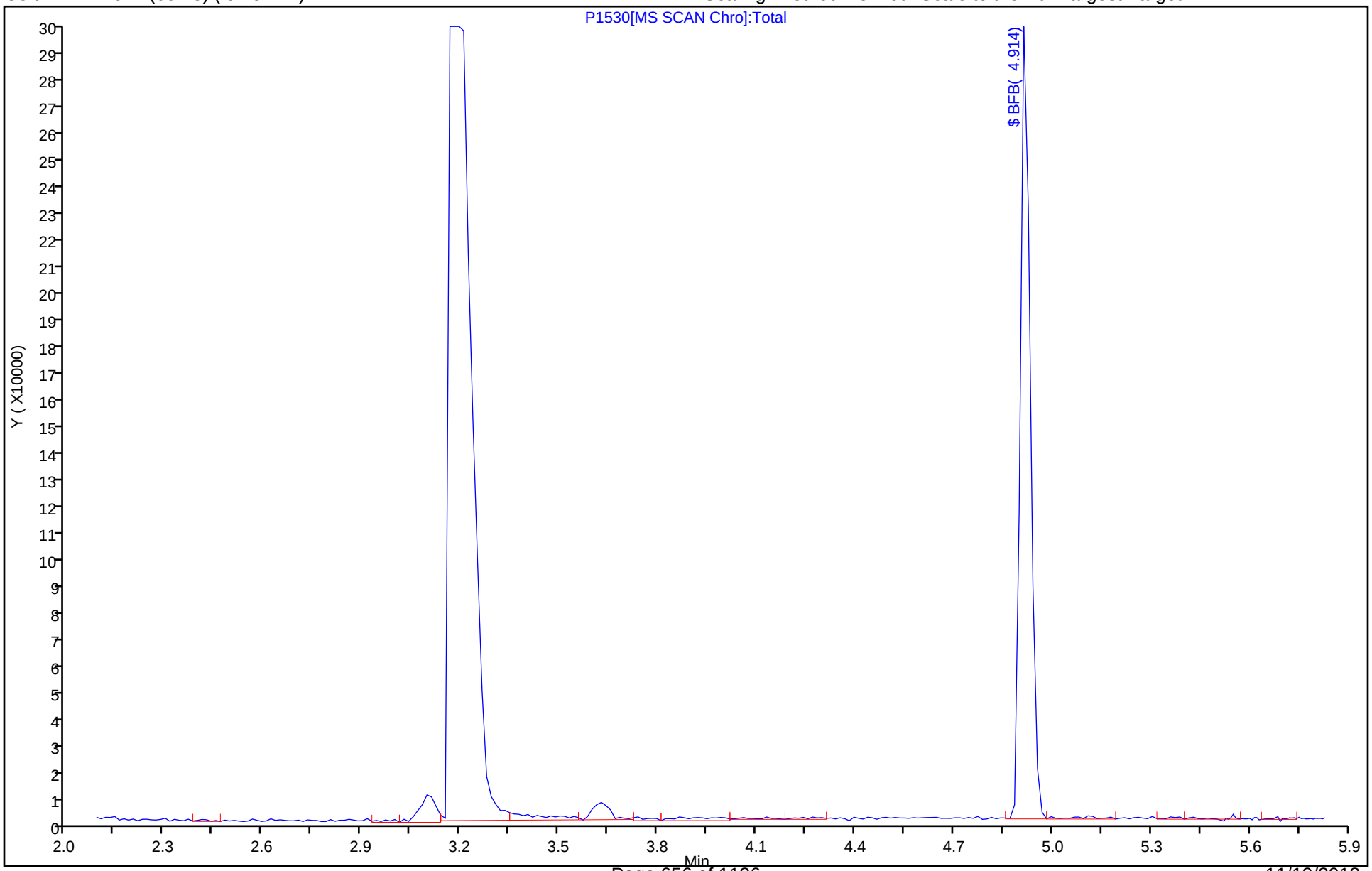
Report Date: 23-Oct-2018 12:08:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D

Injection Date:	22-Oct-2018 21:54:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2132.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 03-Nov-2018 12:06:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:15 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 12:14:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.901	4.901	0.000	0	160429	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

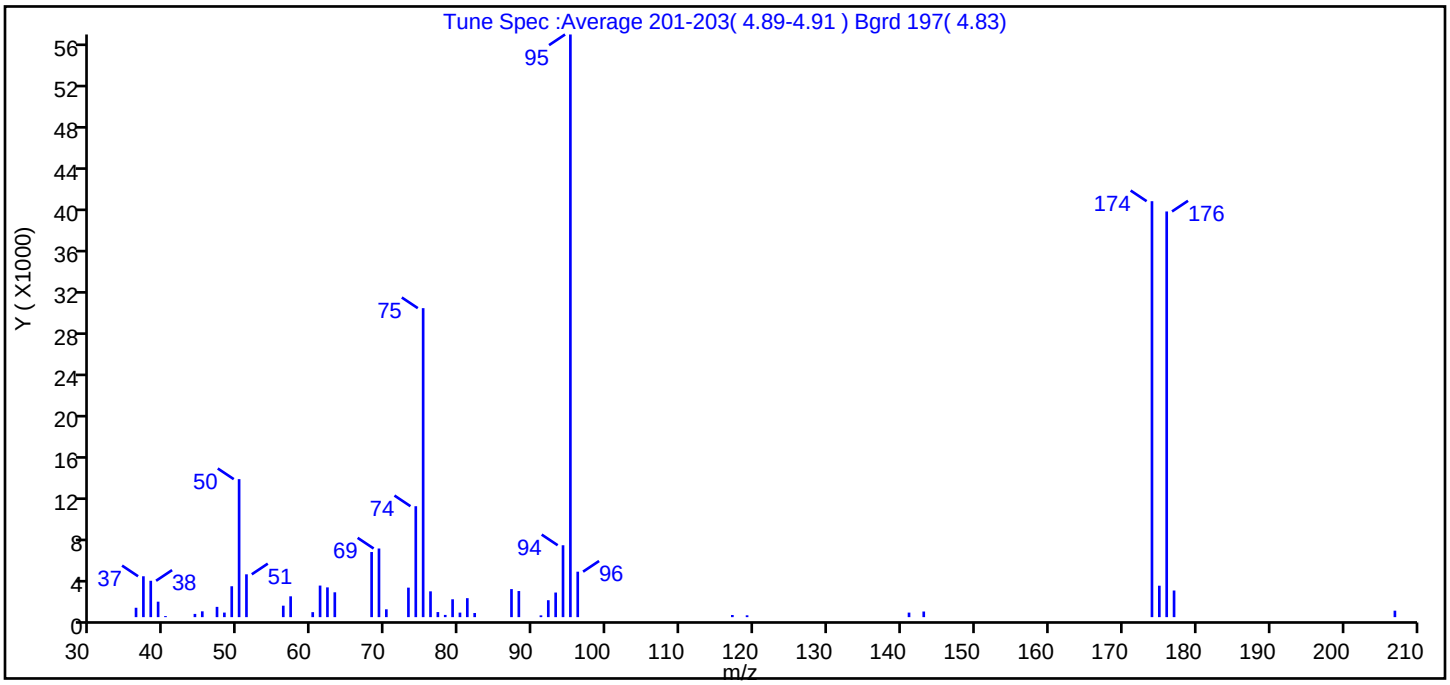
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2132.D
Injection Date: 03-Nov-2018 12:06:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.7
75	30 to 60% of m/z 95	53.0
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	71.4
175	5 to 9% of m/z 174	5.4 (7.6)
176	Greater than 95% but less than 101% of m/z 174	69.6 (97.5)
177	5 to 9% of m/z 176	4.6 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2132.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 03-Nov-2018 12:06:30
Spectrum: Tune Spec :Average 201-203(4.89-4.91) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 48

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	915	56.00	1117	76.00	2515	94.00	7006
37.00	3984	57.00	2030	77.00	494	95.00	56784
38.00	3545	60.00	486	78.00	217	96.00	4431
39.00	1508	61.00	3077	79.00	1742	117.00	209
40.00	104	62.00	2900	80.00	442	119.00	179
44.00	316	63.00	2422	81.00	1850	141.00	442
45.00	567	68.00	6347	82.00	402	143.00	549
47.00	1001	69.00	6689	87.00	2733	174.00	40536
48.00	444	70.00	764	88.00	2544	175.00	3064
49.00	3011	73.00	2876	91.00	173	176.00	39536
50.00	13448	74.00	10811	92.00	1650	177.00	2596
51.00	4174	75.00	30112	93.00	2398	207.00	630

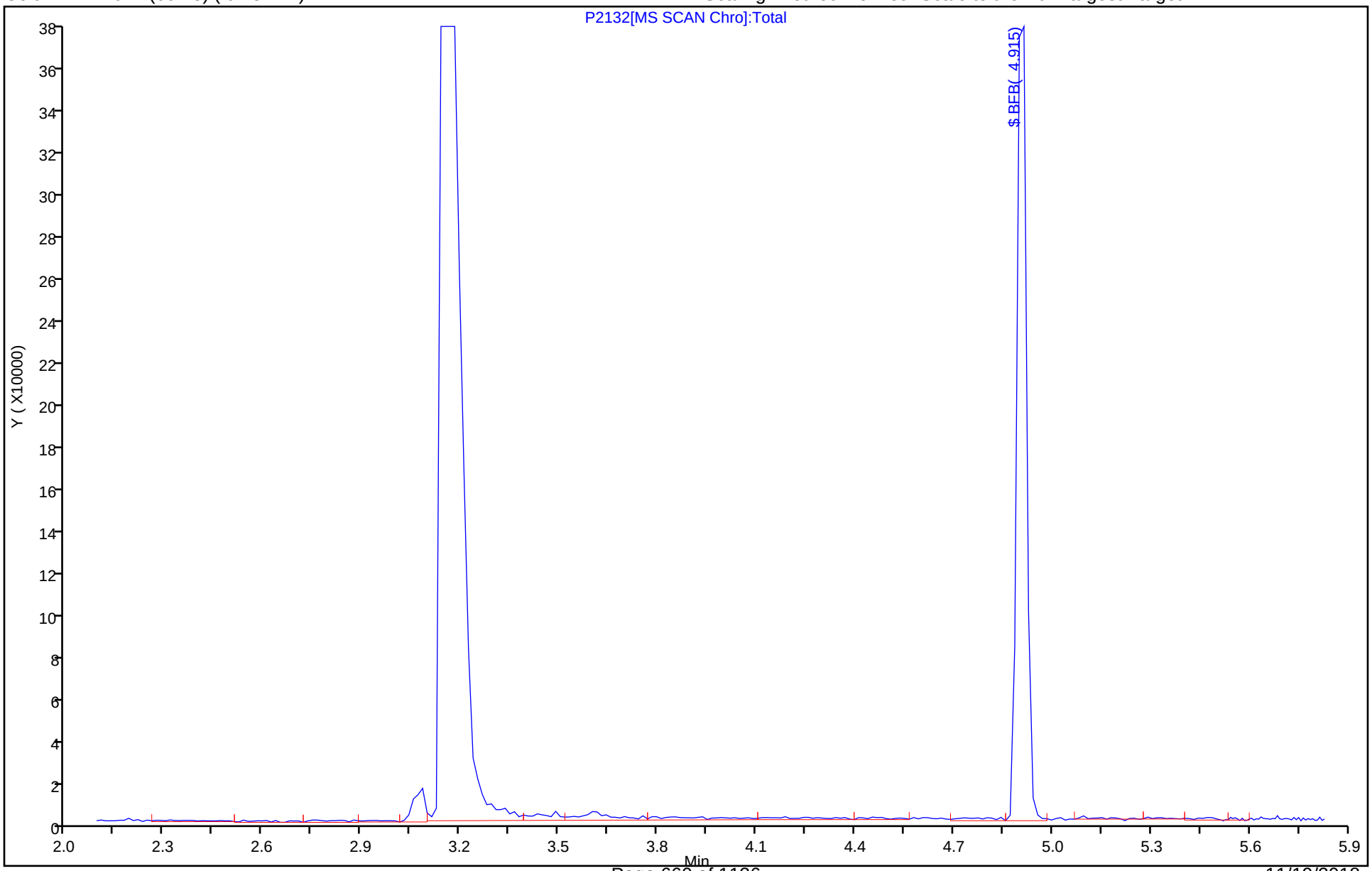
Report Date: 10-Nov-2018 00:02:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2132.D

Injection Date:	03-Nov-2018 12:06:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2201.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	05-Nov-2018 19:28:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	07-Nov-2018 18:50:01	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0322				
First Level Reviewer: newcomer		Date:	05-Nov-2018 19:42:31		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.917	4.917	0.000	0	181018	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

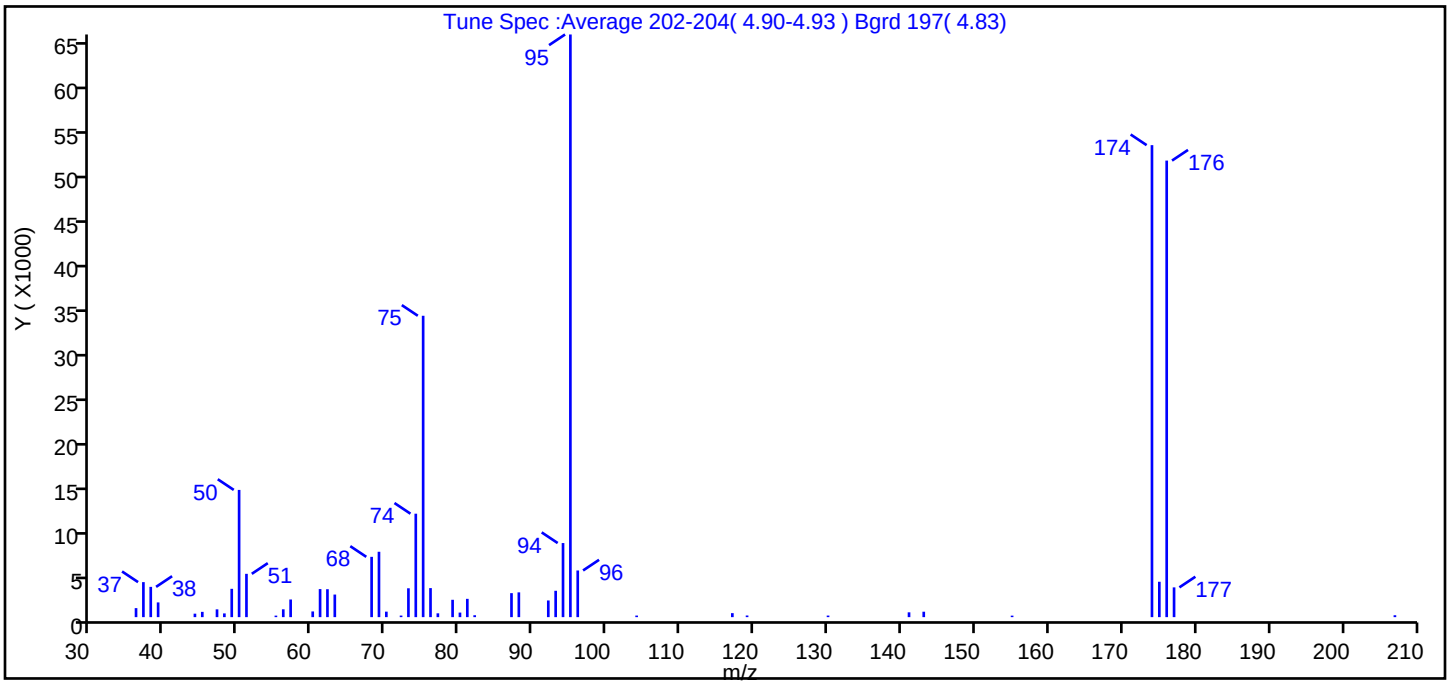
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2201.D
Injection Date: 05-Nov-2018 19:28:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.8
75	30 to 60% of m/z 95	51.7
96	5 to 9% of m/z 95	8.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	81.0
175	5 to 9% of m/z 174	6.1 (7.5)
176	Greater than 95% but less than 101% of m/z 174	78.4 (96.7)
177	5 to 9% of m/z 176	5.1 (6.5)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2201.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 05-Nov-2018 19:28:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1010	57.00	1977	77.00	428	117.00	448
37.00	3921	60.00	639	79.00	1943	119.00	184
38.00	3390	61.00	3142	80.00	511	130.00	176
39.00	1650	62.00	3128	81.00	2049	141.00	539
44.00	389	63.00	2529	82.00	214	143.00	608
45.00	592	68.00	6751	87.00	2687	155.00	169
47.00	873	69.00	7320	88.00	2775	174.00	52848
48.00	418	70.00	616	92.00	1867	175.00	3962
49.00	3171	72.00	176	93.00	2952	176.00	51120
50.00	14246	73.00	3232	94.00	8296	177.00	3333
51.00	4850	74.00	11583	95.00	65240	207.00	213
55.00	171	75.00	33744	96.00	5225		
56.00	879	76.00	3252	104.00	177		

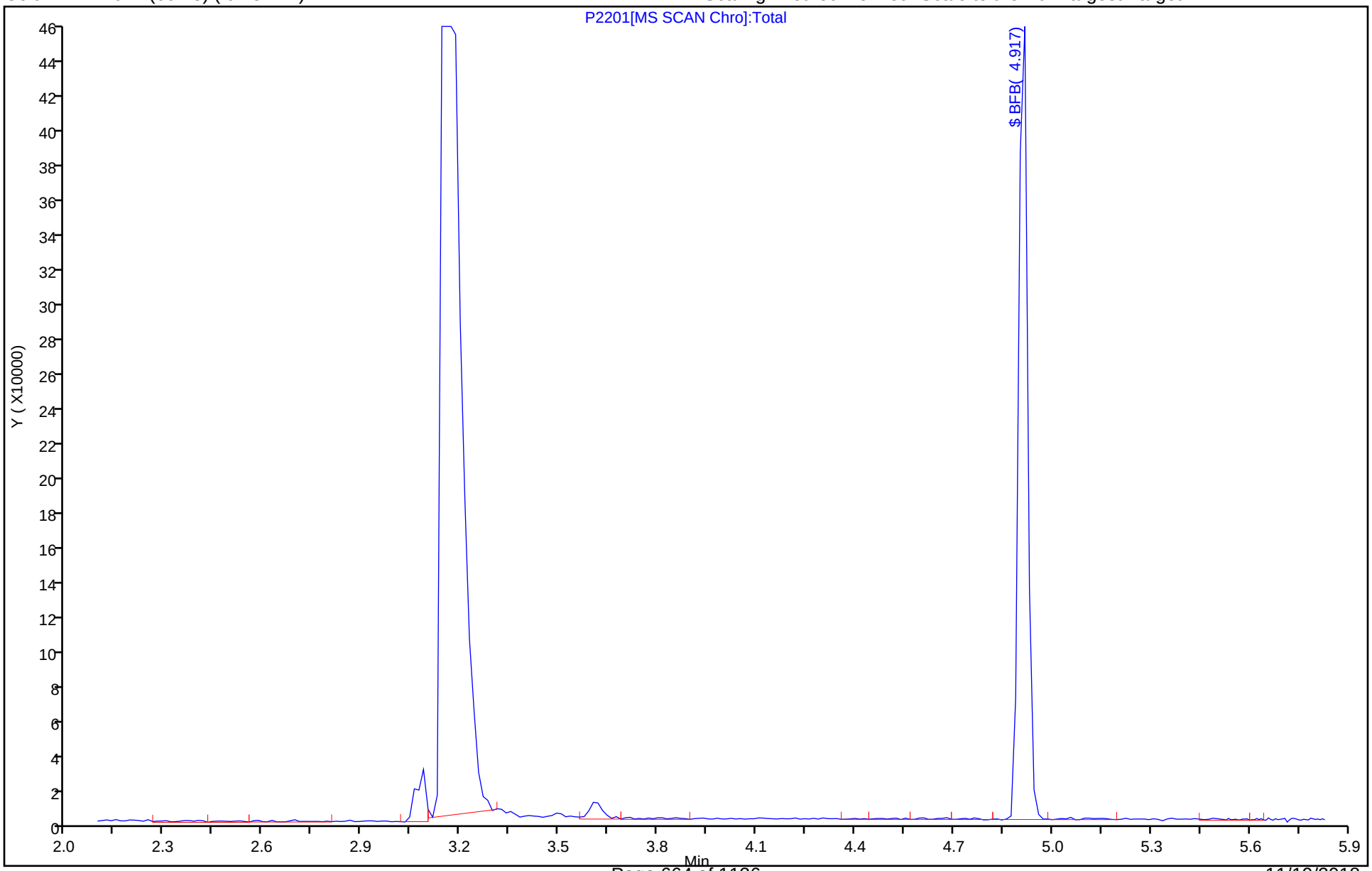
Report Date: 07-Nov-2018 18:50:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2201.D

Injection Date:	05-Nov-2018 19:28:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74583.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 20-Oct-2018 10:39:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Oct-2018 12:10:07 Calib Date: 20-Oct-2018 15:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74598.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	5.000	5.000	0.000	0	133745	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

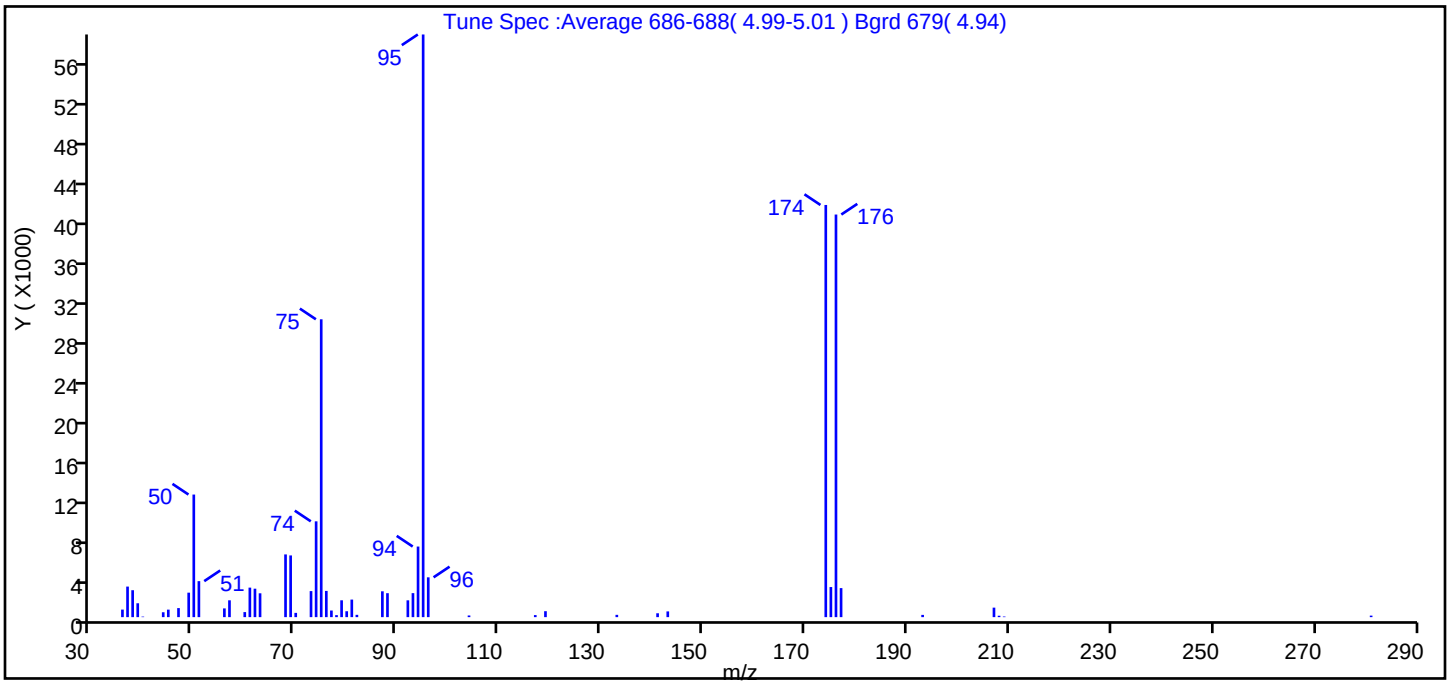
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74583.D
Injection Date: 20-Oct-2018 10:39:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.0
75	30 to 60% of m/z 95	51.1
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.7
175	5 to 9% of m/z 174	5.2 (7.3)
176	Greater than 95% but less than 101% of m/z 174	69.1 (97.7)
177	5 to 9% of m/z 176	5.0 (7.2)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74583.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 20-Oct-2018 10:39:30
Spectrum: Tune Spec :Average 686-688(4.99-5.01) Bgrd 679(4.94)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 52

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	764	60.00	511	79.00	1704	119.00	601
37.00	3091	61.00	2985	80.00	598	133.00	233
38.00	2724	62.00	2877	81.00	1776	141.00	392
39.00	1403	63.00	2412	82.00	234	143.00	580
40.00	54	68.00	6343	87.00	2613	174.00	41680
44.00	495	69.00	6240	88.00	2423	175.00	3044
45.00	759	70.00	432	92.00	1701	176.00	40712
47.00	915	73.00	2634	93.00	2428	177.00	2936
49.00	2475	74.00	9689	94.00	7139	193.00	228
50.00	12397	75.00	30120	95.00	58920	207.00	961
51.00	3640	76.00	2652	96.00	4026	208.00	142
56.00	884	77.00	671	104.00	168	209.00	61
57.00	1703	78.00	203	117.00	207	281.00	154

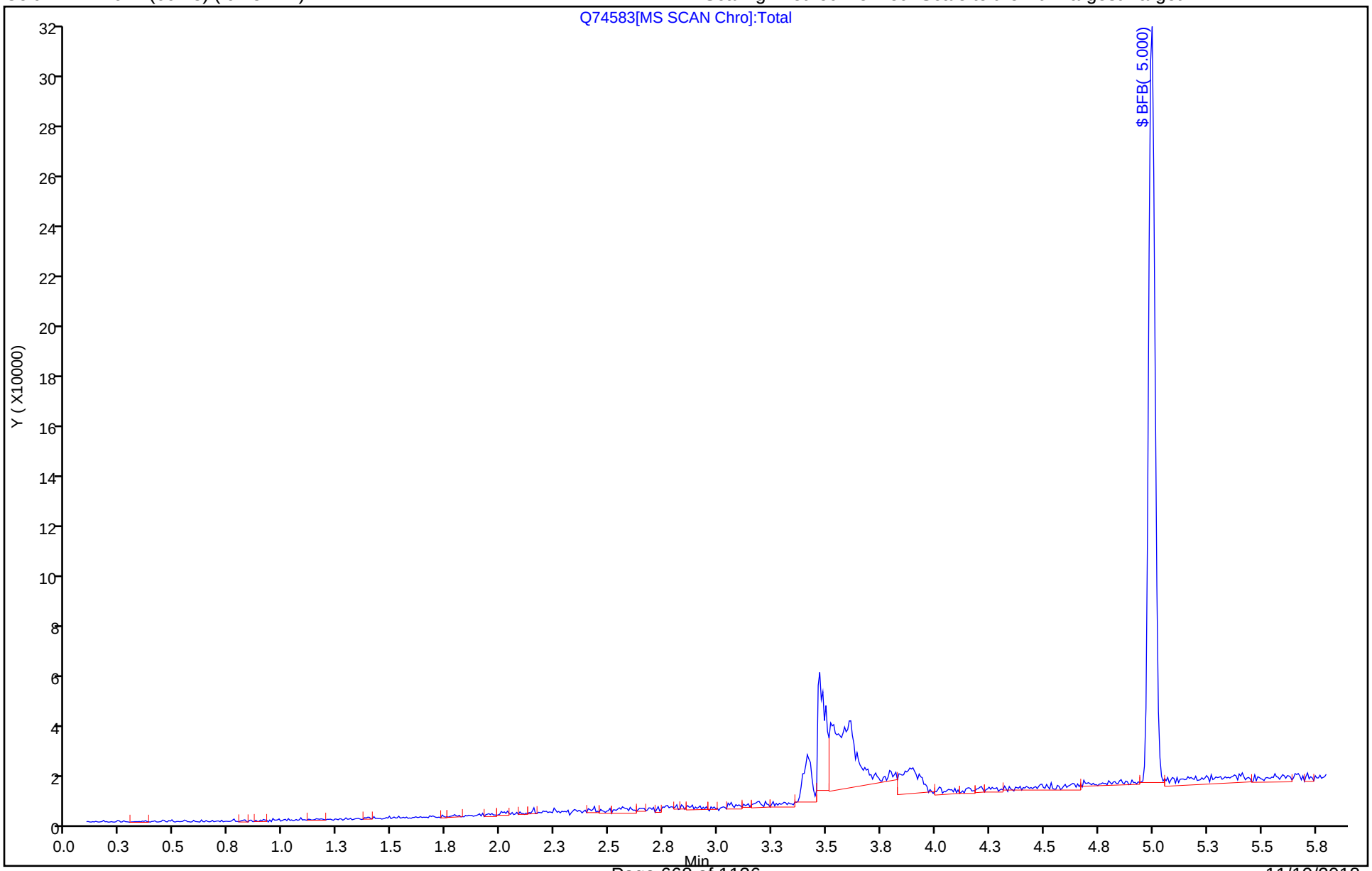
Report Date: 22-Oct-2018 12:10:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b\Q74583.D

Injection Date:	20-Oct-2018 10:39:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74583.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 22-Oct-2018 11:34:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 23-Oct-2018 08:46:21 Calib Date: 22-Oct-2018 13:48:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74592.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: meierg Date: 22-Oct-2018 11:44:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.988	4.988	0.000	0	110675	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

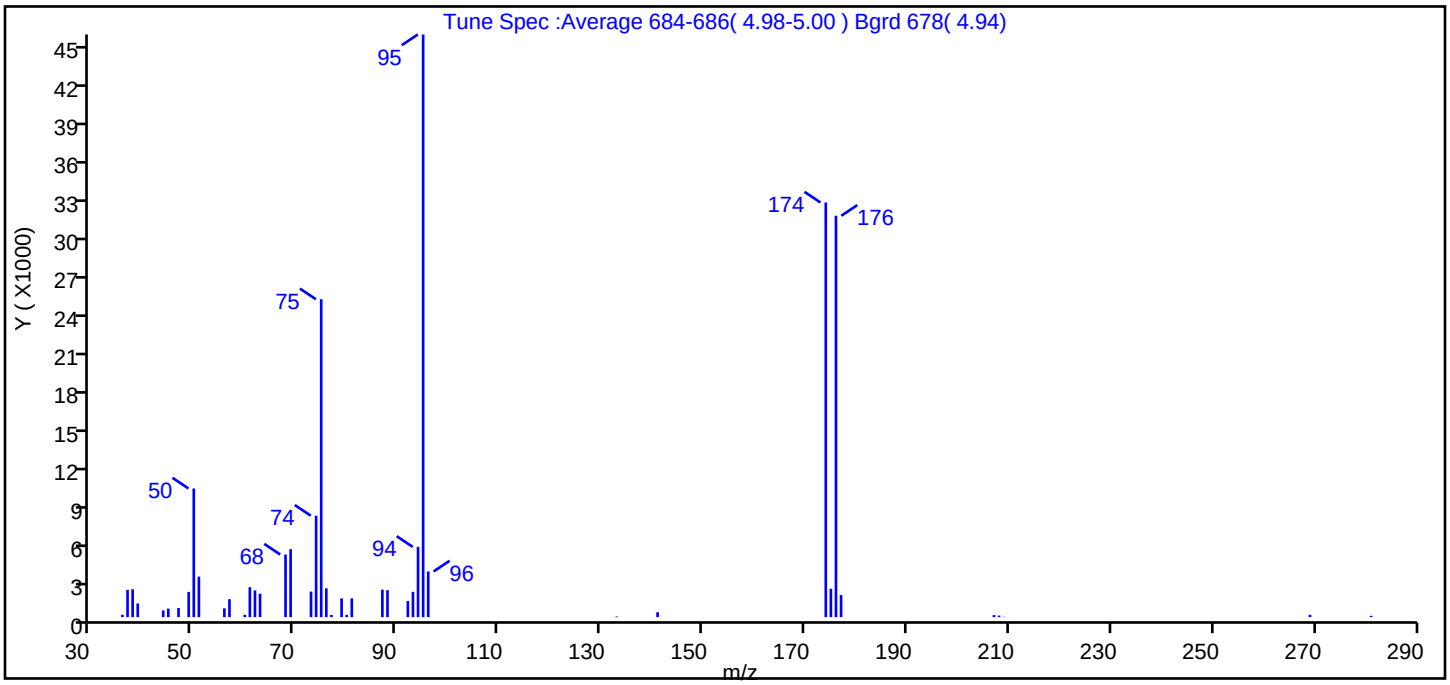
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74583.D
Injection Date: 22-Oct-2018 11:34:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.1
75	30 to 60% of m/z 95	54.6
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	71.2
175	5 to 9% of m/z 174	4.9 (6.8)
176	Greater than 95% but less than 101% of m/z 174	68.9 (96.8)
177	5 to 9% of m/z 176	3.8 (5.5)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74583.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 22-Oct-2018 11:34:30
Spectrum: Tune Spec :Average 684-686(4.98-5.00) Bgrd 678(4.94)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 44

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	181	57.00	1394	77.00	173	133.00	51
37.00	2119	60.00	185	79.00	1458	141.00	383
38.00	2167	61.00	2326	80.00	178	174.00	32224
39.00	1061	62.00	2078	81.00	1459	175.00	2207
44.00	519	63.00	1822	87.00	2137	176.00	31192
45.00	663	68.00	4867	88.00	2092	177.00	1714
47.00	713	69.00	5280	92.00	1256	207.00	162
49.00	1962	73.00	1989	93.00	1969	208.00	122
50.00	9999	74.00	7884	94.00	5461	209.00	24
51.00	3146	75.00	24704	95.00	45280	269.00	185
56.00	682	76.00	2240	96.00	3550	281.00	106

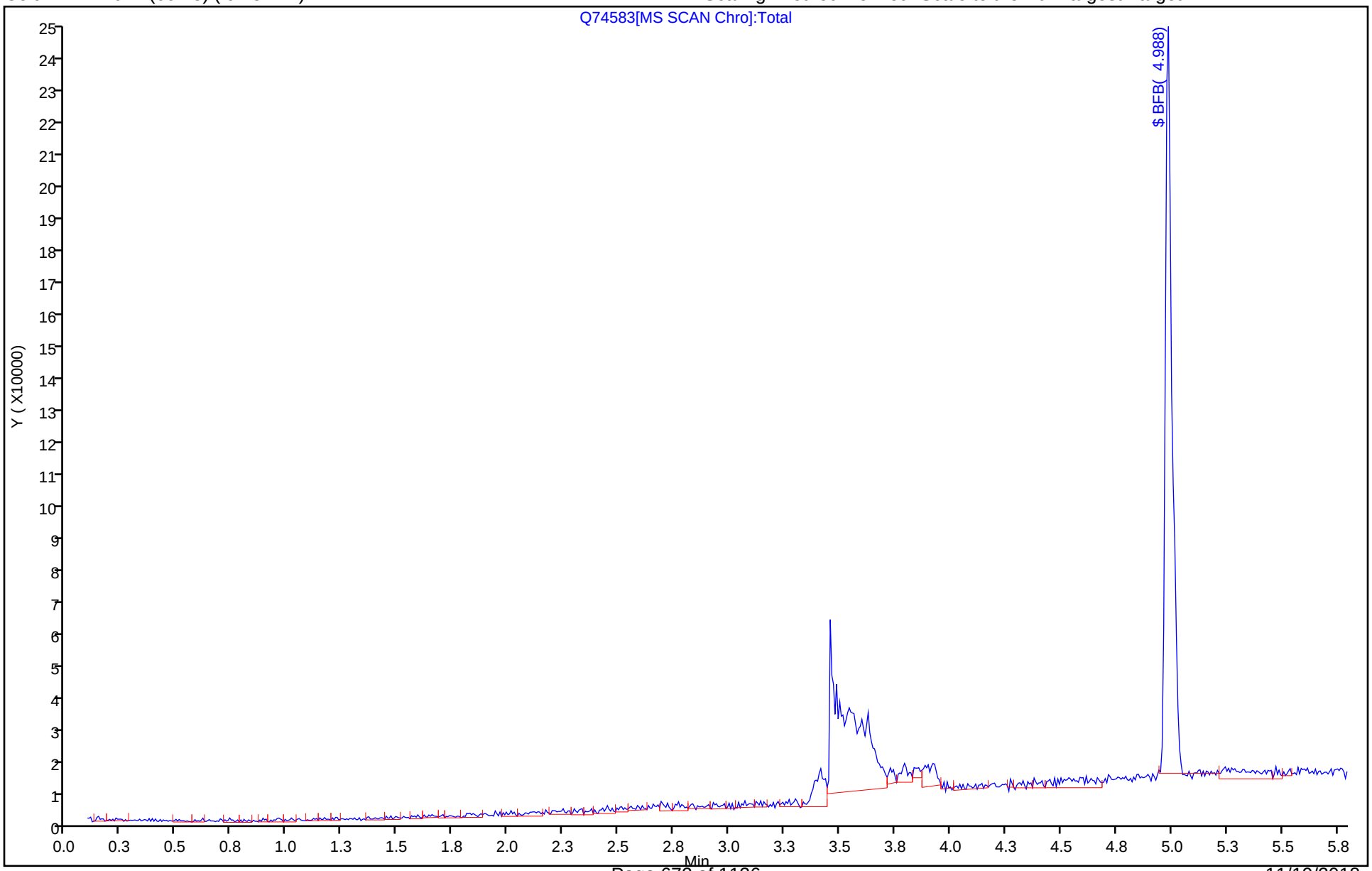
Report Date: 23-Oct-2018 08:46:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181022-75344.b\Q74583.D

Injection Date:	22-Oct-2018 11:34:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74632.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 23-Oct-2018 12:57:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Oct-2018 10:41:53 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.994	4.994	0.000	0	118877	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

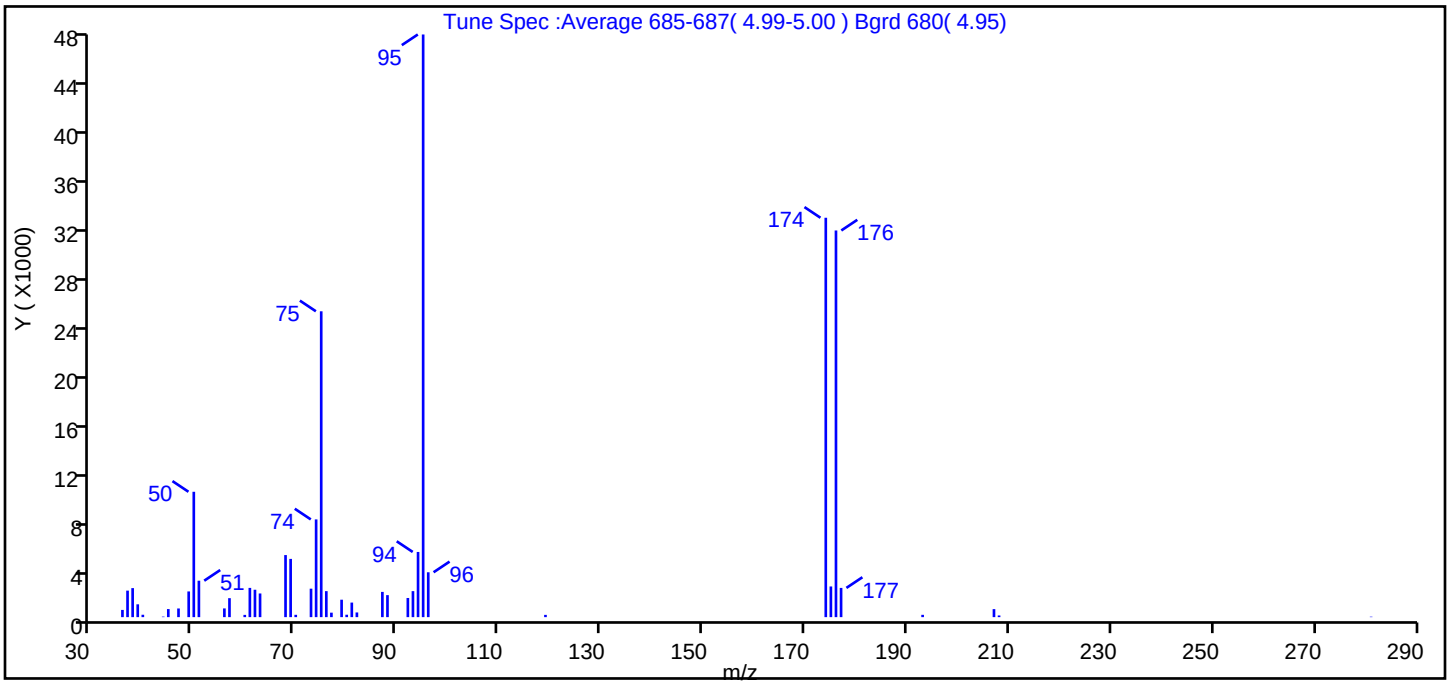
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74632.D
Injection Date: 23-Oct-2018 12:57:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.5
75	30 to 60% of m/z 95	52.5
96	5 to 9% of m/z 95	7.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	68.5
175	5 to 9% of m/z 174	5.3 (7.7)
176	Greater than 95% but less than 101% of m/z 174	66.4 (96.8)
177	5 to 9% of m/z 176	5.0 (7.6)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74632.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 23-Oct-2018 12:57:30
Spectrum: Tune Spec :Average 685-687(4.99-5.00) Bgrd 680(4.95)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	595	57.00	1563	77.00	369	119.00	187
37.00	2184	60.00	186	79.00	1436	174.00	32896
38.00	2391	61.00	2409	80.00	199	175.00	2527
39.00	1057	62.00	2257	81.00	1200	176.00	31848
40.00	197	63.00	1950	82.00	386	177.00	2408
44.00	43	68.00	5113	87.00	2079	193.00	191
45.00	665	69.00	4798	88.00	1813	207.00	661
47.00	714	70.00	192	92.00	1578	208.00	138
49.00	2117	73.00	2345	93.00	2142	281.00	37
50.00	10326	74.00	8050	94.00	5369		
51.00	3001	75.00	25192	95.00	47992		
56.00	719	76.00	2142	96.00	3696		

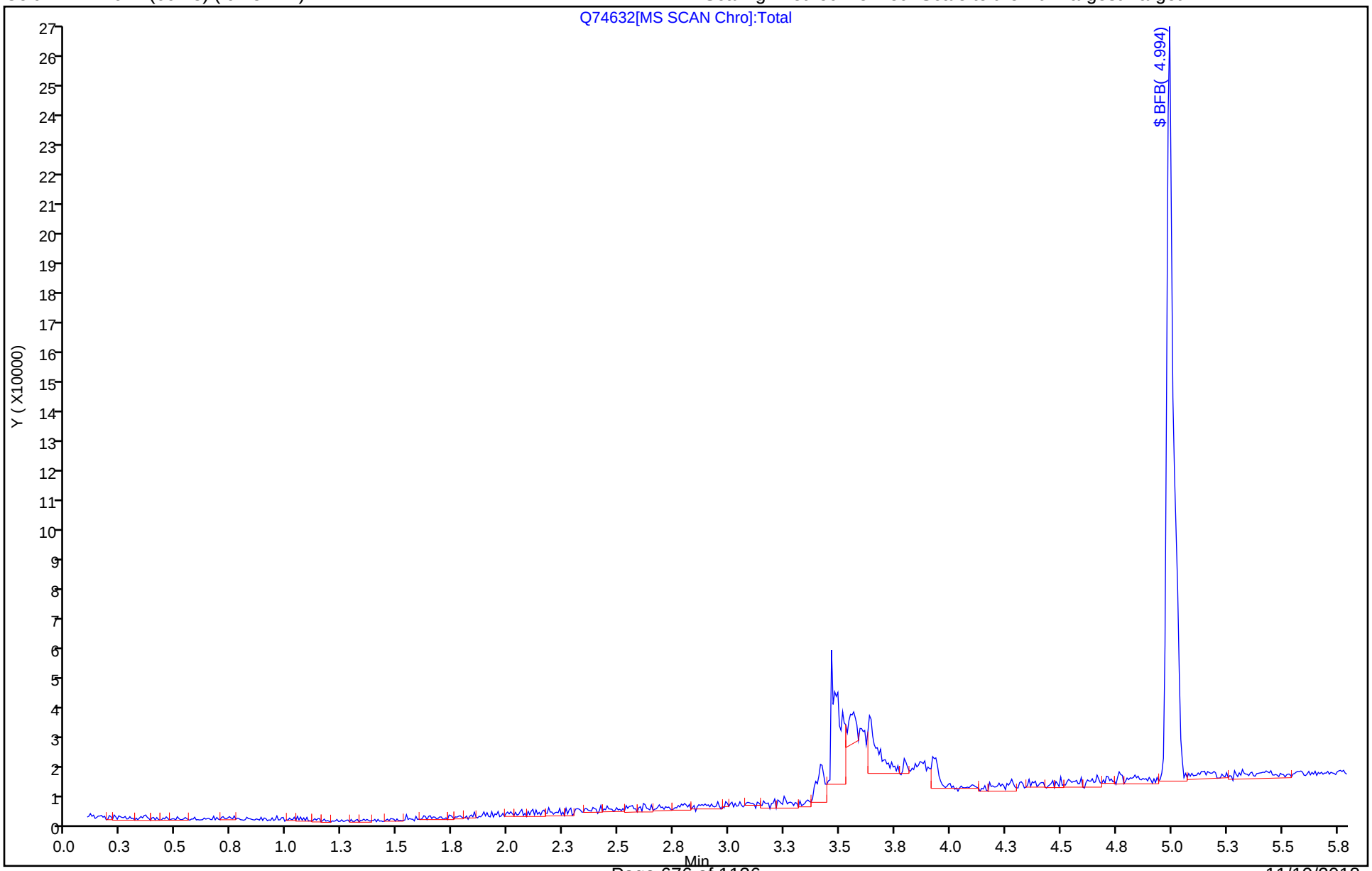
Report Date: 24-Oct-2018 10:41:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74632.D

Injection Date:	23-Oct-2018 12:57:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75270.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	10-Nov-2018 10:21:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 14:52:49	Calib Date:	23-Oct-2018 15:30:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				
First Level Reviewer: meierg		Date:	10-Nov-2018 10:49:59		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.991	4.991	0.000	0	252246	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

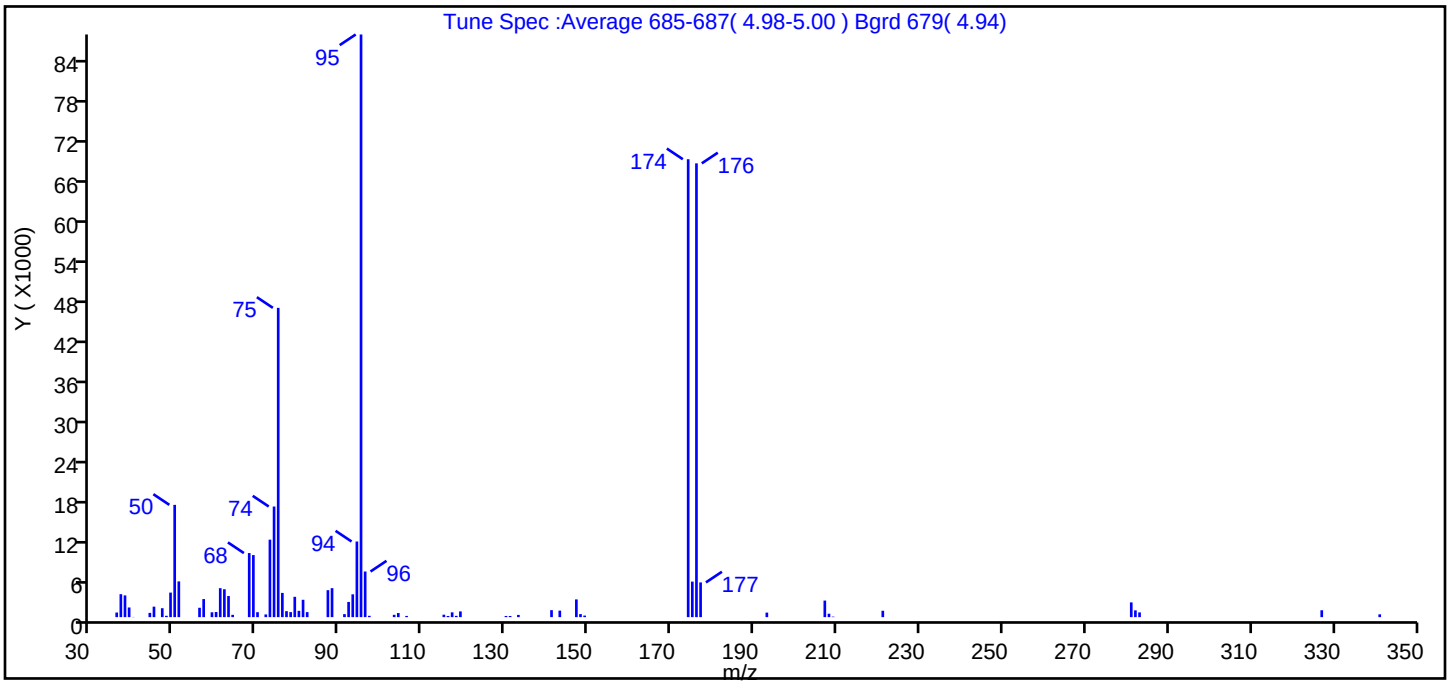
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75270.D
Injection Date: 10-Nov-2018 10:21:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.3
75	30 to 60% of m/z 95	53.1
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.6
175	5 to 9% of m/z 174	6.1 (7.8)
176	Greater than 95% but less than 101% of m/z 174	77.9 (99.1)
177	5 to 9% of m/z 176	6.0 (7.7)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75270.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 10-Nov-2018 10:21:30
Spectrum: Tune Spec :Average 685-687(4.98-5.00) Bgrd 679(4.94)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	690	64.00	345	93.00	3413	148.00	456
37.00	3433	68.00	9577	94.00	11306	149.00	232
38.00	3250	69.00	9276	95.00	87096	174.00	68448
39.00	1443	70.00	740	96.00	6820	175.00	5311
40.00	26	72.00	405	97.00	198	176.00	67832
44.00	635	73.00	11582	103.00	349	177.00	5191
45.00	1568	74.00	16536	104.00	614	193.00	679
47.00	1336	75.00	46232	106.00	182	207.00	2478
48.00	202	76.00	3623	115.00	367	208.00	512
49.00	3669	77.00	896	116.00	174	209.00	74
50.00	16784	78.00	755	117.00	721	221.00	954
51.00	5341	79.00	3039	118.00	192	281.00	2205
56.00	1402	80.00	943	119.00	857	282.00	1014
57.00	2702	81.00	2596	130.00	177	283.00	708
59.00	728	82.00	751	131.00	170	327.00	1030
60.00	769	87.00	4032	133.00	335	341.00	422
61.00	4330	88.00	4334	141.00	1046		
62.00	4171	91.00	453	143.00	974		
63.00	3157	92.00	2273	147.00	2652		

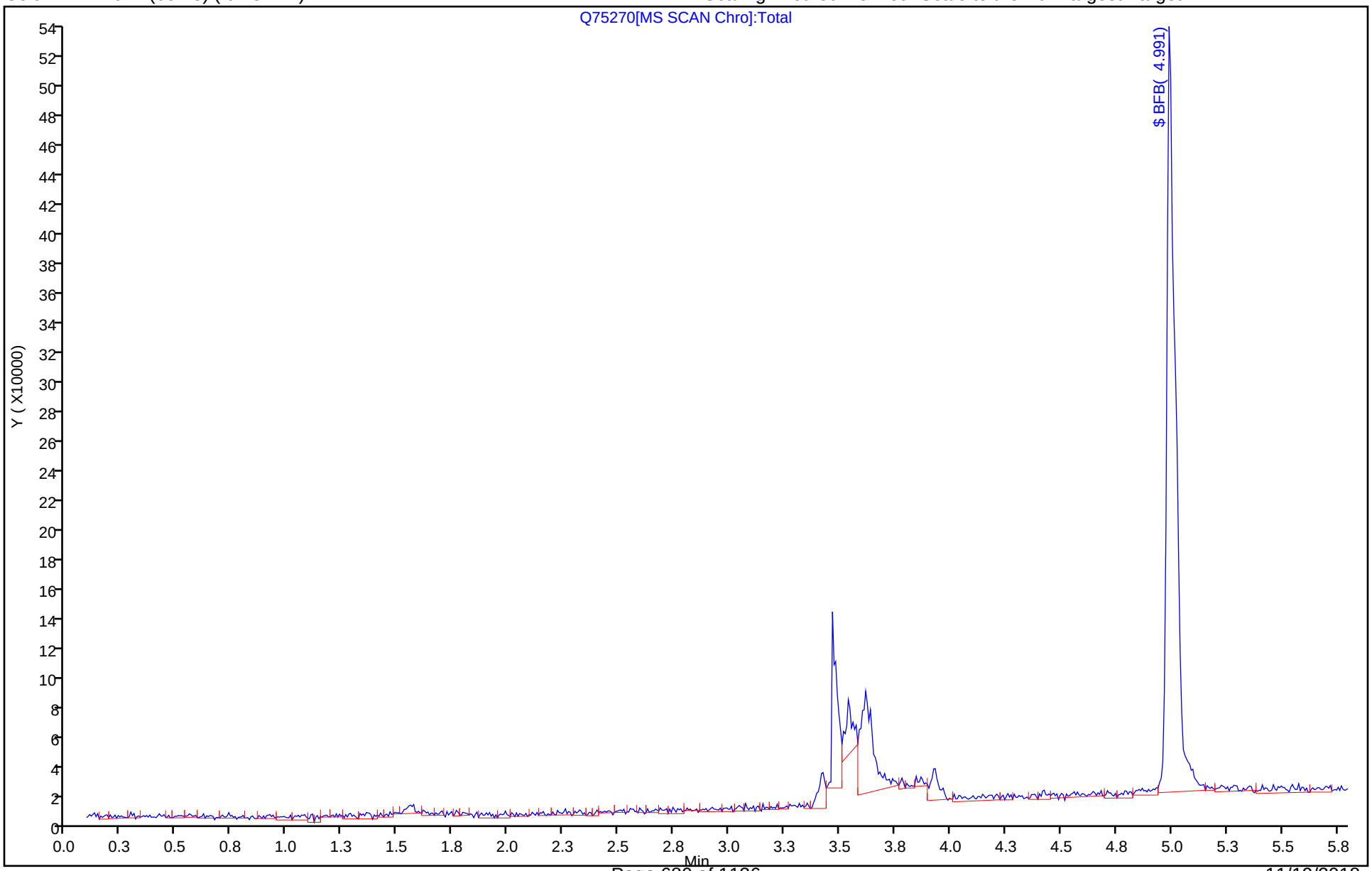
Report Date: 16-Nov-2018 14:52:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75270.D

Injection Date:	10-Nov-2018 10:21:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436199/4

Matrix: Water | Lab File ID: P2136.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 13:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436199/4

Matrix: Water | Lab File ID: P2136.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 13:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-436199/4

Matrix: Water Lab File ID: P2136.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/03/2018 13:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436199 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2136.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Nov-2018 13:24:30 ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 14:05:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.616	5.601	0.015	94	138212	250.0	250.0	a
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1292789	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.820	9.820	0.000	90	278892	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	395435	12.5	12.5	
* 149 1,4-Dioxane-d8	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	91	280518	10.0	11.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	260987	10.0	10.8	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1177474	10.0	9.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	345375	10.0	9.78	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.901					ND	
22 Chlorotrifluoroethene	116		3.818					ND	
23 Dichlorodifluoromethane	85		3.845					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.027					ND	
26 Chloromethane	50		4.082					ND	
27 Vinyl chloride	62		4.208					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.307					ND	
28 Ethylene oxide	43		4.515					ND	
29 Bromomethane	94		4.571					ND	
30 Chloroethane	64		4.641					ND	
31 Dichlorofluoromethane	67		4.781					ND	
32 Trichlorofluoromethane	101		4.892					ND	
33 Ethanol	45		4.990					ND	
35 Ethyl ether	59		5.046					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.089					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.131					ND	
38 Propene oxide	58		5.157					ND	
39 Acrolein	56		5.214					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.283					ND	
41 Acetone	43		5.311					ND	
42 Isopropyl alcohol	45		5.325					ND	
43 1,1-Dichloroethene	96		5.325					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.522					ND	
45 Methyl acetate	43		5.551					ND	
47 3-Chloro-1-propene	41		5.594					ND	
46 Acetonitrile	41		5.601					ND	U
48 Carbon disulfide	76		5.608					ND	
49 2-Methyl-2-propanol	59		5.658					ND	
50 Methylene Chloride	84	5.694	5.694	0.000	92	4672		0.1435	
51 Methyl tert-butyl ether	73		5.866					ND	
52 Acrylonitrile	53		5.866					ND	
53 trans-1,2-Dichloroethene	96		5.916					ND	
54 Hexane	57		6.066					ND	
55 Vinyl acetate	43		6.173					ND	
56 Isopropyl ether	87		6.180					ND	
57 1,1-Dichloroethane	63		6.237					ND	
58 2-Chloro-1,3-butadiene	53		6.301					ND	
59 Tert-butyl ethyl ether	59		6.459					ND	
60 Ethyl acetate	43		6.609					ND	U
61 2-Butanone (MEK)	43		6.624					ND	
62 sec-Butyl Alcohol	45		6.673					ND	U
63 cis-1,2-Dichloroethene	96		6.674					ND	
64 2,2-Dichloropropane	77		6.695					ND	
65 Propionitrile	54		6.709					ND	
66 Methacrylonitrile	41		6.816					ND	
67 Chlorobromomethane	128		6.874					ND	
68 Chloroform	83		6.881					ND	
69 Tetrahydrofuran	42		6.910					ND	
70 Isobutyl alcohol	41		7.095					ND	
71 1,1,1-Trichloroethane	97		7.095					ND	
72 Cyclohexane	56		7.160					ND	
73 1,1-Dichloropropene	75		7.196					ND	
74 Carbon tetrachloride	117		7.231					ND	
75 Tert-amyl methyl ether	73		7.360					ND	
76 1,2-Dichloroethane	62		7.367					ND	
77 Benzene	78		7.381					ND	
14 n-Heptane	43		7.439					ND	
78 n-Butanol	56		7.603					ND	U
79 Trichloroethene	95		7.839					ND	
80 2-Pentanone	43		7.896					ND	
81 Methyl methacrylate	100		7.982					ND	
82 Methylcyclohexane	55		8.025					ND	
83 1,2-Dichloropropane	63		8.032					ND	
84 1,4-Dioxane	88		8.096					ND	
85 Dibromomethane	93		8.147					ND	
86 Dichlorobromomethane	83		8.211					ND	
87 2-Chloroethyl vinyl ether	63		8.354					ND	
88 2-Nitropropane	41		8.361					ND	
89 cis-1,3-Dichloropropene	75		8.533					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590					ND	
91 Toluene	91		8.804					ND	
92 Ethyl methacrylate	69		8.890					ND	
93 trans-1,3-Dichloropropene	75		8.904					ND	
94 1,1,2-Trichloroethane	97		9.069					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.176					ND	
96 1,3-Dichloropropane	76		9.198					ND	
97 Tetrachloroethene	164		9.212					ND	
98 Chlorodibromomethane	129		9.391					ND	
99 Tetrahydrothiophene	60		9.433					ND	
100 Ethylene Dibromide	107		9.519					ND	
101 1-Chlorohexane	91		9.726					ND	
102 Chlorobenzene	112		9.848					ND	
103 Ethylbenzene	106		9.877					ND	
104 1,1,1,2-Tetrachloroethane	131		9.884					ND	
105 m-Xylene & p-Xylene	106		9.956					ND	
107 o-Xylene	106		10.270					ND	
106 Styrene	104		10.270					ND	
108 Bromoform	173		10.477					ND	
109 Isopropylbenzene	105		10.528					ND	
110 cis-1,4-Dichloro-2-butene	53		10.570					ND	
111 Cyclohexanone	55		10.671					ND	
112 1,1,2,2-Tetrachloroethane	83		10.742					ND	
113 trans-1,4-Dichloro-2-buten	53		10.778					ND	
114 1,2,3-Trichloropropane	110		10.814					ND	
115 N-Propylbenzene	120		10.842					ND	
116 Bromobenzene	156		10.849					ND	
117 1,3,5-Trimethylbenzene	105		10.957					ND	
118 2-Chlorotoluene	126		10.971					ND	
119 4-Chlorotoluene	126		11.049					ND	
120 tert-Butylbenzene	119		11.250					ND	
121 1,2,4-Trimethylbenzene	105		11.278					ND	
122 sec-Butylbenzene	134		11.428					ND	
123 4-Isopropyltoluene	119		11.514					ND	
124 1,3-Dichlorobenzene	146		11.593					ND	
125 1,2,3-Trimethylbenzene	105		11.664					ND	
126 1,4-Dichlorobenzene	146		11.664					ND	
127 n-Butylbenzene	91		11.879					ND	
128 1,2-Dichlorobenzene	146		12.022					ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773					ND	
16 1,3,5-Trichlorobenzene	180		12.972					ND	
130 1,2,4-Trichlorobenzene	180		13.709					ND	
131 Hexachlorobutadiene	225		13.845					ND	
132 Naphthalene	128		14.081					ND	
133 1,2,3-Trichlorobenzene	180		14.396					ND	
17 3-Ethylpentane	1		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
34 Propene oxide TIC	58		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
19 3-Methylhexane	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 140 1,2-Dichloroethene, Total	96		2.000				ND		
S 134 Trihalomethanes, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 136 Total BTEX	1		0.000				ND		
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		
S 139 Xylenes, Total	106		0.000				ND		
S 152 TAH	1				0			0	7

QC Flag Legend

Processing Flags
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

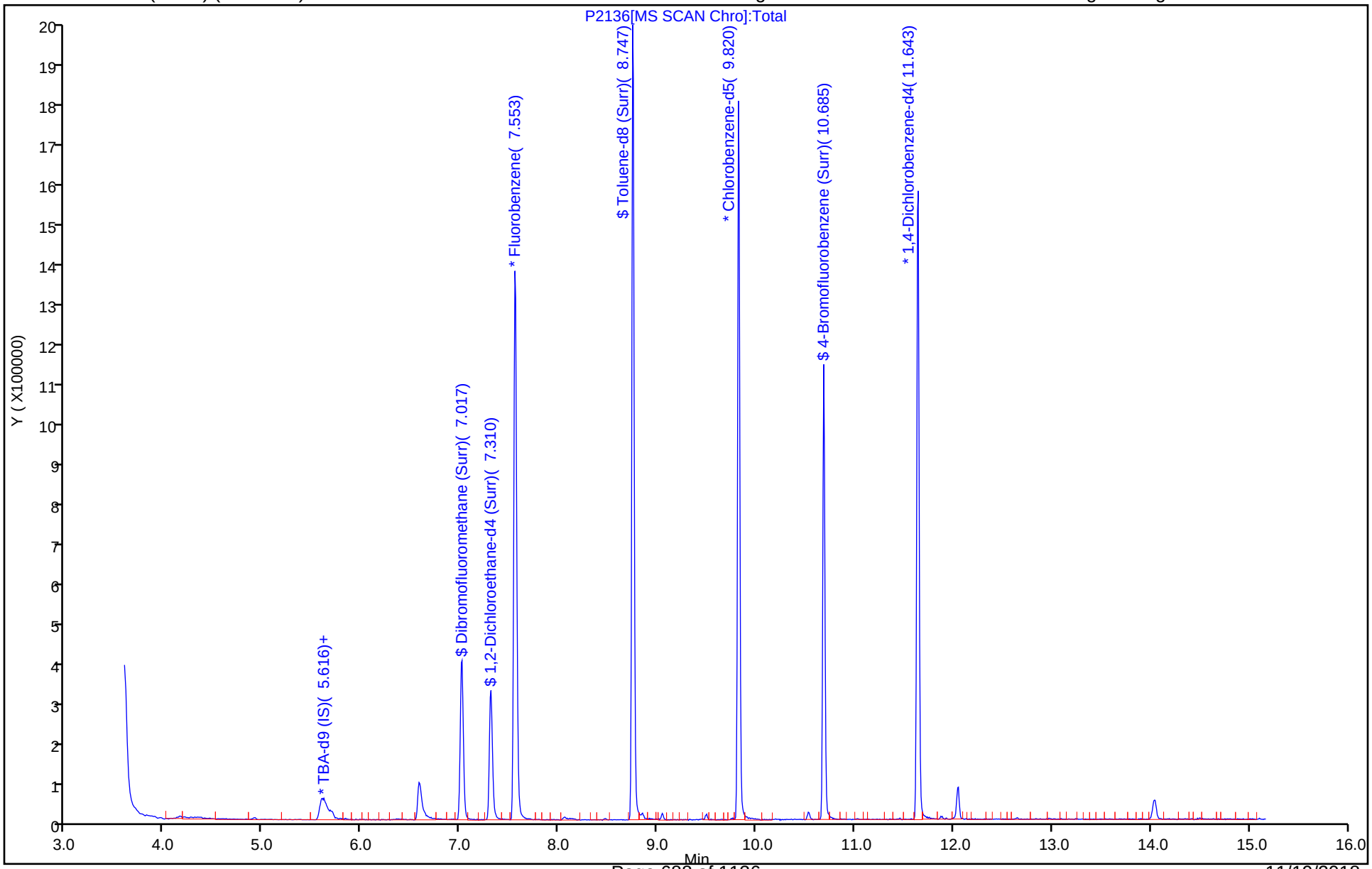
Report Date: 10-Nov-2018 00:03:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2136.D

Injection Date:	03-Nov-2018 13:24:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2136.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Nov-2018 13:24:30 ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 14:05:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.2	111.60
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.16
$ 7 Toluene-d8 (Surr)	10.0	9.98	99.78
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.78	97.79

Manual Integration/User Assign Peak Report

TestAmerica Denver

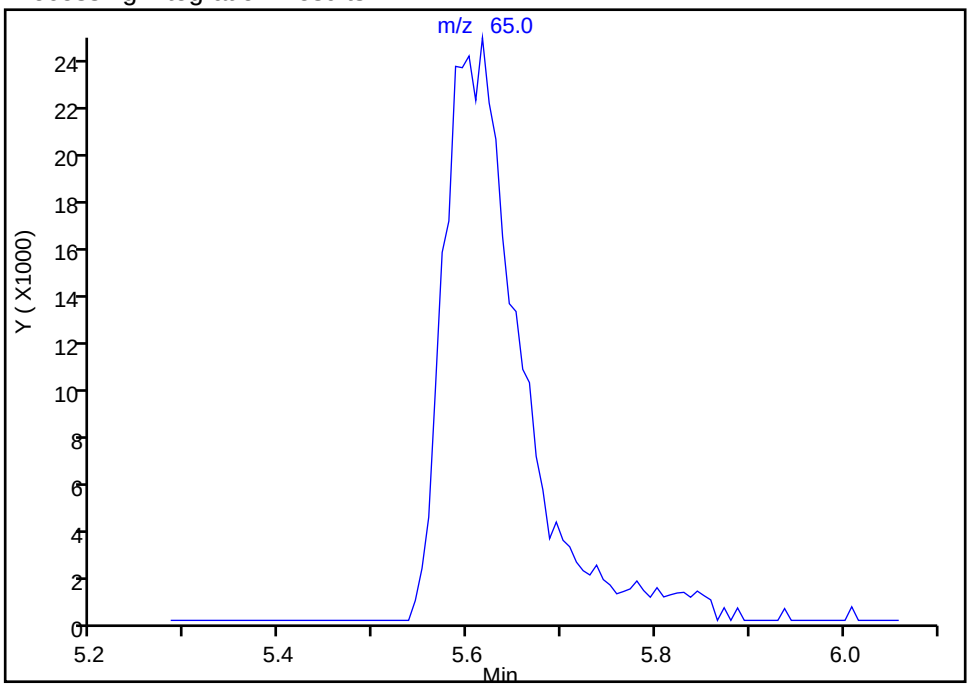
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2136.D
Injection Date: 03-Nov-2018 13:24:30 Instrument ID: VMS_P
Lims ID: MB
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

* 150 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

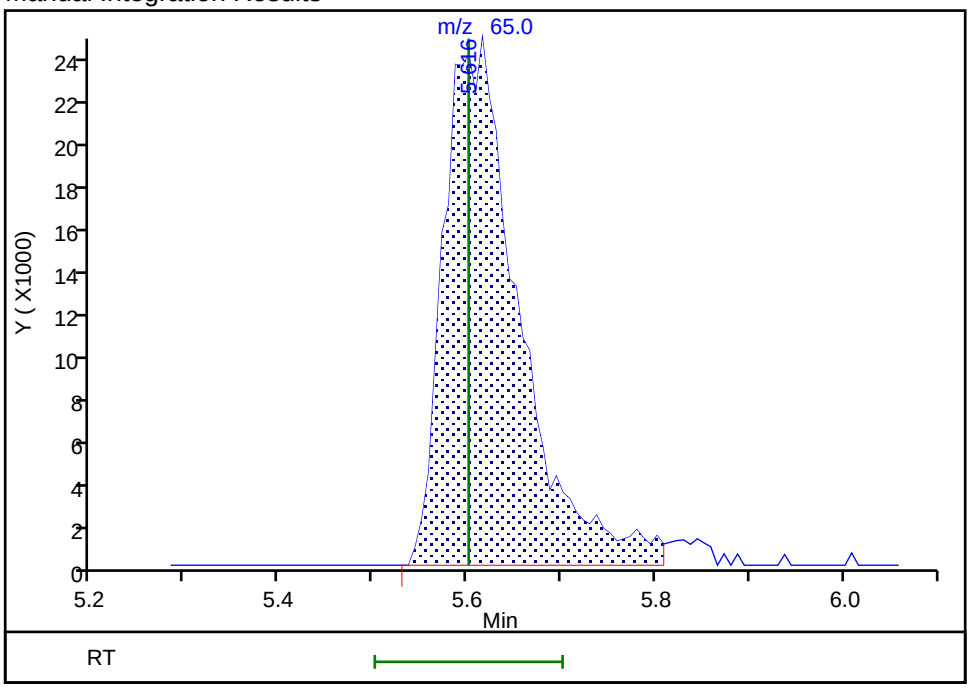
Not Detected
Expected RT: 5.60

Processing Integration Results



Manual Integration Results

RT: 5.62
Area: 138212
Amount: 250.0000
Amount Units: ug/l



Reviewer: newcomer, 03-Nov-2018 14:04:15
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436409/4

Matrix: Water | Lab File ID: P2204.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/05/2018 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436409/4

Matrix: Water | Lab File ID: P2204.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/05/2018 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.472	J	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-436409/4

Matrix: Water Lab File ID: P2204.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/05/2018 20:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436409 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	117		80-119
2037-26-5	Toluene-d8 (Surr)	106		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2204.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 05-Nov-2018 20:31:30 ALS Bottle#: 12 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 05-Nov-2018 22:23:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.587	5.593	-0.006	96	163322	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.559	-0.006	98	1384565	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	90	301943	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.649	-0.006	98	443912	12.5	12.5	
* 149 1,4-Dioxane-d8	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	314034	10.0	11.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	294752	10.0	11.4	
$ 7 Toluene-d8 (Surr)	98	8.755	8.753	0.002	95	1358976	10.0	10.6	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	85	396731	10.0	10.0	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.917					ND	
22 Chlorotrifluoroethene	116		3.818					ND	
23 Dichlorodifluoromethane	85		3.845					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.027					ND	
26 Chloromethane	50		4.083					ND	
27 Vinyl chloride	62		4.208					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.307					ND	
28 Ethylene oxide	43		4.528					ND	
29 Bromomethane	94		4.572					ND	
30 Chloroethane	64		4.641					ND	
31 Dichlorofluoromethane	67		4.795					ND	
32 Trichlorofluoromethane	101		4.893					ND	
33 Ethanol	45		5.017					ND	
35 Ethyl ether	59		5.060					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.089					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.131					ND	
38 Propene oxide	58		5.157					ND	
39 Acrolein	56		5.214					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.284					ND	
41 Acetone	43		5.312					ND	
43 1,1-Dichloroethene	96		5.326					ND	
42 Isopropyl alcohol	45		5.338					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.522					ND	
45 Methyl acetate	43		5.557					ND	
47 3-Chloro-1-propene	41		5.600					ND	
46 Acetonitrile	41		5.600					ND	
48 Carbon disulfide	76		5.607					ND	
49 2-Methyl-2-propanol	59		5.672					ND	
50 Methylene Chloride	84	5.701	5.693	0.008	97	16471		0.4724	
52 Acrylonitrile	53		5.865					ND	
51 Methyl tert-butyl ether	73		5.872					ND	
53 trans-1,2-Dichloroethene	96		5.915					ND	
54 Hexane	57		6.072					ND	
55 Vinyl acetate	43		6.179					ND	
56 Isopropyl ether	87		6.179					ND	
57 1,1-Dichloroethane	63		6.244					ND	
58 2-Chloro-1,3-butadiene	53		6.308					ND	
59 Tert-butyl ethyl ether	59		6.458					ND	
60 Ethyl acetate	43		6.608					ND	U
61 2-Butanone (MEK)	43		6.630					ND	
63 cis-1,2-Dichloroethene	96		6.673					ND	
62 sec-Butyl Alcohol	45		6.673					ND	U
64 2,2-Dichloropropane	77		6.701					ND	
65 Propionitrile	54		6.709					ND	
66 Methacrylonitrile	41		6.816					ND	
67 Chlorobromomethane	128		6.880					ND	
68 Chloroform	83		6.887					ND	
69 Tetrahydrofuran	42		6.909					ND	
71 1,1,1-Trichloroethane	97		7.095					ND	
70 Isobutyl alcohol	41		7.095					ND	
72 Cyclohexane	56		7.159					ND	
73 1,1-Dichloropropene	75		7.195					ND	
74 Carbon tetrachloride	117		7.230					ND	
75 Tert-amyl methyl ether	73		7.359					ND	
76 1,2-Dichloroethane	62		7.373					ND	
77 Benzene	78		7.381					ND	
14 n-Heptane	43		7.445					ND	
78 n-Butanol	56		7.602					ND	U
79 Trichloroethene	95		7.845					ND	
80 2-Pentanone	43		7.896					ND	
81 Methyl methacrylate	100		7.981					ND	
82 Methylcyclohexane	55		8.031					ND	
83 1,2-Dichloropropane	63		8.038					ND	
84 1,4-Dioxane	88		8.103					ND	
85 Dibromomethane	93		8.146					ND	
86 Dichlorobromomethane	83		8.217					ND	
87 2-Chloroethyl vinyl ether	63		8.360					ND	
88 2-Nitropropane	41		8.367					ND	
89 cis-1,3-Dichloropropene	75		8.532					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.589					ND	
91 Toluene	91		8.803					ND	
92 Ethyl methacrylate	69		8.889					ND	
93 trans-1,3-Dichloropropene	75		8.911					ND	
94 1,1,2-Trichloroethane	97		9.068					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.182					ND	
96 1,3-Dichloropropane	76		9.204					ND	
97 Tetrachloroethene	164		9.211					ND	
98 Chlorodibromomethane	129		9.397					ND	
99 Tetrahydrothiophene	60		9.433					ND	
100 Ethylene Dibromide	107		9.518					ND	
101 1-Chlorohexane	91		9.734					ND	
102 Chlorobenzene	112		9.847					ND	
103 Ethylbenzene	106		9.883					ND	
104 1,1,1,2-Tetrachloroethane	131		9.890					ND	
105 m-Xylene & p-Xylene	106		9.962					ND	
107 o-Xylene	106		10.276					ND	
106 Styrene	104		10.276					ND	
108 Bromoform	173		10.484					ND	
109 Isopropylbenzene	105		10.534					ND	
110 cis-1,4-Dichloro-2-butene	53		10.570					ND	
111 Cyclohexanone	55		10.677					ND	U
112 1,1,2,2-Tetrachloroethane	83		10.748					ND	
113 trans-1,4-Dichloro-2-buten	53		10.784					ND	
114 1,2,3-Trichloropropane	110		10.820					ND	
115 N-Propylbenzene	120		10.848					ND	
116 Bromobenzene	156		10.856					ND	
117 1,3,5-Trimethylbenzene	105		10.956					ND	
118 2-Chlorotoluene	126		10.977					ND	
119 4-Chlorotoluene	126		11.049					ND	
120 tert-Butylbenzene	119		11.256					ND	
121 1,2,4-Trimethylbenzene	105		11.285					ND	
122 sec-Butylbenzene	134		11.435					ND	
123 4-Isopropyltoluene	119		11.520					ND	
124 1,3-Dichlorobenzene	146		11.599					ND	
125 1,2,3-Trimethylbenzene	105		11.664					ND	
126 1,4-Dichlorobenzene	146		11.671					ND	
127 n-Butylbenzene	91		11.885					ND	
128 1,2-Dichlorobenzene	146		12.028					ND	
129 1,2-Dibromo-3-Chloropropan	157		12.786					ND	
16 1,3,5-Trichlorobenzene	180		12.972					ND	
130 1,2,4-Trichlorobenzene	180		13.716					ND	
131 Hexachlorobutadiene	225		13.851					ND	
132 Naphthalene	128		14.087					ND	
133 1,2,3-Trichlorobenzene	180		14.409					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
17 3-Ethylpentane	1		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
34 Propene oxide TIC	58		0.000					ND	
19 3-Methylhexane	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 140 1,2-Dichloroethene, Total	96		2.000				ND		
S 134 Trihalomethanes, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 136 Total BTEX	1		0.000				ND		
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		
S 139 Xylenes, Total	106		0.000				ND		
S 152 TAH	1				0			0	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

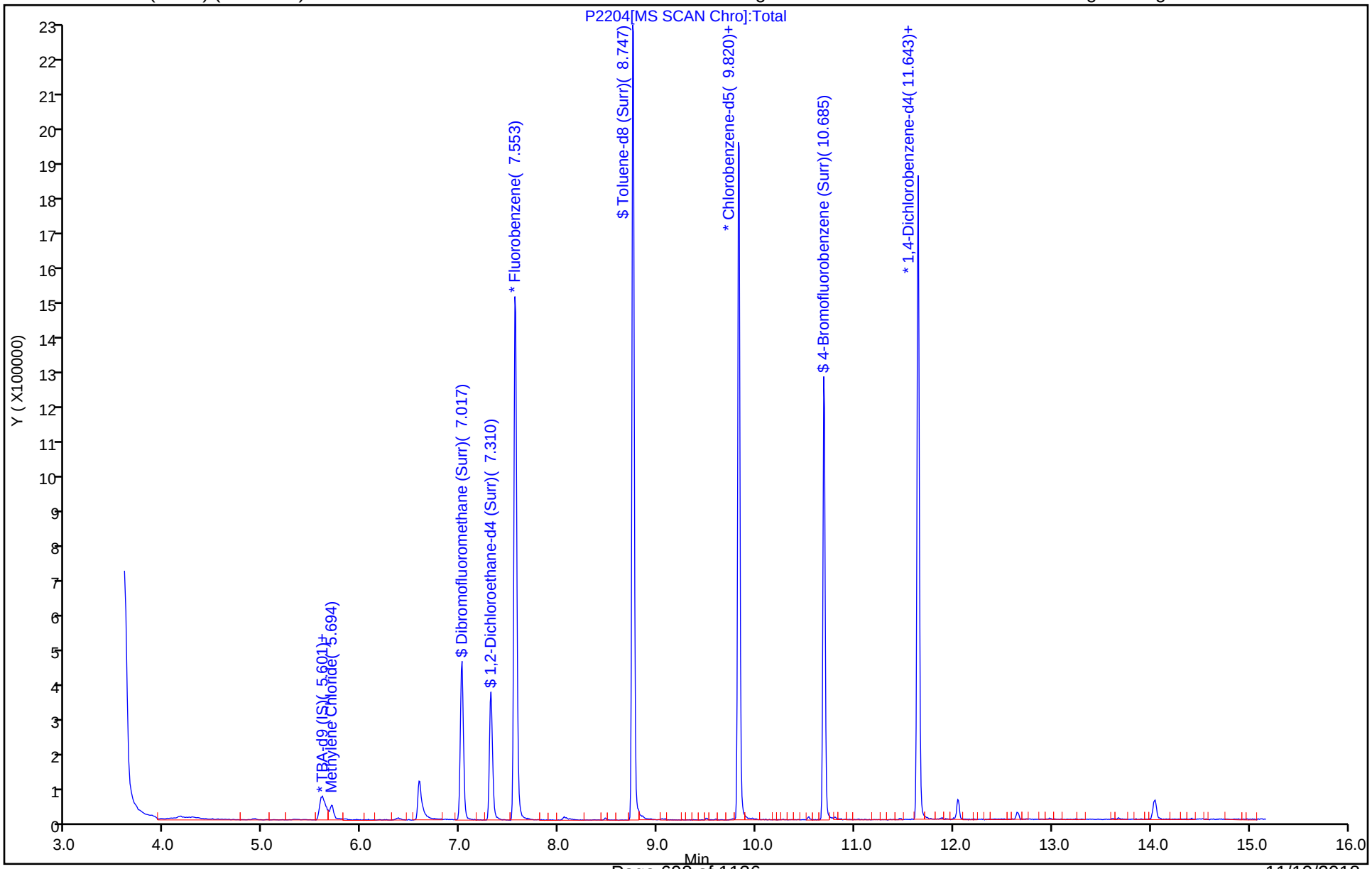
Report Date: 07-Nov-2018 18:50:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2204.D

Injection Date:	05-Nov-2018 20:31:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2204.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	05-Nov-2018 20:31:30	ALS Bottle#:	12	Worklist Smp#:	4
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	07-Nov-2018 18:50:10	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0322				

First Level Reviewer: newcomer Date: 05-Nov-2018 22:23:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.7	116.65
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	114.06
$ 7 Toluene-d8 (Surr)	10.0	10.6	106.37
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.0	100.07

Report Date: 07-Nov-2018 18:50:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2204.D

Injection Date: 05-Nov-2018 20:31:30 Instrument ID: VMS_P

Lims ID: MB

Client ID:

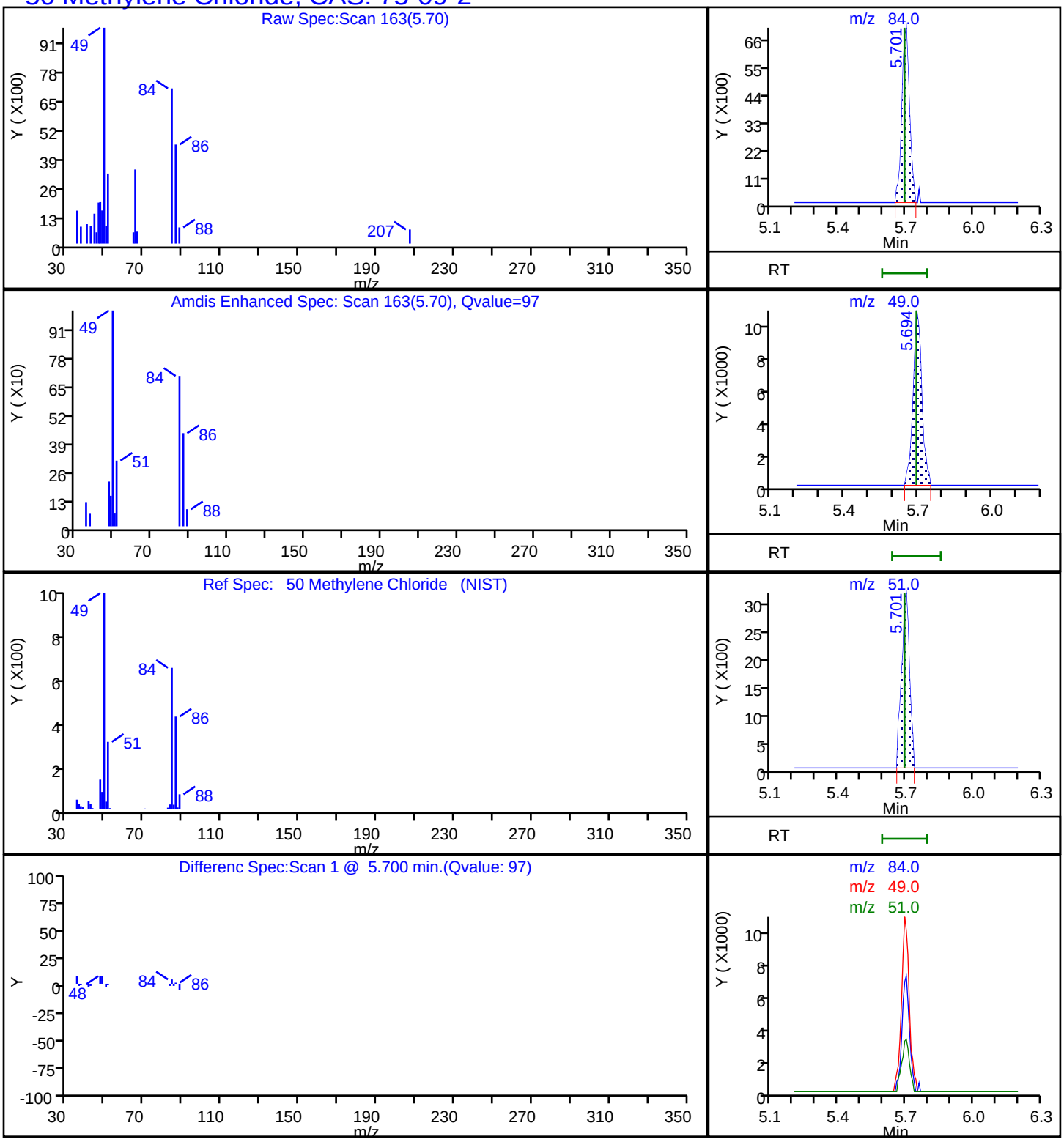
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 4

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

50 Methylene Chloride, CAS: 75-09-2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-437146/8

Matrix: Water | Lab File ID: Q75277.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	0.80	U	3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	0.40	U	1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	0.80	U	1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
95-49-8	2-Chlorotoluene	0.40	U	1.0	0.40	0.17
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
106-43-4	4-Chlorotoluene	0.80	U	1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	0.40	U	1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-437146/8

Matrix: Water | Lab File ID: Q75277.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
74-95-3	Dibromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
108-20-3	Diisopropyl ether	2.0	U	10	2.0	0.74
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	0.80	U	1.0	0.80	0.36
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
179601-23-1	m,p-Xylene	0.80	U	2.0	0.80	0.34
74-88-4	Methyl iodide	0.80	U	2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
91-20-3	Naphthalene	0.80	U	1.0	0.80	0.22
104-51-8	n-Butylbenzene	0.80	U	1.0	0.80	0.32
103-65-1	N-Propylbenzene	0.40	U	1.0	0.40	0.16
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
135-98-8	sec-Butylbenzene	0.40	U	1.0	0.40	0.17
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
98-06-6	tert-Butylbenzene	0.40	U	1.0	0.40	0.16
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
108-05-4	Vinyl acetate	2.0	U	3.0	2.0	0.94
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-437146/8

Matrix: Water Lab File ID: Q75277.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/10/2018 12:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437146 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	96		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75277.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 10-Nov-2018 12:38:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: meierg Date: 10-Nov-2018 16:59:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.880	5.872	0.008	0	228859	250.0	250.0	
* 1 Fluorobenzene	96	7.803	7.803	0.000	100	2649371	12.5	12.5	
* 149 1,4-Dioxane-d8	96		8.639					ND	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	100	523580	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	714083	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.259	-0.007	91	568766	9.00	8.63	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.546	7.545	0.001	0	433025	9.00	8.05	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	100	2515757	9.00	8.90	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	87	687592	9.00	8.96	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.991					ND	
23 Dichlorodifluoromethane	85		4.199					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.391					ND	
26 Chloromethane	50		4.449					ND	
27 Vinyl chloride	62		4.578					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.655					ND	
28 Ethylene oxide	43		4.835					ND	
29 Bromomethane	94		4.914					ND	
30 Chloroethane	64		4.964					ND	
31 Dichlorofluoromethane	67		5.107					ND	
32 Trichlorofluoromethane	101		5.186					ND	
33 Ethanol	45		5.228					ND	
35 Ethyl ether	59		5.357					ND	
38 Propene oxide	58		5.457					ND	
22 Chlorotrifluoroethene	116		5.463					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.463					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.499					ND	
39 Acrolein	56		5.500					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.600					ND	
41 Acetone	43		5.608					ND	
42 Isopropyl alcohol	45		5.621					ND	
43 1,1-Dichloroethene	96		5.629					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.808					ND	
45 Methyl acetate	43		5.836					ND	
46 Acetonitrile	41		5.886					ND	
47 3-Chloro-1-propene	41		5.886					ND	
48 Carbon disulfide	76		5.908					ND	
49 2-Methyl-2-propanol	59		5.944					ND	
50 Methylene Chloride	84		5.972					ND	
52 Acrylonitrile	53		6.129					ND	
51 Methyl tert-butyl ether	73		6.158					ND	
53 trans-1,2-Dichloroethene	96		6.194					ND	
54 Hexane	57		6.358					ND	
55 Vinyl acetate	43		6.437					ND	
56 Isopropyl ether	87		6.458					ND	
57 1,1-Dichloroethane	63		6.501					ND	
58 2-Chloro-1,3-butadiene	53		6.572					ND	
59 Tert-butyl ethyl ether	59		6.737					ND	
60 Ethyl acetate	43		6.866					ND	
61 2-Butanone (MEK)	43		6.880					ND	
62 sec-Butyl Alcohol	45		6.916					ND	
63 cis-1,2-Dichloroethene	96		6.930					ND	
65 Propionitrile	54		6.944					ND	
64 2,2-Dichloropropane	77		6.966					ND	
66 Methacrylonitrile	41		7.059					ND	
67 Chlorobromomethane	128		7.123					ND	
68 Chloroform	83		7.130					ND	
69 Tetrahydrofuran	42		7.166					ND	
70 Isobutyl alcohol	41		7.331					ND	
71 1,1,1-Trichloroethane	97		7.359					ND	
72 Cyclohexane	56		7.431					ND	
73 1,1-Dichloropropene	75		7.452					ND	
74 Carbon tetrachloride	117		7.495					ND	
76 1,2-Dichloroethane	62		7.602					ND	
75 Tert-amyl methyl ether	73		7.616					ND	
77 Benzene	78		7.631					ND	
14 n-Heptane	43		7.703					ND	
78 n-Butanol	56		7.802					ND	
79 Trichloroethene	95		8.081					ND	
80 2-Pentanone	43		8.117					ND	
81 Methyl methacrylate	100		8.210					ND	
83 1,2-Dichloropropane	63		8.260					ND	
82 Methylcyclohexane	55		8.275					ND	
84 1,4-Dioxane	88		8.317					ND	
85 Dibromomethane	93		8.360					ND	
86 Dichlorobromomethane	83		8.425					ND	
88 2-Nitropropane	41		8.560					ND	
87 2-Chloroethyl vinyl ether	63		8.561					ND	
89 cis-1,3-Dichloropropene	75		8.732					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789					ND	
91 Toluene	91		9.011					ND	
92 Ethyl methacrylate	69		9.082					ND	
93 trans-1,3-Dichloropropene	75		9.104					ND	
94 1,1,2-Trichloroethane	97		9.254					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.376					ND	
96 1,3-Dichloropropane	76		9.390					ND	
97 Tetrachloroethene	164		9.426					ND	
98 Chlorodibromomethane	129		9.590					ND	
99 Tetrahydrothiophene	60		9.647					ND	
100 Ethylene Dibromide	107		9.719					ND	
101 1-Chlorohexane	91		9.933					ND	
102 Chlorobenzene	112		10.055					ND	
104 1,1,1,2-Tetrachloroethane	131		10.083					ND	
103 Ethylbenzene	106		10.091					ND	
105 m-Xylene & p-Xylene	106		10.162					ND	
107 o-Xylene	106		10.484					ND	
106 Styrene	104		10.484					ND	
108 Bromoform	173		10.684					ND	
109 Isopropylbenzene	105		10.741					ND	
110 cis-1,4-Dichloro-2-butene	53		10.770					ND	
111 Cyclohexanone	55		10.877					ND	U
112 1,1,2,2-Tetrachloroethane	83		10.942					ND	
113 trans-1,4-Dichloro-2-buten	53		10.977					ND	
114 1,2,3-Trichloropropane	110		11.020					ND	
115 N-Propylbenzene	120		11.063					ND	
116 Bromobenzene	156		11.070					ND	
117 1,3,5-Trimethylbenzene	105		11.170					ND	
118 2-Chlorotoluene	126		11.192					ND	
119 4-Chlorotoluene	126		11.263					ND	
120 tert-Butylbenzene	119		11.471					ND	
121 1,2,4-Trimethylbenzene	105		11.506					ND	
143 Pentachloroethane	167		11.528					ND	
122 sec-Butylbenzene	134		11.657					ND	
123 4-Isopropyltoluene	119		11.749					ND	
124 1,3-Dichlorobenzene	146		11.821					ND	
125 1,2,3-Trimethylbenzene	105		11.892					ND	
126 1,4-Dichlorobenzene	146		11.892					ND	
127 n-Butylbenzene	91		12.121					ND	
128 1,2-Dichlorobenzene	146		12.257					ND	
129 1,2-Dibromo-3-Chloropropan	157		13.015					ND	
16 1,3,5-Trichlorobenzene	180		13.236					ND	
130 1,2,4-Trichlorobenzene	180		13.987					ND	
131 Hexachlorobutadiene	225		14.138					ND	
132 Naphthalene	128		14.359					ND	
133 1,2,3-Trichlorobenzene	180		14.688					ND	
19 3-Methylhexane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
17 3-Ethylpentane	1		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
S 140 1,2-Dichloroethene, Total	96		2.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 152 TAH	1				0			0	7
S 136 Total BTEX	1		0.000				ND		
S 139 Xylenes, Total	106		0.000				ND		
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		
S 134 Trihalomethanes, Total	1		0.000				ND		

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

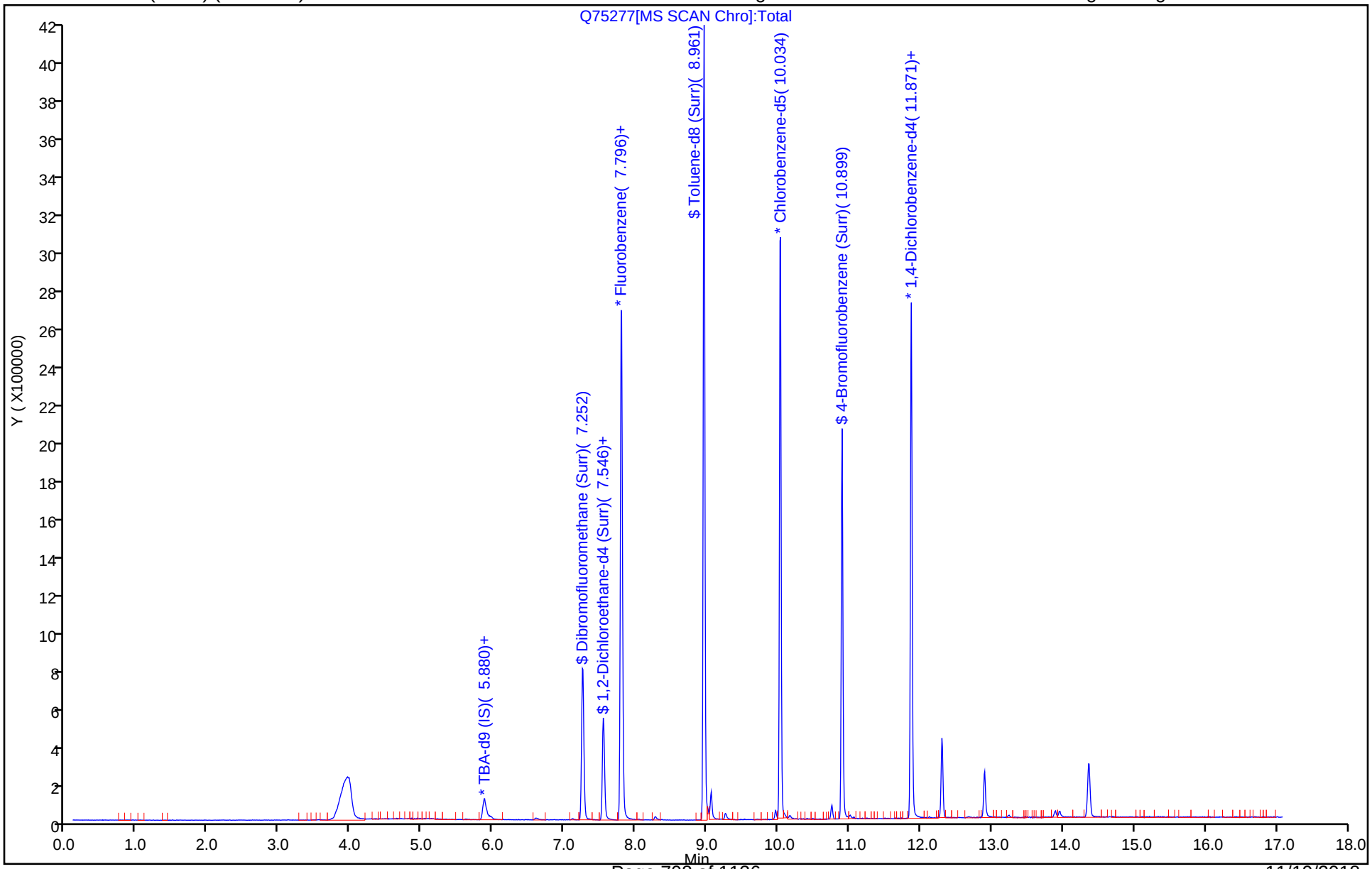
Report Date: 16-Nov-2018 14:53:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75277.D

Injection Date:	10-Nov-2018 12:38:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	MB			Worklist Smp#:	8
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75277.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	10-Nov-2018 12:38:30	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	mb				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 14:52:55	Calib Date:	23-Oct-2018 15:30:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: meierg Date: 10-Nov-2018 16:59:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.63	95.86
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.05	89.39
$ 7 Toluene-d8 (Surr)	9.00	8.90	98.88
$ 8 4-Bromofluorobenzene (Surr)	9.00	8.96	99.53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436199/5

Matrix: Water | Lab File ID: P2137.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 13:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	4.89		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	5.20		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.95		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.57		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.36		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	5.47		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	5.17		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.89		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	5.06		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	4.67		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.73		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	4.35	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	4.96		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.87		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	5.01		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.8		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.58		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.70		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.77		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	4.94		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.83		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	5.20		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	16.9		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.85		1.0	0.40	0.17
591-78-6	2-Hexanone	18.0		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.83		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.81		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	21.1		5.0	3.2	0.98
67-64-1	Acetone	18.8		10	6.4	1.9
71-43-2	Benzene	5.31		1.0	0.40	0.16
108-86-1	Bromobenzene	4.73		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.44		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.09		1.0	0.40	0.17
75-25-2	Bromoform	4.46		1.0	0.40	0.19
74-83-9	Bromomethane	5.43		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.31		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436199/5

Matrix: Water | Lab File ID: P2137.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 13:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	5.15		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.01		1.0	0.40	0.17
75-00-3	Chloroethane	5.44		2.0	1.6	0.41
67-66-3	Chloroform	5.25		1.0	0.40	0.16
74-87-3	Chloromethane	4.68		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.29		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.91		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.51		1.0	0.40	0.17
74-95-3	Dibromomethane	5.13		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.25		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.93		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.61		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.80		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.11		2.0	0.80	0.34
74-88-4	Methyl iodide	5.35		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.81	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	5.18		5.0	0.80	0.32
91-20-3	Naphthalene	4.28		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.86		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.88		1.0	0.40	0.16
95-47-6	o-Xylene	5.12		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.84		1.0	0.40	0.17
100-42-5	Styrene	5.10		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.77		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.99		1.0	0.40	0.20
108-88-3	Toluene	5.36		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.51		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.65		1.0	0.40	0.19
79-01-6	Trichloroethene	5.12		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.08		2.0	0.80	0.29
108-05-4	Vinyl acetate	9.65		3.0	2.0	0.94
75-01-4	Vinyl chloride	4.85		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.2		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436199/5

Matrix: Water Lab File ID: P2137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/03/2018 13:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436199 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	94		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2137.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Nov-2018 13:49:30 ALS Bottle#: 14 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 22:01:49 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: newcomer Date: 05-Nov-2018 18:03:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.608	5.601	0.007	75	150890	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.553	0.007	98	1368650	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.820	0.006	88	288850	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.643	-0.001	97	455947	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.009	0.007	91	291966	10.0	11.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	273002	10.0	10.7	
$ 7 Toluene-d8 (Surr)	98	8.754	8.747	0.007	95	1258162	10.0	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	382909	10.0	9.40	
23 Dichlorodifluoromethane	85	3.846	3.845	0.001	100	262328	5.00	4.25	
26 Chloromethane	50	4.083	4.082	0.001	98	190084	5.00	4.68	
27 Vinyl chloride	62	4.223	4.208	0.015	98	200816	5.00	4.85	
29 Bromomethane	94	4.586	4.571	0.015	92	194444	5.00	5.43	
30 Chloroethane	64	4.642	4.641	0.001	99	184457	5.00	5.44	
31 Dichlorofluoromethane	67	4.796	4.781	0.015	98	496072	5.00	5.76	
32 Trichlorofluoromethane	101	4.893	4.892	0.001	100	396524	5.00	5.08	
35 Ethyl ether	59	5.061	5.046	0.015	94	92660	5.00	5.52	
39 Acrolein	56	5.215	5.214	0.001	99	92800	50.0	50.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.284	5.283	0.001	95	178221	5.00	5.41	
41 Acetone	43	5.326	5.311	0.015	28	73013	20.0	18.8	
43 1,1-Dichloroethene	96	5.326	5.325	0.001	95	218859	5.00	5.47	
44 Iodomethane	142	5.522	5.522	0.000	99	297401	5.00	5.35	
45 Methyl acetate	43	5.558	5.551	0.007	99	80107	10.0	9.05	
47 3-Chloro-1-propene	41	5.600	5.594	0.006	81	390592	5.00	5.47	
48 Carbon disulfide	76	5.615	5.608	0.007	100	863588	5.00	5.31	
49 2-Methyl-2-propanol	59	5.672	5.658	0.014	95	32617	50.0	45.4	
50 Methylene Chloride	84	5.701	5.694	0.007	97	178525	5.00	5.18	
51 Methyl tert-butyl ether	73	5.872	5.866	0.006	97	208733	5.00	4.81	
52 Acrylonitrile	53	5.879	5.866	0.013	98	172733	50.0	51.8	
53 trans-1,2-Dichloroethene	96	5.915	5.916	-0.001	96	217005	5.00	5.51	
54 Hexane	57	6.072	6.066	0.006	96	356038	5.00	4.59	
55 Vinyl acetate	43	6.180	6.173	0.007	97	297329	10.0	9.65	
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	369572	5.00	5.36	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.630	6.624	0.006	99	93841	20.0	16.9	
63 cis-1,2-Dichloroethene	96	6.673	6.674	-0.001	88	196881	5.00	5.29	
64 2,2-Dichloropropane	77	6.702	6.695	0.007	92	304120	5.00	5.20	
67 Chlorobromomethane	128	6.880	6.874	0.006	94	60645	5.00	5.44	
68 Chloroform	83	6.880	6.881	-0.001	97	318904	5.00	5.25	
69 Tetrahydrofuran	42	6.916	6.910	0.006	93	27861	10.0	9.48	
70 Isobutyl alcohol	41	7.095	7.095	0.000	98	15183	125.0	92.9	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	97	322615	5.00	5.20	
72 Cyclohexane	56	7.166	7.160	0.006	95	437123	5.00	5.14	
73 1,1-Dichloropropene	75	7.195	7.196	-0.001	96	299754	5.00	5.17	
74 Carbon tetrachloride	117	7.238	7.231	0.007	96	268653	5.00	5.15	
76 1,2-Dichloroethane	62	7.367	7.367	0.000	97	163290	5.00	5.01	
77 Benzene	78	7.381	7.381	0.000	97	773194	5.00	5.31	
14 n-Heptane	43	7.445	7.439	0.006	95	413229	5.00	5.03	
79 Trichloroethene	95	7.838	7.839	-0.001	95	194603	5.00	5.12	
82 Methylcyclohexane	55	8.031	8.025	0.006	95	348965	5.00	5.05	
83 1,2-Dichloropropane	63	8.039	8.032	0.007	92	177670	5.00	5.58	
84 1,4-Dioxane	88	8.096	8.096	0.000	27	7738	100.0	99.2	M
85 Dibromomethane	93	8.146	8.147	-0.001	92	56168	5.00	5.13	
86 Dichlorobromomethane	83	8.210	8.211	-0.001	98	175335	5.00	5.09	
87 2-Chloroethyl vinyl ether	63	8.360	8.354	0.006	90	29659	5.00	4.11	
89 cis-1,3-Dichloropropene	75	8.532	8.533	-0.001	91	186518	5.00	4.91	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.590	-0.001	98	227050	20.0	21.1	
91 Toluene	91	8.804	8.804	0.000	97	795947	5.00	5.36	
92 Ethyl methacrylate	69	8.890	8.890	0.000	93	72073	5.00	4.35	
93 trans-1,3-Dichloropropene	75	8.911	8.904	0.007	99	126962	5.00	4.65	
94 1,1,2-Trichloroethane	97	9.068	9.069	-0.001	93	79674	5.00	5.57	
95 2-Hexanone	43	9.183	9.176	0.007	99	133861	20.0	18.0	
96 1,3-Dichloropropane	76	9.204	9.198	0.006	98	143549	5.00	4.94	
97 Tetrachloroethene	164	9.211	9.212	-0.001	93	147350	5.00	4.99	
98 Chlorodibromomethane	129	9.390	9.391	-0.001	90	77218	5.00	4.51	
100 Ethylene Dibromide	107	9.519	9.519	0.000	98	63065	5.00	4.96	
102 Chlorobenzene	112	9.848	9.848	0.000	95	426430	5.00	5.01	
103 Ethylbenzene	106	9.883	9.877	0.006	98	276203	5.00	4.93	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.884	-0.001	42	127485	5.00	4.89	
105 m-Xylene & p-Xylene	106	9.955	9.956	-0.001	99	335376	5.00	5.11	
107 o-Xylene	106	10.269	10.270	-0.001	89	310994	5.00	5.12	
106 Styrene	104	10.277	10.270	0.007	85	431345	5.00	5.10	
108 Bromoform	173	10.484	10.477	0.007	93	32672	5.00	4.46	
109 Isopropylbenzene	105	10.527	10.528	-0.001	97	902541	5.00	4.80	
111 Cyclohexanone	55	10.677	10.671	0.006	96	80981	200.0	177.3	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.742	-0.001	95	82600	5.00	4.95	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.778	-0.001	79	17455	5.00	4.25	
114 1,2,3-Trichloropropane	110	10.813	10.814	-0.001	85	22361	5.00	5.06	
115 N-Propylbenzene	120	10.841	10.842	-0.001	99	255224	5.00	4.88	
116 Bromobenzene	156	10.856	10.849	0.007	97	151651	5.00	4.73	
117 1,3,5-Trimethylbenzene	105	10.956	10.957	-0.001	94	716595	5.00	4.70	
118 2-Chlorotoluene	126	10.970	10.971	-0.001	95	199751	5.00	4.85	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	191997	5.00	4.83	
120 tert-Butylbenzene	119	11.249	11.250	-0.001	93	709865	5.00	4.77	
121 1,2,4-Trimethylbenzene	105	11.278	11.278	0.000	99	722024	5.00	4.73	
122 sec-Butylbenzene	134	11.428	11.428	0.000	95	200046	5.00	4.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.521	11.514	0.007	97	832690	5.00	4.81	
124 1,3-Dichlorobenzene	146	11.592	11.593	-0.001	96	341756	5.00	4.77	
126 1,4-Dichlorobenzene	146	11.664	11.664	0.000	94	343973	5.00	4.83	
127 n-Butylbenzene	91	11.878	11.879	-0.001	98	916940	5.00	4.86	
128 1,2-Dichlorobenzene	146	12.021	12.022	-0.001	95	281075	5.00	4.87	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.773	-0.001	74	8005	5.00	4.35	
130 1,2,4-Trichlorobenzene	180	13.709	13.709	0.000	93	175354	5.00	4.67	
131 Hexachlorobutadiene	225	13.845	13.845	0.000	93	133603	5.00	4.61	
132 Naphthalene	128	14.081	14.081	-0.001	98	207983	5.00	4.28	
133 1,2,3-Trichlorobenzene	180	14.395	14.396	-0.001	94	137506	5.00	4.89	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.8	
S 134 Trihalomethanes, Total	1				0		20.0	19.3	
S 135 Xylenes, Total (URS)	1				0		10.0	10.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.57	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.8	
S 139 Xylenes, Total	106				0		10.0	10.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

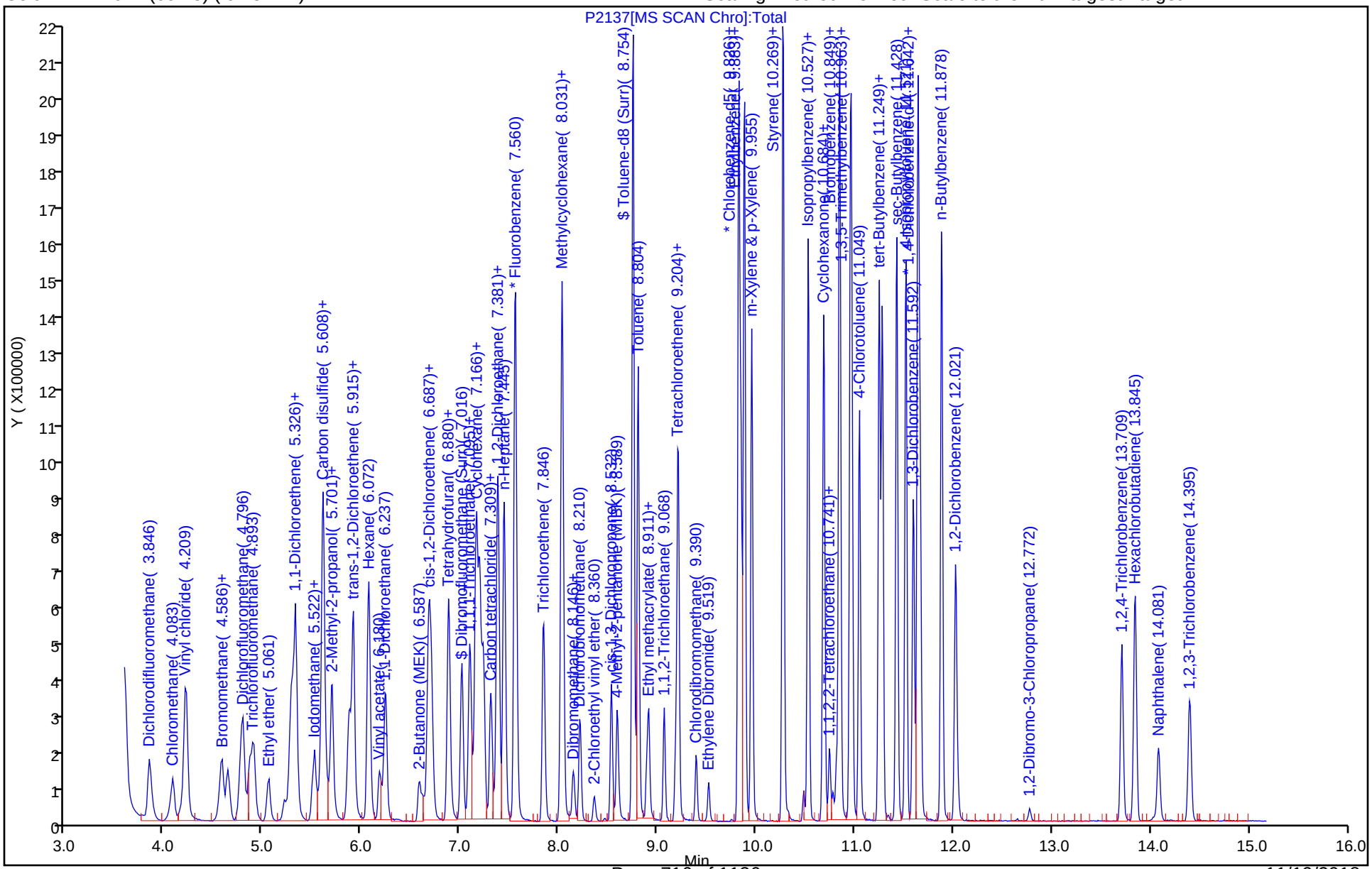
Report Date: 12-Nov-2018 22:02:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2137.D

Injection Date:	03-Nov-2018 13:49:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2137.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	03-Nov-2018 13:49:30	ALS Bottle#:	14	Worklist Smp#:	5
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCS				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 22:01:49	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0318				

First Level Reviewer: newcomer Date: 05-Nov-2018 18:03:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.0	109.72
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.87
$ 7 Toluene-d8 (Surr)	10.0	10.3	102.94
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.40	94.03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436199/7

Matrix: Water | Lab File ID: P2138.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/03/2018 14:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436199 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	5.39	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2138.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Nov-2018 14:07:30 ALS Bottle#: 15 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-Nov-2018 00:02:52 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: newcomer Date: 03-Nov-2018 14:47:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	96	149055	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.553	0.000	98	1316991	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.820	0.007	90	287399	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	98	405094	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.009	0.008	92	288653	10.0	11.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	99	273258	10.0	11.1	
$ 7 Toluene-d8 (Surr)	98	8.747	8.747	0.000	95	1234546	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	84	365406	10.0	10.1	
28 Ethylene oxide	43	4.529	4.515	0.014	100	154075	500.0	439.7	
33 Ethanol	45	4.990	4.990	0.000	14	30868	300.0	337.3	M
38 Propene oxide	58	5.158	5.157	0.001	96	785860	500.0	567.4	
42 Isopropyl alcohol	45	5.339	5.325	0.014	94	31982	50.0	55.4	
46 Acetonitrile	41	5.608	5.601	0.007	36	51619	50.0	53.4	M
56 Isopropyl ether	87	6.180	6.180	0.000	94	107163	5.00	5.39	
58 2-Chloro-1,3-butadiene	53	6.309	6.301	0.008	94	334665	5.00	5.16	
59 Tert-butyl ethyl ether	59	6.459	6.459	0.000	98	314751	5.00	5.08	
60 Ethyl acetate	43	6.609	6.609	0.000	99	83656	10.0	9.74	
65 Propionitrile	54	6.709	6.709	0.000	96	33835	50.0	35.2	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	367760	50.0	54.8	
75 Tert-amyl methyl ether	73	7.360	7.360	0.000	84	237607	5.00	5.33	
78 n-Butanol	56	7.624	7.603	0.021	52	11265	125.0	92.2	
81 Methyl methacrylate	100	7.982	7.982	0.000	91	18730	10.0	9.26	
88 2-Nitropropane	41	8.361	8.361	0.000	95	18432	10.0	10.2	
99 Tetrahydrothiophene	60	9.433	9.433	0.000	94	6982	10.0	7.75	
110 cis-1,4-Dichloro-2-butene	53	10.570	10.570	0.000	93	17674	10.0	7.83	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	99	596430	5.00	4.86	
16 1,3,5-Trichlorobenzene	180	12.973	12.972	0.001	95	231522	5.00	5.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp B_00022	Amount Added:	2.50	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

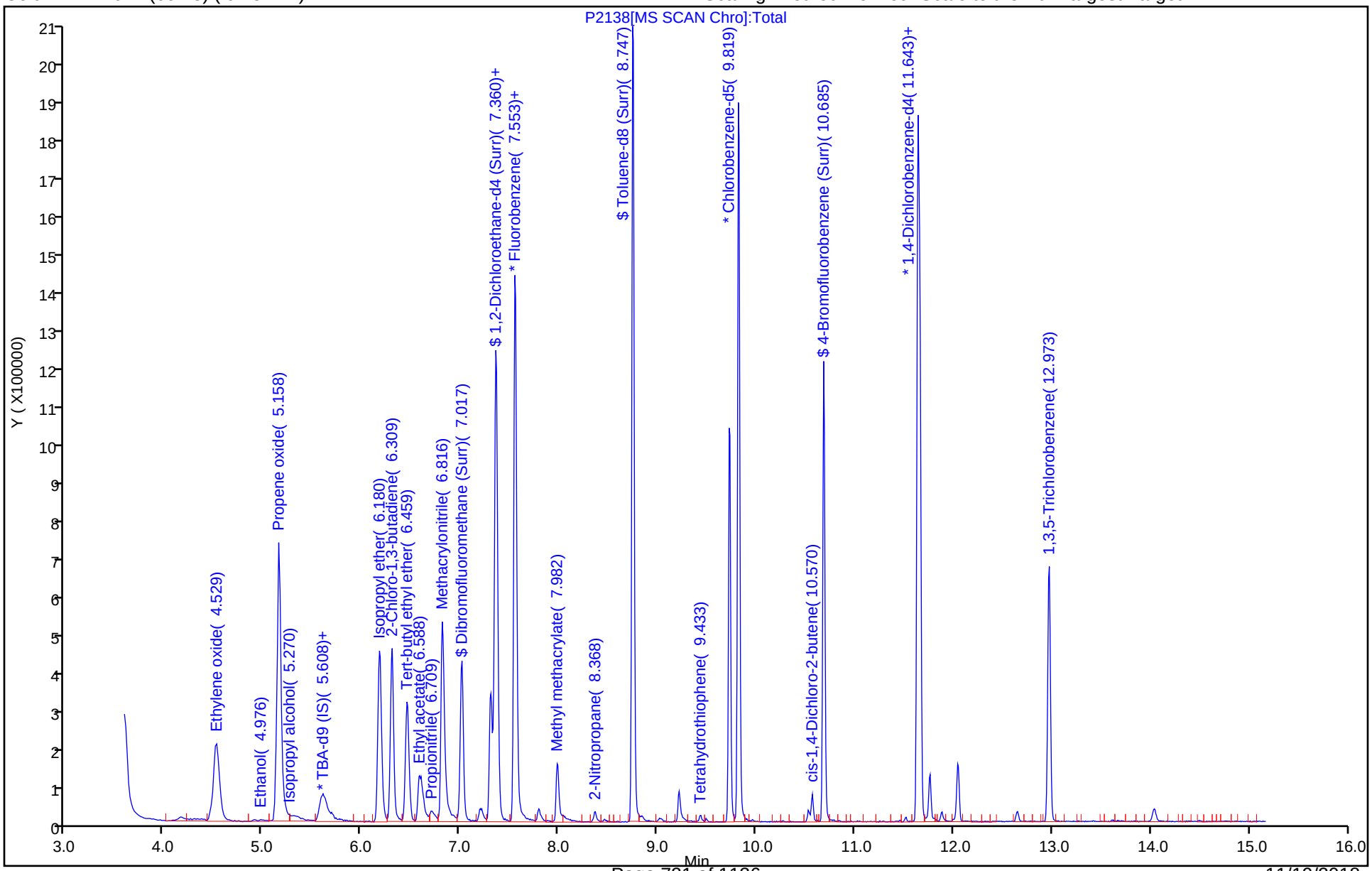
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TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2138.D

Injection Date:	03-Nov-2018 14:07:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	7
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\P2138.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	03-Nov-2018 14:07:30	ALS Bottle#:	15	Worklist Smp#:	7
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCS				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	10-Nov-2018 00:02:52	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

First Level Reviewer: newcomer Date: 03-Nov-2018 14:47:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.3	112.73
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.17
$ 7 Toluene-d8 (Surr)	10.0	10.2	101.52
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.1	101.00

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436409/5

Matrix: Water | Lab File ID: P2218.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/06/2018 00:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.14		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	5.58		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.24		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	6.24	Q	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.94		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	5.75		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	5.64		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	5.04		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	5.19		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	4.71		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.70		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	5.32		5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	5.26		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.78		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	5.76		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	11.7		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	6.33	Q	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.65		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.76		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	5.33		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.77		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	5.33		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	19.8		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.82		1.0	0.40	0.17
591-78-6	2-Hexanone	20.2		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.73		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.80		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	23.8		5.0	3.2	0.98
67-64-1	Acetone	21.7		10	6.4	1.9
71-43-2	Benzene	5.78		1.0	0.40	0.16
108-86-1	Bromobenzene	4.73		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.80		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.77		1.0	0.40	0.17
75-25-2	Bromoform	4.53		1.0	0.40	0.19
74-83-9	Bromomethane	5.83		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.55		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436409/5

Matrix: Water | Lab File ID: P2218.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/06/2018 00:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	5.49		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.05		1.0	0.40	0.17
75-00-3	Chloroethane	5.89		2.0	1.6	0.41
67-66-3	Chloroform	5.86		1.0	0.40	0.16
74-87-3	Chloromethane	5.09		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.87		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.10		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.80		1.0	0.40	0.17
74-95-3	Dibromomethane	5.72		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.58		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.91		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.55		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.74		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.19		2.0	0.80	0.34
74-88-4	Methyl iodide	5.62		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	5.51		5.0	0.80	0.25
75-09-2	Methylene Chloride	5.74		5.0	0.80	0.32
91-20-3	Naphthalene	4.95		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.74		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.84		1.0	0.40	0.16
95-47-6	o-Xylene	5.18		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.80		1.0	0.40	0.17
100-42-5	Styrene	5.06		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.79		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.89		1.0	0.40	0.20
108-88-3	Toluene	5.95		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.83		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.19		1.0	0.40	0.19
79-01-6	Trichloroethene	5.57		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.38		2.0	0.80	0.29
108-05-4	Vinyl acetate	10.8		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.50		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.4		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436409/5

Matrix: Water Lab File ID: P2218.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/06/2018 00:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436409 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		81-118
460-00-4	4-Bromofluorobenzene (Surr)	89		85-114
1868-53-7	Dibromofluoromethane (Surr)	114		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2218.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Nov-2018 00:52:30 ALS Bottle#: 26 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 07-Nov-2018 18:19:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.593	0.007	57	156367	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1193310	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	270340	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.649	-0.007	97	432771	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	264100	10.0	11.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	255777	10.0	11.5	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1143910	10.0	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	345804	10.0	8.95	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	99	246160	5.00	4.58	
26 Chloromethane	50	4.083	4.083	0.000	98	180190	5.00	5.09	
27 Vinyl chloride	62	4.222	4.208	0.014	97	198771	5.00	5.50	
29 Bromomethane	94	4.585	4.572	0.013	92	181935	5.00	5.83	
30 Chloroethane	64	4.641	4.641	0.000	99	174120	5.00	5.89	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	464318	5.00	6.18	
32 Trichlorofluoromethane	101	4.907	4.893	0.014	100	365788	5.00	5.38	
35 Ethyl ether	59	5.060	5.060	0.000	95	93771	5.00	6.41	
39 Acrolein	56	5.214	5.214	0.000	99	86701	50.0	54.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.284	0.014	96	164517	5.00	5.73	
41 Acetone	43	5.326	5.312	0.014	30	73721	20.0	21.7	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	94	200595	5.00	5.75	
44 Iodomethane	142	5.521	5.522	-0.001	100	272115	5.00	5.62	
45 Methyl acetate	43	5.550	5.557	-0.007	97	86118	10.0	11.2	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	89	364741	5.00	5.85	
48 Carbon disulfide	76	5.614	5.607	0.007	100	786662	5.00	5.55	
49 2-Methyl-2-propanol	59	5.664	5.672	-0.008	92	44561	50.0	58.7	
50 Methylene Chloride	84	5.693	5.693	0.000	97	172513	5.00	5.74	
52 Acrylonitrile	53	5.872	5.865	0.007	80	158528	50.0	54.3	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	97	208696	5.00	5.51	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	94	200149	5.00	5.83	
54 Hexane	57	6.072	6.072	0.000	96	333382	5.00	4.59	
55 Vinyl acetate	43	6.179	6.179	0.000	97	292920	10.0	10.8	
57 1,1-Dichloroethane	63	6.243	6.244	-0.001	97	356923	5.00	5.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.630	6.630	0.000	99	96055	20.0	19.8	
63 cis-1,2-Dichloroethene	96	6.673	6.673	-0.001	85	190515	5.00	5.87	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	88	271923	5.00	5.33	
67 Chlorobromomethane	128	6.873	6.880	-0.007	89	56431	5.00	5.80	
68 Chloroform	83	6.887	6.887	0.000	96	310098	5.00	5.86	
69 Tetrahydrofuran	42	6.916	6.909	0.007	84	25973	10.0	10.1	
71 1,1,1-Trichloroethane	97	7.094	7.095	-0.001	97	302136	5.00	5.58	
70 Isobutyl alcohol	41	7.094	7.095	-0.001	97	17909	125.0	98.8	
72 Cyclohexane	56	7.159	7.159	0.000	97	407495	5.00	5.50	
73 1,1-Dichloropropene	75	7.202	7.195	0.007	95	285435	5.00	5.64	
74 Carbon tetrachloride	117	7.237	7.230	0.007	96	249551	5.00	5.49	
76 1,2-Dichloroethane	62	7.366	7.373	-0.007	97	163533	5.00	5.76	
77 Benzene	78	7.380	7.381	-0.001	98	733565	5.00	5.78	
14 n-Heptane	43	7.445	7.445	0.000	95	391981	5.00	5.47	
79 Trichloroethene	95	7.845	7.845	0.000	94	184539	5.00	5.57	
82 Methylcyclohexane	55	8.031	8.031	0.000	95	320617	5.00	5.32	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	92	175596	5.00	6.33	
84 1,4-Dioxane	88	8.095	8.103	-0.008	86	4212	100.0	70.2	
85 Dibromomethane	93	8.145	8.146	-0.001	92	54595	5.00	5.72	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	173068	5.00	5.77	
87 2-Chloroethyl vinyl ether	63	8.360	8.360	0.000	91	29024	5.00	4.56	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	91	181333	5.00	5.10	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	222642	20.0	23.8	
91 Toluene	91	8.803	8.803	0.000	96	770347	5.00	5.95	
92 Ethyl methacrylate	69	8.889	8.889	0.000	92	72500	5.00	4.65	
93 trans-1,3-Dichloropropene	75	8.910	8.911	-0.001	98	124442	5.00	5.19	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	77791	5.00	6.24	
95 2-Hexanone	43	9.182	9.182	0.000	98	141612	20.0	20.2	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	144882	5.00	5.33	
97 Tetrachloroethene	164	9.211	9.211	0.000	91	135150	5.00	4.89	
98 Chlorodibromomethane	129	9.390	9.397	-0.007	90	77094	5.00	4.80	
100 Ethylene Dibromide	107	9.518	9.518	0.000	99	62584	5.00	5.26	
102 Chlorobenzene	112	9.847	9.847	0.000	96	402404	5.00	5.05	
103 Ethylbenzene	106	9.883	9.883	0.000	98	257732	5.00	4.91	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.890	-0.007	42	125428	5.00	5.14	
105 m-Xylene & p-Xylene	106	9.954	9.962	-0.008	99	319077	5.00	5.19	
107 o-Xylene	106	10.276	10.276	0.000	98	294629	5.00	5.18	
106 Styrene	104	10.276	10.276	0.000	86	400370	5.00	5.06	
108 Bromoform	173	10.484	10.484	0.000	91	31124	5.00	4.53	
109 Isopropylbenzene	105	10.526	10.534	-0.008	97	846112	5.00	4.74	
111 Cyclohexanone	55	10.677	10.677	0.000	95	97477	200.0	225.3	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.748	0.000	95	82954	5.00	5.24	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.784	-0.007	65	17493	5.00	4.48	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	86	21785	5.00	5.19	
115 N-Propylbenzene	120	10.848	10.848	0.000	100	240192	5.00	4.84	
116 Bromobenzene	156	10.855	10.856	-0.001	97	143929	5.00	4.73	
117 1,3,5-Trimethylbenzene	105	10.955	10.956	-0.001	94	672703	5.00	4.65	
118 2-Chlorotoluene	126	10.970	10.977	-0.007	94	188316	5.00	4.82	
119 4-Chlorotoluene	126	11.048	11.049	-0.001	99	178235	5.00	4.73	
120 tert-Butylbenzene	119	11.249	11.256	-0.007	93	676282	5.00	4.79	
121 1,2,4-Trimethylbenzene	105	11.284	11.285	0.000	96	681277	5.00	4.70	
122 sec-Butylbenzene	134	11.427	11.435	-0.008	95	188461	5.00	4.80	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.520	11.520	0.000	97	789895	5.00	4.80	
124 1,3-Dichlorobenzene	146	11.599	11.599	0.000	96	323789	5.00	4.76	
126 1,4-Dichlorobenzene	146	11.663	11.671	-0.008	93	322466	5.00	4.77	
127 n-Butylbenzene	91	11.885	11.885	0.000	99	847589	5.00	4.74	
128 1,2-Dichlorobenzene	146	12.028	12.028	0.000	94	261988	5.00	4.78	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.786	-0.014	74	9563	5.00	5.32	
130 1,2,4-Trichlorobenzene	180	13.708	13.716	-0.008	93	167711	5.00	4.71	
131 Hexachlorobutadiene	225	13.844	13.851	-0.007	92	125283	5.00	4.55	
132 Naphthalene	128	14.080	14.087	-0.007	98	228564	5.00	4.95	
133 1,2,3-Trichlorobenzene	180	14.395	14.409	-0.014	94	134570	5.00	5.04	
S 140 1,2-Dichloroethene, Total	96				0		10.0	11.7	
S 134 Trihalomethanes, Total	1				0		20.0	21.0	
S 135 Xylenes, Total (URS)	1				0		10.0	10.4	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.3	
S 138 1,2-Dichloroethene, Total	1				0		10.0	11.7	
S 139 Xylenes, Total	106				0		10.0	10.4	

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

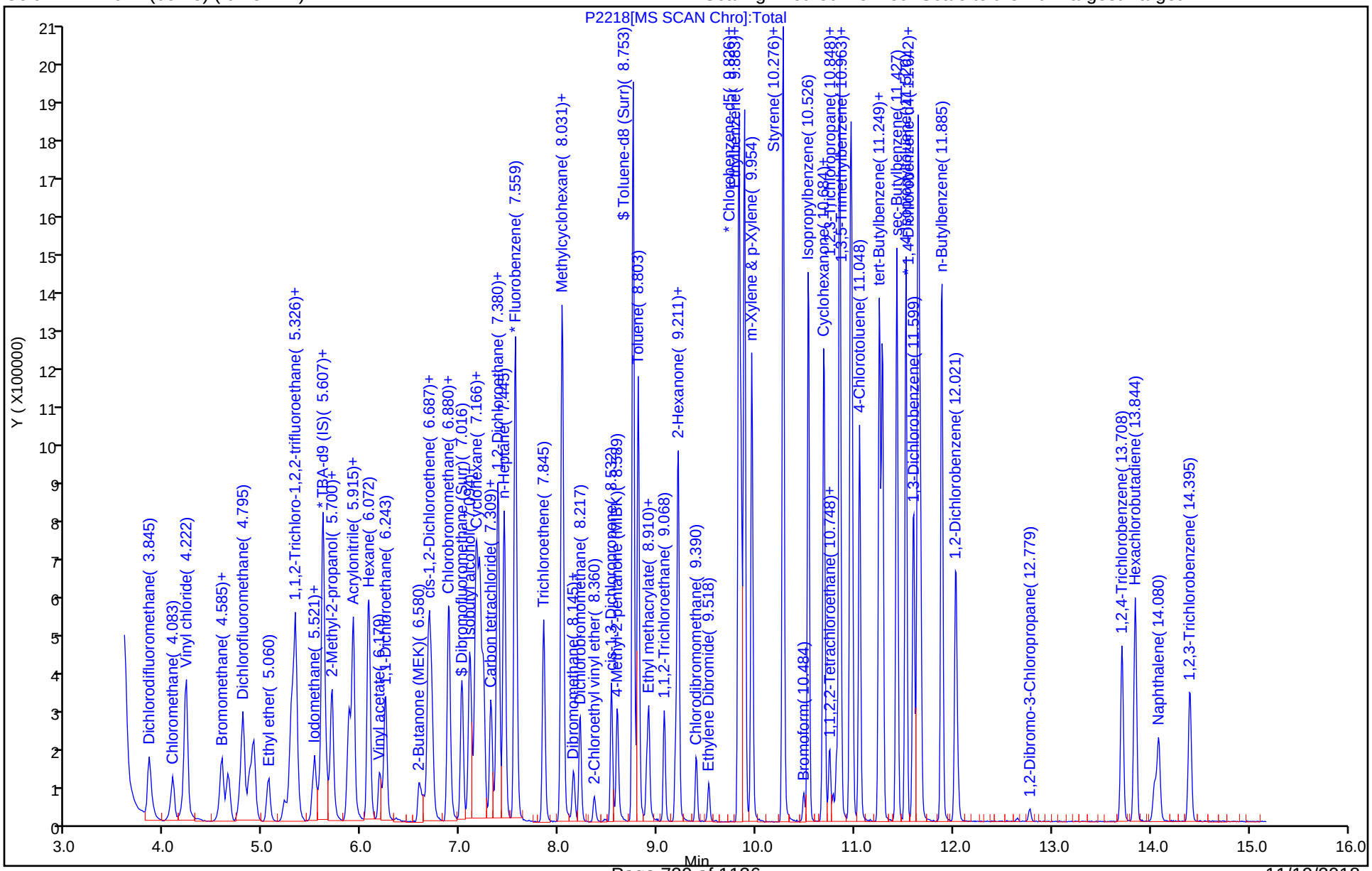
Report Date: 07-Nov-2018 18:50:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2218.D

Injection Date:	06-Nov-2018 00:52:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2218.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	06-Nov-2018 00:52:30	ALS Bottle#:	26	Worklist Smp#:	5
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCS				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	07-Nov-2018 18:50:10	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0322				

First Level Reviewer: newcomer Date: 07-Nov-2018 18:19:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.4	113.83
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.5	114.84
$ 7 Toluene-d8 (Surr)	10.0	10.0	100.00
$ 8 4-Bromofluorobenzene (Surr)	10.0	8.95	89.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437146/4

Matrix: Water | Lab File ID: Q75273.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 11:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.11		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	4.93		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.93		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.30		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.02		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.95		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	5.11		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	5.23		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	4.73		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	5.31		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.83		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	4.97	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	4.91		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.96		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	4.84		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.3		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.58		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.75		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.98		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	4.83		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.95		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	4.89		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	15.3		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.82		1.0	0.40	0.17
591-78-6	2-Hexanone	16.2		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	4.78		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.74		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	17.9		5.0	3.2	0.98
67-64-1	Acetone	18.1		10	6.4	1.9
71-43-2	Benzene	5.23		1.0	0.40	0.16
108-86-1	Bromobenzene	5.00		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.19		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.12		1.0	0.40	0.17
75-25-2	Bromoform	5.43		1.0	0.40	0.19
74-83-9	Bromomethane	6.40		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.22		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437146/4

Matrix: Water | Lab File ID: Q75273.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 11:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	4.88		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.92		1.0	0.40	0.17
75-00-3	Chloroethane	5.10		2.0	1.6	0.41
67-66-3	Chloroform	5.16		1.0	0.40	0.16
74-87-3	Chloromethane	4.36		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.09		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.22		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.96		1.0	0.40	0.17
74-95-3	Dibromomethane	5.21		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.61		2.0	0.80	0.31
100-41-4	Ethylbenzene	4.94		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	5.04		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.59		1.0	0.40	0.19
179601-23-1	m,p-Xylene	4.83		2.0	0.80	0.34
74-88-4	Methyl iodide	5.07		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	4.96	J	5.0	0.80	0.25
75-09-2	Methylene Chloride	4.79	J	5.0	0.80	0.32
91-20-3	Naphthalene	5.24		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.82		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.60		1.0	0.40	0.16
95-47-6	o-Xylene	5.11		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.69		1.0	0.40	0.17
100-42-5	Styrene	4.91		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.52		1.0	0.40	0.16
127-18-4	Tetrachloroethene	4.85		1.0	0.40	0.20
108-88-3	Toluene	5.30		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.19		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.80		1.0	0.40	0.19
79-01-6	Trichloroethene	4.95		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.22		2.0	0.80	0.29
108-05-4	Vinyl acetate	9.49		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.29		1.5	0.20	0.10
1330-20-7	Xylenes, Total	9.94		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-437146/4

Matrix: Water Lab File ID: Q75273.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/10/2018 11:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437146 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75273.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Nov-2018 11:16:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	223552	250.0	250.0	
* 1 Fluorobenzene	96	7.796	7.803	-0.007	100	2714620	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	99	565688	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	99	837083	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.259	-0.007	92	594493	9.00	8.80	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	462825	9.00	8.41	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	100	2636901	9.00	8.62	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	87	801563	9.00	8.91	
23 Dichlorodifluoromethane	85	4.199	4.199	0.000	99	491487	5.00	4.61	
26 Chloromethane	50	4.456	4.449	0.007	98	230237	5.00	4.36	
27 Vinyl chloride	62	4.585	4.578	0.007	98	300511	5.00	5.29	
29 Bromomethane	94	4.907	4.914	-0.007	91	299707	5.00	6.40	
30 Chloroethane	64	4.964	4.964	0.000	99	136072	5.00	5.10	
31 Dichlorofluoromethane	67	5.107	5.107	0.000	95	667891	5.00	7.29	
32 Trichlorofluoromethane	101	5.222	5.186	0.036	99	781579	5.00	5.22	
35 Ethyl ether	59	5.357	5.357	0.000	92	161706	5.00	5.60	
39 Acrolein	56	5.508	5.500	0.008	99	135760	50.0	47.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.600	0.000	97	278505	5.00	5.05	
41 Acetone	43	5.608	5.608	0.000	36	91364	20.0	18.1	
43 1,1-Dichloroethene	96	5.629	5.629	0.000	96	378844	5.00	4.95	
44 Iodomethane	142	5.808	5.808	0.000	98	532301	5.00	5.07	
45 Methyl acetate	43	5.829	5.836	-0.007	98	116014	10.0	7.94	
47 3-Chloro-1-propene	41	5.886	5.886	0.000	84	628462	5.00	4.85	
48 Carbon disulfide	76	5.908	5.908	0.000	99	1628471	5.00	5.22	
49 2-Methyl-2-propanol	59	5.929	5.944	-0.015	93	74333	50.0	56.7	
50 Methylene Chloride	84	5.972	5.972	0.000	95	311753	5.00	4.79	
52 Acrylonitrile	53	6.130	6.129	0.001	99	266125	50.0	49.0	
51 Methyl tert-butyl ether	73	6.151	6.158	-0.007	94	350001	5.00	4.96	
53 trans-1,2-Dichloroethene	96	6.194	6.194	0.000	97	438707	5.00	5.19	
54 Hexane	57	6.351	6.358	-0.007	90	753148	5.00	4.67	
55 Vinyl acetate	43	6.437	6.437	0.000	97	486836	10.0	9.49	
57 1,1-Dichloroethane	63	6.501	6.501	0.000	96	763528	5.00	5.02	
61 2-Butanone (MEK)	43	6.880	6.880	0.000	100	132428	20.0	15.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	83	406456	5.00	5.09	
64 2,2-Dichloropropane	77	6.966	6.966	0.000	87	571906	5.00	4.89	
67 Chlorobromomethane	128	7.123	7.123	0.000	94	114387	5.00	5.19	
68 Chloroform	83	7.131	7.130	0.001	93	688352	5.00	5.16	
69 Tetrahydrofuran	42	7.166	7.166	0.000	93	33312	10.0	7.61	
70 Isobutyl alcohol	41	7.338	7.331	0.007	95	44883	125.0	128.1	
71 1,1,1-Trichloroethane	97	7.352	7.359	-0.007	98	624166	5.00	4.93	
72 Cyclohexane	56	7.431	7.431	0.000	91	788800	5.00	5.20	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	98	667479	5.00	5.11	
74 Carbon tetrachloride	117	7.495	7.495	0.000	97	561650	5.00	4.88	
76 1,2-Dichloroethane	62	7.603	7.602	0.000	97	292398	5.00	4.84	
77 Benzene	78	7.631	7.631	0.000	96	1605748	5.00	5.23	
14 n-Heptane	43	7.703	7.703	0.001	91	725835	5.00	4.57	
79 Trichloroethene	95	8.082	8.081	0.001	95	429332	5.00	4.95	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	98	364982	5.00	5.58	
82 Methylcyclohexane	55	8.275	8.275	0.000	94	624719	5.00	4.89	
84 1,4-Dioxane	88	8.318	8.317	0.001	84	16898	100.0	113.1	
85 Dibromomethane	93	8.360	8.360	0.000	88	113926	5.00	5.21	
86 Dichlorobromomethane	83	8.425	8.425	0.000	99	385494	5.00	5.12	
87 2-Chloroethyl vinyl ether	63	8.561	8.561	0.000	89	43295	5.00	3.60	
89 cis-1,3-Dichloropropene	75	8.732	8.732	0.000	97	421904	5.00	5.22	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	309397	20.0	17.9	
91 Toluene	91	9.011	9.011	0.000	98	1636158	5.00	5.30	
92 Ethyl methacrylate	69	9.090	9.082	0.008	88	126635	5.00	4.19	
93 trans-1,3-Dichloropropene	75	9.104	9.104	0.000	93	277289	5.00	4.80	
94 1,1,2-Trichloroethane	97	9.261	9.254	0.007	91	148843	5.00	5.30	
95 2-Hexanone	43	9.376	9.376	0.000	95	179828	20.0	16.2	
96 1,3-Dichloropropane	76	9.397	9.390	0.007	90	266370	5.00	4.83	
97 Tetrachloroethene	164	9.426	9.426	0.000	93	311417	5.00	4.85	
98 Chlorodibromomethane	129	9.590	9.590	0.000	90	173740	5.00	4.96	
100 Ethylene Dibromide	107	9.719	9.719	0.000	98	122110	5.00	4.91	
102 Chlorobenzene	112	10.055	10.055	0.000	96	854986	5.00	4.92	
104 1,1,1,2-Tetrachloroethane	131	10.084	10.083	0.001	91	271469	5.00	5.11	
103 Ethylbenzene	106	10.091	10.091	0.000	98	550422	5.00	4.94	
105 m-Xylene & p-Xylene	106	10.162	10.162	0.000	0	648820	5.00	4.83	
107 o-Xylene	106	10.484	10.484	0.000	90	590833	5.00	5.11	
106 Styrene	104	10.484	10.484	0.000	83	807025	5.00	4.91	
108 Bromoform	173	10.684	10.684	0.000	94	73466	5.00	5.43	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	1725812	5.00	4.59	
111 Cyclohexanone	55	10.877	10.877	0.000	100	179364	200.0	249.5	
112 1,1,2,2-Tetrachloroethane	83	10.942	10.942	0.000	93	141777	5.00	4.93	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	66	17294	5.00	3.15	
114 1,2,3-Trichloropropane	110	11.020	11.020	0.000	86	32502	5.00	4.73	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	483482	5.00	4.60	
116 Bromobenzene	156	11.070	11.070	0.000	95	296488	5.00	5.00	
117 1,3,5-Trimethylbenzene	105	11.178	11.170	0.008	94	1410190	5.00	4.75	
118 2-Chlorotoluene	126	11.192	11.192	0.000	95	382276	5.00	4.82	
119 4-Chlorotoluene	126	11.271	11.263	0.008	98	374160	5.00	4.78	
120 tert-Butylbenzene	119	11.478	11.471	0.007	91	1431471	5.00	4.52	
121 1,2,4-Trimethylbenzene	105	11.506	11.506	0.000	98	1372767	5.00	4.83	
122 sec-Butylbenzene	134	11.657	11.657	0.000	95	381646	5.00	4.69	
123 4-Isopropyltoluene	119	11.750	11.749	0.001	96	1599797	5.00	4.74	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.828	11.821	0.007	96	644952	5.00	4.98	
126 1,4-Dichlorobenzene	146	11.893	11.892	0.001	94	638877	5.00	4.95	
127 n-Butylbenzene	91	12.121	12.121	0.000	98	1770265	5.00	4.82	
128 1,2-Dichlorobenzene	146	12.257	12.257	0.000	97	494287	5.00	4.96	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.015	0.000	80	15868	5.00	4.97	
130 1,2,4-Trichlorobenzene	180	13.988	13.987	0.001	94	320867	5.00	5.31	
131 Hexachlorobutadiene	225	14.145	14.138	0.007	98	299353	5.00	5.04	
132 Naphthalene	128	14.367	14.359	0.008	89	354429	5.00	5.24	
133 1,2,3-Trichlorobenzene	180	14.688	14.688	0.000	94	223743	5.00	5.23	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.3	
S 139 Xylenes, Total	106				0		10.0	9.93	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.0	
S 135 Xylenes, Total (URS)	1				0		10.0	9.93	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.3	
S 134 Trihalomethanes, Total	1				0		20.0	20.7	

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

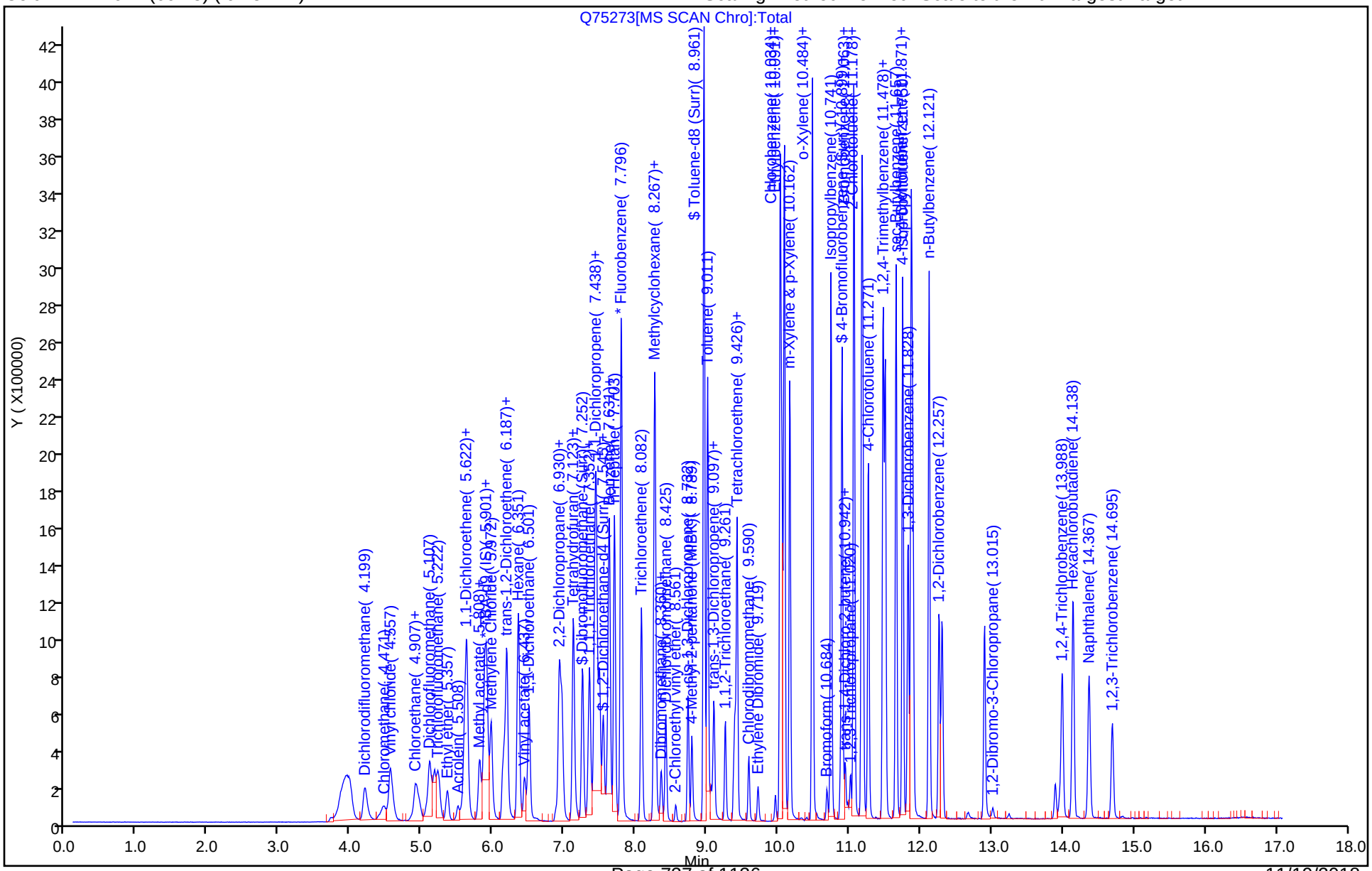
Report Date: 16-Nov-2018 14:52:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75273.D

Injection Date:	10-Nov-2018 11:16:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75273.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Nov-2018 11:16:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.80	97.79
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.41	93.44
$ 7 Toluene-d8 (Surr)	9.00	8.62	95.73
$ 8 4-Bromofluorobenzene (Surr)	9.00	8.91	98.98

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437146/6

Matrix: Water | Lab File ID: Q75275.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	4.71	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75275.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Nov-2018 11:57:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.881	5.872	0.009	0	243787	250.0	250.0	
* 1 Fluorobenzene	96	7.797	7.803	-0.006	100	3019849	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.033	-0.005	99	629544	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.872	11.871	0.001	100	789107	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.253	7.259	-0.006	92	659840	9.00	8.78	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.545	0.002	0	483586	9.00	7.87	
$ 7 Toluene-d8 (Surr)	98	8.962	8.961	0.001	100	2910812	9.00	8.54	
$ 8 4-Bromofluorobenzene (Surr	95	10.900	10.899	0.001	88	761663	9.00	8.98	
28 Ethylene oxide	43	4.844	4.835	0.009	0	49244	500.0	307.8	
33 Ethanol	45		5.228				300.0	ND	
38 Propene oxide	58	5.459	5.457	0.002	0	1103898	500.0	457.0	
42 Isopropyl alcohol	45	5.630	5.621	0.009	98	44525	50.0	55.0	
46 Acetonitrile	41	5.888	5.886	0.002	0	41828	50.0	37.2	
56 Isopropyl ether	87	6.460	6.458	0.002	0	183443	5.00	4.71	
58 2-Chloro-1,3-butadiene	53	6.574	6.572	0.002	0	642292	5.00	5.36	
59 Tert-butyl ethyl ether	59	6.732	6.737	-0.005	0	525229	5.00	4.40	
60 Ethyl acetate	43	6.867	6.866	0.001	0	131558	10.0	8.07	
65 Propionitrile	54	6.953	6.944	0.009	0	46459	50.0	35.9	
66 Methacrylonitrile	41	7.053	7.059	-0.006	0	492389	50.0	41.3	
75 Tert-amyl methyl ether	73	7.618	7.616	0.002	0	405148	5.00	4.53	
78 n-Butanol	56		7.802				125.0	ND	
81 Methyl methacrylate	100	8.204	8.210	-0.006	0	39626	10.0	9.10	
88 2-Nitropropane	41	8.562	8.560	0.002	0	24313	10.0	7.50	
99 Tetrahydrothiophene	60		9.647				10.0	ND	
110 cis-1,4-Dichloro-2-butene	53	10.771	10.770	0.001	0	21585	10.0	7.47	
125 1,2,3-Trimethylbenzene	105	11.894	11.892	0.002	0	1046938	5.00	5.29	
16 1,3,5-Trichlorobenzene	180	13.238	13.236	0.002	0	436709	5.00	6.43	

Reagents:

MV-Supp B_00022	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

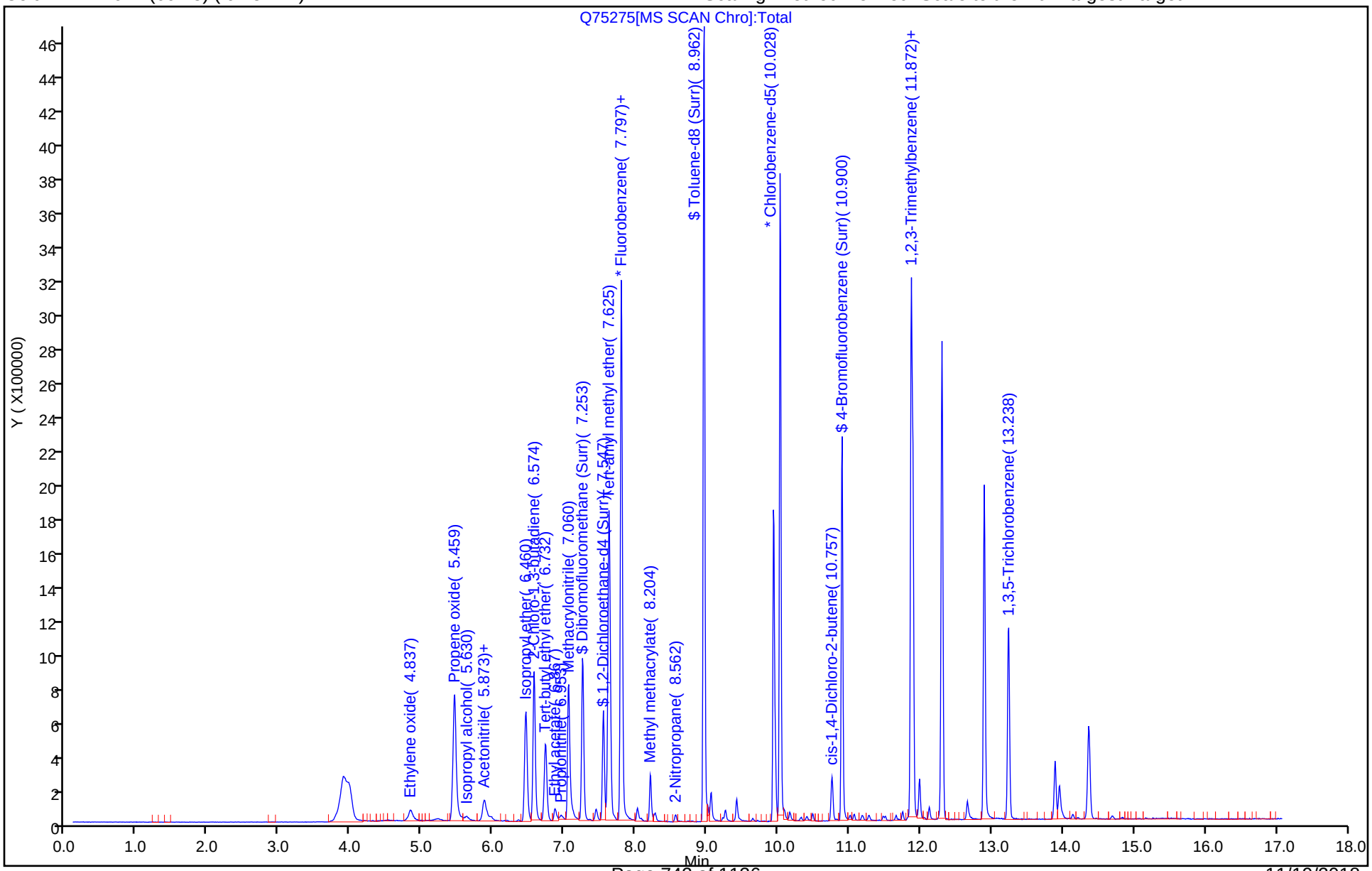
Report Date: 16-Nov-2018 14:53:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75275.D

Injection Date:	10-Nov-2018 11:57:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75275.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Nov-2018 11:57:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.78	97.57
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	7.87	87.49
$ 7 Toluene-d8 (Surr)	9.00	8.54	94.90
$ 8 4-Bromofluorobenzene (Surr)	9.00	8.98	99.77

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436409/6

Matrix: Water | Lab File ID: P2233.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/06/2018 05:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.17		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	5.65		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.24		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	6.21	Q	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.93		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	5.98		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	5.71		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	5.20		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	5.12		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	4.74		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	4.83		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	4.76	J	5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	5.32		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.99		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	5.83		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	11.7		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	6.20	Q	1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.88		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	4.86		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	5.19		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	4.97		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	5.23		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	18.2		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	4.92		1.0	0.40	0.17
591-78-6	2-Hexanone	18.6		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	5.04		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	4.97		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	23.8		5.0	3.2	0.98
67-64-1	Acetone	21.9		10	6.4	1.9
71-43-2	Benzene	5.93		1.0	0.40	0.16
108-86-1	Bromobenzene	4.94		1.0	0.40	0.17
74-97-5	Bromochloromethane	6.03		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.88		1.0	0.40	0.17
75-25-2	Bromoform	5.06		1.0	0.40	0.19
74-83-9	Bromomethane	6.15		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.83		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436409/6

Matrix: Water | Lab File ID: P2233.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/06/2018 05:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436409 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	5.52		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.07		1.0	0.40	0.17
75-00-3	Chloroethane	6.16		2.0	1.6	0.41
67-66-3	Chloroform	5.82		1.0	0.40	0.16
74-87-3	Chloromethane	5.32		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.70		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.17		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.73		1.0	0.40	0.17
74-95-3	Dibromomethane	5.92		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	5.32		2.0	0.80	0.31
100-41-4	Ethylbenzene	5.01		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	4.68		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.84		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.16		2.0	0.80	0.34
74-88-4	Methyl iodide	5.78		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	5.59		5.0	0.80	0.25
75-09-2	Methylene Chloride	5.57		5.0	0.80	0.32
91-20-3	Naphthalene	4.75		1.0	0.80	0.22
104-51-8	n-Butylbenzene	4.96		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.95		1.0	0.40	0.16
95-47-6	o-Xylene	5.15		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	5.02		1.0	0.40	0.17
100-42-5	Styrene	4.97		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.83		1.0	0.40	0.16
127-18-4	Tetrachloroethene	5.05		1.0	0.40	0.20
108-88-3	Toluene	5.88		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.96		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.16		1.0	0.40	0.19
79-01-6	Trichloroethene	5.62		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.82		2.0	0.80	0.29
108-05-4	Vinyl acetate	10.2		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.68		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.3		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-436409/6

Matrix: Water Lab File ID: P2233.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/06/2018 05:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436409 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		81-118
460-00-4	4-Bromofluorobenzene (Surr)	91		85-114
1868-53-7	Dibromofluoromethane (Surr)	116		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2233.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 06-Nov-2018 05:31:30 ALS Bottle#: 41 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 07-Nov-2018 18:45:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.593	0.014	36	144032	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1167488	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	268892	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.649	-0.007	98	424651	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	263533	10.0	11.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	255752	10.0	11.7	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1139247	10.0	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.684	0.007	89	346458	10.0	9.14	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	279755	5.00	5.32	
26 Chloromethane	50	4.095	4.083	0.012	97	184379	5.00	5.32	
27 Vinyl chloride	62	4.221	4.208	0.013	90	200852	5.00	5.68	
29 Bromomethane	94	4.584	4.572	0.012	92	187908	5.00	6.15	
30 Chloroethane	64	4.654	4.641	0.013	98	178217	5.00	6.16	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	465621	5.00	6.33	
32 Trichlorofluoromethane	101	4.905	4.893	0.012	99	387219	5.00	5.82	
35 Ethyl ether	59	5.059	5.060	-0.001	95	90662	5.00	6.33	
39 Acrolein	56	5.227	5.214	0.013	99	85117	50.0	54.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.284	0.012	96	164840	5.00	5.87	
41 Acetone	43	5.324	5.312	0.012	30	72610	20.0	21.9	
43 1,1-Dichloroethene	96	5.338	5.326	0.012	96	204054	5.00	5.98	
44 Iodomethane	142	5.522	5.522	0.000	100	273882	5.00	5.78	
45 Methyl acetate	43	5.557	5.557	0.000	97	80619	10.0	10.7	
47 3-Chloro-1-propene	41	5.607	5.600	0.007	80	361231	5.00	5.93	
48 Carbon disulfide	76	5.614	5.607	0.007	99	808561	5.00	5.83	
49 2-Methyl-2-propanol	59	5.672	5.672	0.000	98	42070	50.0	60.1	M
50 Methylene Chloride	84	5.700	5.693	0.007	99	163771	5.00	5.57	
52 Acrylonitrile	53	5.872	5.865	0.007	76	146830	50.0	51.6	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	97	207019	5.00	5.59	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	95	200065	5.00	5.96	
54 Hexane	57	6.072	6.072	0.000	96	351269	5.00	4.86	
55 Vinyl acetate	43	6.187	6.179	0.007	97	269789	10.0	10.2	
57 1,1-Dichloroethane	63	6.244	6.244	0.000	97	349139	5.00	5.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.630	6.630	0.000	99	86437	20.0	18.2	
63 cis-1,2-Dichloroethene	96	6.680	6.673	0.007	87	181199	5.00	5.70	
64 2,2-Dichloropropane	77	6.708	6.701	0.007	90	261146	5.00	5.23	
67 Chlorobromomethane	128	6.880	6.880	0.000	90	57382	5.00	6.03	
68 Chloroform	83	6.887	6.887	0.000	97	301486	5.00	5.82	
69 Tetrahydrofuran	42	6.916	6.909	0.007	89	27719	10.0	11.1	
71 1,1,1-Trichloroethane	97	7.102	7.095	0.007	97	299382	5.00	5.65	
70 Isobutyl alcohol	41	7.095	7.095	0.000	97	25574	125.0	125.8	
72 Cyclohexane	56	7.166	7.159	0.007	96	414128	5.00	5.71	
73 1,1-Dichloropropene	75	7.202	7.195	0.007	95	282409	5.00	5.71	
74 Carbon tetrachloride	117	7.238	7.230	0.008	96	245478	5.00	5.52	
76 1,2-Dichloroethane	62	7.373	7.373	0.000	97	162052	5.00	5.83	
77 Benzene	78	7.381	7.381	0.000	98	735379	5.00	5.93	
14 n-Heptane	43	7.445	7.445	0.000	96	402480	5.00	5.74	
79 Trichloroethene	95	7.845	7.845	0.000	96	182198	5.00	5.62	
82 Methylcyclohexane	55	8.031	8.031	0.000	95	325604	5.00	5.52	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	93	168443	5.00	6.20	
84 1,4-Dioxane	88	8.103	8.103	0.000	80	5489	100.0	86.2	
85 Dibromomethane	93	8.146	8.146	0.000	89	55334	5.00	5.92	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	172749	5.00	5.88	
87 2-Chloroethyl vinyl ether	63	8.360	8.360	0.000	91	27614	5.00	4.44	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	91	182824	5.00	5.17	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	218245	20.0	23.8	
91 Toluene	91	8.803	8.803	0.000	98	744750	5.00	5.88	
92 Ethyl methacrylate	69	8.889	8.889	0.000	94	67575	5.00	4.38	
93 trans-1,3-Dichloropropene	75	8.911	8.911	0.000	98	121139	5.00	5.16	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	75685	5.00	6.21	
95 2-Hexanone	43	9.182	9.182	0.000	98	129588	20.0	18.6	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	97	140491	5.00	5.19	
97 Tetrachloroethene	164	9.211	9.211	0.000	91	138852	5.00	5.05	
98 Chlorodibromomethane	129	9.397	9.397	0.000	90	75399	5.00	4.73	
100 Ethylene Dibromide	107	9.518	9.518	0.000	96	62985	5.00	5.32	
102 Chlorobenzene	112	9.847	9.847	0.000	96	401585	5.00	5.07	
103 Ethylbenzene	106	9.883	9.883	0.000	97	261399	5.00	5.01	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.890	-0.007	93	125613	5.00	5.17	
105 m-Xylene & p-Xylene	106	9.955	9.962	-0.007	99	315622	5.00	5.16	
107 o-Xylene	106	10.276	10.276	0.000	89	291209	5.00	5.15	
106 Styrene	104	10.276	10.276	0.000	83	391121	5.00	4.97	
108 Bromoform	173	10.484	10.484	0.000	90	34862	5.00	5.06	
109 Isopropylbenzene	105	10.527	10.534	-0.007	97	846966	5.00	4.84	
111 Cyclohexanone	55	10.677	10.677	0.000	97	96714	200.0	224.8	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.748	0.000	95	81374	5.00	5.24	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.784	-0.007	77	17428	5.00	4.55	
114 1,2,3-Trichloropropane	110	10.813	10.820	-0.007	87	21071	5.00	5.12	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	240996	5.00	4.95	
116 Bromobenzene	156	10.856	10.856	0.000	97	147519	5.00	4.94	
117 1,3,5-Trimethylbenzene	105	10.956	10.956	0.000	94	692775	5.00	4.88	
118 2-Chlorotoluene	126	10.970	10.977	-0.007	94	188597	5.00	4.92	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	186710	5.00	5.04	
120 tert-Butylbenzene	119	11.249	11.256	-0.007	92	669908	5.00	4.83	
121 1,2,4-Trimethylbenzene	105	11.277	11.285	-0.007	99	686633	5.00	4.83	
122 sec-Butylbenzene	134	11.428	11.435	-0.007	95	193015	5.00	5.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.521	11.520	0.000	97	801542	5.00	4.97	
124 1,3-Dichlorobenzene	146	11.599	11.599	0.000	95	324305	5.00	4.86	
126 1,4-Dichlorobenzene	146	11.664	11.671	-0.007	94	329509	5.00	4.97	
127 n-Butylbenzene	91	11.885	11.885	0.000	98	870526	5.00	4.96	
128 1,2-Dichlorobenzene	146	12.021	12.028	-0.007	95	267886	5.00	4.99	
129 1,2-Dibromo-3-Chloropropan	157	12.779	12.786	-0.007	69	8279	5.00	4.76	
130 1,2,4-Trichlorobenzene	180	13.716	13.716	0.000	93	165686	5.00	4.74	
131 Hexachlorobutadiene	225	13.844	13.851	-0.007	91	126449	5.00	4.68	
132 Naphthalene	128	14.080	14.087	-0.007	98	215058	5.00	4.75	
133 1,2,3-Trichlorobenzene	180	14.402	14.409	-0.007	94	136244	5.00	5.20	
S 140 1,2-Dichloroethene, Total	96				0		10.0	11.7	
S 134 Trihalomethanes, Total	1				0		20.0	21.5	
S 135 Xylenes, Total (URS)	1				0		10.0	10.3	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.3	
S 138 1,2-Dichloroethene, Total	1				0		10.0	11.7	
S 139 Xylenes, Total	106				0		10.0	10.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

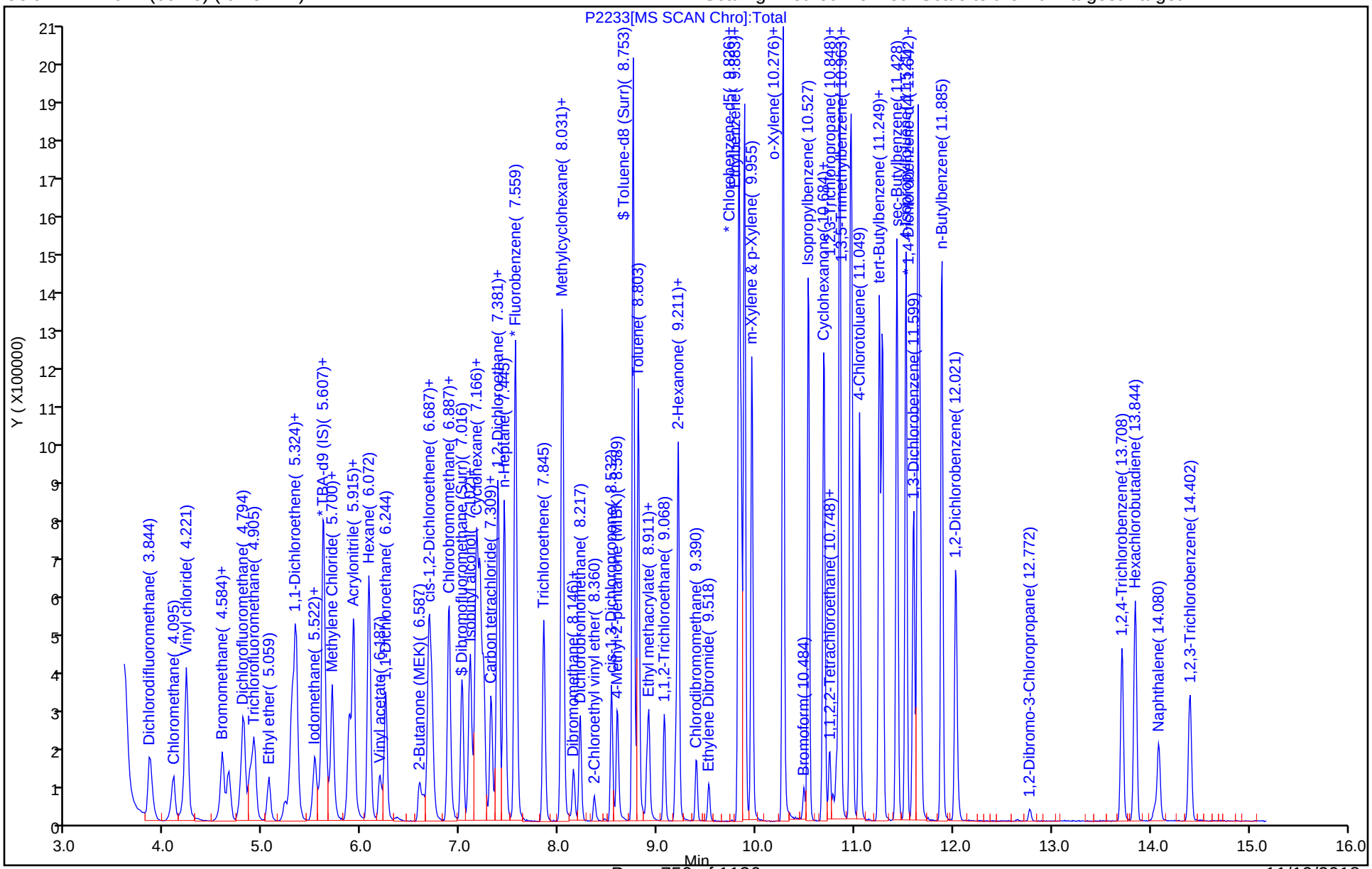
Report Date: 07-Nov-2018 18:50:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2233.D

Injection Date:	06-Nov-2018 05:31:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	LCSD			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\P2233.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 06-Nov-2018 05:31:30 ALS Bottle#: 41 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: newcomer Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2018 18:50:10 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: newcomer Date: 07-Nov-2018 18:45:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	11.6	116.10
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	11.7	117.37
$ 7 Toluene-d8 (Surr)	10.0	10.0	100.13
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.14	91.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-437146/5

Matrix: Water | Lab File ID: Q75274.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 11:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
630-20-6	1,1,1,2-Tetrachloroethane	5.42		1.0	0.80	0.21
71-55-6	1,1,1-Trichloroethane	5.02		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.12		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.45		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.25		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	5.14		1.0	0.80	0.23
563-58-6	1,1-Dichloropropene	5.25		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	5.45		1.0	0.80	0.21
96-18-4	1,2,3-Trichloropropane	4.89		3.0	0.80	0.33
120-82-1	1,2,4-Trichlorobenzene	5.43		1.0	0.80	0.21
95-63-6	1,2,4-Trimethylbenzene	5.05		1.0	0.40	0.15
96-12-8	1,2-Dibromo-3-Chloropropane	5.08		5.0	1.6	0.47
106-93-4	1,2-Dibromoethane	5.07		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	5.22		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	5.03		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.5		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.77		1.0	0.40	0.18
108-67-8	1,3,5-Trimethylbenzene	4.99		1.0	0.40	0.16
541-73-1	1,3-Dichlorobenzene	5.14		1.0	0.40	0.13
142-28-9	1,3-Dichloropropane	5.00		1.0	0.80	0.22
106-46-7	1,4-Dichlorobenzene	5.20		1.0	0.40	0.16
594-20-7	2,2-Dichloropropane	5.03		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	13.7		6.0	4.0	2.0
95-49-8	2-Chlorotoluene	5.13		1.0	0.40	0.17
591-78-6	2-Hexanone	16.8		5.0	4.0	1.7
106-43-4	4-Chlorotoluene	5.15		1.0	0.80	0.21
99-87-6	4-Isopropyltoluene	5.05		1.0	0.40	0.20
108-10-1	4-Methyl-2-pentanone (MIBK)	19.1		5.0	3.2	0.98
67-64-1	Acetone	17.0		10	6.4	1.9
71-43-2	Benzene	5.45		1.0	0.40	0.16
108-86-1	Bromobenzene	5.20		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.46		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.28		1.0	0.40	0.17
75-25-2	Bromoform	5.60		1.0	0.40	0.19
74-83-9	Bromomethane	6.56		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.33		2.0	1.6	0.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-437146/5

Matrix: Water | Lab File ID: Q75274.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 11:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
56-23-5	Carbon tetrachloride	5.05		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.18		1.0	0.40	0.17
75-00-3	Chloroethane	5.01		2.0	1.6	0.41
67-66-3	Chloroform	5.29		1.0	0.40	0.16
74-87-3	Chloromethane	4.25		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.22		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.44		1.0	0.40	0.16
124-48-1	Dibromochloromethane	5.07		1.0	0.40	0.17
74-95-3	Dibromomethane	5.50		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.56		2.0	0.80	0.31
100-41-4	Ethylbenzene	5.24		1.0	0.40	0.16
87-68-3	Hexachlorobutadiene	5.19		1.0	0.80	0.36
98-82-8	Isopropylbenzene	4.87		1.0	0.40	0.19
179601-23-1	m,p-Xylene	5.09		2.0	0.80	0.34
74-88-4	Methyl iodide	5.23		2.0	0.80	0.23
1634-04-4	Methyl tert-butyl ether	5.12		5.0	0.80	0.25
75-09-2	Methylene Chloride	4.97	J	5.0	0.80	0.32
91-20-3	Naphthalene	5.30		1.0	0.80	0.22
104-51-8	n-Butylbenzene	5.00		1.0	0.80	0.32
103-65-1	N-Propylbenzene	4.83		1.0	0.40	0.16
95-47-6	o-Xylene	5.54		1.0	0.40	0.19
135-98-8	sec-Butylbenzene	4.94		1.0	0.40	0.17
100-42-5	Styrene	5.11		1.0	0.40	0.17
98-06-6	tert-Butylbenzene	4.85		1.0	0.40	0.16
127-18-4	Tetrachloroethene	5.10		1.0	0.40	0.20
108-88-3	Toluene	5.56		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.30		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.97		1.0	0.40	0.19
79-01-6	Trichloroethene	5.23		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.37		2.0	0.80	0.29
108-05-4	Vinyl acetate	9.23		3.0	2.0	0.94
75-01-4	Vinyl chloride	5.24		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.6		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-437146/5

Matrix: Water Lab File ID: Q75274.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/10/2018 11:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437146 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75274.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 10-Nov-2018 11:36:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.872	0.003	0	230559	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.803	-0.005	100	2805600	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	99	577034	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.874	11.871	0.003	99	851091	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.259	-0.004	91	612863	9.00	8.78	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.548	7.545	0.003	0	466729	9.00	8.20	
$ 7 Toluene-d8 (Surr)	98	8.957	8.961	-0.004	100	2662245	9.00	8.52	
$ 8 4-Bromofluorobenzene (Surr	95	10.902	10.899	0.003	88	782494	9.00	8.55	
23 Dichlorodifluoromethane	85	4.195	4.199	-0.004	99	502568	5.00	4.56	
26 Chloromethane	50	4.459	4.449	0.010	98	231994	5.00	4.25	
27 Vinyl chloride	62	4.581	4.578	0.003	97	307929	5.00	5.24	
29 Bromomethane	94	4.917	4.914	0.003	91	317338	5.00	6.56	
30 Chloroethane	64	4.967	4.964	0.003	99	138370	5.00	5.01	
31 Dichlorofluoromethane	67	5.110	5.107	0.003	96	581195	5.00	6.14	
32 Trichlorofluoromethane	101	5.224	5.186	0.038	99	830509	5.00	5.37	
35 Ethyl ether	59	5.360	5.357	0.003	93	170137	5.00	5.70	
39 Acrolein	56	5.510	5.500	0.010	99	149640	50.0	50.5	
40 1,1,2-Trichloro-1,2,2-trif	151	5.611	5.600	0.011	97	293947	5.00	5.15	
41 Acetone	43	5.603	5.608	-0.005	37	88644	20.0	17.0	
43 1,1-Dichloroethene	96	5.632	5.629	0.003	97	406457	5.00	5.14	
44 Iodomethane	142	5.811	5.808	0.003	99	567537	5.00	5.23	
45 Methyl acetate	43	5.832	5.836	-0.004	97	123773	10.0	8.28	
47 3-Chloro-1-propene	41	5.882	5.886	-0.004	85	667198	5.00	4.98	
48 Carbon disulfide	76	5.911	5.908	0.003	99	1717668	5.00	5.33	
49 2-Methyl-2-propanol	59	5.939	5.944	-0.005	92	76550	50.0	56.6	
50 Methylene Chloride	84	5.975	5.972	0.003	95	334587	5.00	4.97	
52 Acrylonitrile	53	6.132	6.129	0.003	99	278240	50.0	49.5	
51 Methyl tert-butyl ether	73	6.154	6.158	-0.004	95	373657	5.00	5.12	
53 trans-1,2-Dichloroethene	96	6.197	6.194	0.003	96	463478	5.00	5.30	
54 Hexane	57	6.354	6.358	-0.004	90	799678	5.00	4.86	
55 Vinyl acetate	43	6.440	6.437	0.003	97	489810	10.0	9.23	
57 1,1-Dichloroethane	63	6.504	6.501	0.003	96	825288	5.00	5.25	
61 2-Butanone (MEK)	43	6.883	6.880	0.003	100	122476	20.0	13.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
63 cis-1,2-Dichloroethene	96	6.933	6.930	0.003	83	431525	5.00	5.22	
64 2,2-Dichloropropane	77	6.962	6.966	-0.004	85	607833	5.00	5.03	
67 Chlorobromomethane	128	7.126	7.123	0.003	94	124432	5.00	5.46	
68 Chloroform	83	7.134	7.130	0.004	92	729181	5.00	5.29	
69 Tetrahydrofuran	42	7.169	7.166	0.003	94	36039	10.0	7.97	
70 Isobutyl alcohol	41	7.334	7.331	0.003	92	38679	125.0	107.0	
71 1,1,1-Trichloroethane	97	7.355	7.359	-0.004	98	657027	5.00	5.02	
72 Cyclohexane	56	7.434	7.431	0.003	91	811611	5.00	5.18	
73 1,1-Dichloropropene	75	7.455	7.452	0.003	98	709702	5.00	5.25	
74 Carbon tetrachloride	117	7.491	7.495	-0.004	97	600050	5.00	5.05	
76 1,2-Dichloroethane	62	7.605	7.602	0.003	97	314421	5.00	5.03	
77 Benzene	78	7.634	7.631	0.003	95	1730386	5.00	5.45	
14 n-Heptane	43	7.706	7.703	0.004	91	757134	5.00	4.61	
79 Trichloroethene	95	8.084	8.081	0.003	96	469186	5.00	5.23	
83 1,2-Dichloropropane	63	8.263	8.260	0.003	97	390329	5.00	5.77	
82 Methylcyclohexane	55	8.270	8.275	-0.005	94	654901	5.00	4.96	
84 1,4-Dioxane	88	8.313	8.317	-0.004	92	16295	100.0	106.2	
85 Dibromomethane	93	8.356	8.360	-0.004	88	124189	5.00	5.50	
86 Dichlorobromomethane	83	8.421	8.425	-0.004	99	410521	5.00	5.28	
87 2-Chloroethyl vinyl ether	63	8.564	8.561	0.003	90	43299	5.00	3.50	
89 cis-1,3-Dichloropropene	75	8.735	8.732	0.003	97	448735	5.00	5.44	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.789	0.003	0	341755	20.0	19.1	
91 Toluene	91	9.014	9.011	0.003	98	1775542	5.00	5.56	
92 Ethyl methacrylate	69	9.086	9.082	0.004	88	137019	5.00	4.43	
93 trans-1,3-Dichloropropene	75	9.100	9.104	-0.004	95	297086	5.00	4.97	
94 1,1,2-Trichloroethane	97	9.257	9.254	0.003	91	158268	5.00	5.45	
95 2-Hexanone	43	9.379	9.376	0.003	95	190798	20.0	16.8	
96 1,3-Dichloropropane	76	9.393	9.390	0.003	90	281811	5.00	5.00	
97 Tetrachloroethene	164	9.422	9.426	-0.004	94	334064	5.00	5.10	
98 Chlorodibromomethane	129	9.586	9.590	-0.004	90	180840	5.00	5.07	
100 Ethylene Dibromide	107	9.722	9.719	0.003	98	128540	5.00	5.07	
102 Chlorobenzene	112	10.051	10.055	-0.004	94	919301	5.00	5.18	
104 1,1,1,2-Tetrachloroethane	131	10.087	10.083	0.004	94	293542	5.00	5.42	
103 Ethylbenzene	106	10.087	10.091	-0.004	98	595359	5.00	5.24	
105 m-Xylene & p-Xylene	106	10.165	10.162	0.003	0	698163	5.00	5.09	
107 o-Xylene	106	10.480	10.484	-0.004	90	654427	5.00	5.54	
106 Styrene	104	10.487	10.484	0.003	83	856791	5.00	5.11	
108 Bromoform	173	10.687	10.684	0.003	94	77305	5.00	5.60	
109 Isopropylbenzene	105	10.744	10.741	0.003	96	1861627	5.00	4.87	
111 Cyclohexanone	55	10.880	10.877	0.003	100	178502	200.0	243.5	
112 1,1,2,2-Tetrachloroethane	83	10.945	10.942	0.003	93	149581	5.00	5.12	
113 trans-1,4-Dichloro-2-buten	53	10.980	10.977	0.003	88	17887	5.00	3.19	
114 1,2,3-Trichloropropane	110	11.016	11.020	-0.004	86	34203	5.00	4.89	
115 N-Propylbenzene	120	11.066	11.063	0.003	99	517040	5.00	4.83	
116 Bromobenzene	156	11.073	11.070	0.003	96	313571	5.00	5.20	
117 1,3,5-Trimethylbenzene	105	11.173	11.170	0.003	93	1506353	5.00	4.99	
118 2-Chlorotoluene	126	11.188	11.192	-0.004	95	413942	5.00	5.13	
119 4-Chlorotoluene	126	11.266	11.263	0.003	98	409307	5.00	5.15	
120 tert-Butylbenzene	119	11.474	11.471	0.003	92	1561592	5.00	4.85	
121 1,2,4-Trimethylbenzene	105	11.502	11.506	-0.004	98	1458135	5.00	5.05	
122 sec-Butylbenzene	134	11.660	11.657	0.003	95	408502	5.00	4.94	
123 4-Isopropyltoluene	119	11.752	11.749	0.003	96	1733666	5.00	5.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.824	11.821	0.003	96	677555	5.00	5.14	
126 1,4-Dichlorobenzene	146	11.896	11.892	0.004	94	682039	5.00	5.20	
127 n-Butylbenzene	91	12.117	12.121	-0.004	98	1866900	5.00	5.00	
128 1,2-Dichlorobenzene	146	12.260	12.257	0.003	96	528945	5.00	5.22	
129 1,2-Dibromo-3-Chloropropan	157	13.011	13.015	-0.004	77	16517	5.00	5.08	
130 1,2,4-Trichlorobenzene	180	13.990	13.987	0.003	94	333957	5.00	5.43	
131 Hexachlorobutadiene	225	14.141	14.138	0.003	97	313619	5.00	5.19	
132 Naphthalene	128	14.362	14.359	0.003	97	364694	5.00	5.30	
133 1,2,3-Trichlorobenzene	180	14.691	14.688	0.003	95	236905	5.00	5.45	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.5	
S 139 Xylenes, Total	106				0		10.0	10.6	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.4	
S 135 Xylenes, Total (URS)	1				0		10.0	10.6	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.5	
S 134 Trihalomethanes, Total	1				0		20.0	21.2	

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

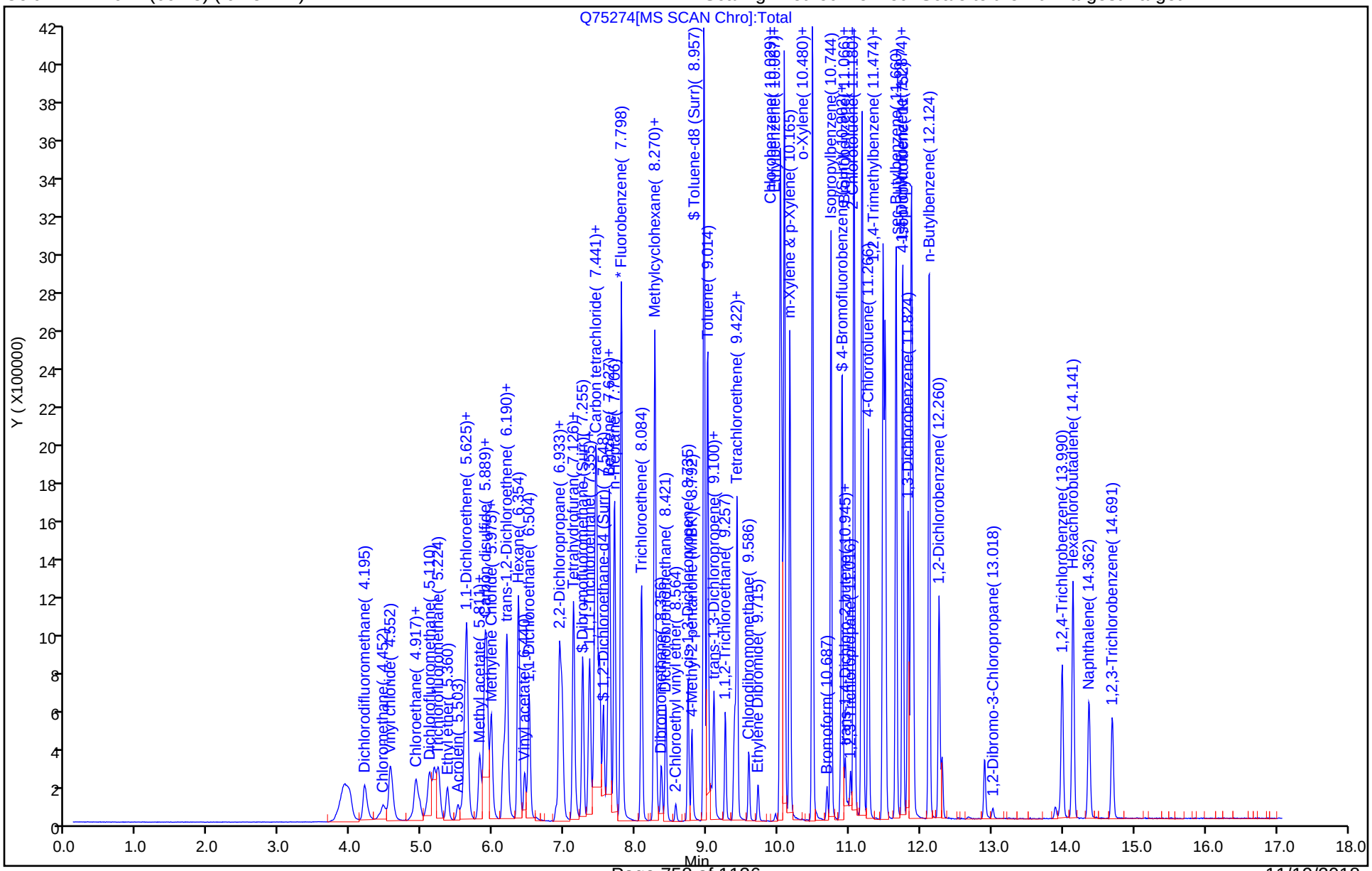
Report Date: 16-Nov-2018 14:53:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75274.D

Injection Date:	10-Nov-2018 11:36:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75274.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 10-Nov-2018 11:36:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.78	97.54
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	8.20	91.07
$ 7 Toluene-d8 (Surr)	9.00	8.52	94.68
$ 8 4-Bromofluorobenzene (Surr)	9.00	8.55	95.03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116017-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-437146/7

Matrix: Water | Lab File ID: Q75276.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/10/2018 12:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437146 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
108-20-3	Diisopropyl ether	5.17	J	10	2.0	0.74

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	99		80-119
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75276.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 10-Nov-2018 12:17:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	218747	250.0	250.0	
* 1 Fluorobenzene	96	7.803	7.803	0.000	100	2825745	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.034	10.033	0.001	100	577629	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.871	0.000	100	780668	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.259	7.259	0.000	92	623786	9.00	8.87	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	452772	9.00	7.88	
$ 7 Toluene-d8 (Surr)	98	8.961	8.961	0.000	100	2672785	9.00	8.55	
$ 8 4-Bromofluorobenzene (Surr	95	10.899	10.899	0.000	87	742125	9.00	8.84	
28 Ethylene oxide	43	4.836	4.835	0.001	0	53498	500.0	357.4	
33 Ethanol	45		5.228				300.0	ND	
38 Propene oxide	58	5.458	5.457	0.001	0	1150520	500.0	509.0	
42 Isopropyl alcohol	45	5.629	5.621	0.008	97	48569	50.0	66.9	
46 Acetonitrile	41	5.894	5.886	0.008	0	32936	50.0	33.2	
56 Isopropyl ether	87	6.459	6.458	0.001	0	188440	5.00	5.17	
58 2-Chloro-1,3-butadiene	53	6.573	6.572	0.001	0	673672	5.00	6.00	
59 Tert-butyl ethyl ether	59	6.730	6.737	-0.007	0	563066	5.00	5.04	
60 Ethyl acetate	43	6.866	6.866	0.000	0	123517	10.0	8.10	
65 Propionitrile	54	6.959	6.944	0.015	0	53906	50.0	41.6	
66 Methacrylonitrile	41	7.059	7.059	0.000	0	513274	50.0	46.0	
75 Tert-amyl methyl ether	73	7.617	7.616	0.001	0	432160	5.00	5.17	
78 n-Butanol	56		7.802				125.0	ND	
81 Methyl methacrylate	100	8.203	8.210	-0.007	0	37960	10.0	9.32	
88 2-Nitropropane	41	8.561	8.560	0.001	0	26023	10.0	8.58	
99 Tetrahydrothiophene	60		9.647				10.0	ND	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.770	-0.007	0	19074	10.0	6.67	
125 1,2,3-Trimethylbenzene	105	11.893	11.892	0.001	0	1141973	5.00	5.84	
16 1,3,5-Trichlorobenzene	180	13.237	13.236	0.001	0	452510	5.00	6.74	

Reagents:

MV-Supp B_00022	Amount Added:	2.50	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	0.72	Units: uL	Run Reagent

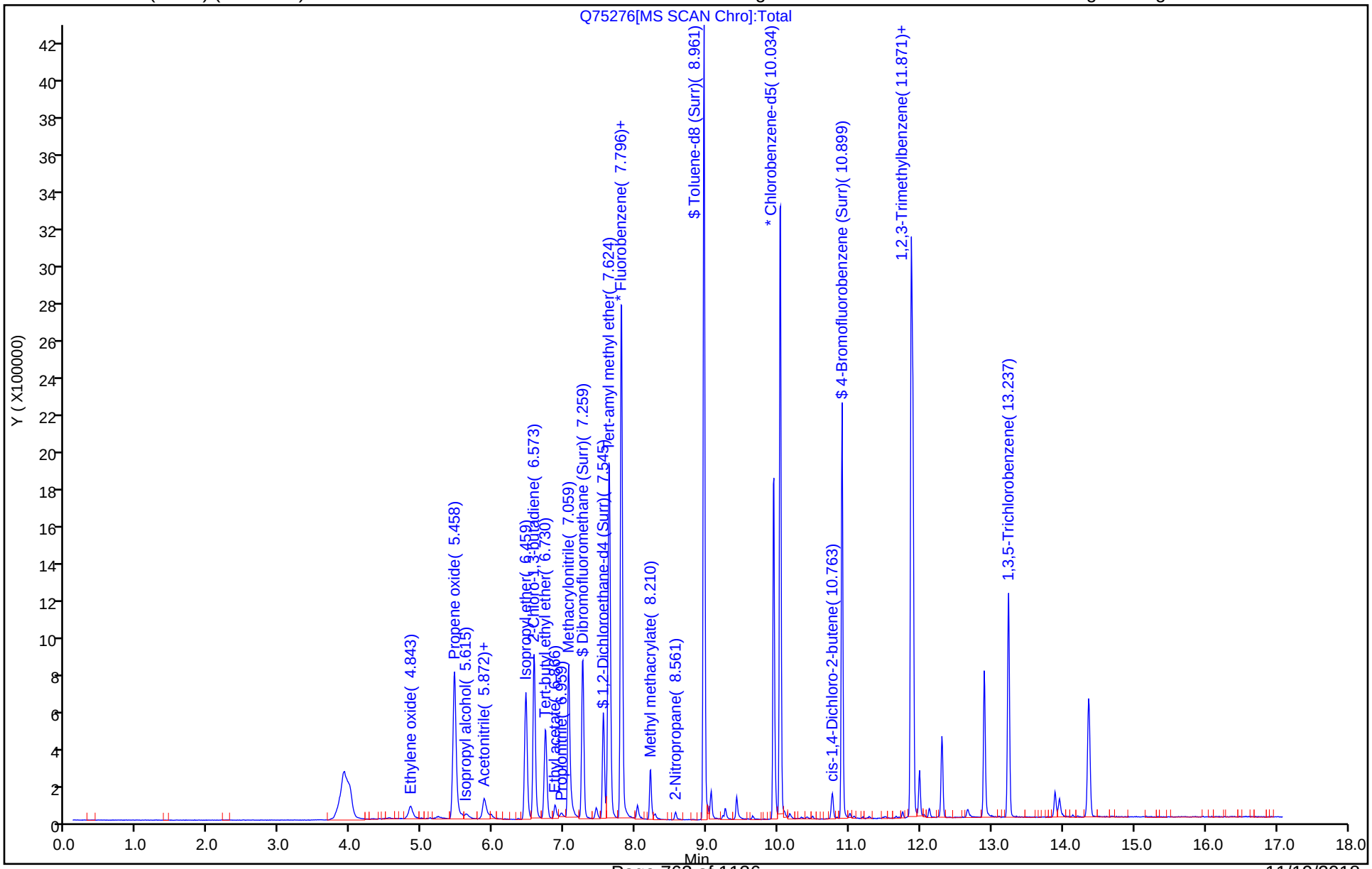
Report Date: 16-Nov-2018 14:53:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75276.D

Injection Date:	10-Nov-2018 12:17:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LCSD			Worklist Smp#:	7
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\Q75276.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 10-Nov-2018 12:17:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: meierg Instrument ID: VMS_Q

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181110-76063.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 14:52:55 Calib Date: 23-Oct-2018 15:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b\Q74640.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	9.00	8.87	98.58
$ 6 1,2-Dichloroethane-d4 (Surr)	9.00	7.88	87.55
$ 7 Toluene-d8 (Surr)	9.00	8.55	94.98
$ 8 4-Bromofluorobenzene (Surr)	9.00	8.84	98.26

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Start Date: 08/16/2018 19:34

Analysis Batch Number: 426490 End Date: 08/17/2018 03:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-426490/1		08/16/2018 19:34	1	P9151.D	DB-624 (60.25) 0.25(mm)
STD003 280-426490/10 IC		08/16/2018 20:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:06	1		DB-624 (60.25) 0.25(mm)
STD010 280-426490/11 IC		08/16/2018 20:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:25	1		DB-624 (60.25) 0.25(mm)
STD020 280-426490/12 IC		08/16/2018 20:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:43	1		DB-624 (60.25) 0.25(mm)
STD050 280-426490/13 IC		08/16/2018 21:02	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:02	1		DB-624 (60.25) 0.25(mm)
ICIS 280-426490/14		08/16/2018 21:20	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:20	1		DB-624 (60.25) 0.25(mm)
STD30 280-426490/15 IC		08/16/2018 21:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:38	1		DB-624 (60.25) 0.25(mm)
STD60 280-426490/16 IC		08/16/2018 21:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:57	1		DB-624 (60.25) 0.25(mm)
ICV 280-426490/17		08/16/2018 22:15	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 22:52	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:11	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:29	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:48	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 00:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 00:24	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:01	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:20	1		DB-624 (60.25) 0.25(mm)
STD010 280-426490/18 IC		08/17/2018 01:38	1	P9170.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:38	1		DB-624 (60.25) 0.25(mm)
STD020 280-426490/19 IC		08/17/2018 01:56	1	P9171.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:56	1		DB-624 (60.25) 0.25(mm)
STD050 280-426490/20 IC		08/17/2018 02:15	1	P9172.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:15	1		DB-624 (60.25) 0.25(mm)
STD10 280-426490/21 IC		08/17/2018 02:33	1	P9173.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:33	1		DB-624 (60.25) 0.25(mm)
STD30 280-426490/22 IC		08/17/2018 02:52	1	P9174.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:52	1		DB-624 (60.25) 0.25(mm)
STD60 280-426490/23 IC		08/17/2018 03:10	1	P9175.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 03:10	1		DB-624 (60.25) 0.25(mm)
ICV 280-426490/24		08/17/2018 03:28	1	P9176.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 03:47	4		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_Q Start Date: 10/20/2018 10:39

Analysis Batch Number: 434257 End Date: 10/20/2018 16:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-434257/1		10/20/2018 10:39	1	Q74583.D	DB-624 (60.25) 0.25(mm)
STD010 280-434257/13 IC		10/20/2018 13:58	1	Q74593.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 13:58	1		DB-624 (60.25) 0.25(mm)
STD020 280-434257/14 IC		10/20/2018 14:19	1	Q74594.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 14:19	1		DB-624 (60.25) 0.25(mm)
STD050 280-434257/15 IC		10/20/2018 14:39	1	Q74595.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 14:39	1		DB-624 (60.25) 0.25(mm)
ICIS 280-434257/16		10/20/2018 15:00	1	Q74596.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 15:00	1		DB-624 (60.25) 0.25(mm)
STD30 280-434257/17 IC		10/20/2018 15:20	1	Q74597.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 15:20	1		DB-624 (60.25) 0.25(mm)
STD60 280-434257/18 IC		10/20/2018 15:41	1	Q74598.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/20/2018 15:41	1		DB-624 (60.25) 0.25(mm)
ICV 280-434257/19		10/20/2018 16:22	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_Q Start Date: 10/22/2018 11:34

Analysis Batch Number: 434393 End Date: 10/22/2018 23:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-434393/1		10/22/2018 11:34	1	Q74583.D	DB-624 (60.25) 0.25(mm)
STD005 280-434393/12 IC		10/22/2018 11:44	1	Q74586.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 11:44	1		DB-624 (60.25) 0.25(mm)
STD010 280-434393/13 IC		10/22/2018 12:05	1	Q74587.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 12:05	1		DB-624 (60.25) 0.25(mm)
STD020 280-434393/14 IC		10/22/2018 12:26	1	Q74588.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 12:26	1		DB-624 (60.25) 0.25(mm)
STD050 280-434393/15 IC		10/22/2018 12:46	1	Q74589.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 12:46	1		DB-624 (60.25) 0.25(mm)
ICIS 280-434393/16		10/22/2018 13:07	1	Q74590.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 13:07	1		DB-624 (60.25) 0.25(mm)
STD30 280-434393/17 IC		10/22/2018 13:27	1	Q74591.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 13:27	1		DB-624 (60.25) 0.25(mm)
STD60 280-434393/18 IC		10/22/2018 13:48	1	Q74592.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 13:48	1		DB-624 (60.25) 0.25(mm)
ICV 280-434393/19		10/22/2018 14:29	1	Q74594.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 14:29	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 15:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 15:30	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 15:51	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 16:11	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 16:32	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 16:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 17:13	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 17:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 17:54	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 18:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 18:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 19:16	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 19:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 19:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 20:18	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 20:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 20:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 21:19	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 21:40	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 22:00	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 22:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/22/2018 22:41	1		DB-624 (60.25) 0.25(mm)
CCVC 280-434393/42		10/22/2018 23:02	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Start Date: 10/22/2018 21:54

Analysis Batch Number: 434433 End Date: 10/23/2018 01:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-434433/1		10/22/2018 21:54	1	P1530.D	DB-624 (60.25) 0.25(mm)
STD005 280-434433/10 IC		10/22/2018 22:40	1	P1532.D	DB-624 (60.25) 0.25(mm)
STD01 280-434433/11 IC		10/22/2018 22:59	1	P1533.D	DB-624 (60.25) 0.25(mm)
STD02 280-434433/12 IC		10/22/2018 23:17	1	P1534.D	DB-624 (60.25) 0.25(mm)
STD05 280-434433/13 IC		10/22/2018 23:36	1	P1535.D	DB-624 (60.25) 0.25(mm)
ICIS 280-434433/14		10/22/2018 23:54	1	P1536.D	DB-624 (60.25) 0.25(mm)
STD25 280-434433/15 IC		10/23/2018 00:13	1	P1537.D	DB-624 (60.25) 0.25(mm)
STD60 280-434433/16 IC		10/23/2018 00:32	1	P1538.D	DB-624 (60.25) 0.25(mm)
ICV 280-434433/17		10/23/2018 01:12	1	P1540.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_Q Start Date: 10/23/2018 12:57

Analysis Batch Number: 434575 End Date: 10/24/2018 00:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-434575/1		10/23/2018 12:57	1	Q74632.D	DB-624 (60.25) 0.25(mm)
CCV 280-434575/3		10/23/2018 13:07	1		DB-624 (60.25) 0.25(mm)
STD005 280-434575/12 IC		10/23/2018 13:27	1	Q74634.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 13:27	1		DB-624 (60.25) 0.25(mm)
STD010 280-434575/13 IC		10/23/2018 13:48	1	Q74635.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 13:48	1		DB-624 (60.25) 0.25(mm)
STD020 280-434575/14 IC		10/23/2018 14:08	1	Q74636.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 14:08	1		DB-624 (60.25) 0.25(mm)
STD050 280-434575/15 IC		10/23/2018 14:29	1	Q74637.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 14:29	1		DB-624 (60.25) 0.25(mm)
ICIS 280-434575/16		10/23/2018 14:49	1	Q74638.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 14:49	1		DB-624 (60.25) 0.25(mm)
STD30 280-434575/17 IC		10/23/2018 15:10	1	Q74639.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 15:10	1		DB-624 (60.25) 0.25(mm)
STD60 280-434575/18 IC		10/23/2018 15:30	1	Q74640.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 15:30	1		DB-624 (60.25) 0.25(mm)
ICV 280-434575/19		10/23/2018 16:40	1	Q74642.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 16:40	1		DB-624 (60.25) 0.25(mm)
ICV 280-434575/45		10/23/2018 17:00	1	Q74643.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 17:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 17:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 18:22	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 18:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 19:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 19:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 19:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 20:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 20:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 20:45	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 21:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 21:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 21:47	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 22:08	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 22:28	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 22:49	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 23:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 23:30	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/23/2018 23:51	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/24/2018 00:11	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		10/24/2018 00:32	1		DB-624 (60.25) 0.25(mm)
CCVC 280-434575/37		10/24/2018 00:52	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Start Date: 11/03/2018 12:06

Analysis Batch Number: 436199 End Date: 11/03/2018 22:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-436199/1		11/03/2018 12:06	1	P2132.D	DB-624 (60.25) 0.25(mm)
CCV 280-436199/2		11/03/2018 12:47	1	P2134.D	DB-624 (60.25) 0.25(mm)
CCV 280-436199/3		11/03/2018 13:05	1	P2135.D	DB-624 (60.25) 0.25(mm)
MB 280-436199/4		11/03/2018 13:24	1	P2136.D	DB-624 (60.25) 0.25(mm)
LCS 280-436199/5		11/03/2018 13:49	1	P2137.D	DB-624 (60.25) 0.25(mm)
LCS 280-436199/7		11/03/2018 14:07	1	P2138.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 14:26	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 14:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 15:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 15:22	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 15:40	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 15:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 16:17	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 16:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 16:54	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 17:13	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 17:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 17:50	1		DB-624 (60.25) 0.25(mm)
280-116017-1		11/03/2018 18:08	1	P2151.D	DB-624 (60.25) 0.25(mm)
280-116017-2		11/03/2018 18:27	1	P2152.D	DB-624 (60.25) 0.25(mm)
280-116017-2 DL		11/03/2018 18:45	4	P2153.D	DB-624 (60.25) 0.25(mm)
280-116017-3		11/03/2018 19:04	1	P2154.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 19:22	10		DB-624 (60.25) 0.25(mm)
280-116017-4		11/03/2018 19:41	1	P2156.D	DB-624 (60.25) 0.25(mm)
280-116017-5		11/03/2018 19:59	1	P2157.D	DB-624 (60.25) 0.25(mm)
280-116017-6		11/03/2018 20:18	1	P2158.D	DB-624 (60.25) 0.25(mm)
280-116017-7		11/03/2018 20:36	1	P2159.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 20:55	2		DB-624 (60.25) 0.25(mm)
280-116017-8		11/03/2018 21:13	1	P2161.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 21:32	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 21:50	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/03/2018 22:09	1		DB-624 (60.25) 0.25(mm)
CCVC 280-436199/37		11/03/2018 22:27	1	P2165.D	DB-624 (60.25) 0.25(mm)
CCVC 280-436199/38		11/03/2018 22:46	1	P2166.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_P Start Date: 11/05/2018 19:28

Analysis Batch Number: 436409 End Date: 11/06/2018 06:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-436409/1		11/05/2018 19:28	1	P2201.D	DB-624 (60.25) 0.25(mm)
CCV 280-436409/2		11/05/2018 19:53	1	P2202.D	DB-624 (60.25) 0.25(mm)
CCV 280-436409/3		11/05/2018 20:12	1	P2203.D	DB-624 (60.25) 0.25(mm)
MB 280-436409/4		11/05/2018 20:31	1	P2204.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 20:49	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 21:08	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 21:26	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 21:45	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 22:04	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 22:23	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 22:41	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 23:00	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 23:19	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 23:37	40		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/05/2018 23:56	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 00:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 00:33	1		DB-624 (60.25) 0.25(mm)
LCS 280-436409/5		11/06/2018 00:52	1	P2218.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 01:29	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 01:48	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 02:07	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 02:26	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 02:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 03:03	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 03:21	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 03:40	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 03:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 04:17	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 04:36	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/06/2018 04:54	1		DB-624 (60.25) 0.25(mm)
280-116017-1 DL		11/06/2018 05:13	4	P2232.D	DB-624 (60.25) 0.25(mm)
LCSD 280-436409/6		11/06/2018 05:31	1	P2233.D	DB-624 (60.25) 0.25(mm)
CCVC 280-436409/37		11/06/2018 06:09	1	P2235.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VMS_Q Start Date: 11/10/2018 10:21

Analysis Batch Number: 437146 End Date: 11/10/2018 22:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-437146/1		11/10/2018 10:21	1	Q75270.D	DB-624 (60.25) 0.25(mm)
CCV 280-437146/2		11/10/2018 10:30	1	Q75271.D	DB-624 (60.25) 0.25(mm)
CCV 280-437146/3		11/10/2018 10:51	1	Q75272.D	DB-624 (60.25) 0.25(mm)
LCS 280-437146/4		11/10/2018 11:16	1	Q75273.D	DB-624 (60.25) 0.25(mm)
LCSD 280-437146/5		11/10/2018 11:36	1	Q75274.D	DB-624 (60.25) 0.25(mm)
LCS 280-437146/6		11/10/2018 11:57	1	Q75275.D	DB-624 (60.25) 0.25(mm)
LCSD 280-437146/7		11/10/2018 12:17	1	Q75276.D	DB-624 (60.25) 0.25(mm)
MB 280-437146/8		11/10/2018 12:38	1	Q75277.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 12:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 13:19	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 13:40	1		DB-624 (60.25) 0.25(mm)
280-116017-9		11/10/2018 14:01	1	Q75281.D	DB-624 (60.25) 0.25(mm)
280-116017-10		11/10/2018 14:21	1	Q75282.D	DB-624 (60.25) 0.25(mm)
280-116017-11		11/10/2018 14:42	1	Q75283.D	DB-624 (60.25) 0.25(mm)
280-116017-12		11/10/2018 15:02	1	Q75284.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 15:23	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 15:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 16:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 16:25	5		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 16:45	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 17:06	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 17:26	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 17:47	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/10/2018 21:46	1		DB-624 (60.25) 0.25(mm)
CCVC 280-437146/38		11/10/2018 22:06	1	Q75294.D	DB-624 (60.25) 0.25(mm)
CCVC 280-437146/39		11/10/2018 22:27	1	Q75295.D	DB-624 (60.25) 0.25(mm)

Sequence Name: C:\HPCHEM\1\SEQUENCE\110318.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\110318\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: P
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 1206 - 2246
Lims Batch: 436199

RSN 11/5/18

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P2132	BFB	BFB
2	Sample	10	P2133	8260	Blank
3	Sample	11	P2134	8260	CCV
4	Sample	12	P2135	8260	CCV
5	Sample	13	P2136	8260	MB
6	Sample	14	P2137	8260	LCS
7	Sample	15	P2138	8260	LCS
8	Sample	16	P2139	8260	280-116013-B-39 pH<2
9	Sample	17	P2140	8260	280-116013-B-39 MS pH<2
10	Sample	18	P2141	8260	280-116013-D-39 MSD pH<2
11	Sample	19	P2142	8260	280-116013-B-39 MS pH<2
12	Sample	20	P2143	8260	280-116013-D-39 MSD pH<2
13	Sample	21	P2144	8260	280-116013-B-26 pH<2
14	Sample	22	P2145	8260	280-116013-B-41 pH<2
15	Sample	23	P2146	8260	280-116013-C-42 pH<2
16	Sample	24	P2147	8260	280-116013-B-43 pH<2
17	Sample	25	P2148	8260	280-116013-B-44 pH<2
18	Sample	26	P2149	8260	280-116013-D-45 pH<2
19	Sample	27	P2150	8260	280-116013-B-46 pH<2
20	Sample	28	P2151	8260	280-116017-D-1 pH<2 E
21	Sample	29	P2152	8260	280-116017-E-2 pH<2 E
22	Sample	30	P2153	8260	280-116017-E-2 pH<2 5mL
23	Sample	31	P2154	8260	280-116017-A-3 pH<2
24	Sample	32	P2155	8260	280-116017-A-3 pH<2 2mL - DL not needed
25	Sample	33	P2156	8260	280-116017-B-4 pH<2
26	Sample	34	P2157	8260	280-116017-A-5 pH<2
27	Sample	35	P2158	8260	280-116017-A-6 pH<2
28	Sample	36	P2159	8260	280-116017-A-7 pH<2
29	Sample	37	P2160	8260	280-116017-A-7 pH<2 10mL - DL not needed
30	Sample	38	P2161	8260	280-116017-A-8 pH<2
31	Sample	39	P2162	8260	280-116017-A-8 pH<2 10mL - DL not needed
32	Sample	40	P2163	8260	280-116285-A-14 pH 7
33	Sample	41	P2164	8260	280-116285-A-16 pH 7
34	Sample	42	P2165	8260	CCVC
35	Sample	43	P2166	8260	CCVC
36	Sample	44	P2167	8260	Blank
37	Sample	45	P2168	8260	primer

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b

Worklist Name:	110318	Worklist Num:	75808
Instrument:	VMS_P	Method:	AQ_VMSP_8260
Analysis Type:	VOA	Creator:	Newcome, Robin S
Inj Volume:	20	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 436199
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 MB	# 4 MB
# 5 LCS	# 5 LCS
# 6 LCSD	# 6 LCSD
# 7 LCS	# 7 LCS
# 8 280-108595-A-1	# 8 280-108595-A-1
# 9 280-108595-A-2	# 9 280-108595-A-2
# 10 280-108595-A-3	# 10 280-108595-A-3
# 11 280-116013-B-39	# 11 280-116013-B-39
# 12 280-116013-B-39 MS	# 12 280-116013-B-39 MS
# 13 280-116013-D-39 MSD	# 13 280-116013-D-39 MSD
# 14 280-116013-B-39 MS	# 14 280-116013-B-39 MS
# 15 280-116013-D-39 MSD	# 15 280-116013-D-39 MSD
# 16 280-116013-B-26	# 16 280-116013-B-26
# 17 280-116013-B-41	# 17 280-116013-B-41
# 18 280-116013-C-42	# 18 280-116013-C-42
# 19 280-116013-B-43	# 19 280-116013-B-43
# 20 280-116013-B-44	# 20 280-116013-B-44
# 21 280-116013-D-45	# 21 280-116013-D-45
# 22 280-116013-B-46	# 22 280-116013-B-46
# 23 280-116017-D-1	# 23 280-116017-D-1
# 24 280-116017-E-2	# 24 280-116017-E-2
# 25 280-116017-E-2	# 25 280-116017-E-2

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 436199
# 26 280-116017-A-3	# 26 280-116017-A-3
# 27 280-116017-A-3	# 27 280-116017-A-3
# 28 280-116017-B-4	# 28 280-116017-B-4
# 29 280-116017-A-5	# 29 280-116017-A-5
# 30 280-116017-A-6	# 30 280-116017-A-6
# 31 280-116017-A-7	# 31 280-116017-A-7
# 32 280-116017-A-7	# 32 280-116017-A-7
# 33 280-116017-A-8	# 33 280-116017-A-8
# 34 280-116017-A-8	# 34 280-116017-A-8
# 35 280-116285-A-14	# 35 280-116285-A-14
# 36 280-116285-A-16	# 36 280-116285-A-16
# 37 CCVC	# 37 CCVC
# 38 CCVC	# 38 CCVC
# 39 primer	# 39 primer
# 40 Samp 40	# 40 Samp 40

Report Date: 06-Nov-2018 22:18:48 Chrom Revision: 2.3 12-Oct-2018 08:24:28 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 110318 **Worklist Number:** 75808
Instrument Name: VMS_P **Chrom Method:** AQ_VMSP_8260
Purge Volume: 20.00 **Units:** mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181103-75808.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010 **Amount Added:** 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107 **Amount Added:** 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075808-001	# 1 BFB	MV-BFB_00027	BFB	voaWater	1.000	uL	1.000
280-0075808-002	# 2 CCV	MV-568718-D_00010 MV-MegaMainA_00005	CCV	voaWater	20.00	mL	1.000
280-0075808-003	# 3 CCV	MV-Supp A_00031	CCV	voaWater	20.00	mL	1.000
280-0075808-004	# 4 MB		MB	voaWater	20.00	mL	1.000
280-0075808-005	# 5 LCS	MV-MegaMain B_00003	LCS	voaWater	20.00	mL	1.000
280-0075808-006	# 6 LCSD	MV-MegaMain B_00003	LCSD	voaWater	20.00	mL	1.000
280-0075808-007	# 7 LCS	MV-Supp B_00022	LCS	voaWater	20.00	mL	1.000
280-0075808-008	# 8 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0075808-009	# 9 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0075808-010	#10 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0075808-011	#11 280-116013-B-39		Client	voaWater	20.00	mL	1.000
280-0075808-012	#12 280-116013-B-39 MS	MV-MegaMain B_00003	MS	voaWater	20.00	mL	1.000
280-0075808-013	#13 280-116013-D-39 MSD	MV-MegaMain B_00003	MSD	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075808-014	#14 280-116013-B-39 MS	MV-Supp B_00022	MS	voaWater	20.00	mL	1.000
280-0075808-015	#15 280-116013-D-39 MSD	MV-Supp B_00022	MSD	voaWater	20.00	mL	1.000
280-0075808-016	#16 280-116013-B-26		Client	voaWater	20.00	mL	1.000
280-0075808-017	#17 280-116013-B-41		Client	voaWater	20.00	mL	1.000
280-0075808-018	#18 280-116013-C-42		Client	voaWater	20.00	mL	1.000
280-0075808-019	#19 280-116013-B-43		Client	voaWater	20.00	mL	1.000
280-0075808-020	#20 280-116013-B-44		Client	voaWater	20.00	mL	1.000
280-0075808-021	#21 280-116013-D-45		Client	voaWater	20.00	mL	1.000
280-0075808-022	#22 280-116013-B-46		Client	voaWater	20.00	mL	1.000
280-0075808-023	#23 280-116017-D-1		Client	voaWater	20.00	mL	1.000
280-0075808-024	#24 280-116017-E-2		Client	voaWater	20.00	mL	1.000
280-0075808-025	#25 280-116017-E-2		Client	voaWater	20.00	mL	4.000
280-0075808-026	#26 280-116017-A-3		Client	voaWater	20.00	mL	1.000
280-0075808-027	#27 280-116017-A-3		Client	voaWater	20.00	mL	10.00
280-0075808-028	#28 280-116017-B-4		Client	voaWater	20.00	mL	1.000
280-0075808-029	#29 280-116017-A-5		Client	voaWater	20.00	mL	1.000
280-0075808-030	#30 280-116017-A-6		Client	voaWater	20.00	mL	1.000
280-0075808-031	#31 280-116017-A-7		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075808-032	#32 280-116017-A-7		Client	voaWater	20.00	mL	2.000
280-0075808-033	#33 280-116017-A-8		Client	voaWater	20.00	mL	1.000
280-0075808-034	#34 280-116017-A-8		Client	voaWater	20.00	mL	2.000
280-0075808-035	#35 280-116285-A-14		Client	voaWater	20.00	mL	1.000
280-0075808-036	#36 280-116285-A-16		Client	voaWater	20.00	mL	1.000
280-0075808-037	#37 CCVC	MV-MegaMainA_00005	CCVC	voaWater	20.00	mL	1.000
280-0075808-038	#38 CCVC	MV-Supp A_00031	CCVC	voaWater	20.00	mL	1.000
280-0075808-039	#39 primer		Client	voaWater	20.00	mL	1.000
280-0075808-040	#40 Samp 40		Client	voaWater	20.00	mL	1.000

Sample Request Form: 51432

RSN 11/3/18

den_msvoa_totalbacklog 11/3/2018 1:16:07 PM Assigned to:Newcome, Robin S

Sample	Client Sample ID	Container (VOC)	Method	Analytical Method (PH)	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-116013-26	MW-D-344	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	MS-Strge & 235 & Shared Samples In-Transi	Unconfirmed
M Q5										
280-116013-41	MW-S-C	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	235 & Shared Samples In-Transi & MS-Strge	Unconfirmed
M Q5										
280-116013-42	MW-S-313	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	235 & Shared Samples In-Transi & MS-Strge	Unconfirmed
M Q5										
280-116013-43	MW-I-331	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	MS-Strge & 235 & Shared Samples In-Transi	Unconfirmed
M Q5										
280-116013-44	MW-D-349	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	MS-Strge & Shared Samples In-Transi & 235	Unconfirmed
M Q5										
280-116013-45	MW-S-G	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	Shared Samples In-Transi & MS-Strge & 235	Unconfirmed
M Q5										
280-116013-46	MW-S-049	20	8260B_DOD5	8260B_DOD5 <2	11/04 23:59	11/14/18	MAJ	OK	MS-Strge & Shared Samples In-Transi & 235	Unconfirmed
M Q5										
280-116017-1	LF6TW-38_1018	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge & WC Dpt & GC-Strge & 237 MS1 10/30	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-2	LF6TW-36_1018	20/5	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge & 237 & GC-Strge & WC Dpt	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-3	775VMW-19R_1018	20/2	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										

Sample Request Form: 51432

RSN 11/3/18

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-116017-4	775VMW-28_1018	VOA 20	8260B_DOD5	8260B_DOD5 PH <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-5	775VMW-9_1018	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-6	775VMW-10_1018	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-7	775VMW-10_1018-a	20/10	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-8	775VMW-20_1018	20/10	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116017-15	775-AB01_102218	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/09/18	JNI	NY	MS-Strge	Unconfirmed
M Q5 / DIL3 / non-standard spike compounds needed (Diisopropyl Ether)										
280-116285-14 UP	FEW4-MW90-198-12	20	8260B_DOD5	8260B_DOD5 7	11/04 23:59	11/14/18	DRR	WY	MS-Strge	Unconfirmed NS1 11/1
280-116285-16	FEW4-MW92-365-12	20	8260B_DOD5	8260B_DOD5 7	11/04 23:59	11/14/18	DRR	WY	MS-Strge	Unconfirmed

Sequence Name: C:\HPCHEM\1\SEQUENCE\110518pm.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\110518pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: P
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 928 - 0609
Lims Batch: 436409

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

RSN 11/7/18

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P2200	BFB	BFB
2	Sample	100	P2201	BFB	BFB
3	Sample	10	P2202	8260	CCV
4	Sample	11	P2203	8260	CCV
5	Sample	12	P2204	8260	MB
6	Sample	13	P2205	8260	280-115935-F-1 pH<2
7	Sample	14	P2206	8260	280-115935-F-2 pH<2
8	Sample	15	P2207	8260	280-115935-F-3 pH<2 2mL E
9	Sample	16	P2208	8260	280-115935-F-3 pH<2 0.2mL
10	Sample	17	P2209	8260	280-115935-H-4 pH<2 2mL E
11	Sample	18	P2210	8260	280-115935-H-4 pH<2 0.2mL
12	Sample	19	P2211	8260	280-115935-F-5 pH<2 10mL E
13	Sample	20	P2212	8260	280-115935-F-5 pH<2 1mL SS↑
14	Sample	21	P2213	8260	280-115935-F-6 pH<2 5mL SSM E
15	Sample	22	P2214	8260	280-115935-F-6 pH<2 0.5mL
16	Sample	23	P2215	8260	280-115935-H-7 pH<2 SSM
17	Sample	24	P2216	8260	280-115935-F-8 pH<2 SS↑
18	Sample	25	P2217	8260	280-115935-B-9 pH<2
19	Sample	26	P2218	8260	LCS
20	Sample	27	P2219	8260	LCSD
21	Sample	28	P2220	8260	280-116018-A-1 pH<2
22	Sample	29	P2221	8260	280-116018-A-1 pH<2 5mL - not needed
23	Sample	30	P2222	8260	280-116018-A-2 pH<2
24	Sample	31	P2223	8260	280-116018-B-3 pH<2
25	Sample	32	P2224	8260	280-116018-A-3 MS pH<2
26	Sample	33	P2225	8260	280-116018-A-3 MSD pH<2
27	Sample	34	P2226	8260	280-116018-A-4 pH<2
28	Sample	35	P2227	8260	280-116018-B-5 pH<2
29	Sample	36	P2228	8260	280-116018-B-6 pH<2 SS↑
30	Sample	37	P2229	8260	280-115951-A-1 pH<2 SS↑
31	Sample	38	P2230	8260	280-115956-A-1 pH<2
32	Sample	39	P2231	8260	280-116044-A-1 pH<2 SS↑
33	Sample	40	P2232	8260	280-116017-E-1 pH<2 5mL
34	Sample	41	P2233	8260	LCS RR
35	Sample	42	P2234	8260	LCSD RR
36	Sample	43	P2235	8260	CCVC
37	Sample	44	P2236	8260MLE	primer
38	Sample	45	P2237	8260MLE	primer

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b

Worklist Name:	110518pm	Worklist Num:	75863
Instrument:	VMS_P	Method:	AQ_VMSP_8260
Analysis Type:	VOA	Creator:	Newcome, Robin S
Inj Volume:	20	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 436409
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 MB	# 4 MB
# 5 LCS	# 5 LCS
# 6 LCSD	# 6 LCSD
# 7 LCS	# 7 LCS
# 8 280-108595-A-1	# 8 280-108595-A-1
# 9 280-108595-A-2	# 9 280-108595-A-2
# 10 280-108595-A-3	# 10 280-108595-A-3
# 11 280-115935-F-1	# 11 280-115935-F-1
# 12 280-115935-F-2	# 12 280-115935-F-2
# 13 280-115935-F-3	# 13 280-115935-F-3
# 14 280-115935-F-3	# 14 280-115935-F-3
# 15 280-115935-H-4	# 15 280-115935-H-4
# 16 280-115935-H-4	# 16 280-115935-H-4
# 17 280-115935-F-5	# 17 280-115935-F-5
# 18 280-115935-F-5	# 18 280-115935-F-5
# 19 280-115935-F-6	# 19 280-115935-F-6
# 20 280-115935-F-6	# 20 280-115935-F-6
# 21 280-115935-H-7	# 21 280-115935-H-7
# 22 280-115935-F-8	# 22 280-115935-F-8
# 23 280-115935-B-9	# 23 280-115935-B-9
# 24 280-116018-A-1	# 24 280-116018-A-1
# 25 280-116018-A-1	# 25 280-116018-A-1

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 436409
# 26 280-116018-A-2	# 26 280-116018-A-2
# 27 280-116018-B-3	# 27 280-116018-B-3
# 28 280-116018-A-3 MS	# 28 280-116018-A-3 MS
# 29 280-116018-A-3 MSD	# 29 280-116018-A-3 MSD
# 30 280-116018-A-4	# 30 280-116018-A-4
# 31 280-116018-B-5	# 31 280-116018-B-5
# 32 280-116018-B-6	# 32 280-116018-B-6
# 33 280-115951-A-1	# 33 280-115951-A-1
# 34 280-115956-A-1	# 34 280-115956-A-1
# 35 280-116044-A-1	# 35 280-116044-A-1
# 36 280-116017-E-1	# 36 280-116017-E-1
# 37 CCVC	# 37 CCVC
# 38 Samp 38	# 38 Samp 38
# 39 Samp 39	# 39 Samp 39

TestAmerica Laboratories
Worklist Report

Worklist Name: 110518pm
Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181105-75863.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010
Run Reagent: MV-ARCH SS A_00107

Worklist Number: 75863
Chrom Method: AQ_VMSP_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075863-001	# 1 BFB	MV-BFB_00027	BFB	voaWater	1.000	uL	1.000
280-0075863-002	# 2 CCV	MV-568718-D_00010 MV-MegaMainA_00005	CCV	voaWater	20.00	mL	1.000
280-0075863-003	# 3 CCV	MV-Supp A_00031	CCV	voaWater	20.00	mL	1.000
280-0075863-004	# 4 MB		MB	voaWater	20.00	mL	1.000
280-0075863-005	# 5 LCS	MV-MegaMain B_00003	LCS	voaWater	20.00	mL	1.000
280-0075863-006	# 6 LCSD	MV-MegaMain B_00003	LCSD	voaWater	20.00	mL	1.000
280-0075863-007	# 7 LCS	MV-Supp B_00022	LCS	voaWater	20.00	mL	1.000
280-0075863-008	# 8 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0075863-009	# 9 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0075863-010	#10 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0075863-011	#11 280-115935-F-1		Client	voaWater	20.00	mL	1.000
280-0075863-012	#12 280-115935-F-2		Client	voaWater	20.00	mL	1.000
280-0075863-013	#13 280-115935-F-3		Client	voaWater	20.00	mL	10.00

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075863-014	#14 280-115935-F-3		Client	voaWater	20.00	mL	100.0
280-0075863-015	#15 280-115935-H-4		Client	voaWater	20.00	mL	10.00
280-0075863-016	#16 280-115935-H-4		Client	voaWater	20.00	mL	100.0
280-0075863-017	#17 280-115935-F-5		Client	voaWater	20.00	mL	2.000
280-0075863-018	#18 280-115935-F-5		Client	voaWater	20.00	mL	20.00
280-0075863-019	#19 280-115935-F-6		Client	voaWater	20.00	mL	4.000
280-0075863-020	#20 280-115935-F-6		Client	voaWater	20.00	mL	40.00
280-0075863-021	#21 280-115935-H-7		Client	voaWater	20.00	mL	1.000
280-0075863-022	#22 280-115935-F-8		Client	voaWater	20.00	mL	1.000
280-0075863-023	#23 280-115935-B-9		Client	voaWater	20.00	mL	1.000
280-0075863-024	#24 280-116018-A-1		Client	voaWater	20.00	mL	1.000
280-0075863-025	#25 280-116018-A-1		Client	voaWater	20.00	mL	4.000
280-0075863-026	#26 280-116018-A-2		Client	voaWater	20.00	mL	1.000
280-0075863-027	#27 280-116018-B-3		Client	voaWater	20.00	mL	1.000
280-0075863-028	#28 280-116018-A-3 MS	MV-MegaMain B_00003	MS	voaWater	20.00	mL	1.000
280-0075863-029	#29 280-116018-A-3 MSD	MV-MegaMain B_00003	MSD	voaWater	20.00	mL	1.000
280-0075863-030	#30 280-116018-A-4		Client	voaWater	20.00	mL	1.000
280-0075863-031	#31 280-116018-B-5		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075863-032	#32 280-116018-B-6		Client	voaWater	20.00	mL	1.000
280-0075863-033	#33 280-115951-A-1		Client	voaWater	20.00	mL	1.000
280-0075863-034	#34 280-115956-A-1		Client	voaWater	20.00	mL	1.000
280-0075863-035	#35 280-116044-A-1		Client	voaWater	20.00	mL	1.000
280-0075863-036	#36 280-116017-E-1		Client	voaWater	20.00	mL	1.000
280-0075863-037	#37 CCVC	MV-MegaMainA_00005	CCVC	voaWater	20.00	mL	1.000
280-0075863-038	#38 Samp 38		Client	voaWater	20.00	mL	1.000
280-0075863-039	#39 Samp 39		Client	voaWater	20.00	mL	1.000

Sample Request Form: 51462

RSN 11/5/18

den_msvoa_totalbacklog 11/5/2018 8:12:14 PM Assigned to: Newcome, Robin S

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-115935-1	MW119x05-1804	VOA 20	8260B_DOD5	8260B_DOD5 PH <2	11/05 23:59	11/08/18	PJM	CA	MS-Strge & Mtls-Strge & 229 & GC-Strge	Unconfirmed H 10/26
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-2	MW1P1x14-1804	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	MS-Strge & Mtls-Strge & 229 & GC-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-3	MW2032x36-1804	2/0.2	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	GC-Strge & MS-Strge & Mtls-Strge & 229	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-4	MW2032x36-1804 B	2/0.2	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	GC-Strge & 229 & Mtls-Strge & MS-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-5	MW2033Ax36-1804	10/1	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	Mtls-Strge & MS-Strge & GC-Strge & 229	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-6	MW2063x36-1804	5/0.5	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	MS-Strge & Mtls-Strge & 229 & GC-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-7	MW2065x36-1804	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	GC-Strge & 229 & MS-Strge & Mtls-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-8	MW223x37-1804	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	229 & GC-Strge & Mtls-Strge & MS-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										
280-115935-9	TB102218-1804	20	8260B_DOD5	8260B_DOD5 <2	11/05 23:59	11/08/18	PJM	CA	MS-Strge & GC-Strge	Unconfirmed
M Q5/DIL1_Std variances Nov12 2013 ok_DF										

Sample Request Form: 51467

RSN 11/5/18

P

den_msvoa_totalbacklog 11/5/2018 10:50:21 PM Assigned to:Newcome, Robin S

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-116018-1	18-SW146	VOA 20/5	8260B_DOD5	8260B_DOD5 PH <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed MS 1 10/30
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-2	18-SW148	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-3	18-SW150	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-3MS	18-SW150	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-3MSD	18-SW150	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-4	18-SW152	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-5	18-SW154	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										
280-116018-6	18-SW156	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/10/18	PJM	OH	MS-Strge	Unconfirmed
M Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.										

Sample Request Form: 51471

RSN 11/5/18

P

den_msvoa_totalbacklog 11/5/2018 11:41:54 PM Assigned to:Newcome, Robin S

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-115951-1	TB-S9-221018-01	20	8260B_DOD5	8260B_DOD5	11/05 23:59	11/08/18	DFB	NM	GC-Use & GC-Strge	Unconfirmed
S limited Volume - only 1 HCL vial for VOCs and 1 HCL vial for GRO										
280-115956-1	TB-S5-221018-01	20	8260B_DOD5	8260B_DOD5	11/05 23:59	11/08/18	DFB	NM	MS-Strge & GC-Strge	Unconfirmed

VOC

PH

<2

<2

Water

116017-1 @ 5mL

PH <2

Sample Request Form: 51472

RSN 11/5/18

P

den_msvoa_totalbacklog 11/5/2018 11:42:56 PM Assigned to:Newcome, Robin S

Sample	Client Sample ID	Container (Vol)	Method	Analytical Method (PH)	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-116044-1	TB-S5-231018-01	20	8260B_DOD5	8260B_DOD5 <2	11/06 23:59	11/09/18	DFB	NM	MS-Strge & GC-Strge	Unconfirmed
280-116044-6	TB-S5-231018-02	20	8260B_DOD5	8260B_DOD5	11/06 23:59	11/09/18	DFB	NM	GC-Strge & MS-Strge	Unconfirmed

Broken Vial

Sequence Name: C:\HPCHEM\1\SEQUENCE\081618I.S
Comment:
Operator: SEIFERTJ
Data Path: C:\HPCHEM\1\DATA\081618I\
Pre-Seq Cmd:
Post-Seq Cmd:

Main + Supp

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Test Ame... Denver
Instrument: 1-Water
(Circle)
Purge Volume: 20mL/5mL/5g)
(Circle)
Tune Time: 1934 - 0328
426490

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	100	P9151	BFB	BFB 1934
2 Sample	10	P9152	8260	STD003
3 Sample	11	P9153	8260	STD010
4 Sample	12	P9154	8260	STD020
5 Sample	13	P9155	8260	STD050
6 Sample	14	P9156	8260	ICIS
7 Sample	15	P9157	8260	STD30
8 Sample	16	P9158	8260	STD60
9 Sample	17	P9159	8260	ICV
10 Sample	18	P9160	8260	280-112822-c-2 2mL PH<2
11 Sample	19	P9161	8260	280-112822-c-2 10mL PH<2 F
12 Sample	20	P9162	8260	280-112822-c-2 2ML PH<2
13 Sample	21	P9163	8260	280-112822-b-5 PH<2
14 Sample	22	P9164	8260	280-112822-C-6 5mL PH<2
15 Sample	23	P9165	8260	280-112822-B-7 PH<2
16 Sample	24	P9166	8260	280-112822-c-2 1mL PH<2
17 Sample	25	P9167	8260	BLK
18 Sample	26	P9168	8260	LCS
19 Sample	27	P9169	8260	MB
20 Sample	28	P9170	8260	STD010
21 Sample	29	P9171	8260	STD020
22 Sample	30	P9172	8260	STD050
23 Sample	31	P9173	8260	STD10
24 Sample	32	P9174	8260	STD30
25 Sample	33	P9175	8260	STD60
26 Sample	34	P9176	8260	ICV 0328
27 Sample	35	P9177	8260	280-112822-c-6 5mL PH<2
28 Sample	36	P9178	8260	BLK
29 Sample	37	P9179	8260	PRIMER
30 Sample	38	P9180	8260	PRIMER
31 Sample	39	P9181	8260	STD060

WL 73127

Calib: 33398 M

ICIS: 14

ICV 17

Calib: 33399 S

ICV: 24

Hexachlorobutadiene E Flag on ICV

0328

1st JK 8/17/18

DL 6/16/19

TestAmerica Laboratories
Worklist Report

Worklist Name: 081618pl Worklist Number: 73127
Instrument Name: VMS_P Chrom Method: AQ_VMSP_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-ARCH SS A_00098 Amount Added: 0.800, Units: uL
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0073127-002	# 2 CCV	MV-2cleve+AVA_00036 MV-Main A_00037 MV-Gas/Ket A_00075	CCV		voaWater	20.00	mL	1.000
280-0073127-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0073127-004	# 4 LCS	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCS		voaWater	20.00	mL	1.000
280-0073127-005	# 5 LCSD	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCSD		voaWater	20.00	mL	1.000
280-0073127-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0073127-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0073127-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0073127-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0073127-010	#10 STD003	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	1	voaWater	20.00	mL	1.000
280-0073127-011	#11 STD010	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-012	#12 STD020	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	3	voaWater	20.00	mL	1.000
280-0073127-013	#13 STD050	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	4	voaWater	20.00	mL	1.000
280-0073127-014	#14 ICIS	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	ICIS	5	voaWater	20.00	mL	1.000
280-0073127-015	#15 STD30	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	6	voaWater	20.00	mL	1.000
280-0073127-016	#16 STD60	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	7	voaWater	20.00	mL	1.000
280-0073127-017	#17 ICV	MV-SS 2-Cleve_00046 MV-Main B_00022 MV-Gas/Ket B_00044 MV-568718-D_00010 MV-ARCH SS A_00102	ICV		voaWater	20.00	mL	1.000
280-0073127-018	#18 STD010	MV-Supp A_00032 MV-568718-D_00010	IC	2	voaWater	20.00	mL	1.000
280-0073127-019	#19 STD020	MV-Supp A_00032 MV-568718-D_00010	IC	3	voaWater	20.00	mL	1.000
280-0073127-020	#20 STD050	MV-Supp A_00032 MV-568718-D_00010	IC	4	voaWater	20.00	mL	1.000
280-0073127-021	#21 STD10	MV-Supp A_00032 MV-568718-D_00010	IC	5	voaWater	20.00	mL	1.000
280-0073127-022	#22 STD30	MV-Supp A_00032 MV-568718-D_00010	IC	6	voaWater	20.00	mL	1.000
280-0073127-023	#23 STD60	MV-Supp A_00032 MV-568718-D_00010	IC	7	voaWater	20.00	mL	1.000
280-0073127-024	#24 ICV	MV-Supp B_00021 MV-568718-D_00010	ICV		voaWater	20.00	mL	1.000
280-0073127-025	#25 280-112822-C-2		Client		voaWater	20.00	mL	2.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-026	#26 280-112822-C-2		Client		voaWater	20.00	mL	10.00
280-0073127-029	#29 280-112822-C-2		Client		voaWater	20.00	mL	20.00
280-0073127-027	#27 280-112822-B-5		Client		voaWater	20.00	mL	1.000
280-0073127-028	#28 280-112822-C-6		Client		voaWater	20.00	mL	1.000
280-0073127-030	#30 280-112822-B-7		Client		voaWater	20.00	mL	1.000
280-0073127-031	#31 primer		Client		voaWater	20.00	mL	1.000
280-0073127-032	#32 primer		Client		voaWater	20.00	mL	1.000

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b

Worklist Name:	102018I	Worklist Num:	75312
Instrument:	VMS_Q	Method:	AQ_VMSQ_8260
Analysis Type:	VOA	Creator:	Meier, Greg P
Inj Volume:	20	Inj Vol Units:	mL

QC Batching: Disabled Limit Group Batching: Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 434257
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 LCS	# 6 LCS
# 7 LCSD	# 7 LCSD
# 8 MB	# 8 MB
# 9 280-108595-A-1	# 9 280-108595-A-1
# 10 280-108595-A-2	# 10 280-108595-A-2
# 11 280-108595-A-3	# 11 280-108595-A-3
# 13 STD010	# 13 STD010
# 14 STD020	# 14 STD020
# 15 STD050	# 15 STD050
# 16 ICIS	# 16 ICIS
# 17 STD30	# 17 STD30
# 18 STD60	# 18 STD60
# 19 ICV	# 19 ICV

TestAmerica Laboratories
Worklist Report

Worklist Name: 102018I
Instrument Name: VMS_Q
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_Q\20181020-75312.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_Q
Run Reagent: MV-568718-D_00008
Run Reagent: MV-ARCH SS A_00101

Worklist Number: 75312
Chrom Method: AQ_VMSQ_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.840, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075312-001	# 1 BFB	MV-BFB_00027	BFB		voaWater	1.000	uL	1.000
280-0075312-002	# 2 CCV	MV-568718-D_00008 MV-Main A_00037 MV-2cleve+AVA_00037 MV-Gas/Ket A_00076	CCV		voaWater	20.00	mL	1.000
280-0075312-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0075312-004	# 4 LCS	MV-Main B_00022 MV-Gas/Ket B_00043	LCS		voaWater	20.00	mL	1.000
280-0075312-005	# 5 LCSD	MV-Main B_00022 MV-Gas/Ket B_00043	LCSD		voaWater	20.00	mL	1.000
280-0075312-006	# 6 LCS		LCS		voaWater	20.00	mL	1.000
280-0075312-007	# 7 LCSD		LCSD		voaWater	20.00	mL	1.000
280-0075312-008	# 8 MB		MB		voaWater	20.00	mL	1.000
280-0075312-009	# 9 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0075312-010	#10 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0075312-011	#11 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0075312-013	#13 STD010	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	IC	1	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075312-014	#14 STD020	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	IC	2	voaWater	20.00	mL	1.000
280-0075312-015	#15 STD050	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	IC	3	voaWater	20.00	mL	1.000
280-0075312-016	#16 ICIS	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	ICIS	4	voaWater	20.00	mL	1.000
280-0075312-017	#17 STD30	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	IC	5	voaWater	20.00	mL	1.000
280-0075312-018	#18 STD60	MV-568718-D_00008 MV-ARCH SS A_00101 MV-Supp A_00031	IC	6	voaWater	20.00	mL	1.000
280-0075312-019	#19 ICV	MV-Supp B_00022	ICV		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\102218pm.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\102218pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Main/Surr - Water

Test America Denver

Instrument: GC/MS - Water
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Tune Time: 21:54 - 01:12 (Circle)
Lims Batch: 434433
WL 75358

Line	Type	Vial	DataFile	Method	Sample Name	
1	Sample	100	P1523	BFB	BFB	
2	Sample	100	P1524	BFB	BFB	
3	Sample	100	P1525	BFB	BFB	
4	Sample	10	P1526	8260	Blank	restart
5	Sample	11	P1527	8260	CCV	
6	Sample	12	P1528	8260	CCV	
7	Sample	100	P1529	BFB	BFB	
8	Sample	100	P1530	BFB	BFB	21:54
9	Sample	10	P1531	8260	Blank	
10	Sample	11	P1532	8260	STD005	
11	Sample	12	P1533	8260	STD01	
12	Sample	13	P1534	8260	STD02	
13	Sample	14	P1535	8260	STD05	
14	Sample	15	P1536	8260	ICIS	
15	Sample	16	P1537	8260	STD25	
16	Sample	17	P1538	8260	STD60	
17	Sample	18	P1539	8260	Blank	
18	Sample	19	P1540	8260	ICV	01:12
19	Sample	20	P1541	8260	Blank	
20	Sample	21	P1542	8260	280-115153-E-1 DQR	DNR
21	Sample	22	P1543	8260	280-115153-E-2 DQR	
22	Sample	23	P1544	8260	280-115153-E-6 DQR	

Calib: 34114

ICIS: 14 ICV: 17

10/23/18

RSN 10/23/18

Preliminary Report

TestAmerica Laboratories
QC Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b
Worklist Name: 102218pm
Instrument: VMS_P
Analysis Type: VOA
Inj Volume: 20
Worklist Num: 75358
Method: AQ_VMSP_8260
Creator: Newcome, Robin S
Inj Vol Units: mL

QC Batching: Disabled
Limit Group Batching: Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 434433
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
# 10 STD005	# 10 STD005
# 11 STD01	# 11 STD01
# 12 STD02	# 12 STD02
# 13 STD05	# 13 STD05
# 14 ICIS	# 14 ICIS
# 15 STD25	# 15 STD25
# 16 STD60	# 16 STD60
# 17 ICV	# 17 ICV
# 18 280-115153-E-1	# 18 280-115153-E-1
# 19 280-115153-E-2	# 19 280-115153-E-2
# 20 280-115153-E-6	# 20 280-115153-E-6
# 21 primer	# 21 primer
# 22 primer	# 22 primer

TestAmerica Laboratories
Worklist Report

Worklist Name: 102218pm
Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010
Run Reagent: MV-ARCH SS A_00107

Worklist Number: 75358
Chrom Method: AQ_VMSP_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075358-001	# 1 BFB	MV-BFB_00027	BFB		voaWater	1.000	uL	1.000
280-0075358-002	# 2 CCV	MV-568718-D_00010 MV-MegaMainA_00002	CCV		voaWater	20.00	mL	1.000
280-0075358-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0075358-004	# 4 LCS	MV-MegaMain B_00002	LCS		voaWater	20.00	mL	1.000
280-0075358-005	# 5 LCSD	MV-MegaMain B_00002	LCSD		voaWater	20.00	mL	1.000
280-0075358-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0075358-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0075358-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0075358-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0075358-010	#10 STD005	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	1	voaWater	20.00	mL	1.000
280-0075358-011	#11 STD01	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	2	voaWater	20.00	mL	1.000
280-0075358-012	#12 STD02	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	3	voaWater	20.00	mL	1.000
280-0075358-013	#13 STD05	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075358-014	#14 ICIS	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCHIVSSA_00107	ICIS	5	voaWater	20.00	mL	1.000
280-0075358-015	#15 STD25	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCHIVSSA_00107	IC	6	voaWater	20.00	mL	1.000
280-0075358-016	#16 STD60	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCHIVSSA_00107	IC	7	voaWater	20.00	mL	1.000
280-0075358-017	#17 ICV	MV-568718-D_00010 MV-MegaMainB_00002 MV-MainBaddon_00001 MV-ARCHIVSSA_00107	ICV		voaWater	20.00	mL	1.000
280-0075358-018	#18 280-115153-E-1		Client		voaWater	20.00	mL	1.000
280-0075358-019	#19 280-115153-E-2		Client		voaWater	20.00	mL	1.000
280-0075358-020	#20 280-115153-E-6		Client		voaWater	20.00	mL	1.000
280-0075358-021	#21 primer		Client		voaWater	20.00	mL	1.000
280-0075358-022	#22 primer		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\102318i.S
Comment:
Operator: meierg
Data Path: C:\HPCHEM\1\DATA\102318i\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: Q
DV-MS-0010 (8260/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 1257 - 0052
Lims Batch: 434575

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	Q74632	BFB	bfb
2	Sample	1	Q74633	8260	ccv
3	Sample	2	Q74634	8260	ic
4	Sample	3	Q74635	8260	ic
5	Sample	4	Q74636	8260	ic
6	Sample	5	Q74637	8260	ic
7	Sample	6	Q74638	8260	icis
8	Sample	7	Q74639	8260	ic
9	Sample	8	Q74640	8260	ic
10	Sample	9	Q74641	8260	blk
11	Sample	10	Q74642	8260	icv
12	Sample	11	Q74643	8260	~~lcs~~ ICV SS
13	Sample	12	Q74644	8260	mb
14	Sample	13	Q74645	8260	lcs
15	Sample	14	Q74646	8260	lcs > PENTACHLOROETHANE
16	Sample	15	Q74647	8260	lcsd
17	Sample	16	Q74648	8260	280-115354-A-2 ph<2
18	Sample	17	Q74649	8260	280-115354-A-5 ph<2
19	Sample	18	Q74650	8260	310-141459-M-1 ph=7
20	Sample	19	Q74651	8260	310-141459-N-2 ph=7
21	Sample	20	Q74652	8260	310-141459-O-3 ph=7
22	Sample	21	Q74653	8260	310-141570-P-4 ph<2
23	Sample	22	Q74654	8260	160-31282-B-2 ph<2 VIS
24	Sample	23	Q74655	8260	160-31282-B-3 ph<2 VIS > NCM
25	Sample	24	Q74656	8260	160-31282-J-1 4x ph<2 VIS
26	Sample	25	Q74657	8260	310-141580-R-1 ph=7
27	Sample	26	Q74658	8260	280-115390-E-11 ph<2
28	Sample	27	Q74659	8260	160-31282-A-4 ph<2
29	Sample	28	Q74660	8260	280-115420-B-7 ph<2
30	Sample	29	Q74661	8260	280-115420-C-8 ph<2
31	Sample	30	Q74662	8260	280-115420-A-8 ms ph<2
32	Sample	31	Q74663	8260	280-115420-A-8 msd ph<2
33	Sample	32	Q74664	8260	280-115420-A-9 ph<2
34	Sample	33	Q74665	8260	ccvc
35	Sample	34	Q74666	8260	blk
36	Sample	35	Q74667	8260	blk
37	Sample	36	Q74668	8260	280-115454-C-1
38	Sample	37	Q74669	8260	280-115454-C-2
39	Sample	38	Q74670	8260	280-115454-A-3
40	Sample	39	Q74671	8260	280-115454-A-4
41	Sample	40	Q74672	8260	280-115901-D-23

SCREENS DMR

10/24/18

TestAmerica Laboratories
Worklist Report

Worklist Name: 102318I
Instrument Name: VMS_Q
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_Q\20181023-75389.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_Q
Run Reagent: MV-568718-D_00008
Run Reagent: MV-ARCH SS A_00101

Worklist Number: 75389
Chrom Method: AQ_VMSQ_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.720, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075389-001	# 1 BFB	MV-BFB_00027	BFB		voaWater	1.000	uL	1.000
280-0075389-002	# 2 CCV	MV-568718-D_00008 MV-MegaMainA_00002	CCV		voaWater	20.00	mL	1.000
280-0075389-003	# 3 CCV	mv-Pentachlor_00011 MV-568718-D_00008	CCV		voaWater	20.00	mL	1.000
280-0075389-004	# 4 LCS	MV-MegaMain B_00002	LCS		voaWater	20.00	mL	1.000
280-0075389-005	# 5 LCSD	MV-MegaMain B_00002	LCSD		voaWater	20.00	mL	1.000
280-0075389-006	# 6 LCS	mv-pentachloB_00009	LCS		voaWater	20.00	mL	1.000
280-0075389-007	# 7 LCSD	mv-pentachloB_00009	LCSD		voaWater	20.00	mL	1.000
280-0075389-008	# 8 MB		MB		voaWater	20.00	mL	1.000
280-0075389-009	# 9 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0075389-010	#10 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0075389-011	#11 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0075389-012	#12 STD005	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	1	voaWater	20.00	mL	1.000
280-0075389-013	#13 STD010	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075389-014	#14 STD020	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	3	voaWater	20.00	mL	1.000
280-0075389-015	#15 STD050	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	4	voaWater	20.00	mL	1.000
280-0075389-016	#16 ICIS	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	ICIS	5	voaWater	20.00	mL	1.000
280-0075389-017	#17 STD30	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	6	voaWater	20.00	mL	1.000
280-0075389-018	#18 STD60	MV-568718-D_00008 MV-MegaMainA_00002 MV-ARCH SS A_00101	IC	7	voaWater	20.00	mL	1.000
280-0075389-019	#19 ICV	MV-MegaMain B_00002 MV-MainBaddon_00001 MV-568718-D_00008	ICV		voaWater	20.00	mL	1.000
280-0075389-045	#45 ICV	MV-568718-D_00008 MV-ARCH SS A_00101	ICV		voaWater	20.00	mL	1.000
280-0075389-020	#20 280-115354-A-2		Client		voaWater	20.00	mL	1.000
280-0075389-021	#21 280-115354-A-5		Client		voaWater	20.00	mL	1.000
280-0075389-022	#22 310-141459-M-1		Client		voaWater	20.00	mL	1.000
280-0075389-023	#23 310-141459-N-2		Client		voaWater	20.00	mL	1.000
280-0075389-024	#24 310-141459-O-3		Client		voaWater	20.00	mL	1.000
280-0075389-025	#25 310-141570-P-4		Client		voaWater	20.00	mL	1.000
280-0075389-026	#26 160-31282-B-2		Client		voaWater	20.00	mL	1.000
280-0075389-027	#27 160-31282-B-3		Client		voaWater	20.00	mL	1.000
280-0075389-028	#28 160-31282-J-1		Client		voaWater	20.00	mL	4.000
280-0075389-029	#29 310-141580-R-1		Client		voaWater	20.00	mL	1.000
280-0075389-030	#30 280-115390-E-11		Client		voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075389-031	#31 160-31282-A-4		Client		voaWater	20.00	mL	1.000
280-0075389-032	#32 280-115420-B-7		Client		voaWater	20.00	mL	1.000
280-0075389-033	#33 280-115420-C-8		Client		voaWater	20.00	mL	1.000
280-0075389-034	#34 280-115420-A-8 MS	MV-MegaMain B_00002	MS		voaWater	20.00	mL	1.000
280-0075389-035	#35 280-115420-A-8 MSD	MV-MegaMain B_00002	MSD		voaWater	20.00	mL	1.000
280-0075389-036	#36 280-115420-A-9		Client		voaWater	20.00	mL	1.000
280-0075389-037	#37 ccvc	MV-MegaMainA_00002	CCVC		voaWater	20.00	mL	1.000
280-0075389-038	#38 280-115454-C-1		Client		voaWater	20.00	mL	1.000
280-0075389-039	#39 280-115454-C-2		Client		voaWater	20.00	mL	1.000
280-0075389-040	#40 280-115454-A-3		Client		voaWater	20.00	mL	1.000
280-0075389-041	#41 280-115454-A-4		Client		voaWater	20.00	mL	1.000
280-0075389-042	#42 280-115901-D-23		Client		voaWater	20.00	mL	1.000
280-0075389-043	#43 Samp 43		Client		voaWater	20.00	mL	1.000

den_msvoa_totalbacklog 10/23/2018 6:06:33 PM Assigned to:Meier, Greg P

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
160-31282-1 4X	C47-LAA-MW-09Q A-100918	2	8260B_DO D5	8260B_DOD5	10/23 23:59	10/31/18	PJM	IL	164 & MS-Strge	Unconfirmed
M Q5.0_ Variance approved										
160-31282-2 20	C47-LAA-MW-04Q A-100918	2	8260B_DO D5	8260B_DOD5	10/23 23:59	10/31/18	PJM	IL	MS-Strge	Unconfirmed
M Q5.0_ Variance approved										
160-31282-3 20	C47-LAA-MW-04Q A-100918FD	2	8260B_DO D5	8260B_DOD5	10/23 23:59	10/31/18	PJM	IL	MS-Strge	Unconfirmed
M Q5.0_ Variance approved										
160-31282-4 20	TB-101018-01	2	8260B_DO D5	8260B_DOD5	10/24 23:59	10/31/18	PJM	IL	MS-Strge	Unconfirmed
M Q5.0_ Variance approved										
280-115354-2 20	1808-MW4(100918)	2	8260B_DO D5	8260B_DOD5	10/23 23:59	10/22/18	DRR	NJ	MS-Strge	Unconfirmed
M Q5REV572014_DIL1_ DF_full spike list										
280-115354-5 20	TRIP BLANK	2	8260B_DO D5	8260B_DOD5	10/23 23:59	10/22/18	DRR	NJ	MS-Strge	Unconfirmed
M Q5REV572014_DIL1_ DF_full spike list										
280-115390-11 20	EB044	2	8260B_DO D5	8260B_DOD5	10/24 23:59	10/23/18	JNI	TX	GC-Strge & MS-Strge & E006 & MS-Strge	Unconfirmed
M Q5/TRRP/DIL1										
280-115420-7 20	EM4	2	8260B_DO D5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-8 20	OLFMW15	2	8260B_DO D5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-8MS 20	OLFMW15MS	2	8260B_DO D5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										

Sample Request Form: 51083

den_msvoa_totalbacklog 10/23/2018 6:06:33 PM Assigned to:Meier, Greg P

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-115420-8MSD	OLFMW15MSD	2	8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-9	EM8	2	8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-10	EM8FD		8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-11	EM12	DID NOT RUN	8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-12	OLFMW21		8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
280-115420-13	OLFMW21FD		8260B_DOD5	8260B_DOD5	10/24 23:59	10/29/18	DRR	CO	MS-Strge	Unconfirmed
M Q5.1/DIL3										
310-141459-1	Pond 2		8260B	8260B	10/23 23:59	10/29/18	ZTB	ND	162 & MS-Strge	Unconfirmed
310-141459-2	Pond 8		8260B	8260B	10/23 23:59	10/29/18	ZTB	ND	162 & MS-Strge	Unconfirmed
310-141459-3	Pond Dup		8260B	8260B	10/23 23:59	10/29/18	ZTB	ND	162 & MS-Strge	Unconfirmed
310-141570-4	Pond FB		8260B	8260B	10/23 23:59	10/30/18	ZTB	ND	MS-Strge & 163	Unconfirmed
310-141580-1	Pond 5		8260B	8260B	10/24 23:59	10/30/18	ZTB	ND	MS-Strge & 163	Unconfirmed

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 426490 Batch Start Date: 08/16/18 19:34 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-BFB 00026	MV-Supp A 00032	MV-Supp B 00021
BFB 280-426490/1		8260B		1 uL	1 uL		1 uL		
STD010 280-426490/18 IC		8260B		20 mL	20 mL	1 uL		0.5 uL	
STD020 280-426490/19 IC		8260B		20 mL	20 mL	1 uL		1 uL	
STD050 280-426490/20 IC		8260B		20 mL	20 mL	1 uL		2.5 uL	
STD10 280-426490/21 IC		8260B		20 mL	20 mL	1 uL		5 uL	
STD30 280-426490/22 IC		8260B		20 mL	20 mL	1 uL		15 uL	
STD60 280-426490/23 IC		8260B		20 mL	20 mL	1 uL		30 uL	
ICV 280-426490/24		8260B		20 mL	20 mL	1 uL			5 uL

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434393 Batch Start Date: 10/22/18 11:34 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-ARCH SS A 00101	MV-BFB 00027	MV-MainBaddon 00001
BFB 280-434393/1		8260B		1 uL	1 uL			1 uL	
STD005 280-434393/12 IC		8260B		20 mL	20 mL	1 uL			
STD010 280-434393/13 IC		8260B		20 mL	20 mL	1 uL			
STD020 280-434393/14 IC		8260B		20 mL	20 mL	1 uL			
STD050 280-434393/15 IC		8260B		20 mL	20 mL	1 uL			
ICIS 280-434393/16		8260B		20 mL	20 mL	1 uL			
STD30 280-434393/17 IC		8260B		20 mL	20 mL	1 uL			
STD60 280-434393/18 IC		8260B		20 mL	20 mL	1 uL			
ICV 280-434393/19		8260B		20 mL	20 mL	1 uL	0.84 uL		5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
BFB 280-434393/1		8260B							
STD005 280-434393/12 IC		8260B			0.2 uL				
STD010 280-434393/13 IC		8260B			0.4 uL				
STD020 280-434393/14 IC		8260B			0.8 uL				
STD050 280-434393/15 IC		8260B			2 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434393 Batch Start Date: 10/22/18 11:34 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
ICIS 280-434393/16		8260B			4 uL				
STD30 280-434393/17 IC		8260B			10 uL				
STD60 280-434393/18 IC		8260B			24 uL				
ICV 280-434393/19		8260B		4 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434433 Batch Start Date: 10/22/18 21:54 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-MainBaddon 00001
BFB 280-434433/1		8260B		1 uL	1 uL			1 uL	
STD005 280-434433/10 IC		8260B		20 mL	20 mL	1 uL	0.04 uL		
STD01 280-434433/11 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD02 280-434433/12 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD05 280-434433/13 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-434433/14		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD25 280-434433/15 IC		8260B		20 mL	20 mL	1 uL	2 uL		
STD60 280-434433/16 IC		8260B		20 mL	20 mL	1 uL	4 uL		
ICV 280-434433/17		8260B		20 mL	20 mL	1 uL	0.8 uL		4 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
BFB 280-434433/1		8260B							
STD005 280-434433/10 IC		8260B			0.2 uL				
STD01 280-434433/11 IC		8260B			0.4 uL				
STD02 280-434433/12 IC		8260B			0.8 uL				
STD05 280-434433/13 IC		8260B			2 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434433 Batch Start Date: 10/22/18 21:54 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
ICIS 280-434433/14		8260B			4 uL				
STD25 280-434433/15 IC		8260B			10 uL				
STD60 280-434433/16 IC		8260B			24 uL				
ICV 280-434433/17		8260B		4 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434575 Batch Start Date: 10/23/18 12:57 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-ARCH SS A 00101	MV-BFB 00027	MV-MainBaddon 00001
BFB 280-434575/1		8260B		1 uL	1 uL			1 uL	
STD005 280-434575/12 IC		8260B		20 mL	20 mL	1 uL	0.04 uL		
STD010 280-434575/13 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD020 280-434575/14 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD050 280-434575/15 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-434575/16		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD30 280-434575/17 IC		8260B		20 mL	20 mL	1 uL	2.4 uL		
STD60 280-434575/18 IC		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-434575/19		8260B		20 mL	20 mL	1 uL			5 uL
ICV 280-434575/45		8260B		20 mL	20 mL	1 uL	0.72 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
BFB 280-434575/1		8260B							
STD005 280-434575/12 IC		8260B			0.2 uL				
STD010 280-434575/13 IC		8260B			0.4 uL				
STD020 280-434575/14 IC		8260B			0.8 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 434575 Batch Start Date: 10/23/18 12:57 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
STD050 280-434575/15 IC		8260B			2 uL				
ICIS 280-434575/16		8260B			4 uL				
STD30 280-434575/17 IC		8260B			10 uL				
STD60 280-434575/18 IC		8260B			24 uL				
ICV 280-434575/19		8260B		4 uL					
ICV 280-434575/45		8260B							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436199 Batch Start Date: 11/03/18 12:06 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-MegaMain B 00003
BFB 280-436199/1		8260B		1 uL	1 uL			1 uL	
CCV 280-436199/2		8260B		20 mL	20 mL	1 uL			
CCV 280-436199/3		8260B		20 mL	20 mL	1 uL	0.8 uL		
MB 280-436199/4		8260B		20 mL	20 mL	1 uL	0.8 uL		
LCS 280-436199/5		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
LCS 280-436199/7		8260B		20 mL	20 mL	1 uL	0.8 uL		
280-116017-D-1	LF6TW-38_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-E-2	LF6TW-36_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-E-2	LF6TW-36_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-A-3	775VMW-19R_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-B-4	775VMW-28_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-A-5	775VMW-9_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-A-6	775VMW-10_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-A-7	775VMW-10_1018-a	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116017-A-8	775VMW-20_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-436199/37		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-436199/38		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00005	MV-Supp A 00031	MV-Supp B 00022			
BFB 280-436199/1		8260B							
CCV 280-436199/2		8260B		4 uL					
CCV 280-436199/3		8260B			5 uL				
MB 280-436199/4		8260B							
LCS 280-436199/5		8260B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436199 Batch Start Date: 11/03/18 12:06 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00005	MV-Supp A 00031	MV-Supp B 00022			
LCS 280-436199/7		8260B				2.5 uL			
280-116017-D-1	LF6TW-38_1018	8260B	T						
280-116017-E-2	LF6TW-36_1018	8260B	T						
280-116017-E-2	LF6TW-36_1018	8260B	T						
280-116017-A-3	775VMW-19R_1018	8260B	T						
280-116017-B-4	775VMW-28_1018	8260B	T						
280-116017-A-5	775VMW-9_1018	8260B	T						
280-116017-A-6	775VMW-10_1018	8260B	T						
280-116017-A-7	775VMW-10_1018-a	8260B	T						
280-116017-A-8	775VMW-20_1018	8260B	T						
CCVC 280-436199/37		8260B		4 uL					
CCVC 280-436199/38		8260B			5 uL				

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436409 Batch Start Date: 11/05/18 19:28 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-MegaMain B 00003
BFB 280-436409/1		8260B		1 uL	1 uL			1 uL	
CCV 280-436409/2		8260B		20 mL	20 mL	1 uL			
CCV 280-436409/3		8260B		20 mL	20 mL	1 uL	0.8 uL		
MB 280-436409/4		8260B		20 mL	20 mL	1 uL	0.8 uL		
LCS 280-436409/5		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
LCSD 280-436409/6		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
280-116017-E-1	LF6TW-38_1018	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-436409/37		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00005	MV-Supp A 00031				
BFB 280-436409/1		8260B							
CCV 280-436409/2		8260B		4 uL					
CCV 280-436409/3		8260B			5 uL				
MB 280-436409/4		8260B							
LCS 280-436409/5		8260B							
LCSD 280-436409/6		8260B							
280-116017-E-1	LF6TW-38_1018	8260B	T						
CCVC 280-436409/37		8260B		4 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 437146 Batch Start Date: 11/10/18 10:21 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-ARCH SS A 00101	MV-BFB 00027	MV-MegaMain B 00003
BFB 280-437146/1		8260B		1 uL	1 uL			1 uL	
CCV 280-437146/2		8260B		20 mL	20 mL	1 uL	0.72 uL		
CCV 280-437146/3		8260B		20 mL	20 mL	1 uL			
LCS 280-437146/4		8260B		20 mL	20 mL	1 uL	0.72 uL		2 uL
LCSD 280-437146/5		8260B		20 mL	20 mL	1 uL	0.72 uL		2 uL
LCS 280-437146/6		8260B		20 mL	20 mL	1 uL	0.72 uL		
LCSD 280-437146/7		8260B		20 mL	20 mL	1 uL	0.72 uL		
MB 280-437146/8		8260B		20 mL	20 mL	1 uL	0.72 uL		
280-116017-C-9	775VMW-20R_1018	8260B	T	20 mL	20 mL	1 uL	0.72 uL		
280-116017-A-10	775VMW-5_1018	8260B	T	20 mL	20 mL	1 uL	0.72 uL		
280-116017-B-11	775VMW-5_1018-a	8260B	T	20 mL	20 mL	1 uL	0.72 uL		
280-116017-A-12	775VMW-4_1018	8260B	T	20 mL	20 mL	1 uL	0.72 uL		
CCVC 280-437146/38		8260B		20 mL	20 mL	1 uL	0.72 uL		
CCVC 280-437146/39		8260B		20 mL	20 mL	1 uL	0.72 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00006	mv-Pentachlor 00011	MV-Supp A 00032	MV-Supp B 00022		
BFB 280-437146/1		8260B							
CCV 280-437146/2		8260B		4 uL					
CCV 280-437146/3		8260B			5 uL	5 uL			
LCS 280-437146/4		8260B							
LCSD 280-437146/5		8260B							
LCS 280-437146/6		8260B					2.5 uL		
LCSD 280-437146/7		8260B					2.5 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 437146 Batch Start Date: 11/10/18 10:21 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00006	mv-Pentachlor 00011	MV-Supp A 00032	MV-Supp B 00022		
MB 280-437146/8		8260B							
280-116017-C-9	775VMW-20R_1018	8260B	T						
280-116017-A-10	775VMW-5_1018	8260B	T						
280-116017-B-11	775VMW-5_1018-a	8260B	T						
280-116017-A-12	775VMW-4_1018	8260B	T						
CCVC 280-437146/38		8260B		4 uL					
CCVC 280-437146/39		8260B				5 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

RSK_175_DOD5

Dissolved Gases (GC)

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11021802.D

Lab ID: LCS 280-436025/2 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Methane	73.0	71.4	98	73-125	
Ethane	137	156	114	74-131	
Ethene	128	140	110	72-133	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11021803.D

Lab ID: LCSD 280-436025/3 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Methane	73.0	63.4	87	12	20	73-125	
Ethane	137	139	101	12	20	74-131	
Ethene	128	126	99	11	20	72-133	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: MB 280-436025/4

Matrix: Water Date Extracted:

Lab File ID:(1) 11021804.D Lab File ID:(2) 11021804.D

Date Analyzed:(1) 11/02/2018 10:53 Date Analyzed:(2) 11/02/2018 10:53

Instrument ID:(1) VGC_J Instrument ID:(2) VGC_J

GC Column:(1) HP-Plot Q ID: 0.53(mm) GC Column:(2) Rt-Alumina K ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436025/2	11/02/2018 10:26	11/02/2018 10:26
	LCSD 280-436025/3	11/02/2018 10:39	11/02/2018 10:39
LF6TW-38_1018	280-116017-1	11/02/2018 11:48	11/02/2018 11:48
LF6TW-38_1018 DU	280-116017-1 DU	11/02/2018 12:01	11/02/2018 12:01
LF6TW-36_1018	280-116017-2	11/02/2018 12:15	11/02/2018 12:15

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 Lab Sample ID: 280-116017-2

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 11/02/2018 12:15 Date Analyzed (2): 11/02/2018 12:15

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.66	1.74	0.73		5.4
	2		1.25	1.23	1.31	0.77		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436025/2

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 11/02/2018 10:26 Date Analyzed (2): 11/02/2018 10:26

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.70	1.66	1.74	71.4		0.4
	2		1.27	1.23	1.31	71.1		
Ethene	1		2.50	2.46	2.56	140		1.8
	2		1.87	1.82	1.92	142		
Ethane	1		2.88	2.83	2.93	156		0.2
	2		1.55	1.50	1.60	156		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-436025/3

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 11/02/2018 10:39 Date Analyzed (2): 11/02/2018 10:39

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.69	1.66	1.74	63.4		0.6
	2		1.27	1.23	1.31	63.0		
Ethene	1		2.51	2.46	2.56	126		1.6
	2		1.87	1.82	1.92	128		
Ethane	1		2.88	2.83	2.93	139		0.3
	2		1.55	1.50	1.60	138		

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 Lab Sample ID: 280-116017-1

Matrix: Water Lab File ID: 11021808.D

Analysis Method: RSK-175 Date Collected: 10/22/2018 08:26

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.80	U	5.0	0.80	0.64
74-84-0	Ethane	1.5	U	5.0	1.5	0.57
74-85-1	Ethene	1.4	U	5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021808.D
Lims ID: 280-116017-G-1
Client ID: LF6TW-38_1018
Sample Type: Client
Inject. Date: 02-Nov-2018 11:48:11 ALS Bottle#: 8 Worklist Smp#: 39
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-G-1
Misc. Info.: 280-0075757-039
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: waldorfj Date: 04-Nov-2018 08:25:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
1 Methane						
1		1.272			ND	
2		1.695				
2 Ethane						
1		1.552			ND	
2		2.879				
3 Ethylene						
1		1.869			ND	
2		2.505				
4 Propane						
1		2.608			ND	
2		4.682				
5 Acetylene						
1		4.050			ND	
2		2.645				
6 Butane						
1		4.363			ND	
2		6.144				
7 isobutylene						
1		5.292			ND	
2		5.994				

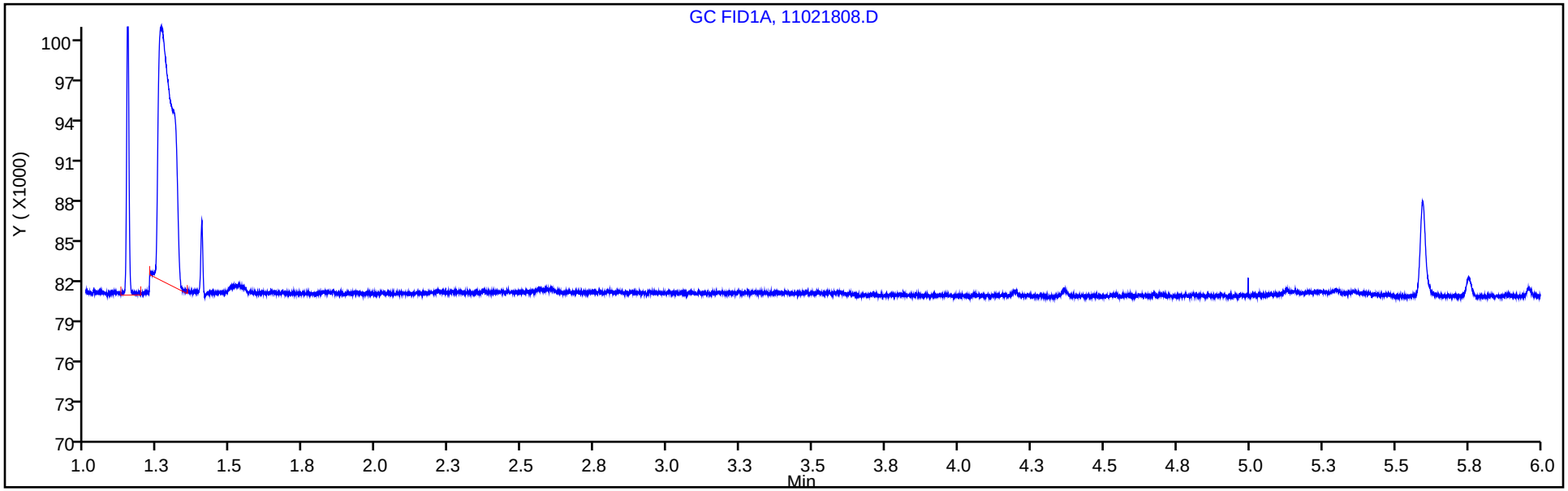
Report Date: 04-Nov-2018 08:33:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

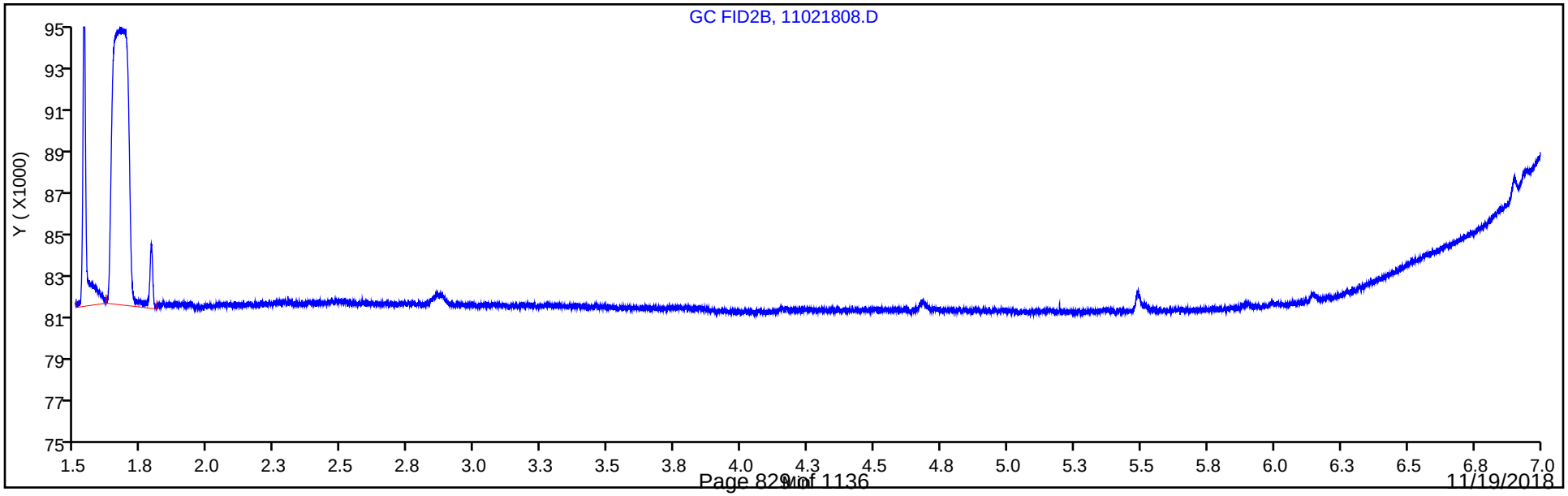
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021808.D

Injection Date:	02-Nov-2018 11:48:11	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	280-116017-G-1	Lab Sample ID:	280-116017-1	Worklist Smp#:	39
Client ID:	LF6TW-38_1018				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-36_1018 Lab Sample ID: 280-116017-2

Matrix: Water Lab File ID: 11021810.D

Analysis Method: RSK-175 Date Collected: 10/22/2018 09:26

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 12:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.73	J	5.0	0.80	0.64
74-84-0	Ethane	1.5	U	5.0	1.5	0.57
74-85-1	Ethene	1.4	U	5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021810.D
Lims ID: 280-116017-I-2
Client ID: LF6TW-36_1018
Sample Type: Client
Inject. Date: 02-Nov-2018 12:15:42 ALS Bottle#: 10 Worklist Smp#: 41
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-I-2
Misc. Info.: 280-0075757-041
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: waldorfj Date: 04-Nov-2018 08:25:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
1 Methane						
1	1.253	1.272	-0.019	112239	0.7739	
2	1.673	1.695	-0.022	90679	0.7331	
					RPD = 5.42	
2 Ethane						
1		1.552			ND	
2		2.879				
3 Ethylene						
1		1.869			ND	
2		2.505				
4 Propane						
1		2.608			ND	
2		4.682				
5 Acetylene						
1		4.050			ND	
2		2.645				
6 Butane						
1		4.363			ND	
2		6.144				
7 isobutylene						
1		5.292			ND	
2		5.994				

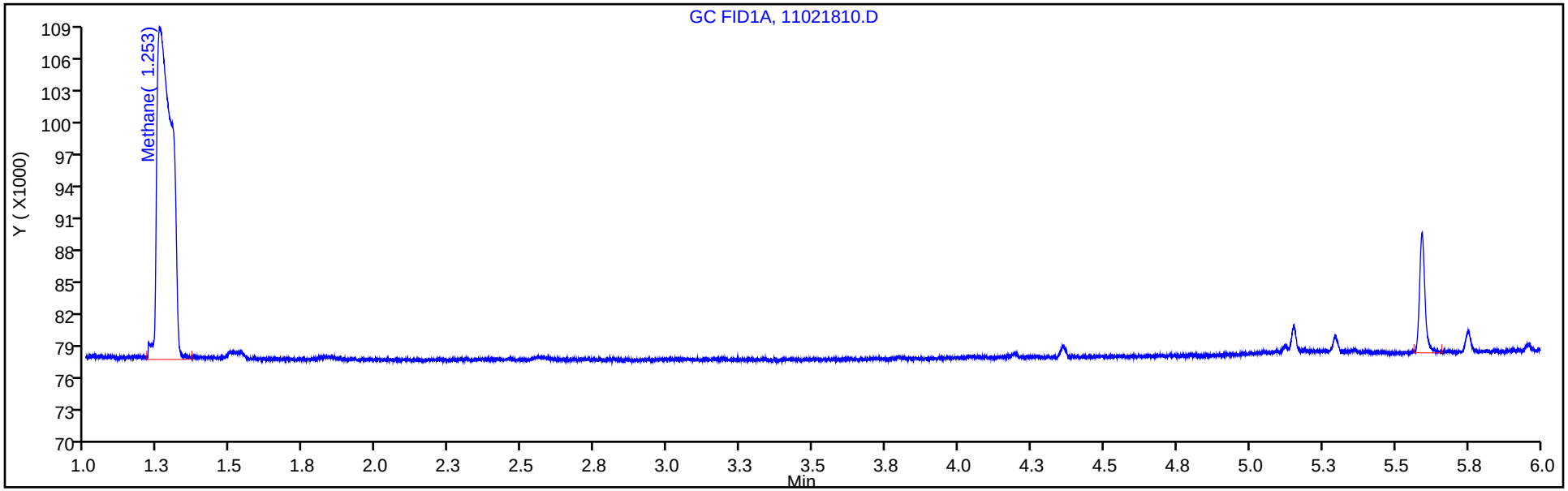
Report Date: 04-Nov-2018 08:33:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

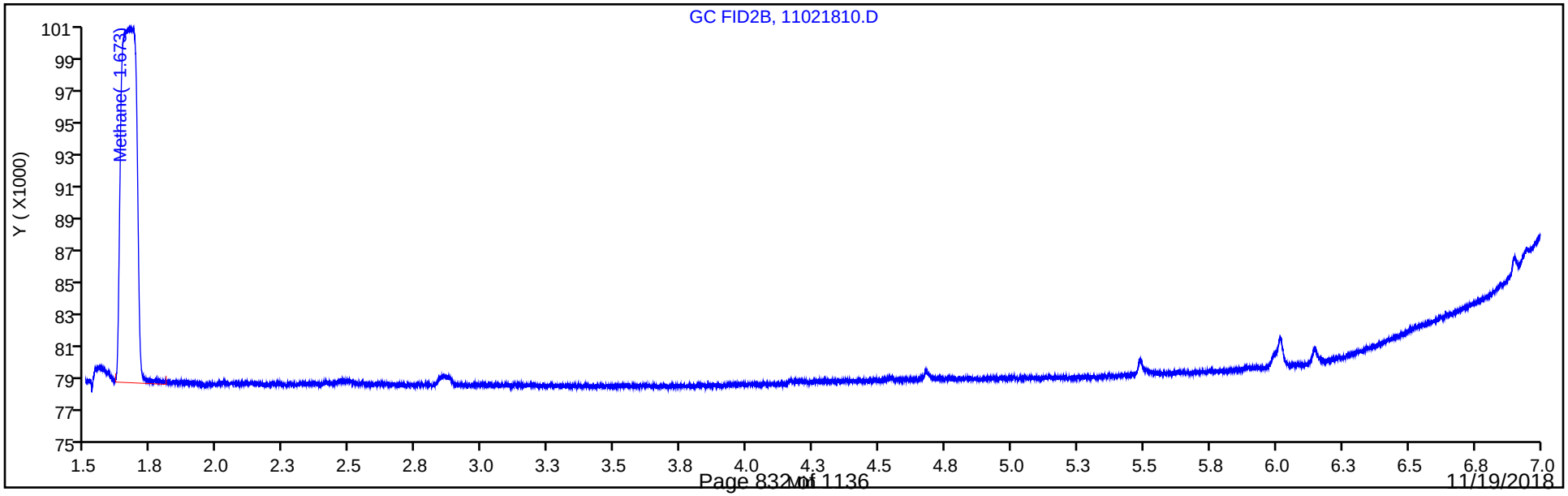
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021810.D

Injection Date:	02-Nov-2018 12:15:42	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	280-116017-I-2	Lab Sample ID:	280-116017-2	Worklist Smp#:	41
Client ID:	LF6TW-36_1018				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33212

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
Methane		1.279	1.277	1.275	1.270	1.268	1.266	1.270	1.270	+++++	1.230 - 1.310	1.272
Ethane	1.560	1.573	1.568	1.571	1.567	1.568	1.566				1.517 - 1.617	1.568
Ethene	1.908	1.913	1.920	1.916	1.913	1.905	1.907				1.863 - 1.963	1.912
Acetylene	4.193	4.191	4.188	4.181	4.169	4.159	4.147				4.089 - 4.249	4.175

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33212

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	 132701 129896	173312 135607 +++++	150740 129443	137929 170568	Ave		145024.389				12.4		20.0			
Ethane	107908 127620	122815 130469	122930 124928	130529	Ave		123885.767				6.3		20.0			
Ethene	77774 105204	100826 106580	102107 103277	105878	Ave		100235.100				10.1		20.0			
Acetylene	32017 37545	36103 37520	37072 37508	36764	Ave		36361.2855				5.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33212

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Methane	Ave	19799464	158154 37798983	275113 308207757	2013850 938860173	9687627 +++++	146	0.913 292	1.83 1807	14.6 7228	73.0 +++++
Ethane	Ave	92299 35710920	210099 68388169	420593	3572729	17465561	0.855 274	1.71 547	3.42	27.4	137
Ethene	Ave	62057 27213526	160901 52739976	325891	2703420	13431071	0.798 255	1.60 511	3.19	25.5	128
Acetylene	Ave	23717 8893827	53488 17782088	109846	871478	4449917	0.741 237	1.48 474	2.96	23.7	119

Curve Type Legend:
Ave = Average

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271801.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 27-Jul-2018 16:08:28 ALS Bottle#: 3 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L1
Misc. Info.: 280-0072448-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:05 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1		1.270			ND	ND	
2		1.700					
2 Ethane							
1	1.560	1.567	-0.007	92299	0.8553	0.7450	
2	2.899	2.884	0.015	78153	0.8553	0.7403	
						RPD = 0.64	
3 Ethylene							
1	1.908	1.913	-0.005	62057	0.7979	0.6191	
2	2.517	2.508	0.009	60545	0.7979	0.6978	
						RPD = 11.96	
4 Propane							
1	2.737	2.717	0.020	148467	1.25	1.13	
2	4.697	4.686	0.011	125786	1.25	1.12	
						RPD = 0.50	
5 Acetylene							
1	4.193	4.169	0.024	23717	0.7408	0.6523	
2	2.660	2.649	0.011	20765	0.7408	0.6561	
						RPD = 0.59	
6 Butane							
1	4.492	4.466	0.026	216270	1.65	1.60	
2	6.158	6.147	0.011	181961	1.65	1.58	
						RPD = 0.83	
7 isobutylene							
1	5.401	5.381	0.020	142008	1.60	1.56	
2	6.006	5.996	0.010	121395	1.60	1.58	
						RPD = 1.13	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

RSK7gasMathes_00021 Amount Added: 1.25 Units: uL

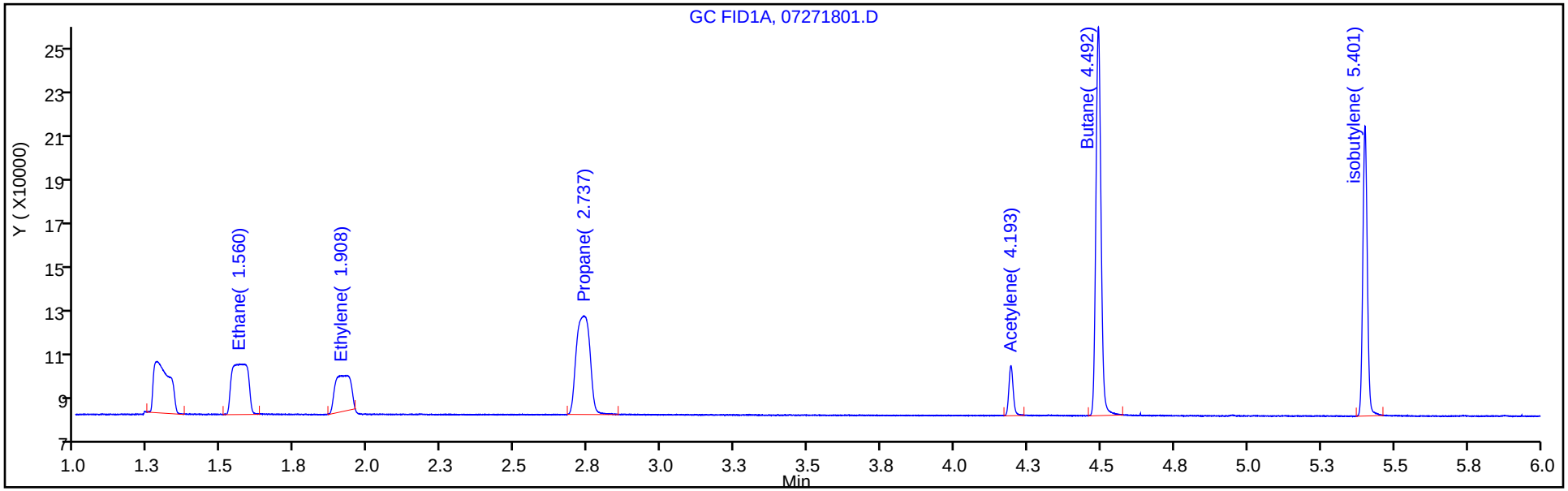
Report Date: 01-Aug-2018 15:06:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

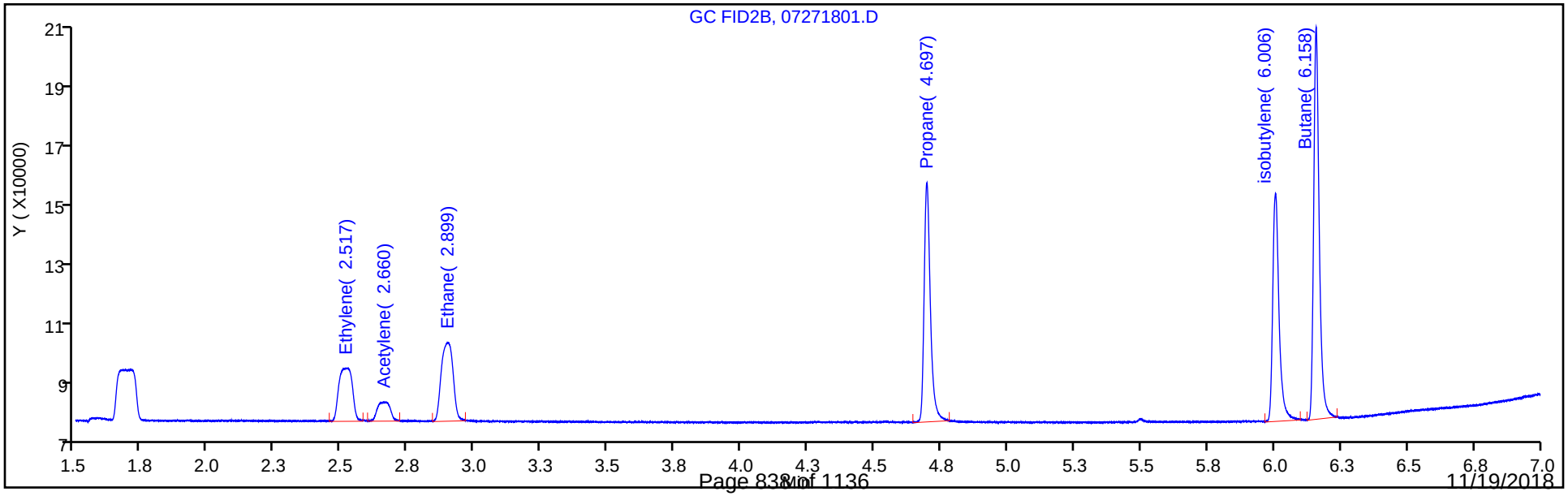
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Injection Date:	27-Jul-2018 16:08:28	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L1			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271802.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Jul-2018 16:21:39 ALS Bottle#: 4 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L2
Misc. Info.: 280-0072448-002
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:07 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.279	1.270	0.009	158154	0.9125	1.09	
2	1.696	1.700	-0.004	132049	0.9125	1.07	
						RPD = 2.13	
2 Ethane							
1	1.573	1.567	0.006	210099	1.71	1.70	
2	2.899	2.884	0.015	177718	1.71	1.68	
						RPD = 0.74	
3 Ethylene							
1	1.913	1.913	0.000	160901	1.60	1.61	
2	2.518	2.508	0.010	136900	1.60	1.58	
						RPD = 1.72	
4 Propane							
1	2.735	2.717	0.018	323658	2.51	2.46	
2	4.696	4.686	0.010	275857	2.51	2.47	
						RPD = 0.10	
5 Acetylene							
1	4.191	4.169	0.022	53488	1.48	1.47	
2	2.660	2.649	0.011	45696	1.48	1.44	
						RPD = 1.87	
6 Butane							
1	4.490	4.466	0.024	431148	3.31	3.19	
2	6.157	6.147	0.010	364330	3.31	3.17	
						RPD = 0.40	
7 isobutylene							
1	5.400	5.381	0.019	278539	3.19	3.06	
2	6.004	5.996	0.008	236349	3.19	3.07	
						RPD = 0.39	

Reagents:

RSK7gasMathes_00021 Amount Added: 2.50 Units: uL

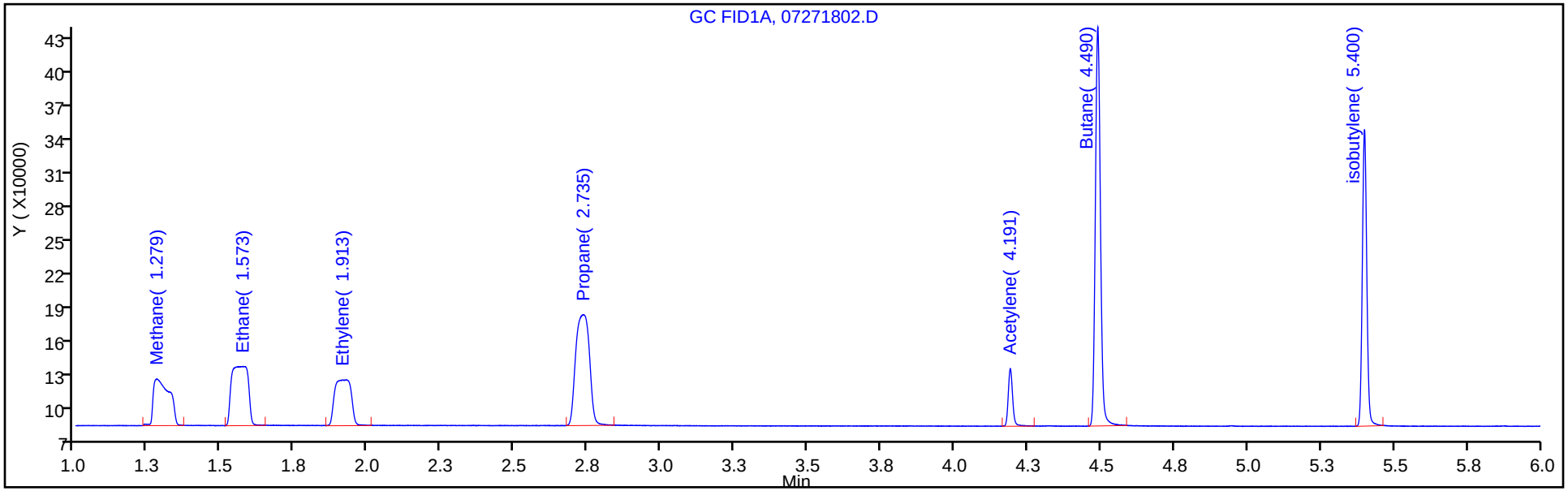
Report Date: 01-Aug-2018 15:06:08 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

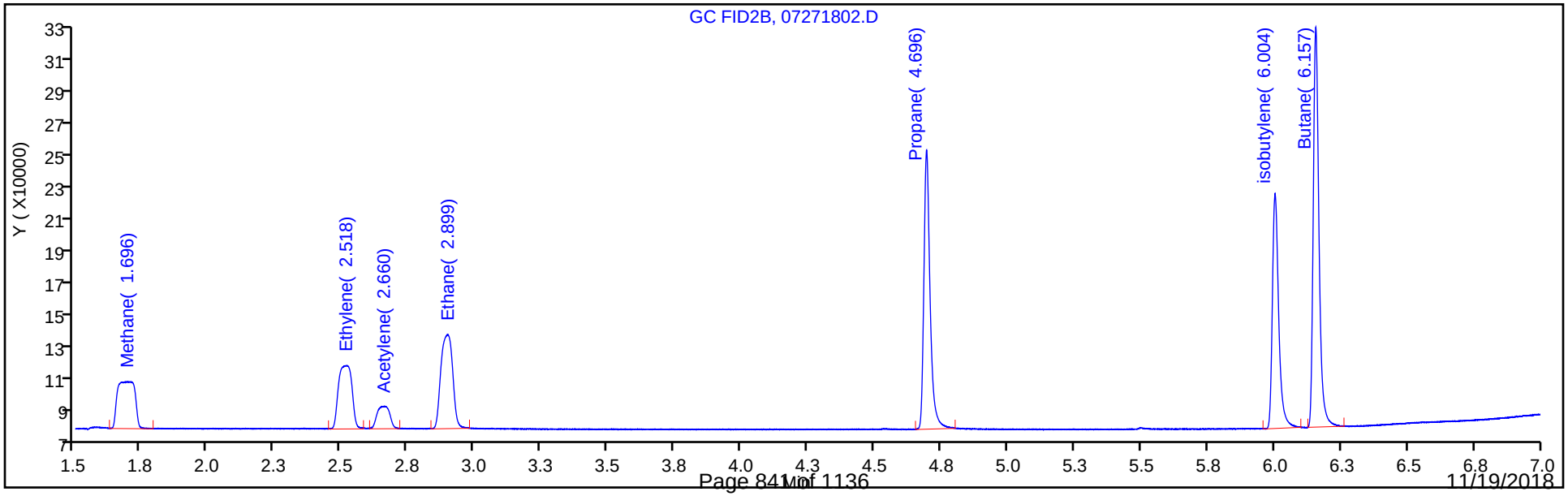
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Injection Date:	27-Jul-2018 16:21:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L2			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271804.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Jul-2018 16:48:06 ALS Bottle#: 6 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L3
Misc. Info.: 280-0072448-003
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:08 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.277	1.270	0.007	275113	1.83	1.90	
2	1.687	1.700	-0.013	231149	1.83	1.87	
						RPD = 1.50	
2 Ethane							
1	1.568	1.567	0.001	420593	3.42	3.40	
2	2.892	2.884	0.008	354173	3.42	3.35	
						RPD = 1.19	
3 Ethylene							
1	1.920	1.913	0.007	325891	3.19	3.25	
2	2.515	2.508	0.007	277260	3.19	3.20	
						RPD = 1.72	
4 Propane							
1	2.729	2.717	0.012	643757	5.02	4.90	
2	4.692	4.686	0.006	547641	5.02	4.89	
						RPD = 0.09	
5 Acetylene							
1	4.188	4.169	0.019	109846	2.96	3.02	
2	2.657	2.649	0.008	93697	2.96	2.96	
						RPD = 2.02	
6 Butane							
1	4.486	4.466	0.020	855583	6.61	6.32	
2	6.155	6.147	0.008	725351	6.61	6.32	
						RPD = 0.07	
7 isobutylene							
1	5.396	5.381	0.015	565765	6.38	6.21	
2	6.001	5.996	0.005	478838	6.38	6.22	
						RPD = 0.13	

Reagents:

RSK7gasMathes_00021 Amount Added: 5.00 Units: uL

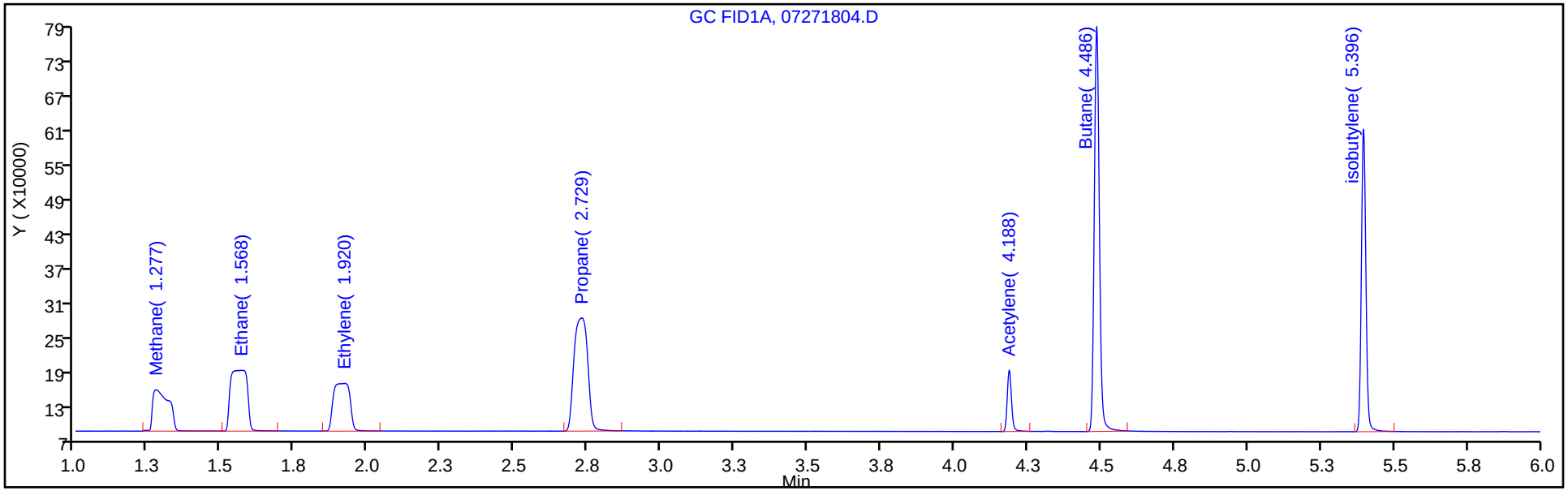
Report Date: 01-Aug-2018 15:06:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

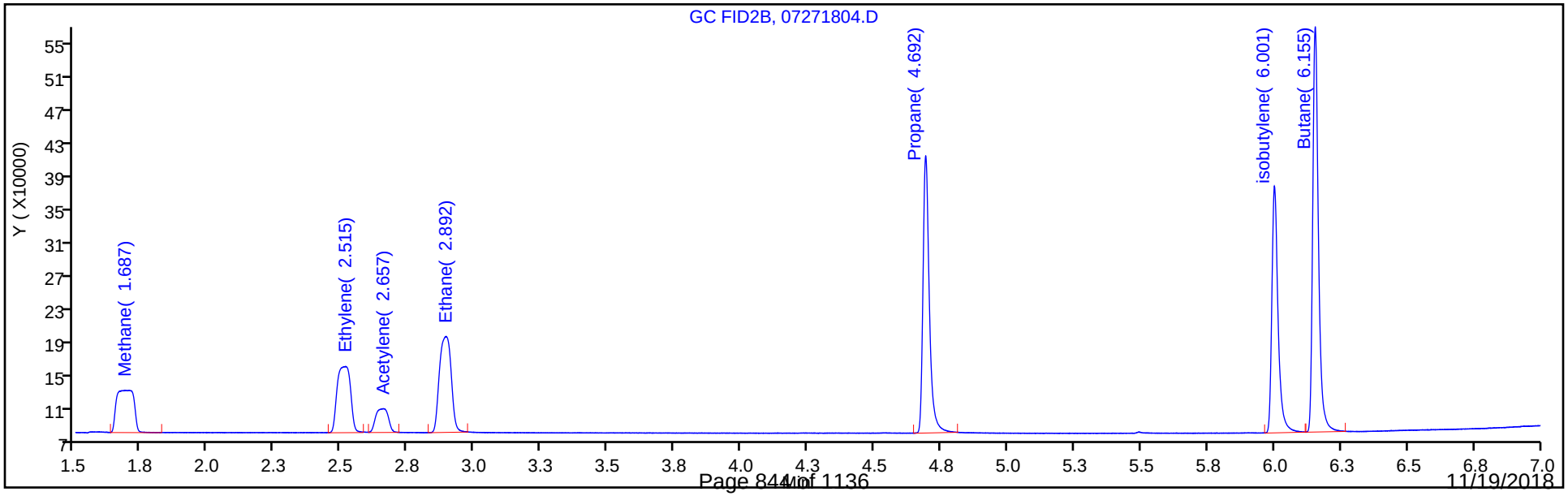
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271804.D

Injection Date:	27-Jul-2018 16:48:06	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L3			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271805.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Jul-2018 17:01:22 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L4
Misc. Info.: 280-0072448-004
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:10 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.275	1.270	0.005	2013850	14.6	13.9	
2	1.695	1.700	-0.005	1729596	14.6	14.0	
						RPD = 0.70	
2 Ethane							
1	1.571	1.567	0.004	3572729	27.4	28.8	
2	2.890	2.884	0.006	3044430	27.4	28.8	
						RPD = 0.01	
3 Ethylene							
1	1.916	1.913	0.003	2703420	25.5	27.0	
2	2.512	2.508	0.004	2305510	25.5	26.6	
						RPD = 1.49	
4 Propane							
1	2.726	2.717	0.009	5515735	40.1	42.0	
2	4.692	4.686	0.006	4700926	40.1	42.0	
						RPD = 0.10	
5 Acetylene							
1	4.181	4.169	0.012	871478	23.7	24.0	
2	2.653	2.649	0.004	761001	23.7	24.0	
						RPD = 0.32	
6 Butane							
1	4.480	4.466	0.014	7345233	52.9	54.3	
2	6.152	6.147	0.005	6263753	52.9	54.5	
						RPD = 0.51	
7 isobutylene							
1	5.392	5.381	0.011	4690212	51.1	51.5	
2	6.001	5.996	0.005	3964374	51.1	51.5	
						RPD = 0.00	

Reagents:

RSK7gasMathes_00021 Amount Added: 40.00 Units: uL

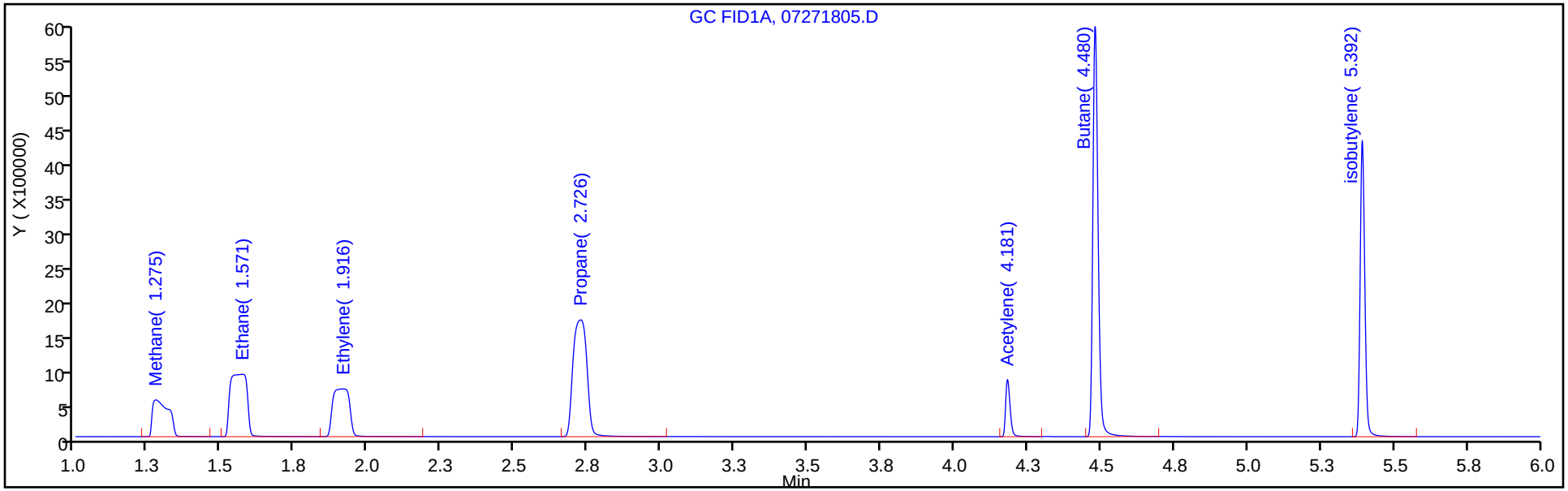
Report Date: 01-Aug-2018 15:06:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

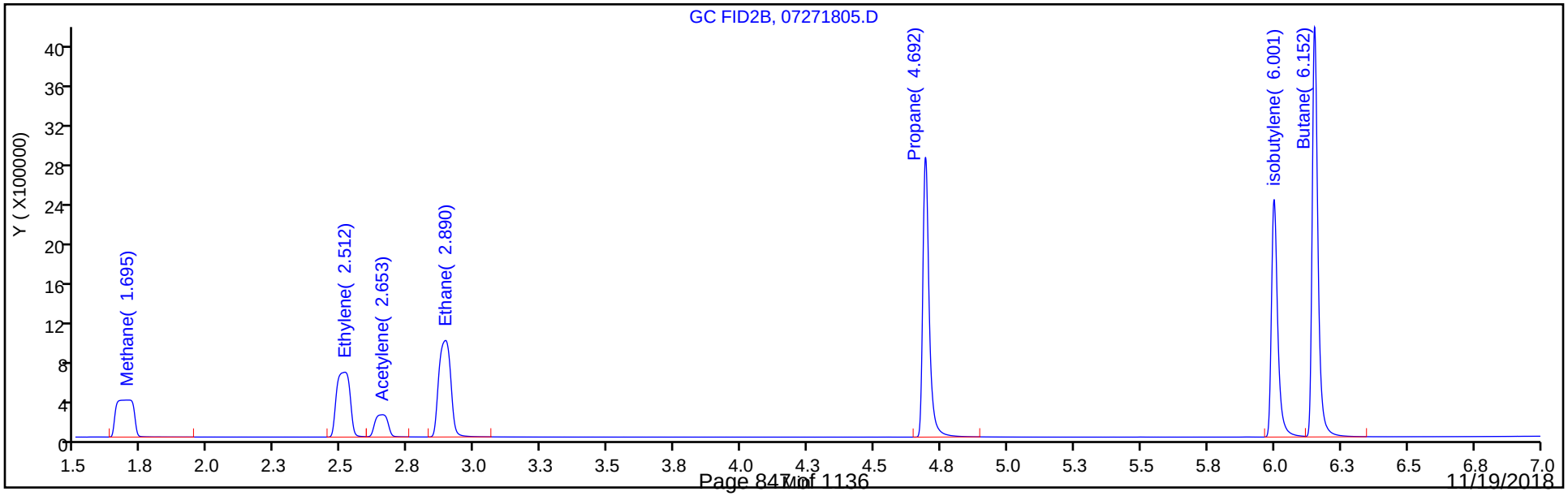
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271805.D

Injection Date:	27-Jul-2018 17:01:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271806.D
Lims ID: ICRT L5
Client ID:
Sample Type: ICRT Calib Level: 5
Inject. Date: 27-Jul-2018 17:14:39 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICRT L5
Misc. Info.: 280-0072448-005
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:11 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	9687627	73.0	66.8	
2	1.700	1.700	0.000	8313745	73.0	67.2	
						RPD = 0.62	
2 Ethane							
1	1.567	1.567	0.000	17465561	136.9	141.0	
2	2.884	2.884	0.000	14939591	136.9	141.5	
						RPD = 0.37	
3 Ethylene							
1	1.913	1.913	0.000	13431071	127.7	134.0	
2	2.508	2.508	0.000	11450145	127.7	132.0	
						RPD = 1.52	
4 Propane							
1	2.717	2.717	0.000	26953316	200.7	205.1	
2	4.686	4.686	0.000	22978605	200.7	205.4	
						RPD = 0.13	
5 Acetylene							
1	4.169	4.169	0.000	4449917	118.5	122.4	
2	2.649	2.649	0.000	3904723	118.5	123.4	
						RPD = 0.81	
6 Butane							
1	4.466	4.466	0.000	36058532	264.5	266.4	
2	6.147	6.147	0.000	30676289	264.5	267.1	
						RPD = 0.27	
7 isobutylene							
1	5.381	5.381	0.000	23545309	255.4	258.6	
2	5.996	5.996	0.000	19818810	255.4	257.5	
						RPD = 0.41	

Reagents:

RSK7gasMathes_00021 Amount Added: 200.00 Units: uL

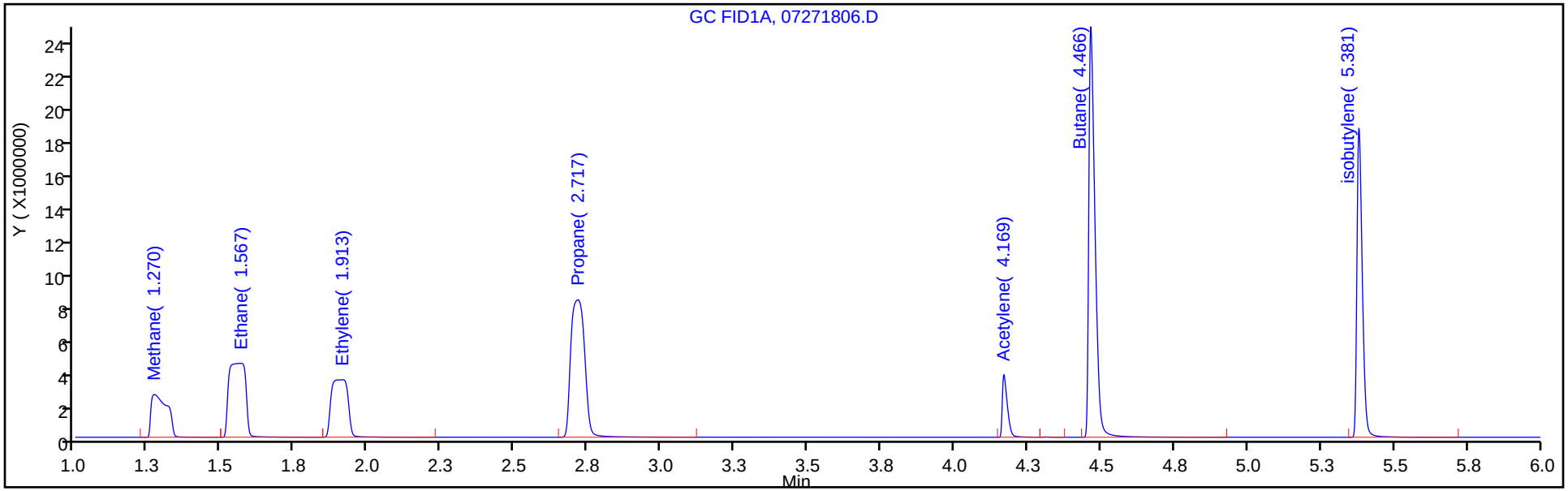
Report Date: 01-Aug-2018 15:06:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

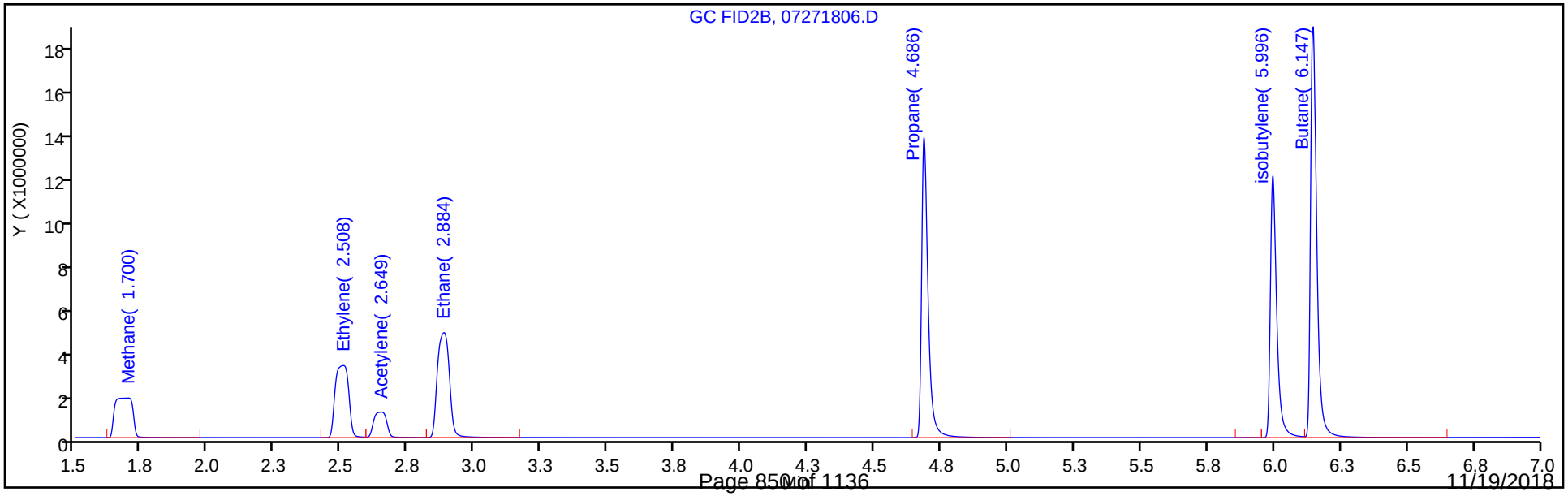
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Injection Date:	27-Jul-2018 17:14:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICRT L5			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271807.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Jul-2018 17:27:53 ALS Bottle#: 9 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L6
Misc. Info.: 280-0072448-006
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:12 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.268	1.270	-0.002	19799464	146.0	136.5	
2	1.689	1.700	-0.011	17009123	146.0	137.5	
						RPD = 0.72	
2 Ethane							
1	1.568	1.567	0.001	35710920	273.7	288.3	
2	2.882	2.884	-0.002	30694702	273.7	290.7	
						RPD = 0.86	
3 Ethylene							
1	1.905	1.913	-0.008	27213526	255.3	271.5	
2	2.505	2.508	-0.003	23185632	255.3	267.2	
						RPD = 1.58	
4 Propane							
1	2.709	2.717	-0.008	55884118	401.4	425.3	
2	4.682	4.686	-0.004	47587505	401.4	425.3	
						RPD = 0.01	
5 Acetylene							
1	4.159	4.169	-0.010	8893827	237.0	244.6	
2	2.649	2.649	0.000	7821405	237.0	247.1	
						RPD = 1.03	
6 Butane							
1	4.452	4.466	-0.014	76052237	529.0	561.9	
2	6.140	6.147	-0.007	64668909	529.0	563.1	
						RPD = 0.22	
7 isobutylene							
1	5.372	5.381	-0.009	48738029	510.8	535.3	
2	5.990	5.996	-0.006	40966010	510.8	532.3	
						RPD = 0.56	

Reagents:

RSK7gasMathes_00021 Amount Added: 400.00 Units: uL

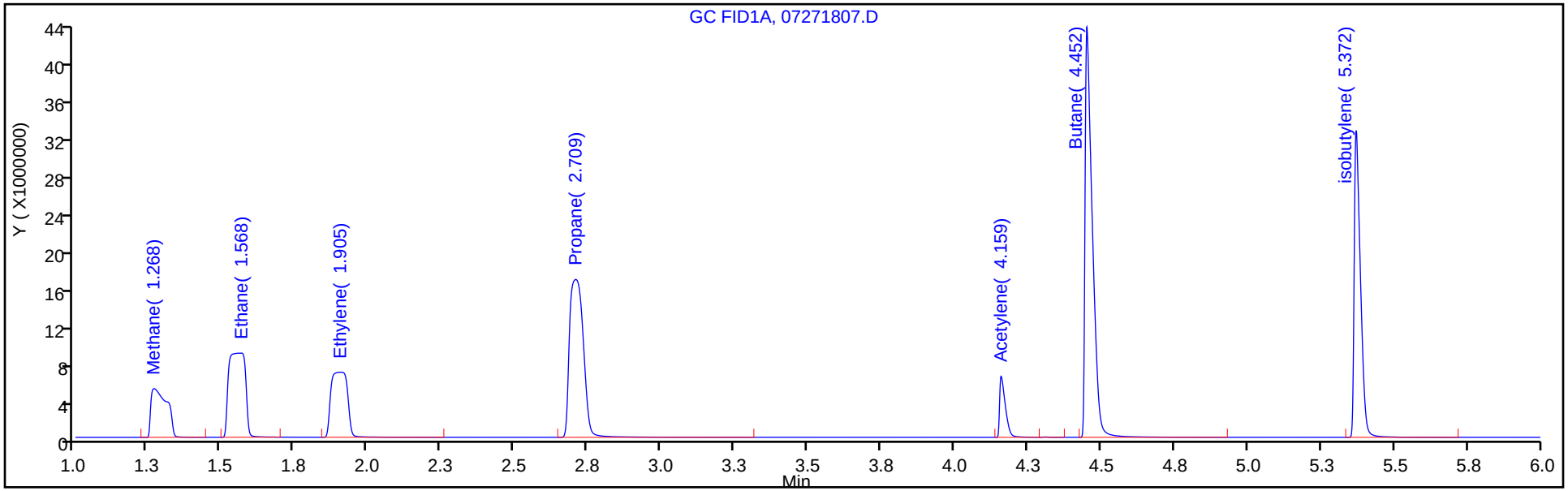
Report Date: 01-Aug-2018 15:06:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

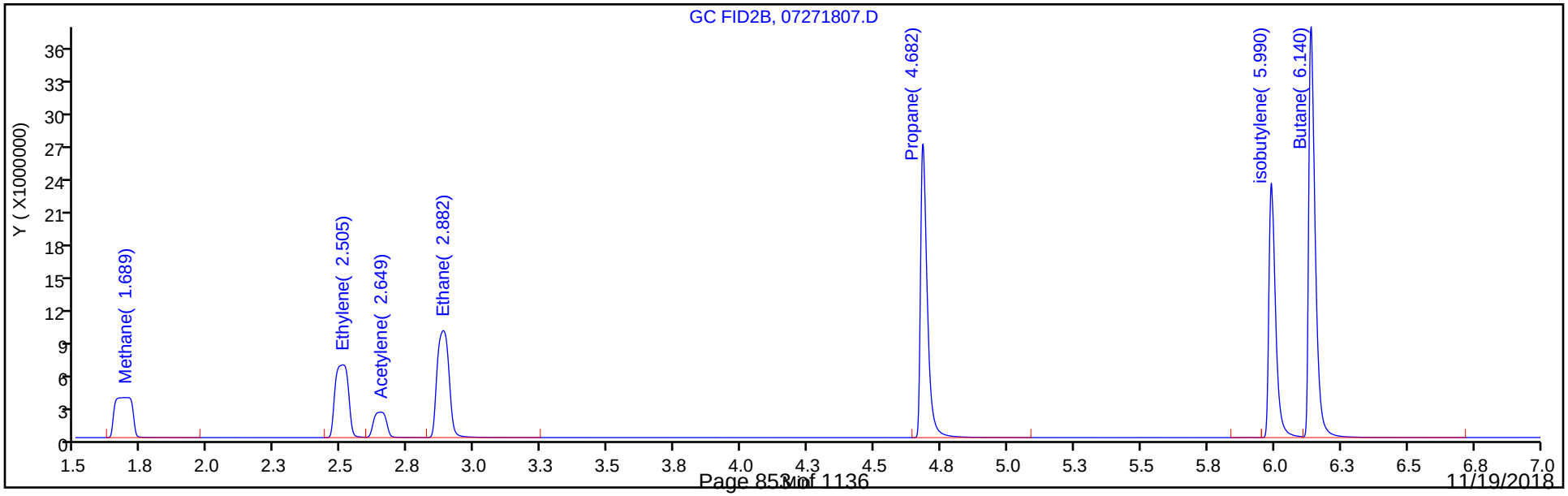
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271807.D

Injection Date:	27-Jul-2018 17:27:53	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L6			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271808.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Jul-2018 17:41:07 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L7
Misc. Info.: 280-0072448-007
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:13 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.266	1.270	-0.004	37798983	292.0	260.6	
2	1.691	1.700	-0.009	32457009	292.0	262.4	
						RPD = 0.68	
2 Ethane							
1	1.566	1.567	-0.001	68388169	547.4	552.0	
2	2.878	2.884	-0.006	58966066	547.4	558.5	
						RPD = 1.17	
3 Ethylene							
1	1.907	1.913	-0.006	52739976	510.7	526.2	
2	2.503	2.508	-0.005	44941752	510.7	518.0	
						RPD = 1.56	
4 Propane							
1	2.696	2.717	-0.021	107017224	802.8	814.4	
2	4.675	4.686	-0.011	91287063	802.8	815.9	
						RPD = 0.18	
5 Acetylene							
1	4.147	4.169	-0.022	17782088	474.1	489.0	
2	2.646	2.649	-0.003	15646052	474.1	494.4	
						RPD = 1.08	
6 Butane							
1	4.436	4.466	-0.030	145987563	1058.1	1078.6	
2	6.129	6.147	-0.018	124122072	1058.1	1080.9	
						RPD = 0.21	
7 isobutylene							
1	5.357	5.381	-0.024	95079391	1021.5	1044.2	
2	5.982	5.996	-0.014	79870985	1021.5	1037.8	
						RPD = 0.61	

Reagents:

RSK7gasMathes_00021 Amount Added: 800.00 Units: uL

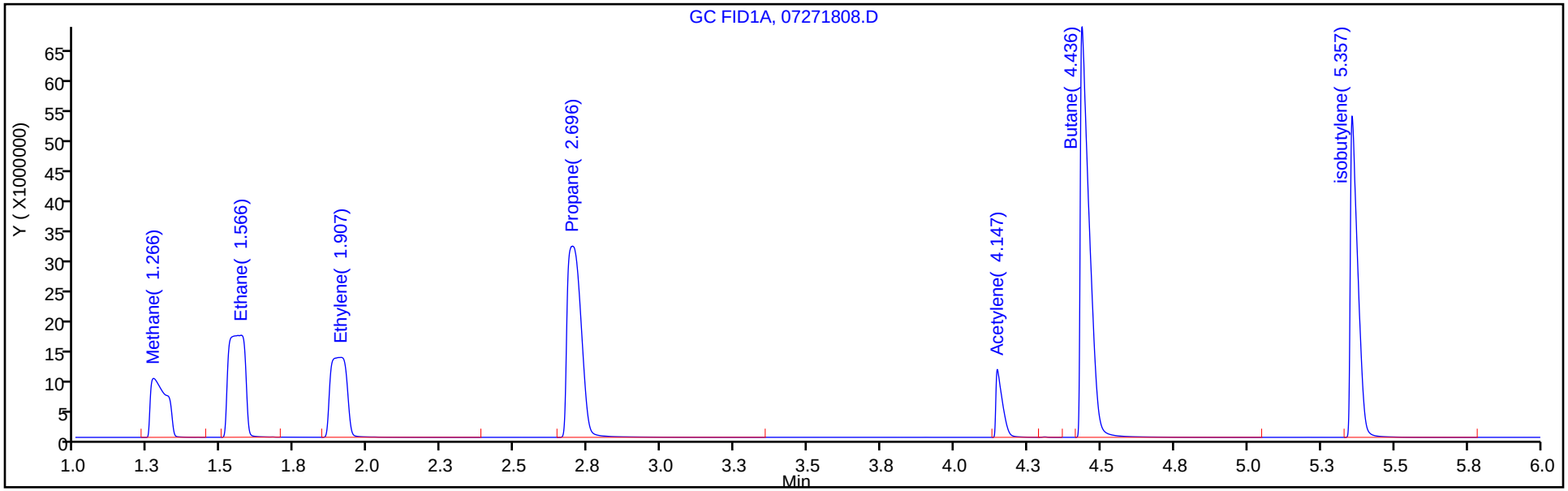
Report Date: 01-Aug-2018 15:06:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

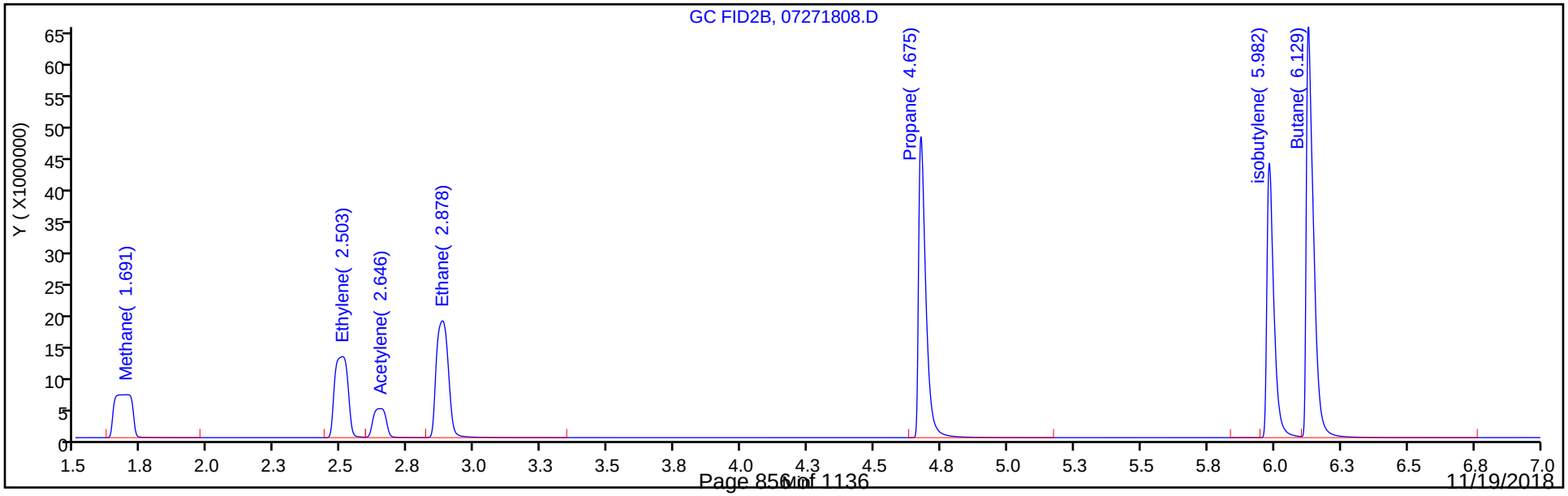
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271808.D

Injection Date:	27-Jul-2018 17:41:07	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L7			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271809.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 27-Jul-2018 17:54:22 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L8
Misc. Info.: 280-0072448-008
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:15 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	308207757	1806.9	2125.2	
2	1.692	1.700	-0.008	264700518	1806.9	2140.1	
						RPD = 0.70	

Reagents:

RSK175methane_00006 Amount Added: 50.00 Units: uL

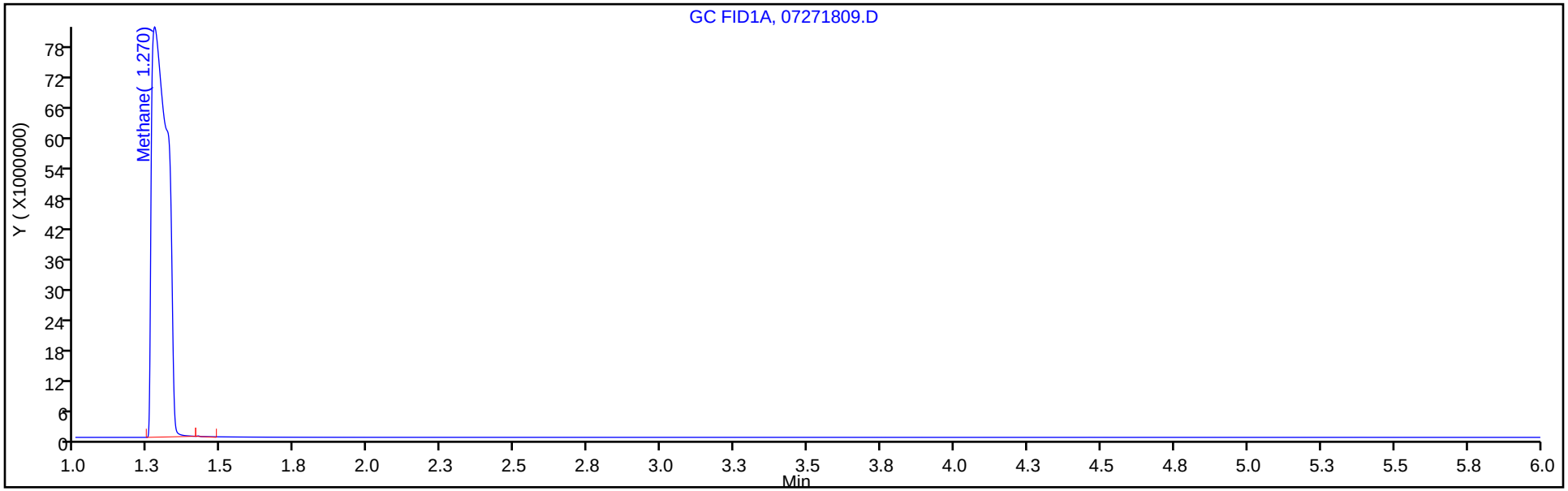
Report Date: 01-Aug-2018 15:06:15 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

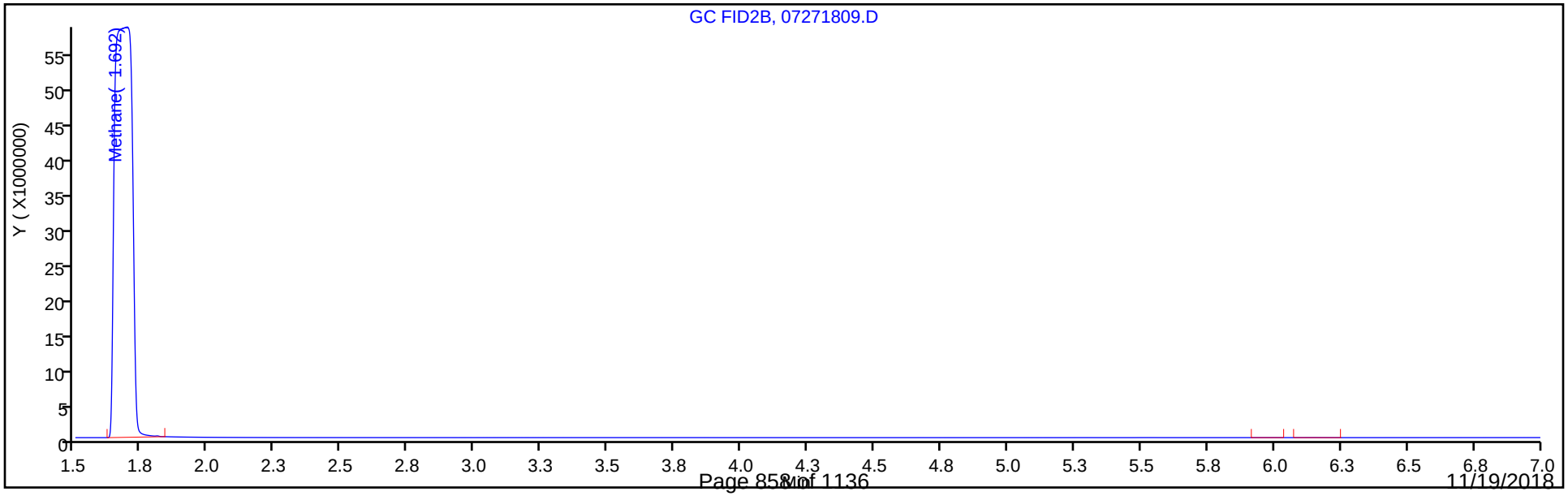
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271809.D

Injection Date:	27-Jul-2018 17:54:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L8			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271810.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 27-Jul-2018 18:07:33 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L9
Misc. Info.: 280-0072448-009
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:16 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	938860173	7227.8	6473.8	
2	1.687	1.700	-0.013	807148110	7227.8	6525.7	
						RPD = 0.80	

Reagents:

RSK175methane_00006 Amount Added: 200.00 Units: uL

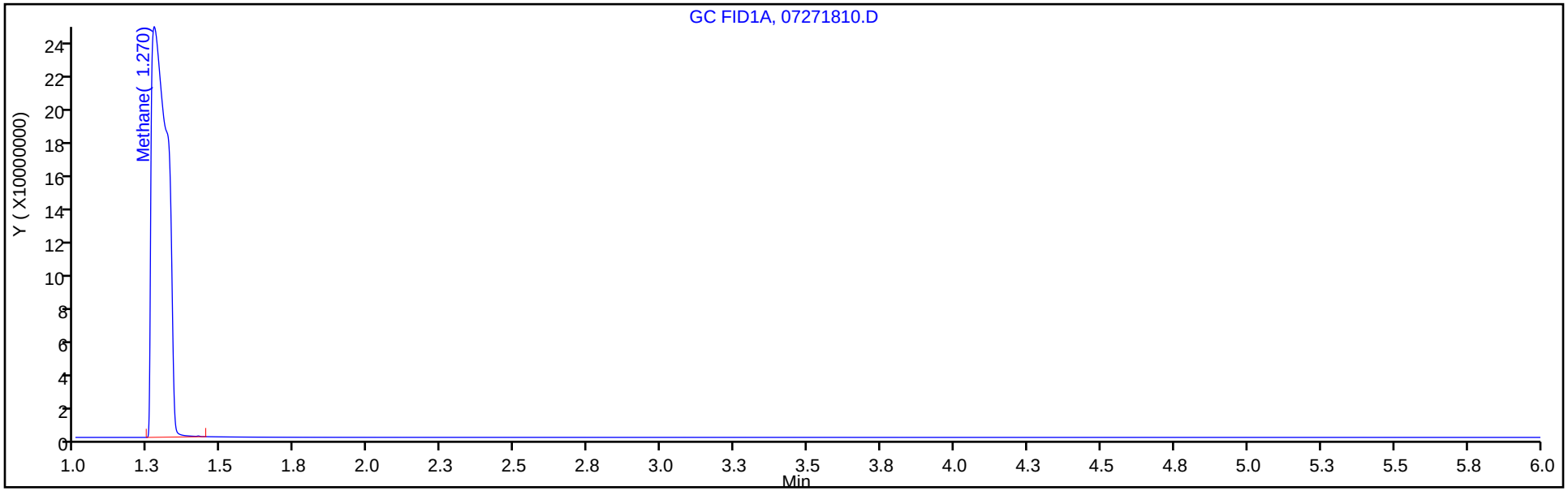
Report Date: 01-Aug-2018 15:06:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

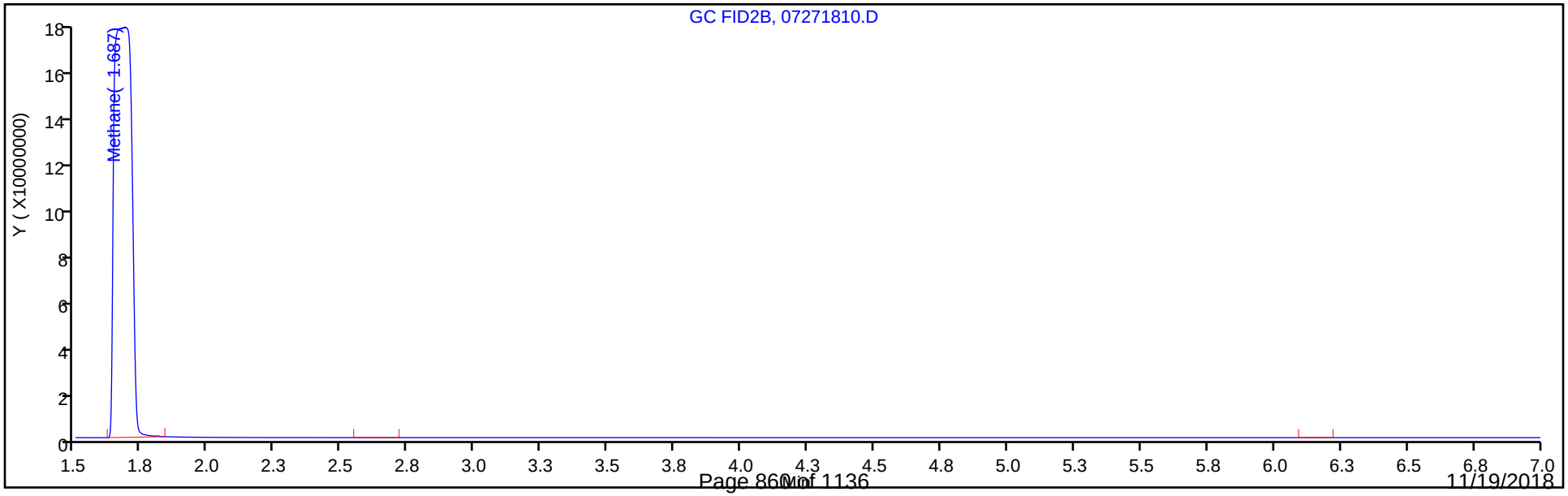
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271810.D

Injection Date:	27-Jul-2018 18:07:33	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L9			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 27-Jul-2018 18:20:43 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L10
Misc. Info.: 280-0072448-010
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:17 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							a
1	1.249	1.270	-0.021	7551219437	14456	52069	a
2	1.624	1.700	-0.076	6498932209	14456	52543	a
						RPD = 0.91	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

RSK175methane_00006 Amount Added: 400.00 Units: uL

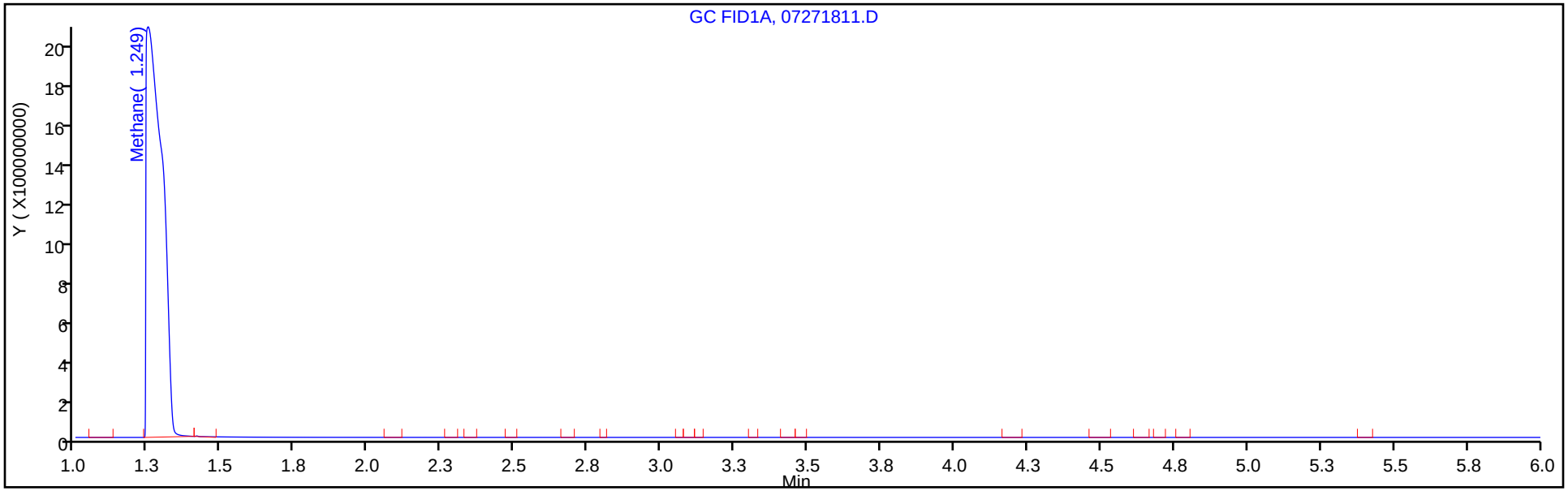
Report Date: 01-Aug-2018 15:06:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

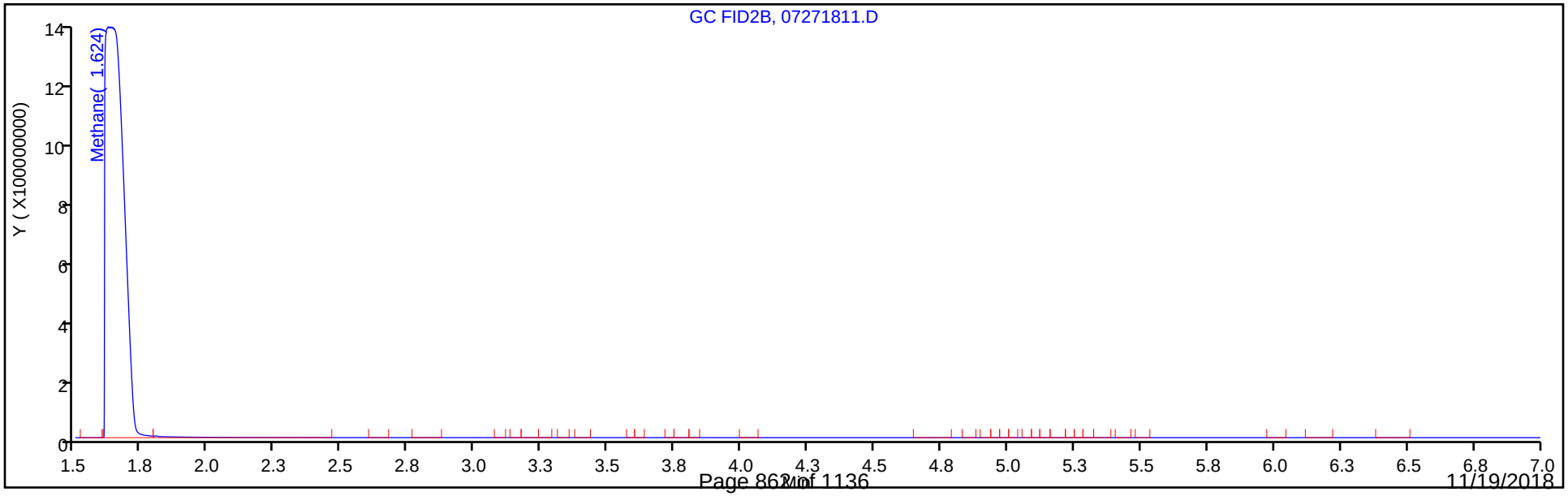
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Injection Date:	27-Jul-2018 18:20:43	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L10			Worklist Smp#:	10
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

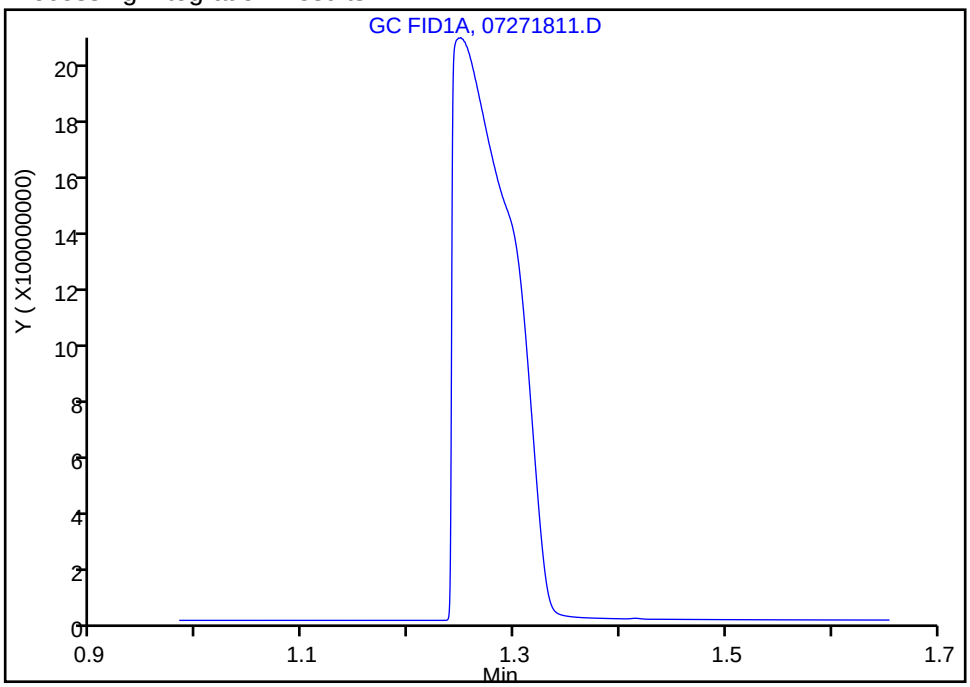
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D
Injection Date: 27-Jul-2018 18:20:43 Instrument ID: VGC_J
Lims ID: IC L10
Client ID:
Operator ID: ms ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

1 Methane, CAS: 74-82-8

Signal: 1

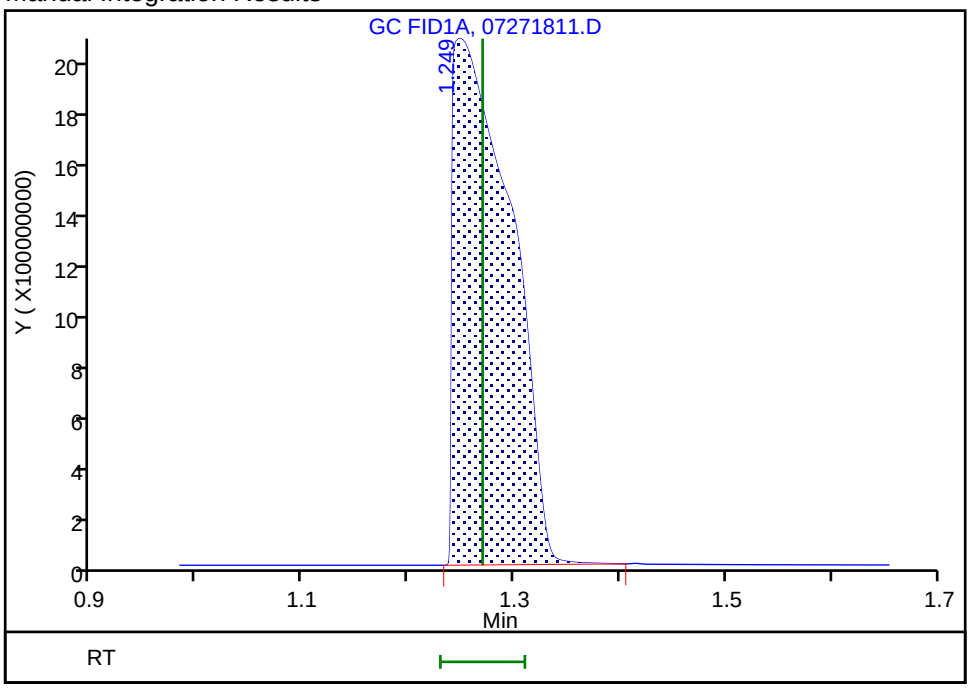
Not Detected
Expected RT: 1.27

Processing Integration Results



Manual Integration Results

RT: 1.25
Area: 7551219437
Amount: 52069
Amount Units: ug/l



Reviewer: waldorfj, 27-Jul-2018 18:32:06
Audit Action: Assigned Compound ID Audit Reason:

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33213

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
Methane		1.696	1.687	1.695	1.700	1.689	1.691	1.692	1.687	+++++	1.660 - 1.740	1.692
Ethene	2.517	2.518	2.515	2.512	2.508	2.505	2.503				2.458 - 2.558	2.511
Acetylene	2.660	2.660	2.657	2.653	2.649	2.649	2.646				2.569 - 2.729	2.653
Ethane	2.899	2.899	2.892	2.890	2.884	2.882	2.878				2.834 - 2.934	2.889

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33213

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	 113882 111673	144705 116496 +++++	126651 111149	118460 146491	Ave		123688.244				11.6		20.0			
Ethene	75879 89688	85786 90805	86870 88006	90294	Ave		86761.1514				5.9		20.0			
Acetylene	28032 32945	30844 32996	31622 33002	32104	Ave		31649.1625				5.7		20.0			
Ethane	91370 109163	103886 112143	103517 107716	111228	Ave		105574.762				6.7		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116017-1 Analy Batch No.: 423985

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2018 16:08 Calibration End Date: 07/27/2018 18:20 Calibration ID: 33213

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-423985/1	07271801.D
Level 2	IC 280-423985/2	07271802.D
Level 3	IC 280-423985/3	07271804.D
Level 4	IC 280-423985/4	07271805.D
Level 5	ICRT 280-423985/5	07271806.D
Level 6	IC 280-423985/6	07271807.D
Level 7	IC 280-423985/7	07271808.D
Level 8	IC 280-423985/8	07271809.D
Level 9	IC 280-423985/9	07271810.D
Level 10	IC 280-423985/10	07271811.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Methane	Ave	17009123	132049 32457009	231149 264700518	1729596 807148110	8313745 +++++	146	0.913 292	1.83 1807	14.6 7228	73.0 +++++
Ethene	Ave	60545 23185632	136900 44941752	277260	2305510	11450145	0.798 255	1.60 511	3.19	25.5	128
Acetylene	Ave	20765 7821405	45696 15646052	93697	761001	3904723	0.741 237	1.48 474	2.96	23.7	119
Ethane	Ave	78153 30694702	177718 58966066	354173	3044430	14939591	0.855 274	1.71 547	3.42	27.4	137

Curve Type Legend:
Ave = Average

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271801.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 27-Jul-2018 16:08:28 ALS Bottle#: 3 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L1
Misc. Info.: 280-0072448-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:05 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1		1.270			ND	ND	
2		1.700					
2 Ethane							
1	1.560	1.567	-0.007	92299	0.8553	0.7450	
2	2.899	2.884	0.015	78153	0.8553	0.7403	
						RPD = 0.64	
3 Ethylene							
1	1.908	1.913	-0.005	62057	0.7979	0.6191	
2	2.517	2.508	0.009	60545	0.7979	0.6978	
						RPD = 11.96	
4 Propane							
1	2.737	2.717	0.020	148467	1.25	1.13	
2	4.697	4.686	0.011	125786	1.25	1.12	
						RPD = 0.50	
5 Acetylene							
1	4.193	4.169	0.024	23717	0.7408	0.6523	
2	2.660	2.649	0.011	20765	0.7408	0.6561	
						RPD = 0.59	
6 Butane							
1	4.492	4.466	0.026	216270	1.65	1.60	
2	6.158	6.147	0.011	181961	1.65	1.58	
						RPD = 0.83	
7 isobutylene							
1	5.401	5.381	0.020	142008	1.60	1.56	
2	6.006	5.996	0.010	121395	1.60	1.58	
						RPD = 1.13	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

RSK7gasMathes_00021 Amount Added: 1.25 Units: uL

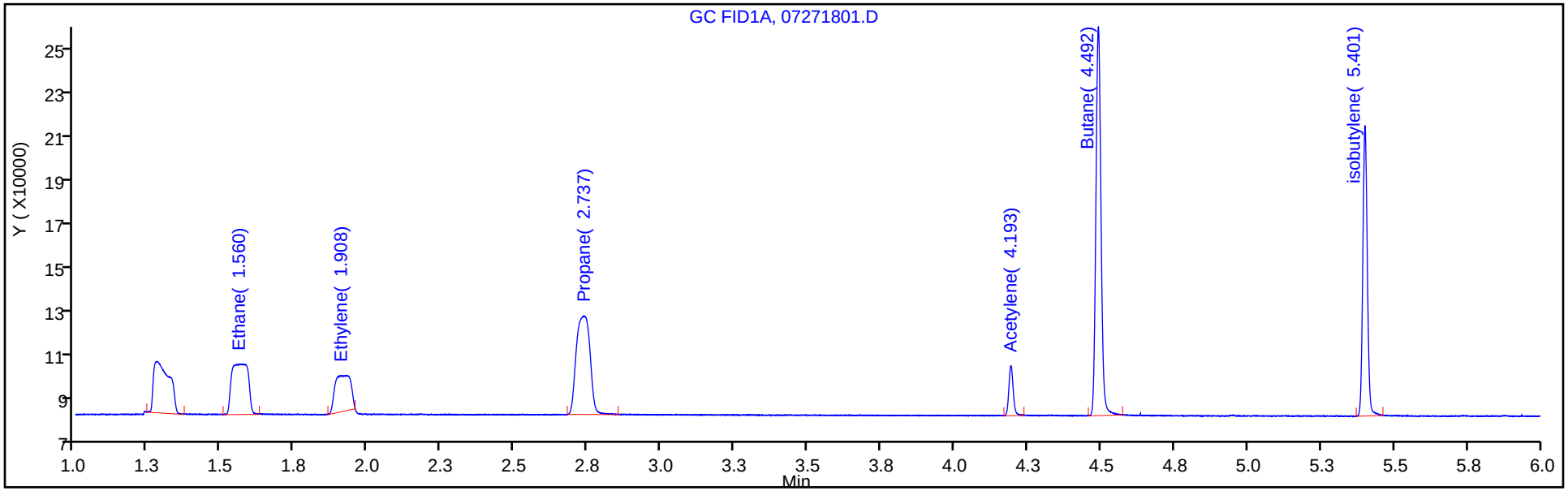
Report Date: 01-Aug-2018 15:06:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

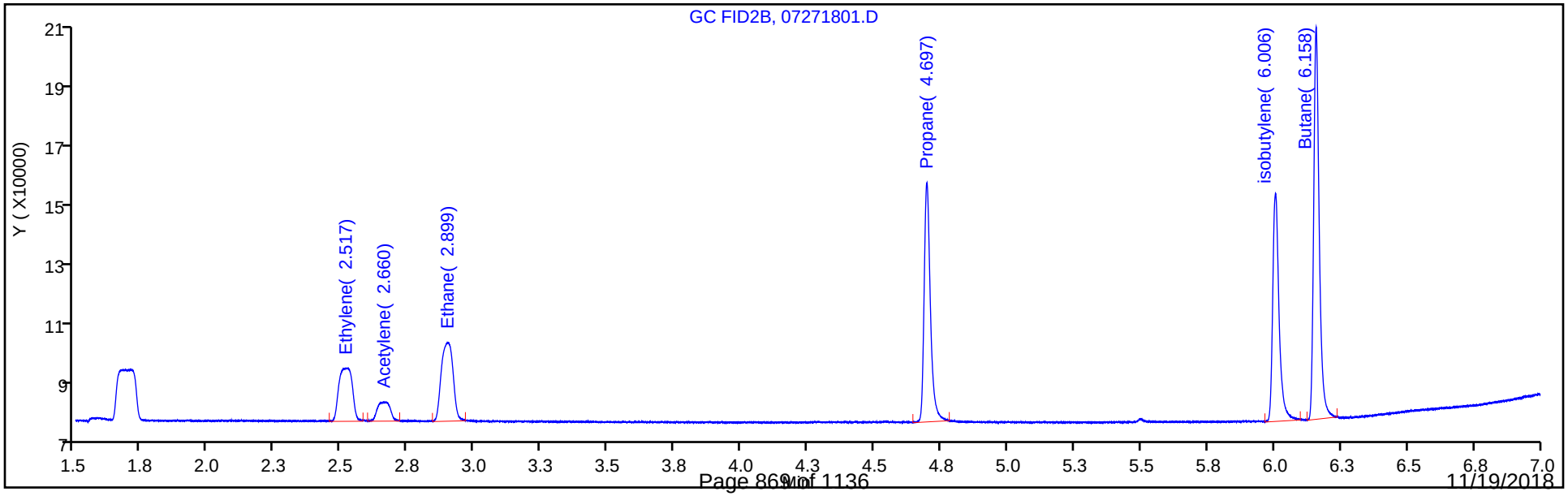
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Injection Date:	27-Jul-2018 16:08:28	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L1			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271802.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Jul-2018 16:21:39 ALS Bottle#: 4 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L2
Misc. Info.: 280-0072448-002
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:07 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.279	1.270	0.009	158154	0.9125	1.09	
2	1.696	1.700	-0.004	132049	0.9125	1.07	
						RPD = 2.13	
2 Ethane							
1	1.573	1.567	0.006	210099	1.71	1.70	
2	2.899	2.884	0.015	177718	1.71	1.68	
						RPD = 0.74	
3 Ethylene							
1	1.913	1.913	0.000	160901	1.60	1.61	
2	2.518	2.508	0.010	136900	1.60	1.58	
						RPD = 1.72	
4 Propane							
1	2.735	2.717	0.018	323658	2.51	2.46	
2	4.696	4.686	0.010	275857	2.51	2.47	
						RPD = 0.10	
5 Acetylene							
1	4.191	4.169	0.022	53488	1.48	1.47	
2	2.660	2.649	0.011	45696	1.48	1.44	
						RPD = 1.87	
6 Butane							
1	4.490	4.466	0.024	431148	3.31	3.19	
2	6.157	6.147	0.010	364330	3.31	3.17	
						RPD = 0.40	
7 isobutylene							
1	5.400	5.381	0.019	278539	3.19	3.06	
2	6.004	5.996	0.008	236349	3.19	3.07	
						RPD = 0.39	

Reagents:

RSK7gasMathes_00021 Amount Added: 2.50 Units: uL

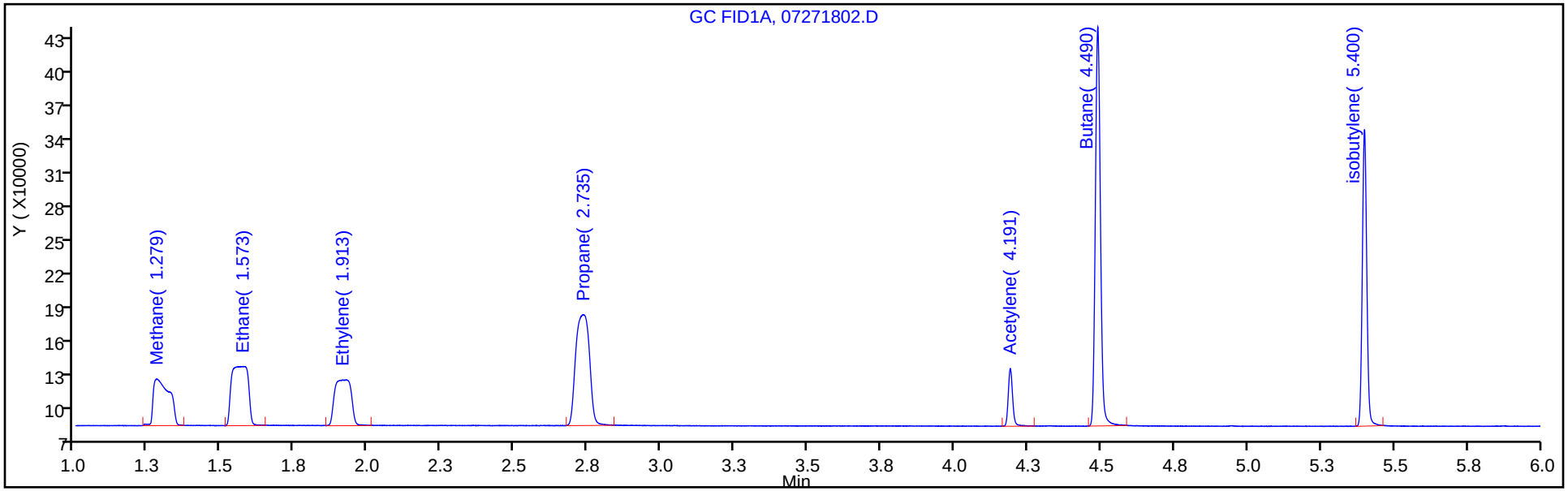
Report Date: 01-Aug-2018 15:06:08 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

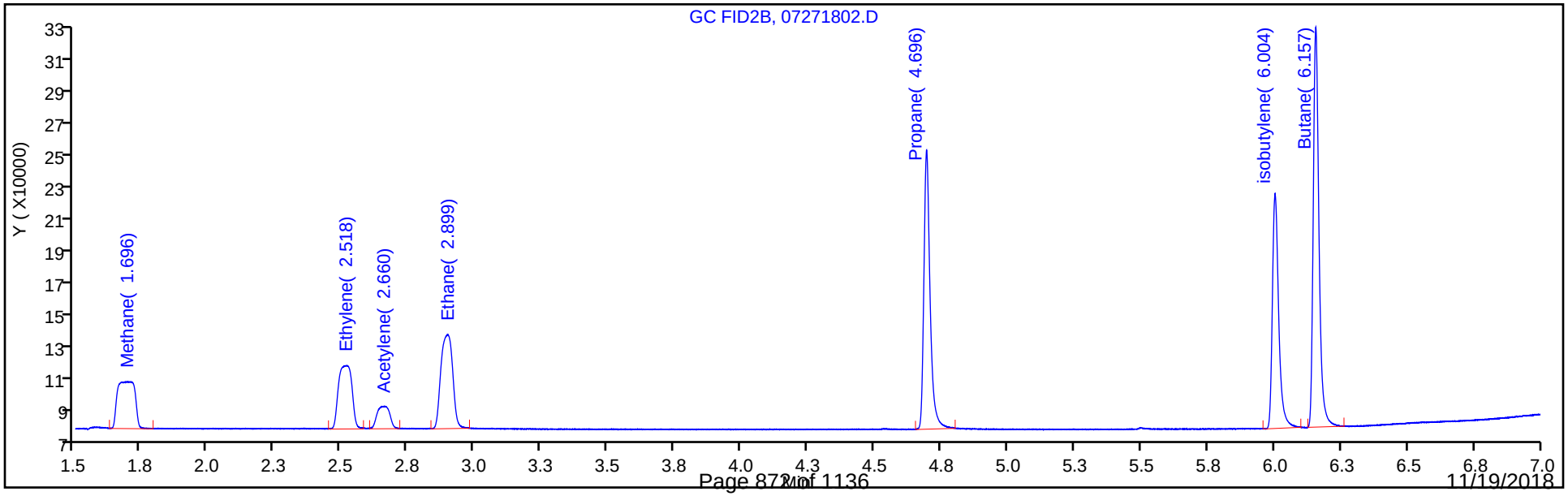
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Injection Date:	27-Jul-2018 16:21:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L2			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271804.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Jul-2018 16:48:06 ALS Bottle#: 6 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L3
Misc. Info.: 280-0072448-003
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:08 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.277	1.270	0.007	275113	1.83	1.90	
2	1.687	1.700	-0.013	231149	1.83	1.87	
						RPD = 1.50	
2 Ethane							
1	1.568	1.567	0.001	420593	3.42	3.40	
2	2.892	2.884	0.008	354173	3.42	3.35	
						RPD = 1.19	
3 Ethylene							
1	1.920	1.913	0.007	325891	3.19	3.25	
2	2.515	2.508	0.007	277260	3.19	3.20	
						RPD = 1.72	
4 Propane							
1	2.729	2.717	0.012	643757	5.02	4.90	
2	4.692	4.686	0.006	547641	5.02	4.89	
						RPD = 0.09	
5 Acetylene							
1	4.188	4.169	0.019	109846	2.96	3.02	
2	2.657	2.649	0.008	93697	2.96	2.96	
						RPD = 2.02	
6 Butane							
1	4.486	4.466	0.020	855583	6.61	6.32	
2	6.155	6.147	0.008	725351	6.61	6.32	
						RPD = 0.07	
7 isobutylene							
1	5.396	5.381	0.015	565765	6.38	6.21	
2	6.001	5.996	0.005	478838	6.38	6.22	
						RPD = 0.13	

Reagents:

RSK7gasMathes_00021 Amount Added: 5.00 Units: uL

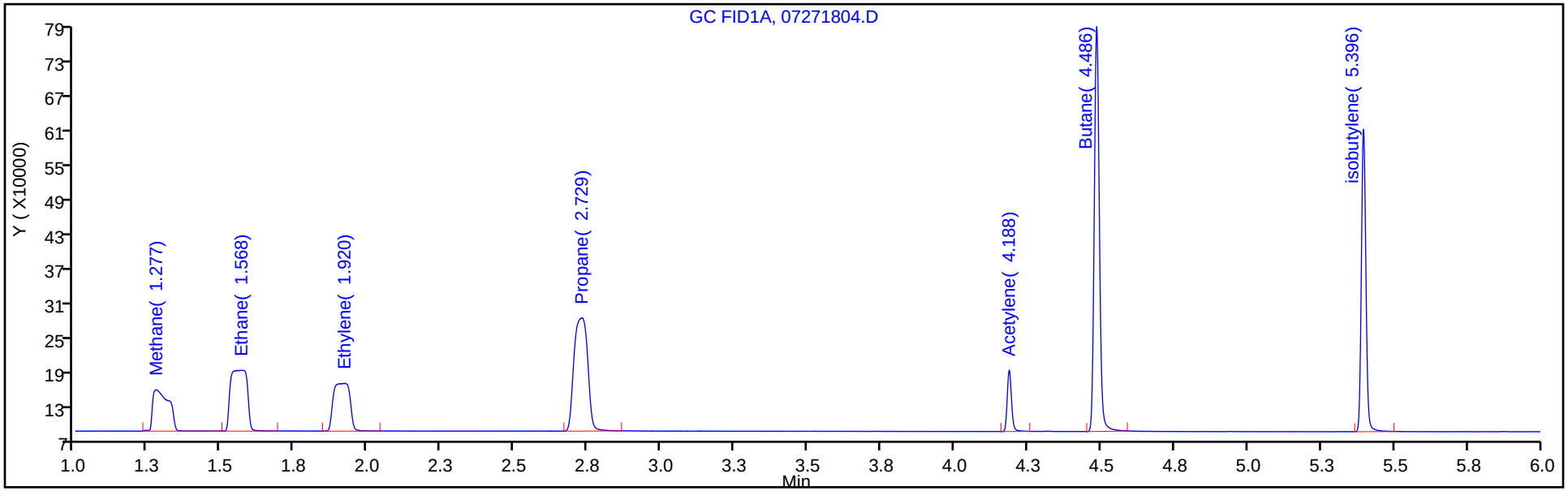
Report Date: 01-Aug-2018 15:06:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

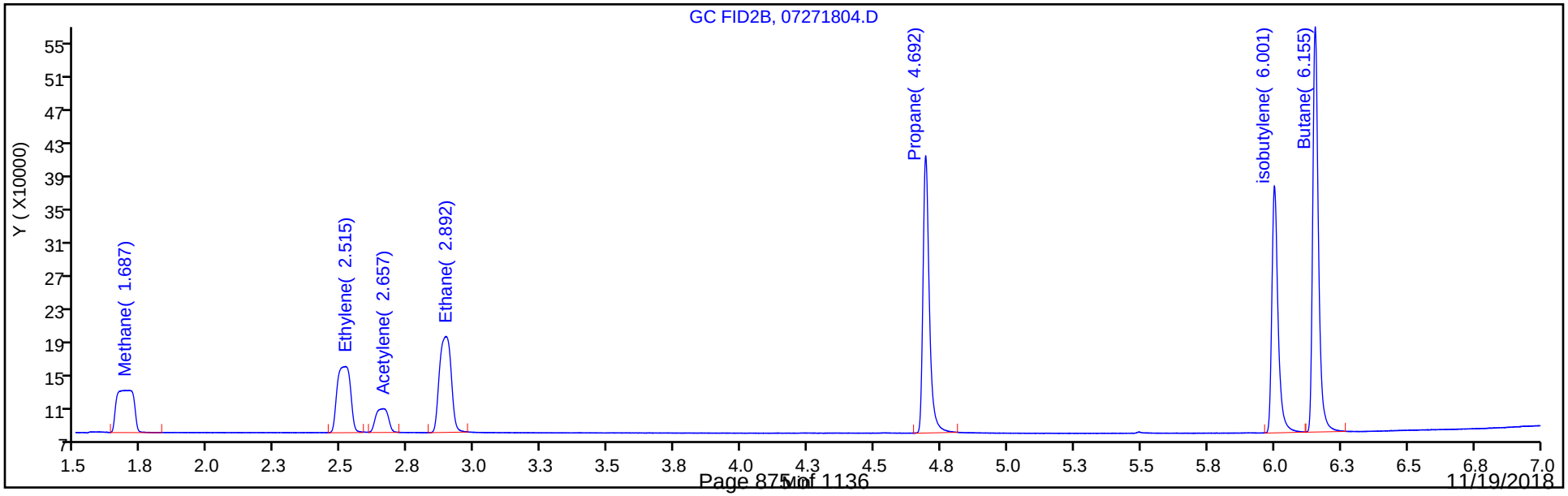
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271804.D

Injection Date:	27-Jul-2018 16:48:06	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L3			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271805.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Jul-2018 17:01:22 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L4
Misc. Info.: 280-0072448-004
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:10 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.275	1.270	0.005	2013850	14.6	13.9	
2	1.695	1.700	-0.005	1729596	14.6	14.0	
						RPD = 0.70	
2 Ethane							
1	1.571	1.567	0.004	3572729	27.4	28.8	
2	2.890	2.884	0.006	3044430	27.4	28.8	
						RPD = 0.01	
3 Ethylene							
1	1.916	1.913	0.003	2703420	25.5	27.0	
2	2.512	2.508	0.004	2305510	25.5	26.6	
						RPD = 1.49	
4 Propane							
1	2.726	2.717	0.009	5515735	40.1	42.0	
2	4.692	4.686	0.006	4700926	40.1	42.0	
						RPD = 0.10	
5 Acetylene							
1	4.181	4.169	0.012	871478	23.7	24.0	
2	2.653	2.649	0.004	761001	23.7	24.0	
						RPD = 0.32	
6 Butane							
1	4.480	4.466	0.014	7345233	52.9	54.3	
2	6.152	6.147	0.005	6263753	52.9	54.5	
						RPD = 0.51	
7 isobutylene							
1	5.392	5.381	0.011	4690212	51.1	51.5	
2	6.001	5.996	0.005	3964374	51.1	51.5	
						RPD = 0.00	

Reagents:

RSK7gasMathes_00021 Amount Added: 40.00 Units: uL

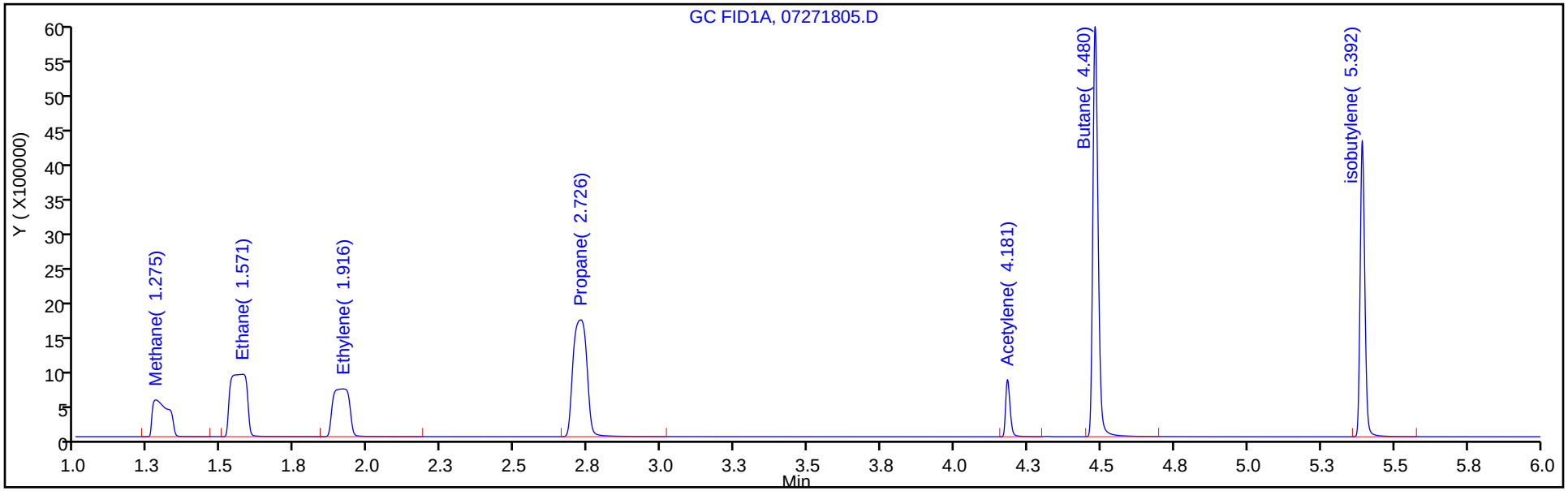
Report Date: 01-Aug-2018 15:06:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

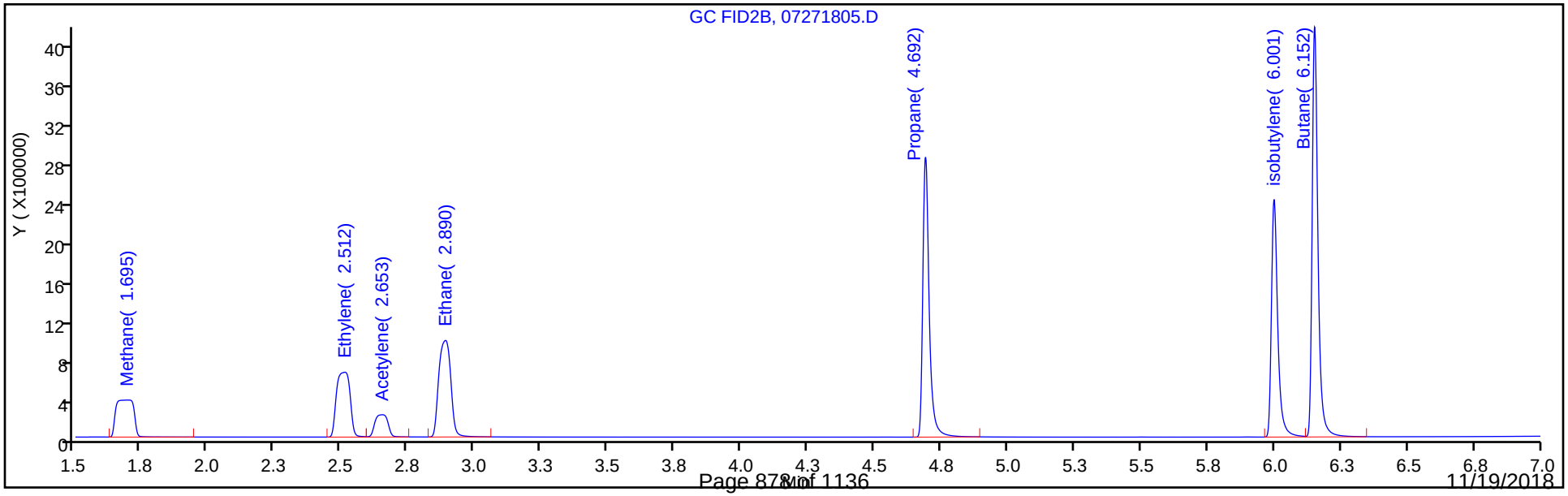
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271805.D

Injection Date:	27-Jul-2018 17:01:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271806.D
Lims ID: ICRT L5
Client ID:
Sample Type: ICRT Calib Level: 5
Inject. Date: 27-Jul-2018 17:14:39 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICRT L5
Misc. Info.: 280-0072448-005
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:11 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	9687627	73.0	66.8	
2	1.700	1.700	0.000	8313745	73.0	67.2	
						RPD = 0.62	
2 Ethane							
1	1.567	1.567	0.000	17465561	136.9	141.0	
2	2.884	2.884	0.000	14939591	136.9	141.5	
						RPD = 0.37	
3 Ethylene							
1	1.913	1.913	0.000	13431071	127.7	134.0	
2	2.508	2.508	0.000	11450145	127.7	132.0	
						RPD = 1.52	
4 Propane							
1	2.717	2.717	0.000	26953316	200.7	205.1	
2	4.686	4.686	0.000	22978605	200.7	205.4	
						RPD = 0.13	
5 Acetylene							
1	4.169	4.169	0.000	4449917	118.5	122.4	
2	2.649	2.649	0.000	3904723	118.5	123.4	
						RPD = 0.81	
6 Butane							
1	4.466	4.466	0.000	36058532	264.5	266.4	
2	6.147	6.147	0.000	30676289	264.5	267.1	
						RPD = 0.27	
7 isobutylene							
1	5.381	5.381	0.000	23545309	255.4	258.6	
2	5.996	5.996	0.000	19818810	255.4	257.5	
						RPD = 0.41	

Reagents:

RSK7gasMathes_00021 Amount Added: 200.00 Units: uL

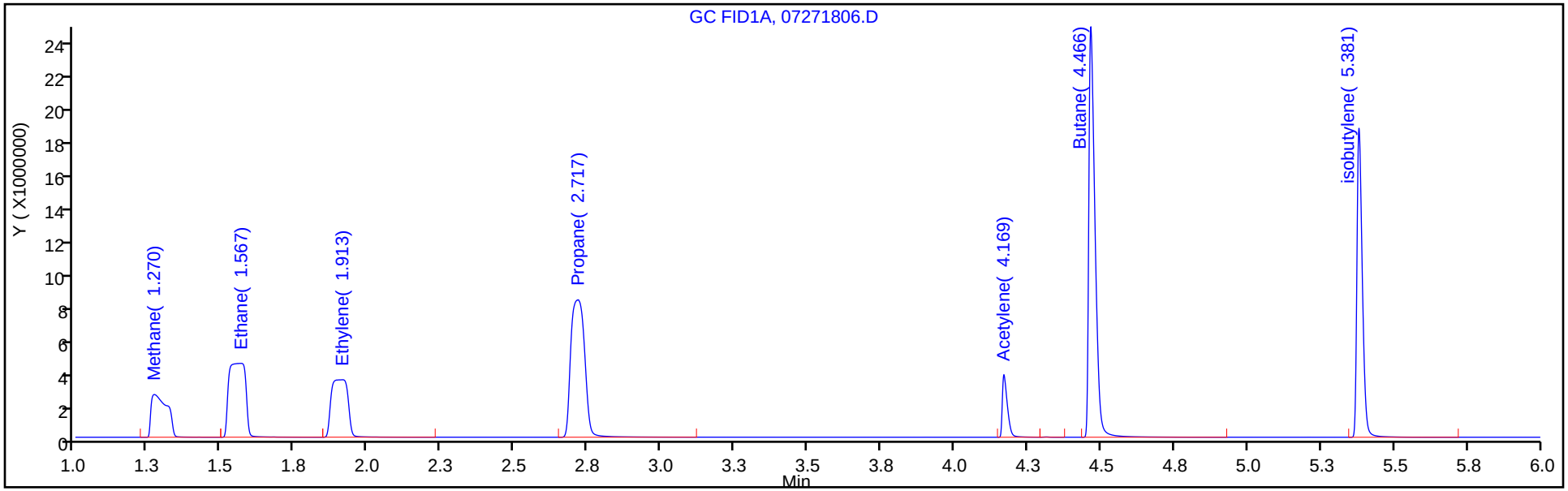
Report Date: 01-Aug-2018 15:06:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

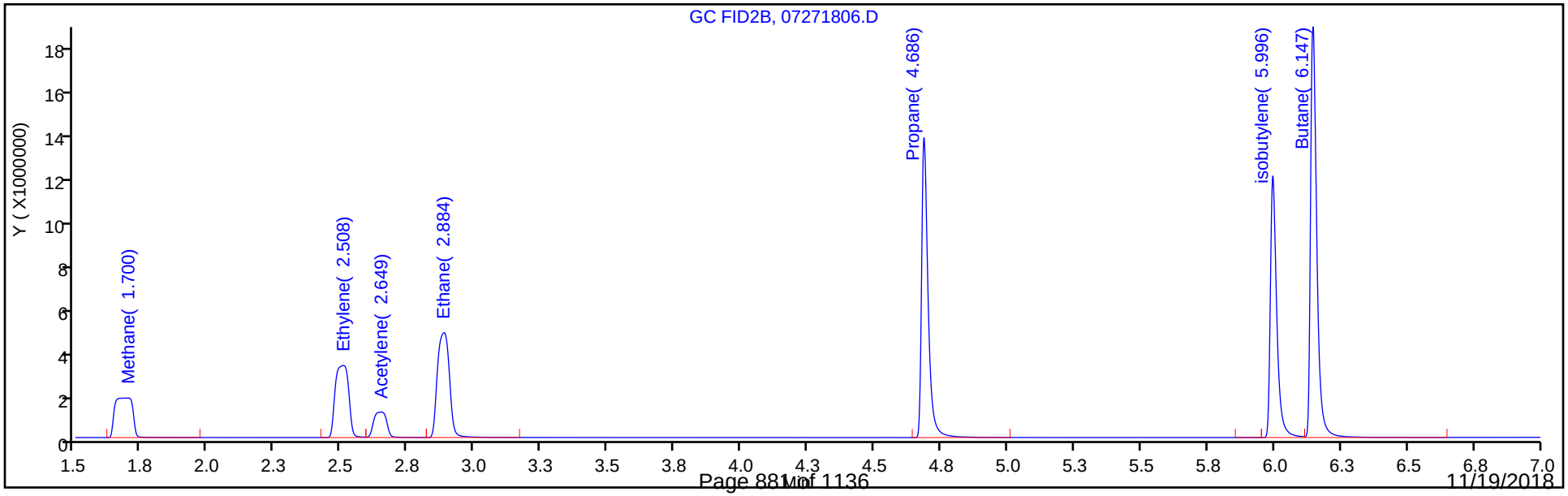
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Injection Date:	27-Jul-2018 17:14:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICRT L5			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271807.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Jul-2018 17:27:53 ALS Bottle#: 9 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L6
Misc. Info.: 280-0072448-006
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:12 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.268	1.270	-0.002	19799464	146.0	136.5	
2	1.689	1.700	-0.011	17009123	146.0	137.5	
						RPD = 0.72	
2 Ethane							
1	1.568	1.567	0.001	35710920	273.7	288.3	
2	2.882	2.884	-0.002	30694702	273.7	290.7	
						RPD = 0.86	
3 Ethylene							
1	1.905	1.913	-0.008	27213526	255.3	271.5	
2	2.505	2.508	-0.003	23185632	255.3	267.2	
						RPD = 1.58	
4 Propane							
1	2.709	2.717	-0.008	55884118	401.4	425.3	
2	4.682	4.686	-0.004	47587505	401.4	425.3	
						RPD = 0.01	
5 Acetylene							
1	4.159	4.169	-0.010	8893827	237.0	244.6	
2	2.649	2.649	0.000	7821405	237.0	247.1	
						RPD = 1.03	
6 Butane							
1	4.452	4.466	-0.014	76052237	529.0	561.9	
2	6.140	6.147	-0.007	64668909	529.0	563.1	
						RPD = 0.22	
7 isobutylene							
1	5.372	5.381	-0.009	48738029	510.8	535.3	
2	5.990	5.996	-0.006	40966010	510.8	532.3	
						RPD = 0.56	

Reagents:

RSK7gasMathes_00021 Amount Added: 400.00 Units: uL

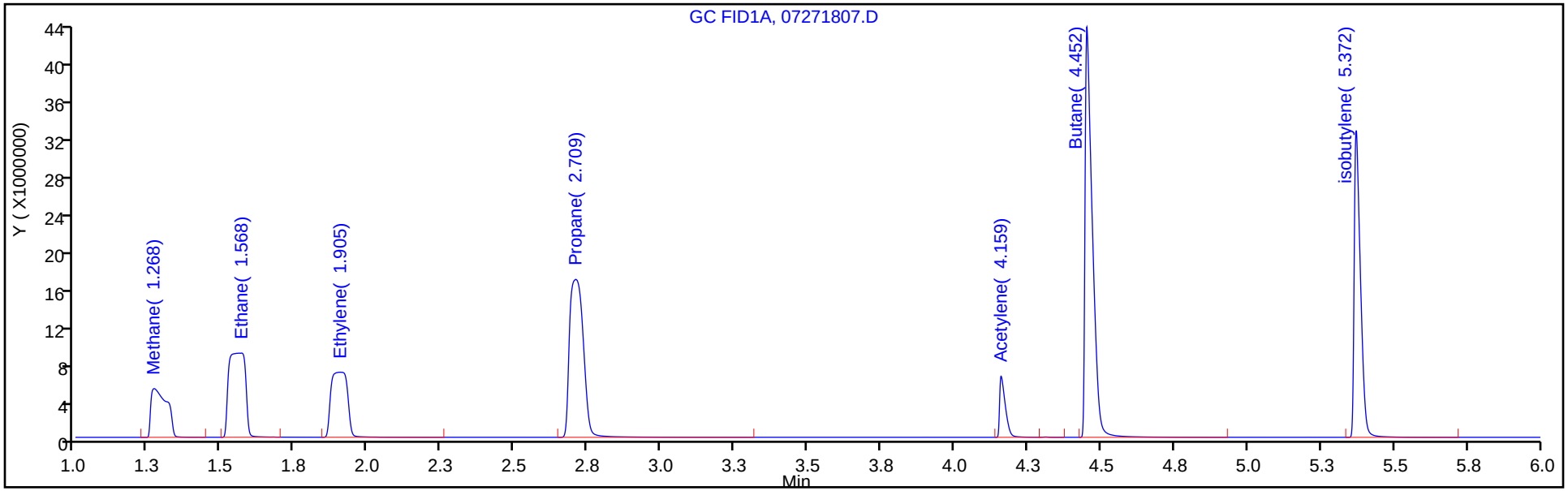
Report Date: 01-Aug-2018 15:06:12 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

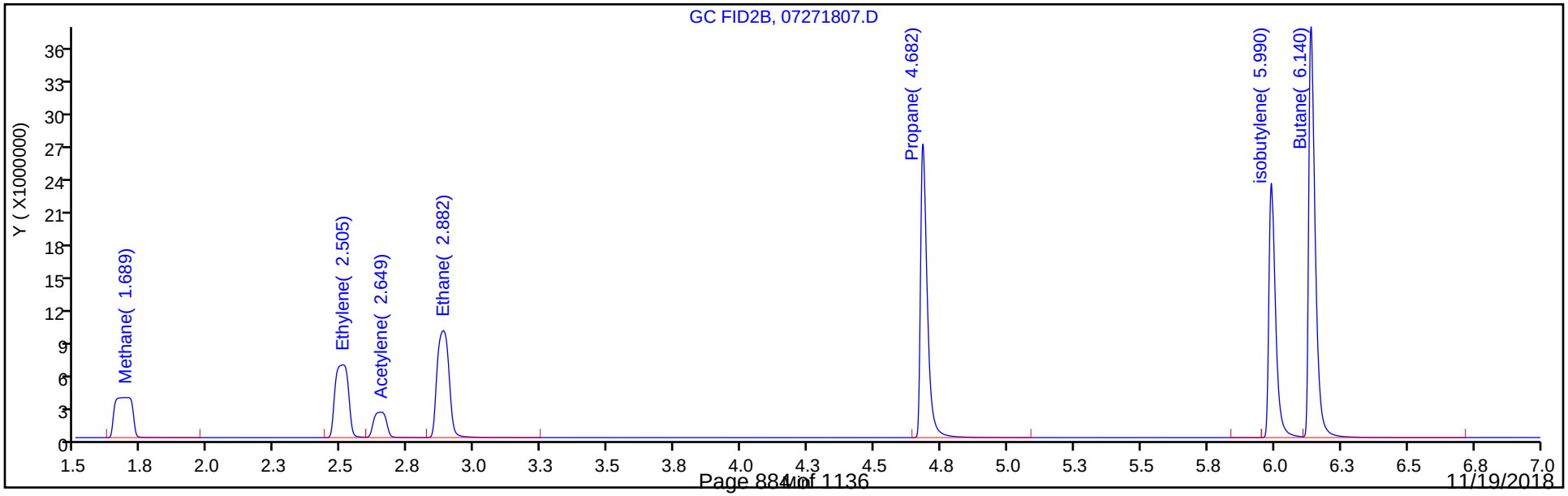
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271807.D

Injection Date:	27-Jul-2018 17:27:53	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L6			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271808.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Jul-2018 17:41:07 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L7
Misc. Info.: 280-0072448-007
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:13 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.266	1.270	-0.004	37798983	292.0	260.6	
2	1.691	1.700	-0.009	32457009	292.0	262.4	
						RPD = 0.68	
2 Ethane							
1	1.566	1.567	-0.001	68388169	547.4	552.0	
2	2.878	2.884	-0.006	58966066	547.4	558.5	
						RPD = 1.17	
3 Ethylene							
1	1.907	1.913	-0.006	52739976	510.7	526.2	
2	2.503	2.508	-0.005	44941752	510.7	518.0	
						RPD = 1.56	
4 Propane							
1	2.696	2.717	-0.021	107017224	802.8	814.4	
2	4.675	4.686	-0.011	91287063	802.8	815.9	
						RPD = 0.18	
5 Acetylene							
1	4.147	4.169	-0.022	17782088	474.1	489.0	
2	2.646	2.649	-0.003	15646052	474.1	494.4	
						RPD = 1.08	
6 Butane							
1	4.436	4.466	-0.030	145987563	1058.1	1078.6	
2	6.129	6.147	-0.018	124122072	1058.1	1080.9	
						RPD = 0.21	
7 isobutylene							
1	5.357	5.381	-0.024	95079391	1021.5	1044.2	
2	5.982	5.996	-0.014	79870985	1021.5	1037.8	
						RPD = 0.61	

Reagents:

RSK7gasMathes_00021 Amount Added: 800.00 Units: uL

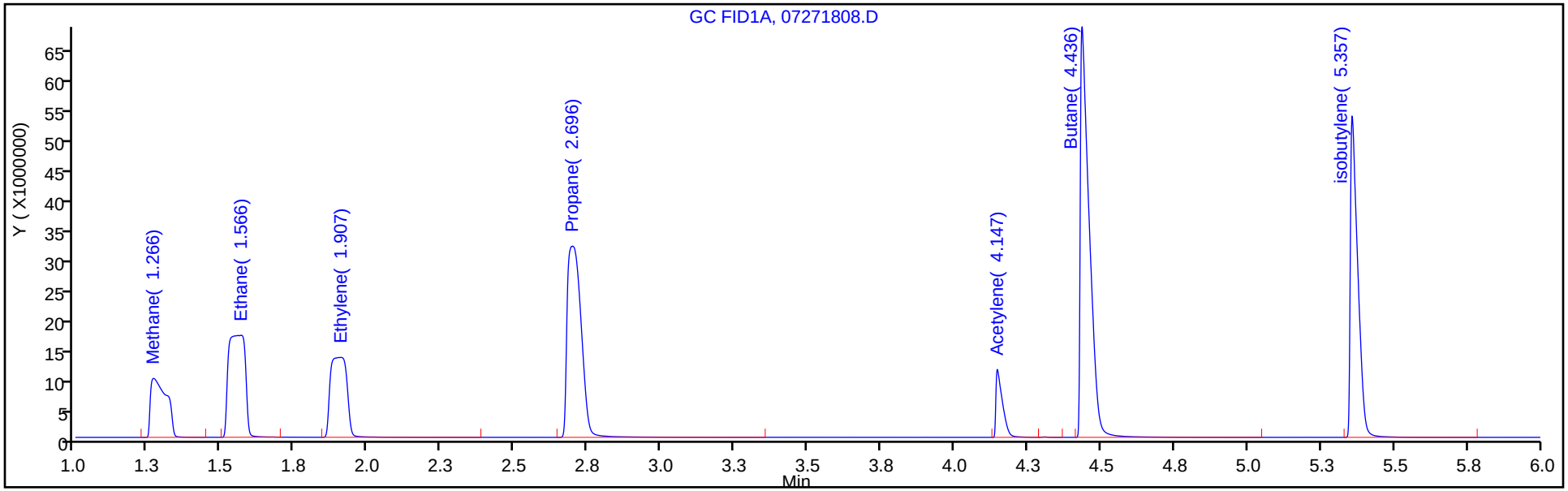
Report Date: 01-Aug-2018 15:06:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

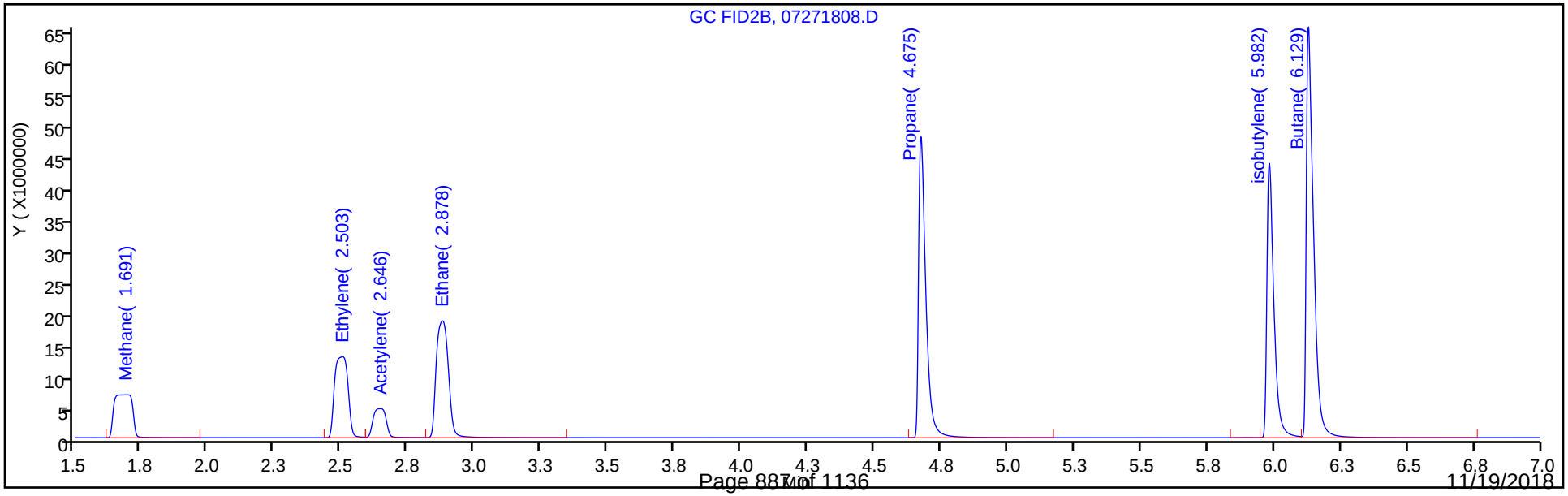
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271808.D

Injection Date:	27-Jul-2018 17:41:07	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L7			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271809.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 27-Jul-2018 17:54:22 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L8
Misc. Info.: 280-0072448-008
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:15 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	308207757	1806.9	2125.2	
2	1.692	1.700	-0.008	264700518	1806.9	2140.1	
						RPD = 0.70	

Reagents:

RSK175methane_00006 Amount Added: 50.00 Units: uL

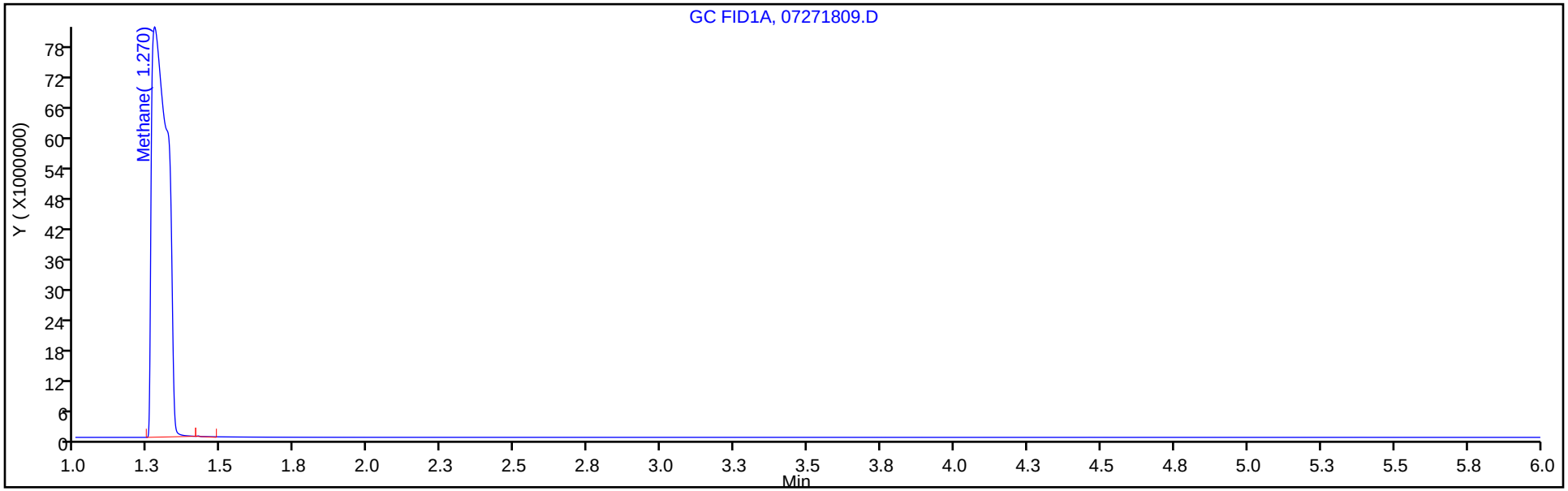
Report Date: 01-Aug-2018 15:06:15 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

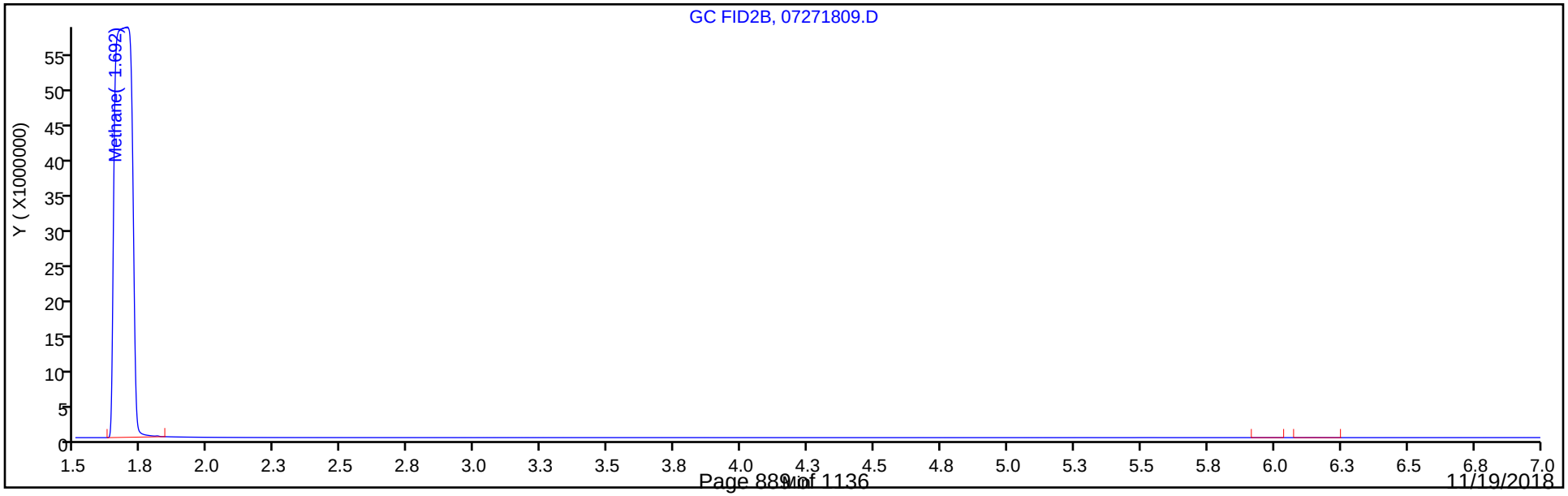
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271809.D

Injection Date:	27-Jul-2018 17:54:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L8			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271810.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 27-Jul-2018 18:07:33 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L9
Misc. Info.: 280-0072448-009
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:16 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.270	0.000	938860173	7227.8	6473.8	
2	1.687	1.700	-0.013	807148110	7227.8	6525.7	
						RPD = 0.80	

Reagents:

RSK175methane_00006 Amount Added: 200.00 Units: uL

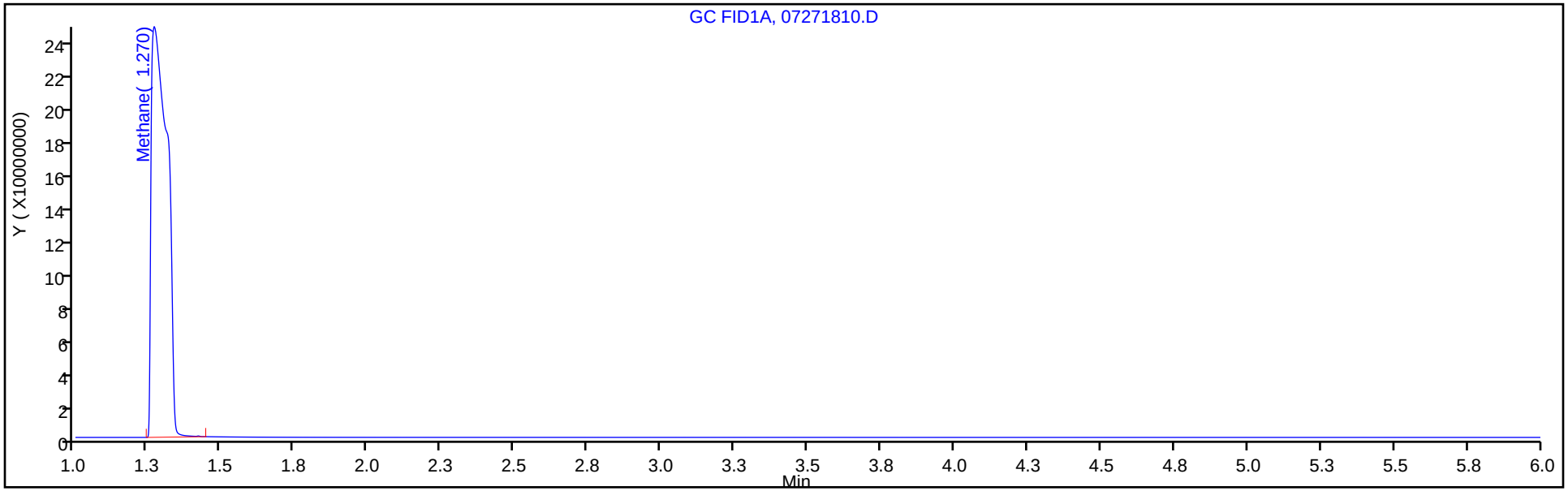
Report Date: 01-Aug-2018 15:06:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

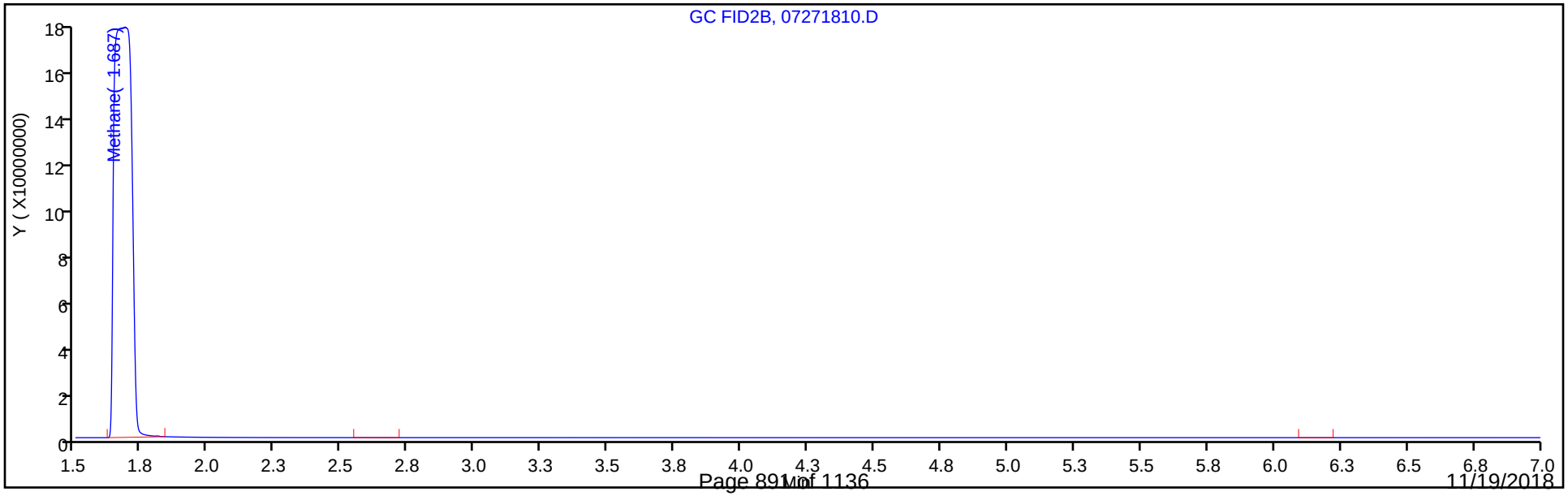
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271810.D

Injection Date:	27-Jul-2018 18:07:33	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L9			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 27-Jul-2018 18:20:43 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L10
Misc. Info.: 280-0072448-010
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:17 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							a
1	1.249	1.270	-0.021	7551219437	14456	52069	a
2	1.624	1.700	-0.076	6498932209	14456	52543	a
						RPD = 0.91	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

RSK175methane_00006 Amount Added: 400.00 Units: uL

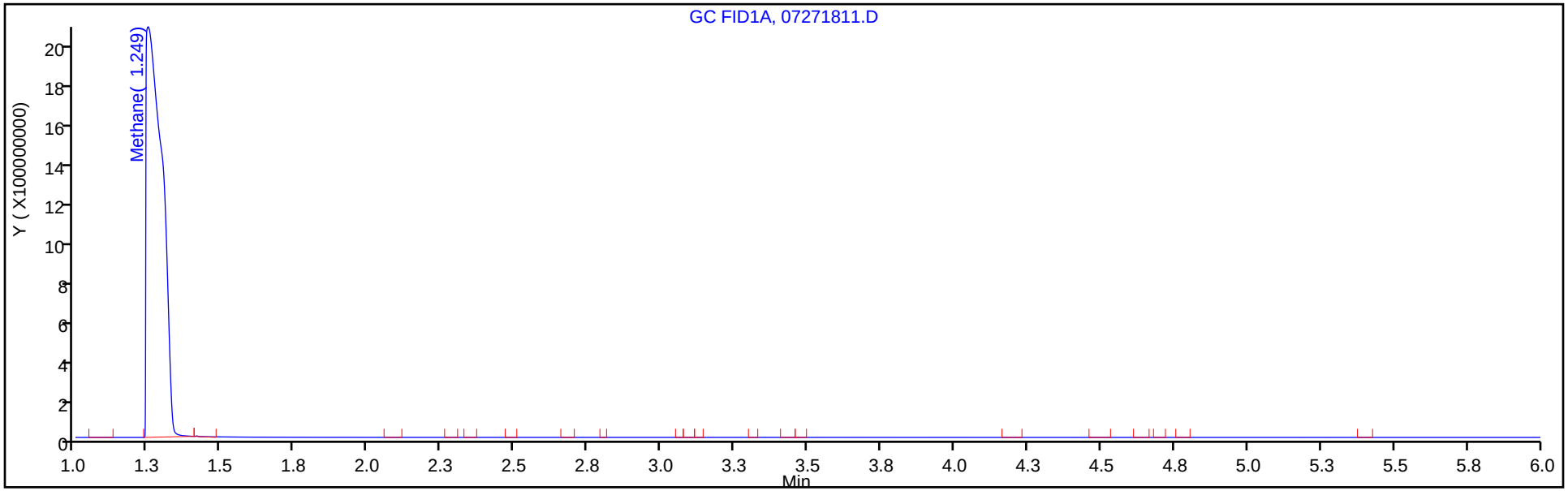
Report Date: 01-Aug-2018 15:06:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

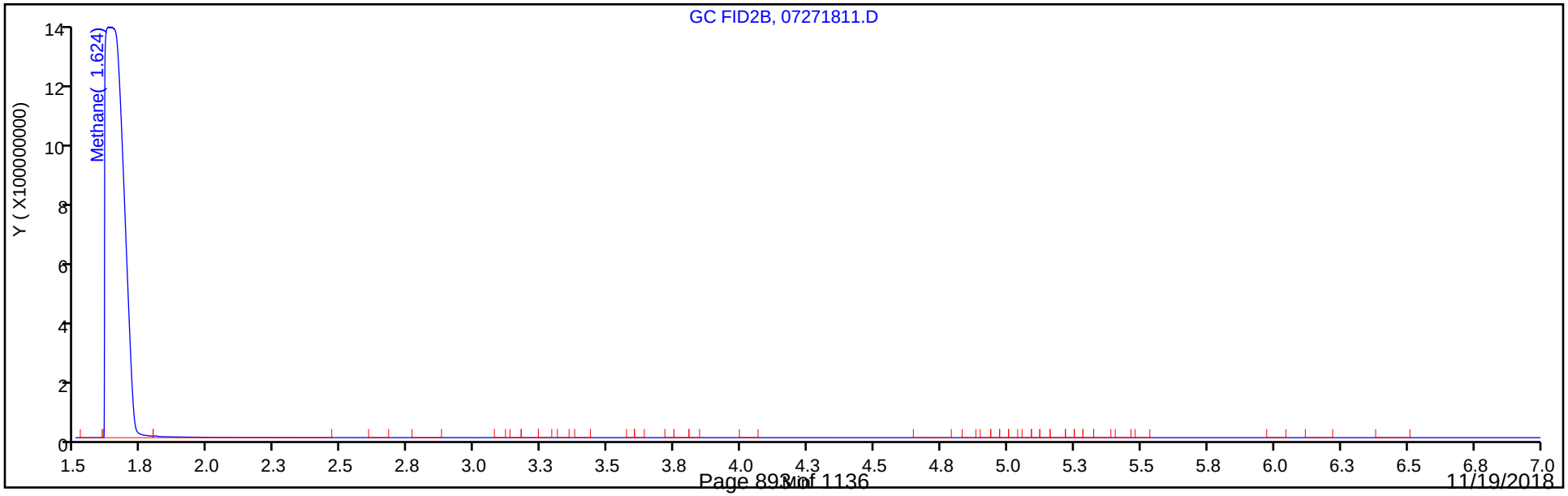
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Injection Date:	27-Jul-2018 18:20:43	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L10			Worklist Smp#:	10
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

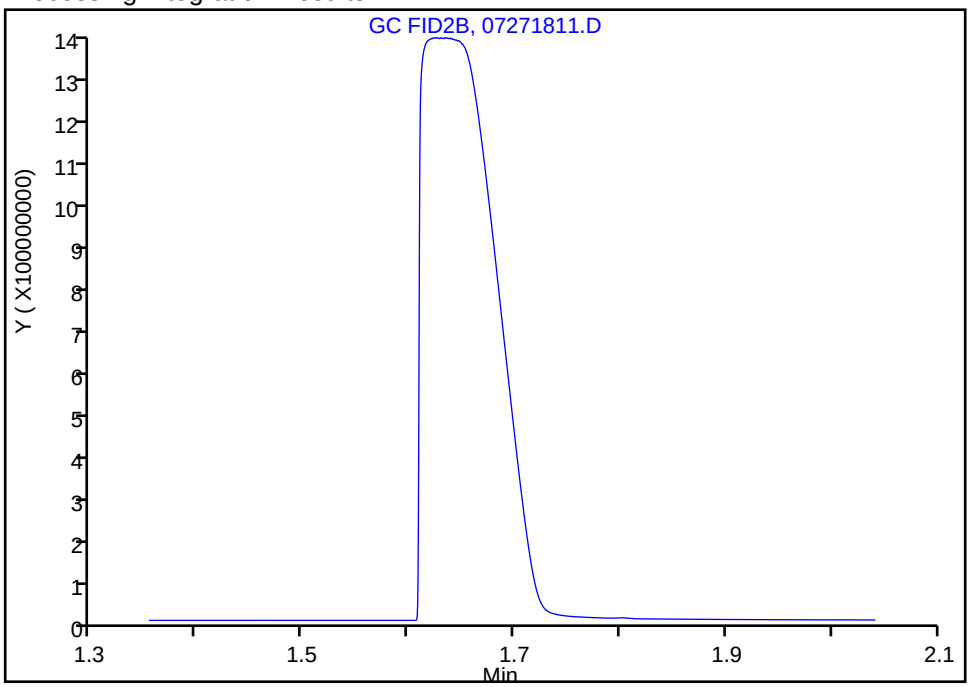
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D
Injection Date: 27-Jul-2018 18:20:43 Instrument ID: VGC_J
Lims ID: IC L10
Client ID:
Operator ID: ms ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: HP-PLOT/Q (0.53 mm) Detector GC FID2B

1 Methane, CAS: 74-82-8

Signal: 2

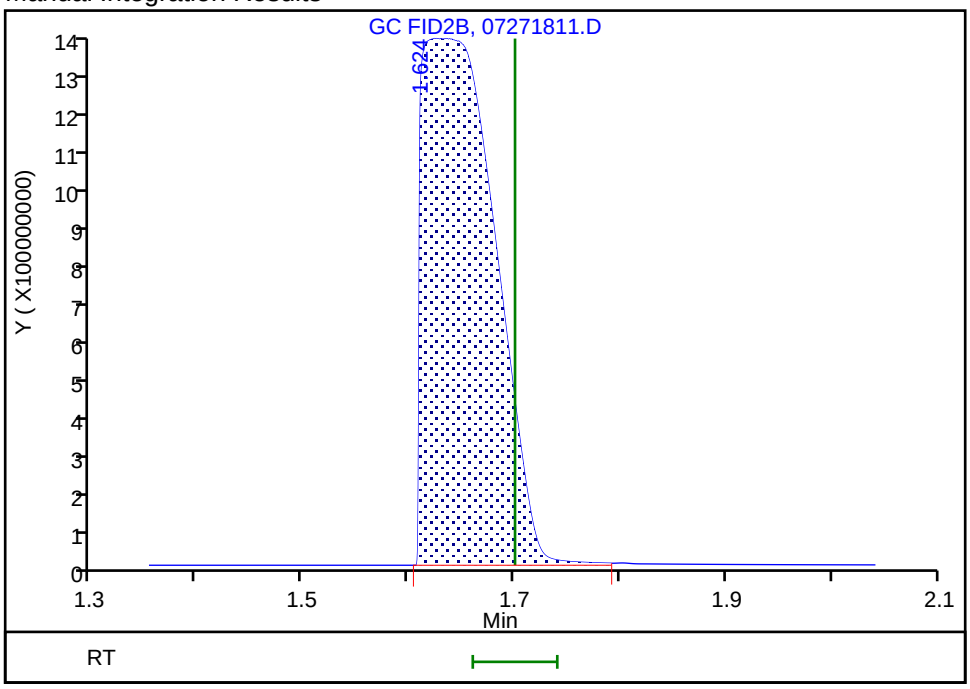
Not Detected
Expected RT: 1.70

Processing Integration Results



Manual Integration Results

RT: 1.62
Area: 6498932209
Amount: 52543
Amount Units: ug/l



Reviewer: waldorfj, 27-Jul-2018 18:32:09
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-423985/12 Calibration Date: 07/27/2018 19:00

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 07271814.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	145024	126499		127	146	-12.8	20.0
Ethane	Ave	123886	121986		270	274	-1.5	20.0
Ethene	Ave	100235	101098		258	255	0.9	20.0
Acetylene	Ave	36361	36957		241	237	1.6	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-423985/12 Calibration Date: 07/27/2018 19:00

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 07271814.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.27	1.23	1.31
Ethane	1.57	1.52	1.62
Ethene	1.91	1.86	1.96
Acetylene	4.16	4.09	4.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271814.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 27-Jul-2018 19:00:22 ALS Bottle#: 16 Worklist Smp#: 12
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: blank
Misc. Info.: 280-0072448-011
Operator ID: ms Instrument ID: VGC_J
Sublist:

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:18 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.269	1.270	-0.001	18469747	146.0	127.4	
2	1.698	1.700	-0.002	15892886	146.0	128.5	
						RPD = 0.89	
2 Ethane							
1	1.567	1.567	0.000	33389051	273.7	269.5	
2	2.882	2.884	-0.002	28741705	273.7	272.2	
						RPD = 1.01	
3 Ethylene							
1	1.908	1.913	-0.005	25813697	255.3	257.5	
2	2.504	2.508	-0.004	22010286	255.3	253.7	
						RPD = 1.50	
4 Propane							
1	2.709	2.717	-0.008	52091328	401.4	396.4	
2	4.682	4.686	-0.004	44450837	401.4	397.3	
						RPD = 0.22	
5 Acetylene							
1	4.155	4.169	-0.014	8760349	237.0	240.9	
2	2.648	2.649	-0.001	7695128	237.0	243.1	
						RPD = 0.91	
6 Butane							
1	4.450	4.466	-0.016	70702459	529.0	522.4	
2	6.140	6.147	-0.007	60180350	529.0	524.1	
						RPD = 0.33	
7 isobutylene							
1	5.369	5.381	-0.012	46124531	510.8	506.6	
2	5.991	5.996	-0.005	38807984	510.8	504.3	
						RPD = 0.46	

Reagents:

RSK7gasMathes_00020 Amount Added: 400.00 Units: uL

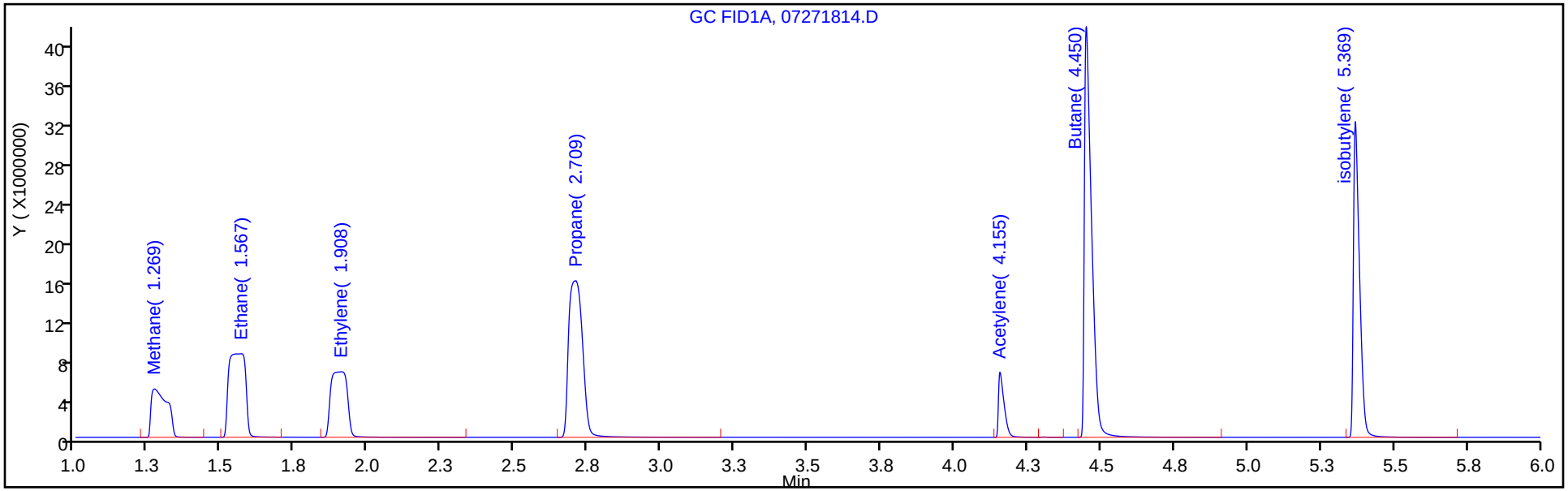
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TestAmerica Denver

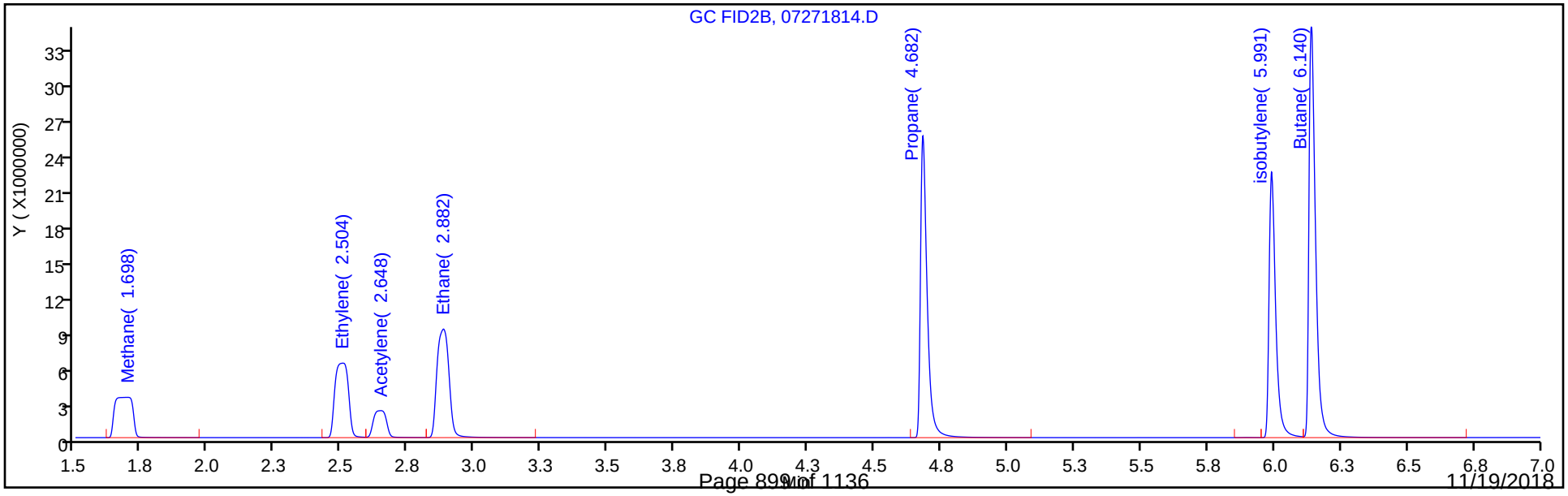
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271814.D

Injection Date:	27-Jul-2018 19:00:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-423985/12 Calibration Date: 07/27/2018 19:00

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 07271814.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	123688	108850		128	146	-12.0	20.0
Ethene	Ave	86761	86202		254	255	-0.6	20.0
Acetylene	Ave	31649	32463		243	237	2.6	20.0
Ethane	Ave	105575	105007		272	274	-0.5	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: ICV 280-423985/12 Calibration Date: 07/27/2018 19:00

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 07271814.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.70	1.66	1.74
Ethene	2.50	2.46	2.56
Acetylene	2.65	2.57	2.73
Ethane	2.88	2.83	2.93

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271814.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 27-Jul-2018 19:00:22 ALS Bottle#: 16 Worklist Smp#: 12
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: blank
Misc. Info.: 280-0072448-011
Operator ID: ms Instrument ID: VGC_J
Sublist:

Method: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 01-Aug-2018 15:06:18 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0314

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.269	1.270	-0.001	18469747	146.0	127.4	
2	1.698	1.700	-0.002	15892886	146.0	128.5	
						RPD = 0.89	
2 Ethane							
1	1.567	1.567	0.000	33389051	273.7	269.5	
2	2.882	2.884	-0.002	28741705	273.7	272.2	
						RPD = 1.01	
3 Ethylene							
1	1.908	1.913	-0.005	25813697	255.3	257.5	
2	2.504	2.508	-0.004	22010286	255.3	253.7	
						RPD = 1.50	
4 Propane							
1	2.709	2.717	-0.008	52091328	401.4	396.4	
2	4.682	4.686	-0.004	44450837	401.4	397.3	
						RPD = 0.22	
5 Acetylene							
1	4.155	4.169	-0.014	8760349	237.0	240.9	
2	2.648	2.649	-0.001	7695128	237.0	243.1	
						RPD = 0.91	
6 Butane							
1	4.450	4.466	-0.016	70702459	529.0	522.4	
2	6.140	6.147	-0.007	60180350	529.0	524.1	
						RPD = 0.33	
7 isobutylene							
1	5.369	5.381	-0.012	46124531	510.8	506.6	
2	5.991	5.996	-0.005	38807984	510.8	504.3	
						RPD = 0.46	

Reagents:

RSK7gasMathes_00020 Amount Added: 400.00 Units: uL

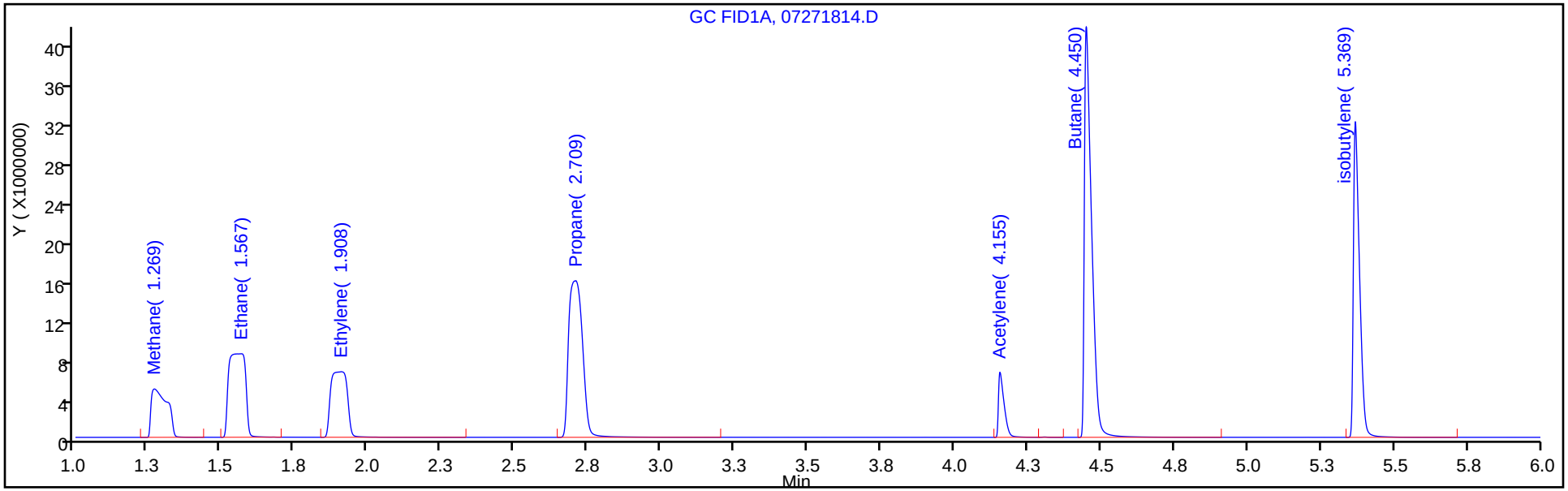
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TestAmerica Denver

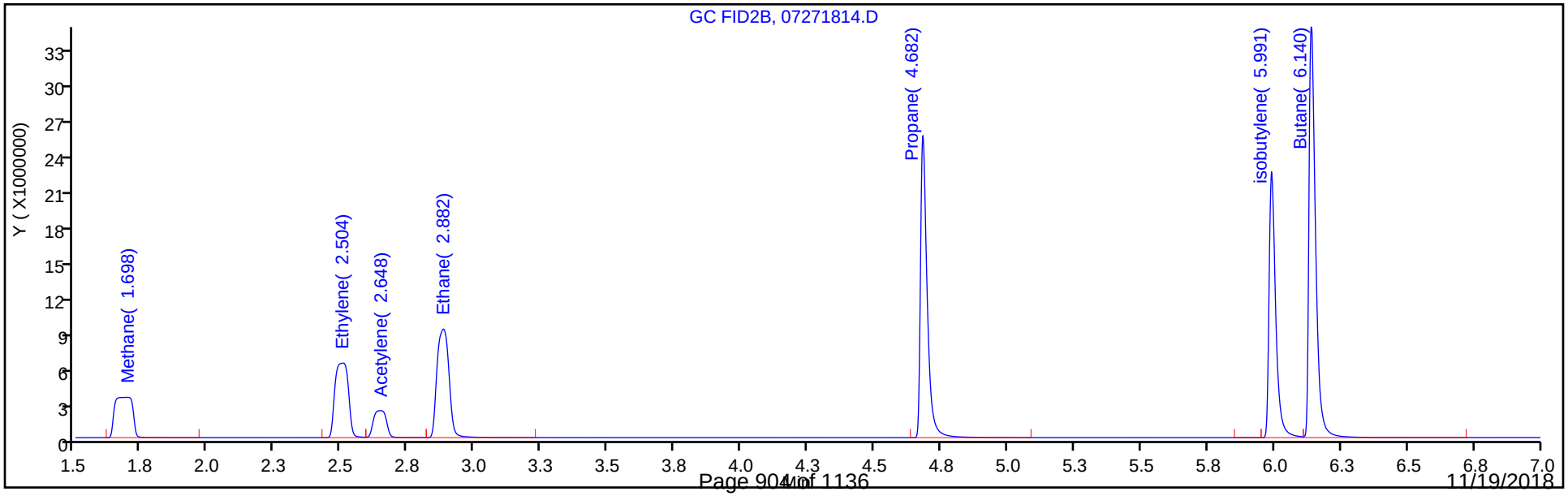
Data File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271814.D

Injection Date:	27-Jul-2018 19:00:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVRT 280-436025/1 Calibration Date: 11/02/2018 09:39

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021801.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	145024	141022		71.0	73.0	-2.8	20.0
Ethane	Ave	123886	140769		156	137	13.6	20.0
Ethene	Ave	100235	112774		144	128	12.5	20.0
Acetylene	Ave	36361	36307		118	119	-0.1	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVRT 280-436025/1 Calibration Date: 11/02/2018 09:39

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021801.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.27	1.23	1.31
Ethane	1.55	1.50	1.60
Ethene	1.87	1.82	1.92
Acetylene	4.05	3.97	4.13

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021801.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 02-Nov-2018 09:39:39 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Misc. Info.: 280-0075757-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:35:37 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.272	1.272	0.000	10295079	73.0	71.0	
2	1.695	1.695	0.000	8810946	73.0	71.2	
						RPD = 0.35	
2 Ethane							
1	1.552	1.552	0.000	19265040	136.9	155.5	
2	2.879	2.879	0.000	16440998	136.9	155.7	
						RPD = 0.14	
3 Ethylene							
1	1.869	1.869	0.000	14397516	127.7	143.6	
2	2.505	2.505	0.000	12238327	127.7	141.1	
						RPD = 1.81	
4 Propane							
1	2.608	2.608	0.000	29052293	200.7	221.1	
2	4.682	4.682	0.000	24640862	200.7	220.2	
						RPD = 0.39	
5 Acetylene							
1	4.050	4.050	0.000	4303227	118.5	118.3	
2	2.645	2.645	0.000	3759212	118.5	118.8	
						RPD = 0.36	
6 Butane							
1	4.363	4.363	0.000	39085105	264.5	288.8	
2	6.144	6.144	0.000	33192149	264.5	289.0	
						RPD = 0.10	
7 isobutylene							
1	5.292	5.292	0.000	27729588	255.4	304.5	
2	5.994	5.994	0.000	23280690	255.4	302.5	
						RPD = 0.67	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

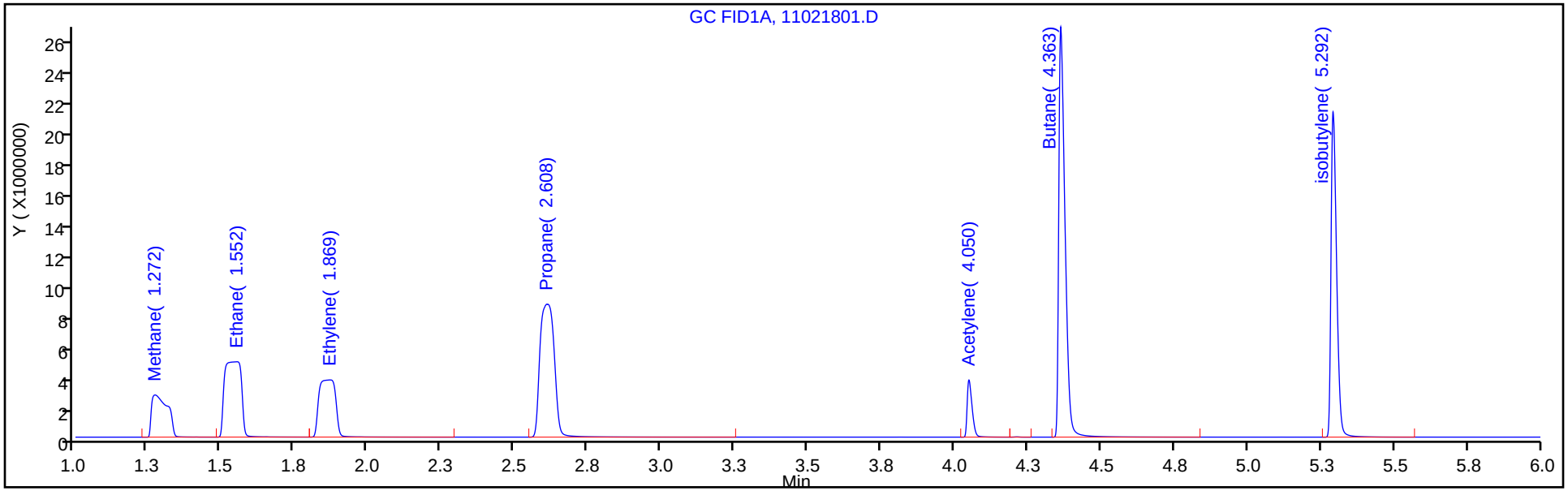
Report Date: 04-Nov-2018 08:35:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

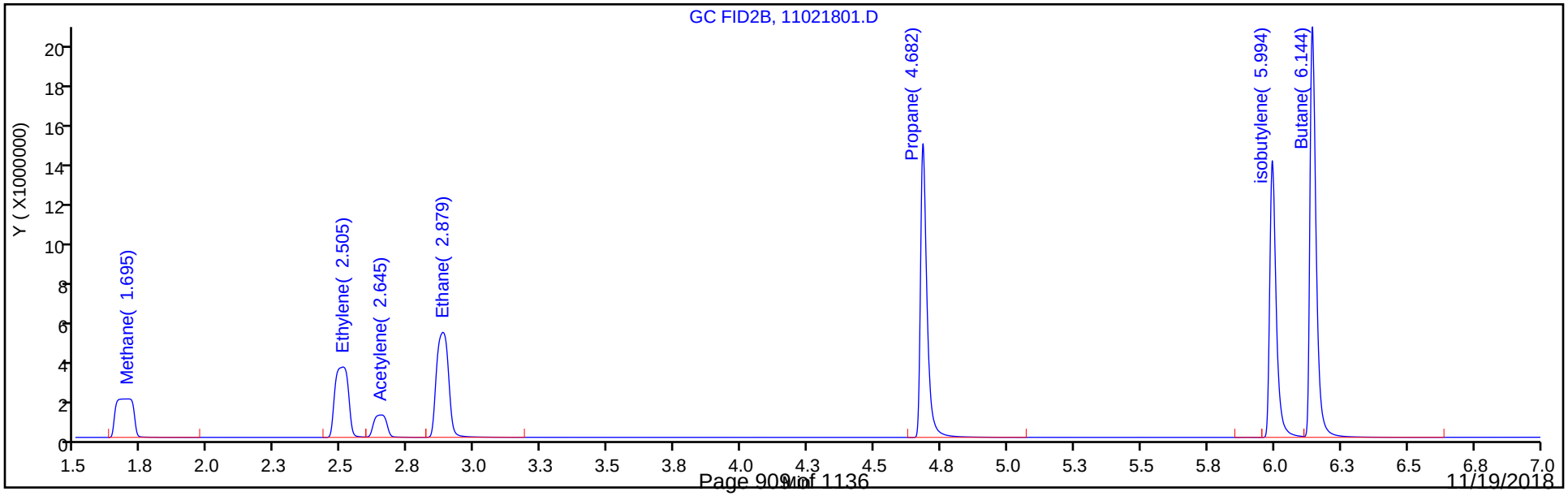
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021801.D

Injection Date:	02-Nov-2018 09:39:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVRT 280-436025/1 Calibration Date: 11/02/2018 09:39

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021801.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	123688	120692		71.2	73.0	-2.4	20.0
Ethene	Ave	86761	95862		141	128	10.5	20.0
Acetylene	Ave	31649	31717		119	119	0.2	20.0
Ethane	Ave	105575	120134		156	137	13.8	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCVRT 280-436025/1 Calibration Date: 11/02/2018 09:39

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021801.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.70	1.66	1.74
Ethene	2.51	2.46	2.56
Acetylene	2.65	2.57	2.73
Ethane	2.88	2.83	2.93

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021801.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 02-Nov-2018 09:39:39 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Misc. Info.: 280-0075757-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:35:37 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.272	1.272	0.000	10295079	73.0	71.0	
2	1.695	1.695	0.000	8810946	73.0	71.2	
						RPD = 0.35	
2 Ethane							
1	1.552	1.552	0.000	19265040	136.9	155.5	
2	2.879	2.879	0.000	16440998	136.9	155.7	
						RPD = 0.14	
3 Ethylene							
1	1.869	1.869	0.000	14397516	127.7	143.6	
2	2.505	2.505	0.000	12238327	127.7	141.1	
						RPD = 1.81	
4 Propane							
1	2.608	2.608	0.000	29052293	200.7	221.1	
2	4.682	4.682	0.000	24640862	200.7	220.2	
						RPD = 0.39	
5 Acetylene							
1	4.050	4.050	0.000	4303227	118.5	118.3	
2	2.645	2.645	0.000	3759212	118.5	118.8	
						RPD = 0.36	
6 Butane							
1	4.363	4.363	0.000	39085105	264.5	288.8	
2	6.144	6.144	0.000	33192149	264.5	289.0	
						RPD = 0.10	
7 isobutylene							
1	5.292	5.292	0.000	27729588	255.4	304.5	
2	5.994	5.994	0.000	23280690	255.4	302.5	
						RPD = 0.67	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

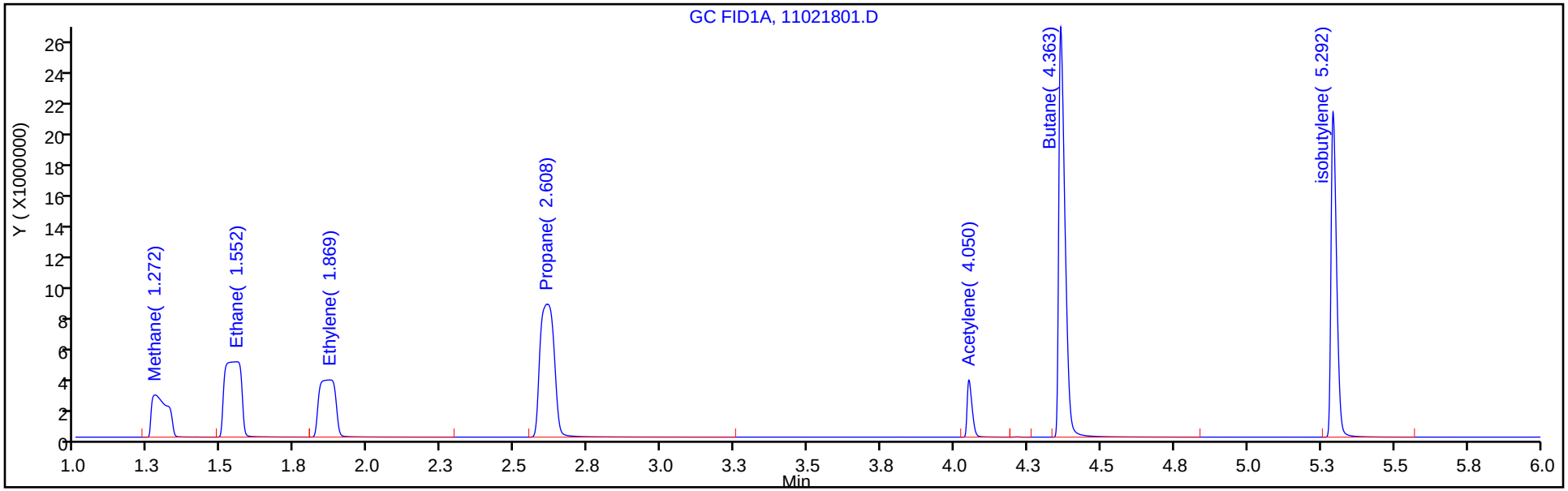
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TestAmerica Denver

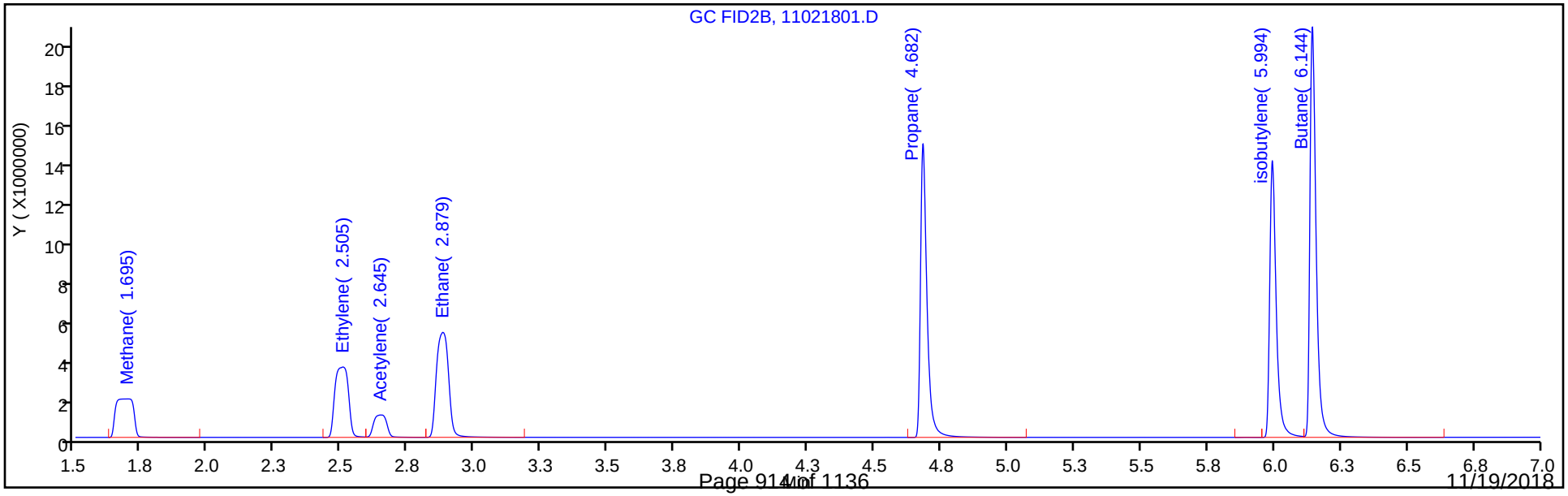
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Injection Date:	02-Nov-2018 09:39:39	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/30 Calibration Date: 11/02/2018 13:38

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021816.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	145024	128218		64.5	73.0	-11.6	20.0
Ethane	Ave	123886	126752		140	137	2.3	20.0
Ethene	Ave	100235	99624		127	128	-0.6	20.0
Acetylene	Ave	36361	36189		118	119	-0.5	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/30 Calibration Date: 11/02/2018 13:38

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021816.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.26	1.23	1.31
Ethane	1.53	1.50	1.60
Ethene	1.84	1.82	1.92
Acetylene	4.03	3.97	4.13

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021816.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 13:38:21 ALS Bottle#: 16 Worklist Smp#: 30
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075757-030
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:34:09 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 13:47:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.255	1.272	-0.017	9360346	73.0	64.5	
2	1.677	1.695	-0.018	8019733	73.0	64.8	
						RPD = 0.46	
2 Ethane							
1	1.526	1.552	-0.026	17346739	136.9	140.0	
2	2.858	2.879	-0.021	14795278	136.9	140.1	
						RPD = 0.08	
3 Ethylene							M
1	1.842	1.869	-0.027	12718661	127.7	126.9	M
2	2.482	2.505	-0.023	10915415	127.7	125.8	
						RPD = 0.85	
4 Propane							
1	2.576	2.608	-0.032	25945259	200.7	197.4	
2	4.674	4.682	-0.008	22014632	200.7	196.8	
						RPD = 0.35	
5 Acetylene							
1	4.034	4.050	-0.016	4289229	118.5	118.0	
2	2.625	2.645	-0.020	3752806	118.5	118.6	
						RPD = 0.52	
6 Butane							
1	4.341	4.363	-0.022	33976571	264.5	251.0	
2	6.139	6.144	-0.005	28854770	264.5	251.3	
						RPD = 0.10	
7 isobutylene							
1	5.276	5.292	-0.016	23429344	255.4	257.3	
2	5.987	5.994	-0.007	19683860	255.4	255.8	
						RPD = 0.60	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

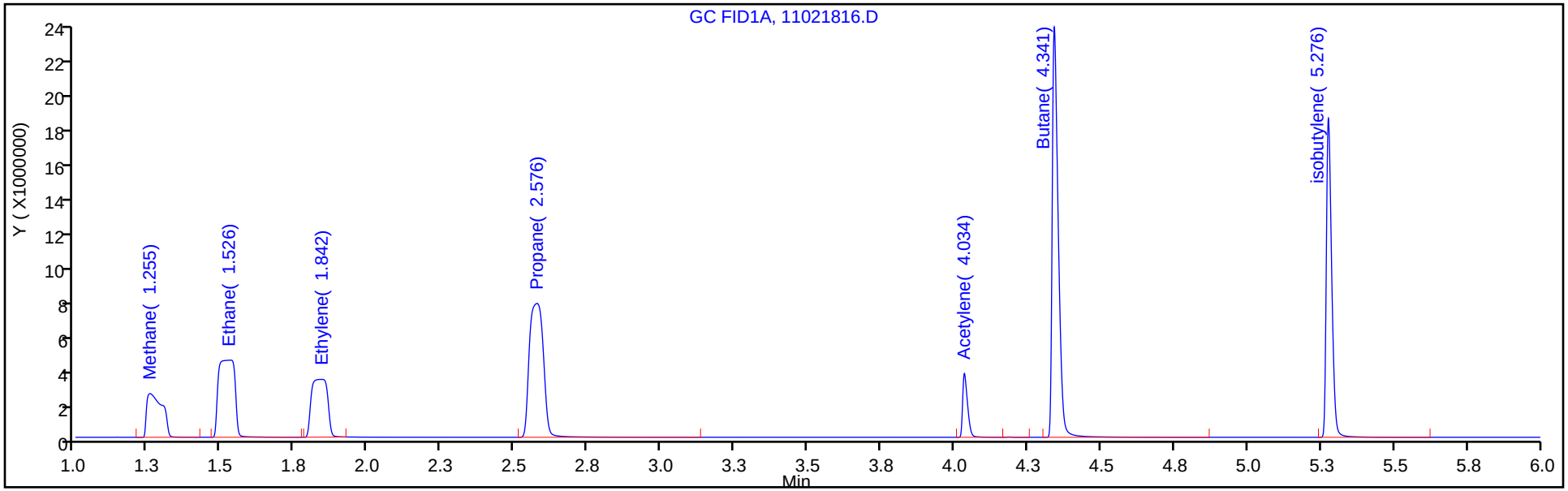
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TestAmerica Denver

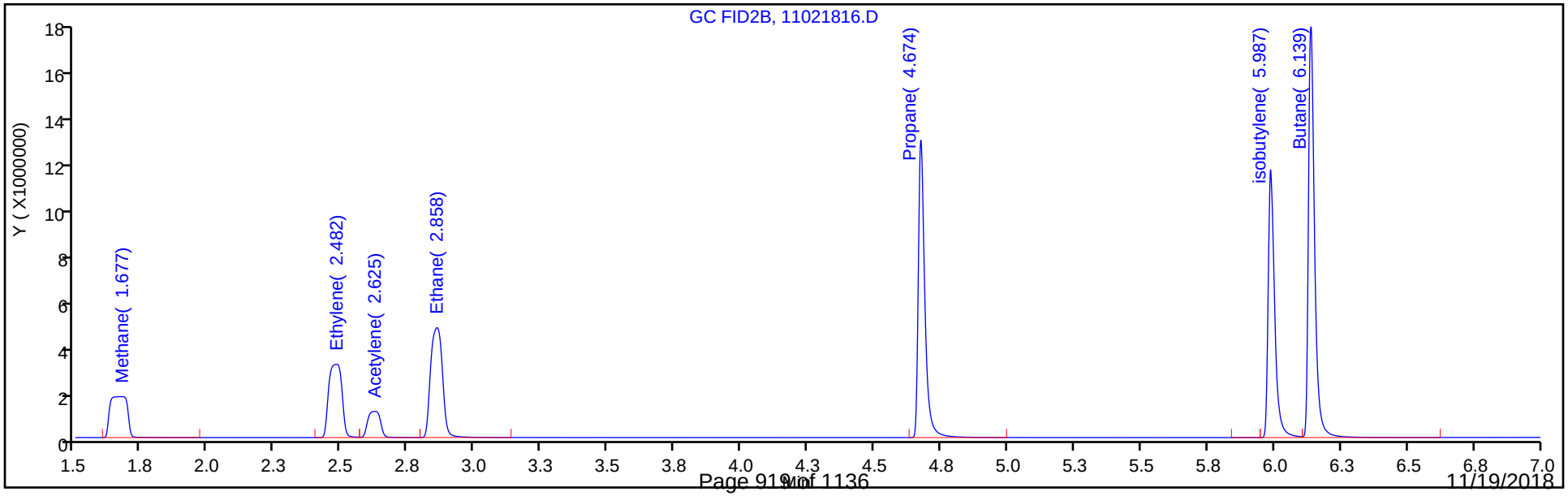
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Injection Date:	02-Nov-2018 13:38:21	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCV			Worklist Smp#:	30
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

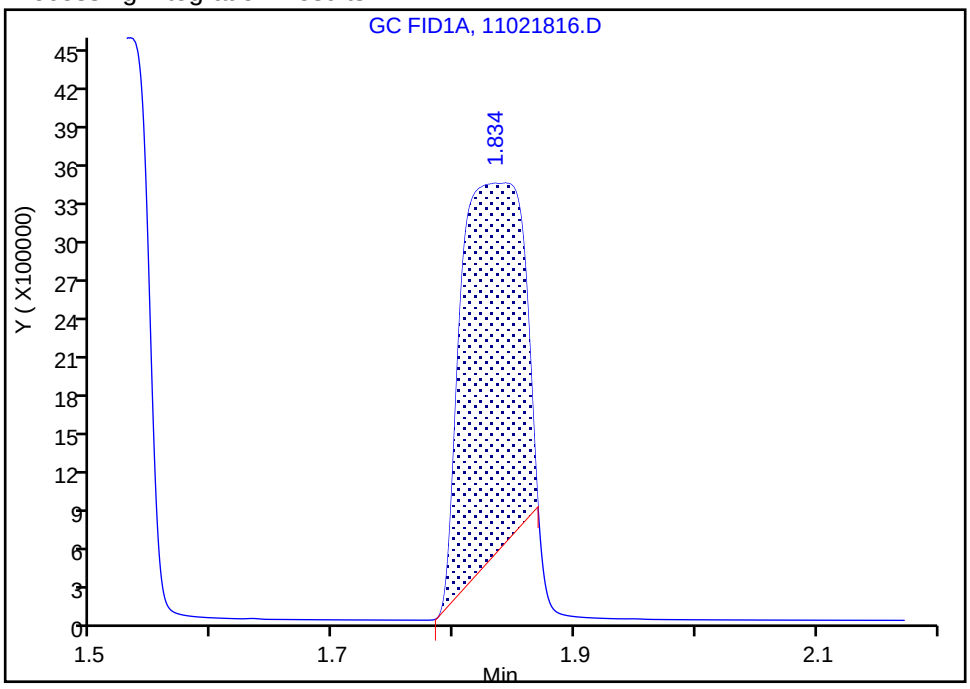
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Injection Date:	02-Nov-2018 13:38:21	Instrument ID:	VGC_J		
Lims ID:	CCV				
Client ID:					
Operator ID:	ms	ALS Bottle#:	16	Worklist Smp#:	30
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethylene, CAS: 74-85-1

Signal: 1

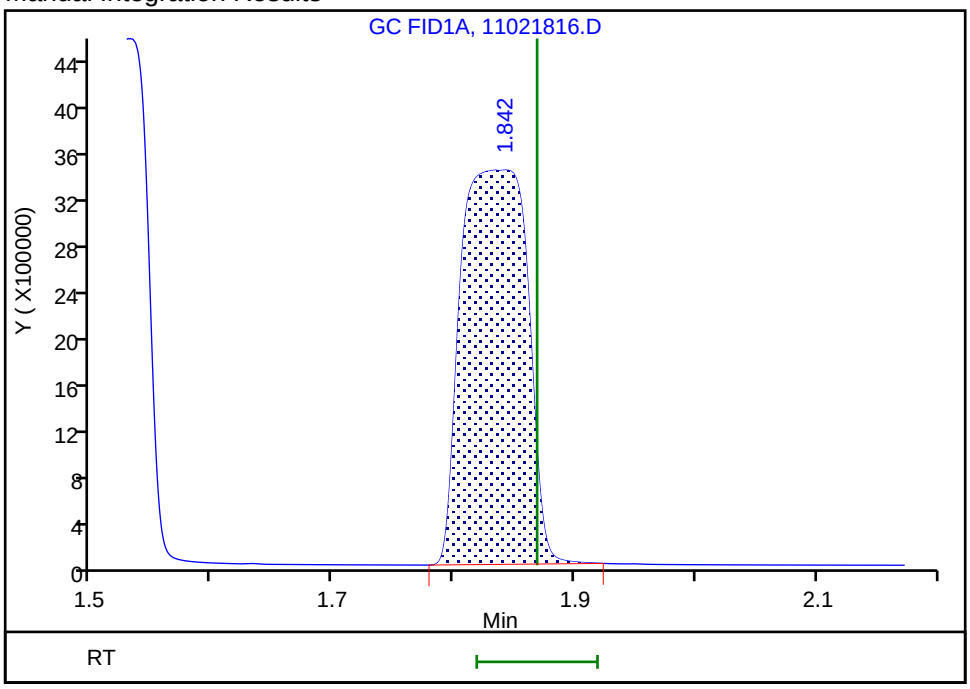
Processing Integration Results

RT: 1.83
Area: 10243030
Amount: 102.1901
Amount Units: ug/l



Manual Integration Results

RT: 1.84
Area: 12718661
Amount: 126.8883
Amount Units: ug/l



Reviewer: sanvillem, 02-Nov-2018 13:47:10

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/30 Calibration Date: 11/02/2018 13:38

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021816.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	123688	109854		64.8	73.0	-11.2	20.0
Ethene	Ave	86761	85499		126	128	-1.5	20.0
Acetylene	Ave	31649	31663		119	119	0.0	20.0
Ethane	Ave	105575	108109		140	137	2.4	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/30 Calibration Date: 11/02/2018 13:38

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021816.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.68	1.66	1.74
Ethene	2.48	2.46	2.56
Acetylene	2.63	2.57	2.73
Ethane	2.86	2.83	2.93

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021816.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 13:38:21 ALS Bottle#: 16 Worklist Smp#: 30
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075757-030
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:34:09 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 13:47:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.255	1.272	-0.017	9360346	73.0	64.5	
2	1.677	1.695	-0.018	8019733	73.0	64.8	
						RPD = 0.46	
2 Ethane							
1	1.526	1.552	-0.026	17346739	136.9	140.0	
2	2.858	2.879	-0.021	14795278	136.9	140.1	
						RPD = 0.08	
3 Ethylene							M
1	1.842	1.869	-0.027	12718661	127.7	126.9	M
2	2.482	2.505	-0.023	10915415	127.7	125.8	
						RPD = 0.85	
4 Propane							
1	2.576	2.608	-0.032	25945259	200.7	197.4	
2	4.674	4.682	-0.008	22014632	200.7	196.8	
						RPD = 0.35	
5 Acetylene							
1	4.034	4.050	-0.016	4289229	118.5	118.0	
2	2.625	2.645	-0.020	3752806	118.5	118.6	
						RPD = 0.52	
6 Butane							
1	4.341	4.363	-0.022	33976571	264.5	251.0	
2	6.139	6.144	-0.005	28854770	264.5	251.3	
						RPD = 0.10	
7 isobutylene							
1	5.276	5.292	-0.016	23429344	255.4	257.3	
2	5.987	5.994	-0.007	19683860	255.4	255.8	
						RPD = 0.60	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

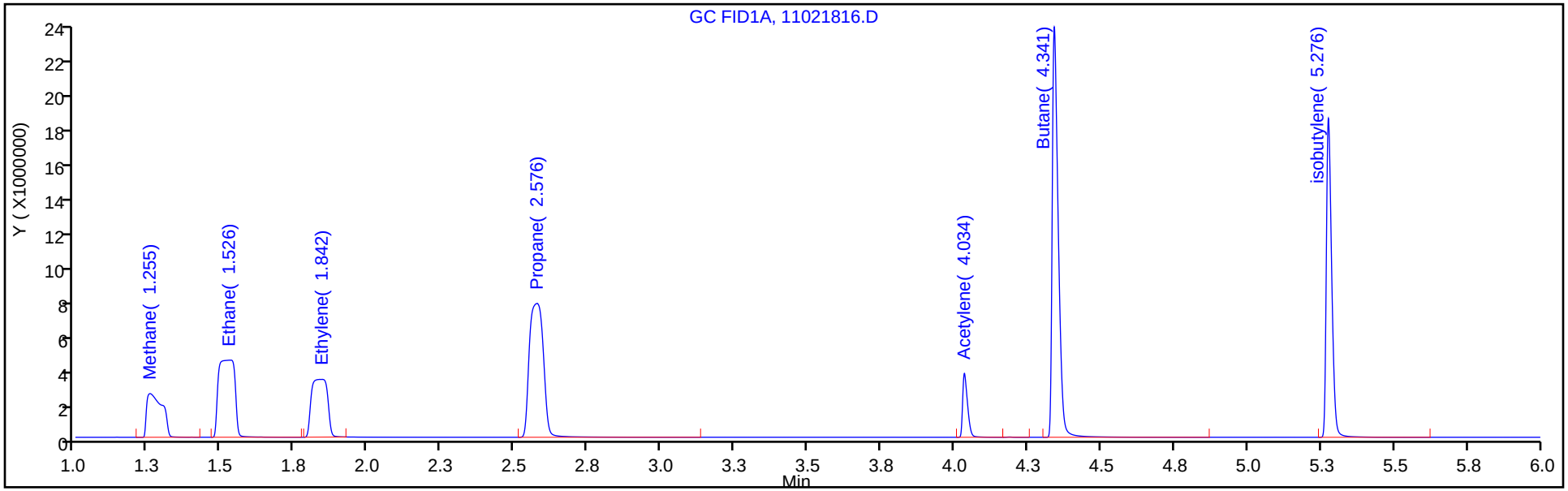
Report Date: 04-Nov-2018 08:34:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

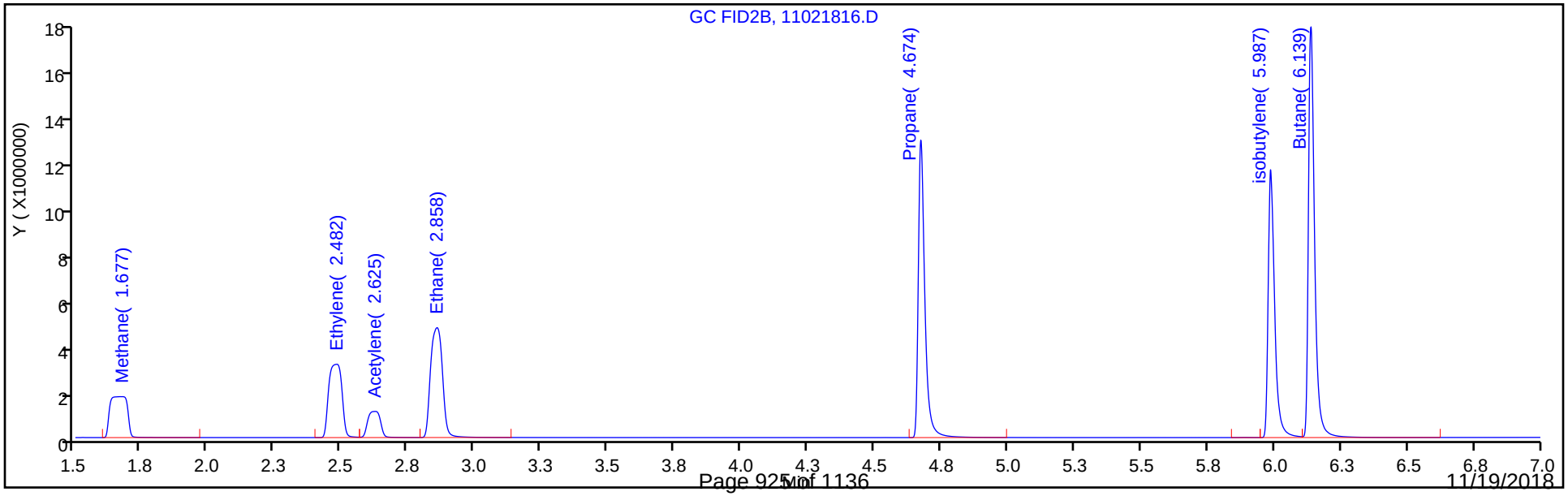
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021816.D

Injection Date:	02-Nov-2018 13:38:21	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCV			Worklist Smp#:	30
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/16 Calibration Date: 11/02/2018 16:37

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021829.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	145024	140169		70.6	73.0	-3.3	20.0
Ethane	Ave	123886	138110		153	137	11.5	20.0
Ethene	Ave	100235	108085		138	128	7.8	20.0
Acetylene	Ave	36361	38399		125	119	5.6	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/16 Calibration Date: 11/02/2018 16:37

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021829.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.26	1.23	1.31
Ethane	1.53	1.50	1.60
Ethene	1.84	1.82	1.92
Acetylene	4.03	3.97	4.13

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021829.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 16:37:56 ALS Bottle#: 29 Worklist Smp#: 16
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075757-016
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:34:34 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 16:47:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.255	1.272	-0.017	10232840	73.0	70.6	
2	1.662	1.695	-0.033	8769333	73.0	70.9	
						RPD = 0.48	
2 Ethane							
1	1.529	1.552	-0.023	18901127	136.9	152.6	
2	2.856	2.879	-0.023	16137042	136.9	152.8	
						RPD = 0.18	
3 Ethylene							
1	1.843	1.869	-0.026	13798842	127.7	137.7	
2	2.477	2.505	-0.028	11729744	127.7	135.2	
						RPD = 1.81	
4 Propane							
1	2.571	2.608	-0.037	28269011	200.7	215.1	
2	4.674	4.682	-0.008	24038126	200.7	214.8	
						RPD = 0.13	
5 Acetylene							
1	4.029	4.050	-0.021	4551112	118.5	125.2	
2	2.625	2.645	-0.020	3977914	118.5	125.7	
						RPD = 0.42	
6 Butane							
1	4.336	4.363	-0.027	37029199	264.5	273.6	
2	6.138	6.144	-0.006	31438134	264.5	273.8	
						RPD = 0.07	
7 isobutylene							
1	5.272	5.292	-0.020	25067496	255.4	275.3	
2	5.987	5.994	-0.007	21044707	255.4	273.5	
						RPD = 0.68	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

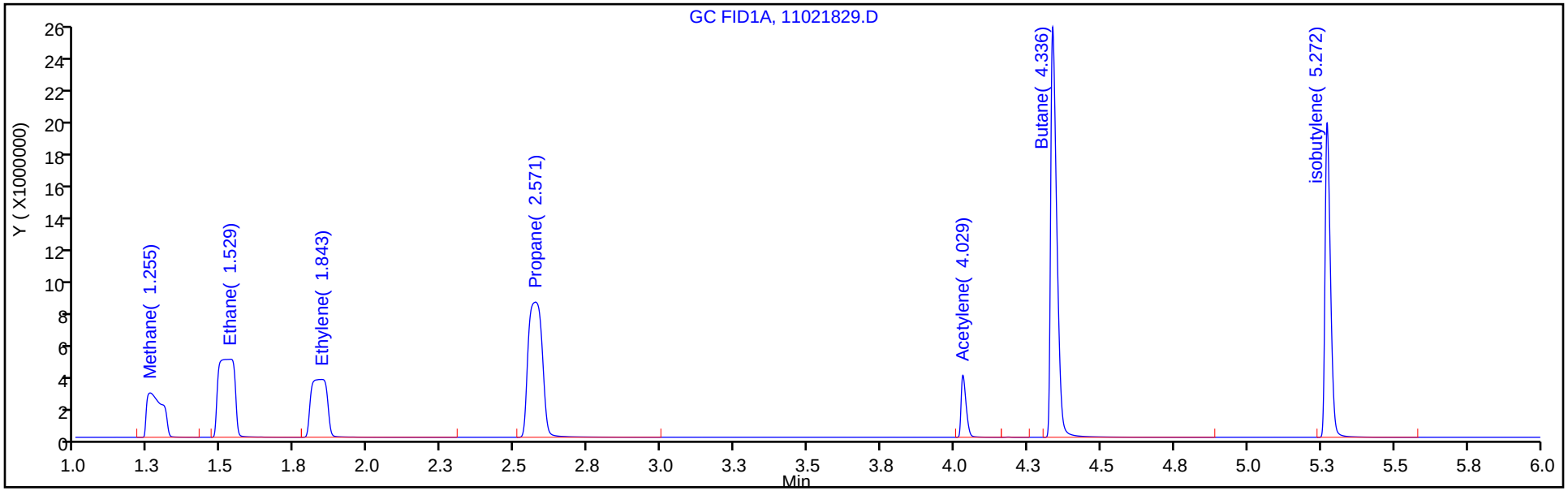
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TestAmerica Denver

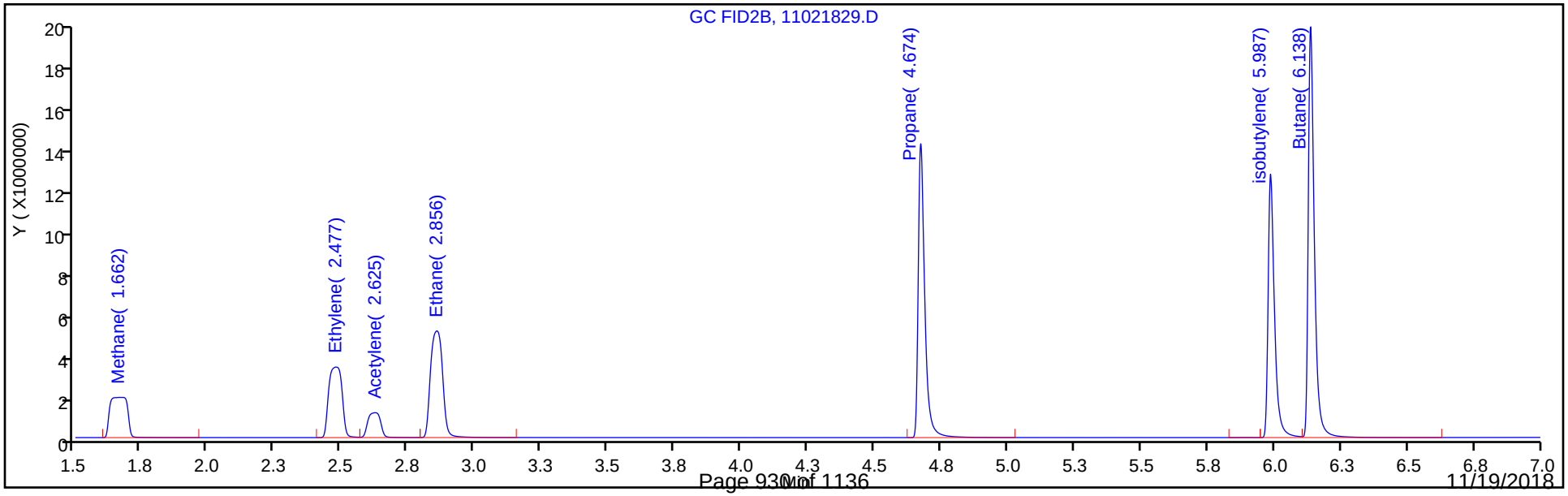
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021829.D

Injection Date:	02-Nov-2018 16:37:56	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCV			Worklist Smp#:	16
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/16 Calibration Date: 11/02/2018 16:37

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021829.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	123688	120122		70.9	73.0	-2.9	20.0
Ethene	Ave	86761	91878		135	128	5.9	20.0
Acetylene	Ave	31649	33563		126	119	6.0	20.0
Ethane	Ave	105575	117913		153	137	11.7	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Lab Sample ID: CCV 280-436025/16 Calibration Date: 11/02/2018 16:37

Instrument ID: VGC_J Calib Start Date: 07/27/2018 16:08

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 07/27/2018 18:20

Lab File ID: 11021829.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.66	1.66	1.74
Ethene	2.48	2.46	2.56
Acetylene	2.63	2.57	2.73
Ethane	2.86	2.83	2.93

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021829.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 16:37:56 ALS Bottle#: 29 Worklist Smp#: 16
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075757-016
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:34:34 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 16:47:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.255	1.272	-0.017	10232840	73.0	70.6	
2	1.662	1.695	-0.033	8769333	73.0	70.9	
						RPD = 0.48	
2 Ethane							
1	1.529	1.552	-0.023	18901127	136.9	152.6	
2	2.856	2.879	-0.023	16137042	136.9	152.8	
						RPD = 0.18	
3 Ethylene							
1	1.843	1.869	-0.026	13798842	127.7	137.7	
2	2.477	2.505	-0.028	11729744	127.7	135.2	
						RPD = 1.81	
4 Propane							
1	2.571	2.608	-0.037	28269011	200.7	215.1	
2	4.674	4.682	-0.008	24038126	200.7	214.8	
						RPD = 0.13	
5 Acetylene							
1	4.029	4.050	-0.021	4551112	118.5	125.2	
2	2.625	2.645	-0.020	3977914	118.5	125.7	
						RPD = 0.42	
6 Butane							
1	4.336	4.363	-0.027	37029199	264.5	273.6	
2	6.138	6.144	-0.006	31438134	264.5	273.8	
						RPD = 0.07	
7 isobutylene							
1	5.272	5.292	-0.020	25067496	255.4	275.3	
2	5.987	5.994	-0.007	21044707	255.4	273.5	
						RPD = 0.68	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

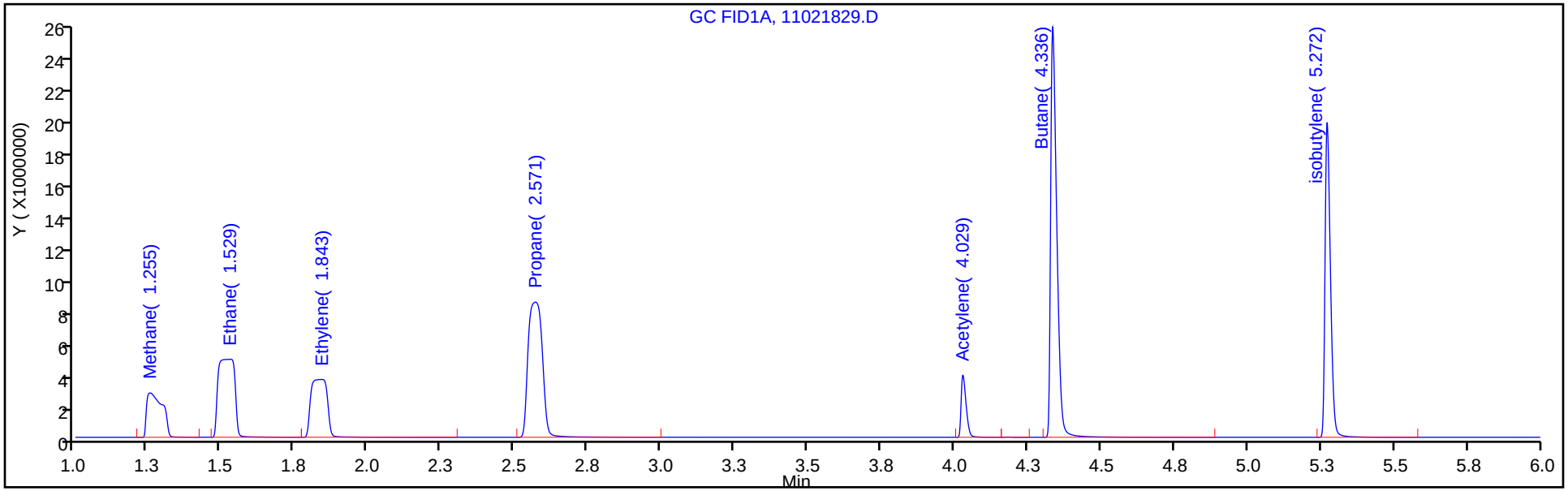
Report Date: 04-Nov-2018 08:34:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

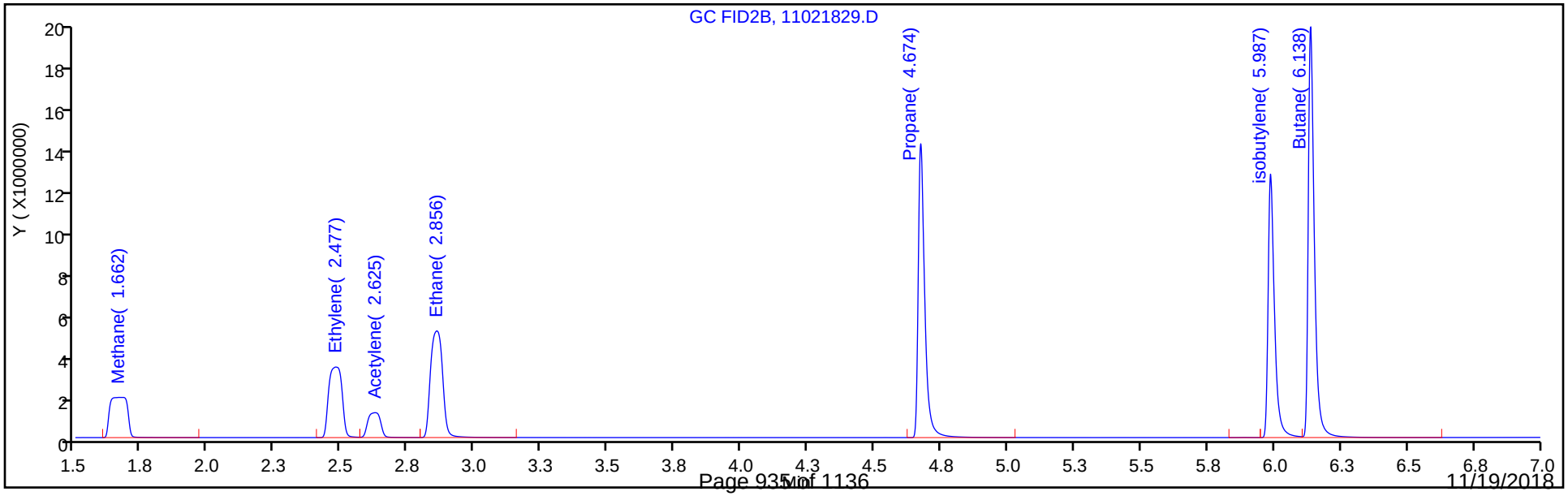
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Injection Date:	02-Nov-2018 16:37:56	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	CCV			Worklist Smp#:	16
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-436025/4

Matrix: Water Lab File ID: 11021804.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 10:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.80	U	5.0	0.80	0.64
74-84-0	Ethane	1.5	U	5.0	1.5	0.57
74-85-1	Ethene	1.4	U	5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021804.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 02-Nov-2018 10:53:18 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 280-0075757-004
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: waldorfj Date: 04-Nov-2018 08:24:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1		1.272				ND	
2		1.695					
2 Ethane							
1		1.552				ND	
2		2.879					
3 Ethylene							
1		1.869				ND	
2		2.505					
4 Propane							
1		2.608				ND	
2		4.682					
5 Acetylene							
1		4.050				ND	
2		2.645					
6 Butane							
1		4.363				ND	
2		6.144					
7 isobutylene							
1		5.292				ND	
2		5.994					

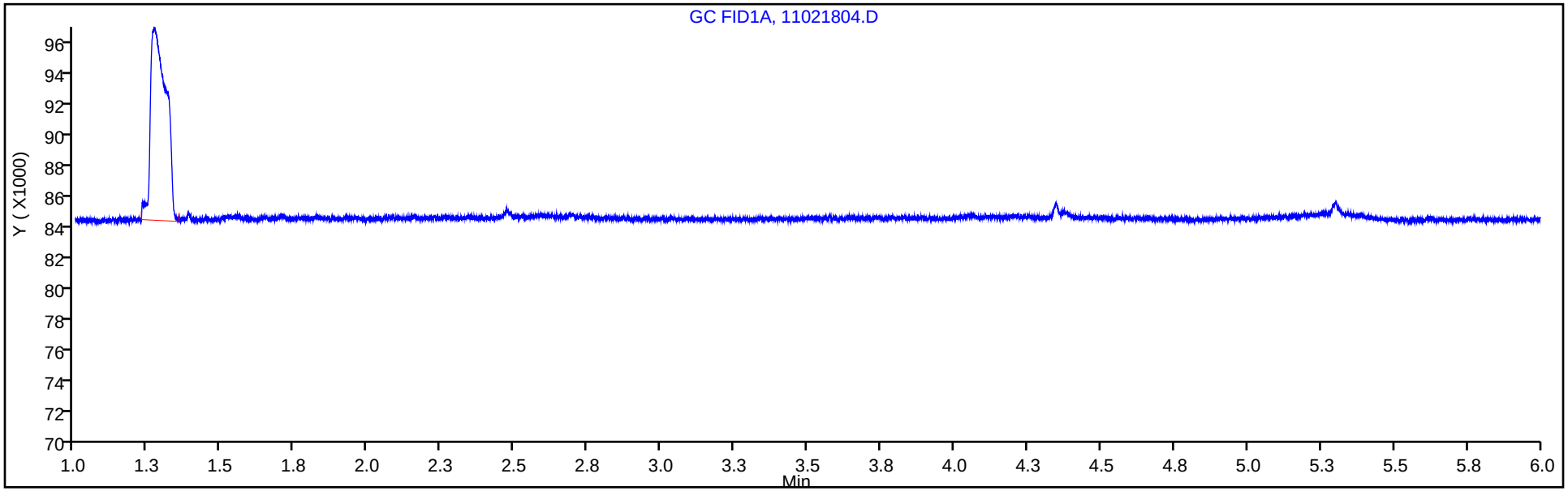
Report Date: 04-Nov-2018 08:33:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

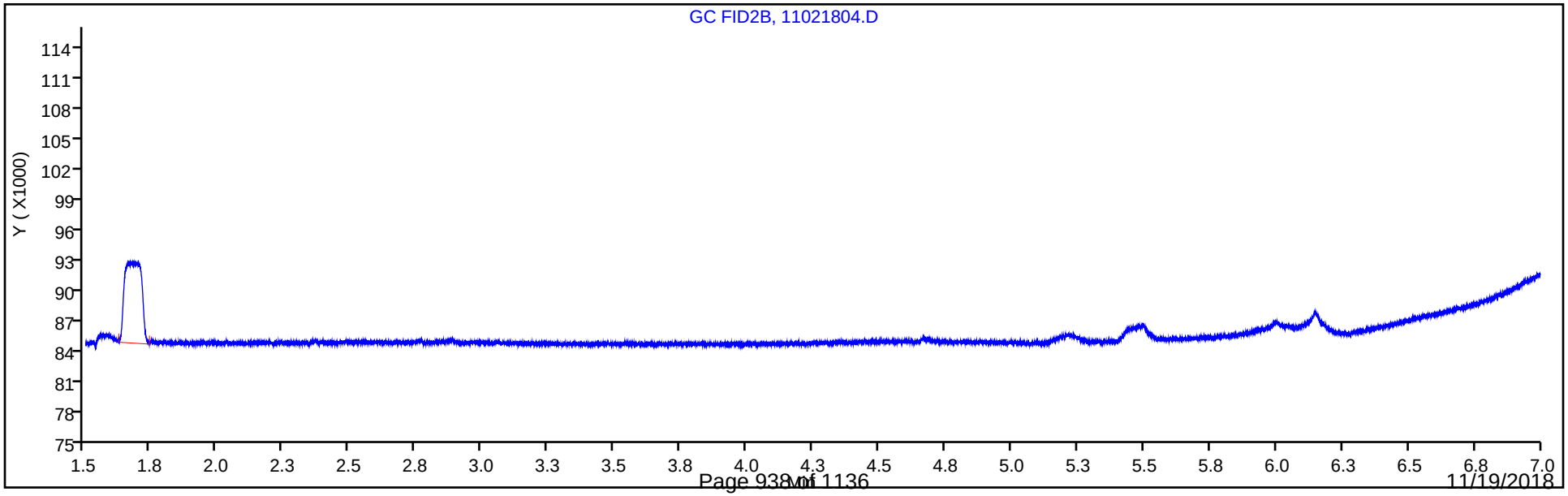
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021804.D

Injection Date:	02-Nov-2018 10:53:18	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436025/2

Matrix: Water Lab File ID: 11021802.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 10:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	71.4		5.0	0.80	0.64
74-84-0	Ethane	156		5.0	1.5	0.57
74-85-1	Ethene	140		5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021802.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 02-Nov-2018 10:26:01 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 280-0075757-002
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 11:09:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.272	-0.002	10318349	73.0	71.1	
2	1.696	1.695	0.001	8834727	73.0	71.4	
						RPD = 0.39	
2 Ethane							
1	1.549	1.552	-0.003	19267662	136.9	155.5	
2	2.878	2.879	-0.001	16446696	136.9	155.8	
						RPD = 0.16	
3 Ethylene							
1	1.866	1.869	-0.003	14270524	127.7	142.4	
2	2.501	2.505	-0.004	12131947	127.7	139.8	
						RPD = 1.80	
4 Propane							
1	2.606	2.608	-0.002	29037471	200.7	221.0	
2	4.682	4.682	0.000	24635758	200.7	220.2	
						RPD = 0.36	
5 Acetylene							
1	4.052	4.050	0.002	4251510	118.5	116.9	
2	2.645	2.645	0.000	3711289	118.5	117.3	
						RPD = 0.29	
6 Butane							
1	4.359	4.363	-0.004	39007716	264.5	288.2	
2	6.143	6.144	-0.001	33101187	264.5	288.3	
						RPD = 0.02	
7 isobutylene							
1	5.291	5.292	-0.001	27278923	255.4	299.6	
2	5.992	5.994	-0.002	22892627	255.4	297.5	
						RPD = 0.71	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

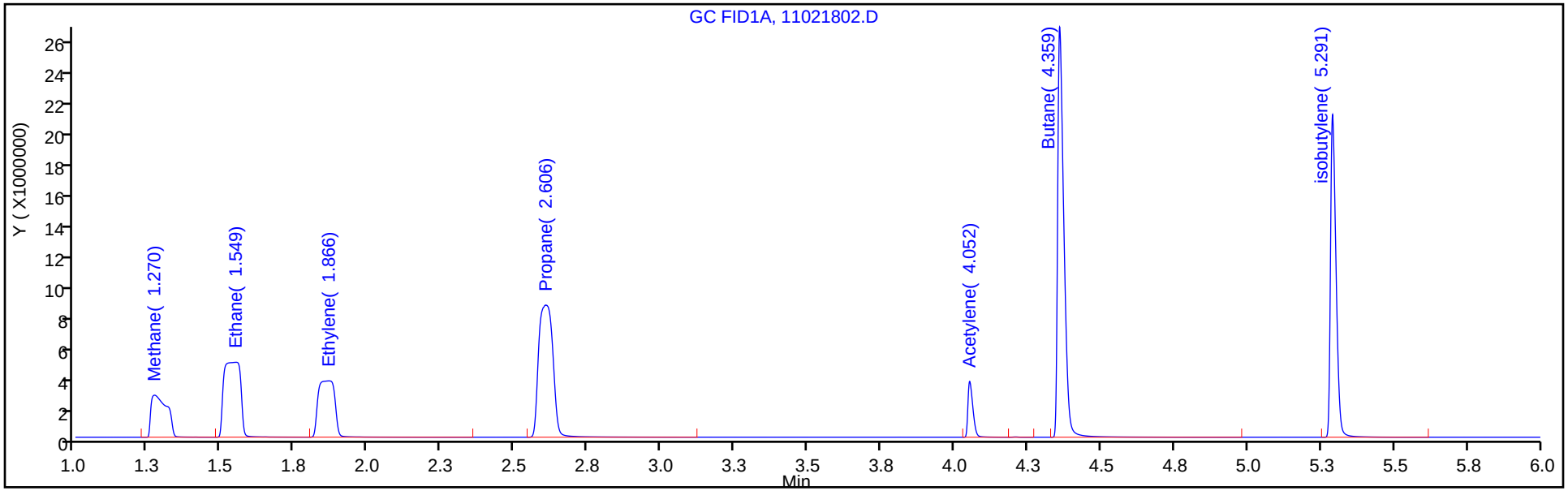
Report Date: 04-Nov-2018 08:33:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

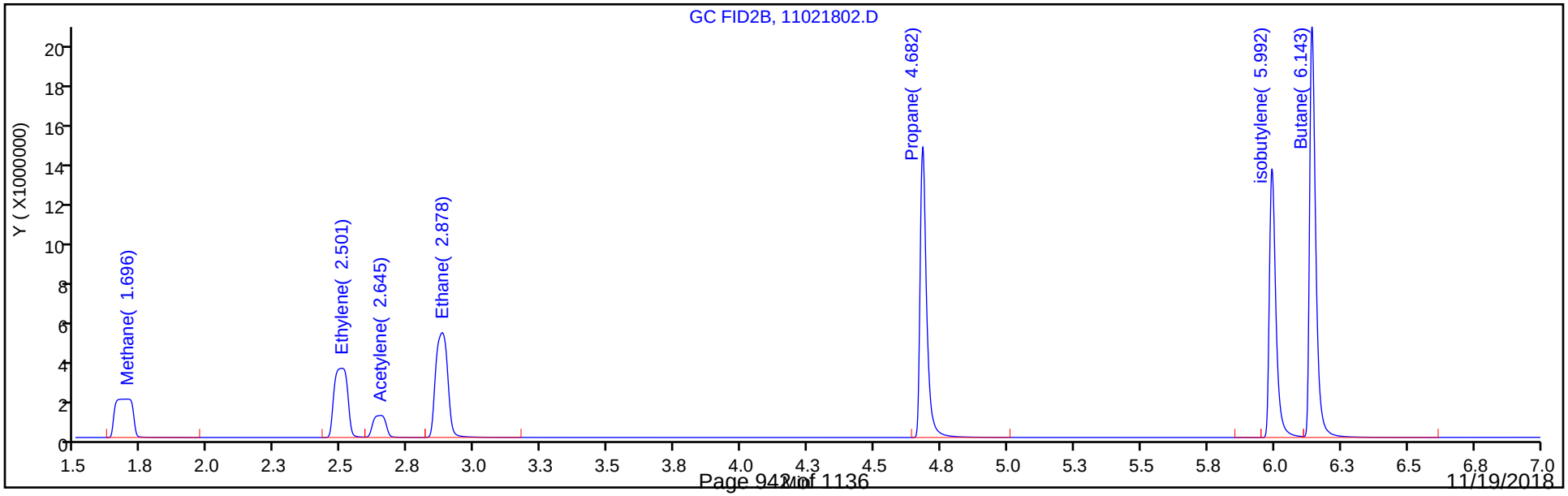
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021802.D

Injection Date:	02-Nov-2018 10:26:01	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	LCS			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-436025/3

Matrix: Water Lab File ID: 11021803.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 10:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	63.4		5.0	0.80	0.64
74-84-0	Ethane	139		5.0	1.5	0.57
74-85-1	Ethene	126		5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021803.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 02-Nov-2018 10:39:36 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 280-0075757-003
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: sanvillem Date: 02-Nov-2018 10:51:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.272	1.272	0.000	9136076	73.0	63.0	
2	1.694	1.695	-0.001	7838335	73.0	63.4	
						RPD = 0.59	
2 Ethane							
1	1.550	1.552	-0.002	17110903	136.9	138.1	
2	2.884	2.879	0.005	14629308	136.9	138.6	
						RPD = 0.33	
3 Ethylene							
1	1.865	1.869	-0.004	12825353	127.7	128.0	
2	2.508	2.505	0.003	10920734	127.7	125.9	
						RPD = 1.64	
4 Propane							
1	2.603	2.608	-0.005	25729611	200.7	195.8	
2	4.684	4.682	0.002	21887399	200.7	195.6	
						RPD = 0.09	
5 Acetylene							
1	4.051	4.050	0.001	4084275	118.5	112.3	
2	2.650	2.645	0.005	3566147	118.5	112.7	
						RPD = 0.31	
6 Butane							
1	4.357	4.363	-0.006	34549626	264.5	255.3	
2	6.145	6.144	0.001	29387941	264.5	255.9	
						RPD = 0.26	
7 isobutylene							
1	5.288	5.292	-0.004	24548064	255.4	269.6	
2	5.994	5.994	0.000	20643458	255.4	268.2	
						RPD = 0.51	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

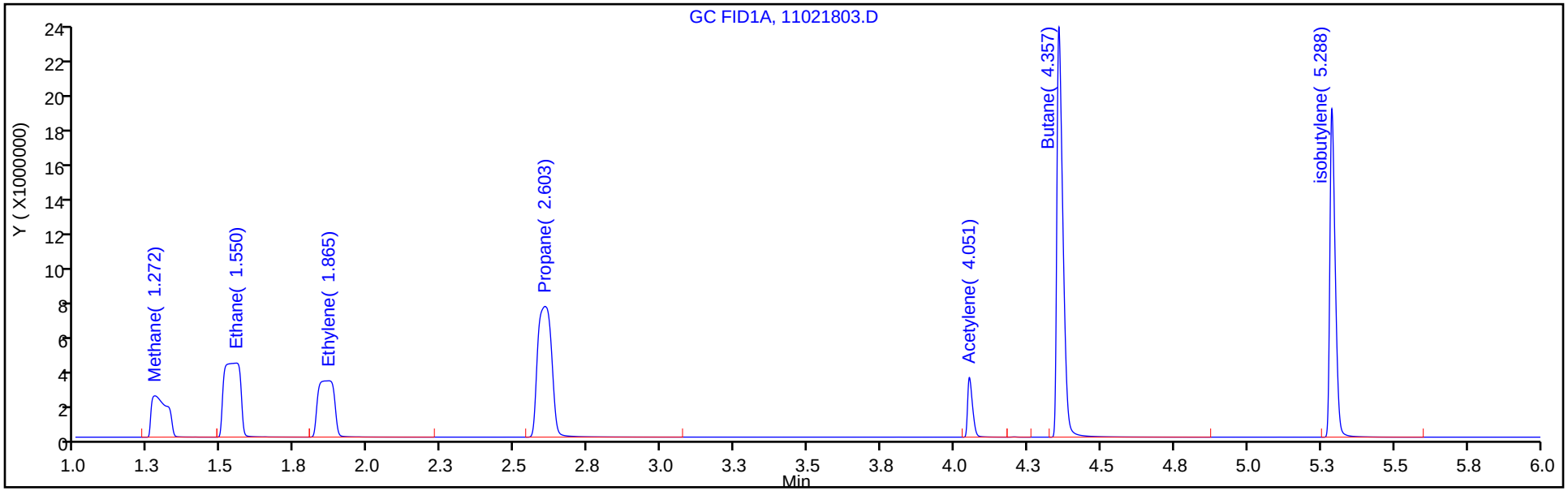
Report Date: 04-Nov-2018 08:33:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

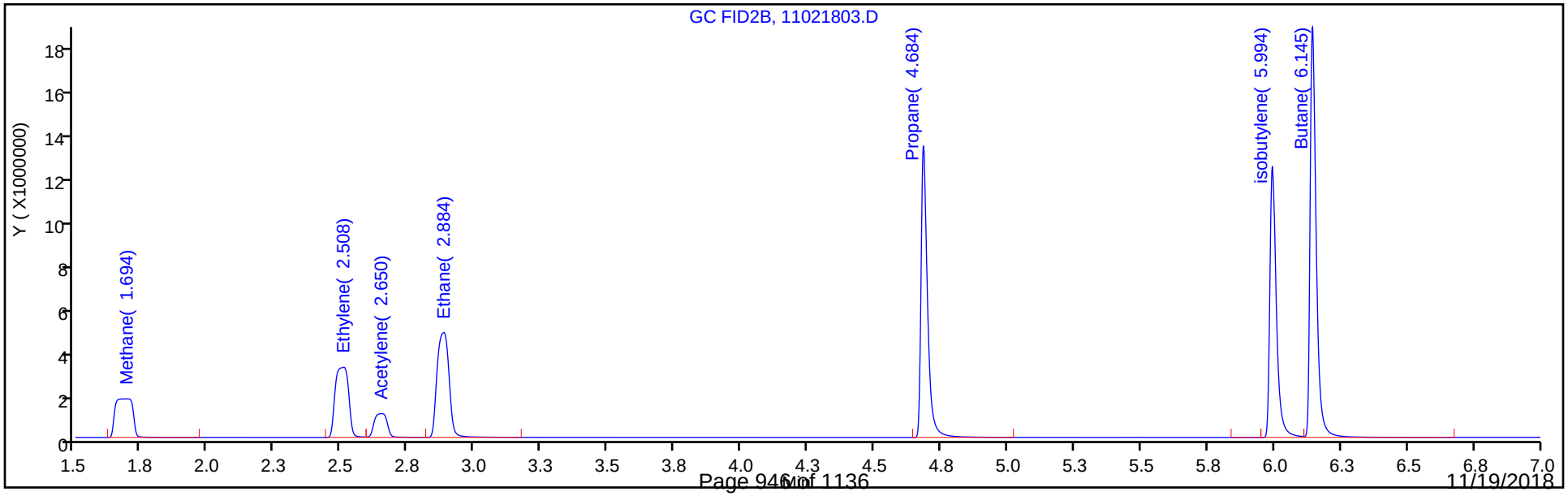
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021803.D

Injection Date:	02-Nov-2018 10:39:36	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	LCSD			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Client Sample ID: LF6TW-38_1018 DU Lab Sample ID: 280-116017-1 DU

Matrix: Water Lab File ID: 11021809.D

Analysis Method: RSK-175 Date Collected: 10/22/2018 08:26

Sample wt/vol: 18(mL) Date Analyzed: 11/02/2018 12:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436025 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.80	U	5.0	0.80	0.64
74-84-0	Ethane	1.5	U	5.0	1.5	0.57
74-85-1	Ethene	1.4	U	5.0	1.4	0.40

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021809.D
Lims ID: 280-116017-G-1 DU
Client ID:
Sample Type: DU
Inject. Date: 02-Nov-2018 12:01:59 ALS Bottle#: 9 Worklist Smp#: 40
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-116017-G-1 D
Misc. Info.: 280-0075757-040
Operator ID: ms Instrument ID: VGC_J

Method: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 04-Nov-2018 08:33:31 Calib Date: 27-Jul-2018 18:20:43
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VGC_J\20180727-72448.b\07271811.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX1013

First Level Reviewer: waldorfj Date: 04-Nov-2018 08:25:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1		1.272				ND	
2		1.695					
2 Ethane							
1		1.552				ND	
2		2.879					
3 Ethylene							
1		1.869				ND	
2		2.505					
4 Propane							
1		2.608				ND	
2		4.682					
5 Acetylene							
1		4.050				ND	
2		2.645					
6 Butane							
1		4.363				ND	
2		6.144					
7 isobutylene							
1		5.292				ND	
2		5.994					

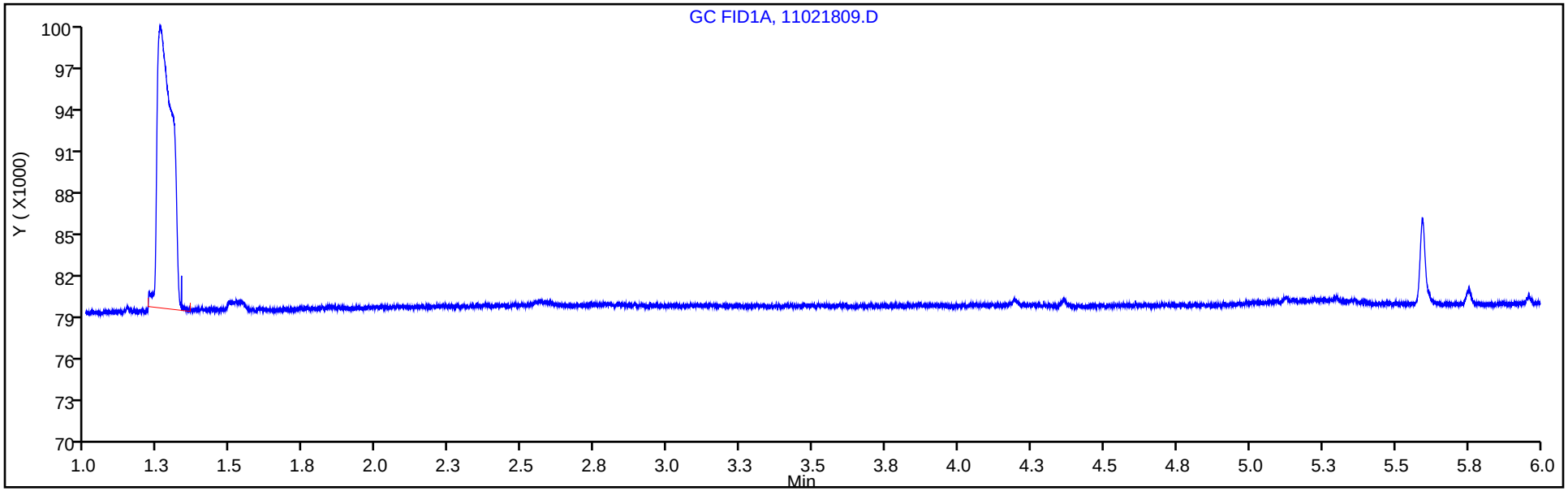
Report Date: 04-Nov-2018 08:33:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

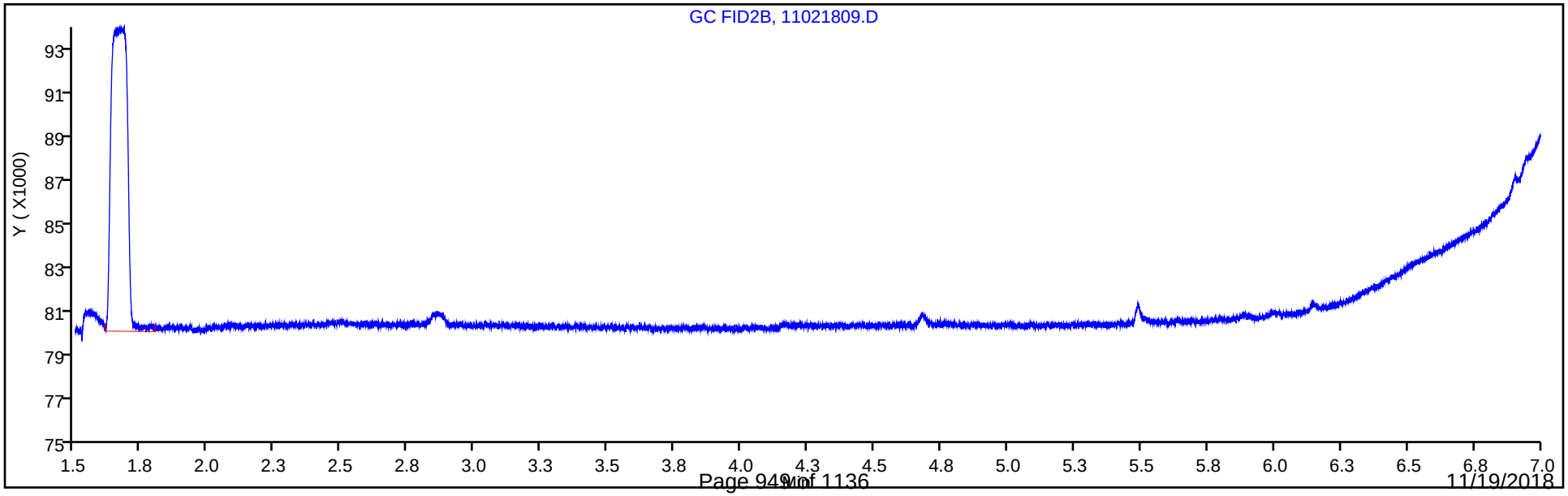
Data File: \\ChromNA\Denver\ChromData\VGC_J\20181102-75757.b\11021809.D

Injection Date:	02-Nov-2018 12:01:59	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	280-116017-G-1 DU			Worklist Smp#:	40
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VGC_J Start Date: 07/27/2018 16:08

Analysis Batch Number: 423985 End Date: 07/27/2018 19:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-423985/1		07/27/2018 16:08	1	07271801.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/1		07/27/2018 16:08	1	07271801.D	HP-Plot Q 0.53(mm)
IC 280-423985/2		07/27/2018 16:21	1	07271802.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/2		07/27/2018 16:21	1	07271802.D	HP-Plot Q 0.53(mm)
IC 280-423985/3		07/27/2018 16:48	1	07271804.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/3		07/27/2018 16:48	1	07271804.D	HP-Plot Q 0.53(mm)
IC 280-423985/4		07/27/2018 17:01	1	07271805.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/4		07/27/2018 17:01	1	07271805.D	HP-Plot Q 0.53(mm)
ICRT 280-423985/5		07/27/2018 17:14	1	07271806.D	Rt-Alumina KCl 0.53(mm)
ICRT 280-423985/5		07/27/2018 17:14	1	07271806.D	HP-Plot Q 0.53(mm)
IC 280-423985/6		07/27/2018 17:27	1	07271807.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/6		07/27/2018 17:27	1	07271807.D	HP-Plot Q 0.53(mm)
IC 280-423985/7		07/27/2018 17:41	1	07271808.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/7		07/27/2018 17:41	1	07271808.D	HP-Plot Q 0.53(mm)
IC 280-423985/8		07/27/2018 17:54	1	07271809.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/8		07/27/2018 17:54	1	07271809.D	HP-Plot Q 0.53(mm)
IC 280-423985/9		07/27/2018 18:07	1	07271810.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/9		07/27/2018 18:07	1	07271810.D	HP-Plot Q 0.53(mm)
IC 280-423985/10		07/27/2018 18:20	1	07271811.D	Rt-Alumina KCl 0.53(mm)
IC 280-423985/10		07/27/2018 18:20	1	07271811.D	HP-Plot Q 0.53(mm)
ICV 280-423985/12		07/27/2018 19:00	1	07271814.D	Rt-Alumina KCl 0.53(mm)
ICV 280-423985/12		07/27/2018 19:00	1	07271814.D	HP-Plot Q 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VGC_J Start Date: 11/02/2018 09:39

Analysis Batch Number: 436025 End Date: 11/02/2018 16:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 280-436025/1		11/02/2018 09:39	1	11021801.D	Rt-Alumina KCl 0.53(mm)
CCVRT 280-436025/1		11/02/2018 09:39	1	11021801.D	HP-Plot Q 0.53(mm)
LCS 280-436025/2		11/02/2018 10:26	1	11021802.D	Rt-Alumina KCl 0.53(mm)
LCS 280-436025/2		11/02/2018 10:26	1	11021802.D	HP-Plot Q 0.53(mm)
LCSD 280-436025/3		11/02/2018 10:39	1	11021803.D	Rt-Alumina KCl 0.53(mm)
LCSD 280-436025/3		11/02/2018 10:39	1	11021803.D	HP-Plot Q 0.53(mm)
MB 280-436025/4		11/02/2018 10:53	1	11021804.D	Rt-Alumina KCl 0.53(mm)
MB 280-436025/4		11/02/2018 10:53	1	11021804.D	HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 11:06	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 11:06	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 11:20	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 11:20	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 11:34	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 11:34	1		HP-Plot Q 0.53(mm)
280-116017-1		11/02/2018 11:48	1	11021808.D	Rt-Alumina KCl 0.53(mm)
280-116017-1		11/02/2018 11:48	1	11021808.D	HP-Plot Q 0.53(mm)
280-116017-1 DU		11/02/2018 12:01	1	11021809.D	Rt-Alumina KCl 0.53(mm)
280-116017-1 DU		11/02/2018 12:01	1	11021809.D	HP-Plot Q 0.53(mm)
280-116017-2		11/02/2018 12:15	1	11021810.D	Rt-Alumina KCl 0.53(mm)
280-116017-2		11/02/2018 12:15	1	11021810.D	HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 12:29	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 12:29	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 12:43	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 12:43	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 12:56	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 12:56	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 13:10	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 13:10	3		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 13:24	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 13:24	3		HP-Plot Q 0.53(mm)
CCV 280-436025/30		11/02/2018 13:38	1	11021816.D	Rt-Alumina KCl 0.53(mm)
CCV 280-436025/30		11/02/2018 13:38	1	11021816.D	HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 13:52	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 13:52	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 14:06	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 14:06	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 14:20	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 14:20	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 14:33	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 14:33	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 14:47	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 14:47	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 15:01	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 15:01	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 15:15	1		Rt-Alumina KCl 0.53(mm)

RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: VGC_J Start Date: 11/02/2018 09:39

Analysis Batch Number: 436025 End Date: 11/02/2018 16:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/02/2018 15:15	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 15:29	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 15:29	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 15:42	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 15:42	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 15:56	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 15:56	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 16:10	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 16:10	1		HP-Plot Q 0.53(mm)
ZZZZZ		11/02/2018 16:24	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		11/02/2018 16:24	1		HP-Plot Q 0.53(mm)
CCV 280-436025/16		11/02/2018 16:37	1	11021829.D	Rt-Alumina KCl 0.53(mm)
CCV 280-436025/16		11/02/2018 16:37	1	11021829.D	HP-Plot Q 0.53(mm)

GC VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436025 Batch Start Date: 11/02/18 09:39 Batch Analyst: Waldorf, Jonathan L

Batch Method: RSK-175 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	RSK7gasMathes 00026		
CCVRT 280-436025/1		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCS 280-436025/2		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCSD 280-436025/3		RSK-175		18 mL	18 mL	5 SU	200 uL		
MB 280-436025/4		RSK-175		18 mL	18 mL	5 SU			
CCV 280-436025/16		RSK-175		18 mL	18 mL	5 SU	200 uL		
CCV 280-436025/30		RSK-175		18 mL	18 mL	5 SU	200 uL		
280-116017-G-1	LF6TW-38_1018	RSK-175	T	18 mL	18 mL	<2.0 SU			
280-116017-G-1 DU	LF6TW-38_1018	RSK-175	T	18 mL	18 mL	<2.0 SU			
280-116017-I-2	LF6TW-36_1018	RSK-175	T	18 mL	18 mL	<2.0 SU			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116017-1

SDG No.:

Project: Griffiss AFB, NY - SD052

Client Sample ID	Lab Sample ID
LF6TW-38_1018	280-116017-1
LF6TW-36_1018	280-116017-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LF6TW-38_1018 Lab Sample ID: 280-116017-1

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG ID.:

Matrix: Water Date Sampled: 10/22/2018 08:26

Reporting Basis: WET Date Received: 10/24/2018 09:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Sulfate	31	5.0	0.50	0.23	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: LF6TW-38_1018 Lab Sample ID: 280-116017-1

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG ID.:

Matrix: Water Date Sampled: 10/22/2018 08:26

Reporting Basis: WET Date Received: 10/24/2018 09:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Dissolved Organic Carbon - Quad	0.76	1.0	0.50	0.16	mg/L	J		1	9060A
Dissolved Organic Carbon - Quad	0.92	1.0	0.50	0.16	mg/L	J		1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LF6TW-36_1018 Lab Sample ID: 280-116017-2

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG ID.:

Matrix: Water Date Sampled: 10/22/2018 09:26

Reporting Basis: WET Date Received: 10/24/2018 09:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Sulfate	27	5.0	0.50	0.23	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: LF6TW-36_1018 Lab Sample ID: 280-116017-2

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG ID.:

Matrix: Water Date Sampled: 10/22/2018 09:26

Reporting Basis: WET Date Received: 10/24/2018 09:45

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Dissolved Organic Carbon - Quad	0.84	1.0	0.50	0.16	mg/L	J		1	9060A
Dissolved Organic Carbon - Quad	0.91	1.0	0.50	0.16	mg/L	J		1	9060A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Analyst: TLP Batch Start Date: 09/02/2018

Reporting Units: mg/L Analytical Batch No.: 428352

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	05:21	Sulfate	84.1	80.0	105	90-110		IC SO4 ICV_00017
9	ICB	05:43	Sulfate	0.252				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Analyst: A1D Batch Start Date: 11/09/2018

Reporting Units: mg/L Analytical Batch No.: 436996

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	08:57	Sulfate	101	100	101	90-110		IC LCS_01397
2	CCB	09:15	Sulfate	0.231				J	
17	CCV	18:19	Sulfate	99.9	100	100	90-110		IC LCS_01397
18	CCB	18:38	Sulfate	0.254				J	
29	CCV	22:16	Sulfate	101	100	101	90-110		IC LCS_01397
30	CCB	22:34	Sulfate	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Analyst: LPL Batch Start Date: 10/30/2018

Reporting Units: mg/L Analytical Batch No.: 435723

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	18:12	Dissolved Organic Carbon - Quad	18.4	20.0	92	90-110		TOC ICV Std_00036
2	ICB	18:39	Dissolved Organic Carbon - Quad	0.206				J	
15	CCV	22:15	Dissolved Organic Carbon - Quad	22.9	25.0	91	90-110		TOC LCS Std_00042
16	CCB	22:33	Dissolved Organic Carbon - Quad	0.188				J	
27	CCV	01:37	Dissolved Organic Carbon - Quad	23.0	25.0	92	90-110		TOC LCS Std_00042
28	CCB	01:56	Dissolved Organic Carbon - Quad	0.219				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Analyst: LPL Batch Start Date: 11/06/2018

Reporting Units: mg/L Analytical Batch No.: 436637

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	10:39	Dissolved Organic Carbon - Quad	18.6	20.0	93	90-110		TOC ICV Std_00036
2	ICB	10:58	Dissolved Organic Carbon - Quad	0.182				J	
51	CCV	00:48	Dissolved Organic Carbon - Quad	23.0	25.0	92	90-110		TOC LCS Std_00042
52	CCB	01:02	Dissolved Organic Carbon - Quad	0.293				J	
63	CCV	03:57	Dissolved Organic Carbon - Quad	23.4	25.0	94	90-110		TOC LCS Std_00042
64	CCB	04:12	Dissolved Organic Carbon - Quad	0.313				J	
72	CCV	06:26	Dissolved Organic Carbon - Quad	23.9	25.0	96	90-110		TOC LCS Std_00042
73	CCB	06:43	Dissolved Organic Carbon - Quad	0.302				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 436996 Date: 11/09/2018 10:30							
9056A	MB 280-436996/6	Sulfate	0.246	J	mg/L	5.0	1
Batch ID: 435723 Date: 10/30/2018 19:11							
9060A	MB 280-435563/2-A	Dissolved Organic Carbon - Quad	0.286	J	mg/L	1.0	1
Batch ID: 436637 Date: 11/07/2018 04:32							
9060A	MB 280-436465/2-A	Dissolved Organic Carbon - Quad	0.349	J	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436996 Date: 11/09/2018 21:20											
9056A	280-116017-1	Sulfate	31		mg/L						
9056A	280-116017-1 MS	Sulfate	56.2		mg/L	25.0	99	87-112			
Batch ID: 435723 Date: 10/30/2018 23:56											
9060A	280-116017-1	Dissolved Organic Carbon - Quad	0.76	J	mg/L						
9060A	280-116017-1 MS	Dissolved Organic Carbon - Quad	23.8		mg/L	25.0	92	88-112			
Batch ID: 436637 Date: 11/07/2018 05:25											
9060A	280-116017-2	Dissolved Organic Carbon - Quad	0.91	J	mg/L						
9060A	280-116017-2 MS	Dissolved Organic Carbon - Quad	24.2		mg/L	25.0	93	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436996 Date: 11/09/2018 21:38											
9056A	280-116017-1 MSD	Sulfate	56.7		mg/L	25.0	101	87-112	1	10	
Batch ID: 435723 Date: 10/31/2018 00:11											
9060A	280-116017-1 MSD	Dissolved Organic Carbon - Quad	23.8		mg/L	25.0	92	88-112	0	15	
Batch ID: 436637 Date: 11/07/2018 05:39											
9060A	280-116017-2 MSD	Dissolved Organic Carbon - Quad	25.0		mg/L	25.0	96	88-112	3	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 436996 Date: 11/09/2018 21:01								
9056A	LF6TW-38_1018	280-116017-1	Sulfate	31	mg/L			
9056A	LF6TW-38_1018	280-116017-1 DU	Sulfate	30.5	mg/L	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436996 Date: 11/09/2018 09:52											
						LCS Source: IC LCS_01397					
9056A	LCS 280-436996/4	Sulfate	100		mg/L	100	100	87-112	0	10	M
Batch ID: 435723 Date: 10/30/2018 18:57											
						LCS Source: TOC LCS Std_00042					
9060A	LCS 280-435563/1-A	Dissolved Organic Carbon - Quad	22.9		mg/L	25.0	91	88-112			
Batch ID: 436637 Date: 11/07/2018 03:42											
						LCS Source: TOC LCS Std_00042					
9060A	LCS 280-436465/1-A	Dissolved Organic Carbon - Quad	23.5		mg/L	25.0	94	88-112			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436996	Date: 11/09/2018 10:11										
						LCSD Source: IC LCS_01397					
9056A	LCSD 280-436996/5	Sulfate	100		mg/L	100	100	87-112	0	10	M

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436996	Date: 11/09/2018 09:33										
						LCS Source: IC CAL cl/so4_00228					
9056A	MRL 280-436996/3	Sulfate	2.75	J	mg/L	2.50	110	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116017-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom8

Method: 9056A DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfate		5	0.232

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116017-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom8

Method: 9056A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		5	0.232

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-116017-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI3

Method: 9060A DL Date: 03/28/2011 11:39

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Dissolved Organic Carbon - Quad		1	0.155

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Denver Job Number: 280-116017-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI3

Method: 9060A XMDL Date: 03/28/2011 11:39

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon - Quad		1	0.155

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_IonChrom8 Analysis Method: 9056A

Start Date: 09/01/2018 11:34 End Date: 09/02/2018 15:21

Lab Sample Id	D/F	Type	Time	Analytes																									
				SO4																									
RTC 280-428352/1			11:34																										
STD 280-428352/2 IC	1		11:56	X																									
STD 280-428352/3 IC	1		12:18	X																									
STD 280-428352/4 IC	1		12:40	X																									
STD 280-428352/5 IC	1		13:02	X																									
STD 280-428352/6 IC	1		04:37	X																									
STD 280-428352/7 IC	1		04:58	X																									
ICV 280-428352/8	1		05:21	X																									
ICB 280-428352/9	1		05:43	X																									
ZZZZZZ			06:05																										
ZZZZZZ			06:27																										
ZZZZZZ			06:50																										
ZZZZZZ			07:12																										
ZZZZZZ			07:34																										
ZZZZZZ			07:56																										
ZZZZZZ			08:18																										
ZZZZZZ			08:41																										
ZZZZZZ			09:03																										
ZZZZZZ			09:25																										
ZZZZZZ			09:47																										
ZZZZZZ			10:10																										
ZZZZZZ			10:32																										
ZZZZZZ			10:54																										
CCV 280-428352/24			11:16																										
CCB 280-428352/25			11:38																										
ZZZZZZ			12:01																										
ZZZZZZ			12:23																										
ZZZZZZ			12:45																										
ZZZZZZ			13:07																										
ZZZZZZ			13:30																										
ZZZZZZ			13:52																										
ZZZZZZ			14:14																										
ZZZZZZ			14:36																										
CCV 280-428352/34			14:58																										
CCB 280-428352/35			15:21																										

Prep Types:
=

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_IonChrom8 Analysis Method: 9056A

Start Date: 11/09/2018 08:57 End Date: 11/10/2018 03:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCV 280-436996/1	1		08:57	X																								
CCB 280-436996/2	1		09:15	X																								
MRL 280-436996/3	1	T	09:33	X																								
LCS 280-436996/4	1	T	09:52	X																								
LCSD 280-436996/5	1	T	10:11	X																								
MB 280-436996/6	1	T	10:30	X																								
ZZZZZZ			15:13																									
ZZZZZZ			15:31																									
ZZZZZZ			15:50																									
ZZZZZZ			16:08																									
ZZZZZZ			16:27																									
ZZZZZZ			16:46																									
ZZZZZZ			17:04																									
ZZZZZZ			17:23																									
ZZZZZZ			17:42																									
ZZZZZZ			18:01																									
CCV 280-436996/17	1		18:19	X																								
CCB 280-436996/18	1		18:38	X																								
ZZZZZZ			18:57																									
ZZZZZZ			19:15																									
ZZZZZZ			19:46																									
ZZZZZZ			20:05																									
ZZZZZZ			20:23																									
280-116017-1	1	T	20:42	X																								
280-116017-1 DU	1	T	21:01	X																								
280-116017-1 MS	1	T	21:20	X																								
280-116017-1 MSD	1	T	21:38	X																								
280-116017-2	1	T	21:57	X																								
CCV 280-436996/29	1		22:16	X																								
CCB 280-436996/30	1		22:34	X																								
ZZZZZZ			22:53																									
ZZZZZZ			23:12																									
ZZZZZZ			23:31																									
ZZZZZZ			23:49																									
ZZZZZZ			00:08																									
ZZZZZZ			00:27																									
ZZZZZZ			00:46																									
ZZZZZZ			01:04																									
ZZZZZZ			01:23																									
ZZZZZZ			01:42																									
CCV 280-436996/41			02:00																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_IonChrom8 Analysis Method: 9056A

Start Date: 11/09/2018 08:57 End Date: 11/10/2018 03:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCB 280-436996/42			02:19																									
ZZZZZZ			02:38																									
CCV 280-436996/45			03:15																									
CCB 280-436996/46			03:34																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 10/30/2018 18:12 End Date: 10/31/2018 11:26

Lab Sample Id	D/F	Type	Time	Analytes
				DOCQ
ICV 280-435723/1	1		18:12	X
ICB 280-435723/2	1		18:39	X
LCS 280-435563/1-A	1	D	18:57	X
MB 280-435563/2-A	1	D	19:11	X
ZZZZZZ			19:26	
ZZZZZZ			19:43	
ZZZZZZ			19:57	
ZZZZZZ			20:12	
ZZZZZZ			20:29	
ZZZZZZ			20:46	
ZZZZZZ			21:02	
ZZZZZZ			21:23	
ZZZZZZ			21:42	
ZZZZZZ			22:01	
CCV 280-435723/15	1		22:15	X
CCB 280-435723/16	1		22:33	X
ZZZZZZ			22:49	
ZZZZZZ			23:08	
280-116017-2	1	D	23:23	X
280-116017-1	1	D	23:42	X
280-116017-1 MS	1	D	23:56	X
280-116017-1 MSD	1	D	00:11	X
ZZZZZZ			00:30	
ZZZZZZ			00:45	
ZZZZZZ			01:01	
ZZZZZZ			01:16	
CCV 280-435723/27	1		01:37	X
CCB 280-435723/28	1		01:56	X
ZZZZZZ			02:10	
ZZZZZZ			02:27	
ZZZZZZ			02:42	
ZZZZZZ			02:57	
ZZZZZZ			03:15	
ZZZZZZ			03:34	
ZZZZZZ			03:51	
ZZZZZZ			04:06	
ZZZZZZ			04:20	
ZZZZZZ			04:35	
CCV 280-435723/39			04:50	
CCB 280-435723/40			05:07	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 10/30/2018 18:12 End Date: 10/31/2018 11:26

Lab Sample Id	D/F	Type	Time	Analytes
				DOCQ
ZZZZZZ			05:22	
ZZZZZZ			05:39	
ZZZZZZ			05:55	
ZZZZZZ			06:10	
ZZZZZZ			06:25	
ZZZZZZ			06:41	
ZZZZZZ			06:59	
ZZZZZZ			07:15	
ZZZZZZ			07:34	
ZZZZZZ			07:49	
CCV 280-435723/51			08:06	
CCB 280-435723/52			08:20	
ZZZZZZ			08:35	
ZZZZZZ			08:50	
ZZZZZZ			09:05	
ZZZZZZ			09:21	
ZZZZZZ			09:36	
ZZZZZZ			09:53	
ZZZZZZ			10:08	
ZZZZZZ			10:24	
ZZZZZZ			10:39	
ZZZZZZ			10:56	
CCV 280-435723/63			11:11	
CCB 280-435723/64			11:26	

Prep Types:
D = Dissolved

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 11/06/2018 10:39 End Date: 11/07/2018 06:43

Lab Sample Id	D/F	Type	Time	Analytes
				DOCQ
ICV 280-436637/1	1		10:39	X
ICB 280-436637/2	1		10:58	X
ZZZZZZ			11:13	
ZZZZZZ			11:30	
ZZZZZZ			12:26	
ZZZZZZ			12:41	
ZZZZZZ			12:56	
ZZZZZZ			13:10	
ZZZZZZ			13:25	
ZZZZZZ			13:44	
ZZZZZZ			14:01	
ZZZZZZ			14:15	
ZZZZZZ			14:30	
ZZZZZZ			14:45	
CCV 280-436637/15			15:04	
CCB 280-436637/16			15:18	
ZZZZZZ			15:40	
ZZZZZZ			15:59	
ZZZZZZ			16:16	
ZZZZZZ			16:30	
ZZZZZZ			16:45	
ZZZZZZ			17:00	
ZZZZZZ			17:15	
ZZZZZZ			17:29	
ZZZZZZ			17:44	
ZZZZZZ			18:01	
CCV 280-436637/27			18:16	
CCB 280-436637/28			18:32	
ZZZZZZ			18:49	
ZZZZZZ			19:04	
ZZZZZZ			19:23	
ZZZZZZ			19:37	
ZZZZZZ			19:54	
ZZZZZZ			20:09	
ZZZZZZ			20:24	
ZZZZZZ			20:42	
ZZZZZZ			20:57	
ZZZZZZ			21:14	
CCV 280-436637/39			21:29	
CCB 280-436637/40			21:43	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 11/06/2018 10:39 End Date: 11/07/2018 06:43

Lab Sample Id	D/F	Type	Time	Analytes																									
				DOCQ																									
ZZZZZZ			22:00																										
ZZZZZZ			22:15																										
ZZZZZZ			22:32																										
ZZZZZZ			22:46																										
ZZZZZZ			23:07																										
ZZZZZZ			23:22																										
ZZZZZZ			23:43																										
ZZZZZZ			23:59																										
ZZZZZZ			00:16																										
ZZZZZZ			00:33																										
CCV 280-436637/51	1		00:48	X																									
CCB 280-436637/52	1		01:02	X																									
ZZZZZZ			01:17																										
ZZZZZZ			01:32																										
ZZZZZZ			01:47																										
ZZZZZZ			02:01																										
ZZZZZZ			02:24																										
ZZZZZZ			02:39																										
ZZZZZZ			02:56																										
ZZZZZZ			03:12																										
ZZZZZZ			03:27																										
LCS 280-436465/1-A	1	D	03:42	X																									
CCV 280-436637/63	1		03:57	X																									
CCB 280-436637/64	1		04:12	X																									
MB 280-436465/2-A	1	D	04:32	X																									
ZZZZZZ			04:53																										
280-116017-2	1	D	05:10	X																									
280-116017-2 MS	1	D	05:25	X																									
280-116017-2 MSD	1	D	05:39	X																									
280-116017-1	1	D	05:56	X																									
ZZZZZZ			06:11																										
CCV 280-436637/72	1		06:26	X																									
CCB 280-436637/73	1		06:43	X																									

Prep Types:
D = Dissolved

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 428352 Batch Start Date: 09/01/18 11:34 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00217	IC Cal low 00396	IC CL ICV 00014	IC ICV 5 00207
STD 280-428352/2 IC		9056A		5 mL	5 mL	0.02 mL	0.02 mL		
STD 280-428352/3 IC		9056A		5 mL	5 mL	0.05 mL	0.05 mL		
STD 280-428352/4 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD 280-428352/5 IC		9056A		5 mL	5 mL	1.2 mL	0.4 mL		
STD 280-428352/6 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD 280-428352/7 IC		9056A		5 mL	5 mL	4 mL	1 mL		
ICV 280-428352/8		9056A		5 mL	5 mL			0.4 mL	0.4 mL
ICB 280-428352/9		9056A		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00017					
STD 280-428352/2 IC		9056A							
STD 280-428352/3 IC		9056A							
STD 280-428352/4 IC		9056A							
STD 280-428352/5 IC		9056A							
STD 280-428352/6 IC		9056A							
STD 280-428352/7 IC		9056A							
ICV 280-428352/8		9056A		0.4 mL					
ICB 280-428352/9		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 428352 Batch Start Date: 09/01/18 11:34 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

Batch Notes	
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics, 1000d, ic100
Regeneration Solution ID	171211301014
Sufficient Volume for Batch QC	yes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436996 Batch Start Date: 11/09/18 08:57 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00228	IC Cal low 00413	IC LCS 01397	ICMS/MSD WEEK 00563
CCV 280-436996/1		9056A		5 mL	5 mL			5 mL	
CCB 280-436996/2		9056A		5 mL	5 mL				
MRL 280-436996/3		9056A		5 mL	5 mL	0.05 mL	0.02 mL		
LCS 280-436996/4		9056A		5 mL	5 mL			5 mL	
LCSD 280-436996/5		9056A		5 mL	5 mL			5 mL	
MB 280-436996/6		9056A		5 mL	5 mL				
CCV 280-436996/17		9056A		5 mL	5 mL			5 mL	
CCB 280-436996/18		9056A		5 mL	5 mL				
280-116017-C-1	LF6TW-38_1018	9056A	T	5 mL	5 mL				
280-116017-C-1 DU	LF6TW-38_1018	9056A	T	5 mL	5 mL				
280-116017-C-1 MS	LF6TW-38_1018	9056A	T	5 mL	5 mL				0.05 mL
280-116017-C-1 MSD	LF6TW-38_1018	9056A	T	5 mL	5 mL				0.05 mL
280-116017-C-2	LF6TW-36_1018	9056A	T	5 mL	5 mL				
CCV 280-436996/29		9056A		5 mL	5 mL			5 mL	
CCB 280-436996/30		9056A		5 mL	5 mL				

Batch Notes	
Batch Comment	AD training with AD
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc1000-d ic100
Regeneration Solution ID	180502365015
Sufficient Volume for Batch QC	Yes

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436996 Batch Start Date: 11/09/18 08:57 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 435563 Batch Start Date: 10/30/18 13:58 Batch Analyst: Loux, Lauren P

Batch Method: FILTRATION Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
LCS 280-435563/1		FILTRATION, 9060A		20 mL	20 mL				
MB 280-435563/2		FILTRATION, 9060A		20 mL	20 mL				
280-116017-C-2	LF6TW-36_1018	FILTRATION, 9060A	D	20 mL	20 mL				
280-116017-C-1	LF6TW-38_1018	FILTRATION, 9060A	D	20 mL	20 mL				
280-116017-C-1 MS	LF6TW-38_1018	FILTRATION, 9060A	D	20 mL	20 mL				
280-116017-C-1 MSD	LF6TW-38_1018	FILTRATION, 9060A	D	20 mL	20 mL				

Batch Notes	
Filter ID	1107214
Nitric Acid ID	200458

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 435722 Batch Start Date: 10/30/18 18:12 Batch Analyst: Loux, Lauren P

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	TOC LCS Std 00042	AnalysisComment			
LCS 280-435563/1-A		9060A		200 mL	5 mL	9060			
280-116017-C-1-B MS	LF6TW-38_1018	9060A	D	50 mL	1.25 mL				
280-116017-C-1-C MSD	LF6TW-38_1018	9060A	D	50 mL	1.25 mL				

Batch Notes	
Acid ID	H2SO4_00188 2%H2SO4_00310
Batch Comment	9060 & 5310
Combustion Catylyst ID	17007D-01
Pipette/Syringe/Dispenser ID	500011, 100011

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 435723 Batch Start Date: 10/30/18 18:12 Batch Analyst: Loux, Lauren P

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	TOC ICV Std 00036	TOC LCS Std 00042	AnalysisComment		
ICV 280-435723/1		9060A		50 mL	1 mL				
LCS 280-435563/1-A		9060A		200 mL		5 mL	9060		
CCV 280-435723/15		9060A		200 mL		5 mL			
280-116017-C-1-B MS	LF6TW-38_1018	9060A	D	50 mL		1.25 mL			
280-116017-C-1-C MSD	LF6TW-38_1018	9060A	D	50 mL		1.25 mL			
CCV 280-435723/27		9060A		200 mL		5 mL			

Batch Notes	
Acid ID	H2SO4_00188 2%H2SO4_00310
Batch Comment	9060 & 5310
Combustion Catylyst ID	17007D-01
Pipette/Syringe/Dispenser ID	5000ll, 1000ll

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436636 Batch Start Date: 11/06/18 10:39 Batch Analyst: Loux, Lauren P

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	TOC LCS Std 00042				
LCS 280-436465/1-A		9060A		200 mL	5 mL				
280-116017-A-2-C MS	LF6TW-36_1018	9060A	D	50 mL	1.25 mL				
280-116017-A-2-D MSD	LF6TW-36_1018	9060A	D	50 mL	1.25 mL				

Batch Notes	
Acid ID	H2SO4_00188 2%H2SO4_00310
Combustion Catylyst ID	17007D-01
Pipette/Syringe/Dispenser ID	5000LL, 1000LL

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116017-1

SDG No.:

Batch Number: 436637 Batch Start Date: 11/06/18 10:39 Batch Analyst: Loux, Lauren P

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	TOC ICV Std 00036	TOC LCS Std 00042			
ICV 280-436637/1		9060A		50 mL	1 mL				
CCV 280-436637/51		9060A		200 mL		5 mL			
LCS 280-436465/1-A		9060A		200 mL		5 mL			
CCV 280-436637/63		9060A		200 mL		5 mL			
280-116017-A-2-C MS	LF6TW-36_1018	9060A	D	50 mL		1.25 mL			
280-116017-A-2-D MSD	LF6TW-36_1018	9060A	D	50 mL		1.25 mL			
CCV 280-436637/72		9060A		200 mL		5 mL			

Batch Notes	
Acid ID	H2SO4_00188 2%H2SO4_00310
Combustion Catylyst ID	17007D-01
Pipette/Syringe/Dispenser ID	5000LL, 1000LL

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\02.0000.d
Lims ID: std L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 01-Sep-2018 11:56:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-002 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:25 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.100	2.117	-0.017	8070560	0.2000	0.1851	
2 Chloride	3.350	3.325	0.025	17320827	1.00	1.00	
3 Nitrite as N	3.842	3.850	-0.008	8442981	0.2000	0.1590	
4 Bromide	6.025	5.975	0.050	1167456	0.2000	0.2236	
5 Nitrate as N	6.609	6.442	0.167	8183065	0.2000	0.2060	
6 Sulfate	11.509	11.275	0.234	11579397	1.00	1.00	M
7 Orthophosphate as P	12.884	12.800	0.084	20791181	0.2000	-0.0952	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

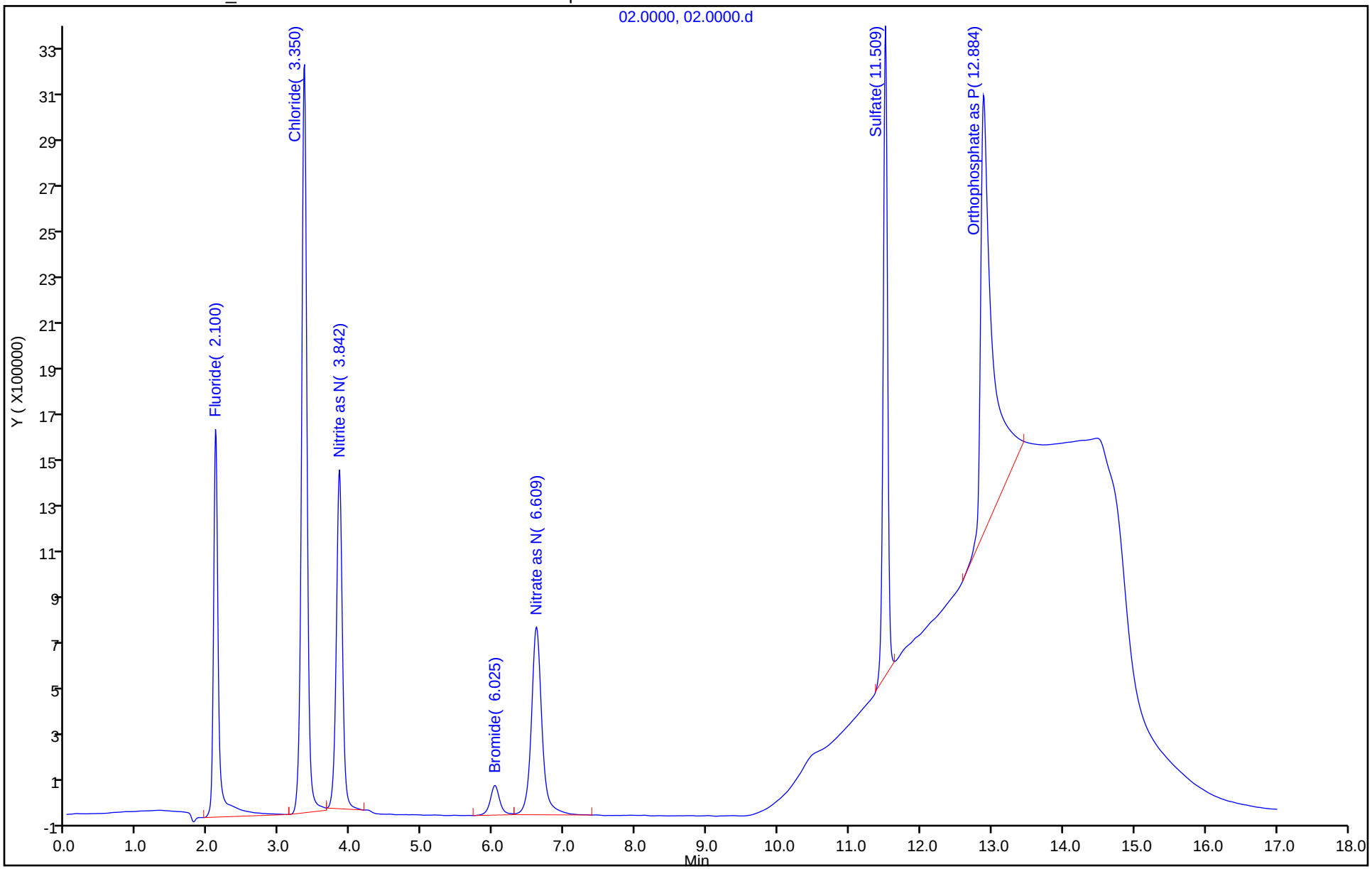
IC Cal low_00396 Amount Added: 0.02 Units: mL
IC CAL cl/so4_00217 Amount Added: 0.02 Units: mL

Report Date: 04-Sep-2018 17:13:25 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\02.0000.d

Injection Date:	01-Sep-2018 11:56:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L1			Worklist Smp#:	2
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

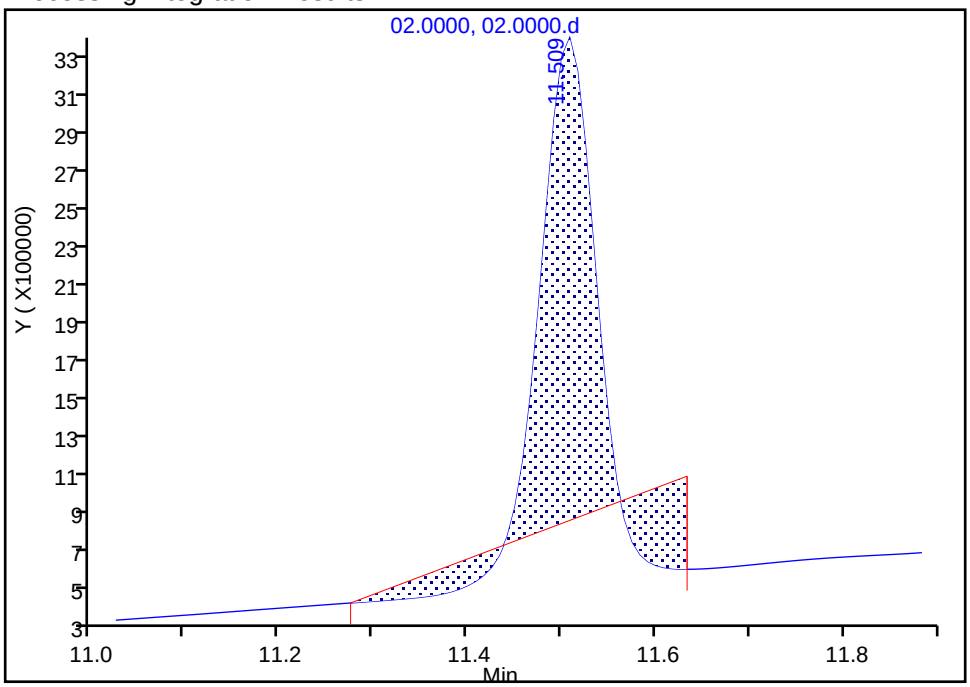
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\02.0000.d
Injection Date: 01-Sep-2018 11:56:00 Instrument ID: WC_IonChrom8
Lims ID: std L1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

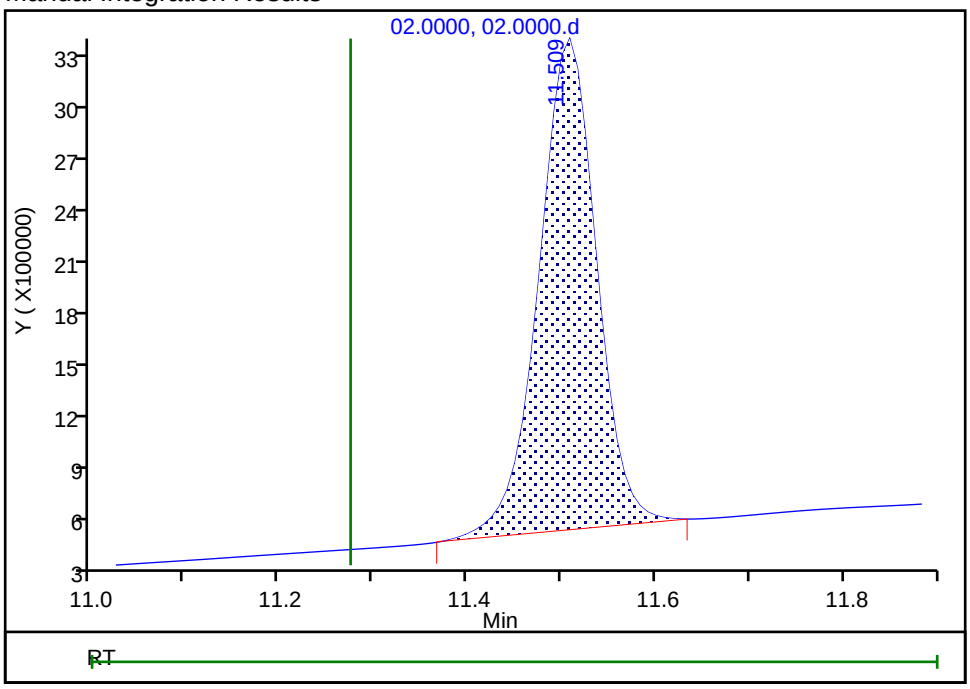
Processing Integration Results

RT: 11.51
Area: 31785046
Amount: 1.528805
Amount Units: ug/ml



Manual Integration Results

RT: 11.51
Area: 11579397
Amount: 1.003236
Amount Units: ug/ml



Reviewer: phantl, 04-Sep-2018 17:03:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\03.0000.d
Lims ID: std L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Sep-2018 12:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-003 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:26 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.108	2.117	-0.009	18028806	0.5000	0.4954	
2 Chloride	3.350	3.325	0.025	46063990	2.50	2.49	
3 Nitrite as N	3.842	3.850	-0.008	23552879	0.5000	0.5215	
4 Bromide	6.025	5.975	0.050	3157221	0.5000	0.4744	
5 Nitrate as N	6.600	6.442	0.158	22460636	0.5000	0.4914	
6 Sulfate	11.492	11.275	0.217	32700473	2.50	2.49	
7 Orthophosphate as P	12.858	12.800	0.058	44201645	0.5000	1.03	

Reagents:

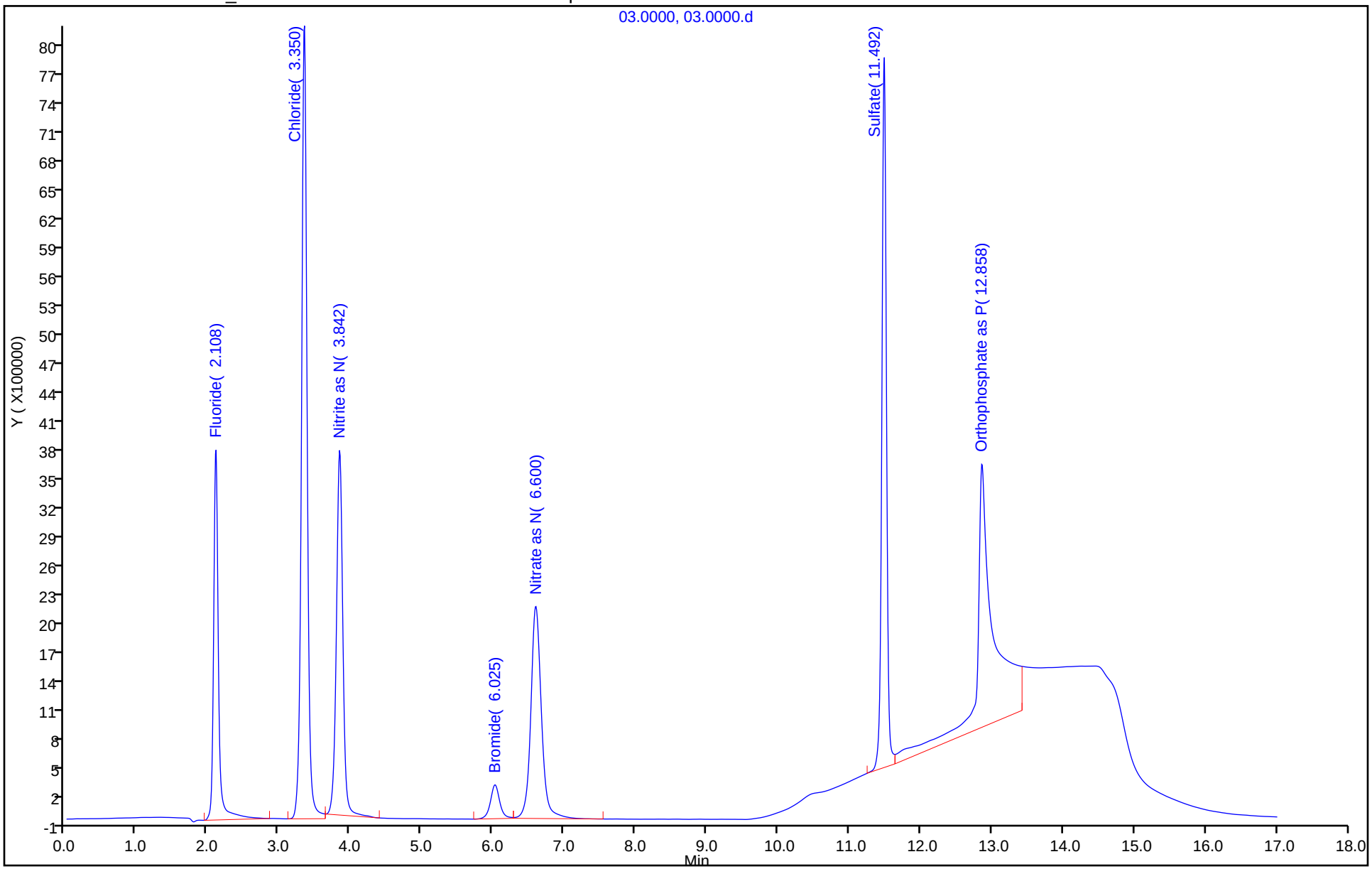
IC Cal low_00396 Amount Added: 0.05 Units: mL
IC CAL cl/so4_00217 Amount Added: 0.05 Units: mL

Report Date: 04-Sep-2018 17:13:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\03.0000.d

Injection Date:	01-Sep-2018 12:18:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L2			Worklist Smp#:	3
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\04.0000.d
Lims ID: std L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Sep-2018 12:40:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-004 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:27 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.108	2.117	-0.009	36188387	1.00	1.06	
2 Chloride	3.350	3.325	0.025	94576246	5.00	5.00	
3 Nitrite as N	3.850	3.850	0.000	48278508	1.00	1.11	
4 Bromide	6.025	5.975	0.050	6799213	1.00	0.9335	
5 Nitrate as N	6.575	6.442	0.133	47266769	1.00	0.9873	
6 Sulfate	11.483	11.275	0.208	67850187	5.00	4.95	
7 Orthophosphate as P	12.850	12.800	0.050	54492121	1.00	1.52	

Reagents:

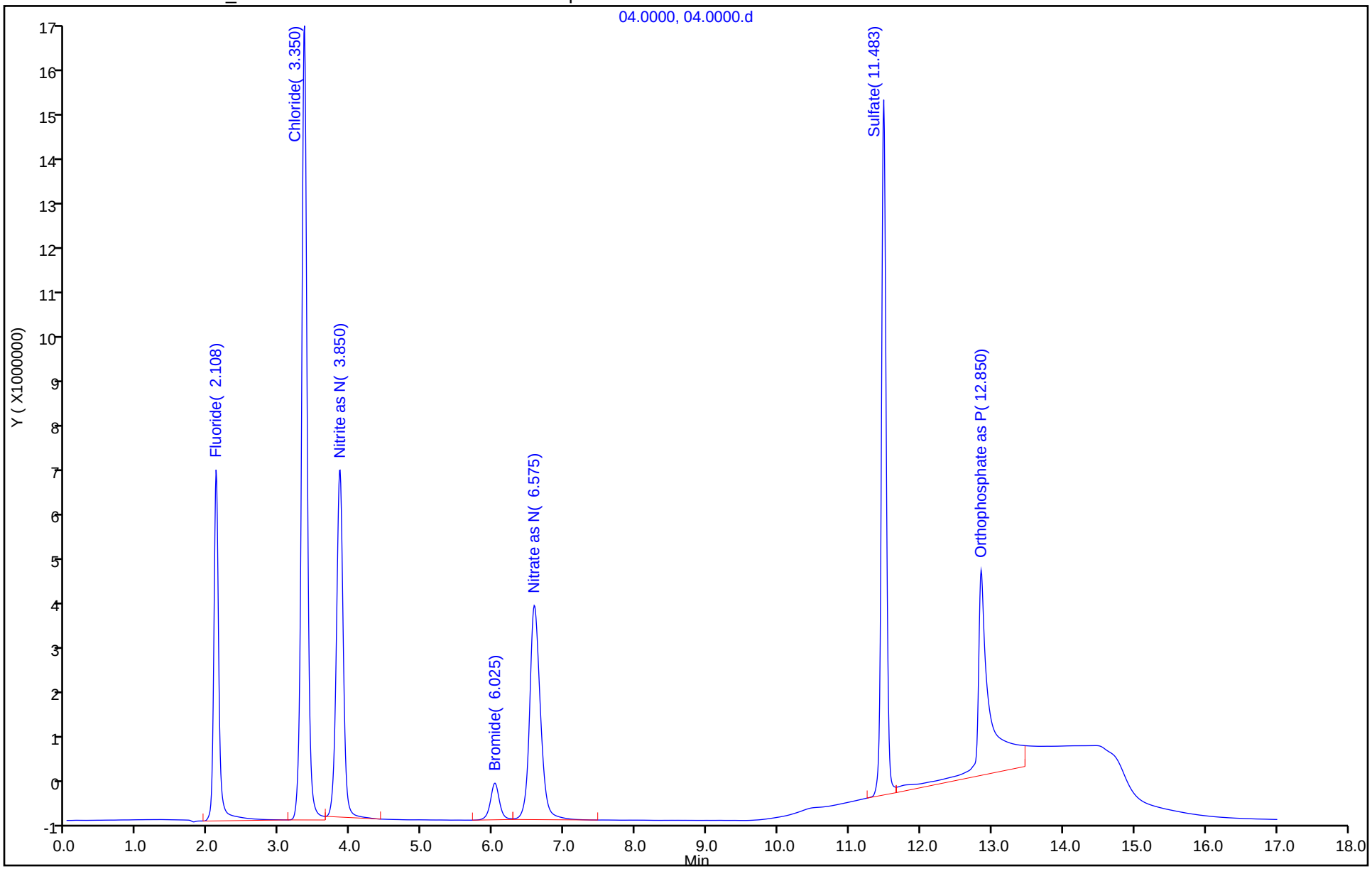
IC Cal low_00396 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00217 Amount Added: 0.10 Units: mL

Report Date: 04-Sep-2018 17:13:27 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\04.0000.d

Injection Date:	01-Sep-2018 12:40:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L3			Worklist Smp#:	4
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\05.0000.d
Lims ID: std L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Sep-2018 13:02:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-005 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:28 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.117	2.117	0.000	136567557	4.00	4.19	
2 Chloride	3.334	3.334	0.000	1169987193	60.0	60.8	
3 Nitrite as N	3.850	3.850	0.000	185494780	4.00	4.41	
4 Bromide	5.992	5.992	0.000	30807083	4.00	3.96	
5 Nitrate as N	6.475	6.475	0.000	197565189	4.00	3.99	
6 Sulfate	11.350	11.350	0.000	868227934	60.0	61.1	
7 Orthophosphate as P	12.817	12.817	0.000	104660131	4.00	3.92	

Reagents:

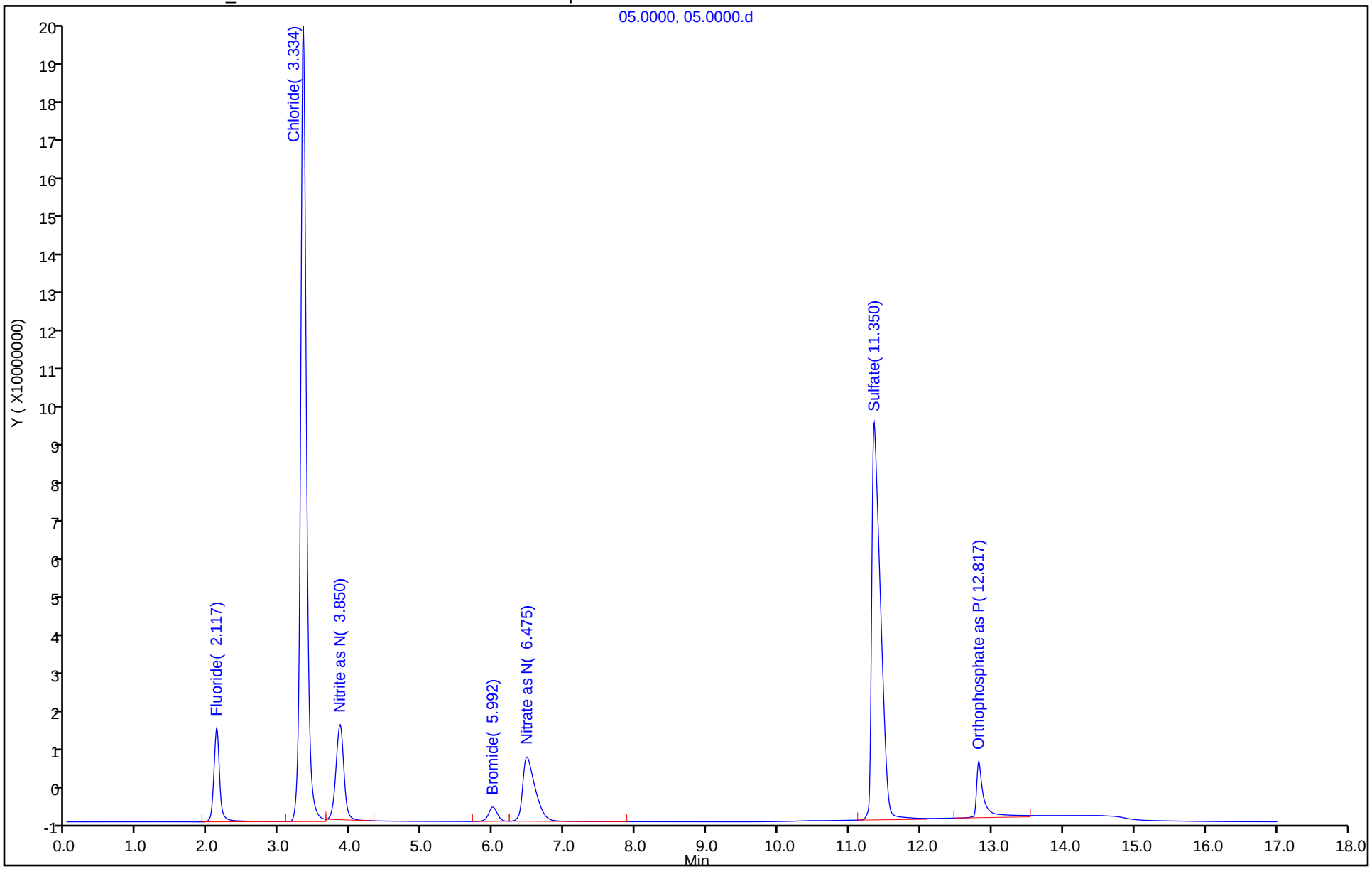
IC Cal low_00396 Amount Added: 0.40 Units: mL
IC CAL cl/so4_00217 Amount Added: 1.20 Units: mL

Report Date: 04-Sep-2018 17:13:28 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\05.0000.d

Injection Date:	01-Sep-2018 13:02:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L4			Worklist Smp#:	5
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\06.0000.d
Lims ID: std L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 02-Sep-2018 04:37:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-006 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:29 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.108	2.117	-0.009	256478991	8.00	7.93	
2 Chloride	3.308	3.334	-0.026	2305131911	120.0	119.7	
3 Nitrite as N	3.825	3.850	-0.025	328680659	8.00	7.84	
4 Bromide	5.933	5.992	-0.059	62589921	8.00	7.97	
5 Nitrate as N	6.358	6.475	-0.117	397163842	8.00	7.98	
6 Sulfate	11.242	11.350	-0.108	1705119270	120.0	119.8	
7 Orthophosphate as P	12.783	12.817	-0.034	181791399	8.00	7.62	

Reagents:

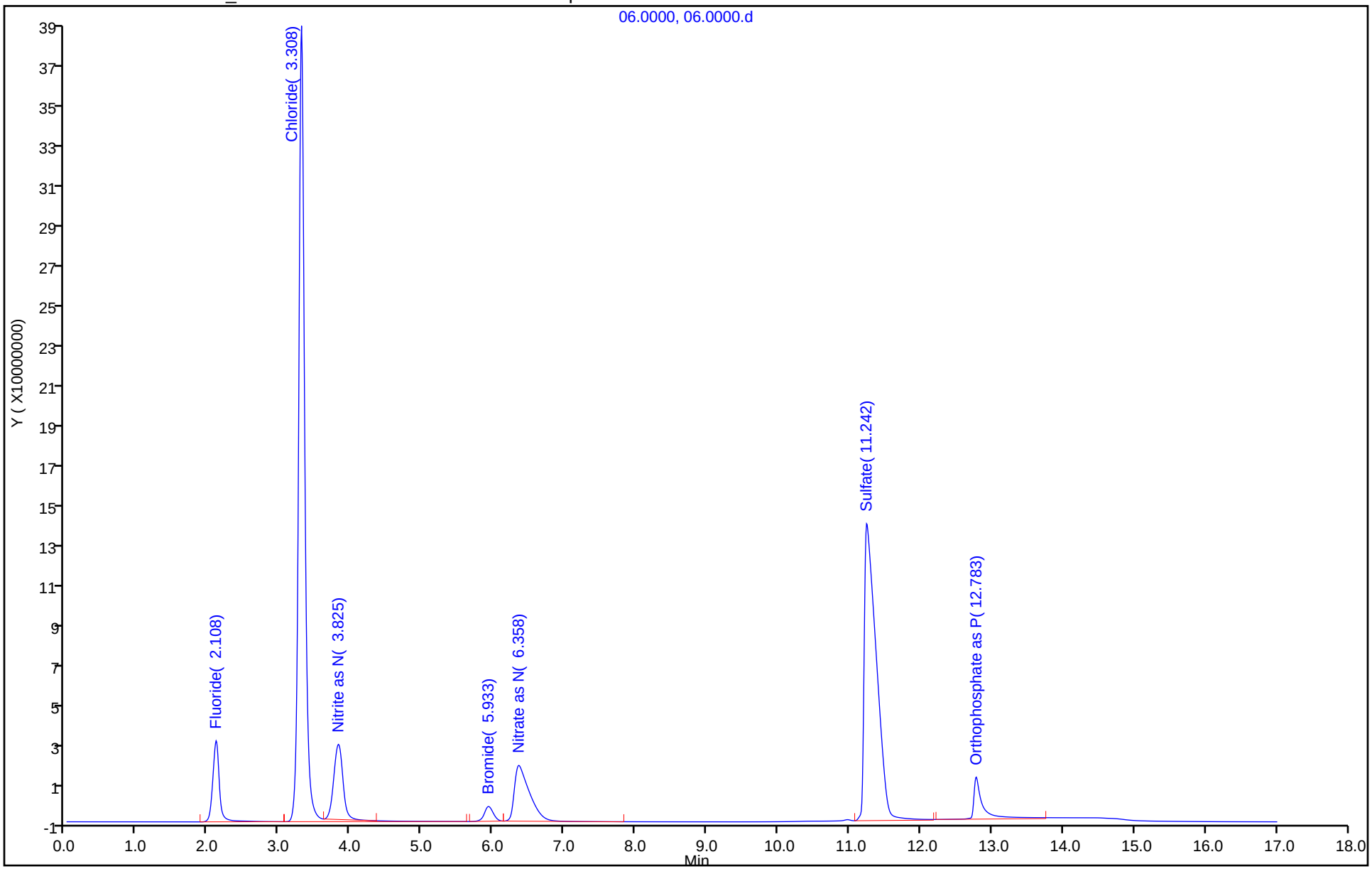
IC Cal low_00396 Amount Added: 0.80 Units: mL
IC CAL cl/so4_00217 Amount Added: 2.40 Units: mL

Report Date: 04-Sep-2018 17:13:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\06.0000.d

Injection Date:	02-Sep-2018 04:37:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L5			Worklist Smp#:	6
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d
Lims ID: std L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 02-Sep-2018 04:58:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-007 Temporary sequence for manual data acquisition
Misc. Info.: 12504
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:13:30 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.109	2.117	-0.008	317925248	10.0	9.84	
2 Chloride	3.309	3.334	-0.025	3845262113	200.0	199.6	
3 Nitrite as N	3.825	3.850	-0.025	404487509	10.0	9.66	
4 Bromide	5.900	5.992	-0.092	79861532	10.0	10.1	
5 Nitrate as N	6.309	6.475	-0.166	500158032	10.0	10.0	
6 Sulfate	11.150	11.350	-0.200	2835814463	200.0	199.1	
7 Orthophosphate as P	12.759	12.817	-0.058	225445325	10.0	9.71	

Reagents:

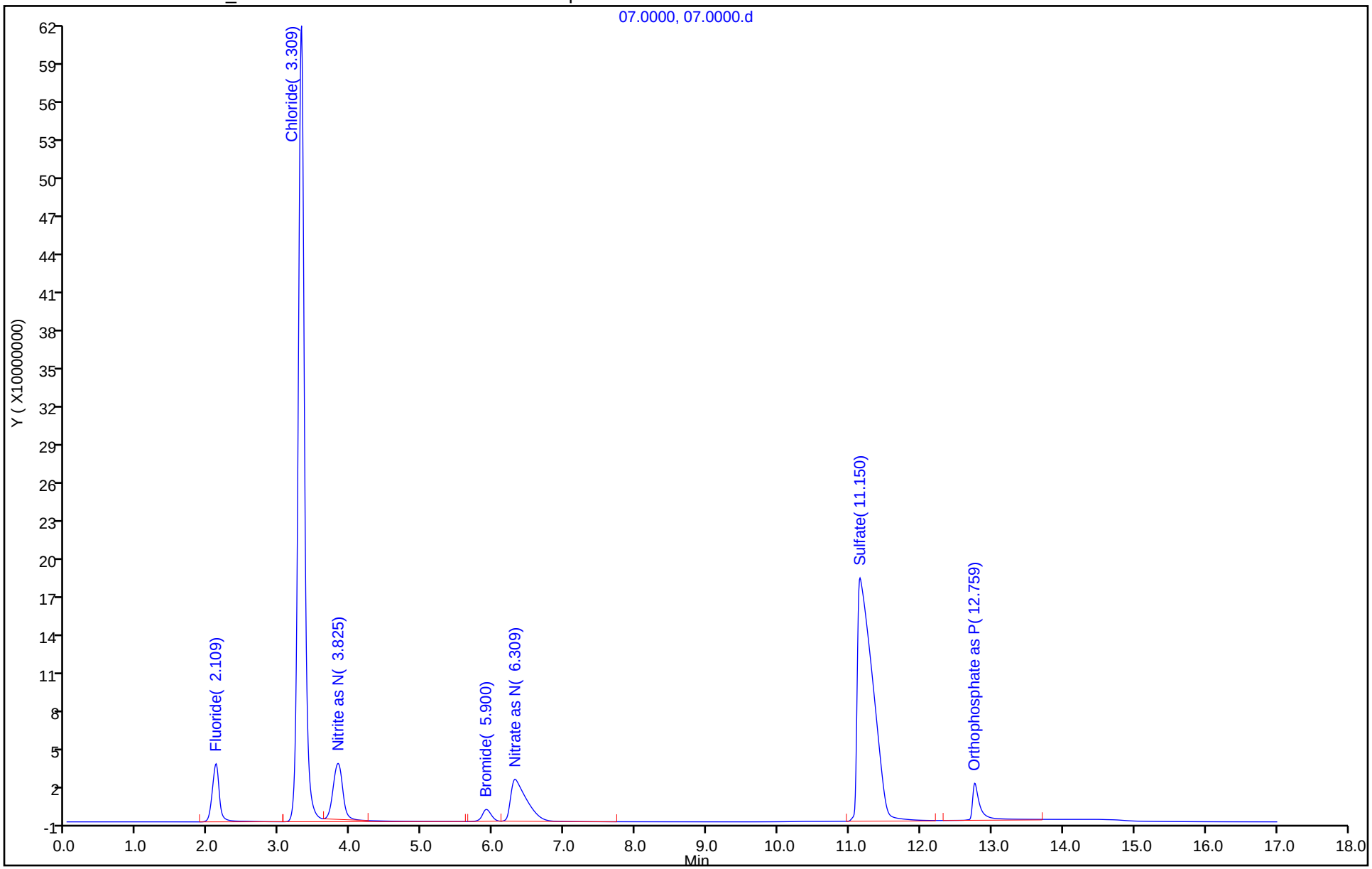
IC Cal low_00396 Amount Added: 1.00 Units: mL
IC CAL cl/so4_00217 Amount Added: 4.00 Units: mL

Report Date: 04-Sep-2018 17:13:30 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Injection Date:	02-Sep-2018 04:58:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	std L6			Worklist Smp#:	7
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



New Cal

TestAmerica 428352 1/51

IC Instrument Information

WL: 428351 Inst ID: 88 Analysis Date: 06/20/18 Analyst: TVP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	428351-41	41	F Cl NO2 Br NO3 PO4 SO4	MS/D	11/5/4
☐	428356	77	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	428352-33	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica Denver

NEW CCAL

TestAmerica 428352 1

IC Instrument Information

WL: 738511 InstID: 8 Analysis Date: 08/10/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	1173844	41	F Cl NO2 Br NO3 PO4 SO4	MS/D	11 8 44
☐	1173856	7	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	1173852-3	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Panida R.
9/5/18

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Instrument: WC_IonChrom8 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Sep-2018 17:17:42
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b
Inj Date : 01-Sep-2018 11:56:00, Sublist: chrom-Anions_IC8*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	2132138	320872C		0.999	2132138	320872C		0.999
2 Chloride	-188536	192783S		1.000	-188536	192783S		1.000
3 Nitrite as N	181298S	4169026		0.996	181298S	4169026		0.996
4 Bromide	-606166	7933309		0.999	-606166	7933309		0.999
5 Nitrate as N	-212116	5002213		1.000	-212116	5002213		1.000
6 Sulfate	-272056	1425383		1.000	-272056	1425383		1.000
7 Orthophosphate as P	227776C	208741C	R1, R4	).938*	227776C	208741C	R1, R4	).938*

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test
R4, Curve Zero Intercept is > Reporting Limit

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Instrument: WC_IonChrom8 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 04-Sep-2018 17:17:42
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b
Inj Date : 01-Sep-2018 11:56:00, Sublist: chrom-Anions_IC8*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	213213E	320872C		0.999	213213E	320872C		0.999
2 Chloride	-188536	1927839		1.000	-188536	1927839		1.000
3 Nitrite as N	1812985	4169026		0.996	1812985	4169026		0.996
4 Bromide	-606166	7933305		0.999	-606166	7933305		0.999
5 Nitrate as N	-212116	5002213		1.000	-212116	5002213		1.000
6 Sulfate	-272056	1425383		1.000	-272056	1425383		1.000
7 Orthophosphate as P	227776C	208741C	R1, R4	).938*	227776C	208741C	R1, R4	).938*

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test
R4, Curve Zero Intercept is > Reporting Limit

Panida R
9/5/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\08.0000.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 02-Sep-2018 05:21:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-008 Temporary sequence for manual data acquisition
Misc. Info.: 8616
Operator ID: Instrument ID: WC_IonChrom8
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:16:16 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.100	2.100	0.000	126306837	4.00	3.87	
2 Chloride	3.309	3.309	0.000	1573573399	80.0	81.7	
3 Nitrite as N	3.825	3.825	0.000	168458287	4.00	4.00	
4 Bromide	5.975	5.975	0.000	29836718	4.00	3.84	
5 Nitrate as N	6.459	6.459	0.000	188402231	4.00	3.81	
6 Sulfate	11.292	11.292	0.000	1196072173	80.0	84.1	
7 Orthophosphate as P	12.800	12.800	0.000	109260429	4.00	4.14	

Reagents:

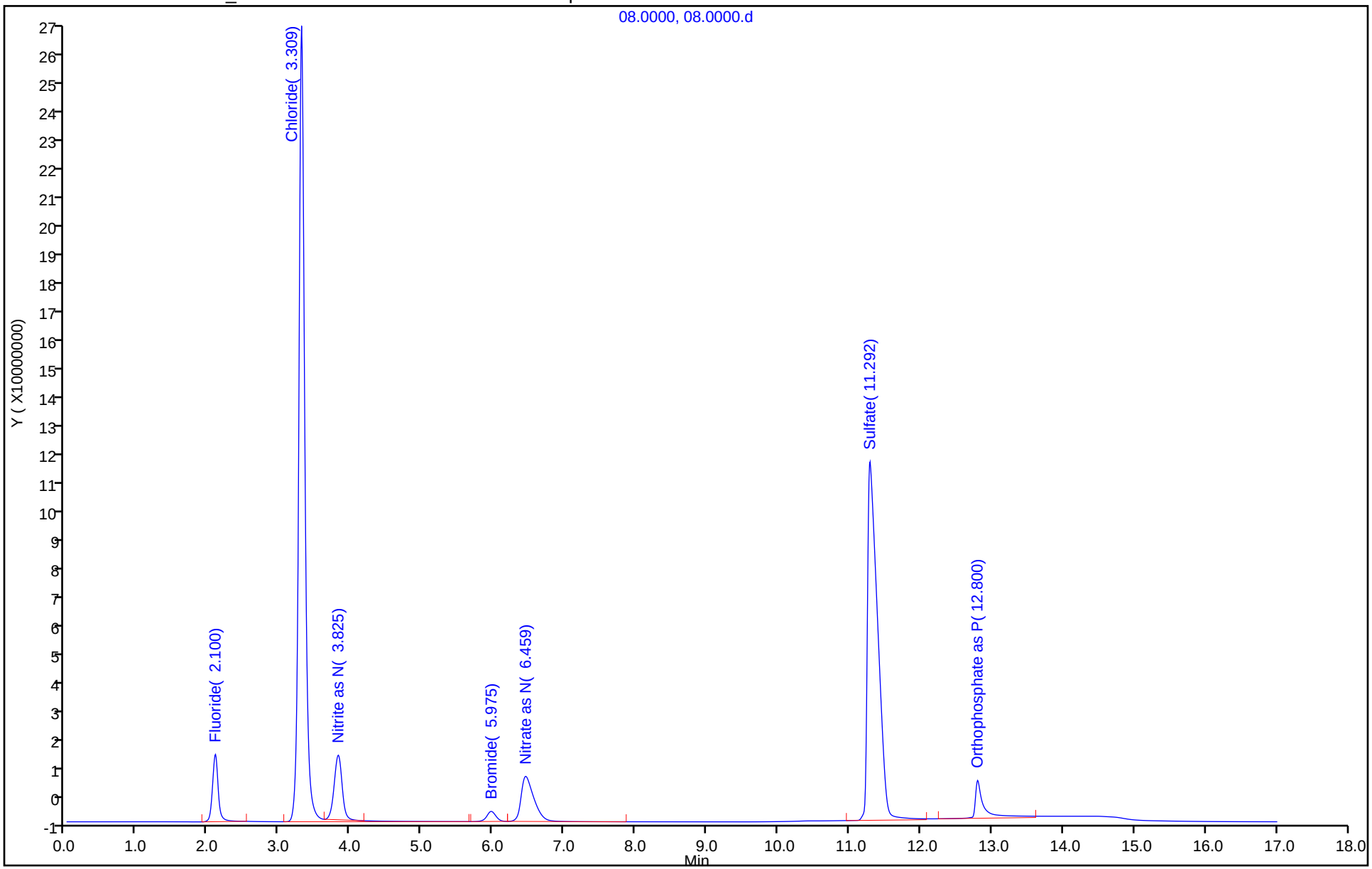
IC CL ICV_00014 Amount Added: 0.40 Units: mL
IC SO4 ICV_00017 Amount Added: 0.40 Units: mL
IC ICV 5_00207 Amount Added: 0.40 Units: mL

Report Date: 04-Sep-2018 17:16:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\08.0000.d

Injection Date:	02-Sep-2018 05:21:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\09.0000.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 02-Sep-2018 05:43:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0073651-009 Temporary sequence for manual data acquisition
Misc. Info.: 10490
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 04-Sep-2018 17:16:19 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: XAWRK021

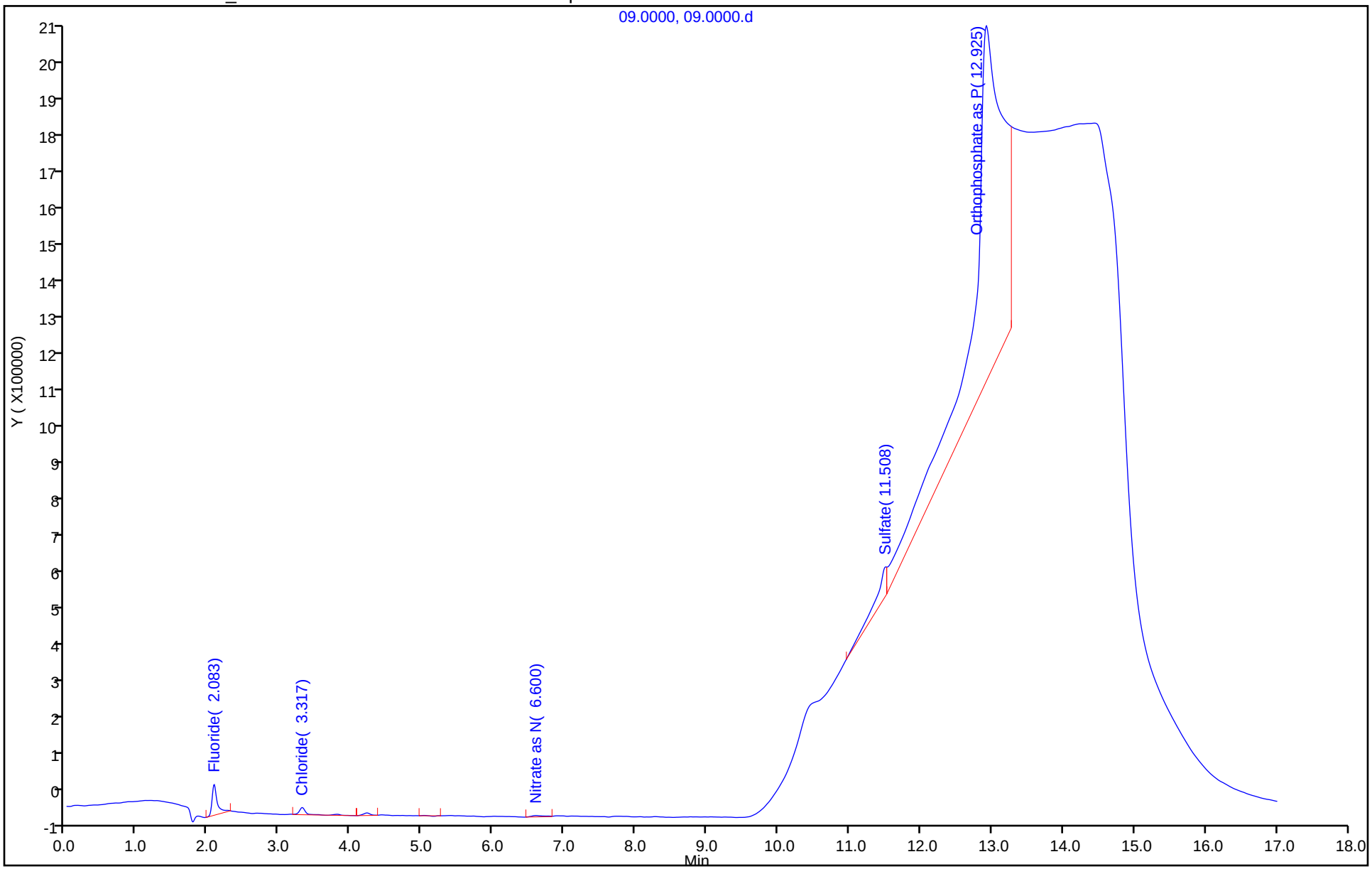
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.083	2.117	-0.034	416822		-0.0535	
2 Chloride	3.317	3.334	-0.017	145863		0.1054	
3 Nitrite as N		3.850				ND	
4 Bromide		5.992				ND	
5 Nitrate as N	6.600	6.475	0.125	45282		0.0433	
6 Sulfate	11.508	11.350	0.158	869336		0.2519	
7 Orthophosphate as P	12.925	12.817	0.108	27543018		0.2283	

Report Date: 04-Sep-2018 17:16:21 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\09.0000.d

Injection Date:	02-Sep-2018 05:43:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



IC Instrument Information

WL: 76013 Inst ID: 12 Analysis Date: 11/9/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	115944	3	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D-3	
☐	115996	10	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D10	client
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

IC Instrument Information

WL: 166865 Inst ID: 111 Analysis Date: 11/16/18 Analyst: CKES

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	166851	11	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
166851	11	F Cl NO2 Br NO3 PO4 SO4	5x+20x	Analytes
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica

IC Instrument Information

WL: 116024 Inst ID: III Analysis Date: 11/9/18 Analyst: [illegible]

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116023	266	F Cl NO2 Br NO3 PO4 SO4	MS/D	11/26 Client
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica

IC Instrument Information

WL: 116789 InstID: 88 AnalysisDate: 11/9/18 Analyst: AD

Rush Job No.	Samples	Anions	QC Req	HT Exp
116789	8	F Cl NO2 Br NO3 PO4 SO4	MS/D	
116817	2	F Cl NO2 Br NO3 PO4 SO4	MS/D-11	
116826	8	F Cl NO2 Br NO3 PO4 SO4	MS/D-12	
116831	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	
		F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
AD 11/9/18 2,10,50	8,4,1,2	F Cl NO2 Br NO3 PO4 SO4	2,10,50	Concentration
116789 ↗	3,5,6	F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Test America Denver 436996 / 436997 TestAmerica

IC Instrument Information

WL: 776015 Inst ID: 88 Analysis Date: 11/9/18 Analyst: AD

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116789	8	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116817	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116826	8	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116831	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
AD 11/9/18 2-10-50	8,4,1,2 3,5,6	F Cl NO2 Br NO3 PO4 SO4	2-10-50	Concentration NO2 NO3 SO4
116789		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Parameter R.R. 11/9/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\01.0000.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 08:57:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-001 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

First Level Reviewer: duplina Date: 09-Nov-2018 12:20:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.083	2.067	0.016	161591542	5.00	4.97	
2 Chloride	3.158	3.159	-0.001	1941429337	100.0	100.8	
3 Nitrite as N	3.608	3.617	-0.009	224725150	5.00	5.35	
4 Bromide	5.450	5.500	-0.050	39195332	5.00	5.02	
5 Nitrate as N	5.850	5.909	-0.059	240721762	5.00	4.85	
6 Sulfate	10.958	10.975	-0.017	1432964406	100.0	100.7	Ma
7 Orthophosphate as P	12.650	12.642	0.008	106169868	5.00	4.00	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

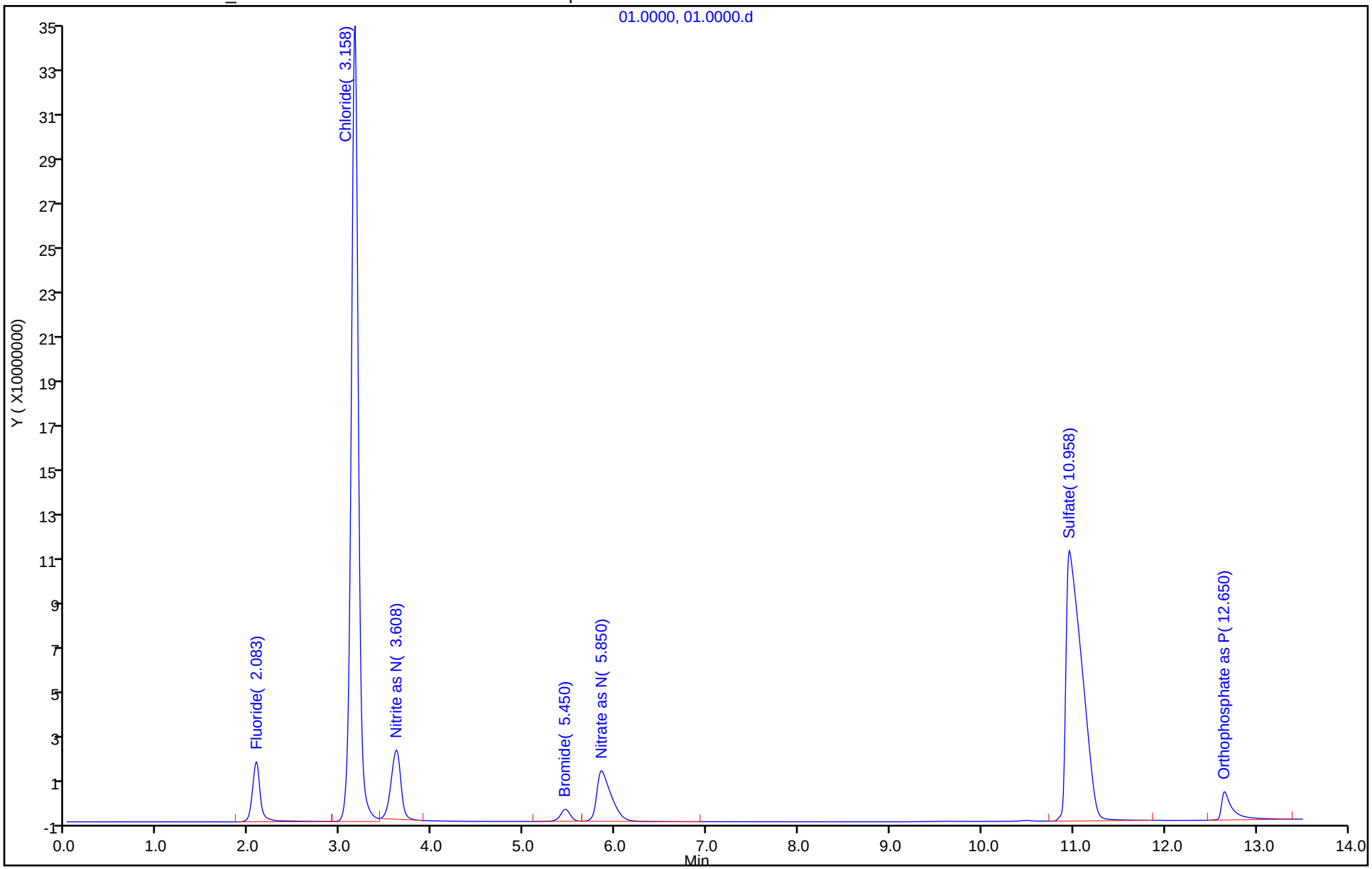
IC LCS_01397 Amount Added: 5.00 Units: mL

Report Date: 12-Nov-2018 12:17:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\01.0000.d

Injection Date:	09-Nov-2018 08:57:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

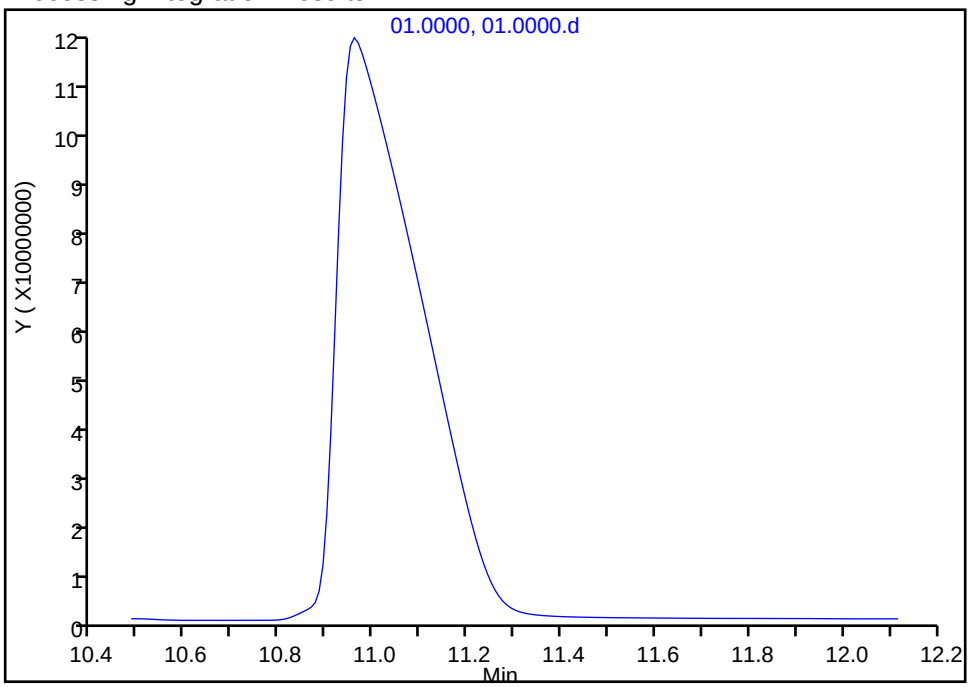
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\01.0000.d
Injection Date: 09-Nov-2018 08:57:00 Instrument ID: WC_IonChrom8
Lims ID: ccv
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

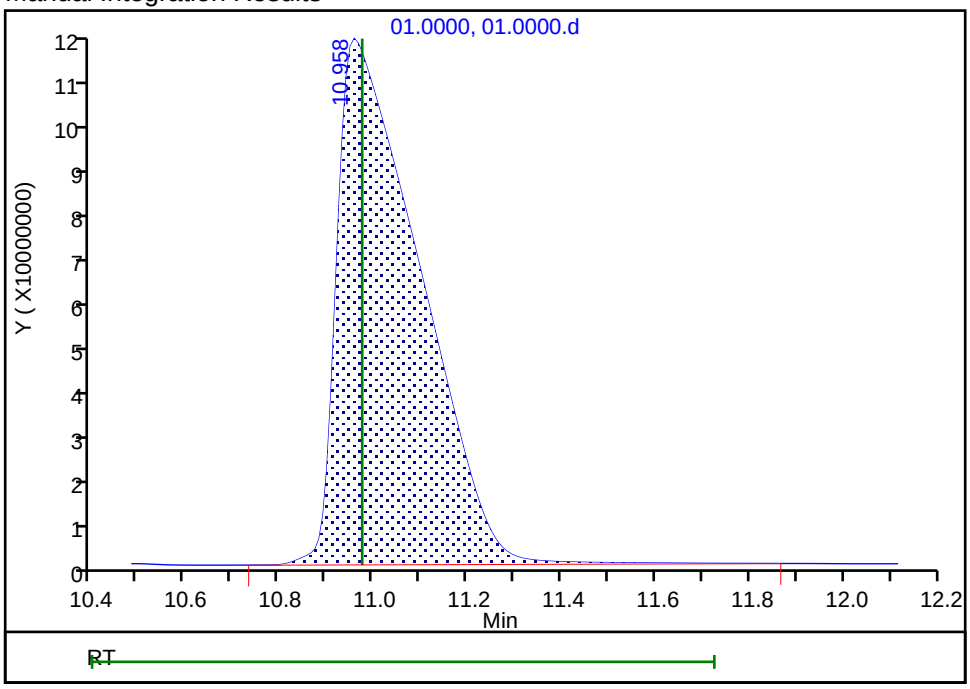
Not Detected
Expected RT: 10.98

Processing Integration Results



Manual Integration Results

RT: 10.96
Area: 1432964406
Amount: 100.7230
Amount Units: ug/ml



Reviewer: duplina, 09-Nov-2018 12:18:11
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\02.0000.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 09-Nov-2018 09:15:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-002 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

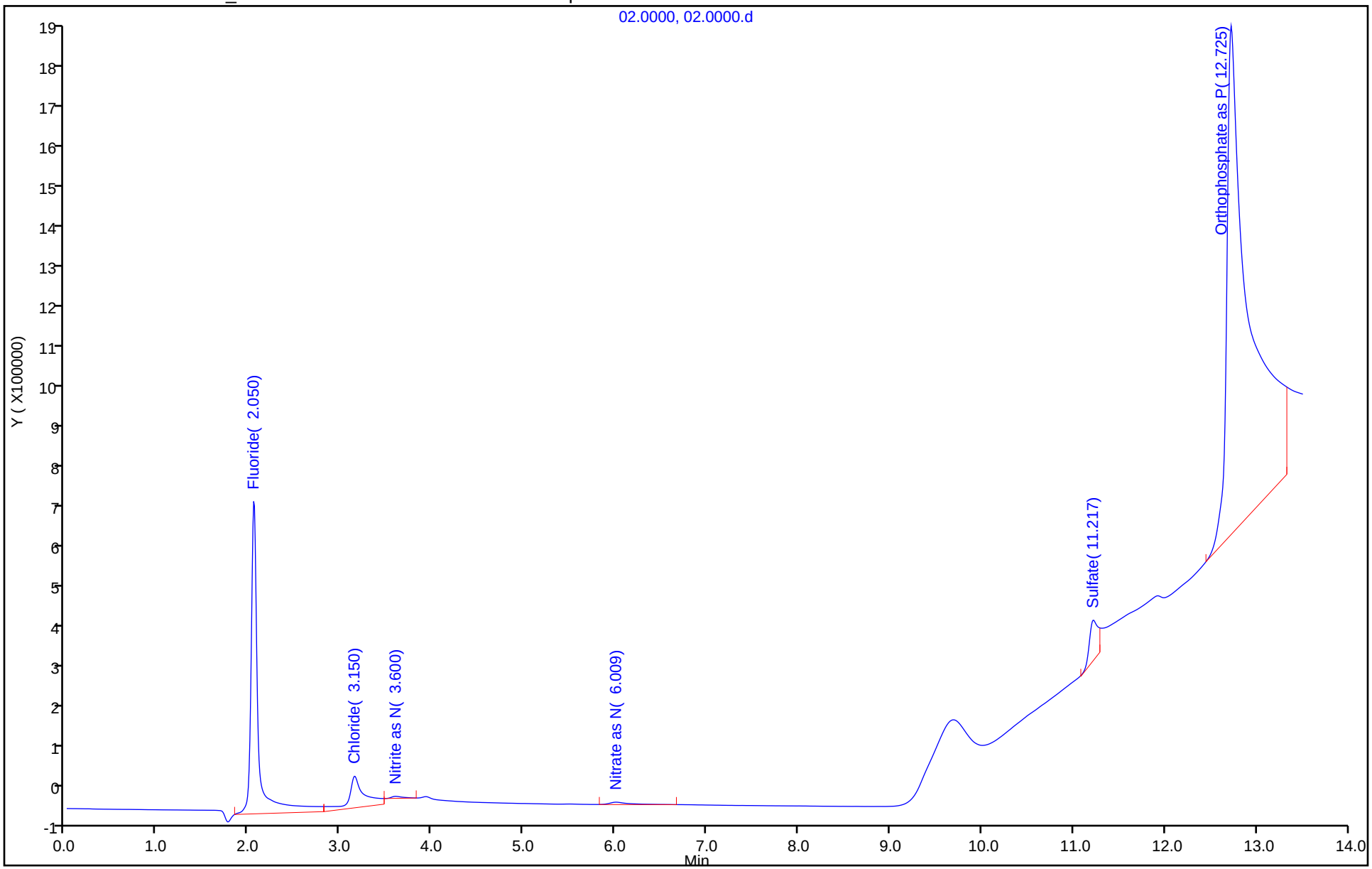
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.050	2.067	-0.017	3913845		0.0555	
2 Chloride	3.150	3.159	-0.009	2642215		0.2349	
3 Nitrite as N	3.600	3.617	-0.017	40319		-0.0425	
4 Bromide		5.500				ND	
5 Nitrate as N	6.009	5.909	0.100	84608		0.0441	
6 Sulfate	11.217	10.975	0.242	602287		0.2314	
7 Orthophosphate as P	12.725	12.642	0.083	20139763		-0.1264	

Report Date: 12-Nov-2018 12:17:11 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\02.0000.d

Injection Date:	09-Nov-2018 09:15:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\03.0000.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 09-Nov-2018 09:33:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-003 Temporary sequence for manual data acquisition
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.050	2.067	-0.017	7547436	0.2000	0.1688	
2 Chloride	3.150	3.159	-0.009	51245459	2.50	2.76	
3 Nitrite as N	3.583	3.617	-0.034	9415116	0.2000	0.1823	
4 Bromide	5.475	5.500	-0.025	1279201	0.2000	0.2377	
5 Nitrate as N	5.983	5.909	0.074	8778234	0.2000	0.2179	
6 Sulfate	11.200	10.975	0.225	36527918	2.50	2.75	
7 Orthophosphate as P	12.733	12.642	0.091	18404994	0.2000	-0.2095	

Reagents:

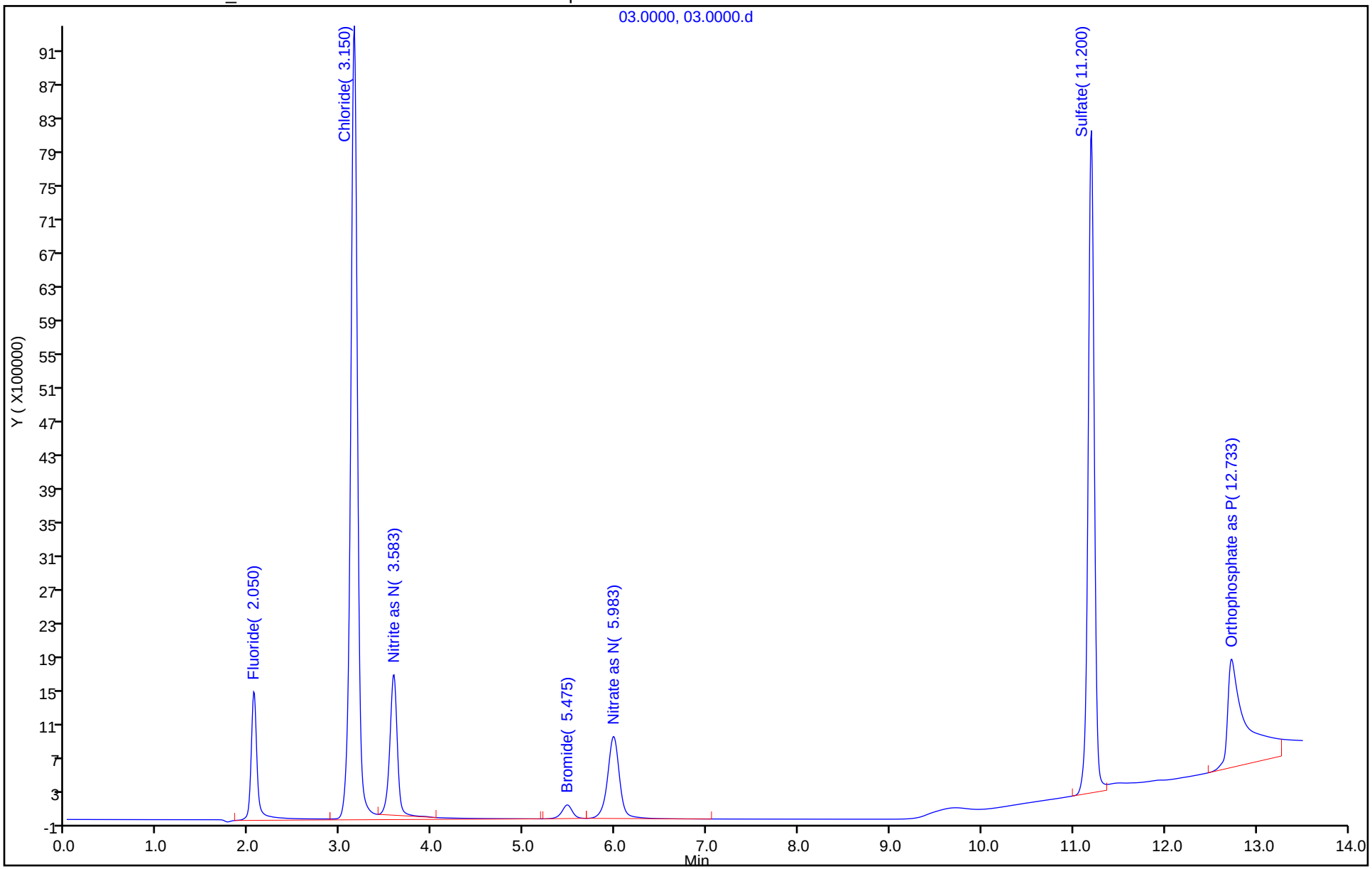
IC CAL cl/so4_00228 Amount Added: 0.05 Units: mL
IC Cal low_00413 Amount Added: 0.02 Units: mL

Report Date: 12-Nov-2018 12:17:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\03.0000.d

Injection Date:	09-Nov-2018 09:33:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\04.0000.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 09-Nov-2018 09:52:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-004 Temporary sequence for manual data acquisition
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

First Level Reviewer: duplina Date: 09-Nov-2018 12:21:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.075	2.067	0.008	163696908	5.00	5.04	
2 Chloride	3.142	3.159	-0.017	1948368821	100.0	101.2	
3 Nitrite as N	3.600	3.617	-0.017	224621315	5.00	5.34	
4 Bromide	5.442	5.500	-0.058	40165323	5.00	5.14	
5 Nitrate as N	5.842	5.909	-0.067	241935558	5.00	4.88	
6 Sulfate	10.950	10.975	-0.025	1427896839	100.0	100.4	Ma
7 Orthophosphate as P	12.625	12.642	-0.017	113429544	5.00	4.34	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

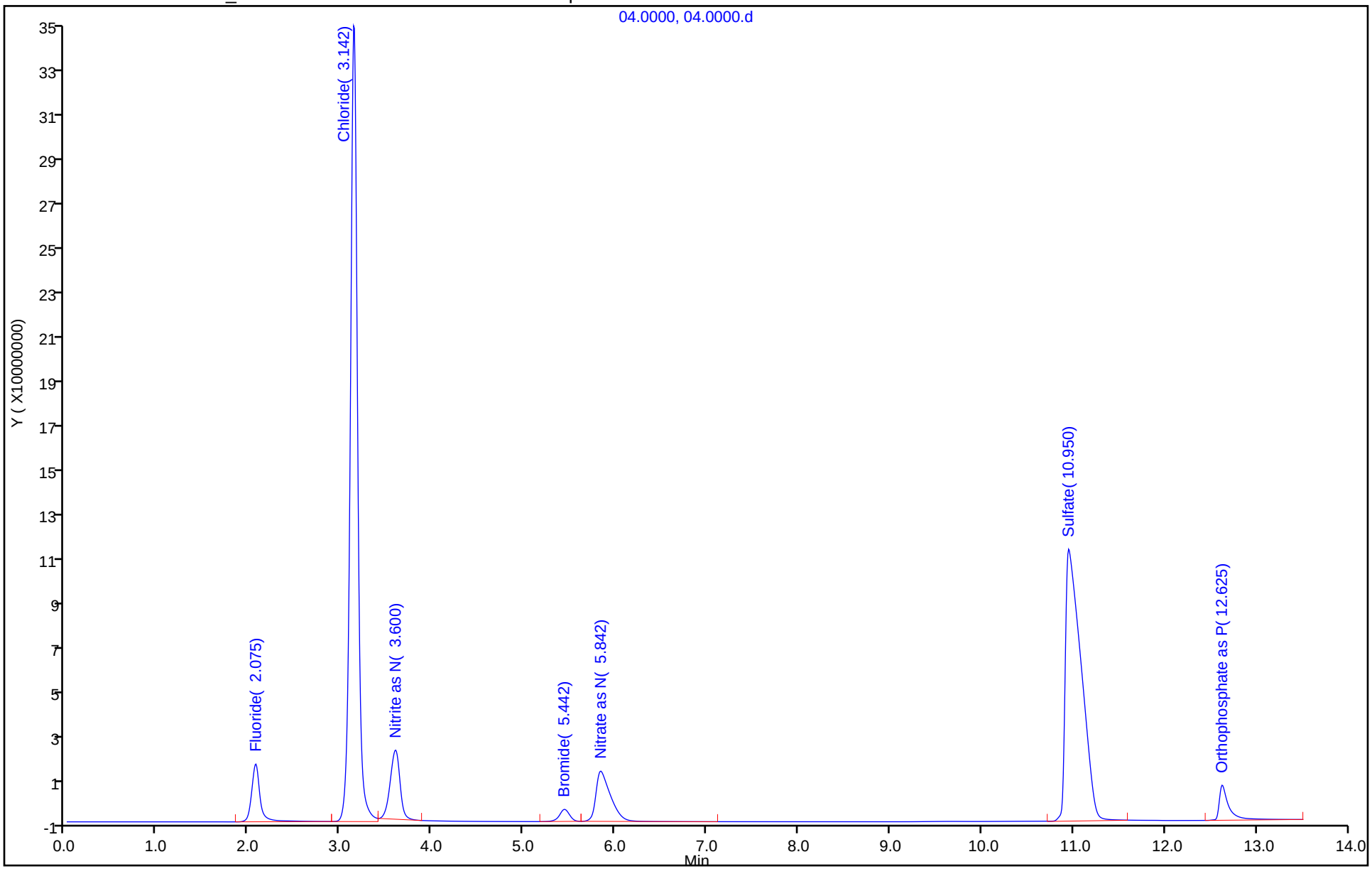
IC LCS_01397 Amount Added: 5.00 Units: mL

Report Date: 12-Nov-2018 12:17:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\04.0000.d

Injection Date:	09-Nov-2018 09:52:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

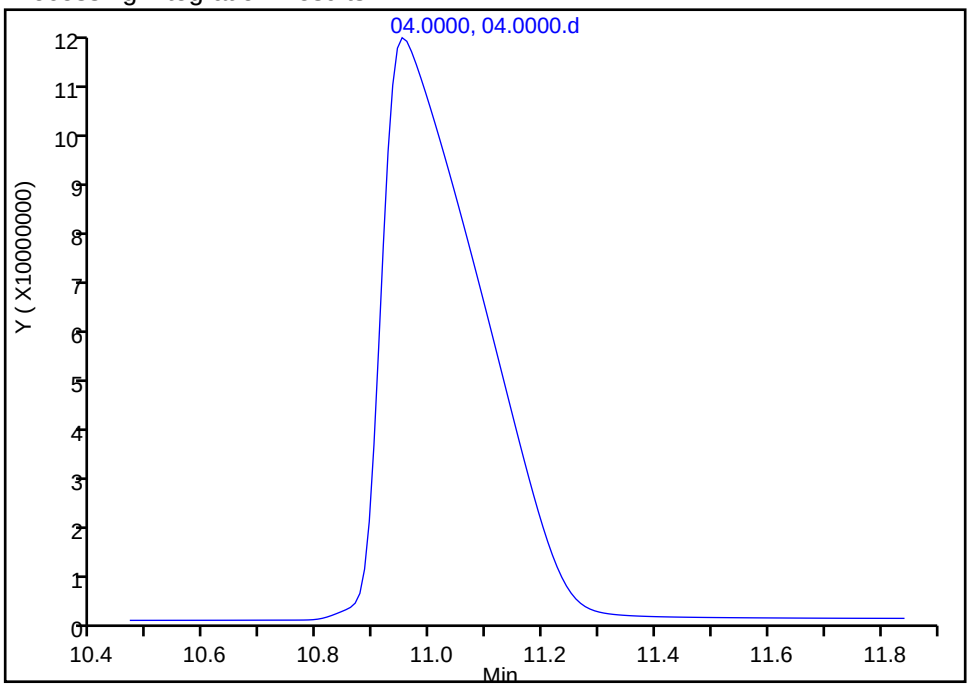
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\04.0000.d
Injection Date: 09-Nov-2018 09:52:00 Instrument ID: WC_IonChrom8
Lims ID: lcs
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

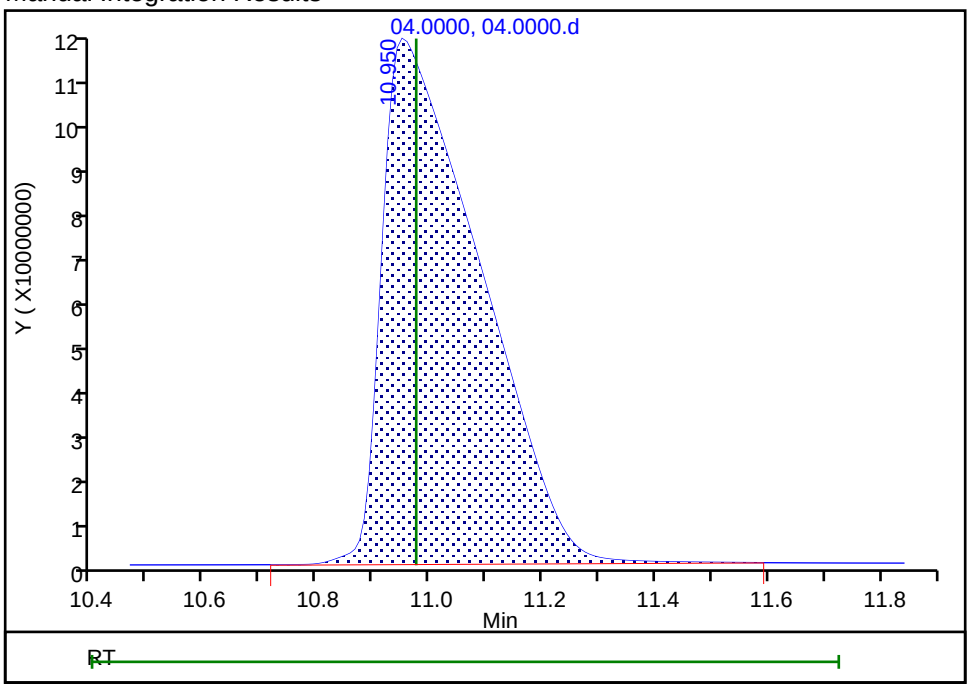
Not Detected
Expected RT: 10.98

Processing Integration Results



Manual Integration Results

RT: 10.95
Area: 1427896839
Amount: 100.3674
Amount Units: ug/ml



Reviewer: duplina, 09-Nov-2018 12:20:28
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\05.0000.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 09-Nov-2018 10:11:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-005 Temporary sequence for manual data acquisition
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

First Level Reviewer: duplina Date: 09-Nov-2018 12:25:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.075	2.067	0.008	164053769	5.00	5.05	
2 Chloride	3.142	3.159	-0.017	1938499821	100.0	100.7	
3 Nitrite as N	3.600	3.617	-0.017	225085260	5.00	5.36	
4 Bromide	5.450	5.500	-0.050	40213649	5.00	5.15	
5 Nitrate as N	5.842	5.909	-0.067	241922388	5.00	4.88	
6 Sulfate	10.958	10.975	-0.017	1429606245	100.0	100.5	Ma
7 Orthophosphate as P	12.633	12.642	-0.009	117625943	5.00	4.54	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

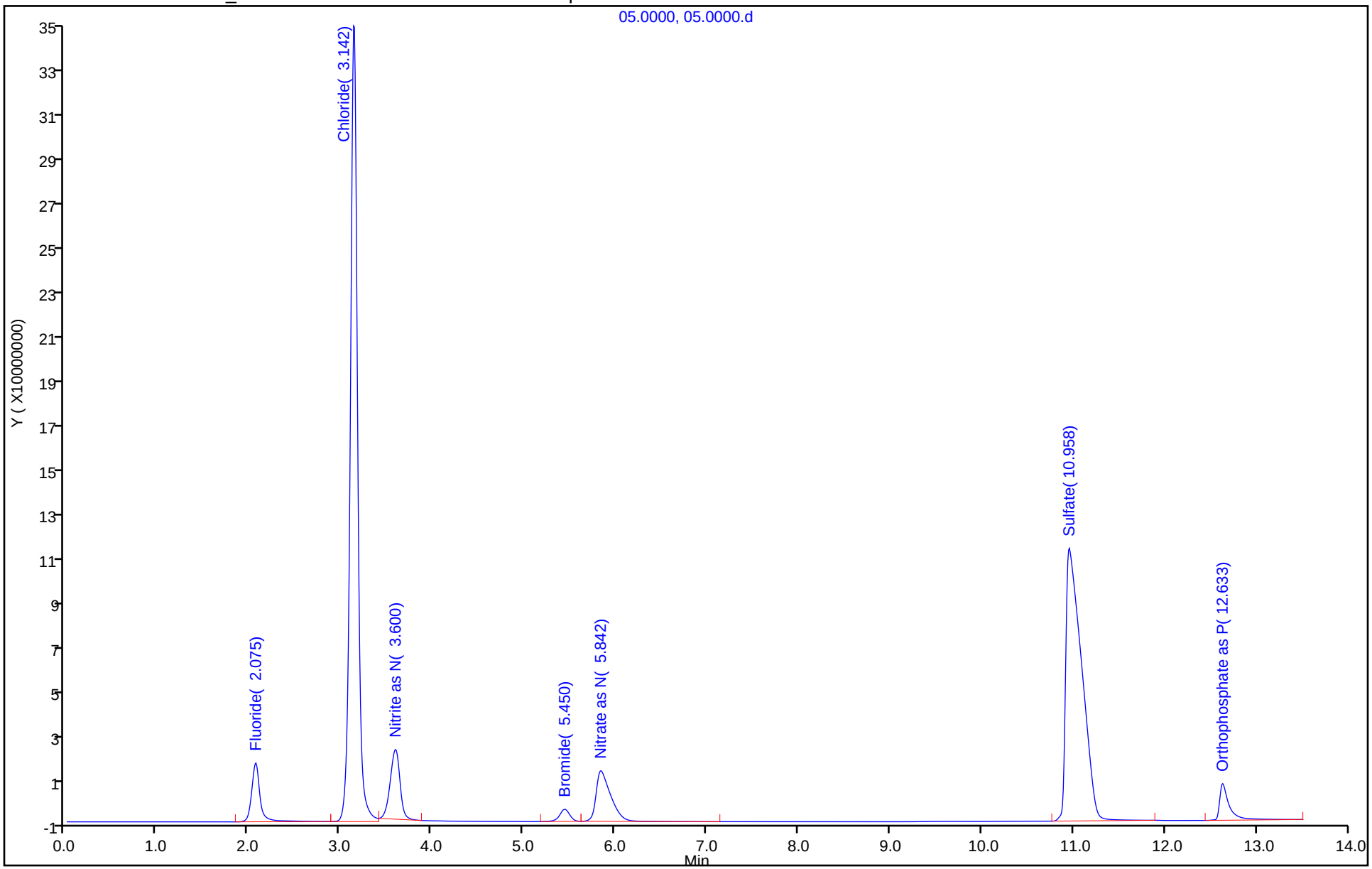
IC LCS_01397 Amount Added: 5.00 Units: mL

Report Date: 12-Nov-2018 12:17:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\05.0000.d

Injection Date:	09-Nov-2018 10:11:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

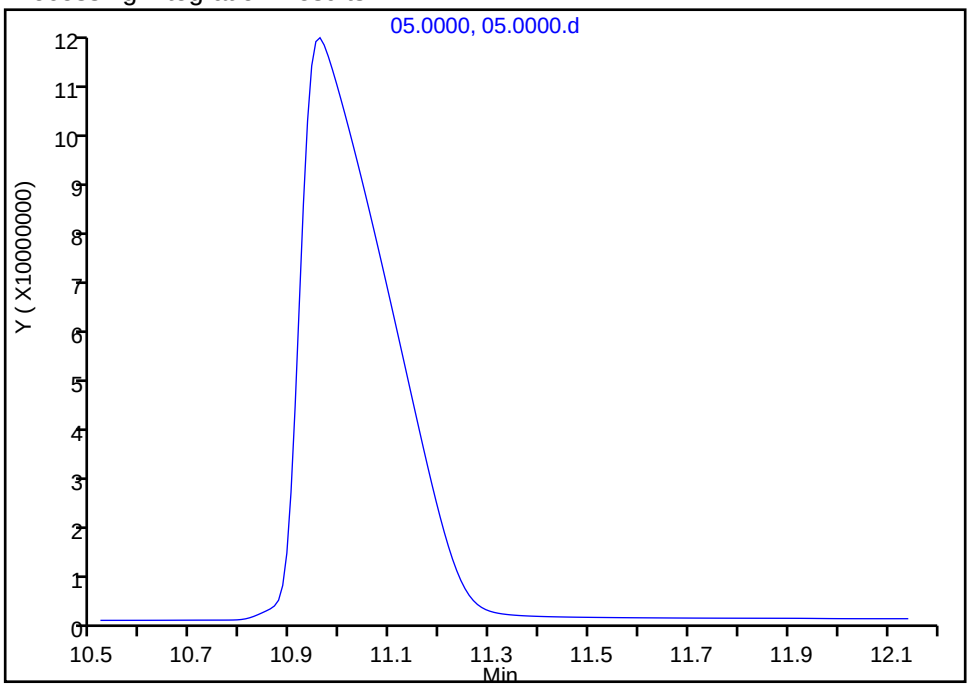
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\05.0000.d
Injection Date: 09-Nov-2018 10:11:00 Instrument ID: WC_IonChrom8
Lims ID: lcsd
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

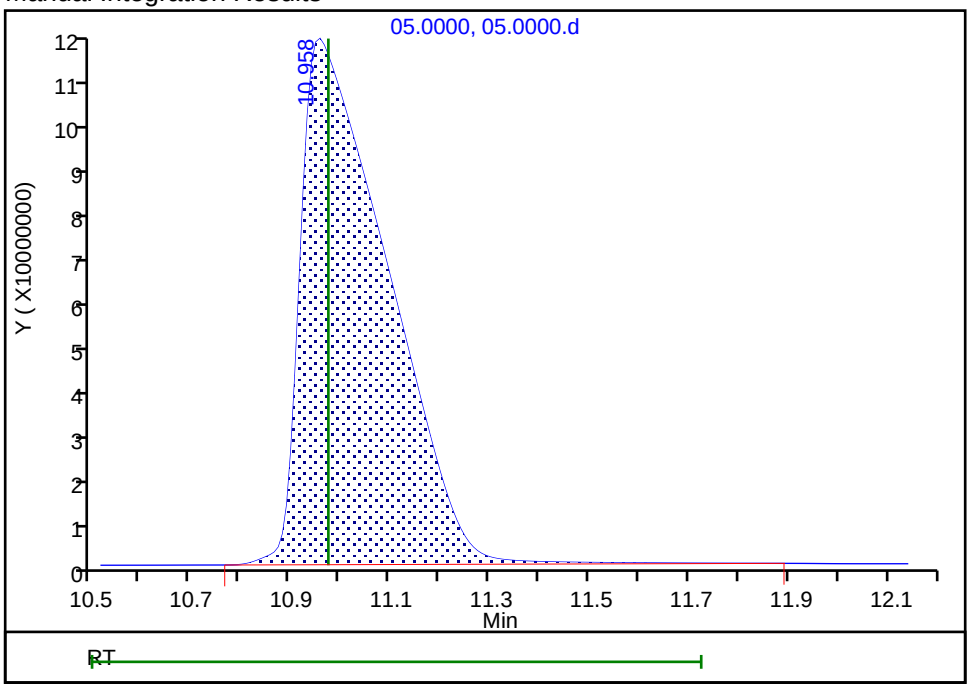
Not Detected
Expected RT: 10.98

Processing Integration Results



Manual Integration Results

RT: 10.96
Area: 1429606245
Amount: 100.4874
Amount Units: ug/ml



Reviewer: duplina, 09-Nov-2018 12:25:01
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\06.0000.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 09-Nov-2018 10:30:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-006 Temporary sequence for manual data acquisition
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:08 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

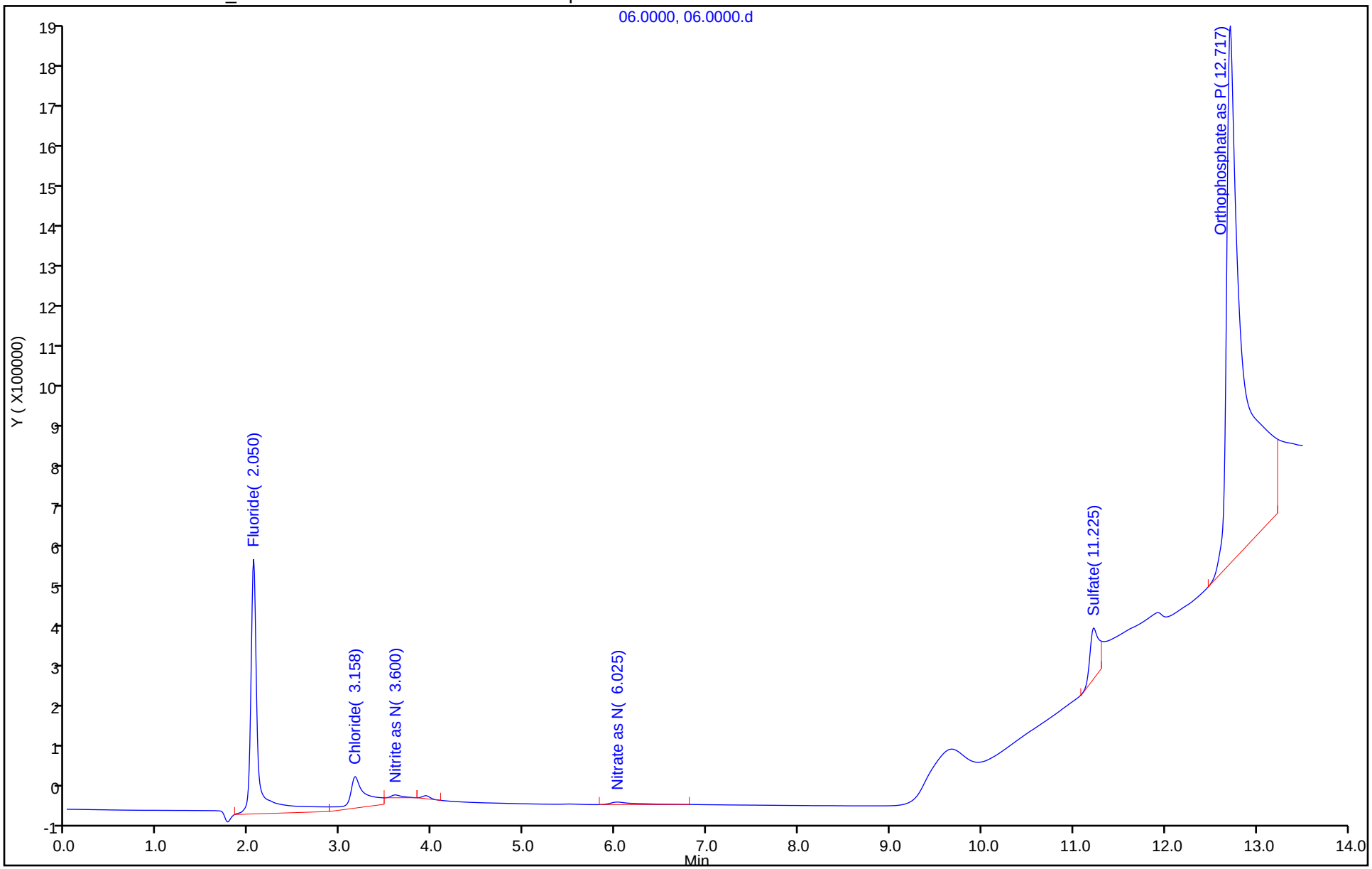
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.050	2.067	-0.017	3390473		0.0392	
2 Chloride	3.158	3.159	-0.001	2685698		0.2371	
3 Nitrite as N	3.600	3.617	-0.017	55736		-0.0422	
4 Bromide		5.500				ND	
5 Nitrate as N	6.025	5.909	0.116	114317		0.0447	
6 Sulfate	11.225	10.975	0.250	804093		0.2455	
7 Orthophosphate as P	12.717	12.642	0.075	16292649		-0.3107	

Report Date: 12-Nov-2018 12:17:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\06.0000.d

Injection Date:	09-Nov-2018 10:30:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\17.0000.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 18:19:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-017 Temporary sequence for manual data acquisition
Misc. Info.: 10364 F
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

First Level Reviewer: mosera Date: 09-Nov-2018 18:41:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.067	2.067	0.000	161081282	5.00	4.95	
2 Chloride	3.142	3.159	-0.017	1937878310	100.0	100.6	
3 Nitrite as N	3.600	3.617	-0.017	225266650	5.00	5.36	
4 Bromide	5.458	5.500	-0.042	40030820	5.00	5.12	
5 Nitrate as N	5.850	5.909	-0.059	241353906	5.00	4.87	
6 Sulfate	10.950	10.975	-0.025	1420742334	100.0	99.9	Ma
7 Orthophosphate as P	12.650	12.642	0.008	96098922	5.00	3.51	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

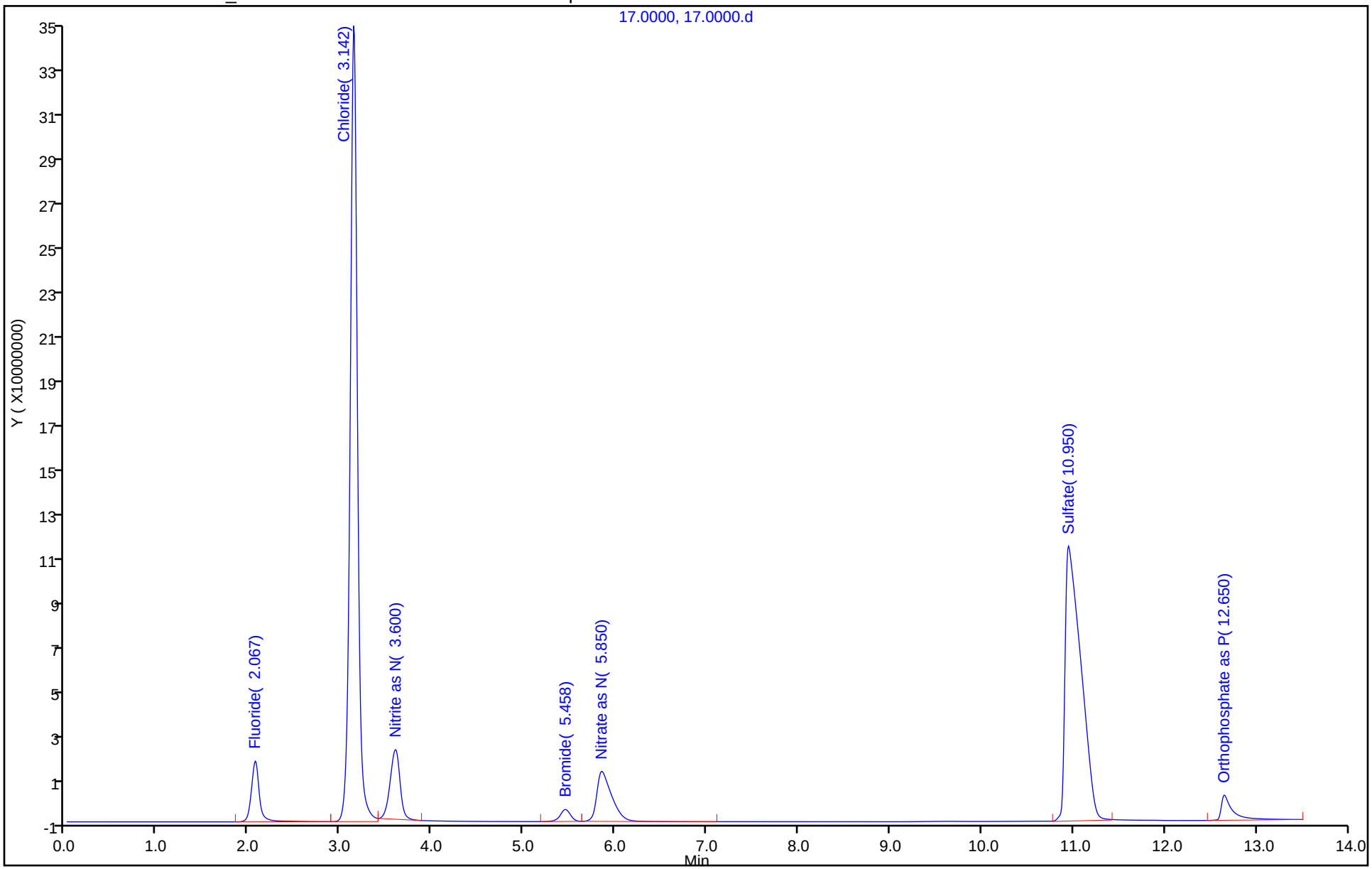
IC LCS_01397 Amount Added: 5.00 Units: mL

Report Date: 12-Nov-2018 12:17:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\17.0000.d

Injection Date:	09-Nov-2018 18:19:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

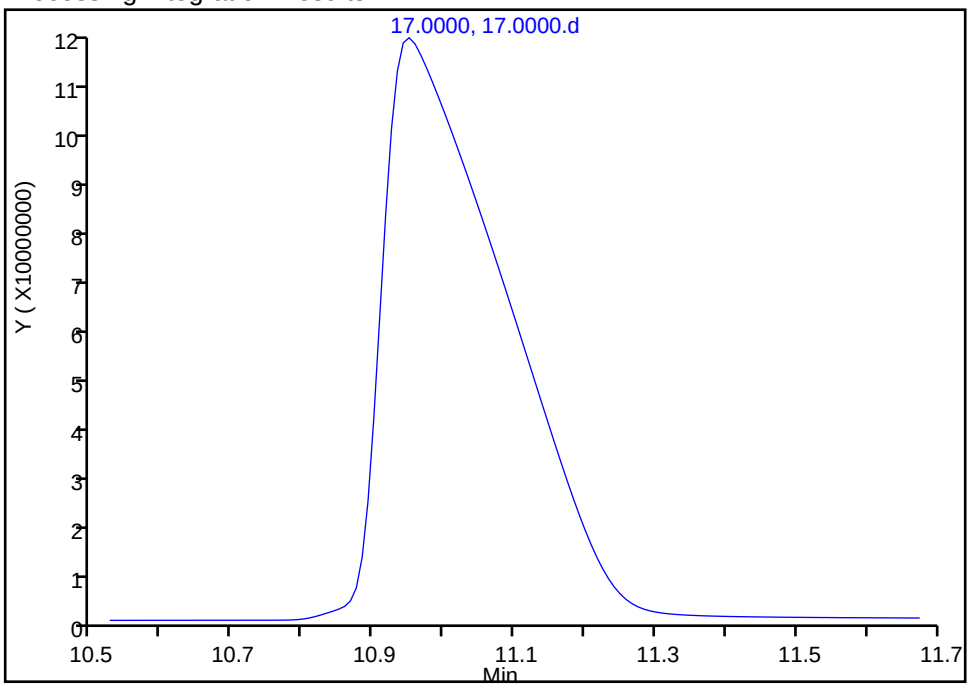
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\17.0000.d
Injection Date: 09-Nov-2018 18:19:00 Instrument ID: WC_IonChrom8
Lims ID: ccv
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

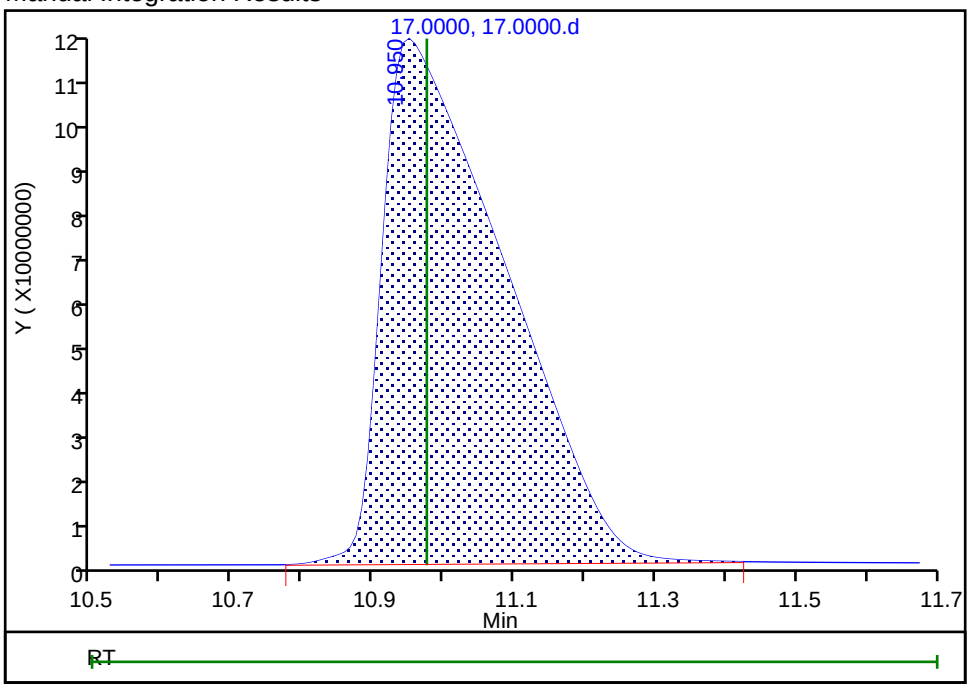
Not Detected
Expected RT: 10.98

Processing Integration Results



Manual Integration Results

RT: 10.95
Area: 1420742334
Amount: 99.865500
Amount Units: ug/ml



Reviewer: mosera, 09-Nov-2018 18:41:51
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\18.0000.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 09-Nov-2018 18:38:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-018 Temporary sequence for manual data acquisition
Misc. Info.: 17415 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

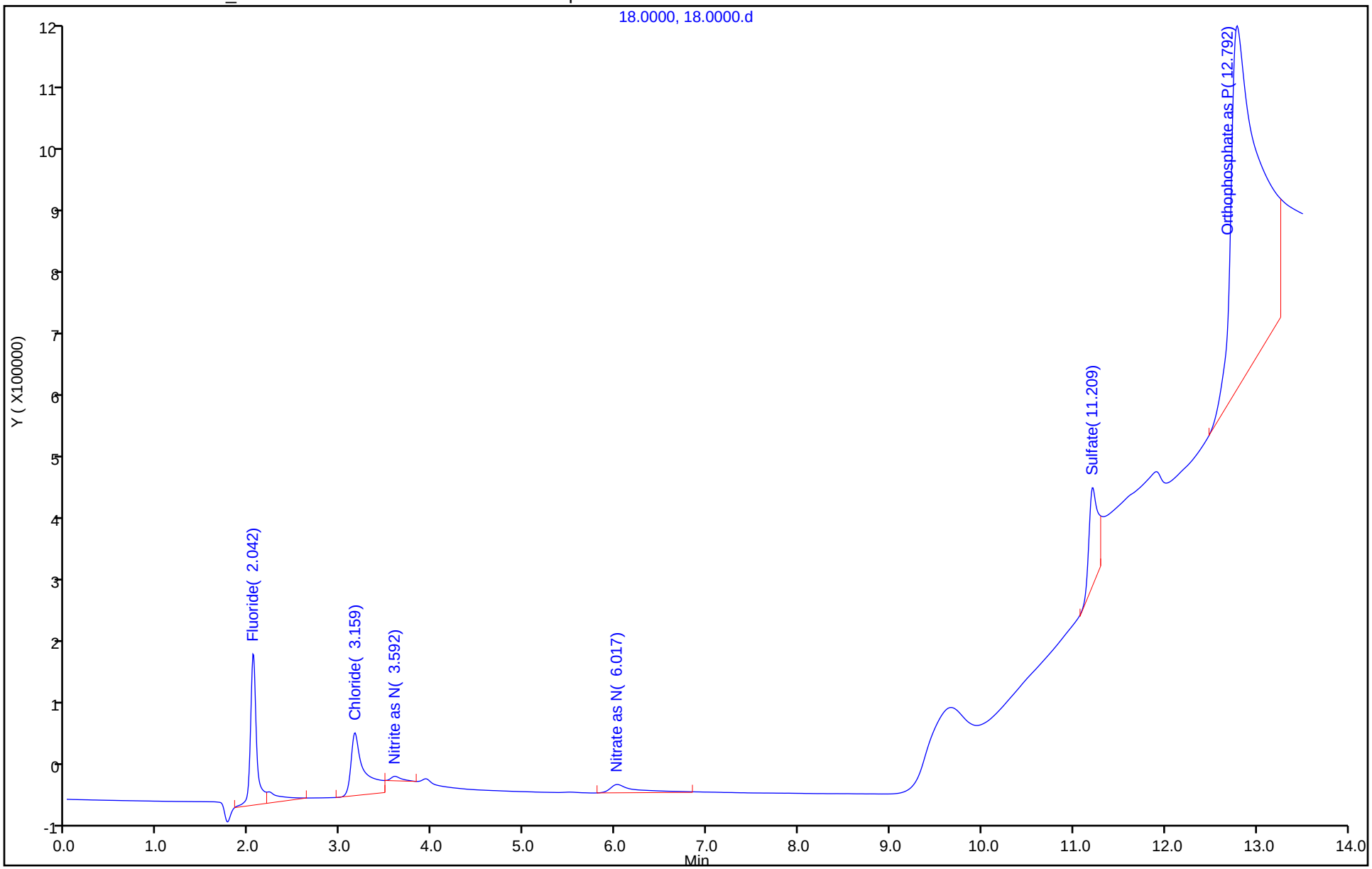
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.042	2.067	-0.025	1008117		-0.0350	
2 Chloride	3.159	3.159	0.000	2131875		0.2084	
3 Nitrite as N	3.592	3.617	-0.025	51018		-0.0423	
4 Bromide		5.500				ND	
5 Nitrate as N	6.017	5.909	0.108	234038		0.0471	
6 Sulfate	11.209	10.975	0.234	927308		0.2542	
7 Orthophosphate as P	12.792	12.642	0.150	11132497		-0.5579	

Report Date: 12-Nov-2018 12:17:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\18.0000.d

Injection Date:	09-Nov-2018 18:38:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\24.0000.d
Lims ID: 280-116017-C-1
Client ID: LF6TW-38_1018
Sample Type: Client
Inject. Date: 09-Nov-2018 20:42:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-024 Temporary sequence for manual data acquisition
Misc. Info.: 4977 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

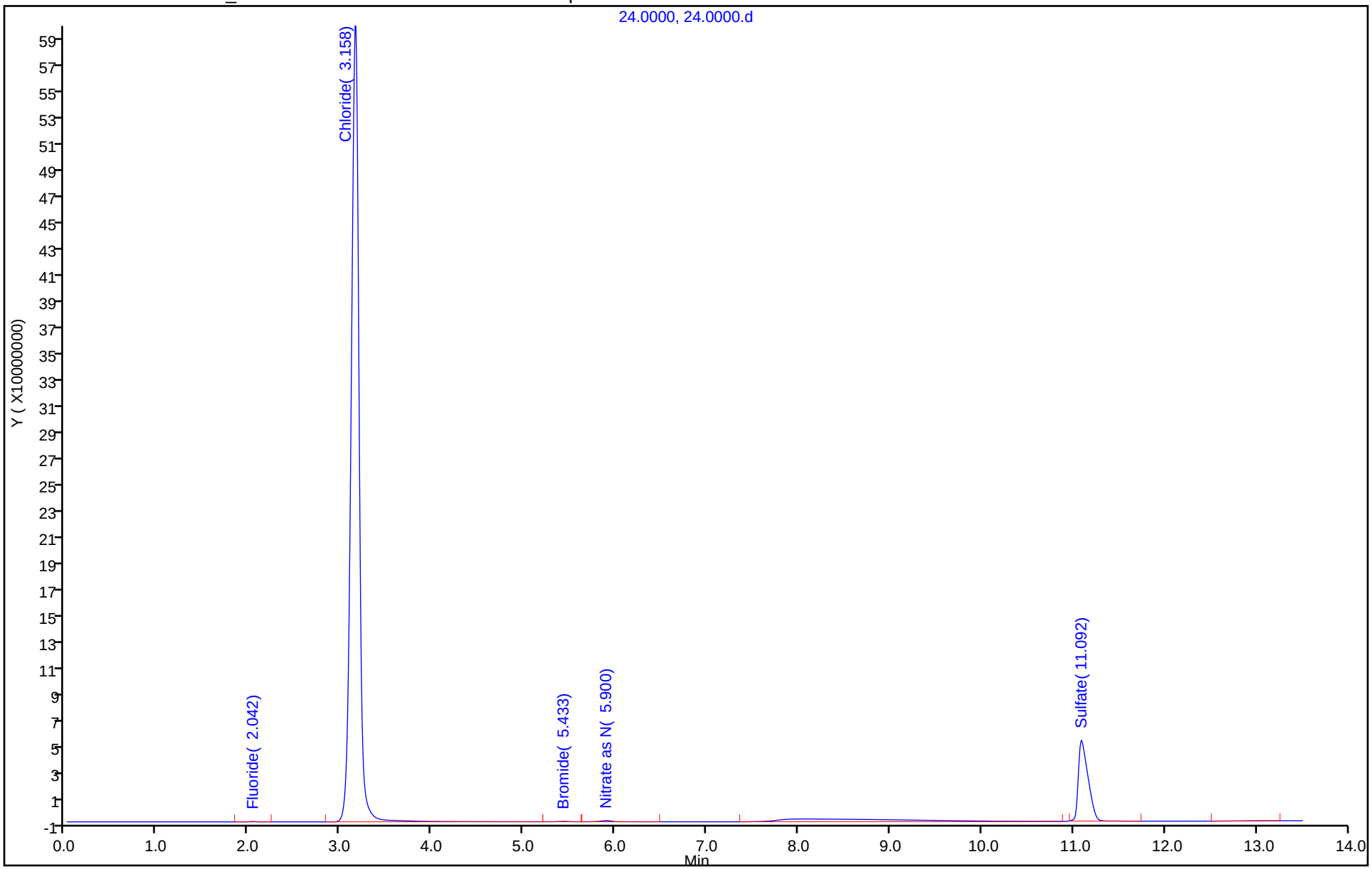
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.042	2.067	-0.025	1133396	-0.0311	
2 Chloride	3.158	3.159	-0.001	3635704379	188.7	
3 Nitrite as N		3.617			ND	
4 Bromide	5.433	5.500	-0.067	1977929	0.3257	
5 Nitrate as N	5.900	5.909	-0.009	7038054	0.1831	
6 Sulfate	11.092	10.975	0.117	444931539	31.4	
7 Orthophosphate as P		12.642			ND	

Report Date: 12-Nov-2018 12:17:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\24.0000.d

Injection Date:	09-Nov-2018 20:42:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	280-116017-C-1	Lab Sample ID:	280-116017-1	Worklist Smp#:	24
Client ID:	LF6TW-38_1018				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\25.0000.d
Lims ID: 280-116017-C-1 DU
Client ID:
Sample Type: DU
Inject. Date: 09-Nov-2018 21:01:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-025 Temporary sequence for manual data acquisition
Misc. Info.: 32447 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

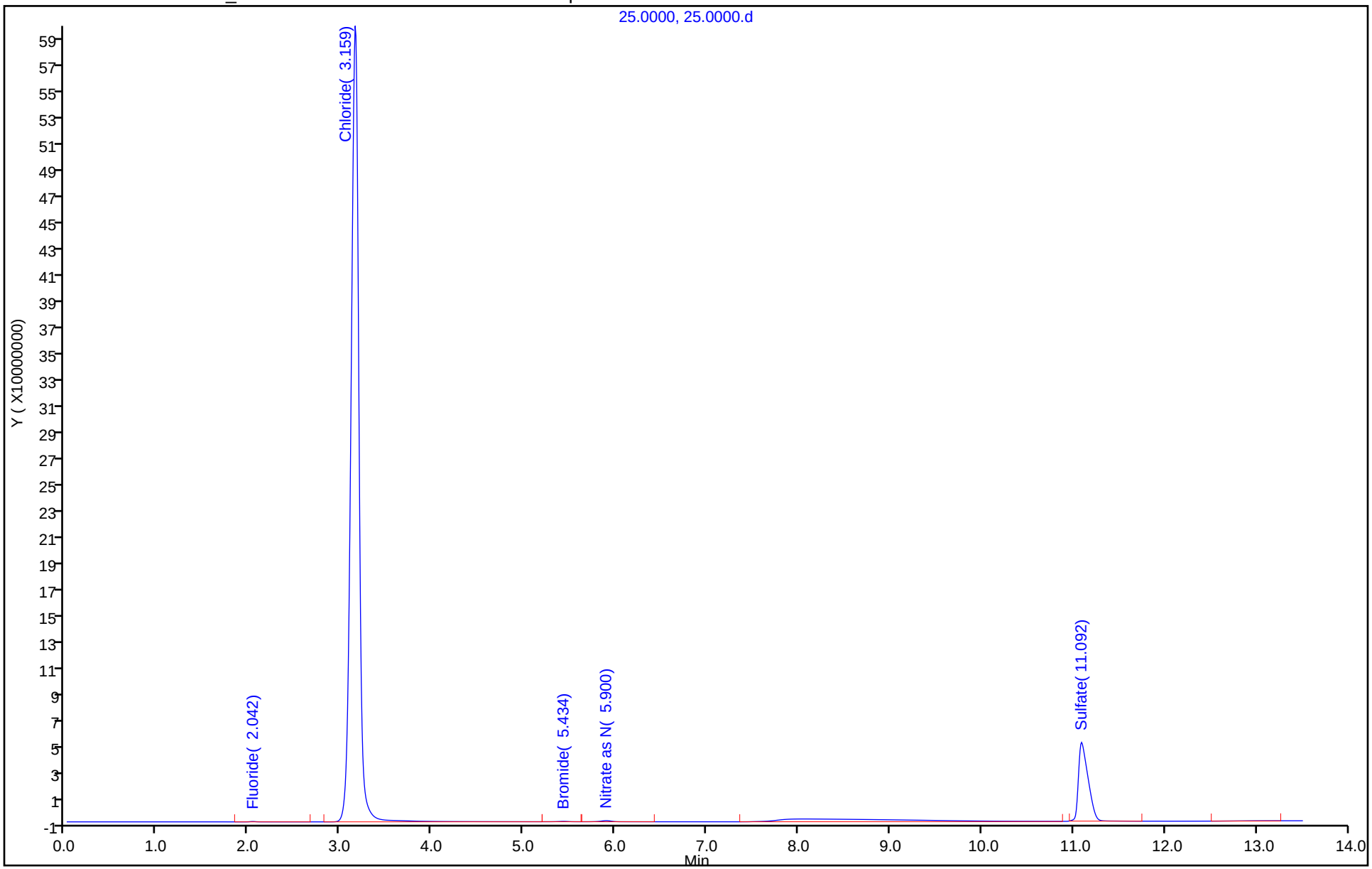
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.042	2.067	-0.025	1389802		-0.0231	
2 Chloride	3.159	3.159	0.000	3632614746		188.5	
3 Nitrite as N		3.617				ND	
4 Bromide	5.434	5.500	-0.066	1986771		0.3268	
5 Nitrate as N	5.900	5.909	-0.009	6914353		0.1806	
6 Sulfate	11.092	10.975	0.117	432303846		30.5	
7 Orthophosphate as P		12.642				ND	

Report Date: 12-Nov-2018 12:17:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\25.0000.d

Injection Date:	09-Nov-2018 21:01:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	280-116017-C-1 DU			Worklist Smp#:	25
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\26.0000.d
Lims ID: 280-116017-C-1 MS
Client ID:
Sample Type: MS
Inject. Date: 09-Nov-2018 21:20:00 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-026 Temporary sequence for manual data acquisition
Misc. Info.: 29557 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.067	2.067	0.000	182726004	5.00	5.63	
2 Chloride	3.159	3.159	0.000	4210995550	25.0	218.5	E
3 Nitrite as N	3.609	3.617	-0.008	233257554	5.00	5.55	
4 Bromide	5.400	5.500	-0.100	50992855	5.00	6.50	
5 Nitrate as N	5.742	5.909	-0.167	305499677	5.00	6.15	
6 Sulfate	11.025	10.975	0.050	799058734	25.0	56.2	
7 Orthophosphate as P	12.684	12.642	0.042	120162785	5.00	4.67	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

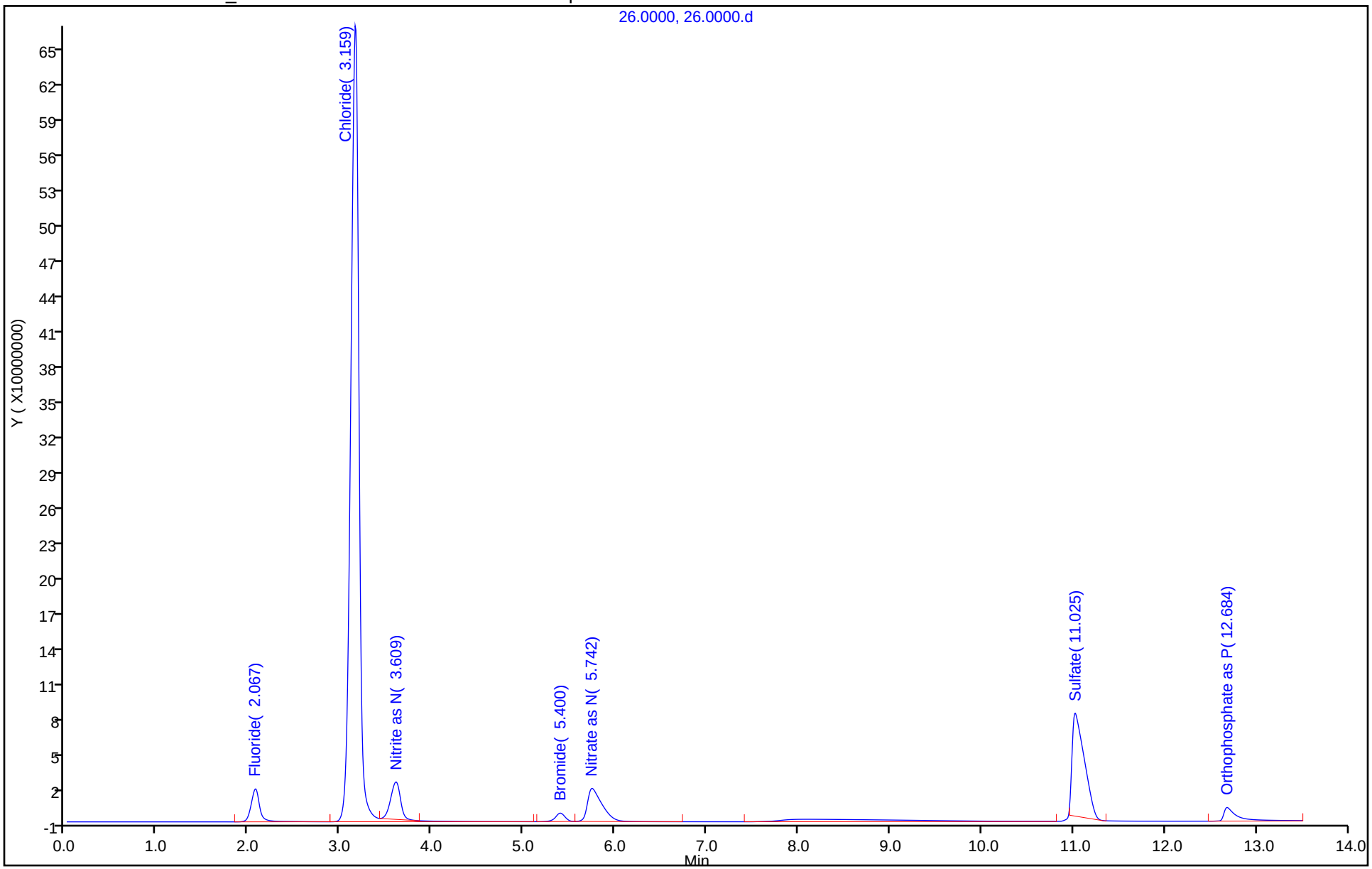
ICMS/MSD WEEK_00563 Amount Added: 0.05 Units: mL

Report Date: 12-Nov-2018 12:17:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\26.0000.d

Injection Date:	09-Nov-2018 21:20:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	280-116017-C-1 MS			Worklist Smp#:	26
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\27.0000.d
Lims ID: 280-116017-C-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 09-Nov-2018 21:38:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-027 Temporary sequence for manual data acquisition
Misc. Info.: 27684 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.075	2.067	0.008	185213817	5.00	5.71	
2 Chloride	3.167	3.159	0.008	4219725450	25.0	219.0	E
3 Nitrite as N	3.609	3.617	-0.008	234244466	5.00	5.58	
4 Bromide	5.400	5.500	-0.100	51132528	5.00	6.52	
5 Nitrate as N	5.750	5.909	-0.159	306368536	5.00	6.17	
6 Sulfate	11.025	10.975	0.050	804994665	25.0	56.7	
7 Orthophosphate as P	12.667	12.642	0.025	139073790	5.00	5.57	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

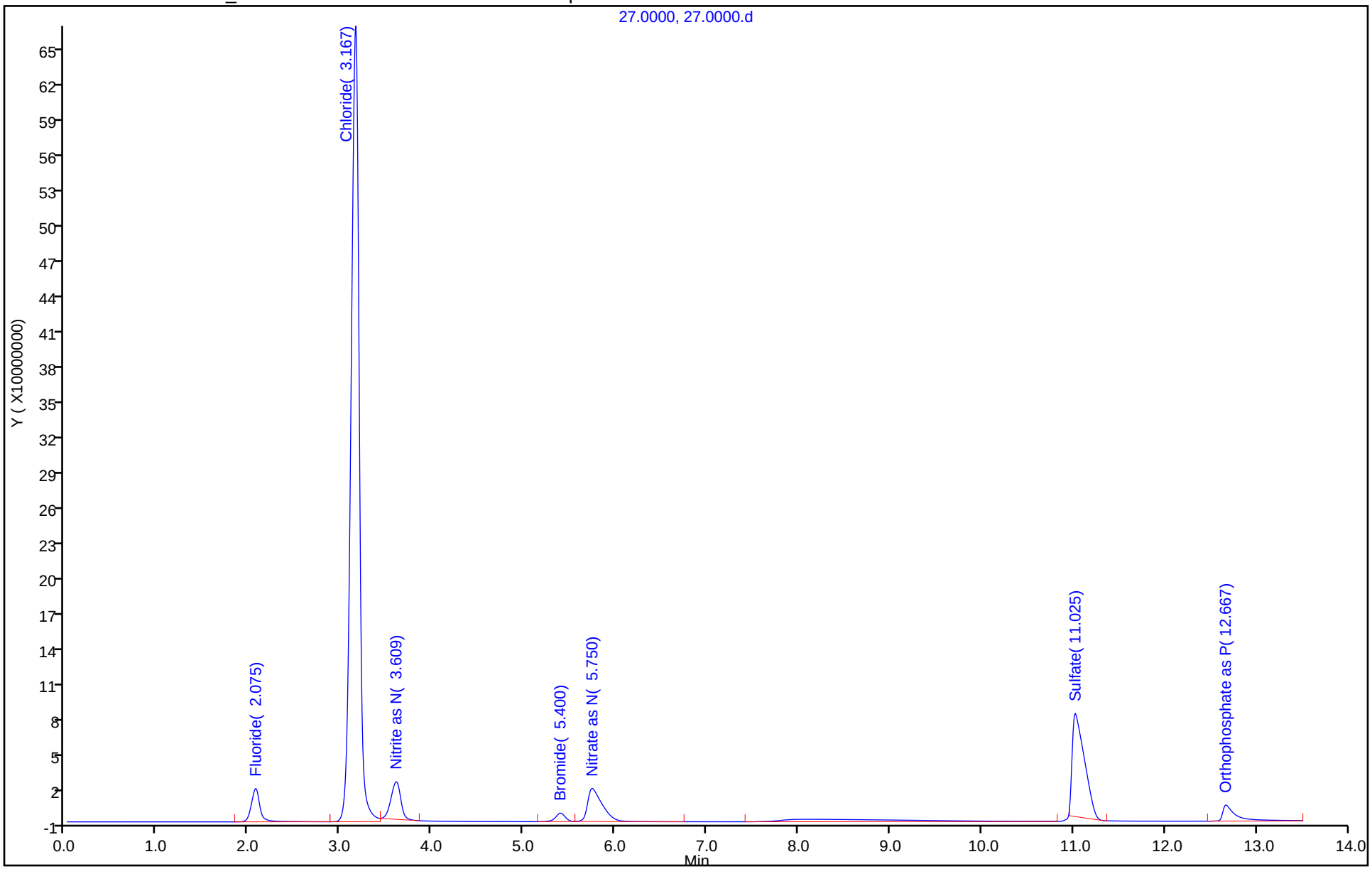
ICMS/MSD WEEK_00563 Amount Added: 0.05 Units: mL

Report Date: 12-Nov-2018 12:17:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\27.0000.d

Injection Date:	09-Nov-2018 21:38:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	280-116017-C-1 MSD			Worklist Smp#:	27
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\28.0000.d
Lims ID: 280-116017-C-2
Client ID: LF6TW-36_1018
Sample Type: Client
Inject. Date: 09-Nov-2018 21:57:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-028 Temporary sequence for manual data acquisition
Misc. Info.: 19854 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:37 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

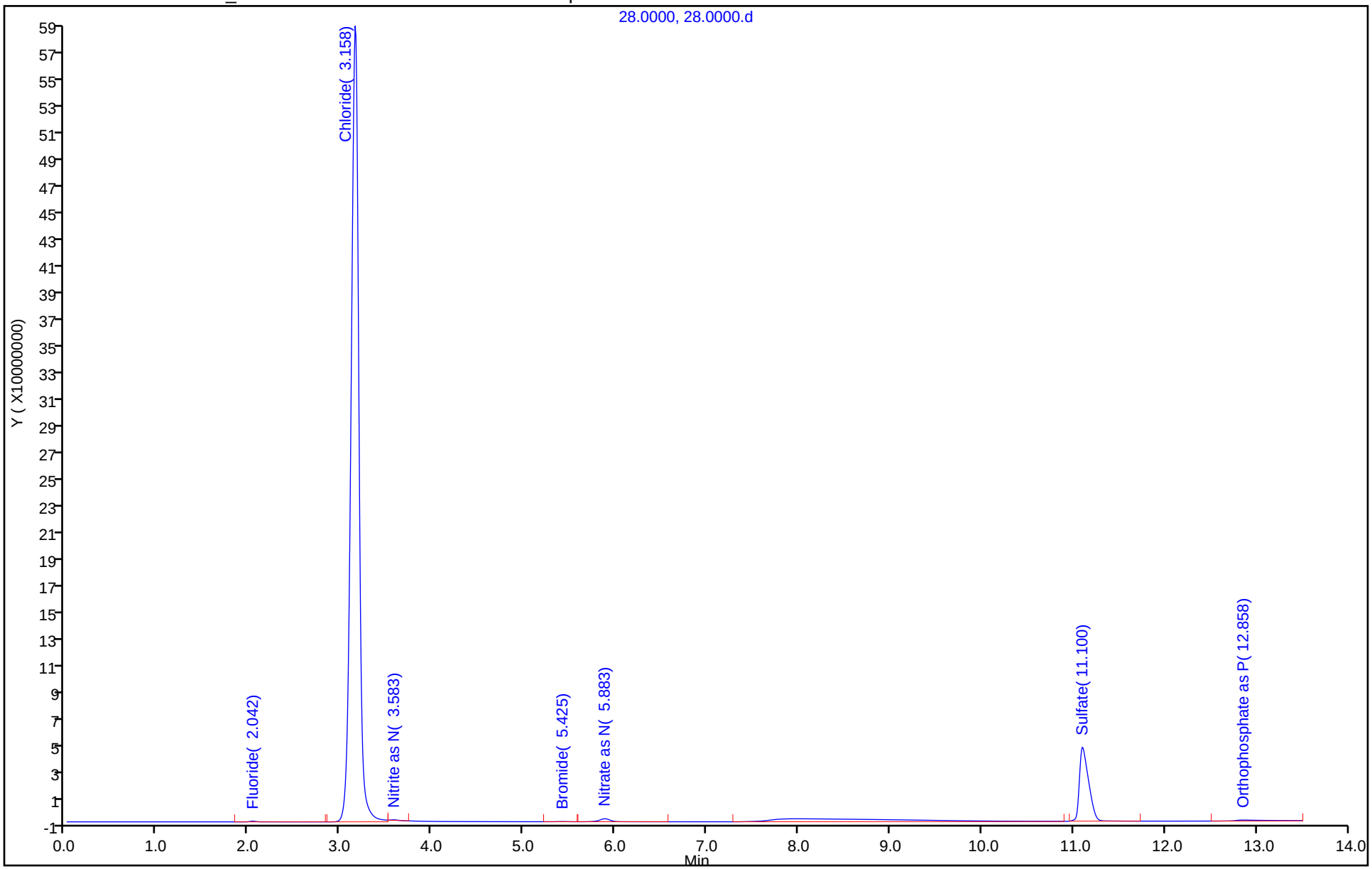
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.042	2.067	-0.025	2896765	0.0238	
2 Chloride	3.158	3.159	-0.001	3530167818	183.2	
3 Nitrite as N	3.583	3.617	-0.034	1830527	0.000421	
4 Bromide	5.425	5.500	-0.075	898188	0.1896	
5 Nitrate as N	5.883	5.909	-0.026	18163257	0.4055	
6 Sulfate	11.100	10.975	0.125	379507978	26.8	
7 Orthophosphate as P	12.858	12.642	0.216	18393057	-0.2100	

Report Date: 12-Nov-2018 12:17:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\28.0000.d

Injection Date:	09-Nov-2018 21:57:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	280-116017-C-2	Lab Sample ID:	280-116017-2	Worklist Smp#:	28
Client ID:	LF6TW-36_1018				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\29.0000.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 22:16:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-029 Temporary sequence for manual data acquisition
Misc. Info.: 5918 F
Operator ID: Instrument ID: WC_IonChrom8
Sublist: chrom-Anions_IC8*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:55 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

First Level Reviewer: duplina Date: 12-Nov-2018 12:11:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.067	2.067	0.000	159000140	5.00	4.89	
2 Chloride	3.150	3.159	-0.009	1955653051	100.0	101.5	
3 Nitrite as N	3.600	3.617	-0.017	225052641	5.00	5.35	
4 Bromide	5.459	5.500	-0.041	39905777	5.00	5.11	
5 Nitrate as N	5.859	5.909	-0.050	240863097	5.00	4.86	
6 Sulfate	10.959	10.975	-0.016	1434133258	100.0	100.8	Ma
7 Orthophosphate as P	12.659	12.642	0.017	101917189	5.00	3.79	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

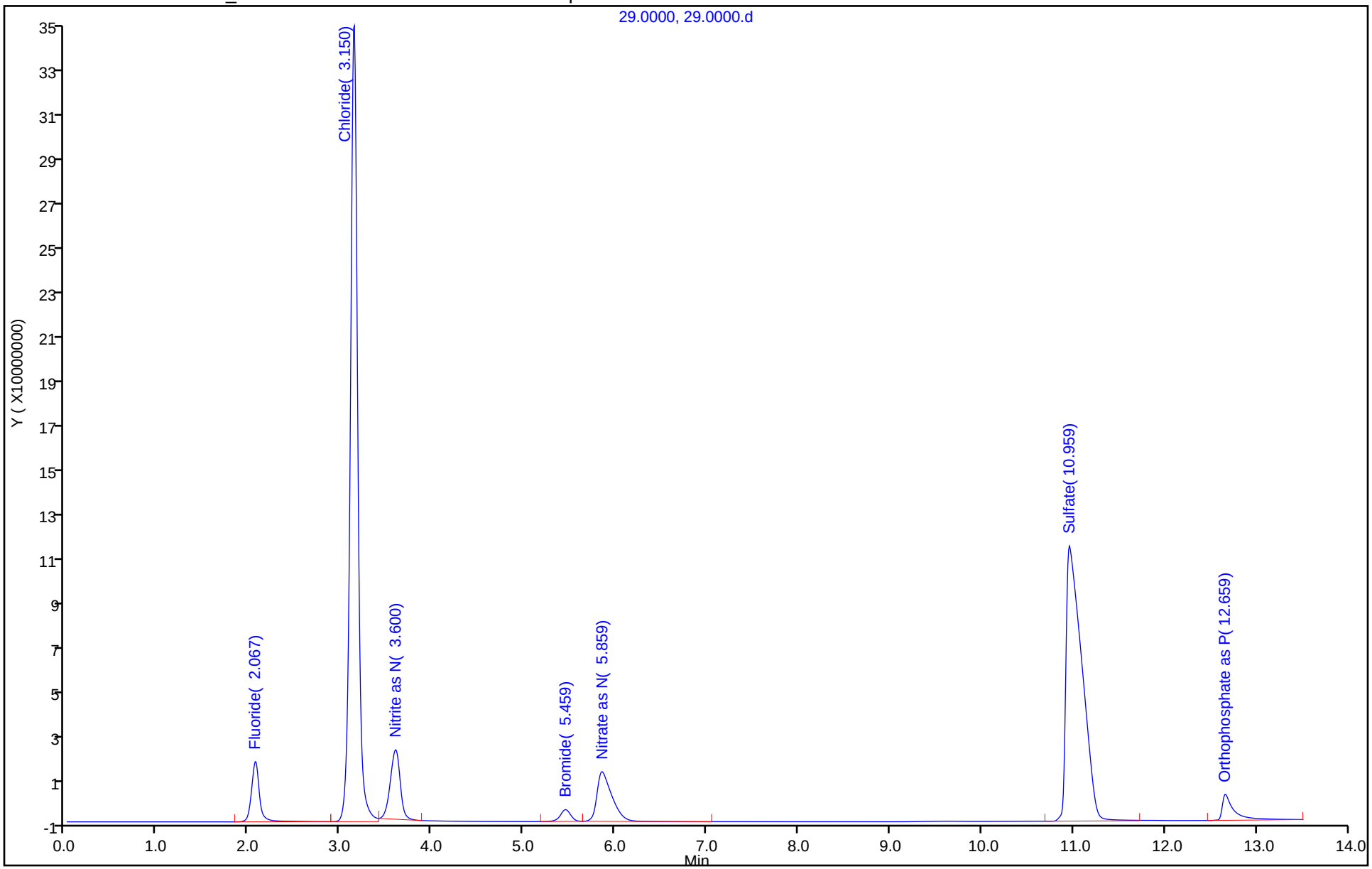
IC LCS_01397 Amount Added: 5.00 Units: mL

Report Date: 12-Nov-2018 12:17:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\29.0000.d

Injection Date:	09-Nov-2018 22:16:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	29
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



Manual Integration/User Assign Peak Report

TestAmerica Denver

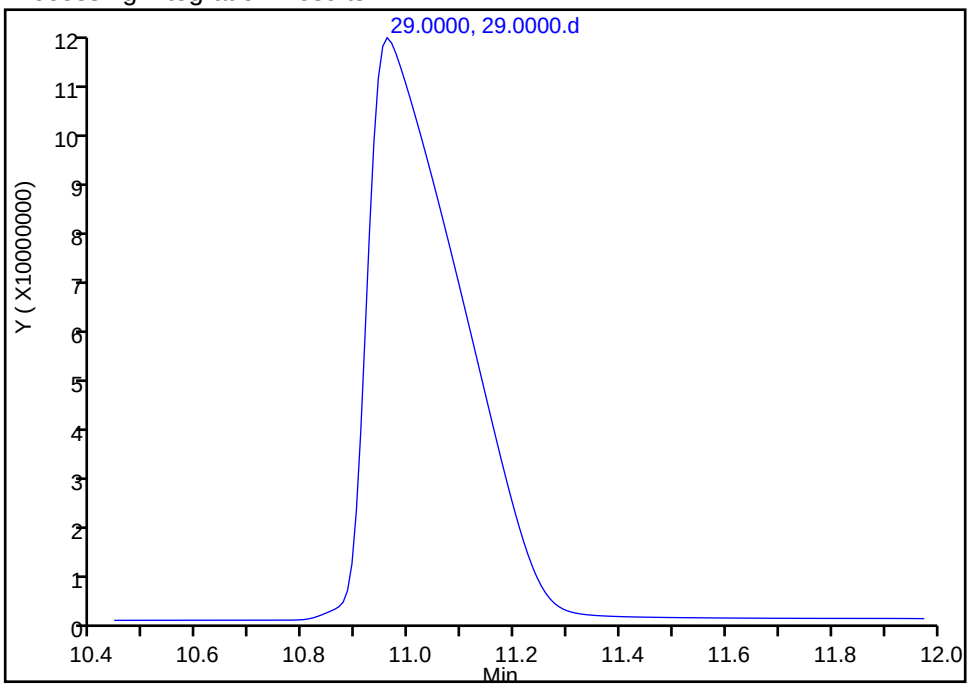
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\29.0000.d
Injection Date: 09-Nov-2018 22:16:00 Instrument ID: WC_IonChrom8
Lims ID: ccv
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: Anions_IC8 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

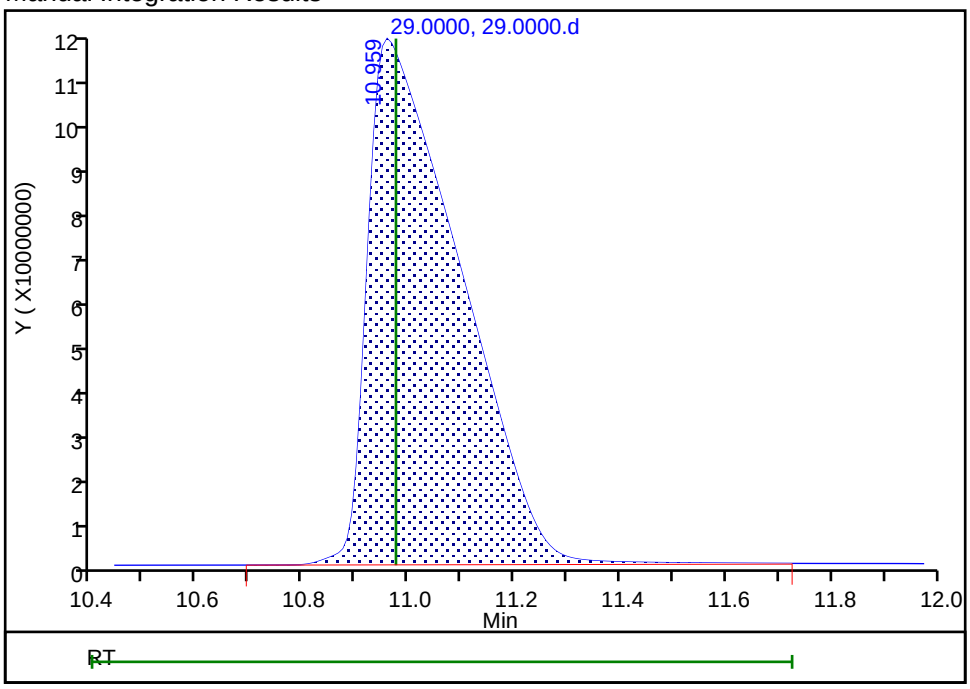
Not Detected
Expected RT: 10.98

Processing Integration Results



Manual Integration Results

RT: 10.96
Area: 1434133258
Amount: 100.8050
Amount Units: ug/ml



Reviewer: duplina, 12-Nov-2018 12:11:41
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\30.0000.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 09-Nov-2018 22:34:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 280-0076015-030 Temporary sequence for manual data acquisition
Misc. Info.: 16501 F
Operator ID: Instrument ID: WC_IonChrom8

Method: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\Anions_IC8.m
Limit Group: Wet - Anions 28D
Last Update: 12-Nov-2018 12:17:55 Calib Date: 02-Sep-2018 04:58:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20180901-73651.b\07.0000.d

Column 1 : Det: 0005
Process Host: CTX0308

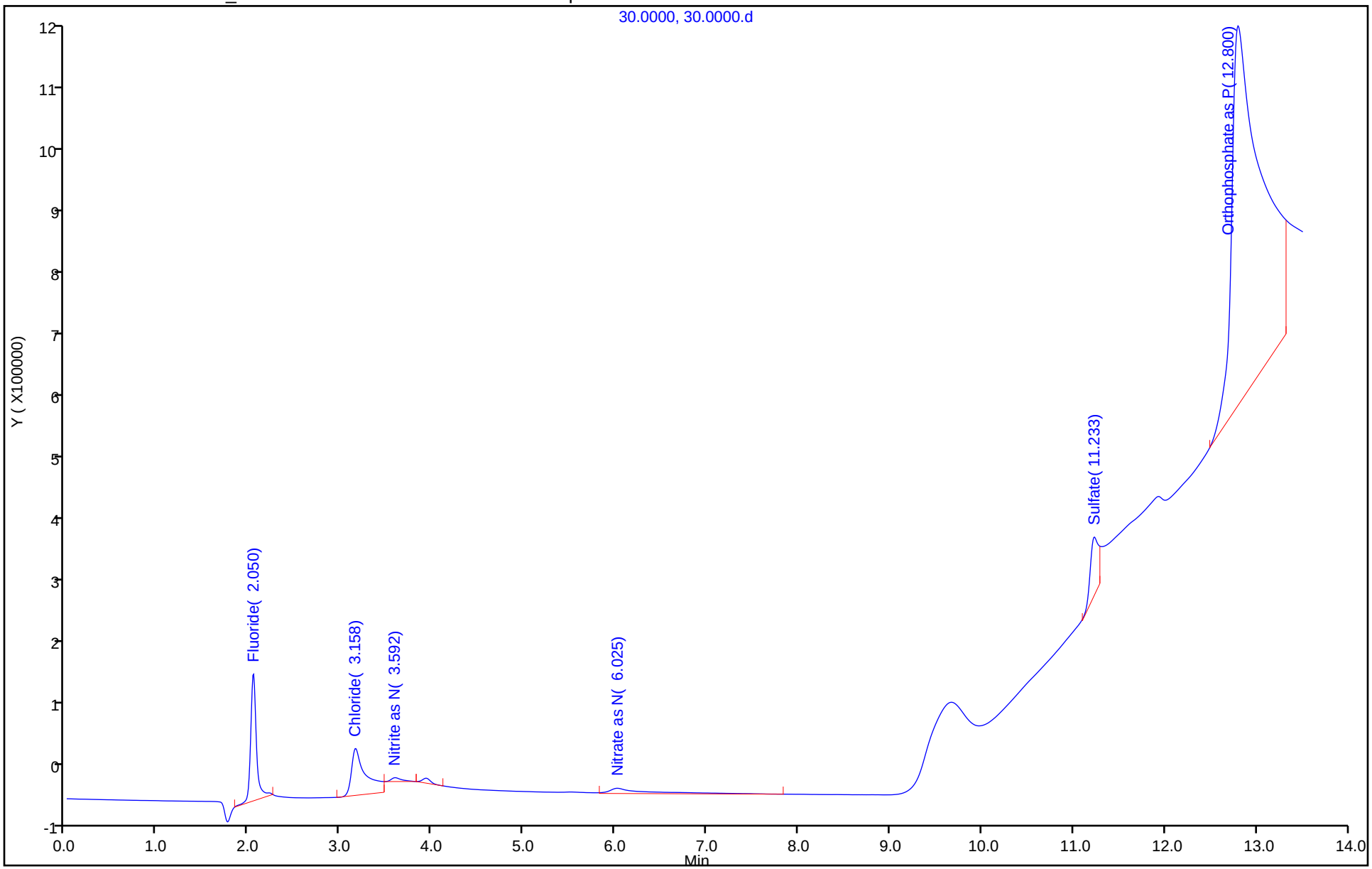
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.050	2.067	-0.017	799380		-0.0415	
2 Chloride	3.158	3.159	-0.001	1912829		0.1970	
3 Nitrite as N	3.592	3.617	-0.025	43947		-0.0424	
4 Bromide		5.500				ND	
5 Nitrate as N	6.025	5.909	0.116	224523		0.0469	
6 Sulfate	11.233	10.975	0.258	509524		0.2249	
7 Orthophosphate as P	12.800	12.642	0.158	12259208		-0.5039	

Report Date: 12-Nov-2018 12:17:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom8\20181109-76015.b\30.0000.d

Injection Date:	09-Nov-2018 22:34:00	Instrument ID:	WC_IonChrom8	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	30
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC8	Limit Group:	Wet - Anions 28D		



9060/5310 10/30/18 TOC DOC-LF

	Analysis	Sample Name	Manual Dilut	Result	Notes	Date/Time	Vial
1*	NPOC	ICV	1.0000	LL			1
2*	NPOC	ICB	1.0000	LL			2
3*	NPOC	lcs 280-435563/1-a	1.0000	LL	9060		3
4*	NPOC	mb 280-435563/2-a	1.0000	LL			4
5*	NPOC	TIC	1.0000	LL			5
6*	NPOC	280-115976-a-26-a	1.0000	6			6
7*	NPOC	280-115976-a-26-b ms	1.000	6			7
8*	NPOC	280-115976-a-26-c msd	1.000	6			8
9*	NPOC	280-115976-a-25-a	1.000	7			9
10*	NPOC	280-115976-b-24-a	1.000	7			10
11*	NPOC	280-115976-a-23-a	1.000	7			11
12*	NPOC	280-115976-b-22-a	1.000	7			12
13*	NPOC	280-115976-a-21-a	1.000	7			13
14*	NPOC	280-115976-a-20-a	1.000	7			14
15*	NPOC	CCV	1.000	LL			15
16*	NPOC	CCB	1.000	LL			16
17*	NPOC	280-115976-a-19-a	1.000	7			17
18*	NPOC	280-115976-b-14-a	1.000	7			18
19*	NPOC	280-116017-c-2-a	1.000	7			19
20*	NPOC	280-116017-c-1-a	1.000	7			20
21*	NPOC	280-116017-c-1-b ms	1.000	7			21
22*	NPOC	280-116017-c-1-c msd	1.000	7			22
23*	NPOC	280-115976-a-31-a	1.000	7			23
24*	NPOC	280-115976-b-30-a	1.000	7			24
25*	NPOC	280-115976-b-29-a	1.000	7			25
26*	NPOC	280-115976-a-28-a	1.000	7			26
27*	NPOC	CCV	1.000	LL			27
28*	NPOC	CCB	1.000	LL			28
29*	NPOC	280-115976-a-27-a	1.000	7			29
30*	NPOC	280-116165-a-7-a	1.000	7			30
31*	NPOC	280-116165-a-2-a	1.000	7			31
32*	NPOC	280-116165-a-5-a	1.000	7			32
33*	NPOC	280-116165-a-4-a	1.000	7			33
34*	NPOC	lcs 280-435563/27-a	1.000	LL			34
35*	NPOC	mb 280-435563/28-a	1.000	LL			35
36*	NPOC	TIC	1.000	LL			36
37*	NPOC	280-116165-a-8-a	1.000	7			37
38*	NPOC	280-116165-a-8-b ms	1.000	7			38
39*	NPOC	CCV	1.000	LL			39
40*	NPOC	CCB	1.000	LL			40
41*	NPOC	280-116165-a-8-c msd	1.000	7			41
42*	NPOC	280-116165-a-3-a	1.000	7			42
43*	NPOC	280-116165-a-9-a	1.000	7			43
44*	NPOC	280-116165-a-6-a	1.000	7			44
45*	NPOC	280-116267-b-1-a	1.000	7			45
46*	NPOC	280-116267-a-2-a	1.000	7			46
47*	NPOC	280-116267-a-3-a	1.000	7			47
48*	NPOC	280-116267-a-4-a	1.000	7			48
49*	NPOC	280-116267-a-5-a	1.000	7			49
50*	NPOC	280-116267-a-6-a	1.000	7			50
51*	NPOC	CCV	1.000	LL			51

PH LL 10/30/18

	Analysis	Sample Name	Manual Dilut	Result	Notes	Date / Time	Vial
52*	NPOC	CCB	1.000	LL			52
53*	NPOC	280-116267-a-7-a	1.000	L			53
54*	NPOC	280-116267-a-7-b ms	1.000	L			54
55*	NPOC	280-116267-a-7-c msd	1.000	L			55
56*	NPOC	280-116267-a-8-a	1.000	L			56
57*	NPOC	LCS	1.000	LL	5310		57
58*	NPOC	MB	1.000	LL			58
59*	NPOC	TIC	1.000	LL			59
60*	NPOC	280-116281-e-1	1.000	LL			60
61*	NPOC	MS 280-116281-e-1	1.000	LL			61
62*	NPOC	MSD 280-116281-e-1	1.000	LL			62
63*	NPOC	CCV	1.000	LL			63
64*	NPOC	CCB	1.000	LL			64

	Analysis	Sample Name	Manual Diluti	Result	Notes	Date / Time	Vial
1	NPOC	ICV	1.000	NPOC:18.37		10/30/2018 6:	1
2	NPOC	ICB	1.000	NPOC:0.2063		10/30/2018 6:	2
3	NPOC	lcs 280-435563/1-a	1.000	NPOC:22.86		10/30/2018 7:	3
4	NPOC	mb 280-435563/2-a	1.000	NPOC:0.2861		10/30/2018 7:	4
5	NPOC	TIC	1.000	NPOC:0.1819		10/30/2018 7:	5
6	NPOC	280-115976-a-26-a	1.000	NPOC:1.272		10/30/2018 7:	6
7	NPOC	280-115976-a-26-b ms	1.000	NPOC:24.03		10/30/2018 8:	7
8	NPOC	280-115976-a-26-c msd	1.000	NPOC:24.24		10/30/2018 8:	8
9	NPOC	280-115976-a-25-a	1.000	NPOC:1.610		10/30/2018 8:	9
10	NPOC	280-115976-b-24-a	1.000	NPOC:1.601		10/30/2018 8:	10
11	NPOC	280-115976-a-23-a	1.000	NPOC:1.457		10/30/2018 9:	11
12	NPOC	280-115976-b-22-a	1.000	NPOC:1.437		10/30/2018 9:	12
13	NPOC	280-115976-a-21-a	1.000	NPOC:0.9478		10/30/2018 9:	13
14	NPOC	280-115976-a-20-a	1.000	NPOC:0.7621		10/30/2018 10	14
15	NPOC	CCV	1.000	NPOC:22.86		10/30/2018 10	15
16	NPOC	CCB	1.000	NPOC:0.1877		10/30/2018 10	16
17	NPOC	280-115976-a-19-a	1.000	NPOC:1.503		10/30/2018 10	17
18	NPOC	280-115976-b-14-a	1.000	NPOC:1.665		10/30/2018 11	18
19	NPOC	280-116017-c-2-a	1.000	NPOC:0.8379		10/30/2018 11	19
20	NPOC	280-116017-c-1-a	1.000	NPOC:0.7636		10/30/2018 11	20
21	NPOC	280-116017-c-1-b ms	1.000	NPOC:23.76		10/31/2018 12	21
22	NPOC	280-116017-c-1-c msd	1.000	NPOC:23.82		10/31/2018 12	22
23	NPOC	280-115976-a-31-a	1.000	NPOC:1.072		10/31/2018 12	23
24	NPOC	280-115976-b-30-a	1.000	NPOC:1.456		10/31/2018 12	24
25	NPOC	280-115976-b-29-a	1.000	NPOC:1.866		10/31/2018 1:	25
26	NPOC	280-115976-a-28-a	1.000	NPOC:1.695		10/31/2018 1:	26
27	NPOC	CCV	1.000	NPOC:23.04		10/31/2018 1:	27
28	NPOC	CCB	1.000	NPOC:0.2189		10/31/2018 2:	28
29	NPOC	280-115976-a-27-a	1.000	NPOC:0.6531		10/31/2018 2:	29
30	NPOC	280-116165-a-7-a	1.000	NPOC:2.870		10/31/2018 2:	30
31	NPOC	280-116165-a-2-a	1.000	NPOC:5.767		10/31/2018 2:	31
32	NPOC	280-116165-a-5-a	1.000	NPOC:1.503		10/31/2018 3:	32
33	NPOC	280-116165-a-4-a	1.000	NPOC:1.422		10/31/2018 3:	33
34	NPOC	lcs 280-435563/27-a	1.000	NPOC:23.36		10/31/2018 3:	34
35	NPOC	mb 280-435563/28-a	1.000	NPOC:0.2815		10/31/2018 3:	35
36	NPOC	TIC	1.000	NPOC:0.2174		10/31/2018 4:	36
37	NPOC	280-116165-a-8-a	1.000	NPOC:0.7366		10/31/2018 4:	37
38	NPOC	280-116165-a-8-b ms	1.000	NPOC:24.08		10/31/2018 4:	38
39	NPOC	CCV	1.000	NPOC:23.34		10/31/2018 4:	39
40	NPOC	CCB	1.000	NPOC:0.2305		10/31/2018 5:	40
41	NPOC	280-116165-a-8-c msd	1.000	NPOC:24.19		10/31/2018 5:	41
42	NPOC	280-116165-a-3-a	1.000	NPOC:1.324		10/31/2018 5:	42
43	NPOC	280-116165-a-9-a	1.000	NPOC:4.425		10/31/2018 6:	43
44	NPOC	280-116165-a-6-a	1.000	NPOC:0.9582		10/31/2018 6:	44
45	NPOC	280-116267-b-1-a	1.000	NPOC:0.6677		10/31/2018 6:	45
46	NPOC	280-116267-a-2-a	1.000	NPOC:119.9		10/31/2018 6:	46
47	NPOC	280-116267-a-3-a	1.000	NPOC:120.4		10/31/2018 7:	47
48	NPOC	280-116267-a-4-a	1.000	NPOC:2.589		10/31/2018 7:	48
49	NPOC	280-116267-a-5-a	1.000	NPOC:0.6119		10/31/2018 7:	49
50	NPOC	280-116267-a-6-a	1.000	NPOC:0.7238		10/31/2018 7:	50
51	NPOC	CCV	1.000	NPOC:23.57		10/31/2018 8:	51
52	NPOC	CCB	1.000	NPOC:0.2650		10/31/2018 8:	52
53	NPOC	280-116267-a-7-a	1.000	NPOC:3.792		10/31/2018 8:	53

	Analysis	Sample Name	Manual Diluti	Result	Notes	Date / Time	Vial
54	NPOC	280-116267-a-7-b ms	1.000	NPOC:27.34		10/31/2018 8:	54
55	NPOC	280-116267-a-7-c msd	1.000	NPOC:27.65		10/31/2018 9:	55
56	NPOC	280-116267-a-8-a	1.000	NPOC:0.7368		10/31/2018 9:	56
57	NPOC	LCS	1.000	NPOC:23.78		10/31/2018 9:	57
58	NPOC	MB	1.000	NPOC:0.2294		10/31/2018 9:	58
59	NPOC	TIC	1.000	NPOC:0.2564		10/31/2018 10	59
60	NPOC	280-116281-e-1	1.000	NPOC:23.70		10/31/2018 10	60
61	NPOC	MS 280-116281-e-1	1.000	NPOC:47.41		10/31/2018 10	61
62	NPOC	MSD 280-116281-e-1	1.000	NPOC:47.34		10/31/2018 11	62
63	NPOC	CCV	1.000	NPOC:23.63		10/31/2018 11	63
64	NPOC	CCB	1.000	NPOC:0.2751		10/31/2018 11	64

Instr.Information

System	TOC-V cpn 3
Instrument Options	TOC/ASI/
Catalyst	Regular Sensitivity

Sample

Sample Name:	ICV
Sample ID:	
Origin:	NPOC.met
Status	Completed
Chk. Result	

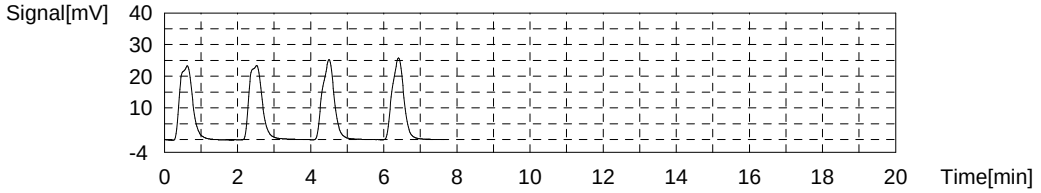
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:18.37mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.29	18.39mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:12:44 PM
2	58.86	18.57mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:14:51 PM
3	57.89	18.26mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:16:55 PM
4	57.98	18.29mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:18:59 PM

Mean Area	58.26
Mean Conc.	18.37mg/L
Vial	1



Sample

Sample Name:	ICB
Sample ID:	
Origin:	NPOC.met
Status	Completed
Chk. Result	

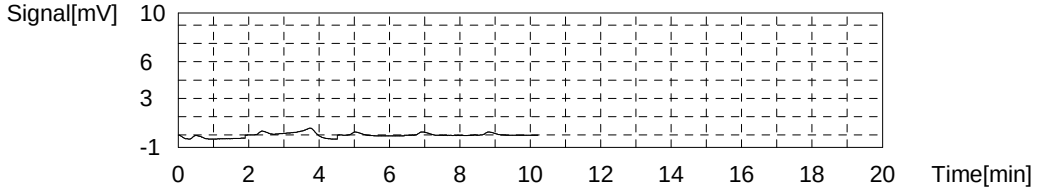
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2063mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4617	0.2057mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:39:34 PM
2	3.792	1.253mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:42:21 PM
3	0.4691	0.2081mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:44:25 PM
4	0.4692	0.2081mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:46:29 PM
5	0.4532	0.2031mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:48:33 PM

Mean Area	0.4633
Mean Conc.	0.2063mg/L
Vial	2



Sample

Sample Name: lcs 280-435563/1-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

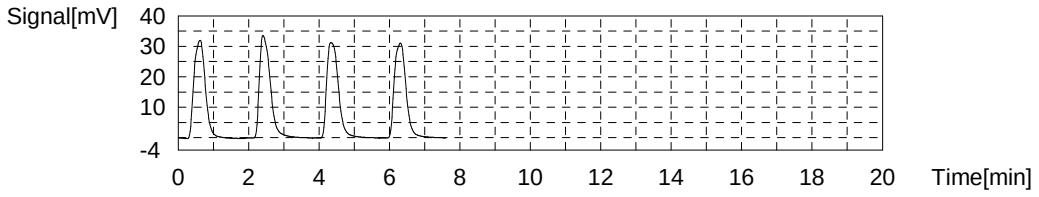
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.82	22.95mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:57:03 PM
2	72.66	22.90mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 6:59:07 PM
3	72.50	22.85mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:01:11 PM
4	72.08	22.72mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:03:15 PM

Mean Area 72.52
Mean Conc. 22.86mg/L
Vial 3



Sample

Sample Name: mb 280-435563/2-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

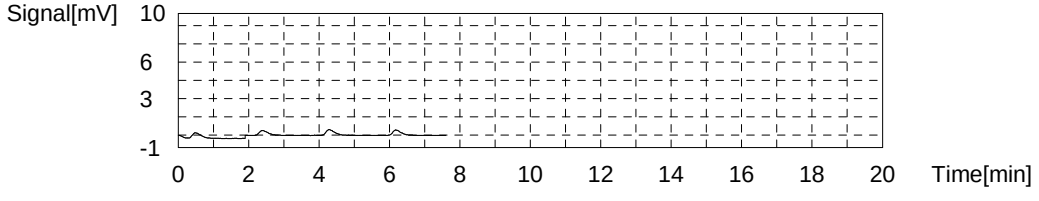
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2861mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7119	0.2844mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:11:46 PM
2	0.6602	0.2682mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:13:50 PM
3	0.8055	0.3138mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:15:54 PM
4	0.6911	0.2779mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:17:58 PM

Mean Area 0.7172
Mean Conc. 0.2861mg/L
Vial 4



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

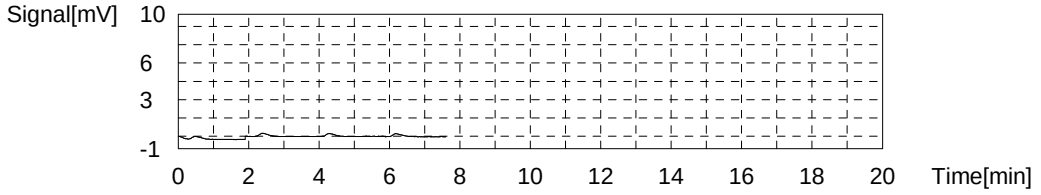
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1819mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3171	0.1603mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:26:30 PM
2	0.4399	0.1989mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:28:34 PM
3	0.3724	0.1777mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:30:38 PM
4	0.4137	0.1907mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:32:42 PM

Mean Area 0.3858
Mean Conc. 0.1819mg/L
Vial 5



Sample

Sample Name: 280-115976-a-26-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

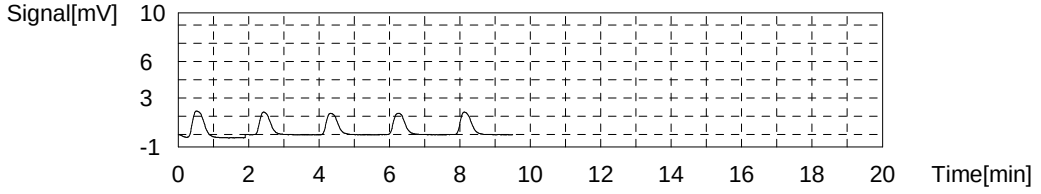
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.272mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.765	1.559mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:41:13 PM
2	3.809	1.258mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:43:17 PM
3	3.852	1.272mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:45:21 PM
4	3.878	1.280mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:47:25 PM
5	3.880	1.280mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:49:29 PM

Mean Area 3.855
Mean Conc. 1.272mg/L
Vial 6



Sample

Sample Name: 280-115976-a-26-b ms
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

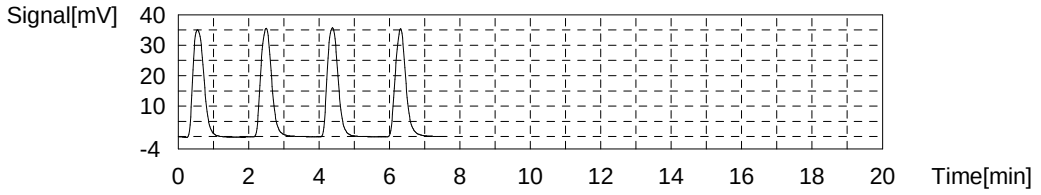
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.03mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	77.19	24.33mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 7:57:59 PM
2	77.06	24.29mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:00:03 PM
3	76.33	24.06mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:02:07 PM
4	74.37	23.44mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:04:11 PM

Mean Area 76.24
Mean Conc. 24.03mg/L
Vial 7



Sample

Sample Name: 280-115976-a-26-c msd
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

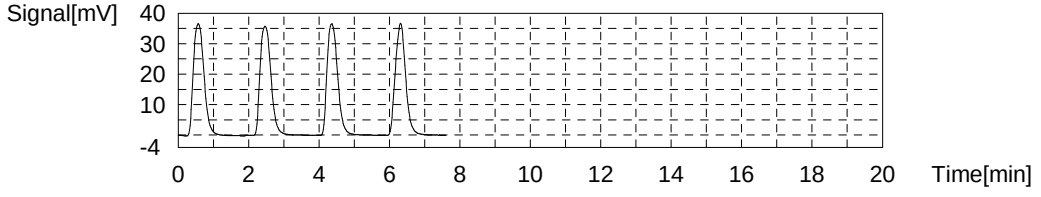
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.24mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.16	24.63mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:12:42 PM
2	77.54	24.44mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:14:46 PM
3	76.76	24.19mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:16:50 PM
4	75.24	23.71mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:18:54 PM

Mean Area 76.93
Mean Conc. 24.24mg/L
Vial 8



Sample

Sample Name: 280-115976-a-25-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

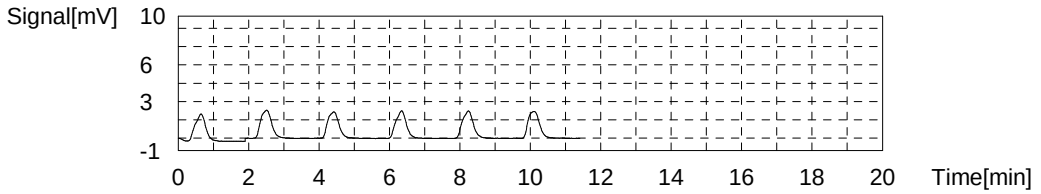
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.610mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.638	1.519mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:27:25 PM
2	5.037	1.644mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:29:29 PM
3	4.793	1.567mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:31:33 PM
4	4.727	1.547mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:33:37 PM
5	4.901	1.601mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:35:41 PM
6	4.982	1.627mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:37:45 PM

Mean Area 4.928
Mean Conc. 1.610mg/L
Vial 9



Sample

Sample Name: 280-115976-b-24-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

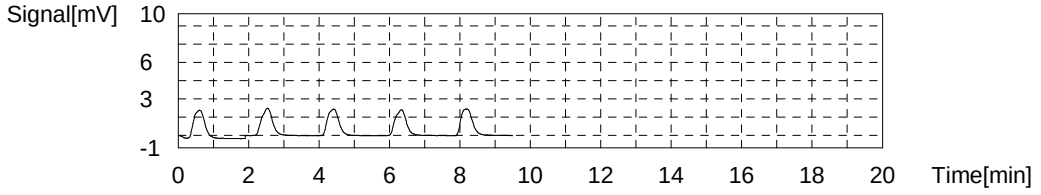
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.601mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.001	1.633mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:46:10 PM
2	4.832	1.580mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:48:14 PM
3	4.841	1.583mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:50:18 PM
4	4.659	1.525mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:52:22 PM
5	4.924	1.609mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 8:54:26 PM

Mean Area 4.899
Mean Conc. 1.601mg/L
Vial 10



Sample

Sample Name: 280-115976-a-23-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

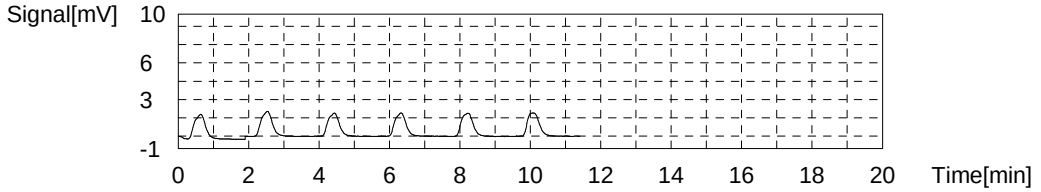
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.457mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.415	1.449mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:02:56 PM
2	4.543	1.489mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:05:00 PM
3	4.229	1.390mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:07:04 PM
4	4.213	1.385mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:09:08 PM
5	4.375	1.436mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:11:12 PM
6	4.431	1.454mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:13:16 PM

Mean Area 4.441
Mean Conc. 1.457mg/L
Vial 11



Sample

Sample Name: 280-115976-b-22-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

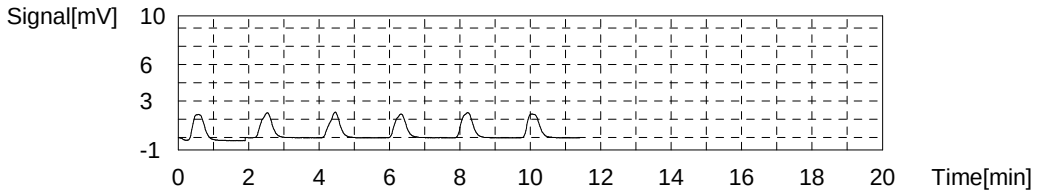
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.437mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.795	1.568mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:21:41 PM
2	4.407	1.446mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:23:45 PM
3	4.326	1.421mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:25:49 PM
4	4.243	1.395mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:27:53 PM
5	4.635	1.518mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:29:57 PM
6	4.531	1.485mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:32:01 PM

Mean Area 4.377
Mean Conc. 1.437mg/L
Vial 12



Sample

Sample Name: 280-115976-a-21-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

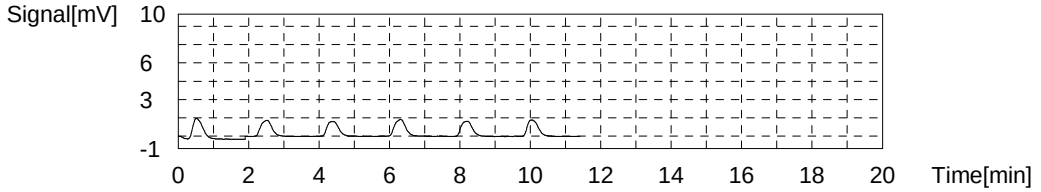
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9478mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.232	1.077mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:40:26 PM
2	2.907	0.9745mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:42:30 PM
3	2.745	0.9236mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:44:34 PM
4	2.988	1.0000mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:46:38 PM
5	2.778	0.9340mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:48:42 PM
6	2.858	0.9591mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:50:46 PM

Mean Area 2.822
Mean Conc. 0.9478mg/L
Vial 13



Sample

Sample Name: 280-115976-a-20-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

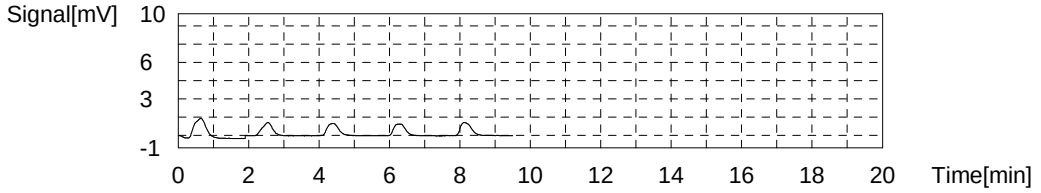
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7621mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.820	1.262mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 9:59:11 PM
2	2.259	0.7708mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:01:15 PM
3	2.216	0.7573mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:03:19 PM
4	2.168	0.7422mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:05:23 PM
5	2.282	0.7780mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:07:27 PM

Mean Area 2.231
Mean Conc. 0.7621mg/L
Vial 14



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

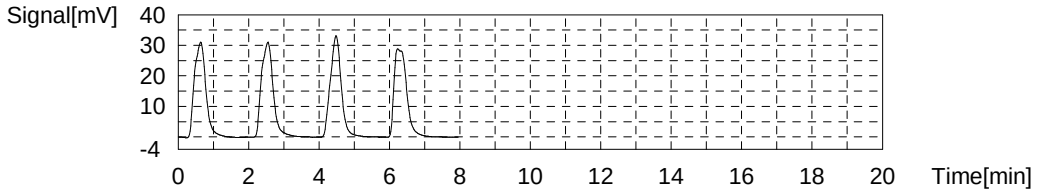
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	71.97	22.69mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:15:57 PM
2	73.24	23.09mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:18:02 PM
3	72.22	22.77mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:20:06 PM
4	72.61	22.89mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:22:30 PM

Mean Area 72.51
Mean Conc. 22.86mg/L
Vial 15



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

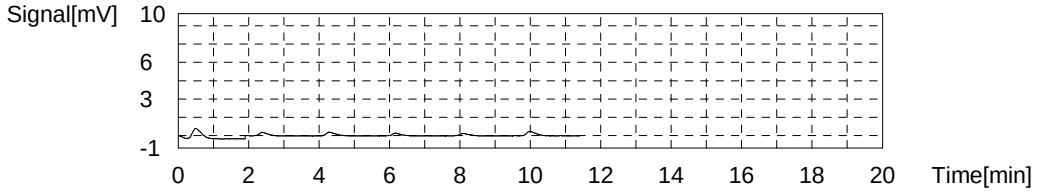
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1877mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.439	0.5130mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:31:01 PM
2	0.4459	0.2008mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:33:05 PM
3	0.5360	0.2291mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:35:09 PM
4	0.3279	0.1637mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:37:13 PM
5	0.3074	0.1572mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:39:17 PM
6	0.6166	0.2544mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:41:21 PM

Mean Area 0.4043
Mean Conc. 0.1877mg/L
Vial 16



Sample

Sample Name: 280-115976-a-19-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

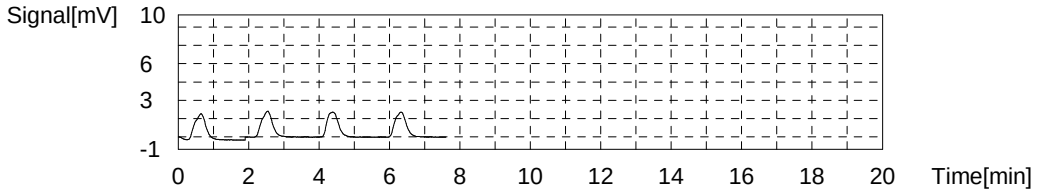
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.503mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.648	1.522mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:49:46 PM
2	4.612	1.511mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:51:50 PM
3	4.545	1.489mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:53:54 PM
4	4.545	1.489mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 10:55:58 PM

Mean Area 4.588
Mean Conc. 1.503mg/L
Vial 17



Sample

Sample Name: 280-115976-b-14-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

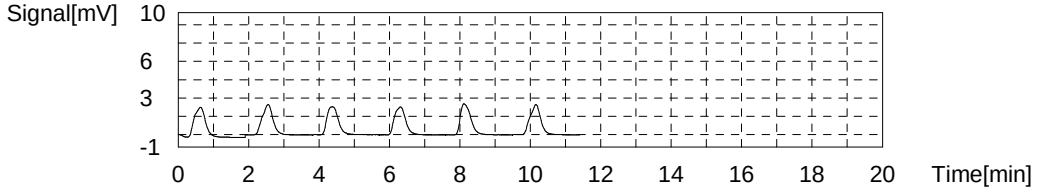
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.665mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.345	1.741mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:04:29 PM
2	5.273	1.718mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:06:33 PM
3	5.065	1.653mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:08:37 PM
4	5.037	1.644mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:10:41 PM
5	5.173	1.687mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:12:45 PM
6	5.144	1.678mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:14:49 PM

Mean Area 5.105
Mean Conc. 1.665mg/L
Vial 18



Sample

Sample Name: 280-116017-c-2-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

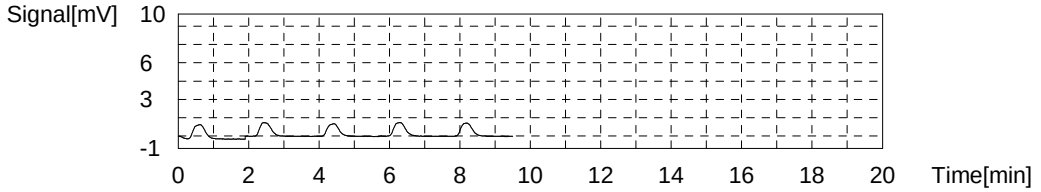
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.8379mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.543	0.8601mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:23:14 PM
2	2.455	0.8324mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:25:18 PM
3	2.306	0.7856mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:27:22 PM
4	2.507	0.8488mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:29:26 PM
5	2.385	0.8104mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:31:30 PM

Mean Area 2.473
Mean Conc. 0.8379mg/L
Vial 19



Sample

Sample Name: 280-116017-c-1-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

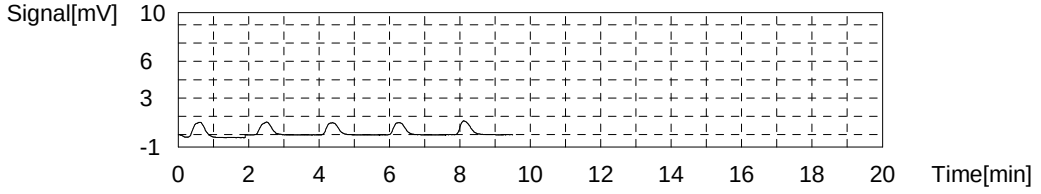
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7636mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.740	0.9220mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:40:00 PM
2	2.300	0.7837mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:42:04 PM
3	2.238	0.7642mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:44:08 PM
4	2.189	0.7488mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:46:12 PM
5	2.218	0.7579mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:48:16 PM

Mean Area 2.236
Mean Conc. 0.7636mg/L
Vial 20



Sample

Sample Name: 280-116017-c-1-b ms
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

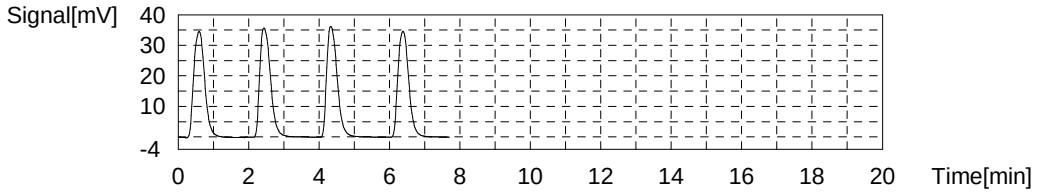
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.76mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.72	23.87mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:56:46 PM
2	76.03	23.96mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/30/2018 11:58:50 PM
3	75.61	23.83mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:01:00 AM
4	74.15	23.37mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:03:04 AM

Mean Area 75.38
Mean Conc. 23.76mg/L
Vial 21



Sample

Sample Name: 280-116017-c-1-c msd
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

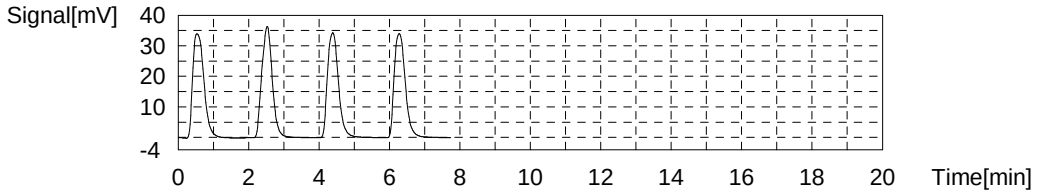
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.82mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.36	24.07mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:11:35 AM
2	76.14	24.00mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:13:39 AM
3	74.76	23.56mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:15:43 AM
4	75.04	23.65mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:17:55 AM

Mean Area 75.58
Mean Conc. 23.82mg/L
Vial 22



Sample

Sample Name: 280-115976-a-31-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

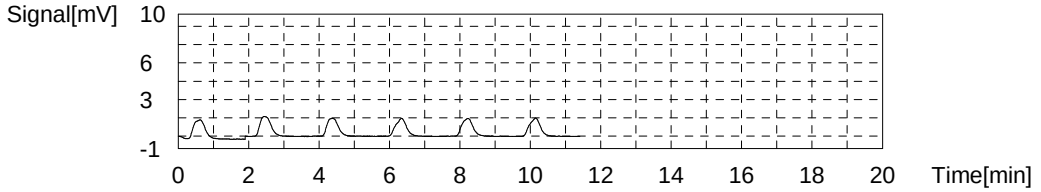
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.072mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.531	1.171mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:26:26 AM
2	3.589	1.189mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:28:30 AM
3	3.258	1.085mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:30:34 AM
4	3.164	1.055mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:32:38 AM
5	3.225	1.074mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:34:42 AM
6	3.226	1.075mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:36:46 AM

Mean Area 3.218
Mean Conc. 1.072mg/L
Vial 23



Sample

Sample Name: 280-115976-b-30-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

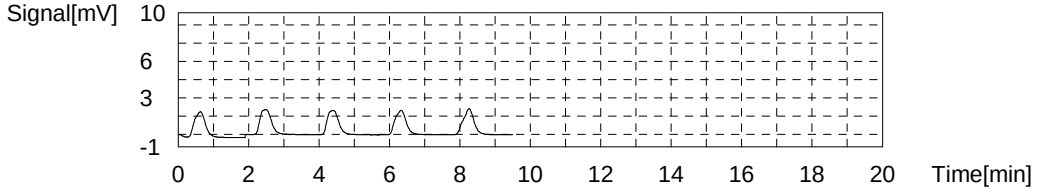
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.456mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.455	1.461mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:45:11 AM
2	4.617	1.512mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:47:15 AM
3	4.429	1.453mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:49:19 AM
4	4.357	1.430mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:51:23 AM
5	4.511	1.479mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 12:53:27 AM

Mean Area 4.438
Mean Conc. 1.456mg/L
Vial 24



Sample

Sample Name: 280-115976-b-29-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

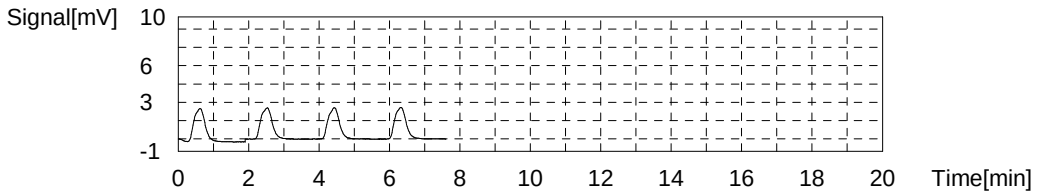
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.866mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.862	1.904mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:01:57 AM
2	5.700	1.853mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:04:01 AM
3	5.681	1.847mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:06:05 AM
4	5.726	1.861mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:08:09 AM

Mean Area 5.742
Mean Conc. 1.866mg/L
Vial 25



Sample

Sample Name: 280-115976-a-28-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

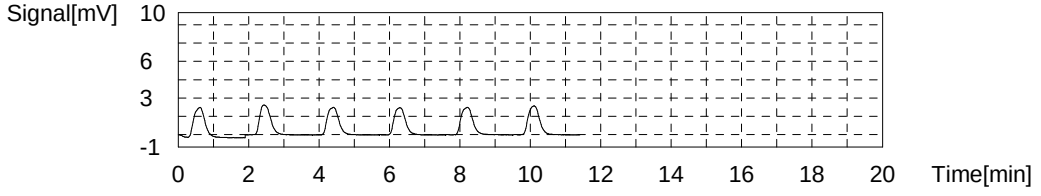
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.695mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.297	1.726mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:16:40 AM
2	5.189	1.692mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:18:44 AM
3	5.020	1.639mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:20:48 AM
4	4.927	1.610mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:22:52 AM
5	5.099	1.664mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:24:56 AM
6	5.214	1.700mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:27:00 AM

Mean Area 5.200
Mean Conc. 1.695mg/L
Vial 26



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

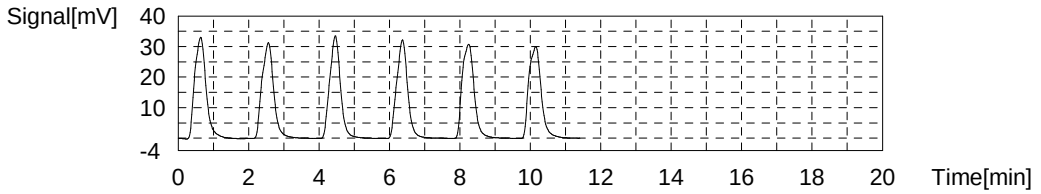
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.04mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.17	24.01mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:35:25 AM
2	72.78	22.94mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:37:29 AM
3	72.10	22.73mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:39:33 AM
4	69.87	22.03mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:41:37 AM
5	73.50	23.17mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:43:41 AM
6	73.95	23.31mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:45:45 AM

Mean Area 73.08
Mean Conc. 23.04mg/L
Vial 27



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

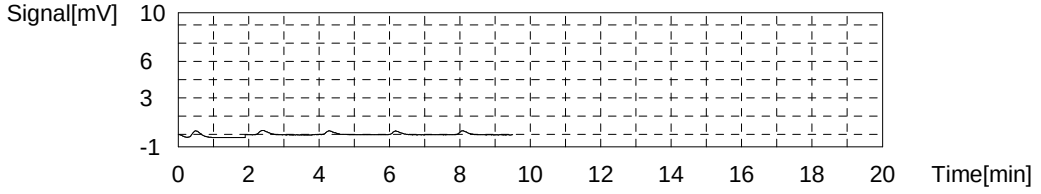
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2189mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.8707	0.3343mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:54:10 AM
2	0.6228	0.2564mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:56:14 AM
3	0.4561	0.2040mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 1:58:18 AM
4	0.4541	0.2034mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:00:22 AM
5	0.4806	0.2117mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:02:26 AM

Mean Area 0.5034
Mean Conc. 0.2189mg/L
Vial 28



Sample

Sample Name: 280-115976-a-27-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

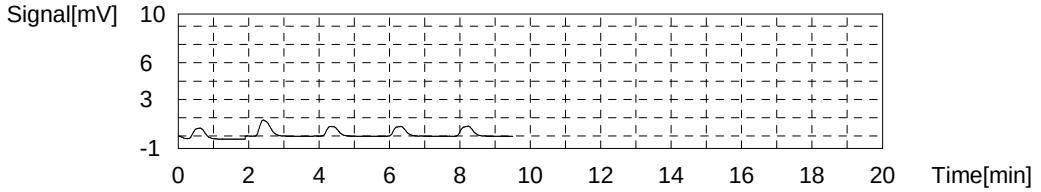
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6531mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.963	0.6777mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:10:56 AM
2	2.712	0.9132mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:13:00 AM
3	1.796	0.6252mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:15:04 AM
4	1.833	0.6369mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:17:08 AM
5	1.947	0.6727mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:19:12 AM

Mean Area 1.885
Mean Conc. 0.6531mg/L
Vial 29



Sample

Sample Name: 280-116165-a-7-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

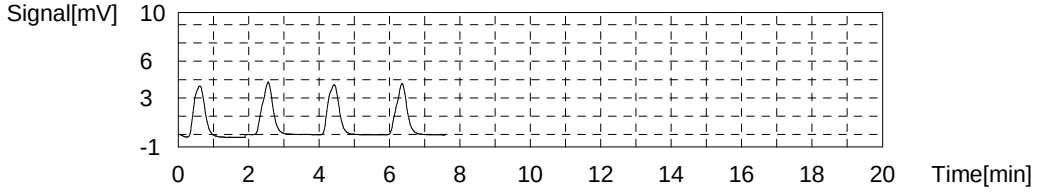
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.870mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.018	2.896mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:27:42 AM
2	8.993	2.888mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:29:46 AM
3	8.976	2.882mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:31:50 AM
4	8.756	2.813mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:33:54 AM

Mean Area 8.936
Mean Conc. 2.870mg/L
Vial 30



Sample

Sample Name: 280-116165-a-2-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

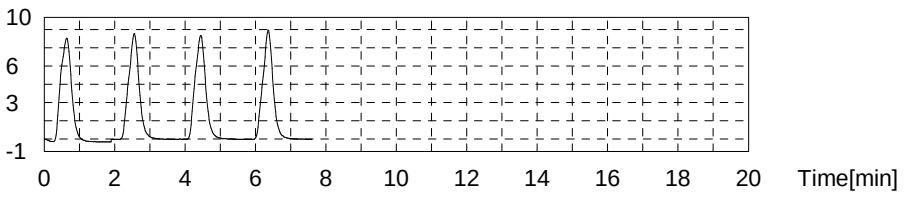
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.767mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.41	5.848mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:42:26 AM
2	18.10	5.751mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:44:30 AM
3	17.96	5.707mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:46:34 AM
4	18.13	5.760mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:48:38 AM

Mean Area 18.15
Mean Conc. 5.767mg/L
Vial 31



Sample

Sample Name: 280-116165-a-5-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

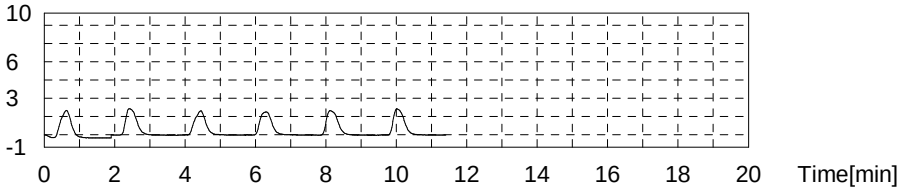
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.503mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.677	1.531mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:57:10 AM
2	4.598	1.506mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 2:59:14 AM
3	4.289	1.409mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:01:18 AM
4	4.337	1.424mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:03:22 AM
5	4.561	1.494mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:05:26 AM
6	4.519	1.481mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:07:30 AM

Mean Area 4.589
Mean Conc. 1.503mg/L
Vial 32



Sample

Sample Name: 280-116165-a-4-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

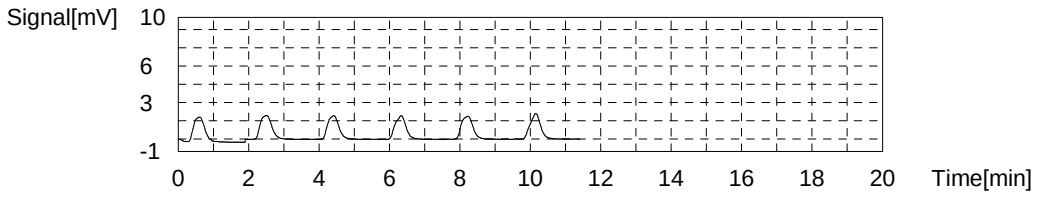
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.422mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.415	1.449mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:15:56 AM
2	4.466	1.465mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:18:00 AM
3	4.252	1.397mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:20:04 AM
4	4.175	1.373mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:22:08 AM
5	4.287	1.408mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:24:12 AM
6	4.362	1.432mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:26:16 AM

Mean Area 4.329
Mean Conc. 1.422mg/L
Vial 33



Sample

Sample Name: lcs 280-435563/27-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

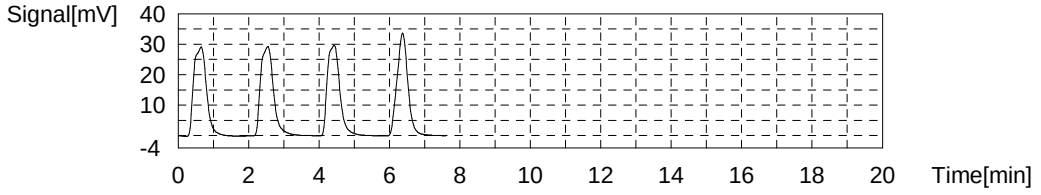
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.73	23.55mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:34:42 AM
2	75.05	23.65mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:36:46 AM
3	73.75	23.25mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:38:50 AM
4	72.93	22.99mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:40:54 AM

Mean Area 74.12
Mean Conc. 23.36mg/L
Vial 34



Sample

Sample Name: mb 280-435563/28-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

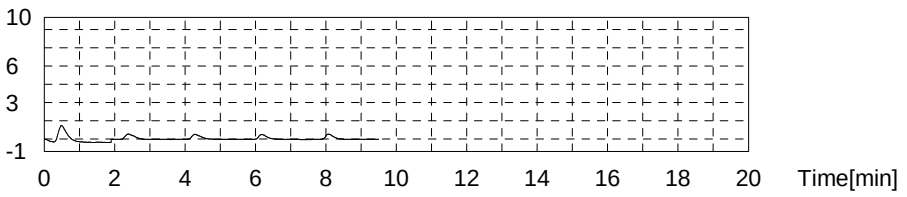
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2815mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.290	0.7805mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:49:26 AM
2	0.7937	0.3101mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:51:30 AM
3	0.7078	0.2831mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:53:34 AM
4	0.6391	0.2615mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:55:38 AM
5	0.6705	0.2714mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 3:57:42 AM

Mean Area 0.7028
Mean Conc. 0.2815mg/L
Vial 35



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

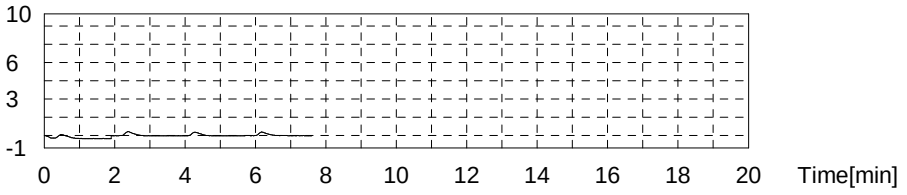
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2174mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5138	0.2221mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:06:13 AM
2	0.5319	0.2278mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:08:17 AM
3	0.4774	0.2107mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:10:21 AM
4	0.4716	0.2089mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:12:25 AM

Mean Area 0.4987
Mean Conc. 0.2174mg/L
Vial 36



Sample

Sample Name: 280-116165-a-8-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

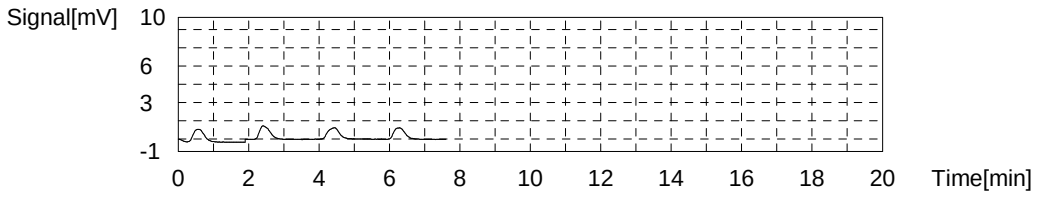
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7366mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.180	0.7459mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:20:57 AM
2	2.227	0.7607mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:23:01 AM
3	2.136	0.7321mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:25:05 AM
4	2.058	0.7076mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:27:09 AM

Mean Area 2.150
Mean Conc. 0.7366mg/L
Vial 37



Sample

Sample Name: 280-116165-a-8-b ms
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

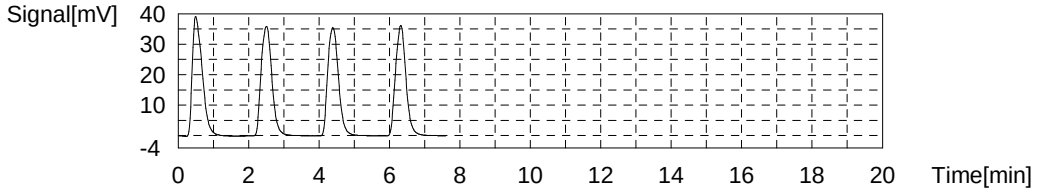
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.08mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.00	24.58mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:35:41 AM
2	76.89	24.23mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:37:45 AM
3	75.84	23.90mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:39:49 AM
4	74.92	23.61mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:41:53 AM

Mean Area 76.41
Mean Conc. 24.08mg/L
Vial 38



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

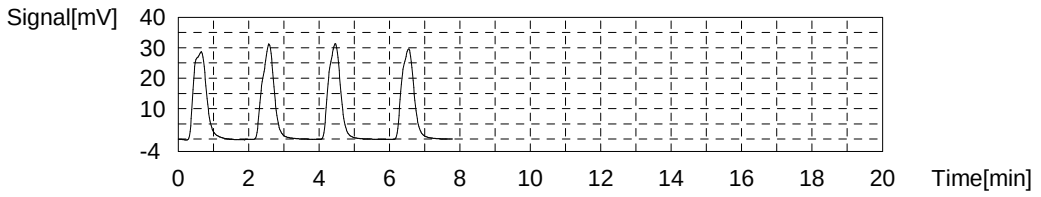
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.34mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.85	23.59mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:50:25 AM
2	73.89	23.29mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:52:29 AM
3	74.98	23.63mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:54:44 AM
4	72.52	22.86mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 4:56:48 AM

Mean Area 74.06
Mean Conc. 23.34mg/L
Vial 39



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

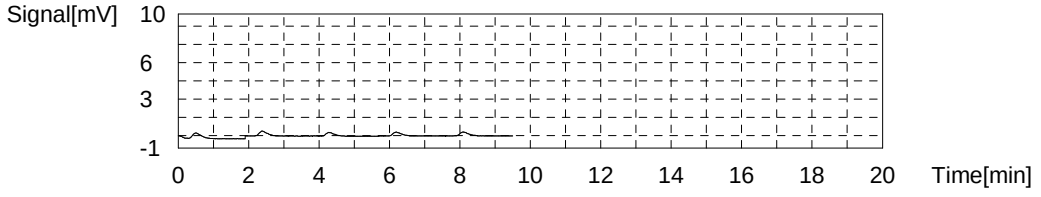
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2305mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7320	0.2907mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:05:20 AM
2	0.6521	0.2656mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:07:24 AM
3	0.4888	0.2143mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:09:28 AM
4	0.4938	0.2158mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:11:32 AM
5	0.5266	0.2262mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:13:36 AM

Mean Area 0.5403
Mean Conc. 0.2305mg/L
Vial 40



Sample

Sample Name: 280-116165-a-8-c msd
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

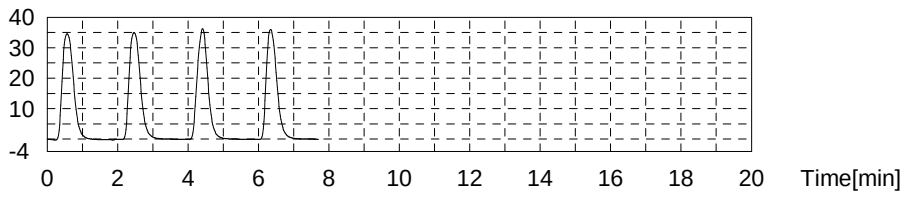
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.19mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	77.40	24.39mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:22:07 AM
2	78.07	24.60mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:24:11 AM
3	76.69	24.17mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:26:21 AM
4	74.90	23.61mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:28:25 AM

Mean Area 76.77
Mean Conc. 24.19mg/L
Vial 41



Sample

Sample Name: 280-116165-a-3-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

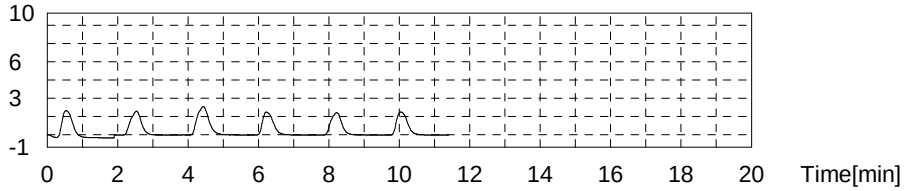
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.324mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.465	1.464mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:36:57 AM
2	4.208	1.384mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:39:01 AM
3	5.366	1.748mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:41:05 AM
4	3.925	1.295mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:43:09 AM
5	3.900	1.287mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:45:13 AM
6	4.039	1.330mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:47:17 AM

Mean Area 4.018
Mean Conc. 1.324mg/L
Vial 42



Sample

Sample Name: 280-116165-a-9-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

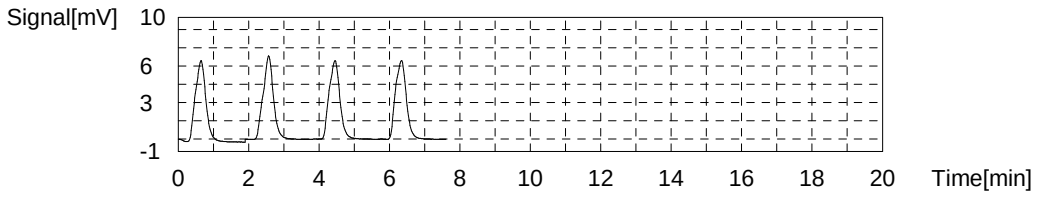
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.425mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.79	4.396mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:55:43 AM
2	13.99	4.459mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:57:47 AM
3	13.80	4.399mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 5:59:51 AM
4	13.95	4.446mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:01:55 AM

Mean Area 13.88
Mean Conc. 4.425mg/L
Vial 43



Sample

Sample Name: 280-116165-a-6-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

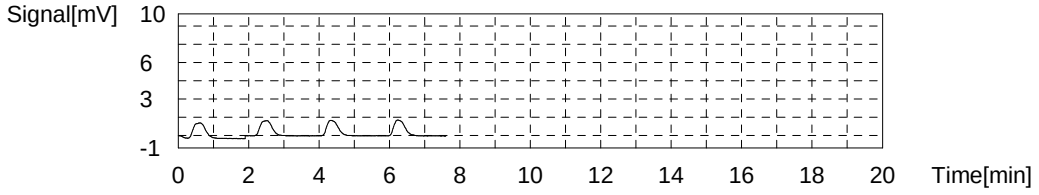
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9582mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.966	0.9931mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:10:27 AM
2	2.887	0.9682mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:12:31 AM
3	2.746	0.9239mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:14:35 AM
4	2.821	0.9475mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:16:39 AM

Mean Area 2.855
Mean Conc. 0.9582mg/L
Vial 44



Sample

Sample Name: 280-116267-b-1-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

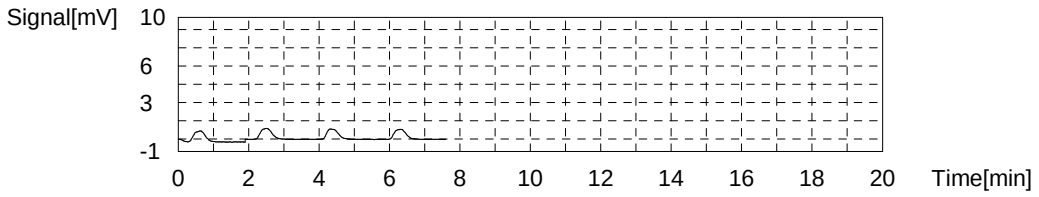
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6677mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.968	0.6793mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:25:11 AM
2	2.014	0.6938mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:27:15 AM
3	1.874	0.6497mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:29:19 AM
4	1.869	0.6482mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:31:23 AM

Mean Area 1.931
Mean Conc. 0.6677mg/L
Vial 45



Sample

Sample Name: 280-116267-a-2-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

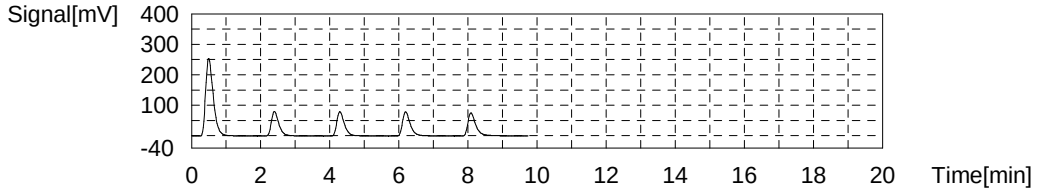
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:119.9mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	393.6	123.8mg/L	50uL	1	R	TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:39:55 AM
2	121.1	119.0mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:41:59 AM
3	121.2	119.1mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:44:03 AM
4	123.4	121.3mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:46:07 AM
5	122.2	120.1mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:48:24 AM

Mean Area 122.0
Mean Conc. 119.9mg/L
Vial 46



Sample

Sample Name: 280-116267-a-3-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

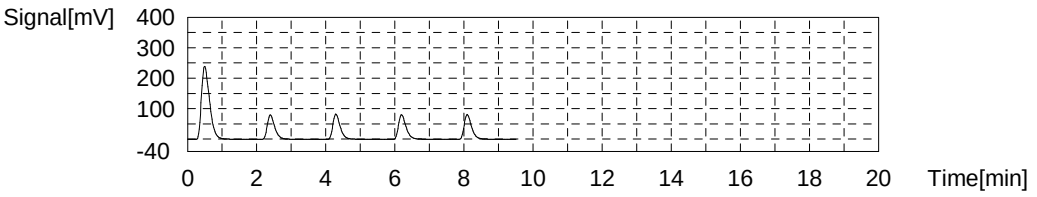
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:120.4mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	396.3	124.7mg/L	50uL	1	R	TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:56:56 AM
2	120.7	118.6mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 6:59:00 AM
3	123.2	121.1mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:01:04 AM
4	123.9	121.8mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:03:07 AM
5	122.1	120.0mg/L	16uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:05:11 AM

Mean Area 122.5
Mean Conc. 120.4mg/L
Vial 47



Sample

Sample Name: 280-116267-a-4-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

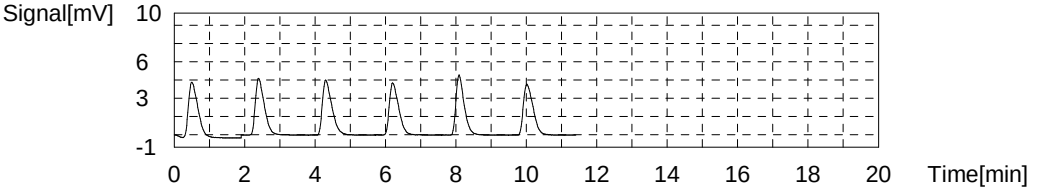
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.589mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.448	2.716mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:13:43 AM
2	8.235	2.650mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:15:47 AM
3	8.502	2.733mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:17:51 AM
4	7.834	2.523mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:19:55 AM
5	8.054	2.593mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:21:59 AM
6	8.041	2.589mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:24:03 AM

Mean Area 8.041
Mean Conc. 2.589mg/L
Vial 48



Sample

Sample Name: 280-116267-a-5-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

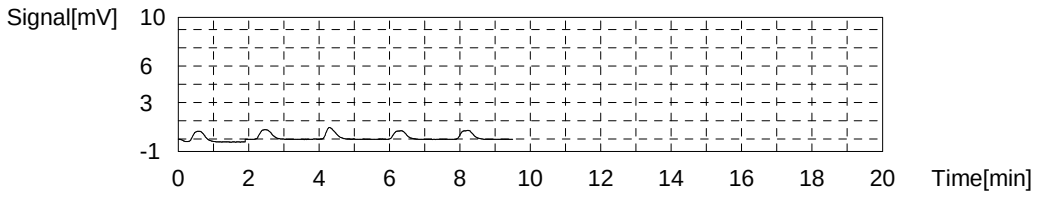
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6119mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.933	0.6683mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:32:28 AM
2	1.805	0.6281mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:34:32 AM
3	1.769	0.6167mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:36:36 AM
4	1.688	0.5913mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:38:40 AM
5	1.752	0.6114mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:40:44 AM

Mean Area 1.754
Mean Conc. 0.6119mg/L
Vial 49



Sample

Sample Name: 280-116267-a-6-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

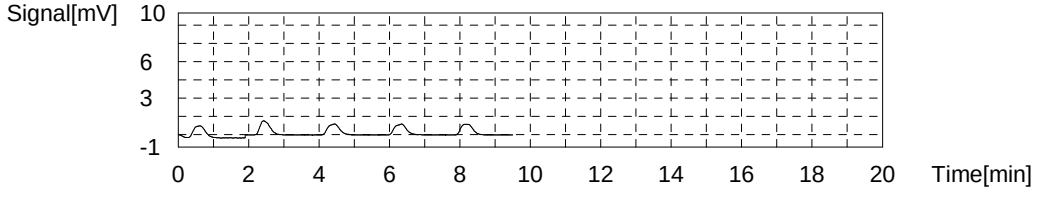
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7238mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.228	0.7610mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:49:15 AM
2	2.275	0.7758mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:51:19 AM
3	2.103	0.7217mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:53:23 AM
4	2.049	0.7048mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:55:27 AM
5	2.058	0.7076mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 7:57:31 AM

Mean Area 2.110
Mean Conc. 0.7238mg/L
Vial 50



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

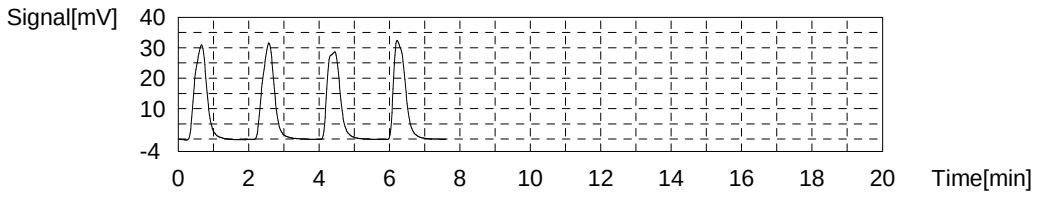
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.57mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.06	23.66mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:06:02 AM
2	74.75	23.56mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:08:06 AM
3	73.83	23.27mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:10:10 AM
4	75.49	23.79mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:12:14 AM

Mean Area 74.78
Mean Conc. 23.57mg/L
Vial 51



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

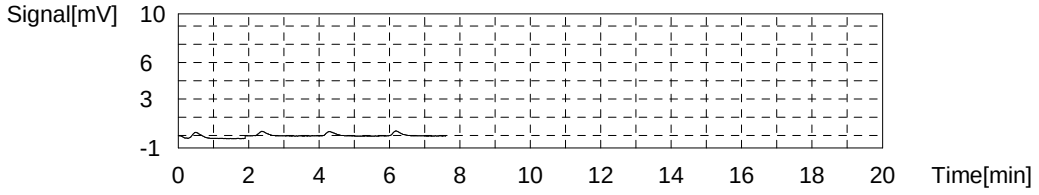
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2650mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7799	0.3058mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:20:46 AM
2	0.5666	0.2387mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:22:50 AM
3	0.6289	0.2583mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:24:54 AM
4	0.6255	0.2572mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:26:58 AM

Mean Area 0.6502
Mean Conc. 0.2650mg/L
Vial 52



Sample

Sample Name: 280-116267-a-7-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

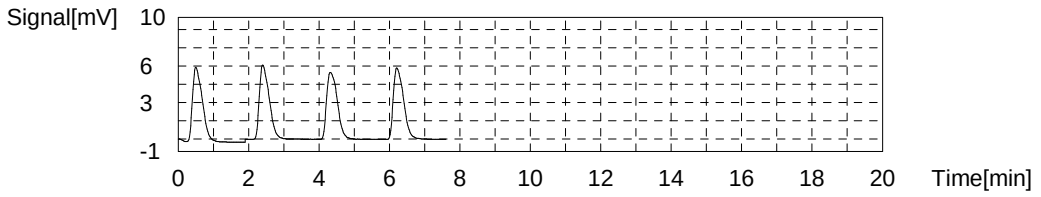
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.792mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.87	3.792mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:35:30 AM
2	11.92	3.808mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:37:34 AM
3	11.75	3.755mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:39:38 AM
4	11.94	3.814mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:41:42 AM

Mean Area 11.87
Mean Conc. 3.792mg/L
Vial 53



Sample

Sample Name: 280-116267-a-7-b ms
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

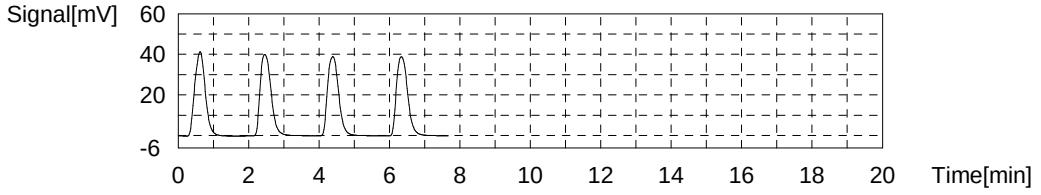
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.34mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	87.32	27.51mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:50:14 AM
2	86.97	27.40mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:52:18 AM
3	86.19	27.16mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:54:26 AM
4	86.55	27.27mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 8:56:30 AM

Mean Area 86.76
Mean Conc. 27.34mg/L
Vial 54



Sample

Sample Name: 280-116267-a-7-c msd
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

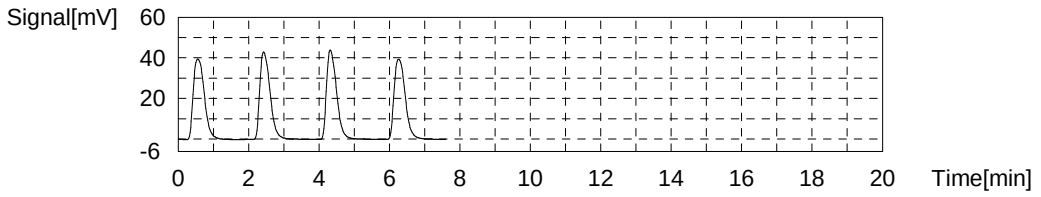
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	88.26	27.81mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:05:03 AM
2	87.81	27.67mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:07:07 AM
3	87.75	27.65mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:09:11 AM
4	87.20	27.47mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:11:15 AM

Mean Area 87.75
Mean Conc. 27.65mg/L
Vial 55



Sample

Sample Name: 280-116267-a-8-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

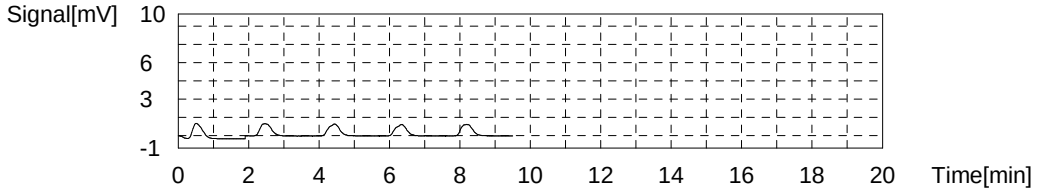
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7368mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.350	0.7994mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:19:48 AM
2	2.226	0.7604mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:21:52 AM
3	2.157	0.7387mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:23:56 AM
4	2.087	0.7167mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:26:00 AM
5	2.133	0.7312mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:28:04 AM

Mean Area 2.151
Mean Conc. 0.7368mg/L
Vial 56



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

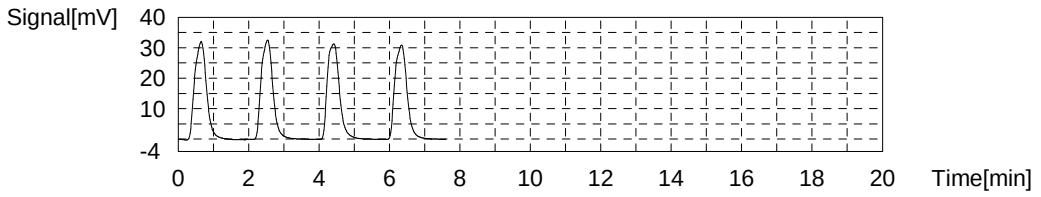
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.78mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.55	24.13mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:36:36 AM
2	75.70	23.86mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:38:40 AM
3	75.34	23.75mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:40:44 AM
4	74.22	23.39mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:42:48 AM

Mean Area 75.45
Mean Conc. 23.78mg/L
Vial 57



Sample

Sample Name: MB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

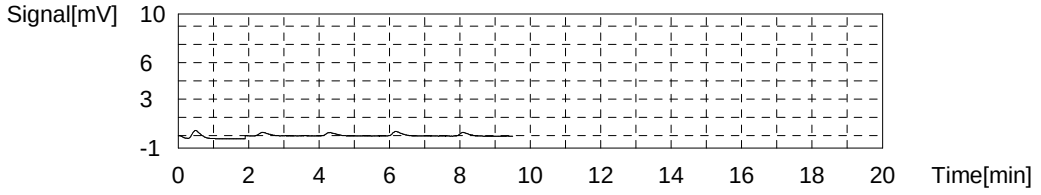
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2294mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.028	0.3838mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:51:21 AM
2	0.5038	0.2190mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:53:25 AM
3	0.5231	0.2251mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:55:29 AM
4	0.6373	0.2610mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:57:33 AM
5	0.4831	0.2125mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 9:59:37 AM

Mean Area 0.5368
Mean Conc. 0.2294mg/L
Vial 58



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

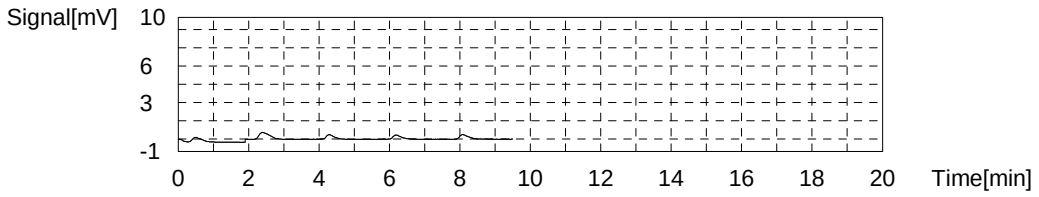
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2564mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6640	0.2693mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:08:09 AM
2	1.147	0.4212mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:10:13 AM
3	0.5957	0.2479mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:12:17 AM
4	0.5740	0.2411mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:14:21 AM
5	0.6573	0.2672mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:16:25 AM

Mean Area 0.6228
Mean Conc. 0.2564mg/L
Vial 59



Sample

Sample Name: 280-116281-e-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

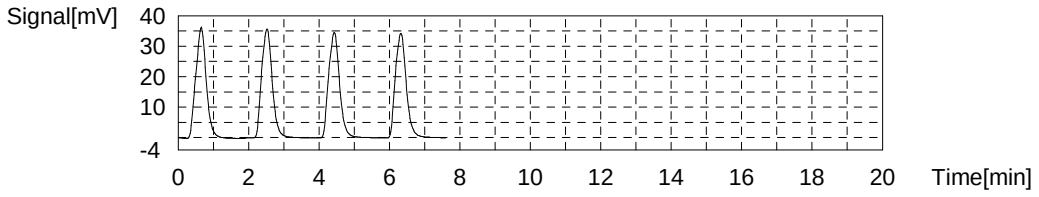
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.70mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.97	23.94mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:24:57 AM
2	75.57	23.82mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:27:01 AM
3	74.96	23.63mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:29:05 AM
4	74.23	23.40mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:31:09 AM

Mean Area 75.18
Mean Conc. 23.70mg/L
Vial 60



Sample

Sample Name: MS 280-116281-e-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

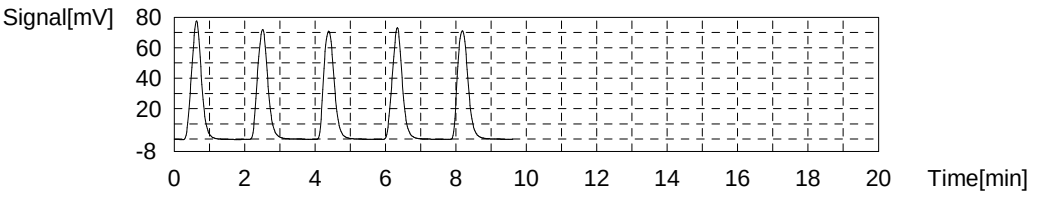
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:47.41mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	153.3	48.26mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:39:42 AM
2	149.1	46.93mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:41:46 AM
3	148.5	46.75mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:43:50 AM
4	146.1	45.99mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:45:54 AM
5	151.6	47.72mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:48:05 AM

Mean Area 150.6
Mean Conc. 47.41mg/L
Vial 61



Sample

Sample Name: MSD 280-116281-e-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

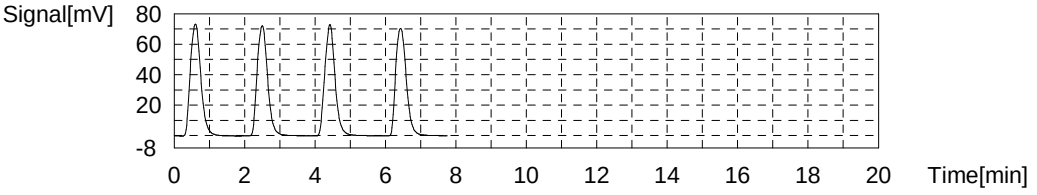
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:47.34mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	153.9	48.44mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:56:37 AM
2	149.9	47.19mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 10:58:41 AM
3	149.2	46.97mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:00:54 AM
4	148.5	46.75mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:02:58 AM

Mean Area 150.4
Mean Conc. 47.34mg/L
Vial 62



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

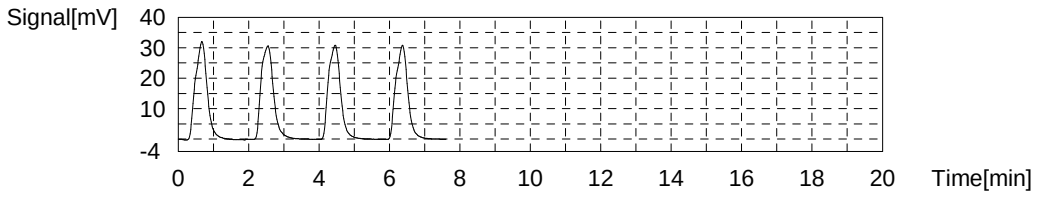
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.35	24.06mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:11:31 AM
2	75.58	23.82mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:13:35 AM
3	74.59	23.51mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:15:39 AM
4	73.37	23.13mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:17:43 AM

Mean Area 74.97
Mean Conc. 23.63mg/L
Vial 63



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

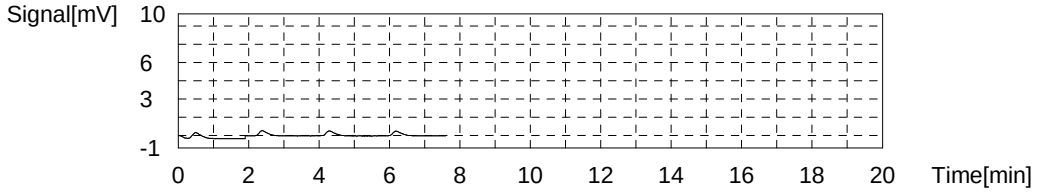
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2751mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7721	0.3033mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:26:16 AM
2	0.6967	0.2796mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:28:20 AM
3	0.6328	0.2595mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:30:24 AM
4	0.6276	0.2579mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	10/31/2018 11:32:28 AM

Mean Area 0.6823
Mean Conc. 0.2751mg/L
Vial 64



TOC-V Cal Curve Information
C:¥TOC3201¥CalCurves¥TOC3.2018_10_23_09_05_36.cal

Date of Creation 10:10:39 AM 10/23/2018
User ||
System TOC-V cpn 3

Cal. Curve

Sample Name: CAL 110716
Sample ID: Untitled
Object ID 0A-103108-04335027-133F01F16135-0000
Cal. Curve: TOC3.cal
Status Completed
Comment:

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.1620	50uL	1	*******		10/23/2018 9:13:18 A
2	0.2116	50uL	1	*******		10/23/2018 9:15:21 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 0.1868
SD Area 0.03507
CV Area 18.78%
Vial 1

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.481	50uL	1	*******		10/23/2018 9:23:56 A
2	3.336	50uL	1	*******		10/23/2018 9:25:59 A
3	3.715	50uL	1	*******	E	10/23/2018 9:28:03 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 3.409
SD Area 0.1025
CV Area 3.01%
Vial 2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	15.68	50uL	1	*******		10/23/2018 9:36:33 A
2	15.64	50uL	1	*******		10/23/2018 9:38:36 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 15.66
SD Area 0.02828
CV Area 0.18%
Vial 3

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	31.61	50uL	1	*******		10/23/2018 9:47:10 A
2	31.15	50uL	1	*******		10/23/2018 9:49:14 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 31.38
SD Area 0.3253
CV Area 1.04%
Vial 4

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	78.47	50uL	1	*******		10/23/2018 9:57:49 A
2	77.96	50uL	1	*******		10/23/2018 9:59:58 A

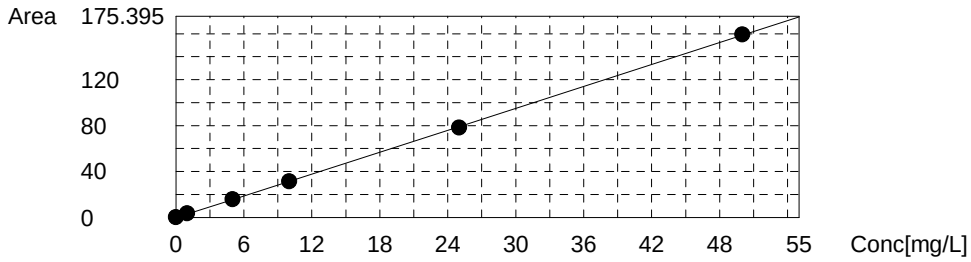
Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 78.22
SD Area 0.3606
CV Area 0.46%
Vial 5

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.4	50uL	1	*******		10/23/2018 10:08:35
2	158.5	50uL	1	*******		10/23/2018 10:10:39

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 159.4
SD Area 1.344
CV Area 0.84%
Vial 6

Slope: 3.181
Intercept -0.1928
r^2 0.9999
r 0.9999
Zero Shift No



9060 RH 11/6/18 TOC DOC-LF

	Analysis	Sample Name	Manual Dilut	Result	Notes	Date / Time	Vial
1*	NPOC	ICV	1.000	LZ			1
2*	NPOC	ICB	1.000	LZ			2
3*	NPOC	LCS	1.000	LZ			3
4*	NPOC	MB	1.000	LZ			4
5*	NPOC	TIC	1.000	LZ			5
6*	NPOC	280-116054-a-9	1.000	LZ			6
7*	NPOC	MS 280-116054-a-9	1.000	LZ			7
8*	NPOC	MSD 280-116054-a-9	1.000	LZ			8
9*	NPOC	280-116054-a-11	1.000	LZ			9
10*	NPOC	280-116054-a-13	1.000	LZ			10
11*	NPOC	280-116054-a-17	1.000	LZ			11
12*	NPOC	280-116054-c-19	1.000	LZ			12
13*	NPOC	280-116054-b-21	1.000	LZ			13
14*	NPOC	280-116054-b-24	1.000	LZ			14
15*	NPOC	CCV	1.000	LZ			15
16*	NPOC	CCB	1.000	LZ			16
17*	NPOC	280-116074-a-4	1.000	LZ			17
18*	NPOC	280-116074-a-6	1.000	LZ			18
19*	NPOC	280-116085-c-1	1.000	LZ			19
20*	NPOC	280-116054-a-15	1.000	LZ			20
21*	NPOC	MS 280-116054-a-15	1.000	LZ			21
22*	NPOC	MSD 280-116054-a-15	1.000	LZ			22
23*	NPOC	280-116085-c-3	1.000	LZ			23
24*	NPOC	280-116085-c-4	1.000	LZ			24
25*	NPOC	280-116085-c-5	1.000	LZ			25
26*	NPOC	280-116085-c-6	1.000	LZ			26
27*	NPOC	CCV	1.000	LZ			27
28*	NPOC	CCB	1.000	LZ			28
29*	NPOC	280-116135-c-3	1.000	LZ			29
30*	NPOC	280-116135-a-5	1.000	LZ			30
31*	NPOC	280-116135-c-7	1.000	LZ			31
32*	NPOC	280-116135-a-11	1.000	LZ			32
33*	NPOC	280-116135-c-13	1.000	LZ			33
34*	NPOC	LCS	1.000	LZ			34
35*	NPOC	MB	1.000	LZ			35
36*	NPOC	TIC	1.000	LZ			36
37*	NPOC	280-116135-b-15	1.000	LZ			37
38*	NPOC	MS 280-116135-b-15	1.000	LZ			38
39*	NPOC	CCV	1.000	LZ			39
40*	NPOC	CCB	1.000	LZ			40
41*	NPOC	MSD 280-116135-b-15	1.000	LZ			41
42*	NPOC	280-116135-b-17	1.000	LZ			42
43*	NPOC	280-116204-b-1	1.000	LZ			43
44*	NPOC	280-116204-b-2	1.000	LZ			44
45*	NPOC	280-116204-c-1	1.000	LZ			45
46*	NPOC	280-116204-c-2	1.000	LZ			46
47*	NPOC	320-445515-m-1	1.000	LZ			47
48*	NPOC	320-445515-m-2	1.000	LZ			48
49*	NPOC	320-445515-m-3	1.000	LZ			49
50*	NPOC	320-445515-m-4	1.000	LZ			50
51*	NPOC	CCV	1.000	LZ			51

11/6/18

	Analysis	Sample Name	Manual Dilut	Result	Notes	Date / Time	Vial
52*	NPOC	CCB	1.000	LZ			52
53*	NPOC	680-160018-k-3	1.000	LZ			53
54*	NPOC	MS 680-160018-k-3	1.000	LZ			54
55*	NPOC	MSD 680-160018-k-3	1.000	LZ			55
56*	NPOC	680-160018-k-7	1.000	LZ			56
57*	NPOC	680-160018-k-8	2 ~~2.000~~	LZ	Particle		57
58*	NPOC	680-160018-k-10	1.000	LZ			58
59*	NPOC	680-160018-l-13	1.000	LZ			59
60*	NPOC	680-160018-k-14	1.000	LZ			60
61*	NPOC	680-160018-k-15	1.000	LZ			61
62*	NPOC	lcs 280-436465/1-a	1.000	LZ			62
63*	NPOC	CCV	1.000	LZ			63
64*	NPOC	CCB	1.000	LZ			64
65*	NPOC	mb 280-436465/2-a	1.000	LZ			65
66*	NPOC	TIC	1.000	LZ			66
67*	NPOC	280-116017-a-2-b	1.000	7			67
68*	NPOC	280-116017-a-2-c ms	1.000	7			68
69*	NPOC	280-116017-a-2-d msd	1.000	7			69
70*	NPOC	280-116017-b-1-a	1.000	7			70
71*	NPOC	280-115976-a-32-d	1.000	7			71
72*	NPOC	CCV	1.000	LZ			72
73*	NPOC	CCB	1.000	LZ			73

	Analysis	Sample Name	Manual Diluti	Result	Notes	Date / Time	Vial
1	NPOC	ICV	1.000	NPOC:18.64		11/6/2018 10:	1
2	NPOC	ICB	1.000	NPOC:0.1819		11/6/2018 11:	2
3	NPOC	LCS	1.000	NPOC:22.52		11/6/2018 11:	3
4	NPOC	LCS	1.000	NPOC:22.65		11/6/2018 12:	74
5	NPOC	MB	1.000	NPOC:0.2230		11/6/2018 11:	4
6	NPOC	TIC	1.000	NPOC:0.2317		11/6/2018 12:	5
7	NPOC	280-116054-a-9	1.000	NPOC:3.472		11/6/2018 12:	6
8	NPOC	MS 280-116054-a-9	1.000	NPOC:26.18		11/6/2018 1:0	7
9	NPOC	MSD 280-116054-a-9	1.000	NPOC:26.26		11/6/2018 1:1	8
10	NPOC	280-116054-a-11	1.000	NPOC:2.142		11/6/2018 1:3	9
11	NPOC	280-116054-a-13	1.000	NPOC:2.049		11/6/2018 1:5	10
12	NPOC	280-116054-a-17	1.000	NPOC:0.5355		11/6/2018 2:0	11
13	NPOC	280-116054-c-19	1.000	NPOC:3.711		11/6/2018 2:2	12
14	NPOC	280-116054-b-21	1.000	NPOC:3.257		11/6/2018 2:3	13
15	NPOC	280-116054-b-24	1.000	NPOC:0.4155		11/6/2018 2:5	14
16	NPOC	CCV	1.000	NPOC:22.55		11/6/2018 3:1	15
17	NPOC	CCB	1.000	NPOC:0.2112		11/6/2018 3:2	16
18	NPOC	280-116074-a-4	1.000	NPOC:5.183		11/6/2018 3:4	17
19	NPOC	280-116074-a-6	1.000	NPOC:4.185		11/6/2018 4:0	18
20	NPOC	280-116085-c-1	1.000	NPOC:1.003		11/6/2018 4:2	19
21	NPOC	280-116054-a-15	1.000	NPOC:0.6037		11/6/2018 4:3	20
22	NPOC	MS 280-116054-a-15	1.000	NPOC:23.91		11/6/2018 4:5	21
23	NPOC	MSD 280-116054-a-15	1.000	NPOC:23.97		11/6/2018 5:0	22
24	NPOC	280-116085-c-3	1.000	NPOC:2.283		11/6/2018 5:2	23
25	NPOC	280-116085-c-4	1.000	NPOC:1.601		11/6/2018 5:3	24
26	NPOC	280-116085-c-5	1.000	NPOC:2.584		11/6/2018 5:5	25
27	NPOC	280-116085-c-6	1.000	NPOC:2.671		11/6/2018 6:0	26
28	NPOC	CCV	1.000	NPOC:23.00		11/6/2018 6:2	27
29	NPOC	CCB	1.000	NPOC:0.2387		11/6/2018 6:4	28
30	NPOC	280-116135-c-3	1.000	NPOC:0.4456		11/6/2018 6:5	29
31	NPOC	280-116135-a-5	1.000	NPOC:4.229		11/6/2018 7:1	30
32	NPOC	280-116135-c-7	1.000	NPOC:5.940		11/6/2018 7:2	31
33	NPOC	280-116135-a-11	1.000	NPOC:0.9241		11/6/2018 7:4	32
34	NPOC	280-116135-c-13	1.000	NPOC:0.7738		11/6/2018 8:0	33
35	NPOC	LCS	1.000	NPOC:22.94		11/6/2018 8:1	34
36	NPOC	MB	1.000	NPOC:0.2698		11/6/2018 8:3	35
37	NPOC	TIC	1.000	NPOC:0.3675		11/6/2018 8:4	36
38	NPOC	280-116135-b-15	1.000	NPOC:1.159		11/6/2018 9:0	37
39	NPOC	MS 280-116135-b-15	1.000	NPOC:24.90		11/6/2018 9:2	38
40	NPOC	CCV	1.000	NPOC:23.13		11/6/2018 9:3	39
41	NPOC	CCB	1.000	NPOC:0.2535		11/6/2018 9:5	40
42	NPOC	MSD 280-116135-b-15	1.000	NPOC:24.90		11/6/2018 10:	41
43	NPOC	280-116135-b-17	1.000	NPOC:0.5670		11/6/2018 10:	42
44	NPOC	280-116204-b-1	1.000	NPOC:0.7188		11/6/2018 10:	43
45	NPOC	280-116204-b-2	1.000	NPOC:0.5442		11/6/2018 10:	44
46	NPOC	280-116204-c-1	1.000	NPOC:0.9908		11/6/2018 11:	45
47	NPOC	280-116204-c-2	1.000	NPOC:0.7280		11/6/2018 11:	46
48	NPOC	320-44515-m-1	1.000	NPOC:0.4635		11/6/2018 11:	47
49	NPOC	320-44515-m-2	1.000	NPOC:1.904		11/7/2018 12:	48
50	NPOC	320-44515-m-3	1.000	NPOC:1.244		11/7/2018 12:	49
51	NPOC	320-44515-m-4	1.000	NPOC:3.879		11/7/2018 12:	50
52	NPOC	CCV	1.000	NPOC:23.02		11/7/2018 12:	51
53	NPOC	CCB	1.000	NPOC:0.2925		11/7/2018 1:0	52

	Analysis	Sample Name	Manual Diluti	Result	Notes	Date / Time	Vial
54	NPOC	680-160018-k-3	1.000	NPOC:17.40		11/7/2018 1:2	53
55	NPOC	MS 680-160018-k-3	1.000	NPOC:40.80		11/7/2018 1:3	54
56	NPOC	MSD 680-160018-k-3	1.000	NPOC:40.56		11/7/2018 1:5	55
57	NPOC	680-160018-k-7	1.000	NPOC:1.626		11/7/2018 2:1	56
58	NPOC	680-160018-k-8	2.000	NPOC:6.763		11/7/2018 2:3	57
59	NPOC	680-160018-k-10	1.000	NPOC:4.765		11/7/2018 2:4	58
60	NPOC	680-160018-l-13	1.000	NPOC:0.5884		11/7/2018 3:0	59
61	NPOC	680-160018-k-14	1.000	NPOC:8.425		11/7/2018 3:1	60
62	NPOC	680-160018-k-15	1.000	NPOC:8.494		11/7/2018 3:3	61
63	NPOC	lcs 280-436465/1-a	1.000	NPOC:23.49		11/7/2018 3:4	62
64	NPOC	CCV	1.000	NPOC:23.42		11/7/2018 4:0	63
65	NPOC	CCB	1.000	NPOC:0.3130		11/7/2018 4:2	64
66	NPOC	mb 280-436465/2-a	1.000	NPOC:0.3487		11/7/2018 4:4	65
67	NPOC	TIC	1.000	NPOC:0.2877		11/7/2018 4:5	66
68	NPOC	280-116017-a-2-b	1.000	NPOC:0.9061		11/7/2018 5:1	67
69	NPOC	280-116017-a-2-c ms	1.000	NPOC:24.24		11/7/2018 5:3	68
70	NPOC	280-116017-a-2-d msd	1.000	NPOC:25.01		11/7/2018 5:4	69
71	NPOC	280-116017-b-1-a	1.000	NPOC:0.9239		11/7/2018 6:0	70
72	NPOC	280-115976-a-32-d	1.000	NPOC:2.406		11/7/2018 6:1	71
73	NPOC	CCV	1.000	NPOC:23.90		11/7/2018 6:3	72
74	NPOC	CCB	1.000	NPOC:0.3023		11/7/2018 6:4	73

Instr.Information

System	TOC-V cpn 3
Instrument Options	TOC/ASI/
Catalyst	Regular Sensitivity

Sample

Sample Name:	ICV
Sample ID:	
Origin:	NPOC.met
Status	Completed
Chk. Result	

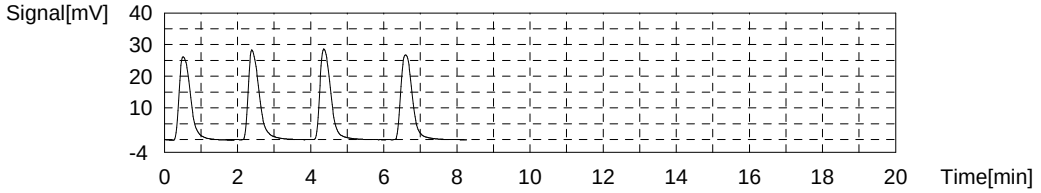
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:18.64mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.77	18.22mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:39:20 AM
2	59.66	18.82mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:41:27 AM
3	59.73	18.84mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:43:49 AM
4	59.28	18.70mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:46:12 AM

Mean Area	59.11
Mean Conc.	18.64mg/L
Vial	1



Sample

Sample Name:	ICB
Sample ID:	
Origin:	NPOC.met
Status	Completed
Chk. Result	

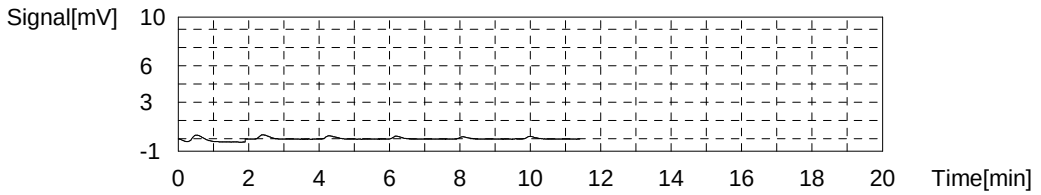
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1819mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.145	0.4206mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:54:43 AM
2	0.6742	0.2726mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:56:47 AM
3	0.5357	0.2290mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:58:51 AM
4	0.3750	0.1785mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:00:55 AM
5	0.2925	0.1526mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:02:59 AM
6	0.3400	0.1675mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:05:03 AM

Mean Area	0.3858
Mean Conc.	0.1819mg/L
Vial	2



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

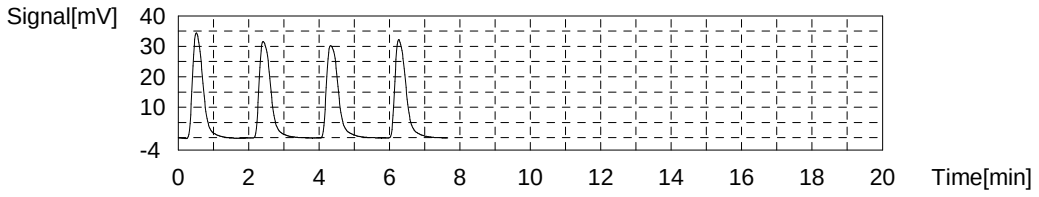
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.52mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.00	22.70mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:13:28 AM
2	71.82	22.64mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:15:32 AM
3	71.22	22.45mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:17:39 AM
4	70.75	22.30mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:19:43 AM

Mean Area 71.45
Mean Conc. 22.52mg/L
Vial 3



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

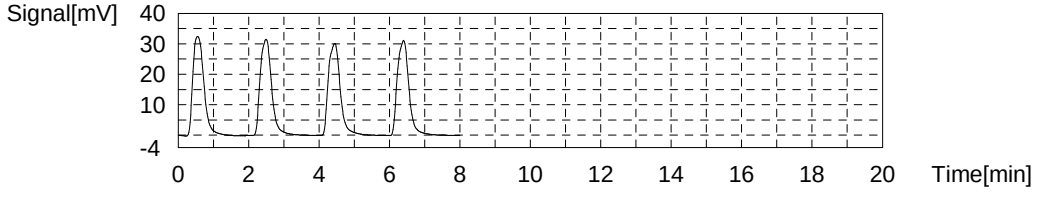
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.25	22.77mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:05:56 PM
2	71.96	22.68mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:08:02 PM
3	71.47	22.53mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:10:09 PM
4	71.73	22.61mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:12:32 PM

Mean Area 71.85
Mean Conc. 22.65mg/L
Vial 74



Sample

Sample Name: MB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

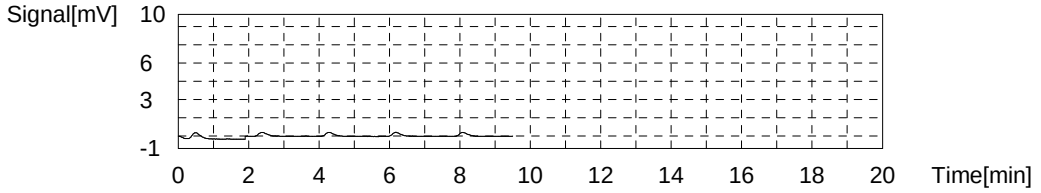
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2230mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7973	0.3113mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:28:14 AM
2	0.5112	0.2213mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:30:18 AM
3	0.5409	0.2306mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:32:22 AM
4	0.5029	0.2187mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:34:26 AM
5	0.5114	0.2214mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:36:30 AM

Mean Area 0.5166
Mean Conc. 0.2230mg/L
Vial 4



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

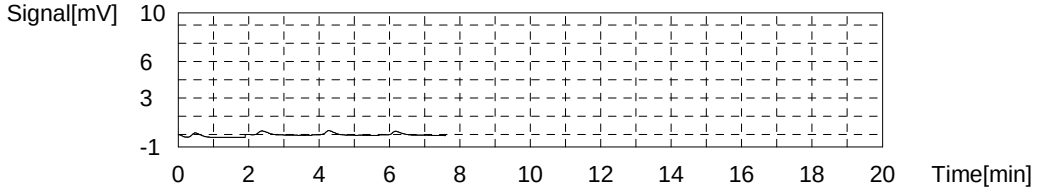
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2317mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5483	0.2330mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:26:39 PM
2	0.5656	0.2384mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:28:43 PM
3	0.5702	0.2399mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:30:47 PM
4	0.4923	0.2154mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:32:51 PM

Mean Area 0.5441
Mean Conc. 0.2317mg/L
Vial 5



Sample

Sample Name: 280-116054-a-9
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

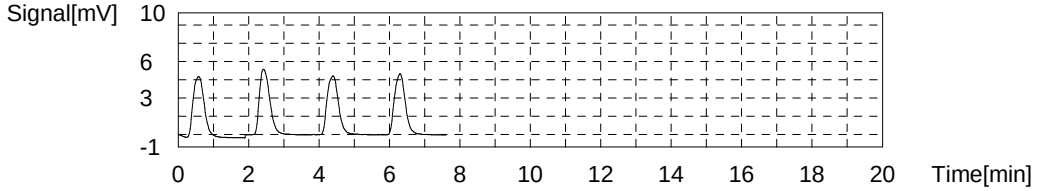
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.472mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.97	3.509mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:41:22 PM
2	11.03	3.528mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:43:26 PM
3	10.68	3.418mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:45:30 PM
4	10.73	3.434mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:47:34 PM

Mean Area 10.85
Mean Conc. 3.472mg/L
Vial 6



Sample

Sample Name: MS 280-116054-a-9
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

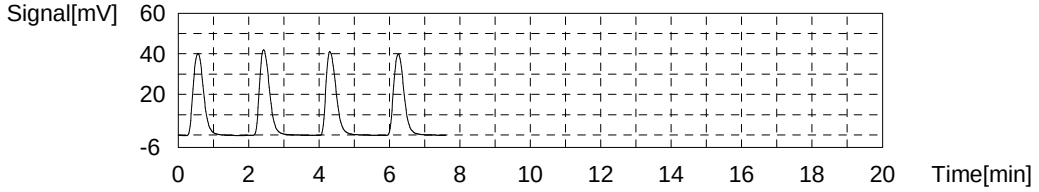
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.18mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	83.76	26.39mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:56:05 PM
2	83.45	26.30mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 12:58:09 PM
3	82.87	26.11mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:00:13 PM
4	82.24	25.92mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:02:17 PM

Mean Area 83.08
Mean Conc. 26.18mg/L
Vial 7



Sample

Sample Name: MSD 280-116054-a-9
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

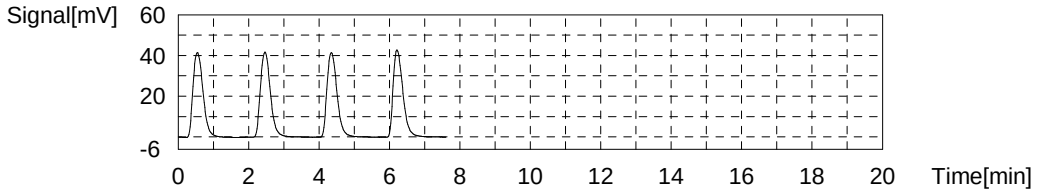
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.26mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	83.86	26.42mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:10:48 PM
2	83.33	26.26mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:12:52 PM
3	82.91	26.13mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:14:56 PM
4	83.24	26.23mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:17:00 PM

Mean Area 83.34
Mean Conc. 26.26mg/L
Vial 8



Sample

Sample Name: 280-116054-a-11
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

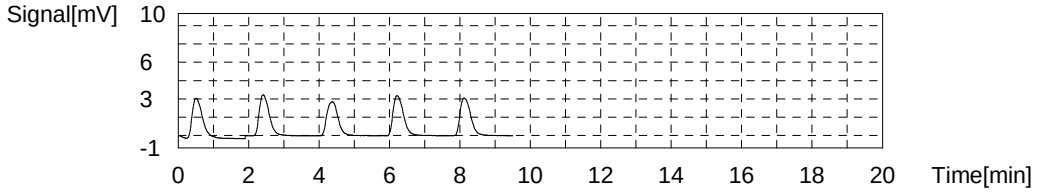
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.142mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.672	2.158mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:25:31 PM
2	6.635	2.147mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:27:35 PM
3	6.054	1.964mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:29:39 PM
4	6.733	2.177mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:31:43 PM
5	6.440	2.085mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:33:47 PM

Mean Area 6.620
Mean Conc. 2.142mg/L
Vial 9



Sample

Sample Name: 280-116054-a-13
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

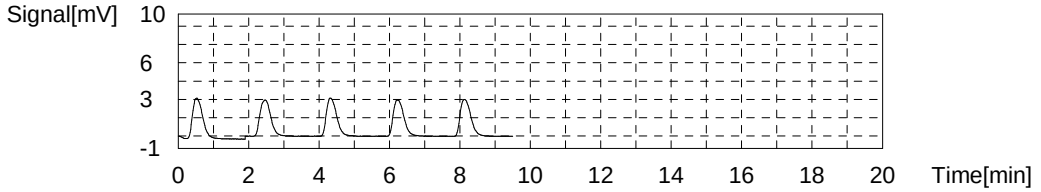
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.049mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.668	2.157mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:42:17 PM
2	6.322	2.048mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:44:21 PM
3	6.327	2.050mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:46:25 PM
4	6.241	2.023mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:48:29 PM
5	6.407	2.075mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:50:33 PM

Mean Area 6.324
Mean Conc. 2.049mg/L
Vial 10



Sample

Sample Name: 280-116054-a-17
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

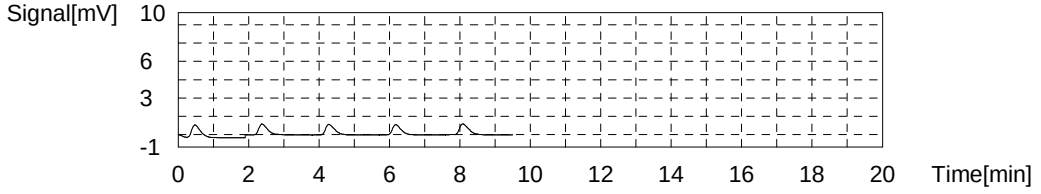
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5355mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.706	0.5969mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 1:59:03 PM
2	1.521	0.5388mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:01:07 PM
3	1.512	0.5359mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:03:11 PM
4	1.412	0.5045mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:05:15 PM
5	1.598	0.5630mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:07:19 PM

Mean Area 1.511
Mean Conc. 0.5355mg/L
Vial 11



Sample

Sample Name: 280-116054-c-19
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

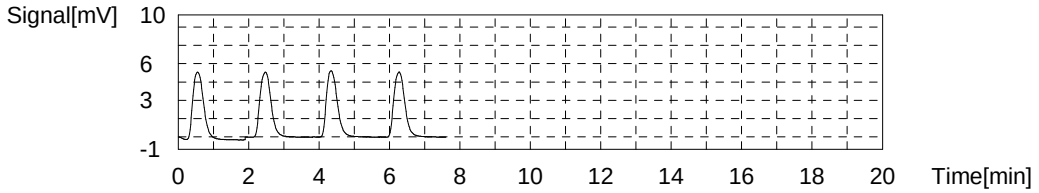
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.711mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.77	3.761mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:15:49 PM
2	11.68	3.733mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:17:53 PM
3	11.56	3.695mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:19:57 PM
4	11.44	3.657mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:22:01 PM

Mean Area 11.61
Mean Conc. 3.711mg/L
Vial 12



Sample

Sample Name: 280-116054-b-21
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

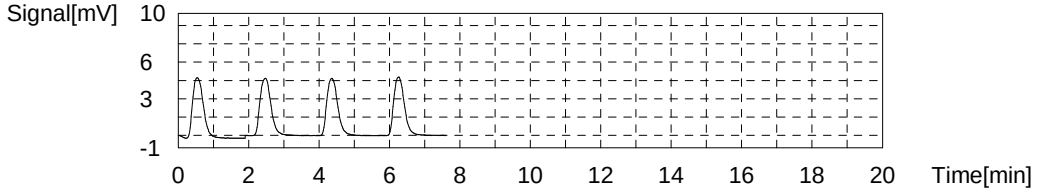
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.257mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.46	3.349mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:30:32 PM
2	10.14	3.248mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:32:36 PM
3	10.02	3.211mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:34:40 PM
4	10.05	3.220mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:36:44 PM

Mean Area 10.17
Mean Conc. 3.257mg/L
Vial 13



Sample

Sample Name: 280-116054-b-24
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

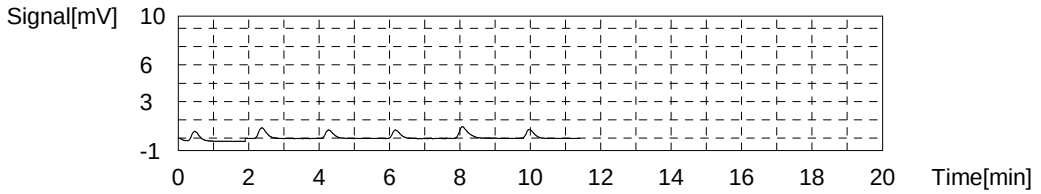
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4155mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.183	0.4325mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:45:16 PM
2	1.376	0.4932mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:47:20 PM
3	1.110	0.4096mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:49:24 PM
4	1.084	0.4014mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:51:28 PM
5	1.665	0.5840mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:53:32 PM
6	1.138	0.4184mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 2:55:35 PM

Mean Area 1.129
Mean Conc. 0.4155mg/L
Vial 14



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

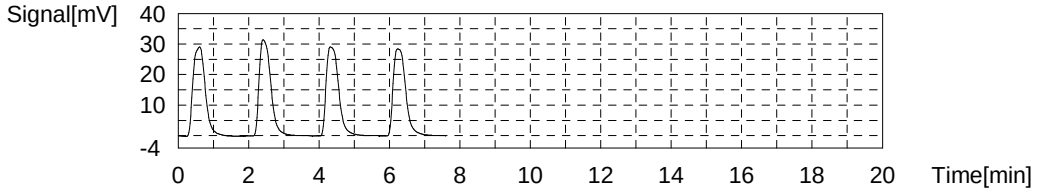
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.55mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	71.74	22.61mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:04:01 PM
2	72.32	22.80mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:06:05 PM
3	71.57	22.56mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:08:09 PM
4	70.51	22.23mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:10:13 PM

Mean Area 71.53
Mean Conc. 22.55mg/L
Vial 15



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

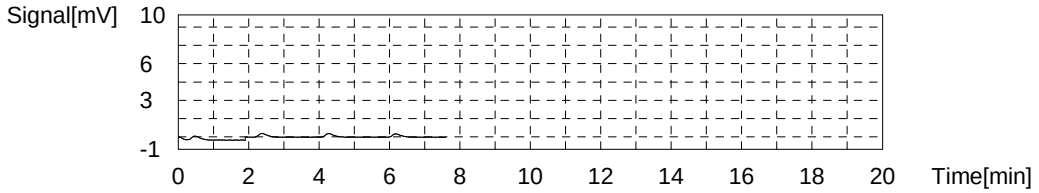
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2112mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4801	0.2115mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:18:44 PM
2	0.5186	0.2236mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:20:48 PM
3	0.4684	0.2079mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:22:52 PM
4	0.4495	0.2019mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:24:56 PM

Mean Area 0.4792
Mean Conc. 0.2112mg/L
Vial 16



Sample

Sample Name: 280-116074-a-4
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

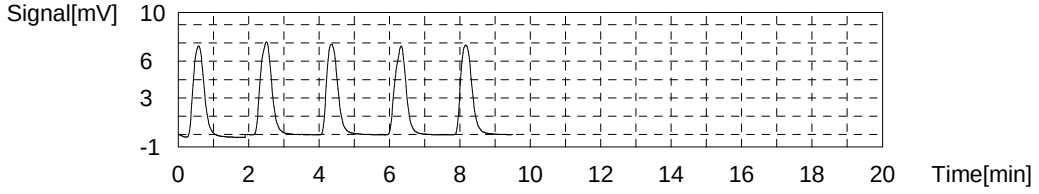
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.183mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.25	5.169mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:40:37 PM
2	17.16	5.455mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:42:41 PM
3	16.31	5.188mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:44:45 PM
4	16.14	5.135mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:46:49 PM
5	16.48	5.242mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:48:53 PM

Mean Area 16.30
Mean Conc. 5.183mg/L
Vial 17



Sample

Sample Name: 280-116074-a-6
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

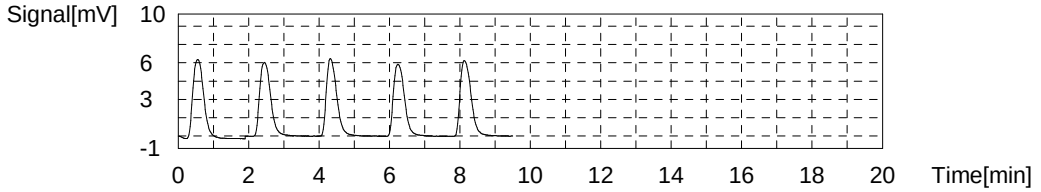
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.185mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.89	4.427mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:57:23 PM
2	13.15	4.195mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 3:59:27 PM
3	13.03	4.157mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:01:31 PM
4	12.87	4.107mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:03:35 PM
5	13.43	4.283mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:05:39 PM

Mean Area 13.12
Mean Conc. 4.185mg/L
Vial 18



Sample

Sample Name: 280-116085-c-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

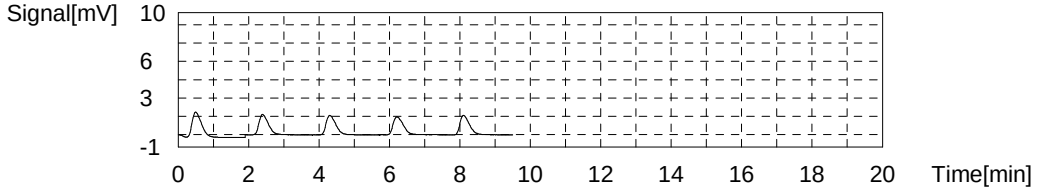
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.003mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.741	1.237mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:14:09 PM
2	3.071	1.026mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:16:13 PM
3	3.009	1.007mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:18:17 PM
4	2.923	0.9795mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:20:21 PM
5	2.988	1.0000mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:22:25 PM

Mean Area 2.998
Mean Conc. 1.003mg/L
Vial 19



Sample

Sample Name: 280-116054-a-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

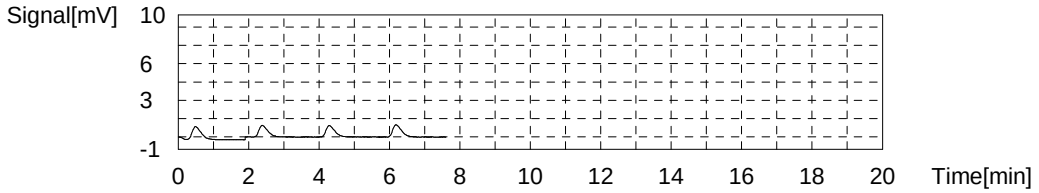
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6037mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.852	0.6428mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:30:55 PM
2	1.671	0.5859mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:32:59 PM
3	1.635	0.5746mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:35:03 PM
4	1.752	0.6114mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:37:07 PM

Mean Area 1.728
Mean Conc. 0.6037mg/L
Vial 20



Sample

Sample Name: MS 280-116054-a-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

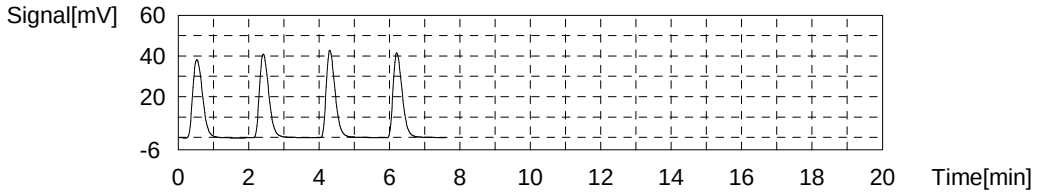
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.91mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.63	23.84mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:45:38 PM
2	76.22	24.02mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:47:42 PM
3	75.94	23.93mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:49:46 PM
4	75.63	23.84mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 4:51:50 PM

Mean Area 75.86
Mean Conc. 23.91mg/L
Vial 21



Sample

Sample Name: MSD 280-116054-a-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

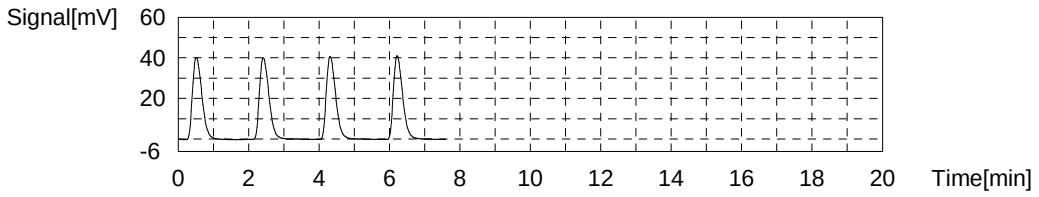
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.58	24.14mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:00:21 PM
2	75.96	23.94mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:02:25 PM
3	75.77	23.88mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:04:29 PM
4	75.96	23.94mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:06:33 PM

Mean Area 76.07
Mean Conc. 23.97mg/L
Vial 22



Sample

Sample Name: 280-116085-c-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

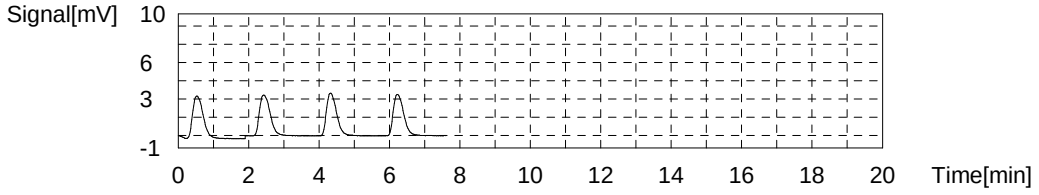
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.283mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.220	2.330mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:15:04 PM
2	7.087	2.289mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:17:08 PM
3	7.009	2.264mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:19:12 PM
4	6.963	2.250mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:21:16 PM

Mean Area 7.070
Mean Conc. 2.283mg/L
Vial 23



Sample

Sample Name: 280-116085-c-4
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

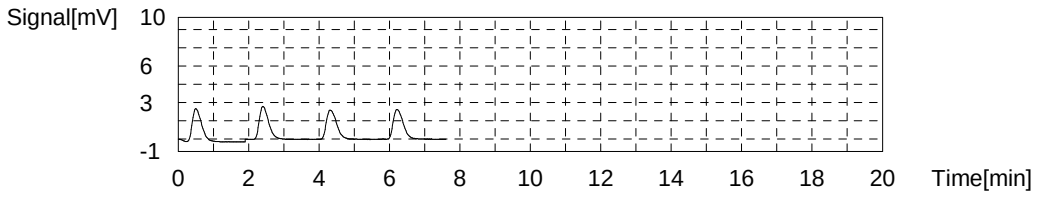
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.601mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.901	1.601mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:29:48 PM
2	5.016	1.638mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:31:52 PM
3	4.863	1.589mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:33:56 PM
4	4.818	1.575mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:36:00 PM

Mean Area 4.900
Mean Conc. 1.601mg/L
Vial 24



Sample

Sample Name: 280-116085-c-5
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

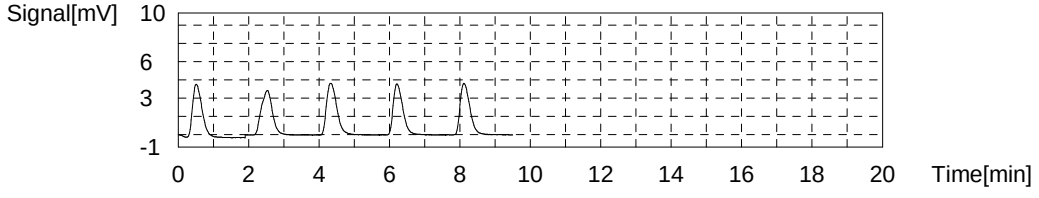
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.584mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.109	2.610mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:44:31 PM
2	7.990	2.573mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:46:35 PM
3	8.619	2.770mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:48:39 PM
4	7.860	2.532mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:50:43 PM
5	8.148	2.622mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 5:52:47 PM

Mean Area 8.027
Mean Conc. 2.584mg/L
Vial 25



Sample

Sample Name: 280-116085-c-6
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

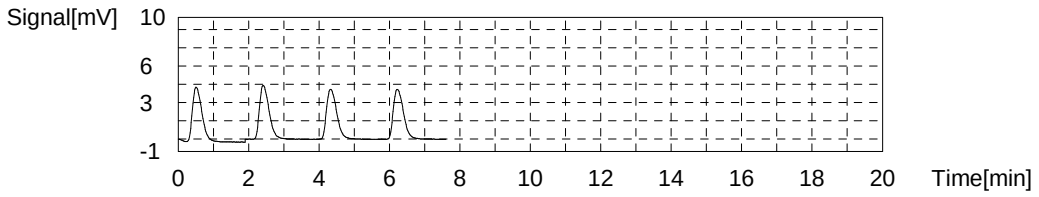
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.671mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.289	2.667mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:01:17 PM
2	8.419	2.707mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:03:21 PM
3	8.279	2.663mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:05:25 PM
4	8.225	2.646mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:07:29 PM

Mean Area 8.303
Mean Conc. 2.671mg/L
Vial 26



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

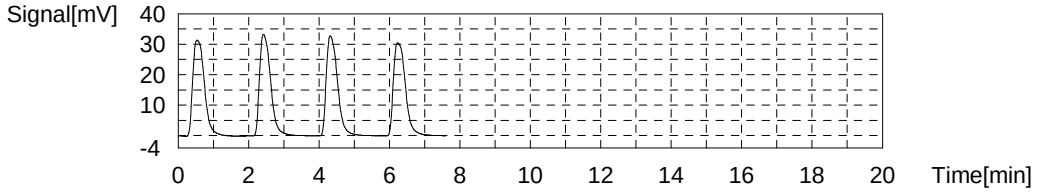
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.00mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	73.35	23.12mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:16:01 PM
2	73.13	23.05mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:18:05 PM
3	72.98	23.00mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:20:09 PM
4	72.41	22.82mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:22:13 PM

Mean Area 72.97
Mean Conc. 23.00mg/L
Vial 27



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

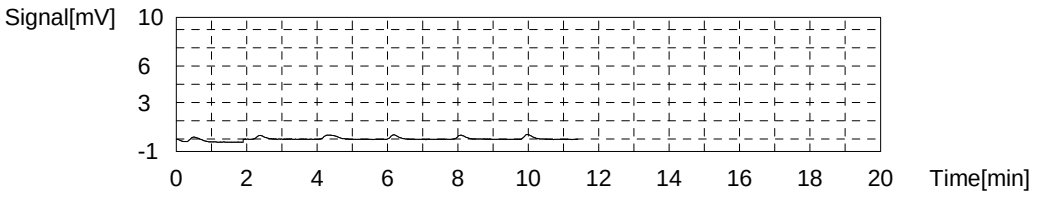
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2387mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7301	0.2901mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:30:44 PM
2	0.5030	0.2187mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:32:48 PM
3	0.9175	0.3490mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:34:52 PM
4	0.5840	0.2442mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:36:56 PM
5	0.5075	0.2201mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:39:00 PM
6	0.6719	0.2718mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:41:04 PM

Mean Area 0.5666
Mean Conc. 0.2387mg/L
Vial 28



Sample

Sample Name: 280-116135-c-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

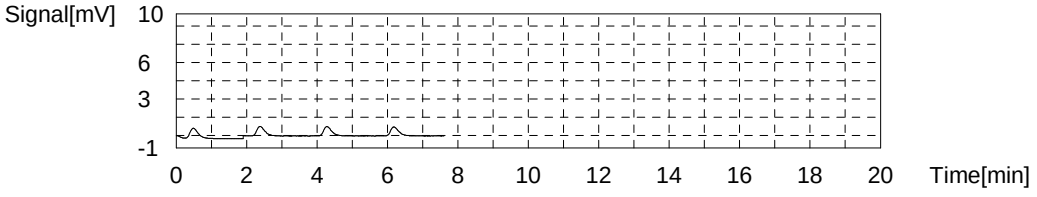
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4456mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.328	0.4781mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:49:29 PM
2	1.210	0.4410mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:51:33 PM
3	1.186	0.4335mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:53:37 PM
4	1.174	0.4297mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 6:55:41 PM

Mean Area 1.225
Mean Conc. 0.4456mg/L
Vial 29



Sample

Sample Name: 280-116135-a-5
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

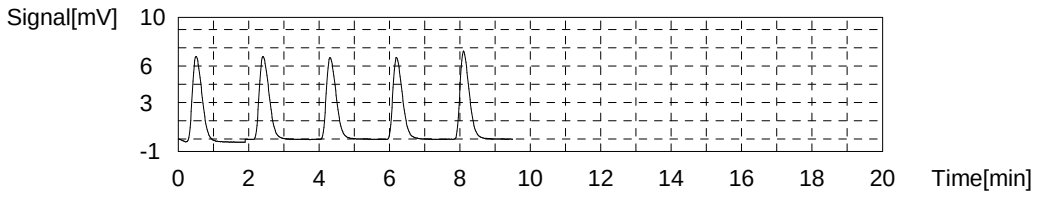
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.229mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.42	4.280mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:04:12 PM
2	13.33	4.251mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:06:16 PM
3	13.03	4.157mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:08:20 PM
4	12.72	4.060mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:10:24 PM
5	13.25	4.226mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:12:28 PM

Mean Area 13.26
Mean Conc. 4.229mg/L
Vial 30



Sample

Sample Name: 280-116135-c-7
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

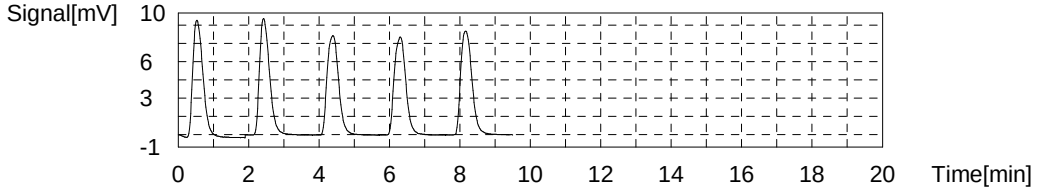
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.940mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.32	6.134mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:20:58 PM
2	18.90	6.002mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:23:02 PM
3	18.58	5.902mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:25:06 PM
4	18.38	5.839mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:27:10 PM
5	18.95	6.018mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:29:14 PM

Mean Area 18.70
Mean Conc. 5.940mg/L
Vial 31



Sample

Sample Name: 280-116135-a-11
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

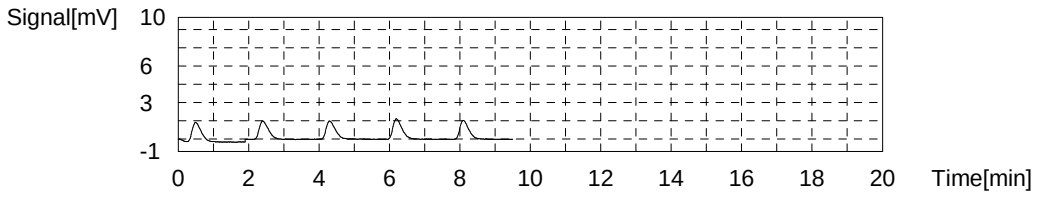
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9241mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.806	0.9428mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:37:45 PM
2	2.742	0.9226mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:39:49 PM
3	2.687	0.9053mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:41:53 PM
4	3.022	1.011mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:43:57 PM
5	2.752	0.9258mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:46:01 PM

Mean Area 2.747
Mean Conc. 0.9241mg/L
Vial 32



Sample

Sample Name: 280-116135-c-13
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

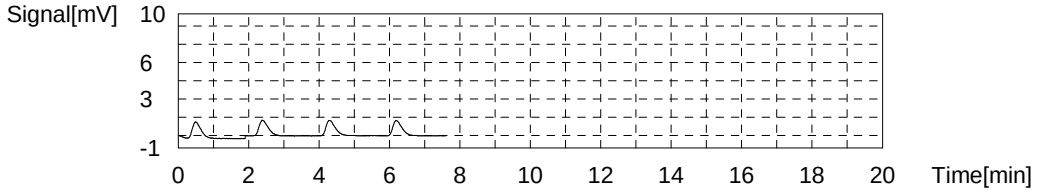
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7738mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.232	0.7623mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:54:32 PM
2	2.314	0.7881mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:56:36 PM
3	2.294	0.7818mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 7:58:40 PM
4	2.234	0.7629mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:00:44 PM

Mean Area 2.269
Mean Conc. 0.7738mg/L
Vial 33



Sample

Sample Name: LCS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

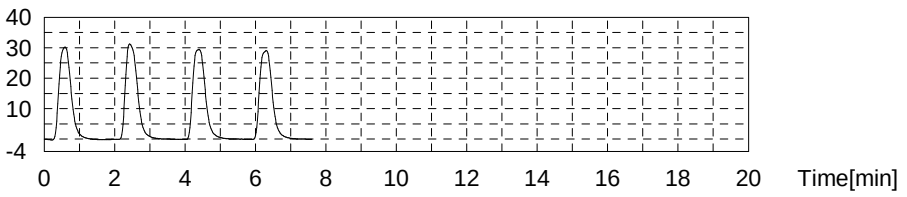
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.94mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.49	22.85mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:09:16 PM
2	73.56	23.19mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:11:20 PM
3	72.93	22.99mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:13:24 PM
4	72.11	22.73mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:15:28 PM

Mean Area 72.77
Mean Conc. 22.94mg/L
Vial 34



Sample

Sample Name: MB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

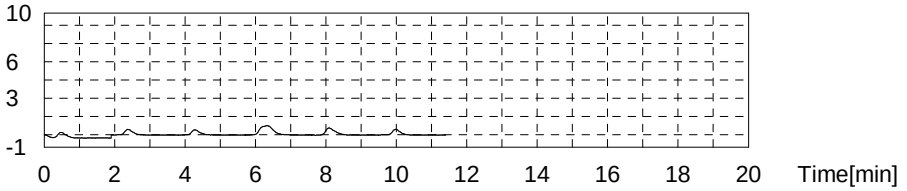
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2698mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6831	0.2754mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:24:00 PM
2	0.6819	0.2750mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:26:04 PM
3	0.6426	0.2626mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:28:08 PM
4	1.910	0.6611mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:30:12 PM
5	1.064	0.3951mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:32:16 PM
6	0.6537	0.2661mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:34:19 PM

Mean Area 0.6653
Mean Conc. 0.2698mg/L
Vial 35



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

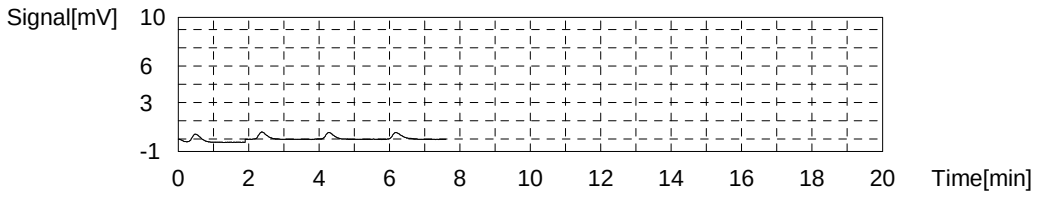
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3675mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.045	0.3891mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:42:45 PM
2	0.9649	0.3639mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:44:49 PM
3	0.8595	0.3308mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:46:53 PM
4	1.036	0.3863mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:48:57 PM

Mean Area 0.9764
Mean Conc. 0.3675mg/L
Vial 36



Sample

Sample Name: 280-116135-b-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

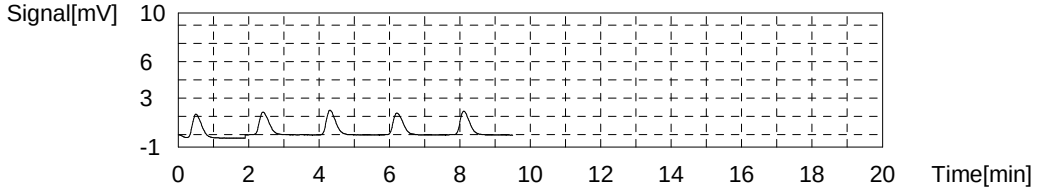
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.159mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.423	1.137mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:57:29 PM
2	3.501	1.161mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 8:59:33 PM
3	3.725	1.232mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:01:37 PM
4	3.452	1.146mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:03:41 PM
5	3.599	1.192mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:05:45 PM

Mean Area 3.494
Mean Conc. 1.159mg/L
Vial 37



Sample

Sample Name: MS 280-116135-b-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

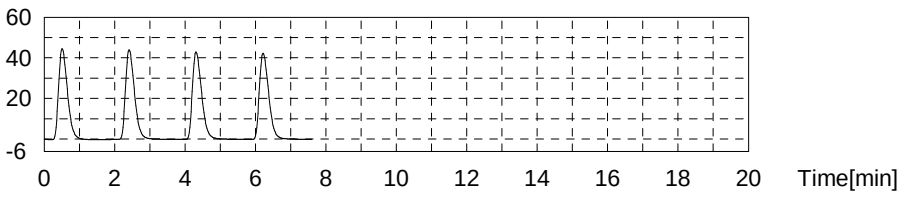
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.46	25.04mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:14:16 PM
2	78.80	24.83mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:16:20 PM
3	79.21	24.96mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:18:24 PM
4	78.55	24.76mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:20:28 PM

Mean Area 79.00
Mean Conc. 24.90mg/L
Vial 38



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

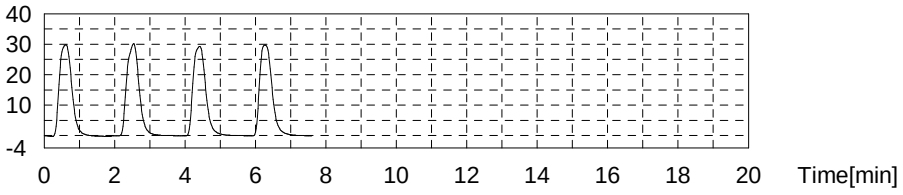
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.13mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.00	23.32mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:29:00 PM
2	73.65	23.21mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:31:04 PM
3	73.07	23.03mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:33:08 PM
4	72.80	22.95mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:35:12 PM

Mean Area 73.38
Mean Conc. 23.13mg/L
Vial 39



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

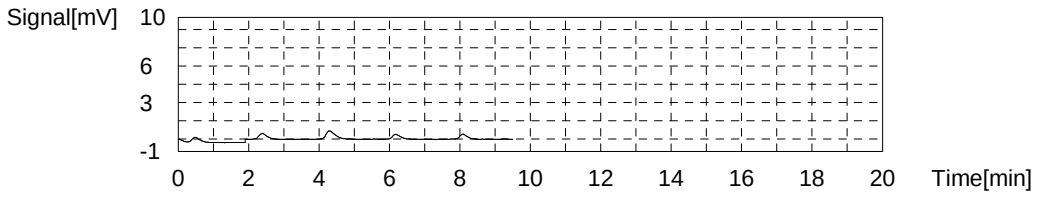
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2535mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5484	0.2330mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:43:44 PM
2	0.7528	0.2973mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:45:48 PM
3	1.249	0.4533mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:47:52 PM
4	0.5887	0.2457mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:49:56 PM
5	0.5641	0.2379mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 9:52:00 PM

Mean Area 0.6135
Mean Conc. 0.2535mg/L
Vial 40



Sample

Sample Name: MSD 280-116135-b-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

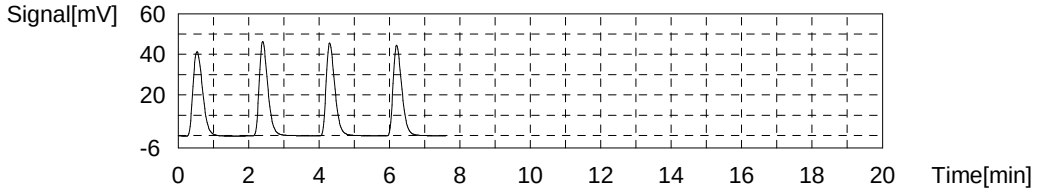
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.28	25.30mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:00:31 PM
2	79.25	24.98mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:02:35 PM
3	79.04	24.91mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:04:39 PM
4	77.45	24.41mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:06:43 PM

Mean Area 79.00
Mean Conc. 24.90mg/L
Vial 41



Sample

Sample Name: 280-116135-b-17
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

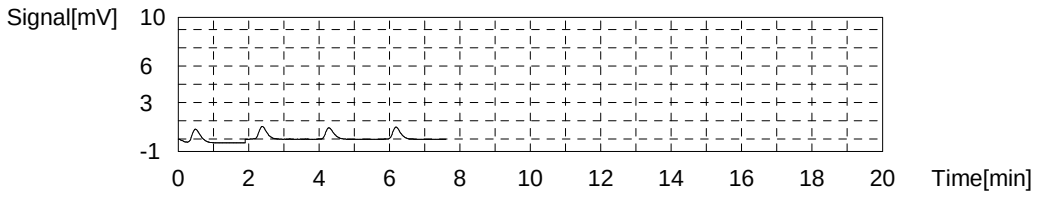
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5670mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.720	0.6013mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:15:15 PM
2	1.623	0.5708mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:17:19 PM
3	1.547	0.5469mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:19:23 PM
4	1.553	0.5488mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:21:27 PM

Mean Area 1.611
Mean Conc. 0.5670mg/L
Vial 42



Sample

Sample Name: 280-116204-b-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

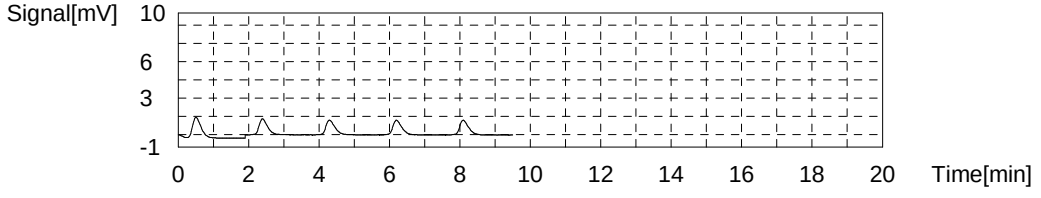
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7188mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.737	0.9211mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:29:59 PM
2	2.139	0.7331mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:32:03 PM
3	2.081	0.7148mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:34:07 PM
4	2.056	0.7070mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:36:11 PM
5	2.099	0.7205mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:38:15 PM

Mean Area 2.094
Mean Conc. 0.7188mg/L
Vial 43



Sample

Sample Name: 280-116204-b-2
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

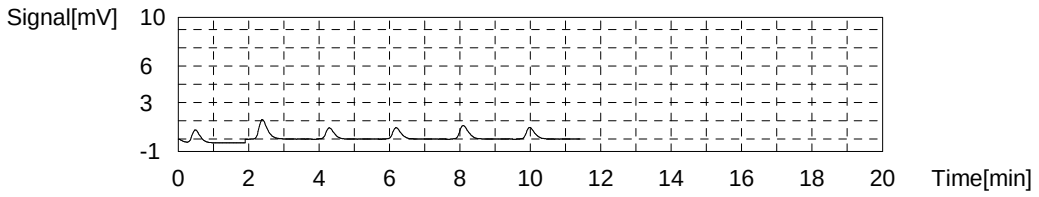
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5442mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.525	0.5400mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:46:46 PM
2	2.668	0.8994mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:48:50 PM
3	1.556	0.5498mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:50:54 PM
4	1.484	0.5271mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:52:58 PM
5	1.942	0.6711mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:55:02 PM
6	1.588	0.5598mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 10:57:05 PM

Mean Area 1.538
Mean Conc. 0.5442mg/L
Vial 44



Sample

Sample Name: 280-116204-c-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

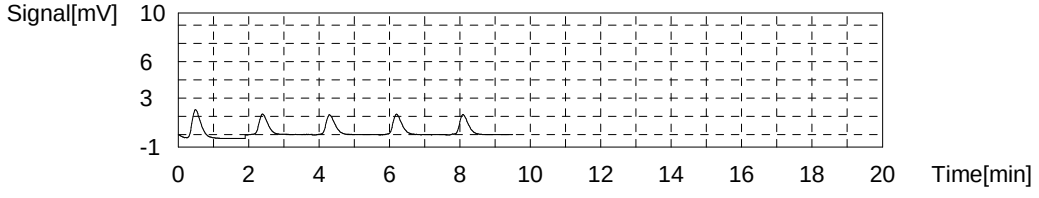
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9908mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.960	1.306mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:05:32 PM
2	2.953	0.9890mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:07:36 PM
3	2.949	0.9877mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:09:40 PM
4	3.013	1.008mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:11:44 PM
5	2.920	0.9786mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:13:48 PM

Mean Area 2.959
Mean Conc. 0.9908mg/L
Vial 45



Sample

Sample Name: 280-116204-c-2
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

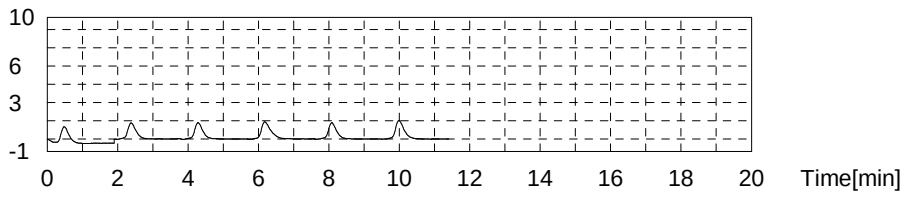
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7280mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.908	0.6604mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:22:19 PM
2	2.230	0.7617mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:24:23 PM
3	2.193	0.7500mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:26:27 PM
4	2.703	0.9104mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:28:31 PM
5	2.160	0.7397mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:30:35 PM
6	2.613	0.8821mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:32:39 PM

Mean Area 2.123
Mean Conc. 0.7280mg/L
Vial 46



Sample

Sample Name: 320-44515-m-1
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

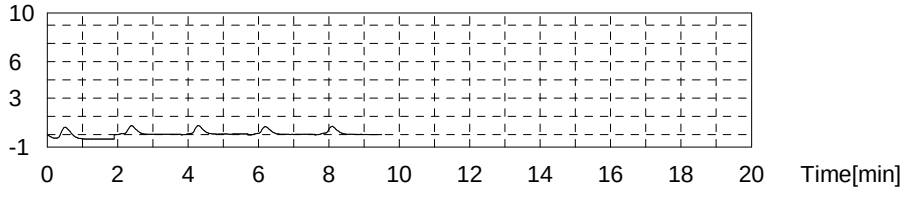
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4635mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.566	0.5529mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:41:05 PM
2	1.256	0.4555mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:43:09 PM
3	1.311	0.4728mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:45:13 PM
4	1.300	0.4693mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:47:17 PM
5	1.259	0.4564mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:49:21 PM

Mean Area 1.282
Mean Conc. 0.4635mg/L
Vial 47



Sample

Sample Name: 320-44515-m-2
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

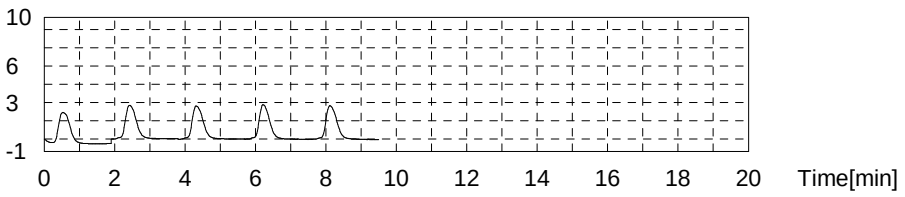
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.904mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.410	1.761mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:57:52 PM
2	5.873	1.907mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/6/2018 11:59:56 PM
3	5.868	1.905mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:02:00 AM
4	5.810	1.887mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:04:04 AM
5	5.899	1.915mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:06:07 AM

Mean Area 5.863
Mean Conc. 1.904mg/L
Vial 48



Sample

Sample Name: 320-44515-m-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

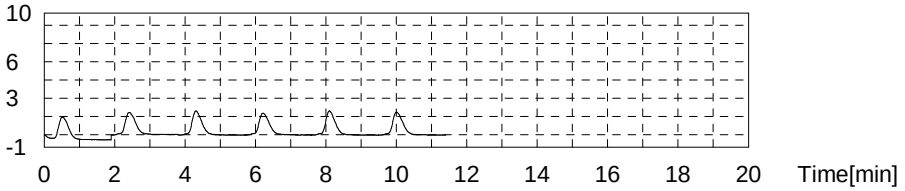
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.244mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.245	1.081mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:14:39 AM
2	3.812	1.259mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:16:43 AM
3	3.795	1.254mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:18:47 AM
4	3.535	1.172mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:20:51 AM
5	3.699	1.223mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:22:55 AM
6	3.746	1.238mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:24:58 AM

Mean Area 3.763
Mean Conc. 1.244mg/L
Vial 49



Sample

Sample Name: 320-44515-m-4
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

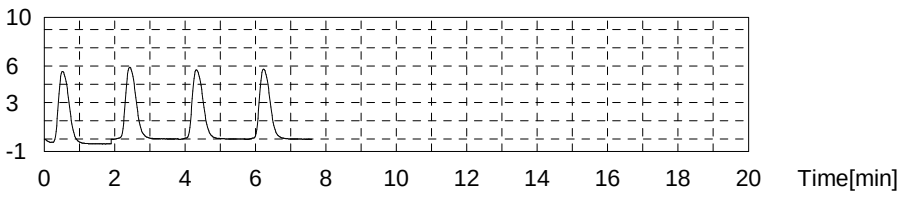
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.879mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.04	3.846mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:33:24 AM
2	12.30	3.927mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:35:28 AM
3	12.19	3.893mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:37:32 AM
4	12.05	3.849mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:39:36 AM

Mean Area 12.15
Mean Conc. 3.879mg/L
Vial 50



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

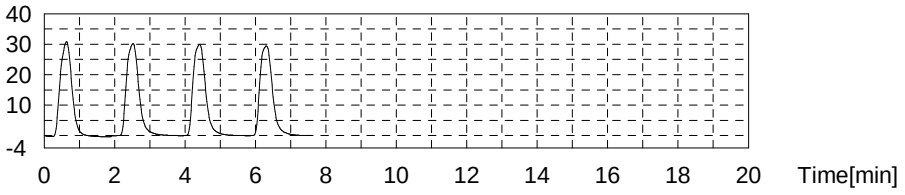
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.02mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.00	22.70mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:48:08 AM
2	73.79	23.26mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:50:12 AM
3	73.51	23.17mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:52:16 AM
4	72.79	22.94mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 12:54:20 AM

Mean Area 73.02
Mean Conc. 23.02mg/L
Vial 51



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

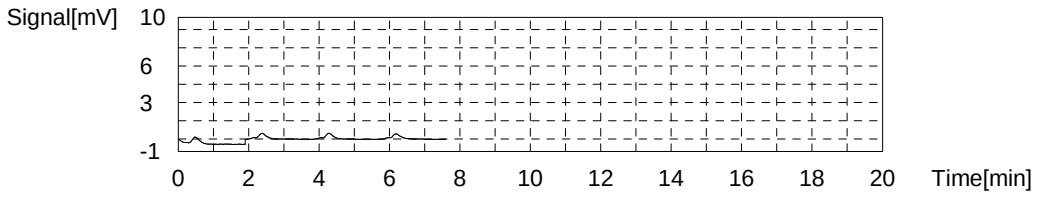
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2925mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6159	0.2542mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:02:52 AM
2	0.7948	0.3105mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:04:56 AM
3	0.7961	0.3109mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:07:00 AM
4	0.7441	0.2945mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:09:04 AM

Mean Area 0.7377
Mean Conc. 0.2925mg/L
Vial 52



Sample

Sample Name: 680-160018-k-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

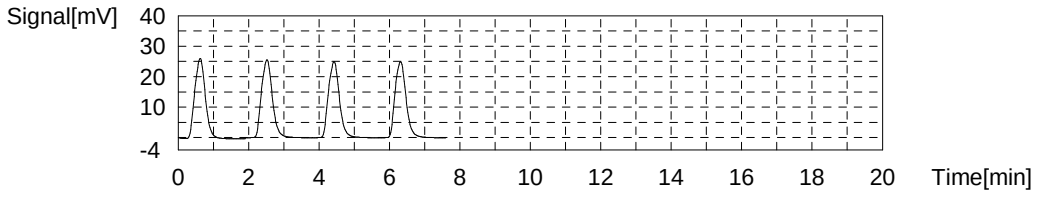
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:17.40mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.57	17.53mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:17:36 AM
2	55.62	17.55mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:19:40 AM
3	54.80	17.29mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:21:44 AM
4	54.64	17.24mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:23:48 AM

Mean Area 55.16
Mean Conc. 17.40mg/L
Vial 53



Sample

Sample Name: MS 680-160018-k-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

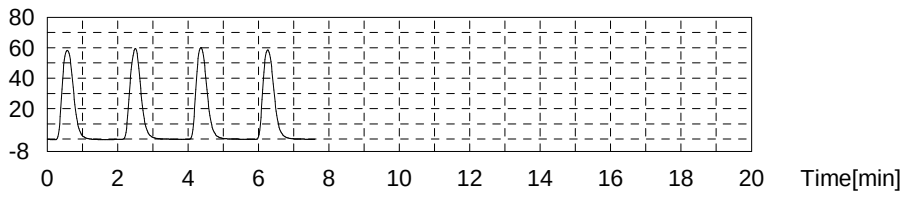
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:40.80mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	131.0	41.24mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:32:20 AM
2	129.5	40.77mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:34:24 AM
3	129.9	40.90mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:36:28 AM
4	128.0	40.30mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:38:32 AM

Mean Area 129.6
Mean Conc. 40.80mg/L
Vial 54



Sample

Sample Name: MSD 680-160018-k-3
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

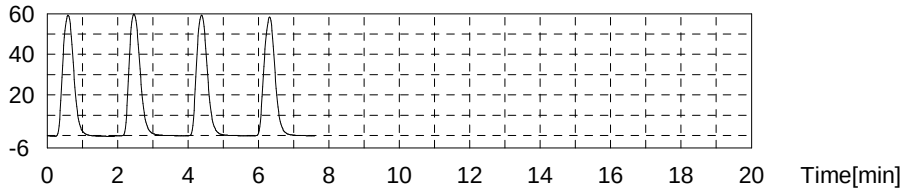
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:40.56mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	129.7	40.84mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:47:05 AM
2	130.5	41.09mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:49:09 AM
3	127.5	40.14mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:51:13 AM
4	127.6	40.18mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 1:53:17 AM

Mean Area 128.8
Mean Conc. 40.56mg/L
Vial 55



Sample

Sample Name: 680-160018-k-7
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

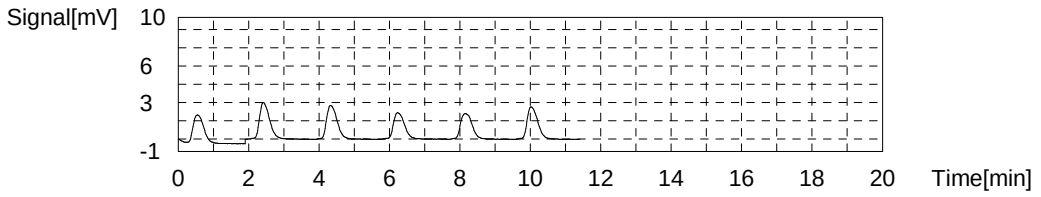
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.626mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.689	1.535mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:01:50 AM
2	5.998	1.946mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:03:54 AM
3	5.839	1.896mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:05:58 AM
4	4.756	1.556mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:08:02 AM
5	4.880	1.595mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:10:06 AM
6	5.588	1.817mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:12:09 AM

Mean Area 4.978
Mean Conc. 1.626mg/L
Vial 56



Sample

Sample Name: 680-160018-k-8
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

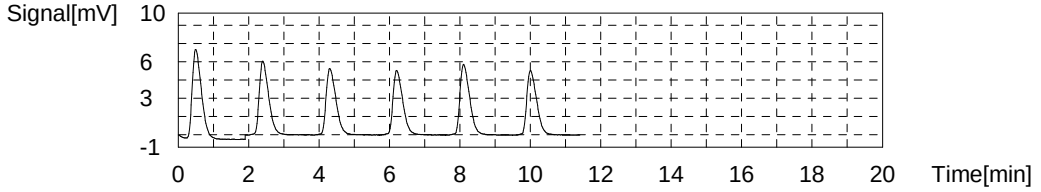
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	2.000	NPOC:6.763mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.25	8.452mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:20:36 AM
2	11.33	7.245mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:22:40 AM
3	10.64	6.811mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:24:44 AM
4	10.18	6.522mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:26:48 AM
5	11.15	7.132mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:28:52 AM
6	10.28	6.585mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:30:55 AM

Mean Area 10.56
Mean Conc. 6.763mg/L
Vial 57



Sample

Sample Name: 680-160018-k-10
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

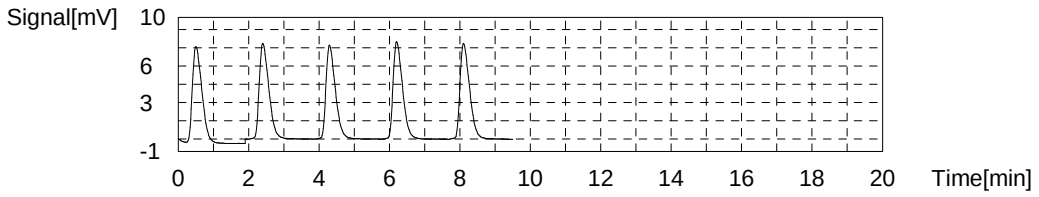
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.765mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.79	4.710mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:39:22 AM
2	14.99	4.773mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:41:26 AM
3	14.35	4.572mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:43:30 AM
4	15.07	4.798mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:45:34 AM
5	15.00	4.776mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:47:37 AM

Mean Area 14.96
Mean Conc. 4.765mg/L
Vial 58



Sample

Sample Name: 680-160018-I-13
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

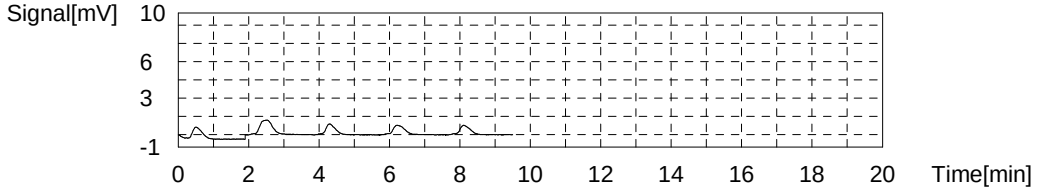
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5884mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.615	0.5683mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:56:10 AM
2	3.010	1.007mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 2:58:14 AM
3	1.708	0.5976mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:00:18 AM
4	1.768	0.6164mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:02:22 AM
5	1.624	0.5712mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:04:26 AM

Mean Area 1.679
Mean Conc. 0.5884mg/L
Vial 59



Sample

Sample Name: 680-160018-k-14
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

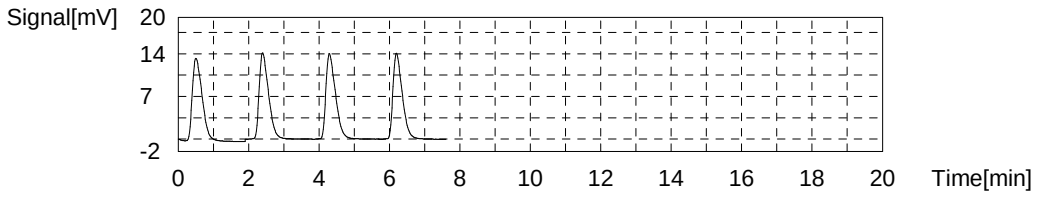
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:8.425mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	26.60	8.423mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:12:58 AM
2	26.54	8.404mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:15:02 AM
3	26.99	8.546mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:17:06 AM
4	26.29	8.326mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:19:10 AM

Mean Area 26.61
Mean Conc. 8.425mg/L
Vial 60



Sample

Sample Name: 680-160018-k-15
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

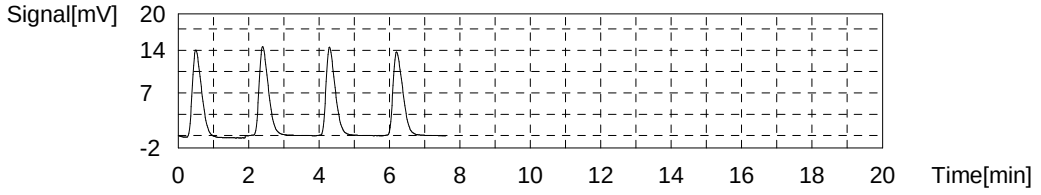
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:8.494mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	26.55	8.407mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:27:43 AM
2	27.19	8.609mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:29:47 AM
3	26.64	8.436mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:31:51 AM
4	26.92	8.524mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:33:55 AM

Mean Area 26.82
Mean Conc. 8.494mg/L
Vial 61



Sample

Sample Name: lcs 280-436465/1-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

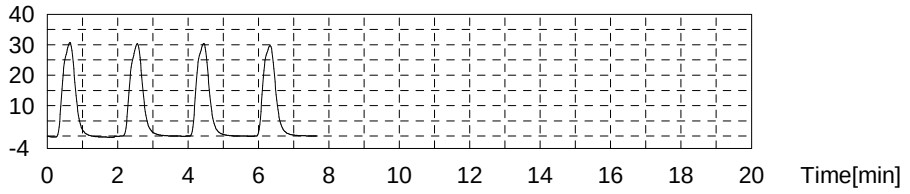
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.49mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.49	23.79mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:42:28 AM
2	75.08	23.66mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:44:32 AM
3	74.52	23.49mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:46:36 AM
4	73.00	23.01mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:48:44 AM

Mean Area 74.52
Mean Conc. 23.49mg/L
Vial 62



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

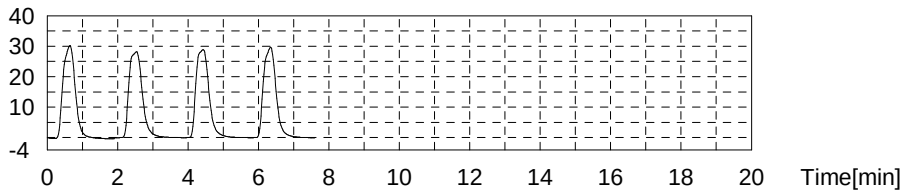
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.42mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.06	23.34mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:57:17 AM
2	74.67	23.54mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 3:59:21 AM
3	74.52	23.49mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:01:25 AM
4	73.92	23.30mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:03:29 AM

Mean Area 74.29
Mean Conc. 23.42mg/L
Vial 63



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

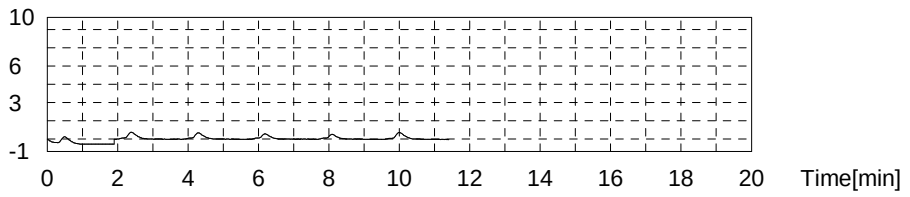
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3130mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7419	0.2938mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:12:02 AM
2	1.070	0.3970mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:14:06 AM
3	0.9646	0.3639mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:16:10 AM
4	0.7935	0.3101mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:18:14 AM
5	0.7117	0.2843mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:20:17 AM
6	1.010	0.3781mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:22:21 AM

Mean Area 0.8029
Mean Conc. 0.3130mg/L
Vial 64



Sample

Sample Name: mb 280-436465/2-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

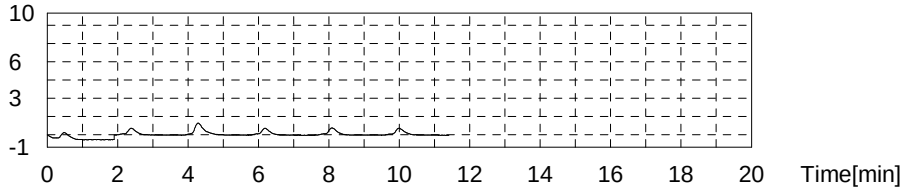
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3487mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6222	0.2562mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:30:48 AM
2	0.9245	0.3512mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:32:52 AM
3	1.840	0.6391mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:34:56 AM
4	0.9553	0.3609mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:37:00 AM
5	0.8944	0.3418mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:39:04 AM
6	0.8912	0.3408mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:41:07 AM

Mean Area 0.9164
Mean Conc. 0.3487mg/L
Vial 65



Sample

Sample Name: TIC
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

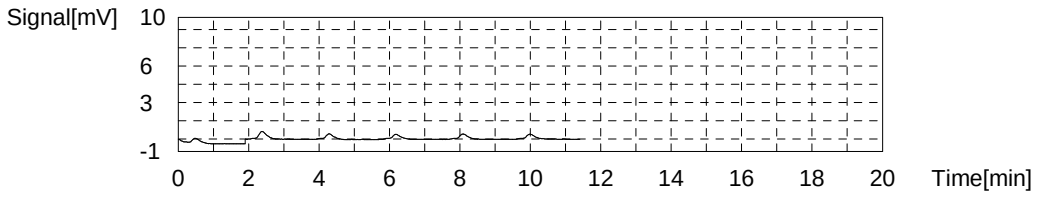
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2877mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4250	0.1942mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:49:34 AM
2	1.056	0.3926mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:51:38 AM
3	0.7840	0.3071mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:53:42 AM
4	0.7574	0.2987mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:55:46 AM
5	0.6069	0.2514mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:57:50 AM
6	0.7406	0.2934mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 4:59:53 AM

Mean Area 0.7222
Mean Conc. 0.2877mg/L
Vial 66



Sample

Sample Name: 280-116017-a-2-b
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

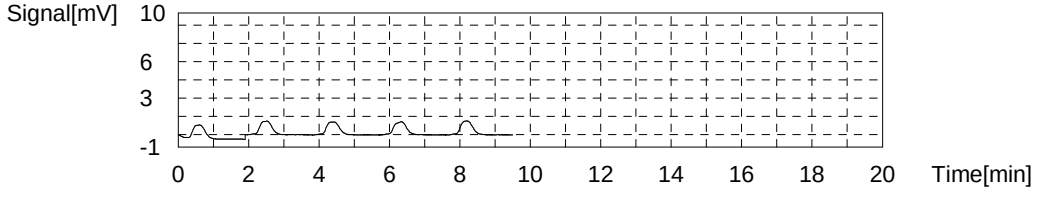
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9061mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.361	0.8029mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:08:20 AM
2	2.684	0.9044mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:10:24 AM
3	2.661	0.8972mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:12:28 AM
4	2.645	0.8921mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:14:32 AM
5	2.768	0.9308mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:16:36 AM

Mean Area 2.690
Mean Conc. 0.9061mg/L
Vial 67



Sample

Sample Name: 280-116017-a-2-c ms
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

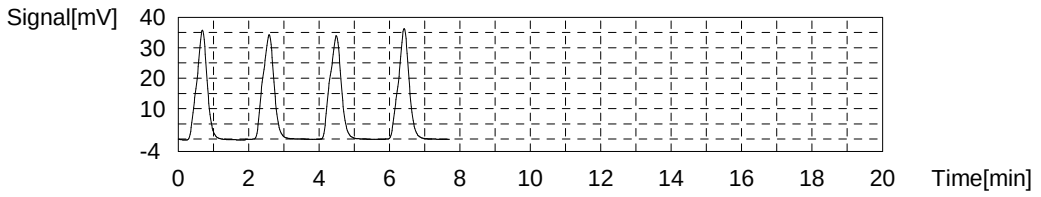
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.24mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.26	23.72mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:25:08 AM
2	76.93	24.25mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:27:12 AM
3	77.13	24.31mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:29:16 AM
4	78.35	24.69mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:31:26 AM

Mean Area 76.92
Mean Conc. 24.24mg/L
Vial 68



Sample

Sample Name: 280-116017-a-2-d msd
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

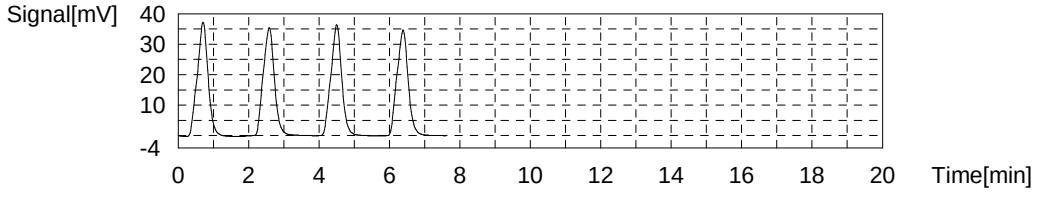
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.01mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	81.26	25.61mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:39:59 AM
2	79.19	24.96mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:42:03 AM
3	79.19	24.96mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:44:07 AM
4	77.75	24.50mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:46:11 AM

Mean Area 79.35
Mean Conc. 25.01mg/L
Vial 69



Sample

Sample Name: 280-116017-b-1-a
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

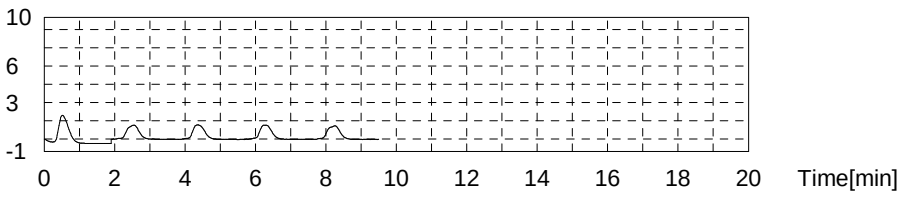
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9239mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.194	1.379mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:54:44 AM
2	2.780	0.9346mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:56:48 AM
3	2.764	0.9295mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 5:58:52 AM
4	2.692	0.9069mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:00:56 AM
5	2.748	0.9245mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:03:00 AM

Mean Area 2.746
Mean Conc. 0.9239mg/L
Vial 70



Sample

Sample Name: 280-115976-a-32-d
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

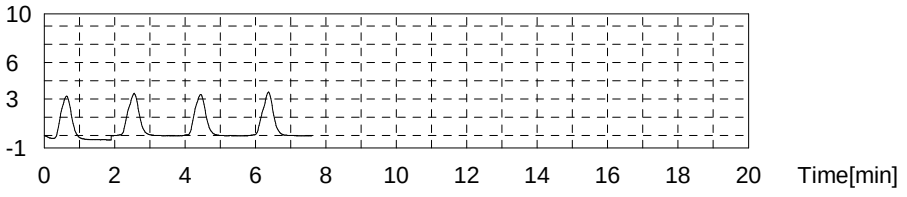
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.406mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.314	2.360mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:11:32 AM
2	7.596	2.449mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:13:36 AM
3	7.410	2.390mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:15:40 AM
4	7.526	2.427mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:17:44 AM

Mean Area 7.462
Mean Conc. 2.406mg/L
Vial 71



Sample

Sample Name: CCV
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

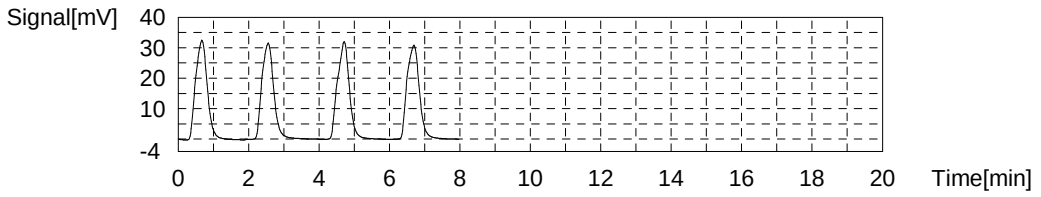
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.90mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.57	24.13mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:26:17 AM
2	74.76	23.56mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:28:34 AM
3	76.16	24.00mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:30:44 AM
4	75.85	23.91mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:32:51 AM

Mean Area 75.84
Mean Conc. 23.90mg/L
Vial 72



Sample

Sample Name: CCB
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

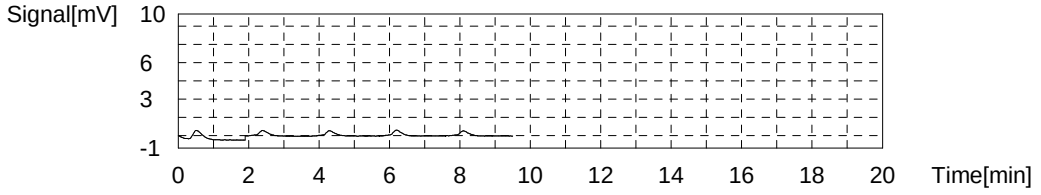
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.3023mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.177	0.4306mg/L	50uL	1	E	TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:41:25 AM
2	0.8266	0.3205mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:43:29 AM
3	0.7669	0.3017mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:45:33 AM
4	0.8207	0.3186mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:47:37 AM
5	0.6613	0.2685mg/L	50uL	1		TOC3.2018_10_23_09_05_36.cal	11/7/2018 6:49:41 AM

Mean Area 0.7689
Mean Conc. 0.3023mg/L
Vial 73



TOC-V Cal Curve Information
C:¥TOC3201¥CalCurves¥TOC3.2018_10_23_09_05_36.cal

Date of Creation 10:10:39 AM 10/23/2018
User ||
System TOC-V cpn 3

Cal. Curve

Sample Name: CAL 110716
Sample ID: Untitled
Object ID 0A-103108-04335027-133F01F16135-0000
Cal. Curve: TOC3.cal
Status Completed
Comment:

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.1620	50uL	1	*******		10/23/2018 9:13:18 A
2	0.2116	50uL	1	*******		10/23/2018 9:15:21 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 0.1868
SD Area 0.03507
CV Area 18.78%
Vial 1

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.481	50uL	1	*******		10/23/2018 9:23:56 A
2	3.336	50uL	1	*******		10/23/2018 9:25:59 A
3	3.715	50uL	1	*******	E	10/23/2018 9:28:03 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 3.409
SD Area 0.1025
CV Area 3.01%
Vial 2

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	15.68	50uL	1	*******		10/23/2018 9:36:33 A
2	15.64	50uL	1	*******		10/23/2018 9:38:36 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 15.66
SD Area 0.02828
CV Area 0.18%
Vial 3

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	31.61	50uL	1	*******		10/23/2018 9:47:10 A
2	31.15	50uL	1	*******		10/23/2018 9:49:14 A

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 31.38
SD Area 0.3253
CV Area 1.04%
Vial 4

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	78.47	50uL	1	*******		10/23/2018 9:57:49 A
2	77.96	50uL	1	*******		10/23/2018 9:59:58 A

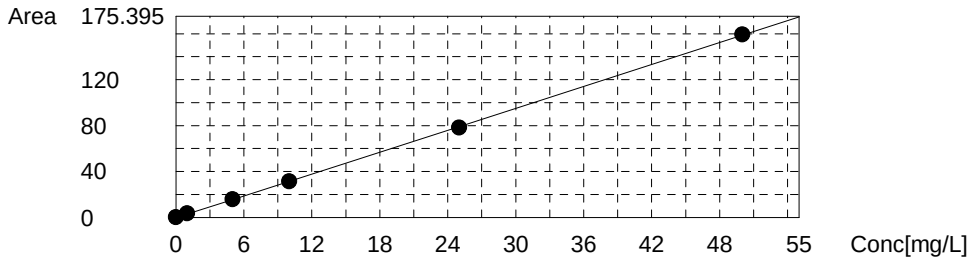
Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 78.22
SD Area 0.3606
CV Area 0.46%
Vial 5

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.4	50uL	1	*******		10/23/2018 10:08:35
2	158.5	50uL	1	*******		10/23/2018 10:10:39

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 159.4
SD Area 1.344
CV Area 0.84%
Vial 6

Slope: 3.181
Intercept -0.1928
r^2 0.9999
r 0.9999
Zero Shift No



Shipping and Receiving Documents

bhate ENVIRONMENT INFRASTRUCTURE
1608 13th Avenue South, Suite 300
Birmingham, Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Project Number: AFCGSA3.0012.00AA

Chain of Custody Number [1]: 10-23-2018

LIMS Number: _____

Facility/Base I.D.:

Project Name / Site Name: Former Griffiss AFB

Client Name: NYSDEC

Collected by: Derrick Berry

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Number of containers	Sample Analysis Requested [5]: VOCs 8260	RSK 175 MEE	9060A DOC	9056 Sulfate	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
LF6TW-38_1018		22-Oct-2018	0826	-	N	01	WG	9	X	X	X	X				
LF6TW-36_1018			0926	-	N	01	WG	9	X	X	X	X				
775VMW-19R_1018			1146	-	N	01	WG	3	X							
775MW-28_1018			1241	-	N	01	WG	3	X							
775VMW-9_1018			1356	-	N	01	WG	3	X							
775VMW-10_1018			1516	-	N	01	WG	3	X							
775VMW-10_1018-a			1516	-	FD	01	WG	3	X							
775MW-20_1018		"	1631	-	N	01	WG	3	X							
775VMW-20R_1018		23-Oct-2018	0826	-	N	01	WG	3	X							
775VMW-5_1018			1041	-	N	01	WG	3	X							
775VMW-5_1018-a		"	1041	-	FD	01	WG	3	X							

280-116017 Chain of Custody

COMMENTS: Temp on Receipts: 3.4°C & ZR 9n CF +0.2°C x1 Bot bk 10/24/18

Custody Transfers Prior to Receipt by Laboratory

	Relinquished by (Signed)	Date	Time		Received by (signed)	Date	Time
1.		10-23-18	1830	1.		10/24/18	0945
2.				2.			
3.				3.			

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.: _____

Method of Shipment: _____ Airbill Number: _____

Analytical Lab: _____ Delivery Location: _____

Lab Recipient: _____ Delivery Date/Time: _____

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc.), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control)

DISTRIBUTION: WHITE COPY - Project File YELLOW COPY - Lab Copy PINK COPY - Working File

bhate ENVIRONMENT INFRASTRUCTURE
1608 13th Avenue South, Suite 300
Birmingham, Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Project Number: AFCGSA3.0012.00AA

Chain of Custody Number [1]: 10-23-2018

LIMS Number: _____

Facility/Base I.D.:

Project Name / Site Name: Former Griffis AFB

Client Name: NYSDEC

Collected by: Derrick Berry

Field Sample ID (10 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Sample Analysis Requested [5]: Number of containers	VOCs 8260								Quality Assurance Samples [6]: Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
775VMW-4_1018		23-Oct-2018	1216	-	N	01	WG	3	X											
LF6-AB01_102218		22-Oct-2018	0826	-	AB	01	WQ	1	X											
LF6-TB01_102218		"	0826	-	TB	01	WQ	2	X											
775-AB01_102218		"	1146	-	AB	01	WQ	1	X											
775-TB01_102218		↓	1146	-	TB	01	WQ	2	X											
				-																
				-																
				-																
				-																
				-																
				-																

COMMENTS: _____

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1.	[signature]	10-23-18	1830	1.	[signature]	10/24/18	0945
2.				2.			
3.				3.			

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.: _____

Method of Shipment: _____ Airbill Number: _____

Analytical Lab: _____ Delivery Location: _____

Lab Recipient: _____ Delivery Date/Time: _____

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc.), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control)

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Login Sample Receipt Checklist

Client: Bhate Environmental

Job Number: 280-116017-1

Login Number: 116017
List Number: 1
Creator: Lujan, Jacob P

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 7
AIR SPARGE LOGS

AIR SPARGE LOG
LOCATION: Griffiss SD052-02
DATE: 10/21/18

Inj Well	Start Time	Stop Time	Pressure	Flow rate	Temp	Water level indicator	Comments
			psi	scfm	˚F	Depth in feet (')	
IW07	10:51		5.5	0	37	64 (DTW 58.85)	Breakout pressure
			9	1			
	10:59		12	4			
	10:59	11:13	14	10			Air at 64' (WLI in air)
IW07 - Rest	11:13	11:48	0	0		11:43 lower to 71	
	11:48	12:40	14.5	15	39		Air at 71' (WLI in air)
IW07 - Rest	12:40	12:48	0	0			
	12:48	12:57	15	30	44		Air at 71' (WLI in air)
IW07 - Rest	12:57	13:00	0	0			
	13:00	13:10	15	30	44		
IW07 - Rest	13:10	13:25	0	0			
	13:25	13:35	16	30	48		
IW07 - Rest	13:35	13:50	0	0			
	13:50	14:00	20	35	48		
IW07 - Rest	14:00	14:21	0	0			
	14:21	14:40	20	40	48		
Mobilize to IW03							Bailer from IW03 light purple
IW03	15:16	15:36	18	20	46	71	Air at 71' (WLI in air)
IW03 - Rest	15:36	15:56	0	0			77'
	15:56	16:11	20	40	48		WLI in water @77'
IW03 - Rest	16:11	16:26	0	0			
	16:26	16:41	18	40	44		WLI in water @77'
Mobilize to IW14							Bailer from IW07 Slight tint
							IW03 is dry
						71.5	Soft bottom in well @ 73'
IW14	17:29	17:30	5	2	37		Breakout Pressure
IW14	17:34	17:44	22	20	37		Air at 71.5' (WLI in air)
IW14 - Rest	17:44	18:03	0	0			
	18:03	18:13	24	30	37		
IW14 - Rest	18:13	18:31	0	0			
	18:31	18:41	20	30	39		
IW14 - Rest	18:41	18:56	0	0			
	18:56	19:06	18	30	40		

Notes:
@ = at
'= feet
DTW = depth to water
˚F = degrees faireneheit
IW = injection well
psi = pounds per square inch
Rest = Period of no air injection
SCFM = standard cubic feet per minute
WLI = water level indicator

LOCATION	Site: SD52-02			Groundwater Parameter Monitoring Log				Date: 10/21/2018	
	Air Sparge Permanganate Dispersion Test							Recorded By: Haskins/ Dawud	
DATE (mmddyy)	**Well**	**TIME (24 Hr)**	**Water Level (BTOC)**	**Temp (C)**	**Cond. (mS/cm)**	**Dissolved Oxygen (mg/L)**	**pH**	**Oxidation Reduction Potential (mV)**	**Remarks (odor, clarity, etc.)**
10/21/2018	MW-6	10:20		12.88	1.461	0.91	8.47	173.6	
		10:57		12.84	1.768	1.82	8.54	169.4	Sparging @ IW-07
		11:00		12.85	1.992	2.79	8.58	169.7	Sparging @ IW-07
		11:05		12.86	2.257	3.27	8.66	171.7	Sparging @ IW-07
		11:10		12.86	2.353	3.43	8.77	174.0	Sparging @ IW-07
		11:47		12.82	1.518	1.13	9.09	160.8	Sparge off
		11:52		12.84	1.924	2.62	9.10	161.3	Sparging @ IW-07
		11:57		12.86	2.308	3.63	9.17	164.7	Sparging @ IW-07
		12:05		12.86	2.420	3.64	9.14	168.7	Sparging @ IW-07
		12:10		12.85	2.440	3.55	9.17	171.0	Sparging @ IW-07
		12:20		12.85	2.456	3.48	9.27	174.4	Sparging @ IW-07
		12:30		12.84	2.477	3.56	9.33	177.5	Sparging @ IW-07
		12:40		12.84	2.496	3.67	9.36	179.9	Sparging @ IW-07
		12:49		12.50	1.808	2.50	9.04	192.2	Sparging @ IW-07
		12:56		12.88	2.603	5.30	9.57	175.4	Sparging @ IW-07
		13:00		12.79	2.348	4.72	9.61	179.0	Sparging @ IW-07
		13:10		12.88	2.531	5.07	9.65	186.0	Sparge off - Bailer clear water
		13:26		12.72	1.833	2.31	9.63	187.5	Sparge Off
		13:35		12.87	2.511	5.19	9.83	190.4	Sparging @ IW-07 Bailer Clear
		13:50		12.74	1.884	2.66	9.74	191.7	Sparge Off
		14:00		12.88	2.582	5.20	9.73	197.2	Sparging @ IW-07
		14:20		12.72	1.784	2.96	9.56	197.3	Sparge off
		15:17		12.77	1.943	4.21	9.60	199.6	Sparging @ IW-03
		15:22		12.83	2.196	4.29	9.57	199.9	Sparging @ IW-03
		15:37		12.85	2.259	4.45	9.57	202.9	Sparge off
		15:56		12.70	1.570	5.31	9.57	198.6	Sparging @ IW-03
		16:06		12.87	2.824	5.00	9.46	204.6	Sparging @ IW-03
		16:11		12.86	2.839	5.23	9.44	207.5	Sparging @ IW-03

LOCATION	Site: SD52-02		Location ID:					Date: 10/21/2018	
	Air Sparge Permanganate Dispersion Test							Recorded By: Haskins/ Dawud	
DATE (mmddyy)	**Well**	**TIME (24 Hr)**	**Water Level (BTOC)**	**Temp (C)**	**Cond. (mS/cm)**	**Dissolved Oxygen (mg/L)**	**pH**	**Oxidation Reduction Potential (mV)**	**Remarks (odor, clarity, etc.)**
10/21/2018	MW-6	16:27		12.75	1.883	5.08	9.40	207.5	Sparging @ IW-03 - Bailer Clear
10/21/2018	VMW-8	17:34		12.94	1.894	7.16	9.79	212.9	Sparging @ IW-14 (Start @ 17:34)
		17:43		13.24	2.396	4.22	9.56	215.5	Sparging @ IW-14
		18:13		13.24	2.758	3.13	9.52	216.6	Sparging @ IW-14
		18:41		13.23	3.000	2.40	9.47	218.7	Sparging @ IW-14
		19:05		13.11	2.398	4.77	9.51	215.1	Sparging @ IW-14
		19:19		13.09	2.478	3.74	9.52	217.4	Sparge Off - Bailer Clear

ATTACHMENT 8
PHOTO LOG

SD52-02 Sparge Test 10/21/2018

Photo Log



MW-6 - 10/21/18 - 10:46, Pre-sparge



MW-6 - 10/21/18 – 11:45, Sparge 54 minutes



IW-14 – 10/21/18 – 16:14, Pre-Injection



IW-14 – 10/22/18 – 10:27, Post-Injection



IW-03 – 10/21/18 – 12:46, Pre-injection



IW-03 – 10/22/18 – 10:40, Post-Injection